Management Academy for Public Health

Final Program Evaluation

Submitted to:
The CDC Foundation

Submitted by:
The Lewin Group, Inc.

June 20, 2003

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CHAPTER ONE: INTRODUCTION

I. Program Overview

The Management Academy for Public Health (MAPH) was established in 1999, with an authorization of approximately $4.0 million, through the support of four public-private sponsors: the W.K. Kellogg and Robert Wood Johnson Foundations, the Centers for Disease Control and Prevention and the Health Resources Services Administration. The sponsors contracted with the CDC Foundation to administer the program. The first group of participants began training in July 1999, and the fourth and final class was admitted in April 2002.

MAPH was created as a management development program through a collaboration between the Kenan-Flagler School of Business and School of Public Health at the University of North Carolina at Chapel Hill (UNC). The program was designed to train state and local public health professionals from Virginia, North Carolina, South Carolina and Georgia over the course of a three-year demonstration period, later extended to a fourth year. Applicants to the program applied in teams of three to six from their particular area. Those who participated in the program did so as part of their team. One senior public health official from each of the four states, the MAPH state representatives, played an important role in marketing the program to public health agencies and recruiting teams of participants. **Exhibit 1** provides a demographic profile of MAPH graduates from the first three program years.

Exhibit 1:
Demographic Profile of MAPH Graduates[1]

Category	Year One	Year Two	Year Three	Total[2]
Gender	***n (%)***	***n (%)***	***n (%)***	***n (%)***
Female	66 (67.3%)	150 (76.9%)	148 (76.7%)	364 (74.9%)
Male	32 (32.7%)	45 (23.1%)	45 (23.3%)	122 (25.1%)
Total - Gender	**98 (100.0%)**	**195 (100.0%)**	**193 (100.0%)**	**486 (100.0%)**
Race	***n (%)***	***n (%)***	***n (%)***	***n (%)***
African American	21 (23.3%)	34 (17.6%)	37 (20.7%)	92 (19.9%)
Asian or Pacific Islander	2 (2.2%)	2 (1.0%)	4 (2.2%)	8 (1.8%)
Chicano/Latino	1 (1.1%)	3 (1.6%)	1 (0.6%)	5 (1.1%)
Native American or Eskimo	0 (0.0%)	1 (0.5%)	0 (0.0%)	1 (0.2%)
White (non-Hispanic)	66 (73.4%)	151 (78.3%)	137 (76.5%)	354 (76.6%)
Other	0 (0.0%)	2 (1.0%)	0 (0.0%)	2 (0.4%)
Total - Race	**90 (100.0%)**	**193 (100.0%)**	**179 (100.0%)**	**462 (100.0%)**
State	***n (%)***	***n (%)***	***n (%)***	***n (%)***
Georgia	17 (17.4%)	49 (25.1%)	34 (17.6%)	100 (20.6%)
North Carolina	29 (29.6%)	43 (22.1%)	26 (13.5%)	98 (20.2%)
South Carolina	26 (26.5%)	53 (27.2%)	69 (35.7%)	148 (30.4%)
Virginia	26 (26.5%)	50 (25.6%)	64 (33.2%)	140 (28.8%)
Total - State	**98 (100.0%)**	**195 (100.0%)**	**193 (100.0%)**	**486 (100.0%)**
Age – Average (in years)	45.7 (n = 96)	45.2 (n = 165)	45.8 (n = 163)	45.6 (n = 424)

[1] Demographic information was supplied to Lewin by UNC program staff and updated during the course of the evaluation.
[2] Totals vary based on the amount of information available (e.g., not every participant provided information on their race).

In Year Two of MAPH, teams were encouraged to include members from other collaborating organizations in the community. Sixteen community partners participated in Year Two and 22 participated in Year Three.

The primary goals of the 10-month MAPH training program were to improve the individual management competencies of public health employees and to enhance the operational effectiveness and efficiency of the state and local agencies participating in this demonstration program. The MAPH training model also expected to be sustainable and replicable beyond its life as a demonstration program.

To accomplish these goals of strengthening the public health infrastructures of local and state public health departments, MAPH sought to enhance the skills of public health professionals in a number of areas integral to the evolving needs of the public health care arena. Key areas of focus included financial, human resource and information systems management, referred to in the program as "managing money, people and data."

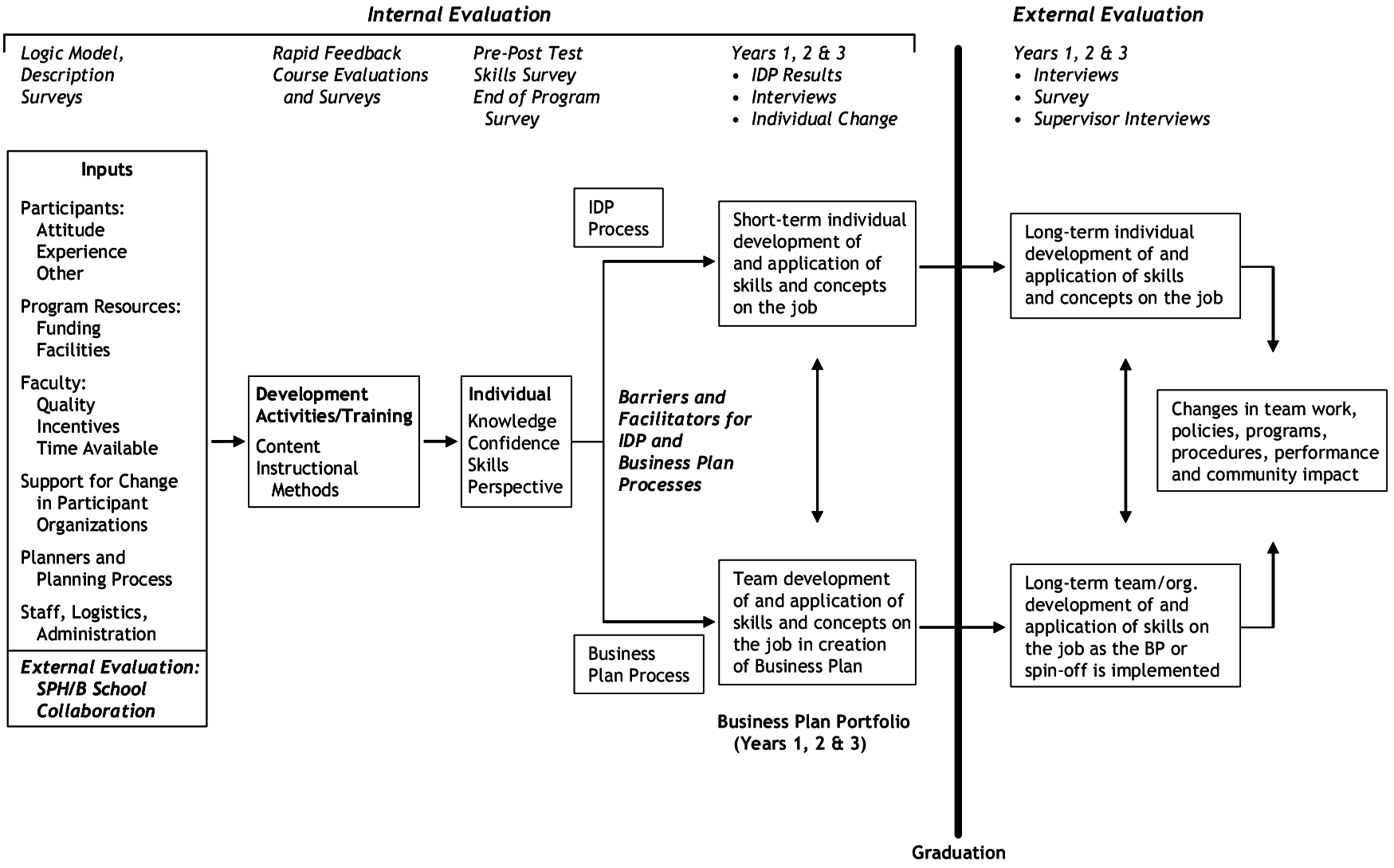
While allowing public health professionals to continue in their current positions, MAPH provided a variety of experiences and opportunities organized around an adult learning-oriented curriculum. Curriculum components include three, intense on-site training programs at UNC (taught jointly by public health and business school faculty), an on-line distance learning component and completion of a business plan-directed project that offers participants an opportunity to apply learned management skills to issues important to the future of their organizations.

II. Purpose of the External Evaluation

The CDC Foundation contracted with The Lewin Group (Lewin) to conduct an external evaluation of MAPH between March 2001 and June 2003 to complement the activities of an internal evaluation conducted by UNC. The overall evaluation design includes components to assess the performance of MAPH across program structure, process and outcomes.

The MAPH Program and Evaluation Logic Model (**Exhibit 2**) depicts the relationship between the internal and external evaluations and delineates the activities of each. Throughout the course of the external evaluation, Lewin maintained regular communication with the internal evaluation team at UNC to ensure appropriate coordination of activities and avoid duplication of effort.

Exhibit 2:
Evaluation Logic Model



Because this demonstration initiative was nearing the end of its funding cycle, this was an opportune time to carry out an evaluation of the program, to examine its performance in relationship to its goals and objectives and to use that information to help inform future marketing and other initiatives to support program sustainability and/or replication. More specifically, it provided an opportunity to recognize past program successes, to identify lessons learned and to develop a critical mass of information to inform discussion of potential future opportunities.

The MAPH External Evaluation Advisory Group was formed to guide the evaluation. Comprised of representatives from the CDC Foundation, UNC, sponsoring organizations and MAPH state representatives, the Advisory Group worked with Lewin to clarify the objectives of the evaluation, to identify assessment questions that were of primary interest and to define broadly the process that would be used for designing and implementing the evaluation.

Based on the requirements of the RFP issued by the CDC Foundation and refinements stemming from subsequent discussions, there was agreement that the overarching evaluation questions should center on evaluating outcomes in relation to two framing questions:

1) What were the characteristics of the collaboration between the UNC School of Public Health and Kenan-Flagler School of Business in planning and implementing MAPH?; what were the intended or unintended outcomes of the collaboration?; and what were the implications of the collaboration for MAPH sustainability and/or replicability in other contexts?

2) To what extent did participants apply what they learned at MAPH on the job?; and what influenced application or non-application of MAPH-acquired or enhanced management skills and competencies?

In September 2002, the CDC Foundation expanded the scope of the evaluation to include an enhanced revenue assessment. The goal of the assessment was to build on the external evaluation of the MAPH program being conducted by Lewin by measuring the direct economic benefits of management training for public health organizations and participating community partners. As a result, a third series of questions was added to the external evaluation:

3) To what extent have MAPH participants translated their training into revenue enhancements for their organizations?; which aspects of MAPH were most effective in supporting revenue enhancement initiatives?; what organizational/environmental facilitators and barriers were encountered by MAPH participants to generating enhanced revenue?; and were there significant variations in enhanced revenue across states?

III. Organization of the Report

The remainder of the report includes the following chapters:

- ***Evaluation Methodology and Approach,*** which details the evaluation methodology and approach specific for addressing each research question.

- ***Understanding the MAPH Collaboration,*** which outlines the characteristics and evolution of the UNC inter-school collaboration in relation to frameworks from the literature and stakeholder perceptions. The chapter also examines benefits, challenges and lessons learned

from the collaboration experience and their implications for program sustainability and replicability.

- ***MAPH Participant Experiences with Program Components,*** which examines the features and effectiveness of core components of the MAPH curriculum.

- ***MAPH Participant Experiences Applying MAPH-acquired Skills,*** which describes the ability of MAPH participants to translate MAPH-acquired skills in the areas of "managing money, people and data" at their sponsoring organizations from the perspectives of participants and their supervisors.

- ***MAPH Enhanced Revenue Assessment,*** which quantifies the extent to which MAPH participants have been able to translate their training into revenue enhancements, describes which aspects of the MAPH curriculum and skill sets have been most effective in supporting revenue enhancement initiatives, what organizational and environmental facilitators and barriers have been encountered by MAPH participants and what intangible benefits have accrued to public health agencies. The assessment also includes a special focus on South Carolina to better understand the relationship between high levels of MAPH penetration in that state and success in generating enhanced revenue.

- ***Measuring Program Impact,*** which discusses and examines key determinants of MAPH's success, including the extent to which participants have been able to apply enhanced management skills to professional growth, enhance the capabilities of their sponsoring organizations and impact the broader field of public health. This chapter also presents findings from three site visits conducted to observe the ability of MAPH graduates to translate growth in management skills in "real world" settings.

- ***Conclusions and Recommendations,*** based on evaluation findings and lessons learned.

Chapter Two:
Evaluation Methodology and Approach

The program evaluation employed a methodological framework customized to address each evaluation question. This approach incorporated ongoing analysis and synthesis of data throughout the course of the evaluation. This allowed for discovery and interpretation of relevant findings, as well as generation of program recommendations, on a more "real time" basis. The data collection for the MAPH evaluation was designed to maximize the opportunity to gather information from as many stakeholders as possible. **Exhibit 3** provides a summary table that illustrates the type and number of stakeholders contacted during any phase of the evaluation. The sections that follow present a summary of the evaluation methodology and approach specific for addressing each research question.

Exhibit 3:
Type and Number of Stakeholders Contacted During The Evaluation

Stakeholder Type	Number
MAPH Participants (individual phone interviews, surveys)[a]	316
MAPH Participants (29 team phone interviews)[b]	84
Supervisors (phone interviews, on-site)[c]	46
Other Stakeholders (phone or on-site interview with Deans, program staff, teaching staff, sponsors, state representatives) [d]	26
Site visits (with teams)[e]	14
MAPH Participants (22 on-site team focus groups)[f]	83

[a] *for addressing external evaluation Question #2*
[b] *for addressing enhanced revenue evaluation Question #3*
[c] *for addressing external and enhanced revenue evaluation Questions #2 and #3*
[d] *for addressing external and enhanced revenue evaluation Question #1*
[e] *for addressing external and enhanced revenue evaluation Questions #2 and #3*
[f] *number of teams and MAPH participants involved in the 14 site visits*

I. What were the Characteristics of the Collaboration between the UNC School of Public Health and the Kenan-Flagler School of Business?

Addressing this question relied on conducting 60-minute in-person interviews with UNC stakeholders, including the Deans of the schools of public health and business (**Appendix A**), MAPH program staff and MAPH teaching faculty (**Appendix B**). Sixty-minute telephone interviews also were carried out with representatives from the four sponsoring organizations (HRSA, CDC, Kellogg and Robert Wood Johnson) (**Appendix C**) and the MAPH state representatives (**Appendix D**). Interviewers took notes using the appropriate stakeholder interview protocol cited above.

Exhibit 4 summarizes interviews conducted by key informant group.

Exhibit 4:
Response Results by Key Informant Group

Key Informant Group	Number Interviewed
Deans	2
MAPH Program Staff	5
MAPH Teaching Faculty	10
MAPH State Representatives	3
Sponsoring Organizations	6
Total	**26**

In addition to interviews, a collaborative functioning assessment exercise was completed by key collaboration stakeholders (**Appendix E**). The purpose of this experience was to assess stakeholder perceptions of the strength of the UNC collaboration across a number of factors that may influence the success of collaborative efforts. Lewin modified 19 factors originally identified by Mattessich & Monsey (1992)[3] in a review of research related to collaboration to make them directionally relevant to factors that influenced the success of the UNC collaboration. Topics included:

- Impetus for collaboration;
- Goals and objectives;
- Collaboration activities;
- Organizational cultures;
- Leadership;
- Conflict and challenges;
- Collaboration outcomes; and
- Future sustainability and replicability.

II. What was the Impact of MAPH on Participants and their Public Health Agencies?

This portion of the MAPH evaluation consisted of the five major tasks listed below. Following each task is a description of the methodology used and the response results.

1. *Conducting 60-minute interviews with a representative sample of MAPH participants from the three program years to gain their insights regarding the quality and effectiveness of MAPH program components and content and to understand their ability to translate MAPH-acquired skills and competencies to heightened profiles and improved organizational effectiveness.*

Over the course of the external evaluation, Lewin interviewed a sample of MAPH participants from each program year (**Appendix F**). A number of variables were available for selecting MAPH interview participants. These included race, gender, state, highest degree earned and

[3] Mattessich and Monsey: *Collaboration: What Makes it Work: A Review of Research Literature on Factors Influencing Successful Collaboration.* St. Paul, MN: Amherst H. Wilder Foundation, 1992.

organization type (state, county, local health departments). Based on discussions with the Evaluation Advisory Committee, it was agreed to select the interview sample based on state and race as follows: 1) select an equivalent number of interviewees from each of the four MAPH states; and 2) oversample minorities. The decision to oversample minorities was based on the fact that minority representation (**Exhibit 1**) in the program was about 25 percent, and randomly selecting interview participants would not assure that an adequate number of minorities would be included.

Three attempts were made to contact each participant in the sample by telephone to schedule the interviews. Calls were placed every three or four days, recognizing that participants' schedules may have been exceptionally busy or participants may have been on travel .

Year One participants were interviewed between October and December of 2001, roughly a year-and-a-half after their graduation from the program. Participants from Year Two also were interviewed between October and December of 2001, six months after graduation. Finally, Year Three participants were interviewed between September and November of 2002, approximately five to six months after graduation. Interviews were tape recorded and data was entered into the MAPH participants interview protocol. See **Exhibit 5** below for interview response rates.

Exhibit 5:
Participant Interview Response Results

	Population	Sample	Respondents
Year One	98	13	9 (69.2%)
Year Two	195	42	23 (54.8%)
Year Three	193	67	48 (71.6%)
Total Participants	**486**	**122**	**80 (65.6%)**

Exhibit 6 provides a demographic profile of MAPH interview participants.

Exhibit 6:
Demographic Profile of MAPH Interview Participants

Category	Year One	Year Two	Year Three	Total
Gender	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Female	6 (66.7%)	16 (69.6%)	37 (77.1%)	59 (73.7%)
Male	3 (33.3%)	7 (30.4%)	11 (22.9%)	21 (26.3%)
Total - Gender	**9 (100.0%)**	**23 (100.0%)**	**48 (100.0%)**	**80 (100.0%)**
Race	*n (%)*	*n (%)*	*n (%)*	*n (%)*
African American	4 (44.4%)	8 (34.8%)	17 (35.4%)	29 (36.2%)
Asian or Pacific Islander	0 (0.0%)	0 (0.0%)	3 (6.2%)	3 (3.7%)
Chicano/Latino	0 (0.0%)	1 (4.3%)	1 (2.1%)	2 (2.5%)
Native American or Eskimo	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
White (non-Hispanic)	5 (55.6%)	13 (56.6%)	27 (56.3%)	45 (56.3%)
Other	0 (0.0%)	1 (4.3%)	0 (0.0%)	1 (1.3%)
Total - Race	**9 (100.0%)**	**23 (100.0%)**	**48 (100.0%)**	**80 (100.0%)**

Category	Year One	Year Two	Year Three	Total
State	***n (%)***	***n (%)***	***n (%)***	***n (%)***
Georgia	3 (33.4%)	4 (17.4%)	9 (18.8%)	16 (20.0%)
North Carolina	2 (22.2%)	6 (26.1%)	7 (14.6%)	15 (18.7%)
South Carolina	2 (22.2%)	4 (17.4%)	16 (33.3%)	22 (27.5%)
Virginia	2 (22.2%)	9 (39.1%)	16 (33.3%)	27 (33.8%)
Total - State	**9 (100.0%)**	**23 (100.0%)**	**48 (100.0%)**	**80 (100.0%)**
Age – Average (in years)	**47.0 (n = 9)**	**45.5 (n = 19)**	**45.8 (n = 41)**	**45.8 (n = 69)**

2. *Conducting 30-minute interviews with a sample of supervisors to gather their views on the value of MAPH for their specific institutions, as well as its contribution to the broader health care delivery system.*

Following interviews with program participants, Lewin conducted interviews with a sample of supervisors(**Appendix G**). The sample was derived from supervisors of participants who had been interviewed and offered contact information for their supervisor, minus any duplicates (public health officials who supervised more than one MAPH participant were only entered into the population once).

Three attempts were made to contact each supervisor in the sample by telephone to schedule the interviews. Calls were placed every three or four days, recognizing supervisors' schedules may have been exceptionally busy or supervisors may have been on travel.

Supervisors for Year One and Year Two participants were interviewed between February and June of 2002. Supervisors of Year Three participants were interviewed in November 2002. Interviews were tape recorded and data was entered into the supervisor interview protocol.

Exhibit 7:
Supervisor Interview Response Results

Supervisor Interviews	Population	Sample	Respondents	Number of Participants Supervised*
Year One	7	6	3 (50.0%)	5 of 9 (55.6%)
Year Two	23	18	10 (55.6%)	10 of 23 (43.5%)
Year Three	35	15	13 (86.7%)	14 of 48 (29.2%)
Total Supervisor Interviews	**65**	**39**	**26 (66.7%)**	**29 of 80 (36.3%)**

** Number of MAPH participant interviewees supervised by supervisors who were interviewed (e.g., of the nine participants interviewed in Year One, five were supervised by the three supervisors interviewed).*

3. *Conducting 30-minute telephone interviews with each of the four MAPH state representatives, who bridge the program at UNC with the available pool of program applicants, to gain their perspectives on program translatability at state and local public health agencies, the challenges involved and factors influencing future success of this model.*

Interviews were conducted with state representatives from North Carolina, South Carolina and Virginia in August 2001. Notes were taken by the interviewer and summarized for inclusion in the report.

4. *Surveying MAPH participants from the first three program years to gather information related to their experiences and satisfaction with various program components, their ability to apply program skills, challenges encountered and professional growth experienced since participating in MAPH.*

In May 2002, surveys were sent by Baselice & Associates, Inc. to Year One and Year Two MAPH participants, excluding those who completed an interview (**Appendix H**). These surveys were conducted roughly two years and one year after graduation, respectively. In August 2002, surveys were sent to Year Three participants, four months after graduation. **Exhibit 8** shows the number of survey respondents for each year.

Exhibit 8:
Participant Survey Response Results

Participant Surveys	Population	Sample	Respondents
Year One	98	89	44 (49.4%)
Year Two	195	172	105 (61.0%)
Year Three	193	193	117 (60.6%)
Total Participant Surveys	**486**	**454**	**266 (58.6%)**

Exhibit 9 provides a demographic profile of MAPH survey respondents.

Exhibit 9:
Demographic Profile of MAPH Survey Respondents

Category	Year One	Year Two	Year Three	Total[4]
Gender	***n (%)***	***n (%)***	***n (%)***	***n (%)***
Female	29 (65.9%)	79 (75.2%)	90 (76.9%)	198 (74.4%)
Male	15 (34.1%)	26 (24.8%)	27 (23.1%)	68 (25.6%)
Total - Gender	**44 (100.0%)**	**105 (100.0%)**	**117 (100.0%)**	**266 (100.0%)**
Race	***n (%)***	***n (%)***	***n (%)***	***n (%)***
African American	3 (7.9%)	11 (10.6%)	12 (10.9%)	26 (10.3%)
Asian or Pacific Islander	1 (2.6%)	2 (1.9%)	0 (0.0%)	3 (1.2%)
Chicano/Latino	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Native American or Eskimo	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
White (non-Hispanic)	34 (89.5%)	90 (86.5%)	98 (89.1%)	222 (88.1%)
Other	0 (0.0%)	1 (1.0%)	0 (0.0%)	1 (0.4%)
Total - Race	**38 (100.0%)**	**104 (100.0%)**	**110 (100.0%)**	**252 (100.0%)**
State	***n (%)***	***n (%)***	***n (%)***	***n (%)***
Georgia	3 (6.8%)	28 (26.7%)	21 (17.9%)	52 (19.5%)
North Carolina	13 (29.5%)	21 (20.0%)	19 (16.2%)	53 (19.9%)
South Carolina	15 (34.1%)	32 (30.5%)	43 (36.8%)	90 (33.8%)
Virginia	13 (29.5%)	24 (22.9%)	34 (29.1%)	71 (26.7%)
Total - State	**44 (100.0%)**	**105 (100.0%)**	**117 (100.0%)**	**266 (100.0%)**
Age – Average (in Years)	47.0 (n = 43)	45.2 (n = 87)	45.8 (n = 98)	45.8 (n = 228)

[4] Totals vary based on the amount of information available (e.g., not every participant provided information on their race).

As the surveys were returned, the data was reviewed and entered by the coders, using a coding scheme for each survey item, including response categories. At the outset, a supervisor at Baselice & Associates, as an indication of whether the instructions were clear and complete, performed duplication of each coder's work. Coded questionnaires then were key-entered into machine format. Throughout the coding operation and data entry processes, coders routinely proofed their own work, and a percentage of each coder's work was independently verified by supervisors. Machine edits provided the final measure of quality control during the data processing phase. These batch edits checked for invalid characters, valid ranges for each items, violation of skip patterns and proper chronology of dates, as well as any other specifications required. Preliminary frequencies also were run on all data to identify other types of checks that should be performed.

5. *Conducting observational site visits with 16 teams at public health sites in Georgia, North Carolina, South Carolina and Virginia.[5] Focus groups with participants and interviews with supervisors were carried out to explore the ability of participants to translate MAPH-acquired and MAPH-enhanced skills on the job.*

Between October 2002 and December 2002, site visits were conducted in Georgia (Atlanta-Fulton County, Rome), North Carolina (Wilkesboro, Raleigh), South Carolina (Edisto, Columbia) and Virginia (Winchester, Richmond). Two Lewin staff were at each site, one facilitating the focus group session and the other acting as the transcriber. Two-hour focus groups were conducted with MAPH teams, followed by 45 to 60-minute interviews with their supervisors. The 16 teams represented a total of 56 MAPH participants. Interviews with six supervisors were conducted during the site visits.

Focus groups were tape recorded and data was entered in the focus group protocol (**Appendix I**). Notes were taken during the supervisor interviews using the supervisor interview protocol (cited previously as **Appendix G**).

III. To what Extent have MAPH Participants Translated their Training into Revenue Enhancements for their Organization?

1. *Conducting 60-minute telephone interviews with all teams or designated team representatives from the first three program years to identify actual MAPH-related revenue by source and type, to forecast follow-on revenue likely to be generated in the foreseeable future (by 2005), to identify intangible benefits stemming from MAPH and to gain their insights regarding challenges and other factors that influence translating MAPH-acquired skills and competencies to heightened effectiveness in producing revenue. The enhanced revenue assessment also included a special focus on the impact of high levels of MAPH penetration in South Carolina.*

In order to maximize the chance of contacting at least one participant on each of the 118 teams, all MAPH participants were sent an e-mail from UNC encouraging them to participate. Approximately one week after the e-mail from UNC, all participants were sent an "enhanced revenue packet" (**Appendix J**), that included a letter encouraging participation, a worksheet to help them compute the enhanced revenue they had generated, instructions, an example and a glossary of terms.

[5] During the site visits in South Carolina, information also was gathered to address the research questions associated with the enhanced revenue assessment presented in Chapter Six.

As participants contacted Lewin about the enhanced revenue study, points of contact were identified and their assistance solicited in arranging telephone interview with their team. Individuals who did not proactively contact Lewin were contacted by phone to arrange a team interview. Those not reachable by phone were sent an e-mail and asked whether they had generated revenue. Those team members who responded to the e-mail by reporting revenue generation by any member of the team were sent a request for a team telephone interview to be coordinated by the respondent. If a team member(s) reported no generated revenue, "$0" was recorded for the team's revenue and no attempts at further contact with the team were made. For purposes of this analysis, teams that responded in this manner were considered to have completed an interview. The e-mail was sent a second time to teams that did not respond, followed by a telephone call to team members interviewed regarding Question #2 as a final attempt to determine if these teams generated revenue.

Of the 73 teams from which we obtained information regarding enhanced revenue, 29 completed interviews over the phone, 8 participated in site visit focus groups and 36 responded via e-mail that their team had generated no enhanced revenue. Twenty-five of the phone interviews were conducted with multiple team members, while four were conducted with only one team member.

Interviews with teams from all three participant years were conducted between December 2002 and March 2003. Interviews for Year One teams were held approximately two-and-a-half years after graduation, one-and-a-half years after graduation for Year Two teams and six months after for Year Three teams. Interviews were tape recorded and the information entered into the enhanced revenue team interview protocol (**Appendix K**).

The following table details the response rates for the enhanced revenue, team interviews, including those who indicated that they had no obtained no revenue.

Exhibit 10:
Enhanced Revenue Interviews, Team Participation

	Population (Teams)	Sample (Teams)	Respondents (Teams)
Year One	28	28	13 (46.4%)
Year Two	45	45	29 (64.4%)
Year Three	45	45	31 (68.9%)
Total Teams	**118**	**118**	**73 (61.9%)**

2. *Conducting 45-minute telephone interviews with supervisors from teams interviewed. Because these interviews were intended to serve as an independent benchmark to validate MAPH participant responses and to provide more senior-level perspective on the empirical and intangible benefits of MAPH training to sponsoring organizations, only supervisors from teams interviewed were contacted.*

Once teams were interviewed, attempts were made to schedule a follow-up interview with their supervisor to confirm the responses reported by teams. In many cases, team members had different supervisors. If so, the supervisor who could best respond to follow-up questions was identified and sent an e-mail referencing the enhanced revenue packet sent in December, 2002, listing members of the team interviewed and requesting a telephone interview. Supervisors who were unresponsive were called or sent e-mails two more times to schedule an interview.

Many teams included the team supervisor as a member. In these cases, supervisors' participation in the team interview served as confirmation of team responses and a follow-up interview was not scheduled.

Again, calls were placed every three or four days, recognizing supervisors' schedules may have been exceptionally busy or supervisors may have been on travel. Interviews with supervisors of participants from all three program years were conducted between February and March 2003. Notes were taken by the interviewers using the enhanced revenue supervisor interview protocol (**Appendix L**).

In total, 10 supervisors were interviewed by phone regarding enhanced revenue. These supervisors were responsible for 10 of the 29 (34.5 percent) teams interviewed by phone.

3. *Conducting observational site visits to state and local public health agencies in South Carolina to understand the tangible and intangible impact of high levels of MAPH penetration on the organizational performance of these agencies.*

Between January 2003 and March 2003, sites visits were carried out with MAPH teams in Aiken, Columbia, Conway, Florence, Greenville and Spartanburg, South Carolina. In December 2002, visits were made to teams in Edisto and Columbia, South Carolina to address research Question #2. These teams also provided information regarding enhanced revenue.

Sites were identified with assistance from the office of the MAPH state representative. These site visits were intended to learn more about the facilitators and barriers from MAPH teams that were able to generate enhanced revenue. At each site, two-hour focus groups were conducted with eight teams comprised of a total of 25 MAPH participants. Seven supervisors involved with those teams were interviewed as part of the site visits. These site visits explored the ability of participants to translate MAPH-acquired and MAPH-enhanced skills to enhanced revenue and other intangible benefits. The enhanced revenue team interview protocol (cited previously as **Appendix K)** was used to record team focus group information. Supervisor interview information was captured using the enhanced revenue supervisor interview protocol (cited previously as **Appendix L**).

IV. Limitation of Evaluation Methodology

The methodological approach used in conducting this evaluation has the following limitations:

- **Selection bias.** Team interviews conducted on-site for both the external evaluation and enhanced revenue analysis were not randomly selected. State representatives guided selection. The purpose of these site visits was not to generalize information to the entire MAPH program, but rather to identify best practices for the most successful sites to inform future marketing efforts and support MAPH program refinements.

- **Item response bias.** It is important to note that, although the overall response rates for the interviews and surveys was adequate, item responses varied because participants elected not to provide responses to particular questions. Therefore, item response percentages were computed for each variable and did not always reflect actual total number of individual interviews conducted or surveys completed.

- **Varied data collection timeline.** The period from completion of the MAPH program and evaluation data collection activities varied. For example, interview data for Year One participants was collected, roughly a year-and-a-half after their graduation from MAPH, whereas Years Two and Three participants were contacted approximately five to six months after graduation. The shortened interval between data collection for Years Two and Three participants may not have allowed these participants enough time to complete their business plans or transfer the skills learned around managing people, money and data to their work settings.

V. Protecting Human Subjects and Maintaining Confidentiality

During the course of the evaluation Lewin had procedures in place for protecting human subjects and maintaining confidentiality as follows:

- All evaluation participants were informed in advance (via letter sent one week prior to contacting them for interviews or sending surveys) that their participation was voluntary, complete confidentiality would be maintained and declining to participate would not, in any way, affect their participation in the MAPH program.

- Participant responses to interview and survey questions would be combined with those of other respondents and individual names would not be identified in any report.

- At the beginning of each telephone interview, focus group session and in the letter accompanying the surveys, participants were informed of their right to terminate the session at any point or decline to answer any specific question.

- Only our subcontractor, Baselice & Associates had access to data that could be linked to the individual participant. This was necessary in order to conduct follow-up activities. All Baselice & Associate survey staff, including coders and professional staff, signed a statement ensuring that they would maintain the confidentiality of all survey data.

VI. Data Analysis

Qualitative data gathered from interviews and focus groups was analyzed to identify patterns and emerging common themes that could be used to address the research questions posed in the evaluation. In addition, the data was used to identify interesting stories that could be used in the site visit highlights. Descriptive statistics were used to summarize and describe the survey data. Data analysis was done using SAS for Windows Release 8.01.

CHAPTER THREE: UNDERSTANDING THE UNC COLLABORATION

I. Introduction

As described above, among the three major areas of exploration encompassed within Lewin's evaluation of MAPH is an assessment of the overall effectiveness of the collaboration between the UNC schools of public health and business in developing and implementing MAPH. The methodology for this assessment is discussed in Chapter Two. Prior to placing the evaluation questions regarding the collaboration under a review lens, this chapter grounds those questions in historical and structural context by:

- describing the initial impetus for and goals of the UNC collaboration; and
- "benchmarking" the UNC collaboration's evolution and structure in relation to phases of development and activities the literature suggests historically have been associated with successful collaborative efforts.[6, 7, 8, 9]

This context shaping exploration of the history of the UNC collaboration and the extent to which it is structurally compatible with other successful collaborations is followed by results from our evaluation of the collaboration between the two schools, focusing on the three central framing questions:

1) What were the characteristics of the collaboration between the UNC schools of public health and business in planning and implementing MAPH?

2) What were the intended or unintended outcomes of the collaboration?

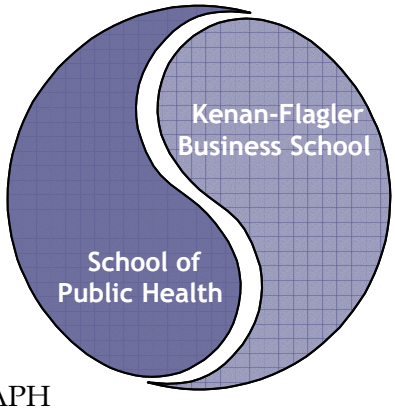
3) What were the implications of the collaboration for MAPH sustainability and/or replicability in other contexts?

II. Impetus for and Goals of the UNC Collaboration

UNC has extensive experience and a successful track record developing and conducting adult executive and management continuing education programs and is regarded as a national leader in this arena. The MAPH Request for Proposal (RFP) presented a unique opportunity for UNC to extend these capabilities beyond a single school or program through creation of a collaborative that brought together the capabilities of the schools of public health and business to enhance the management capabilities of public health managers.

[6] Taylor-Powell E, Rossing B, Geran J, *Evaluating Collaboratives: Reaching the Potential.* University of Wisconsin-System Board of Regents and University of Wisconsin-Extension, 1998.
[7] London S, *Collaboration and Community.* Paper prepared for Pew Partnership for Civic Change: November 1995.
[8] Chrislip DD, Larson CE, *Collaborative Leadership: How Citizens and Civic Leaders Can Make a Difference.* San Francisco: Jossey-Bass, 1994.
[9] Florin P, Mitchell R, Stevenson J, *Identifying Training and Technical Assistance Needs in Community Coalitions: A Developmental Approach.* Journal of Health Education Research: 1993 September; 8(3):417-32.

More than any other single factor, UNC respondents credited the impetus for creating the collaboration between the schools to a long-term strategic vision shared by the two Deans to pursue opportunities for collaboration proactively. Release of the MAPH RFP presented an opportunity for the Deans to bring this goal to fruition and establish a foundation for future UNC collaborative efforts. In addition, their sanctioning of collaboration as a high level goal empowered MAPH faculty and program staff to plan and implement a unique collaboration model within a very short period of time.



Interview respondents were asked to identify key goals of the MAPH collaboration. As depicted in **Exhibit 11**, respondents identified seven goals. Their responses suggest that collaboration was seen by stakeholders primarily as a vehicle to advance important organizational goals. These included enhancing the quality of UNC programming and reality testing the feasibility of inter-school collaboration between two schools with little previous history of working together. The collaboration also was viewed by some as an opportunity to increase UNC's national presence and credentials in this arena, leading to possible follow-on collaboration opportunities on a broader scale.

Exhibit 11:
Goals of the MAPH Collaboration
Response Results by Collaboration Goal

Goal	Responses
Creating a program better than could have been achieved by either school alone	10 (38.5%)
Testing the viability of inter-school collaboration	5 (19.2%)
Vehicle for faculty to work together	3 (11.5%)
Fulfill demands of the RFP	3 (11.5%)
Derive national presence and strengthen credentials	3 (11.5%)
Demonstrate management similarities in the private and public sectors	1 (3.9%)
Reduce potential competition between the schools	1 (3.9%)
Total	**26 (100.0%)**

One senior respondent pointed out that the collaboration's goals and objectives were not set in stone. In contrast, they were agile and flexible, able to respond quickly to resolve problems and to recognize opportunities. This feature of the collaboration model proved effective when the program was faced with the need to plan and carry out program activities for the initial team of MAPH participants shortly after receiving the contract award and rapidly modify certain areas of the curriculum after the first year of MAPH participants completed their on-site training.

III. Phases of MAPH Collaborative Development

Lewin gathered information from a large pool of stakeholders at UNC and elsewhere to understand the major characteristics and evolution of the collaboration between the two schools better. These included the Deans of the two schools, MAPH faculty and program staff, sponsors and MAPH state representatives. In addition to analyzing stakeholder feedback, to round out our ability to assess the collaboration, we compared MAPH's collaborative journey

with the phases of development typically associated with successful collaborative efforts across three domains of inquiry, including:

- the experiences of MAPH in relation to three major phases of collaborative development;
- an assessment of the strength of the MAPH collaborative across 16 characteristics the literature suggests is associated with successful collaborations; and
- the extent to which the MAPH experience qualifies as a "collaboration," based on these factors.

Does MAPH Qualify as a Collaboration?

"A mutually beneficial relationship between two or more parties to achieve common goals they are more likely to achieve together than alone."

A. MAPH in Relation to Phases of Collaborative Development

Although each collaboration is unique, there is a growing body of evidence that the development of a collaboration moves through chronological phases. Each phase includes a number of tasks that enhance the functioning of the collaboration and serve as important building blocks to create the infrastructure needed to move to the next phase of development.

We examined the experiences of MAPH in relation to key tasks included within three major evolutionary phases associated with the development of successful collaboratives: 1) getting started; 2) organizing and acting on results; and 3) achieving and transforming for positive outcomes and impacts. The sources for the three major phases of successful collaborations and their associated tasks described below are previously cited research, while the experiences of the UNC collaboration in relation to these tasks are based on data synthesized from stakeholder interviews.

B. Phase One: Getting Started

The first major phase of a collaboration generally takes shape as stakeholders engage in early infrastructure building tasks. **Exhibit 12** depicts a number of these tasks and compares them to features of the MAPH collaboration as reported by program stakeholders.

Exhibit 12:
Phase One Collaboration Tasks

Phase One Tasks	MAPH Collaboration Feature
Develop relationships and understandings	▪ Strong relationship between the Deans. ▪ Philosophical commitment to inter-school collaboration.
Develop working procedures and guidelines	▪ Few formalized guidelines due to speed of implementation. ▪ Rely on fluidity, "flexibility and agility" to recognize opportunities and resolve problems.
Develop goals and expected outcomes	▪ Clearly articulated collaborative goals, including: - Sharing expertise and building bridge for faculty to work together - Testing viability of inter-school collaboration - Fulfilling RFP demands - Achieving heightened national presence ▪ Expected outcomes also were clear, including: - Train 600 professionals in three years - Expand potential for other collaborations
Specify indicators to measure collaboration outcomes	▪ Discussed evaluation plans in proposal ▪ Internal evaluation staff and plan evolved over time
Create structure and clarify leadership	▪ Structure and leadership clearly defined ▪ Committees formed, staff hired and program office established

Acknowledging the uniqueness of individual collaborations, when viewed in relation to the early formative tasks typically required to build a foundation for future success, respondents rated the MAPH collaborative highly. Development of evaluation measures and processes lagged during this formative phase, but were established and refined later as the internal evaluator position solidified, and they have become an integral component of the collaboration.

C. Phase Two: Organizing and Acting for Results

The second major phase of collaborative development focuses on creating a more formal structure to sustain the direction of the collaboration. **Exhibit 13** summarizes a number of related tasks in relation to activities carried out by MAPH.

Exhibit 13:
Phase Two Collaboration Tasks

Phase Two Tasks	MAPH Collaboration Feature
Secure resources and staffing to carry out the collaboration	▪ Both schools collaborated to secure MAPH funding. ▪ Senior-level faculty were recruited from both schools. ▪ A position was created at the school of public health to focus on collaboration opportunities.
Develop an action plan	▪ Proposal work plan guided project implementation. ▪ Stand-alone work plan or other formal structure was not seen as necessary.
Establish communications systems	▪ Established ongoing internal communications system featuring: - Faculty meetings - Program committee meetings - Extensive use of e-mail
Initiate implementation activities	▪ MAPH Year One began training at UNC only 4.5 months after contract award.

D. Phase Three: Achieving and Transforming

After moving through the more formative Phases One and Two, collaboratives focus on achieving positive outcomes and longer-term impacts during their more mature Phase Three stage. This includes fulfilling or making substantial progress toward meeting the collaborative vision and goals. In the case of MAPH, this also included heightened emphasis on integrating collaborative projects with community partners to foster changes beyond the walls of participating public health organizations.

Exhibit 14:
Phase Three Collaboration Tasks

Phase Three Tasks	MAPH Collaboration Feature
Measure collaboration outcomes and impacts	▪ Successfully trained 600 participants in four years. ▪ Outcomes evaluation initially was challenging: - Struggled during first year to design measures of organizational change - After first year, changed to measurement of individual, not team change - New internal evaluator hired ▪ Better structured and targeted year two evaluation. ▪ External evaluation funded in 2001 to assess broader outcomes and impacts of MAPH.
Ensure commitment to continuous quality improvements	▪ On-going quality improvement has been a collaboration priority: - Continual course refinement to ensure relevance to participants - Other program changes between years, in response to participant/sponsor feedback
Develop/implement sustainability strategy	▪ Collaborative process to develop sustainability strategy is underway: - Many meetings held - Extensive internal debate regarding potential models - Report developed

IV. MAPH in Relation to Characteristics of Successful Collaborations

This final comparative profile of collaborative development examined MAPH in relation to 16 factors that research suggests influence the success of a collaboration. These factors were converted into an assessment tool, or Collaborative Functioning Scale. Key UNC stakeholders, including the Deans, MAPH teaching faculty and program staff were asked to rate MAPH in relation to each success factor on a scale of "1" (lowest) through "7" (highest). The resulting profile of highest and lowest scoring success factors is presented in **Exhibits 15 and 16** below.

Exhibit 15:
Summary of MAPH Survey Results by Collaboration Success Factor
Eight Highest Scoring Success Factors
(n = 12)

Success Factor	Score
Supportive Political and Social Climate	6.17
Well Developed Work Plans	6.17
Successful Conflict Management	6.17
Open External Communication	6.00
Sufficient Funding and Resources	5.91
Strong Relationships/Trust	5.83
Low Opportunity Costs	5.83
Shared Vision	5.75
Strong Individual Commitment	5.75
Average Score	**5.95**

Exhibit 16:
Summary of MAPH Survey Results by Collaboration Success Factor
Eight Lowest Scoring Success Factors
(n = 12)

Success Factor	Score
Effective Leadership	5.67
Appropriate Involvement by Each School	5.67
Goals and Objectives Well Understood	5.54
Effective Decision-making Procedures	5.17
Effective Internal Communication	5.00
Clear Understanding of Individual Roles	4.75
History of Collaboration	3.38
Average Score	**5.03**

Results of this exercise indicated that, overall, stakeholders rated the UNC collaboration highly across most of the 16 factors associated with successful collaborations. The highest rated factors included successful conflict resolution, well developed work plans and a favorable political and social environment within which to develop the collaboration. The lowest rated factors included little history of collaboration and lack of clarity among members of the collaboration regarding individual roles and responsibilities.

These findings and themes generally are consistent with the interview results presented below, but differ in several respects. For example, effective external communication received a high score from UNC stakeholders participating in the Collaborative Functioning Scale exercise, but was not explicitly highlighted as an important collaboration factor during our interviews with a larger subset of program stakeholders. This may be a framing issue, as interviewees noted the responsiveness of collaborative members to the input of important external stakeholders, including state representatives and sponsors, but did not characterize these interactions as "external communication."

V. Extent to which MAPH Qualifies as a Collaboration

To understand the nature and strength of the UNC collaboration better, we compared the features of MAPH, as described by program stakeholders, to those commonly observed in most successful collaborative initiatives. We also compared MAPH with several other more loosely organized and less intense types of joint efforts among parties, including cooperation and coordination. **Exhibit 17** summarizes the distinguishing characteristics of each.

Within this summary framework, collaboration represents the endpoint of a continuum of increasing intensity of effort, beginning with cooperation and moving through coordination. Items with check marks next to them are the features that interview respondents associated most strongly with the UNC MAPH collaboration.

Exhibit 17:
The Collaboration Continuum

Cooperation	Coordination	Collaboration
▪ Shorter-term ▪ Informal ▪ No clearly defined mission, structure or planning effort ▪ Information sharing about subject at hand only ▪ Independent authority ▪ Separate resources	✓ More formal relationships ▪ Understanding of missions ▪ Longer-term interaction around a specific effort ▪ Some planning and division of roles ▪ Opens channels of communication ▪ Separate authority, but increased risk ▪ Power may be an issue ✓ Resources made available ▪ Rewards are shared	▪ Durable and pervasive relationships ✓ Separate organizations into new structure with full commitment to a common mission ✓ Comprehensive planning and well-defined communication ✓ Structure determines authority ✓ Greater risk ▪ Power is an issue ✓ Partners jointly secure resources and share rewards

MAPH shares many more of the characteristics of a "classic" collaboration than it does with more loosely knit and less intense relationships between parties based on mutual cooperation and coordination of efforts. As a result, the preponderance of available evidence supports classifying the MAPH experience as a collaboration.

VI. Key Characteristics of the UNC Collaboration

When examined in relation to the phases of collaborative development and the factors that influence successful collaboration efforts, the MAPH collaboration was viewed as a success by both MAPH and other informed sources familiar with the collaboration's outcomes, including program sponsors and state representatives.

Exhibit 18 summarizes responses when stakeholders were asked to describe the single most important characteristic influencing the success of the MAPH collaboration. Most respondents pointed to strong leadership, followed by the cultural compatibility of the two schools.

Exhibit 18:
MAPH Collaboration's Most Important Success Factor
(n = 26)

Most Important Success Factor	Response
Common vision and support from Deans	9 (34.6%)
Strong program leaders	6 (23.1%)
Culture/ability of schools to work together	4 (15.3%)
Overall leadership	3 (11.5%)
Quality of faculty	2 (7.7%)
Presence of a quality improvement process	1 (3.9%)
Limited risk	1 (3.9%)
Total	**26 (100.0%)**

Based on these findings and other respondent feedback, we examined in more detail several related factors that have influenced the success of the UNC collaboration. These included:

- Organizational culture;
- Leadership;
- Decision-making;
- Conflict resolution; and
- Role of the MAPH state representatives.

A. Organizational Culture

The presence of compatible organizational cultures has been identified as a key success factor for collaborative initiatives. Until recently, few opportunities arose at UNC, or elsewhere, for the organizational cultures of public health and business schools to interact effectively. Contributing factors included perceptions of high opportunity costs among business school faculty and beliefs by stakeholders in both schools that their respective cultures may create barriers across which fruitful collaboration may be difficult.

> *"There is commonality in the organizational cultures of the two schools, including a high emphasis on quality instruction and common leadership vision between the Deans."*
>
> *- UNC Respondent*

The MAPH collaboration has proven to be a notable exception to these perceptions. Although UNC interviewees reported observing differences in organizational culture, with the school of public health seen as more altruistic and public service-oriented and the business school more entrepreneurial and market driven, they overwhelmingly agreed that these differences did not negatively affect the collaboration between the two schools.

Respondents pointed to three major factors that neutralized any potential negative effects on the collaboration stemming from cultural issues. These included:

- a strong, long-standing relationship between the Deans, which included a shared vision for the collaboration. Their supportive advocacy and influence also helped instill a positive political and social climate at UNC for creating and nurturing MAPH collaborative efforts;

- strong, performance-oriented program champions at each school, who established an excellent working relationship, understood both public health and business perspectives and were able to identify and quickly resolve issues before major problems arose; and

- similarities between the cultures of the Kenan-Flagler School of Business and the Department of Health Policy and Administration, which represents the UNC School of Public Health in carrying out the MAPH collaboration. UNC respondents reported that the cultural compatibility between these entities, including common perspectives regarding business and management training, helped facilitate the successful teaming of faculty from the two schools. Several UNC respondents also reported that the collaboration would have been more challenging, had other departments in the school of public health been involved.

Perceptions that the schools shared a high level of cultural compatibility carried over to MAPH participants. Many agreed that the pairing of faculty enriched the program and noted that they were unable to distinguish during classroom sessions which school teaching faculty represented.

These factors also appear to have strengthened the level of trust between the two schools. Respondents reported that, with the exception of establishing a uniform payment structure for faculty, there were few formal policies or agreements put in place to govern the workings of the collaboration. Instead, due in part to the required speed of program development and implementation, the parties relied largely on informal joint understandings supported by mutual respect and trust.

B. Leadership

All respondents agreed that strong leadership is a key success factor for any collaborative initiative of the magnitude and with the unique features of MAPH. Strong leadership commitment from both the Deans and senior program staff from both schools was needed to, "speak the language of all parties," "champion the cause" and "push the work forward."

While many factors influenced MAPH, strong, consistent leadership from both schools may be the program's single most important success factor, as it overarches many of the characteristics essential to achieving the collaboration's major goals. Virtually all UNC respondents reported that MAPH leadership at every level was very strong, energetic and committed to success.

> *"This would not have happened without the Deans, and I admire the Kenan-Flagler Dean for doing this, even though its not a money maker."*
>
> *- Member of the MAPH Faculty*

Consistent commitment from both Deans was essential to influence senior faculty participation and empower program staff. Senior MAPH program staff also were seen as flexible, respectful of each others needs, willing to take prudent risks, committed to continued learning and improvement and able to rapidly identify and resolve issues.

The responsiveness to input from sponsors and participants by the Deans and senior program staff regarding on-going program refinements is further supporting evidence of leadership effectiveness. MAPH participants noted that the willingness of program staff to adopt a continuous quality improvement approach to refining and customizing program components enhanced its relevance and effectiveness.

C. Decision-making

One hallmark of successful collaborations is the presence of effective decision-making structures and procedures that establish a balance between efficiency and inclusiveness. UNC respondents reported that the MAPH decision-making process is efficient, with the Deans, program leaders, staff and several key faculty members playing central roles. The decision-making process generally is carried out by program staff and key faculty members, with recommendations around major decisions formulated by the two program heads and forwarded to the Deans for approval.

While only a limited number of program stakeholders played key roles, feedback from MAPH faculty suggested that this process was seen as appropriate. Faculty members reported no shortage of opportunities to provide input to decision-making through committee participation, or through informal access to decision-makers, and felt that their interests were well represented by faculty members who played central decision-making roles.

Another point of evidence regarding the ability of the decision-making process to achieve a balance between efficiency and inclusiveness was the perception of less senior participants that decisions were made after debate and opportunities for all perspectives to be heard and weighed.

D. Conflict Resolution

> *"Solutions to problems are arrived at through compromise and a willingness to listen to all sides with 'winning' based on 'wise counsel'."*
>
> *- Member of the MAPH Faculty*

Conflict is an expected element of any collaboration. Typical sources of conflict in collaborations include low trust levels, vague vision and focus, ambiguous desired results and strategies and lack of clear authority. Seven of 17 UNC respondents reported that conflict has not surfaced in the MAPH collaboration. They noted that, although disagreements may have existed, they were resolved in a timely manner by program leaders before escalating to the conflict stage. As a result of prompt intervention, respondents did not perceive such disagreements as conflict.

Typical sources of conflict reported by other respondents largely were related to issues affecting MAPH faculty. These included:

- resistance by some faculty to carrying out major revisions to established program content to meet the unique needs of participants and address the concerns of program sponsors;
- failure of several early pairings for faculty co-teaching; and
- occasional conflict regarding selection of faculty to teach in the program.

While acknowledging these areas of conflict, stakeholders pointed out that the issues were relatively minor when viewed in the larger context of the program, did not impair the operation of MAPH and that it was realistic to expect some conflict in any large collaborative effort among parties without an extensive history of working together.

E. Role of the State Representatives

Although not directly involved in the UNC inter-school collaboration, MAPH state representatives have served as critical links, bridging the program and its stakeholders at UNC and the target market of public health professionals throughout the four demonstration states. Each of these senior-level public health professionals played an important role since the early planning stages by writing letters of support for UNC's application, marketing the program to state and local public health agencies and recruiting applicants. In addition, they helped to determine which public health staff in their states fulfilled MAPH requirements and to provide input critical to shaping the recruitment and team selection process, based on the unique characteristics of each state's public health infrastructure and target market.

State representatives also attended MAPH advisory committee meetings and program graduation ceremonies, where they had the opportunity to interact with colleagues from other states, UNC program staff and sponsors and to provide input to help maximize the program's continued relevance to public health employees.

In general, state representatives reported being very pleased with their participation in the program and found it very rewarding to see the results of the program in their respective states. One, however, noted that in their current capacities, they have limited interaction with members of the collaboration and may be an underutilized resource. This respondent suggested that enhanced communication with the advisory team and faculty could improve program responsiveness to the needs of MAPH participants and provide support for encouraging community partners to attend the program. Others, however, felt that their current level of commitment was appropriate, and that they would be over extended if their responsibilities were expanded.

VII. Outcomes of the MAPH Collaboration

We interviewed 26 key MAPH stakeholders about their experiences throughout the evolution of the MAPH collaboration and synthesized their feedback regarding outcomes to date across five areas of inquiry, beginning by profiling the extent to which initial stakeholder expectations of the collaboration have been met. This is followed by describing:

- challenges encountered and MAPH strategies for addressing them;
- the most and least useful features of the collaboration;
- perceived benefits of the collaboration by stakeholder type; and
- lessons learned from this collaboration experience.

A. Extent to which Expectations of the Collaboration have been Met

> *"My personal expectations were exceeded. I had not thought that our efforts with this program would lead to the school winning a grant to carry out a program here that had been housed on the West Coast for 10 years."*
>
> *- Member of the MAPH Faculty*

There was general consensus among collaboration stakeholders that, for the most part, their personal and professional expectations for the collaboration were met. Several faculty members from the schools of business and public health felt it was a very interesting experience to learn the issues and challenges faced by public health professionals, including their lack of flexibility in selecting work activities and burdensome legal and regulatory requirements. Others noted that their professional expectations were met by being able to co-teach with faculty from another school and interact with representatives from local public health departments.

Several sponsors were very pleased that MAPH was implemented on time, on budget and met a key goal of providing high quality management training to 600 participants. They believed these positive outcomes will serve the program well in the future in terms of broader recognition and marketing.

Respondents reported mixed expectations regarding program sustainability. One sponsor believed that creating a sustainable and/or replicable model would exceed sponsor expectations, while another hoped that MAPH outcomes would stimulate demand and that the program would be replicated nationally by UNC or the federal government.

One faculty member expressed some disappointment that closer working relations between schools have not been formalized through vehicles such as joint faculty appointments or growth in joint MHA-MBA programs.

B. Challenges Encountered and MAPH Strategies for Addressing Them

Consistent with the experiences of virtually all collaborative initiatives, MAPH encountered a number of challenges in fielding the management training program and deployed a variety of strategies to address them. Respondents were thoughtful in their assessment of challenges facing the collaboration, but frequently noted that many were factors inherent in the formative phases of any collaborative venture carried out in academic settings and that the collaboration partners responded rapidly and effectively to address most issues.

Further supporting evidence for a lack of significant collaboration challenges lies in the number of UNC interviewees (5) who reported observing no challenges, while several others (5) reported only minimal challenges. One sponsor both was surprised and delighted at how well the collaboration addressed challenges, citing in particular the ability of the schools to quickly incorporate the values, norms and motivators for participants into the program.

Challenges or issues of concern and MAPH strategies for addressing them are summarized below in **Exhibit 19**.

Exhibit 19:
MAPH Challenges and Corrective Strategies

Stakeholder	Challenge/Concern	MAPH Response
MAPH Sponsors	▪ Unequal visibility among the schools. Some concern was expressed in the early stages of the collaboration regarding the ability of the two schools to function as equal partners.	▪ Strong, collaborative leadership from Deans and program champions relieved concerns.
	▪ Competition for Deans' attention. Early concern that competing priorities would diminish leadership presence.	▪ Deans' commitment has been unwavering.
	▪ Effective communication with MAPH participants. Early concerns regarding ability of the schools to create a language that cuts across both business and public health disciplines.	▪ Adult education experience and teaming of faculty from both schools helped integrate business and public health "languages."
MAPH Faculty	▪ Efficiency of co-teaching. Early concern that, although co-teaching produces better outcomes, it is more time consuming and inefficient.	▪ Concern diminished as faculty worked well together and on-site teaching took place during off-peak periods of the year.
MAPH Program Staff	▪ Reconciling business and public health orientations during the curriculum development process.	▪ Challenge eased by a history of both schools carrying out high quality executive education.
	▪ Lack of formal program evaluation component.	▪ Addressed after Year One by recruiting a new internal evaluator.
State Representatives	▪ Ability of program staff to maintain current levels of energy and program quality. Concern that current staff may be spread too thin if other opportunities arise.	▪ UNC is finalizing a sustainability plan that includes a leadership succession plan.

C. Most and Least Useful Features of the Collaboration

The two most frequently cited "most useful features" of the collaboration by UNC faculty were: 1) the opportunity to interact with colleagues in another school and with the MAPH program staff, who maintained an open atmosphere and were available for consultation; and 2) to meet and teach an enthusiastic and motivated group of students. Others pointed to MAPH as the leading edge of an innovation or diffusion curve. Respondents reported no "least useful" features of the MAPH collaboration.

D. Perceived Benefits of the MAPH Collaboration

A hallmark of successful collaborations is the perception among key participants that they have received value or benefit from participating. This value equation may take different forms, depending on stakeholder goals and objectives. They include tangible benefits, such as access to resources otherwise unavailable, or more intangible values, including empowering participants by capitalizing and building on their individual strengths.

MAPH stakeholders identified a number of benefits that have accrued to date, both to MAPH as a whole and to specific members of the MAPH collaboration. Benefits to MAPH as a whole include:

> *"It worked! It was a high quality educational experience. On a scale of '1' to '10', I rate it a '9.5'."*
>
> *- Member of the MAPH Faculty*

- the success of MAPH, as one among the strongest public health-business collaborations in the nation, to be a powerful influence on institutionalizing collaboration at UNC;
- MAPH's ability to help spawn other collaborative projects between the schools of public health and business, including being awarded the National Public Health Leadership Institute grant, which had been housed on the West Coast for the past 10 years;
- a heightened regional and national exposure to potential public health and business school applicants and benefactors; and
- an elevation of the school's national reputation in executive education and workforce development. For example, stakeholders reported that the CDC views MAPH as a key resource for public health workforce development.

In addition to the more global and encompassing benefits that accrued as a whole, stakeholders also pointed to the value proposition that the MAPH collaboration has provided for the schools of public health and business and for the participants. These are summarized in **Exhibit 20** below.

Exhibit 20:
Benefits to MAPH Stakeholders from the Collaboration

Stakeholder Group	Benefits from MAPH Collaboration
Business School Faculty	▪ Faculty exposed to the public health sector. ▪ Enhanced the school's reputation internally and externally. ▪ Served as a solid foundation for future collaboration with the school of public health. ▪ Demonstrated seriousness about contributing to societal welfare.
School of Public Health Faculty	▪ Faculty enhanced their executive education teaching skills. ▪ Enhanced the school's national and regional reputation.
MAPH Participants	▪ Benefited from quality of education, superior to what either school could offer alone. ▪ Business plan component of curriculum led to enhanced revenue for some sponsoring organizations. ▪ Received both business and public health perspectives. ▪ Increased the credibility and value of participants at the workplace.

E. Lessons Learned from the Collaboration Experience

This examination of outcomes stemming from the MAPH collaboration concludes by presenting a distillation of the eight most important lessons that stakeholders reported learning from the

MAPH collaboration experience. Most collaboration participants agreed that these "lessons learned" can be applied to guide future UNC collaboration efforts and should help inform planning for sustainability and potential future replication of MAPH:

- Regular communication among all collaboration participants is important;
- Buy-in at the top level of leadership is a critical collaboration success factor;
- The opportunity costs of participating in the collaboration must be acceptable;
- The collaboration should be logistically streamlined to maximize efficiency;
- Early team building and division of roles is important;
- A clear mandate from sponsors is a precondition for effective, early planning and infrastructure building;
- An emphasis on continuous learning and quality improvement maximizes program relevance and effectiveness; and
- Flexibility and adaptability in collaboration leadership and structure create an organic planning process that allows participants to respond quickly to resolve problems and recognize and act on opportunities.

VIII. Planning for Sustainability

The MAPH collaboration remains relatively young. During its first four years of funding, the collaborative successfully navigated through the major phases of collaborative development and scored highly on factors that influence success in this arena.

An important future outcome will be the UNC collaboration's ability to ensure its sustainability within a challenging environment that is rapidly evolving and may or may not include the current program sponsors. As a result, establishing a structure to sustain and build on collaborative activities to date is a critical future goal of the program.

To elaborate, **Exhibit 21** summarizes feedback from the 26 UNC and other collaboration stakeholders interviewed regarding major factors likely to influence the future sustainability of the MAPH collaboration.

Exhibit 21:
Factors which Influence the Sustainability of the MAPH Collaboration
(n = 26)

Factor	Response
Funding/Program Cost	19 (73.1%)
Maintaining Quality/Relevance	10 (38.5%)
Committed Leadership	5 (19.2%)
Faculty/Staff Opportunity Costs	5 (19.2%)
Reputation as Unique Model	3 (11.5%)
Thoughtful Planning	2 (7.7%)
Infrastructure	2 (7.7%)
State/Local Support	2 (7.7%)
Trust and Shared Vision	1 (3.8%)
Applicant Pool	1 (3.8%)
Flexibility	1 (3.8%)

** Percentage does not sum to 100% because respondents could identify more than one factor.*

The most critical factors or challenges cited for sustainability planning include cost of the program, securing future funding and maintaining the quality and relevance of MAPH program components. The single greatest challenge for the collaboration seen by program staff and faculty was the ability to secure ongoing funding to support a "Cadillac" model program.

Since continued support from current sponsors is seen as uncertain, a key challenge is to develop a funding model that appeals to both the public and private sectors, without compromising program quality. To advance this goal, sponsors and Deans highlighted the need for a plan that:

- develops through an organic, not static, planning process;
- presents evidence documenting the impact of the program;
- includes a strong marketing component; and
- identifies a succession strategy.

Stakeholders reinforced the importance of a comprehensive sustainability plan that advances these goals by effectively mobilizing members of the MAPH collaborative and reaches out beyond the walls of UNC to target key potential external partners.

Internally, faculty stressed the need for sustainability planning to take into account future opportunity costs and differing incentives that may influence the willingness of faculty to continue their current level of effort. There is a perception among some faculty that the business school operates in a larger universe than its public health counterpart that may include more opportunities and competing priorities. As a result, there is a perceived risk that opportunity costs may become too large for current business school faculty to continue participating in the collaboration at some point in the future.

Respondents also stressed the need to ensure continuity of committed leadership through development of a succession strategy. Both Deans and program staff pointed to the need for credible leadership that maintains the focus and commitment of both schools as other factors, including faculty, curriculum, supporting technology, students and sponsors, change over time.

Sponsors and state representatives pointed to the growing nationwide reputation of MAPH as a unique, innovative workforce development initiative and feel that this may present opportunities for UNC to capitalize on the program's visibility. Core elements of an externally-directed sustainability strategy recommended by many respondents include:

- documenting the impact of the program through an outcomes evaluation in order to demonstrate value to potential funders. This includes quantifying benefits, costs and how MAPH has improved the ability of participants to apply newly learned skills and competencies in a public health environment faced with new challenges, including budget cuts and heightened emphasis on bioterrorism response and disease surveillance.
- reaching out to elicit testimonials from graduates who have been able to apply MAPH skill sets and competencies effectively.
- marketing to legislators and potential public and private sector community partners within the demonstration states.

IX. Planning for MAPH Replicability

Replicating the MAPH program model beyond the four states was a goal shared by many participants in the MAPH collaboration. **Exhibit 22** presents feedback from 26 UNC and other collaboration stakeholders regarding major factors likely to influence future replication of MAPH.

Exhibit 22:
Factors which Influence the Replicability of MAPH
(n = 26)

Factor	Response
Maintaining Quality	9 (34.6%)
Funding	9 (34.6%)
Organizational Culture	4 (15.4%)
Demand for the Program	4 (15.4%)
Leadership Commitment	3 (11.5%)
Strong Evidence of Value	2 (7.7%)
Understanding Geographic Diversity	2 (7.7%)
Capacity to Deliver	2 (7.7%)
Speed	1 (3.8%)

** Percentage does not sum to 100% because respondents could identify more than one factor.*

Although many of the success factors and strategies associated with planning for program sustainability also apply to more widespread replication of the collaboration model, stakeholder perceptions regarding the ranking and emphasis of priorities varied somewhat. Perceptions also varied regarding the feasibility of replicating the MAPH collaboration model beyond UNC.

Stakeholders saw the ability to maintain high quality in program curriculum, teaching and supportive technology to be as important as funding issues in influencing successful program replication. Related challenges that may complicate successful replication efforts include:

- difficulty in maintaining consistent quality of faculty across all disciplines;
- difficulties in requiring other universities to adhere to the UNC collaborative model; and
- difficulty ensuring that the current quality of distance learning technology and curriculum will be maintained.

As a result, perceptions varied regarding the feasibility of replicating the MAPH collaboration model. For example, stakeholders were split regarding the practicality of creating a training group within UNC's business school to replicate MAPH as a franchisable "Carolina brand" model that captures the qualities of this collaboration in other university settings. Stakeholders also expressed concerns regarding the desirability of having the model replicated by others in the context of maintaining quality. Other issues raised by UNC collaborators and sponsors included:

- the importance of establishing compatible relationships with other organizational cultures; and
- the need to carry out further background preparation to ensure that the program is relevant to public health employees in other states.

X. Conclusion

Stakeholders familiar with the evolution of the UNC collaboration overwhelmingly agreed that, measured against its key goals, the collaborative is a success and fulfills a unique niche both within UNC and the broader public health arena. Looking into the future, stakeholder feedback suggests that success in sustaining and/or replicating the MAPH collaboration model is likely to require a more expansive level of effort. Key enablers for future success include:

- a level of sustained Dean and program staff energy and commitment equaling or exceeding that demonstrated during planning and implementation of MAPH;
- the ability to instill more structure into the collaboration planning and marketing processes while retaining sufficient fluidity and flexibility to react quickly to market opportunities and threats;
- the ability of UNC to maintain equilibrium between available capacity in the schools of public health and business to support internal and external demand;
- the ability to customize the scale of replication models to match available funding without compromising quality; and
- the ability to maintain a favorable corporate culture that supports inter-school collaboration.

CHAPTER FOUR: PARTICIPANT EXPERIENCES WITH MAPH PROGRAM COMPONENTS

I. Introduction

In order to assess the extent to which participants have been able to apply what they learned at MAPH on the job, it is necessary to better understand to what public health representatives were exposed through the program that was intended for follow-on application. MAPH use a number of different educational components to provide new skills and networking opportunities for participants. The use of multiple program components is intended to provide exposure to a quality adult education experience, highly focused individual and team-based learning and multiple forums in which to apply these experiences.

Throughout the first three years of the program, a number of changes and refinements were made to each of the components, stemming from sponsor, MAPH faculty and participant feedback. For example, after the first year, the focus of all three components changed from organizational improvement to a gain in competencies for individuals. In keeping with this overarching change, the curriculum was modified to focus on the central issues of managing people, data and money. As a result, a number of curriculum features, such as data management and finance, were revised to meet this new focus. Other program refinements based on stakeholder feedback included revision of the financial skills curriculum and enhanced roles for business plan advisors.[10] Reflecting the success of this diversified approach to adult learning, about 95 percent of participants felt "somewhat" to "extremely" well prepared to participate in MAPH.

Participants responded to eight program components that, together, served as vehicles for providing the skills and competencies intended for application in public health and broader community settings (see **Appendix H**).

The remainder of this chapter profiles participant experiences with these core components of the MAPH curriculum in greater detail by examining: 1) participant feedback regarding the most and least useful program components; 2) participant experiences with on-site training activities at MAPH; 3) the business plan experience, including facilitators and barriers to implementation; and 4) public health representative feedback regarding the applicability and utility of distance learning.

II. Most and Least Useful MAPH Program Components

The evaluation asked MAPH participants to rank the three most useful and the three least useful program components. The three components with the greatest number of responses in each category are presented in **Exhibit 23**.

[10] Year Three Annual Progress Report: Management Academy for Public Health. CDC Foundation. February 12, 2001.

Exhibit 23:
Most and Least Useful MAPH Program Components

Most Useful Components	Most Useful (n=264)	2nd Most Useful (n=264)	3rd Most Useful (n=263)
On-site Training Sessions	147 (55.7%)	56 (21.2%)	31 (11.8%)
Business Plan Experience	59 (22.3%)	95 (36.0%)	48 (18.3%)
Working in Teams	24 (9.1%)	36 (13.6%)	42 (16.0%)
Least Useful Components	**Least Useful (n=261)**	**2nd Least Useful (n=254)**	**3rd Least Useful (n=243)**
Distance Learning Activities	125 (47.9%)	34 (13.4%)	44 (18.1%)
Individual Development Plan	41 (15.7%)	51 (20.1%)	49 (20.2%)
360O Feedback Sessions	26 (10.0%)	69 (27.2%)	37 (15.2%)

In general, participants speak most highly of the on-site training sessions and the experience of developing a business plan. Although both presented challenges, these two components provided participants with a new set of skills and a great deal more confidence in their management abilities. In contrast, participants faced numerous challenges with the distance learning component, including accessing information and perceptions of "dry and unapproachable material."

III. On-site Training Sessions

MAPH uses on-site training sessions as the foundation for participant skills training. During the three, multi-day class sessions, participants are exposed to a number of skills designed to expand their knowledge of business practices and behaviors, as well as the ability to apply this heightened expertise within the public health arena. As detailed in Chapter Three, classes are taught by faculty from both the UNC School of Public Health and the Kenan-Flagler School of Business. Participants are expected to obtain skills that later will be enhanced and applied in other settings, including their public health agencies and communities.

In general, participants described the on-site training as very positive. They were able to get outside the walls of their office into an environment that was much more conducive to adult learning and, as a result, were able to develop new insights and a new knowledge base.

> *"The on-site training was phenomenal. We were treated very well and made to feel important. The quality of the teachers, facilities and the food was unbelievable. They really made the individual feel special."*
>
> *- Year One MAPH Participant*

Participants gave much of the credit to the faculty at UNC for the high level of quality at the on-site training sessions. Many had not been expecting such high-caliber professors and appreciated having access to them. The co-teaching component of the program was praised highly for its ability to integrate business and public health approaches and practices.

For some, the on-site training also fostered a sense of camaraderie, both with members of their own team and participants from other states. In some cases, this helped to facilitate networking opportunities. Many continue to maintain a relationship with other participants, both inside and outside their state. They reported being able to communicate more effectively using the

business language learned at MAPH when they see each other at conferences and state meetings. The networking also gave individuals new sources of information for how to address problems they currently face, particularly with regard to revenue generation and response to the fiscal crises faced by many public health departments.

In addition to increasing their knowledge base, many participants felt that they had grown professionally and as managers, because of the activities at the on-site training. Some cited the 360º feedback as a help in examining their professional strengths and weaknesses. Using this information, participants were able to understand how they work and manage staff and to make appropriate changes. Many participants mentioned that, because of the introspection elicited by the feedback, they began to delegate to their staffs much more effectively and provide venues to solicit their input.

Challenges and Recommendations

Despite the overall strong support for the on-site training, participants reported encountering challenges. Prior to MAPH, many participants had not attended collegiate level classes for many years and had to acclimate themselves to accommodate this learning environment. At the same time, the curriculum was designed to maximize each day participants spent at the on-site training. The result was very long class days (sometimes as long as 12 hours) for students not acclimated to this format. This was cited particularly for the finance curriculum, as public health professionals, often without backgrounds in this area, were required to attend lengthy classes and assimilate compressed material of a technical nature.

Although the MAPH training seeks to enroll mid-level public health managers and professionals, their skill levels vary considerably. Consequently, a number of participants were unprepared for some aspects of the subject matter taught during the course of the on-site training. For example, during Year One, the on-site training for skills relating to managing money was consolidated into one long class day. After feedback from participants, the length and intensity of the financial skills training was reduced. In addition, to address the issue of varying financial backgrounds among participants, financial skills training was divided into two modules:

> *"The classroom work and time commitment was intense. We were exposed to a lot of information in a short period of time. They gave a lot of work out, and many people cut corners …"*
>
> *- Year One MAPH Participant*

1) a basic module for those with little or no financial training (nicknamed "plain"); and

2) a more advanced module for those with some previous training (nicknamed "peanut").

Although some participants still described the financial training as being too advanced, most respondents agreed that this approach allowed for a better match between participant skill levels and program content.

Participants suggested that MAPH consider:

- asking future participants to provide an assessment of their skills prior to attending MAPH, to ensure that the level of material presented is aligned with students' skill levels and the short period of time available to impart new expertise; and

- allowing participants to focus their limited on-site training time to areas within the current program design that are more directly transferable to their individual work settings.

IV. Business Plans

As part of their participation in MAPH, participants are expected to develop a business plan. The business plan component gives participants a practical application of the skills they learned during both the on-site training and the distance learning. Plans developed by each team used the following approach:

1) Develop an idea on which to build a business plan;

2) Write a feasibility study and submit it to faculty at MAPH for review;

3) Write the business plan, including information on revenue generation and sustainability;

4) Present the business plan to the faculty and other participants at MAPH; and

5) Implement the business plan back in the community upon completion of MAPH.

Following the first year of the program, a number of changes were made to the business plan component:

- Teams were assigned an advisor to assist them with the development of the plan and offer constructive criticism. MAPH faculty served as advisors in the first year of the program. In subsequent years, a more structured approach was adopted. Some coaches were MBAs employed full-time by The Frank Hawkins Kenan Institute of Private Enterprise, affiliated with the Kenan-Flagler School of Business. The other coaches were doctoral students in the School of Public Health's Public Health Leadership program. These advisors also were assigned to teams much earlier in the process than was the case in Year One.

- Participants were required to review the CDC's Public Health Performance Standards during the year prior, as a means of assessing need during the business planning process.

> *"The Business Plan is vital to the program's success. It is extremely important to have the practical application of the skills as you go through the training."*
>
> *- Year One MAPH Participant*

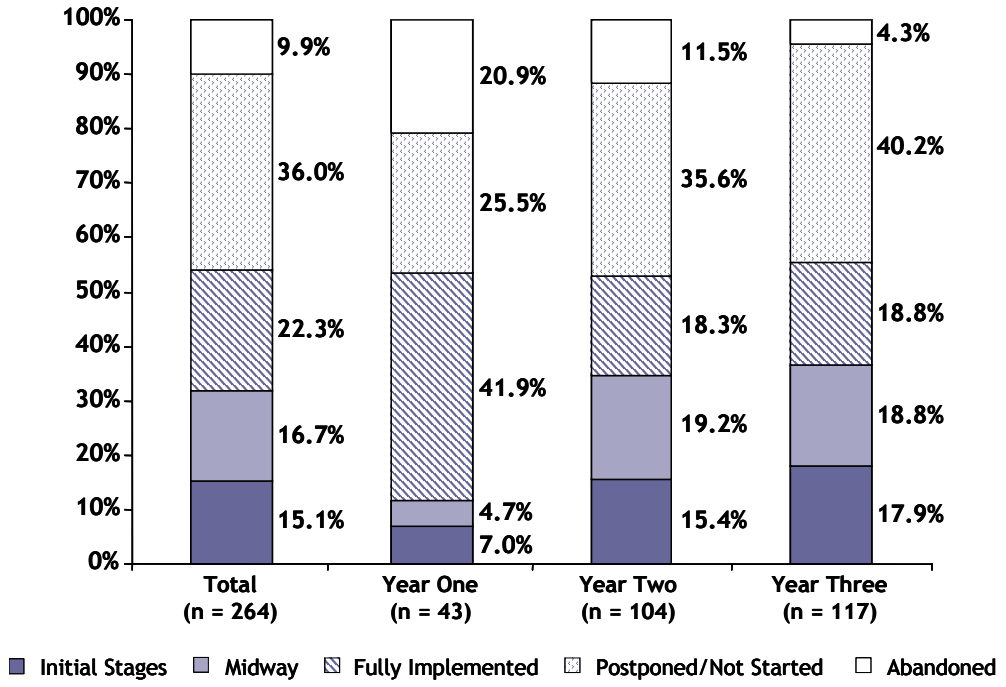
- The presence of a community partner was always a business plan requirement. In addition, beginning in 2001, teams were asked to include a community partner on their team to extend its applicability beyond their office or agency.

In general, participants reported a positive experience with business plan development. In many cases, this was their first experience developing an extensive plan and seeing it through to its completion as part of a team experience.

A. Status of Business Plan Implementation

Approximately 22 percent of all respondents indicated that their business plan had been fully implemented, with a higher level of success reported by Year One participants (approximately 42 percent). This may be attributable to these teams having more time to implement their business plans and that a higher proportion of Year One participants were in more senior positions at their organizations than other classes. **Exhibit 24** details the status of business plans.

Exhibit 24:
Status of Business Plan Implementation, by Year



B. Facilitators to Business Plan Implementation

Some MAPH teams were aided in their business plan implementation by the presence of certain "facilitators." These facilitators helped teams by providing additional avenues to reach out to communities and to improve team collaboration.

For example, participants who included a community partner on their team achieved a number of benefits from the relationship. Working with a community member gave them a new perspective on options available to their agency for expanding its effectiveness. Supervisors interviewed made similar observations, detailing stronger working relationships between the public health departments and their community partners. In one case, community partner participation in MAPH was cited by a supervisor as having a direct impact on improving access by local Hispanic residents to bi-lingual care and easing cultural barriers.

How Working with a Community Partner can Facilitate Agency Effectiveness

"Our plan changed significantly as time went on. There was a rural health care clinic in our county that had not been on stable financial ground for a long period of time. There were a number of issues with the clinic, including high turnover, improper billing and a lack of Spanish speaking staff. The clinic was in danger of being closed, which would have likely lead to a dramatic increase in traffic to the ER. For our business plan, we (the public health department) agreed to provide financial and management oversight, in return for a new emphasis on bilingual services. Because of the lack of bilingual staff, the clinic was not properly serving the large Hispanic population which had recently moved into the area. Our community partner, who attended MAPH, spoke Spanish and understood the medical needs of the Latino community. His input was critical to the successful organization and administration of the health clinic and was a demonstration of the potential value of a community partner outside of the health department. He was able to convey important information about the Latino community to the public health department, such as the fact that the Latinos are accustomed to simply going to a clinic and waiting, rather than making an appointment for a given time. Working with a community partner allowed the department to effectively understand and address the needs of their target population."

- Year Two MAPH Participant

Having a community partner in the group also provided some public health teams with new avenues for business plan activities, particularly with regard to generating enhanced revenue. Unlike public health agencies that often are legally prohibited or constrained from engaging in certain fundraising activities, community groups and not-for-profit organizations have much greater flexibility in organizing to solicit funds. As a result, many participants indicated that they planned to continue developing partnerships with outside groups and collaborate with them to design and operate programs that expand their ability to meet community need beyond what public health departments alone can achieve.

Although not the determining factor in the overall success of business plans, the role of the plan advisor also was noted as a facilitator by some teams. Where participants reported regular contact with their advisor, teams would have regular conference calls, during which advisors would review development of the business plan and provide advice and feedback, particularly on sections related to financial projections and budgeting. Participants who had this type of relationship with their advisors spoke very highly of the process and its effect on the strength of their business plans. Other participants, particularly those from Year One teams, reported lack of contact with business plan advisors hindered their ability to develop effective plans. Effectiveness of business plan advisors improved greatly by Year Two, as MAPH responded to participant feedback and strengthened this aspect of the program.

Another factor influencing business plan implementation was the criteria for team selection. **Exhibit 25** summarizes team selection criteria in relation to the degree of success implementing business plans through at least the midway stage.

Exhibit 25:
Team Selection Criteria

Team Members Selection Criteria	Percent Able to Complete a Portion of Business Plan*
Good position to work together on a specific community health project (n = 57)	21 (36.8%)
Good position to work on a specific internal management issue (n = 11)	4 (36.4%)
Staff member positions in the organization provide an opportunity to act as a natural team (n = 58)	31 (53.4%)
Individual positions (n = 49)	23 (46.9%)
Staff who were most interested (n = 58)	16 (27.6%)
Same geographic area (n = 7)	0 (0.0%)
Availability (n = 11)	2 (18.2%)

** Midway or fully implemented business plans.*

Participants who had a prior working relationship with their fellow teammates or were selected based on their individual positions made greater progress toward implementing their business plans. Conversely, those who did not work in the same office as their fellow team members experienced less success with their business plans. Between Year One and Year Three, the proportion of team members selected based on their individual positions and who were able to fully or partially implement their business plans rose from about 15 percent to 62 percent. This suggests that, over time, team selection criteria may have become more targeted toward individuals whose position facilitated business plan success. Challenges faced by teams with members from different offices included:

- the need to coalesce as a team during the MAPH training. Teams from the same office or in a good position to work together on a specific project generally had a working relationship with one another and had the opportunity to interact more frequently around their business plans.

- team member proximity to one another. Team members located in different areas added the further burden of geographic accessibility, hampering their ability to liaise and coordinate business plan activities effectively.

- lack of buy-in from multiple supervisors. Although not a widespread problem among the majority of MAPH teams, some of those with members from different offices also faced challenges achieving buy-in from multiple supervisors.

C. Barriers to Business Plan Implementation

A number of barriers impeded teams' abilities to complete their business plans. For example, teams from Year One faced much rosier financial situations at their organizations than those in later years. The impact of September 11, 2001 also placed new responsibilities on public health, while public health agencies struggle to maintain funding in the face of mounting state deficits.

In addition, success in implementing business plans often is influenced by environmental barriers. These include legal and regulatory restrictions on implementing some types of revenue generating initiatives, as well as the public health sector's susceptibility to cultural and political factors not typically encountered in service delivery or academic medicine, such as:

- long-held beliefs that interacting with the business world may be a conflict of interest for public health departments and may compromise their historic missions. Several MAPH graduates noted growing "push back" against this view due, in part, to exposure to civic entrepreneurship at MAPH as an alternative model.

- direct influence by political constituencies setting and funding program priorities.

These factors combine to restrict the types of business plans that are likely to meet success and to diminish the certainty of committed resources and time, which are critical success factors for all business plans.

MAPH teams also faced a variety of challenges in implementing their plans within their own organizations (**Exhibit 26**). Insufficient resources (including staffing, time and funding) were the primary challenges faced by respondents.

Exhibit 26:
Barriers to Business Plan Implementation, by Year

Barriers Encountered in Business Plan Implementation*	Year One	Year Two	Year Three	Total
Lack of support from agency leaders/supervisors	7 of 41 (17.1%)	14 of 98 (14.3%)	25 of 108 (23.2%)	46 of 247 (18.6%)
Too few staff	33 of 42 (78.6%)	64 of 95 (67.4%)	74 of 107 (69.2%)	171 of 244 (70.1%)
Insufficient financial resources	32 of 42 (76.2%)	71 of 98 (72.5%)	79 of 112 (70.5%)	182 of 252 (72.2%)
Lack of time	26 of 42 (61.9%)	69 of 98 (70.4%)	92 of 112 (82.1%)	187 of 252 (74.2%)
Unhelpful business plan advisor**	N/A	18 of 89 (20.2%)	8 of 102 (7.8%)	26 of 230 (11.3%)
Working within a team	1 of 40 (2.5%)	12 of 97 (12.4%)	8 of 103 (7.8%)	21 of 240 (8.8%)

** Survey respondents were asked to respond to each barrier separately. As a result, some respondents chose not to answer certain questions. Therefore, the total number of respondents for each barrier varies.*
*** There were no business plan advisors in Year One.*

These responses were consistent across program years, with one notable exception. Lack of time consistently grew as a critical challenge, as new priorities (including bioterrorism and disease surveillance responsibilities) increasingly crowded out competing priorities. Supervisors supported this finding in interviews. They also agree that staff turnover, competing priorities and the inability to raise funding were key impediments to successful business plan implementation.

> *"Because of funding problems, reorganization and lay-offs, the plan is on hold. Currently, there are too few people to launch it, but it remains a goal and hopefully, one day, it will be enacted."*
>
> *- Year Three MAPH Participant*

Participants also expressed a general difficulty completing their business plans, because of obligations to their full-time positions. Some participants pointed-out that they were given flexibility to work on their business plans, particularly if the plan dealt specifically with a priority identified by their agencies. However, almost all participants faced some level of additional burden balancing work responsibilities with MAPH.

D. Development of Business Plans Outside MAPH

The business plan program component was designed to give participants the skills to develop and implement their own business plans. The evaluation examined how successful participants have been in applying these skills to develop business plans other than the one required by MAPH.

> *"A business plan was needed to scope the various approaches to achieving our goals. It's my third project since the MAPH training where I have developed a business plan."*
>
> *- Year Two MAPH Participant*

Almost one-fifth of participants have been able to develop new business plans outside of MAPH (**Exhibit 27**). For example, participants developed business plans for projects related to tobacco cessation, creating a free standing pediatric center and conducting a fundraising event for a women's shelter.

Exhibit 27:
Ability to Develop Business Plans Outside MAPH, by Year
(n = 221)

Developed Business Plan Outside of MAPH	Year One	Year Two	Year Three	Total
Yes	12 (36.7%)	17 (23.3%)	13 (11.3%)	42 (19.0%)
No	21 (63.6%)	56 (76.7%)	102 (88.7%)	179 (81.0%)

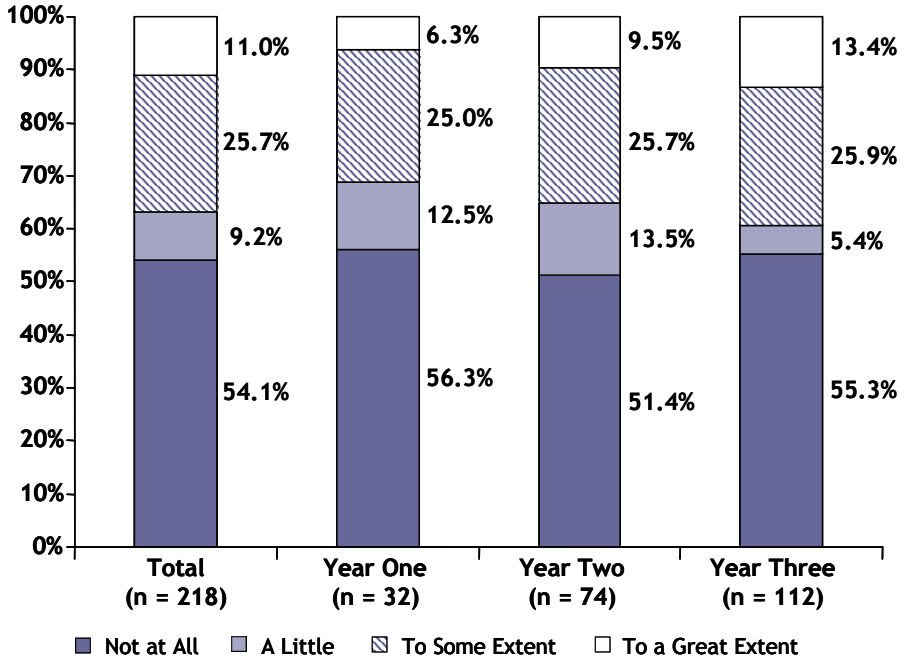
Year One participants had greater success than subsequent program years. This suggests that time may be a factor that positively influences the extent to which MAPH participants have been able to work on new business plans. These outcomes also may be influenced by the fact that a higher proportion of more senior public health managers attended MAPH during its first year compared to later program years. These higher level managers may have more authority to develop new plans. There appears to be a relationship between success implementing MAPH business plans and the ability to develop business plans for other programs. Of the 102 participants who postponed or abandoned their MAPH business plans, only about 13 percent were able to develop other business plans. Of the participants able to implement their business plans, 29 percent also were able to develop other business plans.[11]

E. Application of Business Plan Skills to a New Public Health Program

Even though participants reported limited success in developing new business plans, some did indicate that they have been able to use the skills acquired through MAPH in developing other new public health initiatives (**Exhibit 28**).

[11] While 59 participants reported implementing business plans, only 49 responded when asked if they were able to develop other business plans.

Exhibit 28:
Ability to Apply MAPH Skills to Prepare a Business Plan for a New Public Health Program



Over one-third of respondents reported being able to apply MAPH skills for a new public health program to "some" or to "a great" extent. Participants describe using business plan and other skills to:

- improve the quality of grant applications by thinking of the process in the framework of a business plan, reportedly improving their funding success rate;

- increase proficiency in presenting program information due to the experience of presenting their business plan, giving them a better understanding of the importance of having all necessary information and spelling it out in a clear and succinct manner;

> *"Prior to participating in MAPH, my budgets for grant applications were trial and error. After MAPH, and particularly after going through the business plan process, I have a much better sense of long-range planning and sustaining revenue generation over time."*
>
> *- Year Three MAPH Participant*

- perform feasibility studies for their own programs prior to developing them further, resulting in a more thoughtful approach to program design; and

- incorporate an evaluation component in their programs, consistent with the design of their original business plans.

V. Distance Learning Activities

To augment the on-site training sessions, MAPH participants were required to complete on-line course work (over the Internet). The information provided through the distance learning component was intended to give participants both enhancements to what was discussed during the on-site training and new information to keep them abreast of management principles and practices.

Respondents rated distance learning the least useful aspect of their learning experience at MAPH. Just under 50 percent of respondents considered distance learning the least useful component, and almost 80 percent listed it as one of the three least useful components.

Exhibit 29:
Usefulness of Distance Learning, by Year

	Least Useful	2nd Least Useful	3rd Least Useful
Year One	19 of 44 (43.2 %)	2 of 43 (4.7%)	10 of 40 (25.0%)
Year Two	39 of 102 (38.2%)	13 of 98 (13.3%)	22 of 96 (22.9%)
Year Three	67 of 115 (58.3%)	19 of 113 (16.8%)	12 of 107 (11.2%)

Despite the negative feedback from many participants, some offered positive perspectives. In many of these cases, participants expressed an affinity for the concept of distance learning and understood its potential for optimizing their own future learning experiences. For some, the experience with distance learning through MAPH encouraged them to seek-out other sources of distance learning. In these cases, participants by and large expressed a strong comfort level with computers and using the Internet.

Like other components of MAPH, changes were made to the distance learning component over the course of the evaluation period. Additions included a new series of data management on-line modules, a quality module and a new module to the project management course designed to help participants working in different locations. Despite these and other refinements, views regarding the usefulness of distance learning grew less favorable over time. Responses suggested the need for MAPH to examine this web-based feature more closely and to determine whether further modifications are indicated. The balance of this section profiles challenges identified by MAPH graduates seeking to use this learning resource and their recommendations for further refinements to improve its overall functionality, user friendliness and content.

A. Functionality and User Friendliness

> *"The on-line equipment made the learning difficult, as it often failed or stopped functioning properly in the middle of a module"*
>
> *- Year Three MAPH Participant*

Problems related to the functionality of the distance learning components crossed many levels of complexity. The most basic issue was connectivity. Some participants conducted distance learning activities at work where they had high-speed Internet. In these cases, participants were able to download modules quickly and efficiently. In contrast, others reviewed the modules on-line at home, often using a dial-up connection. For them, particularly those in rural areas, connections to the Internet often were interrupted, and the relatively slow speed of the connection required longer download times.

Interview respondents also reported that it was difficult to access or otherwise navigate through program material easily. For example, once on the website, audio-visual (AV) presentations could not be paused at any time without having to return to the beginning of the presentation. Users also reportedly were unable to fast-forward or reverse through presentation material. For longer presentations (over half-an-hour), this posed issues, particularly for those with dial-up connections. If a participant using a dial-up connection suddenly lost connectivity, they were forced to start the presentation from the beginning.

Because of the variability of Internet technology possessed by participants, MAPH may want to consider some technical refinements. These should accommodate those who are unable to spend long periods of time with dedicated, high-speed Internet. One user-friendly modification would include giving participants more control over starting, stopping and pausing presentations. Participants then could view sections of presentations, stopping and starting them as needed.

B. Content Presentation and Time Commitment

MAPH participants cited two specific problems with distance learning content presentation. In some cases, the presentation featured a video of a class being taught. Users saw a minimized box on their computer monitor with no ability to make it full-screen without distorting the image. In addition, the lecturer often gave dry, monotone presentations, on which it was difficult to concentrate in a non-classroom setting, and the media offered no interaction with the participant. Many indicated that these conditions were incompatible with an optimally effective and productive learning environment.

A second issue resided with the distance learning content itself. Some participants expressed frustration that the content provided was not integrated sufficiently with what was being taught during on-site training. Instead, distance learning focused on issues with little relation or linkage to their classroom studies or business plan development. In addition, participants did not have the ability to get real-time answers to questions stemming from the on-line curriculum. In order to get answers to these questions, participants had to initiate follow-up contact with MAPH, which was both time consuming and burdensome.

Participants were vocal about their dislike for the static nature of how information was presented. MAPH may want to consider making some presentations more interactive. This would encourage users to immerse themselves and concentrate more effectively, enriching the learning experience. Finally, creating a forum for participants to ask questions about the content they have reviewed through distance learning activities might provide another vehicle for clarification, give faculty the ability to interact with students around program material and facilitate responsive fine-tuning of presentation format and content.

The amount of time necessary to complete each of the modules also was a commonly identified issue in interviews with participants. For most participants, MAPH-related activities were conducted above and beyond their normal office workload. Considering the limited time participants have to view an on-line curriculum, some recommended that MAPH may want to consider reducing the length of on-line presentation modules. A larger number of shorter modules would provide participants with greater flexibility in accessing and completing program content, both during the work day and at home.

Chapter Five:
Participant Experiences Applying MAPH-acquired Skills

I. Introduction

In contrast to Chapter Four, which examined how participants responded to program components, this chapter looks at the participants' ability to apply skills acquired on the job. MAPH was designed to provide mid- and senior-level public health professionals with training to improve their management skills. Specifically, the program was expected to enhance management skill levels in three areas:

1) Managing people;

2) Managing money; and

3) Managing data.

Over the program's first three years, the curriculum has changed to improve these three fundamental skills sets. Changes to the skills training included the addition of an information database management component, human resources and negotiation and a revision of the finance curriculum. These changes were well received by participants.

In general, participants indicated an ability to apply the skills they learned at MAPH. In particular, they were successful at applying skills related to managing people. They reported being able to improve communication with their staff, delegate more effectively, develop new relationships with outside groups and hire better qualified staff. Participants also were able to use many of the data management skills, particularly those germane to effectively presenting data. While the financial skills were considered useful by many, there were those who found the skills too advanced or not applicable to their job responsibilities.

The major challenges encountered by participants in application of MAPH skills included a non-supportive organizational culture, lack of time and lack of applicability to their job responsibilities. Lack of support from agency leaders or supervisors and level of preparation by MAPH to apply skills were rarely cited as barriers.

Supervisors agreed unanimously that MAPH participants were able to translate at least some of the skills acquired through the program on the job. The ability to manage staff more effectively, along with enhanced communication and presentation skills, were the most frequently cited benefits of the program. Several supervisors noted that participants appeared more thoughtful after the program and approached problem solving on the job in a more organized and structured manner.

This chapter continues with a more detailed look at participants' abilities to translate each of the major skill sets learned at MAPH back to their jobs and presents several recommendations as potential program refinements.

II. Managing People

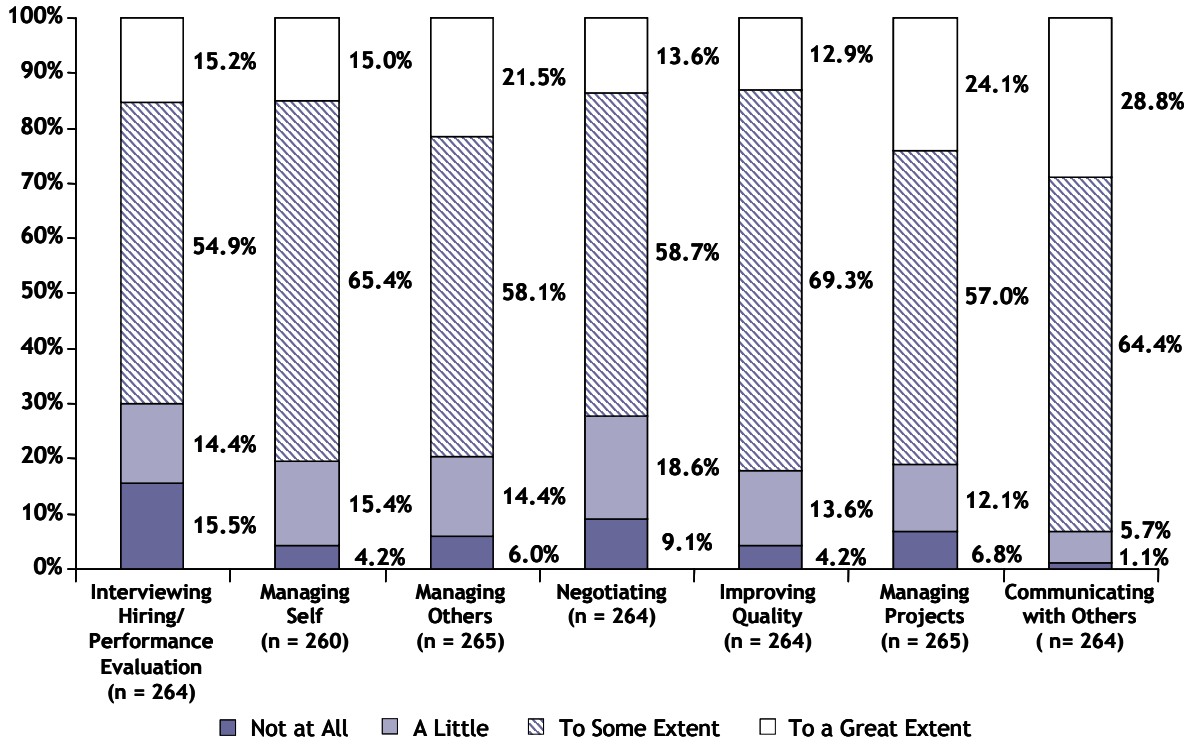
Skills taught to MAPH participants related to managing people focus on improving participants' abilities to manage their staff effectively, coordinate efforts with other offices and departments and develop positive relationships with community-based organizations. In the program's first year, specific skills taught included communication, project management, task delegation and conflict management. In future years, additional skills related to formally managing people were added, such as human resources (interviewing, hiring and performance evaluation) and negotiation.

> *"I started holding monthly, individual development meetings with my staff. During these meetings, I provide information about the senior staff meetings, and the staff uses them to discuss any project or office issue with me."*
>
> *- Year Three MAPH Participant*

Experiences Applying Managing People Skills

The majority of respondents indicated at least some ability to apply "people" skills at their public health work setting. This was true across all three program years. In many cases, participants found these to be the most useful skills they learned at MAPH. Overall results are summarized below in **Exhibit 30**.

Exhibit 30:
Participant Ability to Apply Managing People Skills, by Skill Set



Participants described improved communication, both with their own supervisors and the staff they manage, as the skill set they have been able to apply most consistently. They were more apt to solicit opinions from their staff and developed more confidence communicating effectively with their superiors. Participants also reported increased communication with outside groups.

Supervisors also were positive about skills related to managing people, with most citing the enhanced leadership and management skills participants obtained as the most useful aspects of MAPH. They also observed a greater sense of team building and more effective interaction and coordination across departments due to application of these MAPH skills.

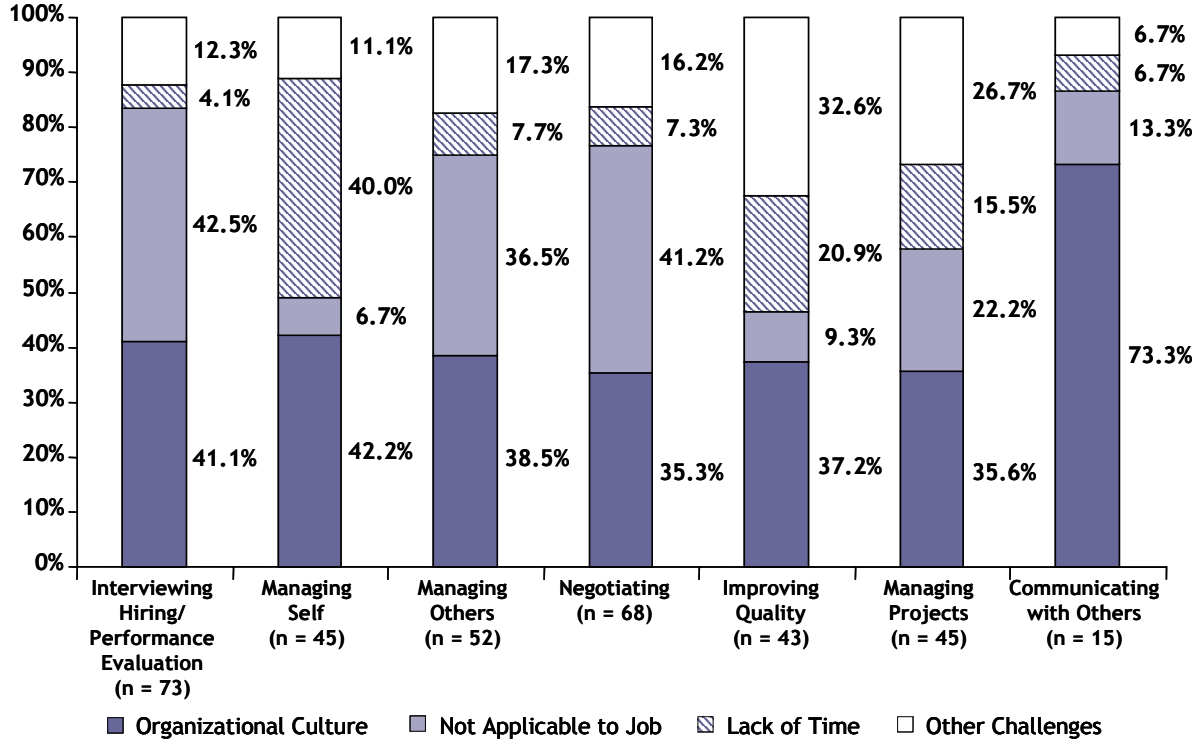
When participants described their experiences applying skills related to managing people, it often was in the context of specific skills. They may have had success using most or all of these skill sets, but almost all cited a specific area wherein MAPH training was particularly helpful to them. For example, those involved in the interviewing and hiring of staff, either as the main decision-maker or as a hiring committee member, consistently cited the added benefit of MAPH training. They described a greater focus when interviewing, not just on bringing in qualified staff, but staff who could integrate well into their office and be a part of the team. Although too early to notice any trends, many participants expected that the hiring decisions they made after attending MAPH eventually would lead to greater staff retention and improved departmental efficiency and productivity.

As part of the skills training at MAPH, participants were asked to complete a 360° assessment of themselves, providing a picture of both their management strengths and weaknesses. For many, this provided an entirely new perspective on their management styles. Along with the staff management training, some participants used this new perspective to create a new dynamic in their office. For example, many participants described themselves prior to MAPH as taking on the bulk of work, believing only they could do it correctly. After MAPH, they delegated tasks to their staff better, feeling confident that they could communicate their expectations effectively and could monitor work status without micromanaging. This gave them the ability to focus on longer term projects and to think more strategically. It reportedly led to higher staff morale as well.

Challenges

Only a minority of MAPH participants were either "a little able" or "unable" to apply skills for managing people. Three primary types of challenges were identified: organizational culture, lack of time and non-applicability to their job responsibilities. Survey results for each of these challenges are reported below in **Exhibit 31**.

Exhibit 31:
Reasons for MAPH Participants' Inability to Apply Managing People Skills by Skill Set



The most consistent challenge faced by MAPH participants related to organizational culture. Participants described initially being very excited about trying to implement new ideas learned at MAPH. However, they often faced a culture that was adverse to change and challenged by a heavily regulated environment. Thus, when they tried to initiate some of the ideas taught at MAPH, there was resistance. In more difficult cases, participants reported to supervisors who were reluctant to deviate from current management practices. Hence, a number of interview respondents noted the importance of senior managers attending MAPH as a vehicle for energizing change and creating an infrastructure for future change.

> *"I made an effort to change the way I manage staff, but the ideas were not supported by upper management."*
> *- Year Three MAPH Participant*

Because the most prevalent challenge reported by participants was the organizational culture of their organizations, MAPH may want to consider providing more information to state policy makers explaining the skills participants are learning and their role in supporting a more effective future public health sector.

Another challenge to participants' abilities to apply MAPH skills related to managing people was that the skills often were not applicable to their job responsibilities. For instance, many participants did not have responsibility for interviewing, hiring and evaluating staff performance. Thus, the skills from MAPH could not be applied. This challenge grew in the second and third program years.

The final noteworthy challenge to participants' abilities to apply skills related to managing people was lack of time. In these cases, participants described having numerous responsibilities that prevented them from focusing on issues that were not directly related to their work.

III. Managing Money

Skills training at MAPH related to managing money was designed to give participants a greater focus on business principles. Many participants had little or no past financial training. The curriculum was designed to give these professionals the skills to be more involved in the financial decision-making of their organization. Skills in this area included developing and managing budgets, understanding and using accounting methodology in reporting, financial planning applications and working with financial staff.

> *"One of the main problems of the finance information was not a lot of it was transferable from commercial business into state and local government funded public health."*
>
> *- Year Three MAPH Participant*

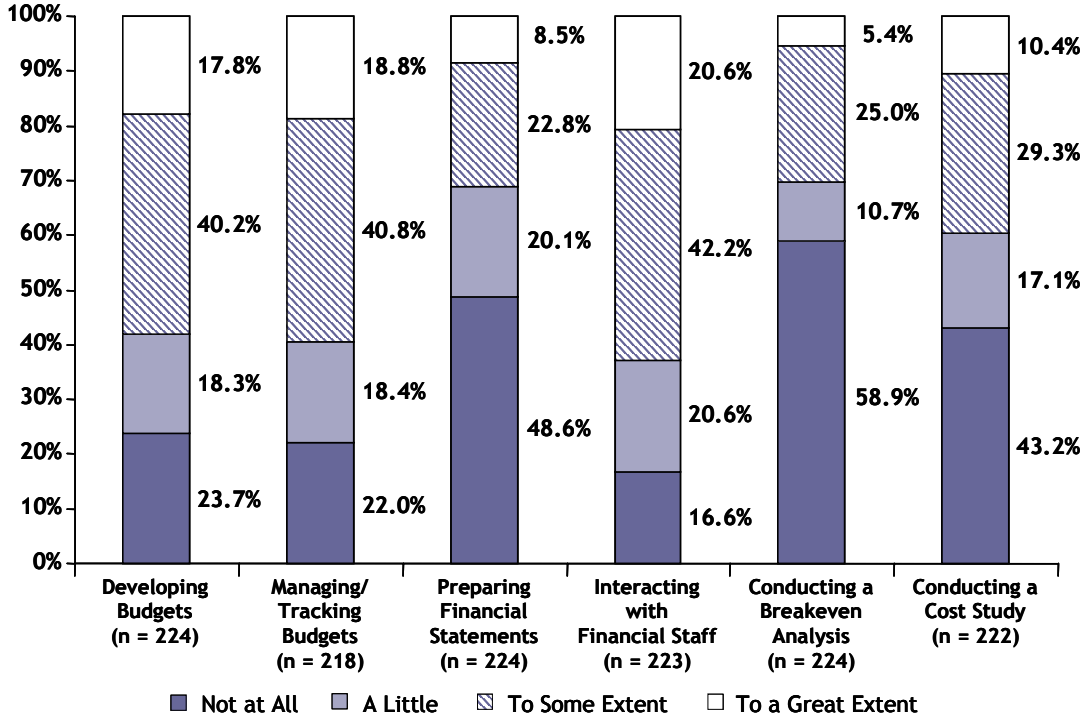
Of the three different skill types, MAPH participants seemed to have the most difficultly conceptualizing how to translate skills related to managing money to their jobs. Whereas participants found that skills related to people and data had a direct correlation to their jobs, many of the managing money skills were more narrowly applicable to those whose formal responsibilities include financial management functions. This was particularly true for the higher level financial skills, including preparing financial statements, conducting break-even analyses and performing cost studies for existing programs.

Participants who were able to translate some of the managing money skills noted that, while their direct involvement in financial work had not necessarily changed, their increased understanding of financial issues improved their ability to engage in the decision-making process. This involvement was facilitated by certain skills, including developing and managing budgets and interacting with financial staff. Survey results regarding participants' ability to apply managing money skills are summarized below in **Exhibit 32.**

> *"Too much time was spent on finance, particularly … Basic skills may have been helpful for people with no finance background, but not for more experienced participants … A demonstration and training on the use of technology for finance would have been more useful, particularly for less computer savvy people."*
>
> *- Year Two MAPH Participant*

> *"I believe most people felt that the money portion was misguided and did not directly translate back into their everyday life (job). Most people do not have the option of putting together a budget, so this obviously makes the financial portion less applicable."*
>
> *- Year Two MAPH Participant*

Exhibit 32:
Participant Ability to Apply Managing Money Skills

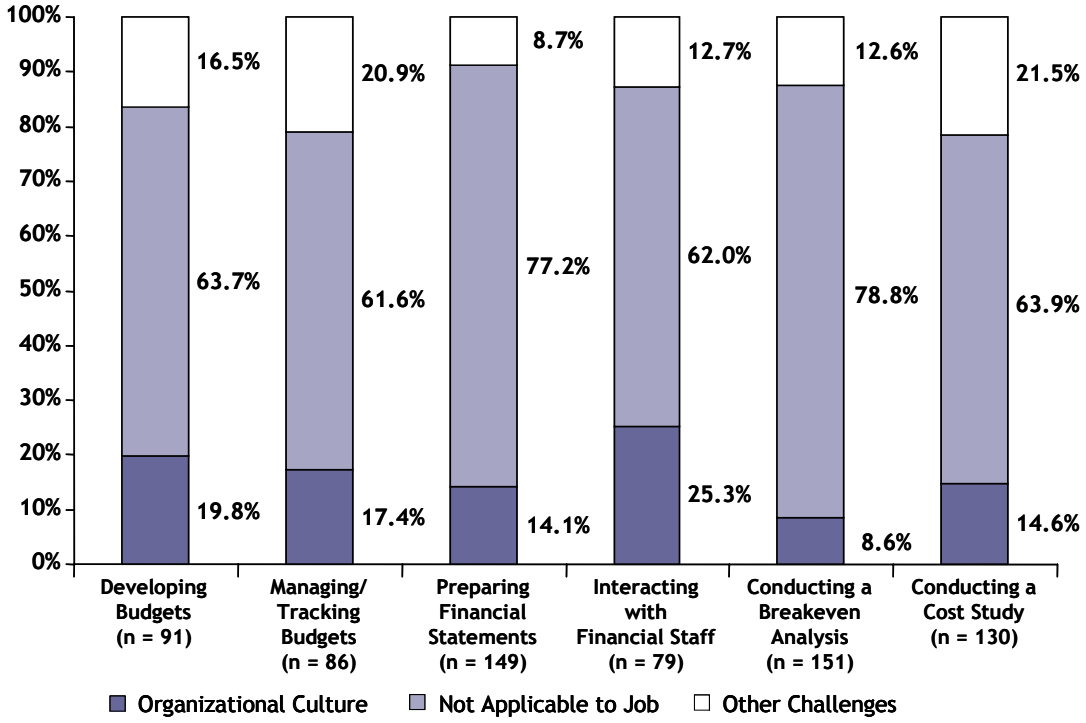


Supervisors were split in their feelings about the financial training their staff received at MAPH. For roughly half, the new skills have been invaluable. In these cases, supervisors have seen a greater interest in the financial side of programs from participants and have been inclined to share more associated responsibilities with them. Others noted that those functions, including developing and tracking budgets and financial planning, had little relevance for most participants in their agencies and were not transferable because these activities were centralized or carried-out elsewhere. The issue of applicability was pronounced among state agencies, whose finance functions tend to be more centralized than their district- or county-level counterparts.

Among those who were able to apply the skills related to managing money, MAPH has provided an entirely new perspective on their jobs. Participants described being able to understand budgetary reports better and being able to participate more effectively in discussions with financial staff. These participants now take a more holistic approach to budgeting, examining the relationship between costs and revenue much more carefully and addressing issues of program sustainability as part of the budget development process. These skills also have been helpful for completing grant applications, and some respondents credited these skills and their business plan experience with greater success securing grant funding. Participants also described having a better understanding of the cost structure of their programs and developing methods for reducing costs and applying those savings back to programs.

As illustrated in **Exhibit 33** below, the most common challenge faced applying financial management skills was non-applicability to participants' job responsibilities. These results were consistent across all program years.

Exhibit 33:
Challenges to Participants' Abilities to Apply Financial Skills by Skill Set



For example, many participants noted that, while they might be involved with the budget of their division or have cause to discuss issues with financial staff, few are in positions that necessitate using the more specialized accounting and financial planning skills. Respondents recommend focusing training on skills that participants are more likely to use, based on a needs assessment to be conducted or guided by MAPH.

IV. Managing Data

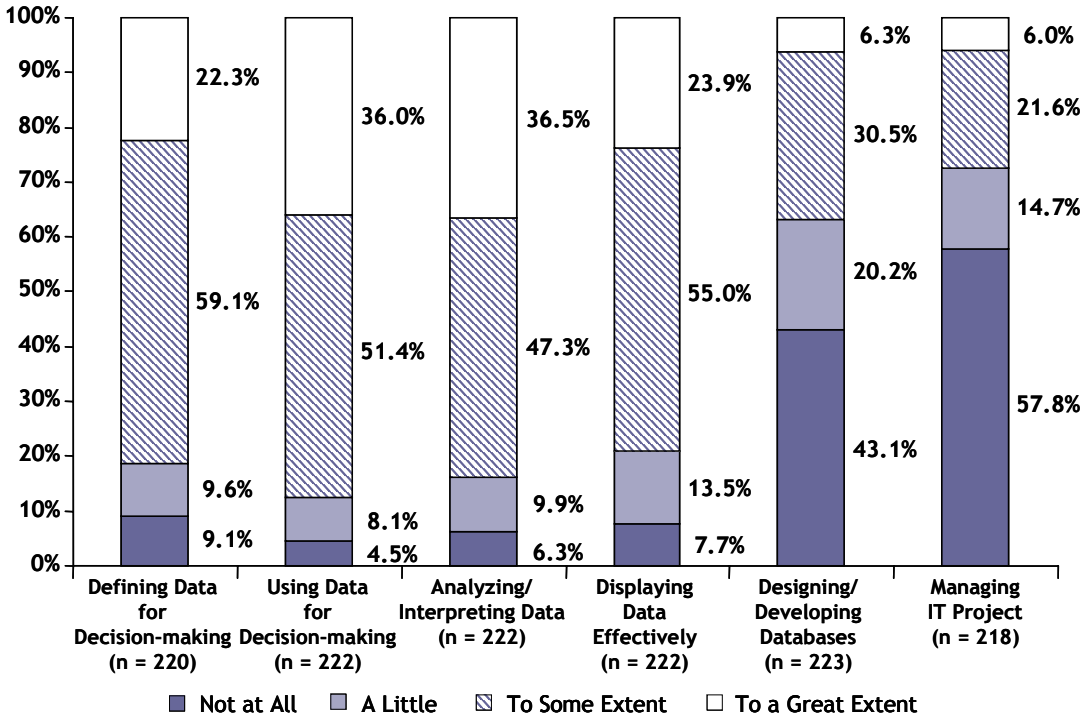
Participants also obtained skills in managing data. These skills included identifying relevant data for decision-making and analyzing and effectively presenting the data. Further advanced training also included informatics and IT project management.

In general, participants reported being able to apply many of the data skills taught at MAPH. They described using new methods for accessing and analyzing data, as well as improving their presentation skills. Supervisors commented favorably on participants' improved abilities to present material in a more effective manner.

Applying Managing Data Skills

Participants were able to apply most of the data management skills they acquired at MAPH, including seeking out and analyzing data and making appropriate decisions based on data analysis. Participants were able to apply higher-level data skills much less, such as database design and IT management. The survey results are detailed in **Exhibit 34** below.

Exhibit 34:
Extent to Which MAPH Participants Have Been Able to Apply Data Skills



Most participants cited increased comfort with data as one of the most valuable outcomes of enhanced data management skills. Many were able to translate increased comfort to analyze and present data more effectively to senior staff. For example, prior to MAPH, many participants used Microsoft PowerPoint for presentations, but not effectively. After MAPH, participants created focused presentations featuring more effective and creative synthesis and interpretation of data. As a result, many of these participants have raised their profiles within their organizations and report greater interest in applying these skills outside their agencies.

Many MAPH participants came from district or local offices, where data was collected centrally at the state level. After MAPH, many reported being more proactive and knowledgeable in making targeted data requests to support analysis of priority issues.

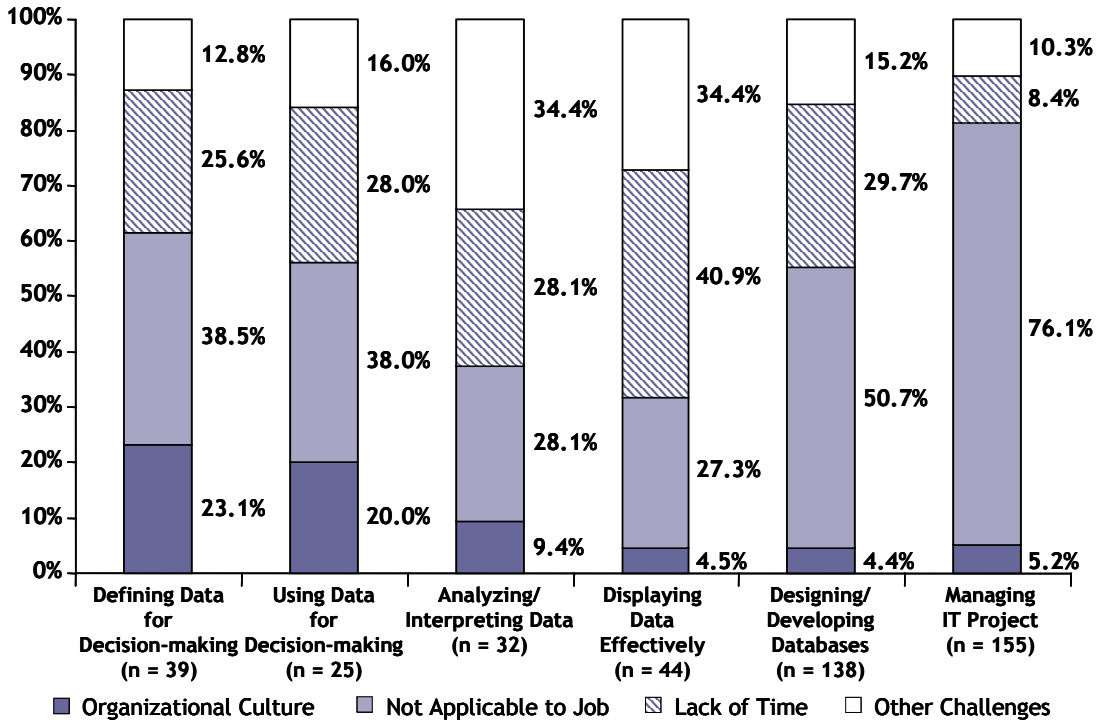
> *"I became involved in an environmental health data management team for the state. I helped to develop a new data management software program, and now I am training others on how to use it."*
> *- Year One MAPH Participant*

Some participants were able to apply data skills to make larger, department-wide changes, such as helping to improve data systems or communication between data managers and other staff. For instance, one participant indicated that, after MAPH training, she recognized that data was underutilized in her department. As a result, she hired a new data manager with enhanced computer skills, eventually leading to significant improvement in data use. Other participants were able to use data skills more effectively outside their organization, working to combat fears of West Nile Virus.

Challenges

While participants successfully applied a number of the data management skills, most were less able to apply skills related to managing full-scale IT projects or developing databases (**Exhibit 35**). Three challenges were cited: 1) organizational culture; 2) lack of time; and 3) non-applicability of the skills to their job responsibilities. For example, of those who indicated that they were largely unable to develop or design databases, over 50 percent reported that it was not their job responsibility. Over 75 percent were unable to manage IT projects for the same reason. There was little difference in response rates across program years.

Exhibit 35:
Reasons for MAPH Participants' Inability to Apply Managing Data Skills



In conclusion, the majority of MAPH participants indicated the ability to apply managing data skills in their jobs, but suggested that higher level data management skills, including the IT and database management modules, be removed from the training. This would eliminate time spent on skills that they do not use and allow more attention to be placed on data analysis and presentation, both of which were deemed very useful. Some participants also believed that the presentation of data management skills was too financially-focused, whereas public health officials most frequently work with other types of data, such as clinical, epidemiological and geographic. These respondents suggested that MAPH seek to integrate public health and financial data analysis and interpretation through more "real world" applications and examples.

CHAPTER SIX:
MAPH ENHANCED REVENUE ASSESSMENT

I. Introduction

The external evaluation also provides an opportunity to gather information on the ability of MAPH participants to translate their management training into measurable revenue enhancements benefiting their public health agencies and the larger community. The enhanced revenue analysis addresses a series of questions:

- To what extent have MAPH teams translated their training into revenue enhancements?
- Are there significant variations in enhanced revenue across states?
- Are there differences in enhanced revenue by MAPH program year?
- Which aspects of MAPH were most and least effective in supporting revenue enhancement initiatives?
- What organizational facilitators and barriers were encountered by MAPH teams?
- Is there a relationship between the team aspects of MAPH and success generating enhanced revenue?
- Is there a relationship between MAPH market penetration and levels of enhanced revenue?
- How successful are community partners in generating enhanced revenue?
- What is the impact of high levels of MAPH penetration in South Carolina?
- What are the implications of these findings for MAPH sustainability/replicability?

The goals of this enhanced revenue assessment are three-fold:

1) To build on the broader findings of the external evaluation of the MAPH by measuring the direct economic benefits of management training for public health organizations and participating community partners;

2) To complement the MAPH internal evaluation; and

3) To inform development of marketing strategies to help ensure program sustainability.

This assessment is not intended to serve as an analysis of the return on investment (ROI) produced by MAPH. That would involve quantifying and assigning monetary values to both the tangible and intangible benefits derived from training public health representatives. In view of concerns regarding the ability of a formal ROI analysis to accurately quantify the intangible benefits of MAPH training in public health settings, this assessment adopts a conservative approach, focusing on quantifying the tangible financial benefits, or enhanced revenue, that have resulted and/or are likely to result from MAPH-related initiatives carried out by public health agencies and their community partners.

The levels of enhanced revenue reported in this chapter are based on careful analysis of financial information provided by MAPH teams and independently verified by their supervisors. This assessment does not report enhanced revenue in instances where no clear linkage between MAPH-acquired skills and success in funding new initiatives could be found, or where MAPH supervisors were unable to verify financial data and information provided by teams. As a result of this conservative approach, it is possible that the full financial benefits stemming from participating in MAPH may be understated.

Appendix J includes a glossary to clarify the financial terms used throughout this chapter. The following are definitions for the three key financial terms most frequently cited:

1) *Actual Revenue,* refers to the known dollar value of MAPH business plan and non-business plan revenue stemming from application of MAPH-related skills and competencies.

2) *Forecasted Revenue,* refers to a probability-weighed forecast of enhanced revenue associated with MAPH-related activities that participants and their supervisors report have a 50 percent or greater probability of being implemented within the foreseeable future (through 2005). Assessing enhanced revenue beyond 2005 was not attempted, due to lack of confidence and certainty associated with forecasting over a longer time horizon.

3) *Enhanced Revenue,* refers to the total dollar value of actual and forecasted revenue stemming from application of MAPH-related skills and competencies.

The remainder of the chapter includes the following areas of focus:

- *Summary of Findings,* which presents the total enhanced revenue generated by MAPH teams through their business plans and through other grant-related and fee-based funding sources. It also reports enhanced revenue by state, payment source and project funding level, and it compares business plan and non-business plan-related enhanced revenue.

- *MAPH Skills Training and Success Producing Enhanced Revenue,* which summarizes the MAPH skill sets most and least effective in supporting revenue enhancement initiatives.

- *Relationship between Public Health Agency Structure and Success with Enhanced Revenue Initiatives,* which compares levels of enhanced revenue generated by teams from centralized and decentralized state public health agencies and explores the possible influence of structural facilitators and barriers on their ability to maximize and diversify revenue sources.

- *Relationship between Team Aspects of MAPH and Success Generating Enhanced Revenue,* which explores the number of teams attending MAPH per agency in relation to success achieved developing and implementing new enhanced revenue initiatives, the relationship between team size and the ability to generate enhanced revenue and the level of success achieved by community partners carrying out revenue enhancing initiatives.

- *Relationship between Year Attending MAPH and Number of Enhanced Revenue Initiatives,* which examines trends in the number of enhanced revenue initiatives per MAPH team by program year to better understand the possible influence of time on the ability of MAPH participants to increase the number of successful revenue generating initiatives.

- *Relationship between Levels of MAPH Market Penetration and Organizational Effectiveness with Enhanced Revenue Initiatives,* which examines and compares across the four states the relationship between different levels of MAPH penetration and agency effectiveness carrying out new revenue generating initiatives.

- *Special Profile of South Carolina,* which examines in detail the relationship between high levels of MAPH penetration in that state and the success in generating enhanced revenue.

- *Implications of Findings for MAPH Sustainability/Replicability,* which reviews assessment findings in relation to their implications for program marketing and sustainability planning.

II. Summary of Findings

The purpose of this summary is to identify the total enhanced revenue generated by the MAPH teams which participated in this assessment through a series of macro-level snapshots. These correspond to research questions of interest regarding the extent to which MAPH teams in the first three program years are able to implement revenue generating initiatives and how success in this arena varies across states, levels of funding and funding sources. These higher level findings also set the stage for examining other relationships between various aspects of MAPH, the public health environment and MAPH-related revenue enhancements. This summary of findings includes the following areas of focus:

- Summary of enhanced revenue;

- Distribution of enhanced revenue by state;

- Distribution of enhanced revenue by payment source;

- Distribution of business plan and non-business plan-related enhanced revenue by program year and state; and

- Distribution of enhanced revenue by project funding level.

A. Summary of Enhanced Revenue

MAPH teams experienced a great deal of variability in their ability to generate enhanced revenue for their public health agencies or to support broader-based community initiatives. About 38 percent of teams interviewed have, or expect to develop, implement and operate revenue generating programs. Between 1999 and 2005, the combined actual and forecasted revenue attributable to translation of MAPH-acquired skills and competencies is over $6 million (**Exhibit 36**).

Teams able to implement revenue generating initiatives report raising an average of almost $216,000 each from a diverse mix of grant and fee-based funding streams. About two-thirds ($4.0 million) of the total enhanced revenue identified in this assessment is tied to existing initiatives, with the remainder forecast to phase-in between now and through 2005 as follow-on to existing initiatives or to support new ones.

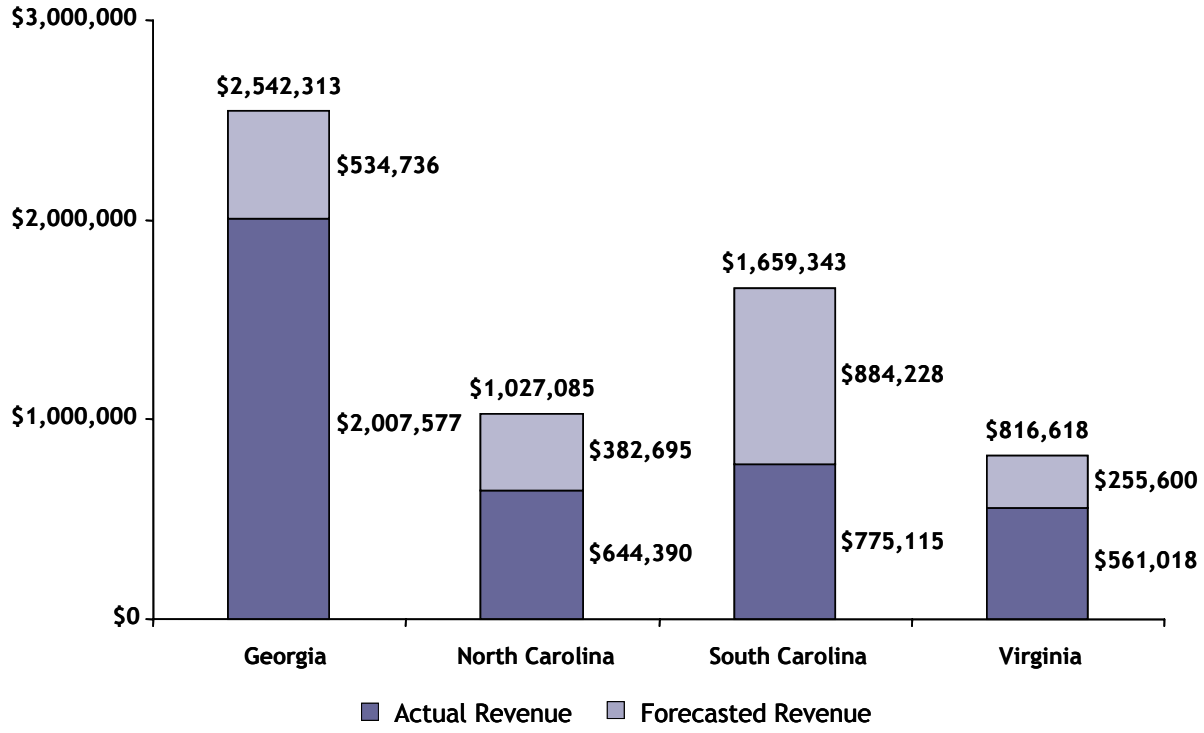
Exhibit 36:
Ability to Generate MAPH-related Enhanced Revenue

Generated Enhanced Revenue	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue per Team
Yes	28 (38.4%)	$3,988,100	$2,057,259	$6,045,359	$215,906
No	45 (61.6%)	$ 0	$ 0	$ 0	$ 0
Total	**73 (100.0%)**	**$3,988,100**	**$2,057,259**	**$6,045,359**	**$ 82,813**

B. Distribution of Enhanced Revenue by State

MAPH teams from each of the four states reported translating MAPH-acquired skills into initiatives that have and will raise significant amounts of enhanced revenue (**Exhibit 37**). Teams from Georgia reported the highest levels of enhanced revenue ($2.5 million), followed by South Carolina, North Carolina and Virginia. Over 40 percent of all enhanced revenue reported can be traced to eight teams from Georgia, who experienced a great deal of success implementing their business plans.

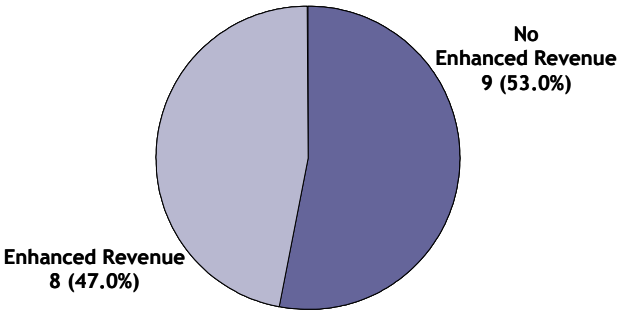
Exhibit 37:
Ability to Generate MAPH-related Enhanced Revenue, by State



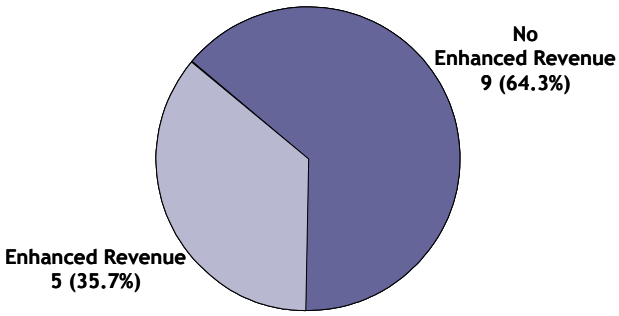
Among successful teams, average levels of enhanced revenue range from about $318,000 (Georgia) to over $136,000 (Virginia) (**Exhibit 38**). In addition to Georgia, teams from other states also report success in raising significant amount of outside funding. North Carolina teams average over $205,000 in enhanced revenue, while South Carolina reports the highest level of forecasted revenue. This suggests that MAPH participants and community partners from South Carolina are well positioned and poised for future success implementing newly funded or follow-on initiatives.

Success in generating enhanced revenue also appears to have penetrated Georgia's teams to a greater extent than in other states. Forty-seven percent of the MAPH teams responding from Georgia demonstrated the ability to attract outside funding, compared to nearly 38 percent in South Carolina and about one-third in North Carolina and Virginia.

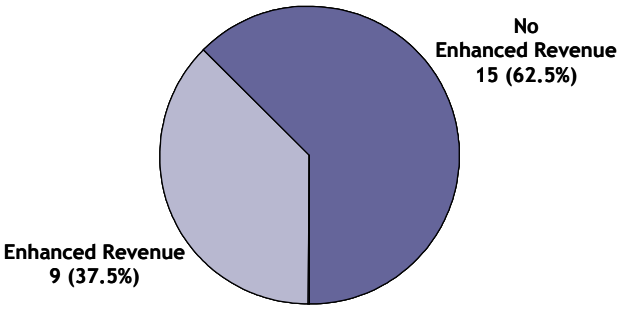
Exhibit 38:
Summary Comparison of Enhanced Revenue Penetration and Average Revenue per Team, by State



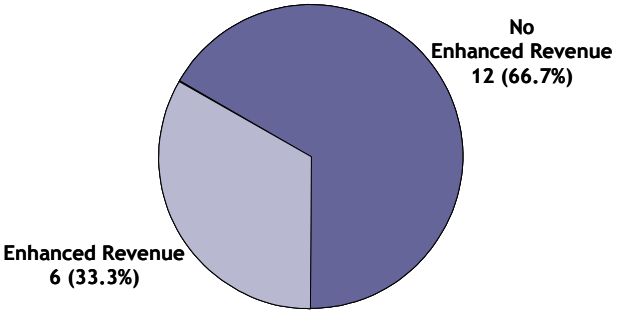
Total Georgia Teams = 17
Average per Team = $149,548
Teams with Enhanced Revenue = 8
Average per Team with Enhanced Revenue = $317,789



Total North Carolina Teams = 14
Average per Team = $73,363
Teams with Enhanced Revenue = 5
Average per Team with Enhanced Revenue = $205,417



Total South Carolina Teams = 24
Average per Team = $69,139
Teams with Enhanced Revenue = 9
Average per Team with Enhanced Revenue = $184,371



Total Virginia Teams = 18
Average per Team = $45,368
Teams with Enhanced Revenue = 6
Average per Team with Enhanced Revenue = $136,103

Generating Enhanced Revenue from Multiple Sources: A Georgia Success Story

One Georgia team's MAPH business plan was designed to create an intensive home visitation program for families immediately after a preterm delivery of a child until the child reaches four years of age. Start-up funding ($39,577) was collected from various private sources in FY 2001. In FY 2002, the team secured a grant from the state Office of Rural Health (ORH) for $250,000, began providing services and became eligible to receive Medicaid reimbursement. When expected continuation funding from ORH for another year failed to materialize, the team sought-out and was awarded a Grant in Aid jointly from the Georgia Department of Community Health and Department of Human Resources to continue the program. The team also applied for two other grants, one from HRSA's Office of Rural Health and another from a local hospital's Indigent Trust Fund. In addition, the team forecasts bringing in $42,000 from Medicaid billing in FY 2003 and at least $50,000 in FY 2004.

C. Distribution of Enhanced Revenue by Payment Source

The purpose of this analysis is to better understand which sources of payment support enhanced revenue initiatives. Governmental and non-governmental grant funding together represent about 85 percent of the almost $6.1 million generated through enhanced revenue initiatives, with fee-based initiatives making up the balance (**Exhibit 39**). Foundations are the major sources of non-governmental grant funding, while federal and state demonstration grants and associated follow-on funding account for the great majority of revenue from governmental sources.

Looking into the future, although only about nine percent of enhanced revenue currently is coming from public and private fee-based payers, these revenue sources are forecast to grow to almost 28 percent by 2005. This finding is consistent with feedback from participants and their supervisors who cite growing numbers of collaborative relationships with community partners to establish new fee-based programs and to better rationalize existing ones. As described in greater detail in **Section V-C**, a number of MAPH community partners also are successfully translating their business plan competencies to attract funding to support new programs for their organizations.

Exhibit 39:
MAPH Enhanced Revenue, by Payment Source

Payment Source	Actual Revenue	Forecasted Revenue	Enhanced Revenue
Grants			
Government	$1,713,162 (43.0%)	$ 901,560 (43.8%)	$2,614,722 (43.3%)
Non-government	$1,906,717 (47.8%)	$ 583,904 (28.4%)	$2,490,621 (41.2%)
Fee-for-service	$ 368,221 (9.2%)	$ 571,795 (27.8%)	$ 940,016 (15.5%)
Total	**$3,988,100 (100.0%)**	**$2,057,259 (100.0%)**	**$6,045,359 (100.0%)**

Examples of MAPH Enhanced Revenue Funding Sources

MAPH teams generated significant revenue from both public and private sources. Examples by source include:

Government Grants:
- *Federal: Center for Disease Control, $126,192 (South Carolina, 2001)*
- *State: Access Georgia Grant, $198,000 (Georgia, 2001)*
- *Local: Florence County Grant, $89,000 (South Carolina, 2001)*

Non-government Grants:
- *National: Kellogg Foundation, $50,000 (Georgia, 2000)*
- *Local: KB Reynolds Charitable Trust, $395,336 (North Carolina, 2000)*

Fee-for-service
- *County Police Department, $36,442 (Virginia, 2000)*
- *Medicaid, $54,000 (South Carolina, 1999)*

D. Distribution of Business Plan and Non-business Plan Enhanced Revenue by Program Year and State

MAPH teams developed business plans as vehicles to guide practical applications of skills learned at the MAPH. Business plans were designed to focus on issues of importance to public health agencies and community partners and were expected to be implemented upon completion of MAPH. In addition, participants were encouraged to actively apply social marketing and civic entrepreneurship to pursue other sources of external funding to maximize enhanced revenue.

This analysis examines success by MAPH teams in attracting enhanced revenue through business and non-business plan sources across two domains:

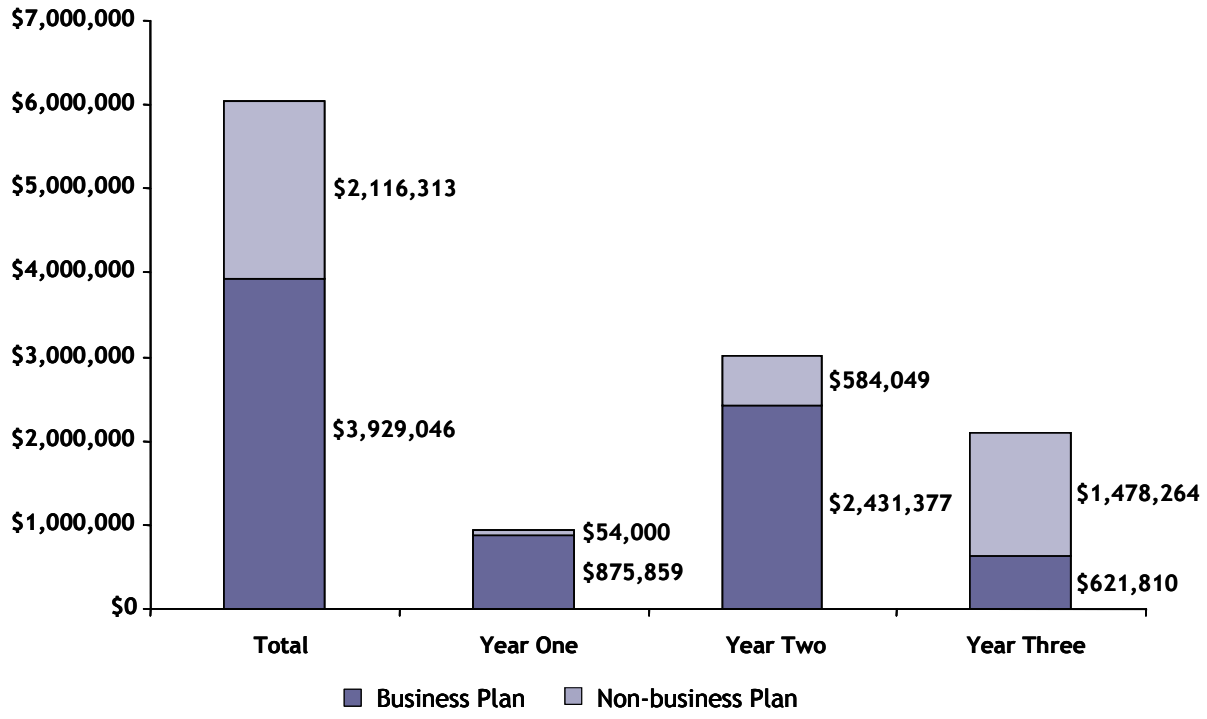
1) The total dollar value of enhanced revenue by program year.

2) The total dollar value of enhanced revenue by state.

1. Trends in Business and Non-business Plan-related Enhanced Revenue by Year

Overall, across all three program years, business plan-related initiatives account for about $3.9 million, or about two-thirds (65 percent) of the total enhanced revenue reported by MAPH teams (**Exhibit 40**). Most of that funding ($3.0 million) comes from enhanced revenue initiatives that have already been planned and implemented, with the remainder forecast to come on line by 2005. Year Two teams report the greatest success generating enhanced revenue ($3.0 million), with over 80 percent stemming from MAPH business plan-related initiatives.

Exhibit 40:
Comparison of Business Plan and Non-business Plan Enhanced Revenue, by Year

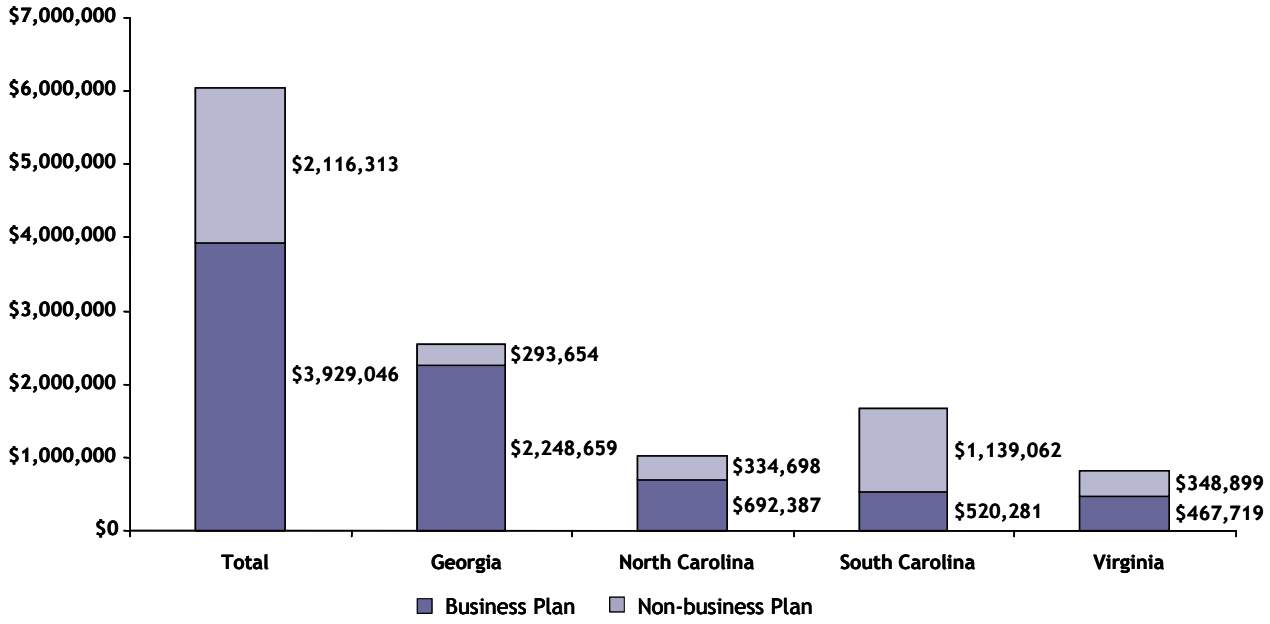


2. Distribution of Business and Non-business Plan-related Enhanced Revenue by State

As previously described, MAPH teams from Georgia report the highest levels of both total and business plan-related enhanced revenue. For example, one Year Two team generated $250,000 from the Georgia Cancer Initiative to run a pilot program for collecting and analyzing cancer screening and treatment data from local public health departments. In another example, a Year Three team generated $248,000 to increase access to care and to provide immunizations and other medical services to children of the growing Hispanic population in their health district.

South Carolina is the only state reporting levels of non-business plan related enhanced revenue exceeding one million dollars (**Exhibit 41**). More than two-thirds (69 percent) of the total enhanced revenue reported by South Carolina's teams comes from initiatives carried out outside the framework of MAPH business plans. In addition, as reported in **Section V-C**, community partners play significant roles, accounting for almost 40 percent of South Carolina's total enhanced revenue.

Exhibit 41:
Comparison of Business Plan and Non-business Plan- Related Enhanced Revenue, by State



Example of Successful MAPH Business Plan-related Enhanced Revenue Initiative

One team's business plan focused on reducing infant injury and death from misuse of car seats. Data analysis suggested that infant-related misuse rate of car seats was as high as 92 percent. As a result, the team began a program to distribute car seats to all mothers that could not afford to purchase them. In order to receive the free seat, mothers were required to participate in a prepared childbirth class, infant CPR training and a safety class. During the program's first year the team received $66,000 from the Georgia Indigent Care Trust Fund (ICTF), and the program was an instant success. It soon expanded to 16 counties, and funding from the ICTF grew to $148,000. A number of rural hospitals signed onto the program, which helped the team to secure additional ICTF funding of approximately $160,000 for at least two more years. In addition, the group focused on partnering with other community groups. One such partnership, with a local tobacco-use prevention foundation, resulted in a pledge of an additional $5,000 for at least one more year.

Example of Successful, Non-business Plan-related Enhanced Revenue Initiative

One team discovered that the municipal police department's four-year contract with an outside provider to perform physicals was soon to expire. Believing that the health department could provide the same services for a lower price, they performed a cost-analysis and verified that they would be able to provide the services for less than the police department's current vendor. Understanding the importance of ensuring fiscal self-sufficiency and with a new understanding of business principles acquired through MAPH, the team marked-up the price to exceed the revenue needed to cover costs, while keeping the price lower than the police department's current vendor. After gaining the approval of their agency, the team offered the health department's services to the police department, which agreed to a four year contract. This win-win scenario resulted in lower costs for the police department and netted over $20,000 for the department of health in the first year. Similar revenue is forecast for each remaining contract year.

E. Distribution of Enhanced Revenue by Funding Level

Many MAPH teams reported that most public health projects are relatively small in scope and are targeted to specific interventions that meet highly defined needs. With this as a back drop, some participants and their supervisors suggested that MAPH focus the business plan component of the program on building capacity to plan, develop and operate smaller scale initiatives. This analysis examines that feedback through a review lens focusing on the distribution of enhanced revenue raised by MAPH teams across a range of funding levels.

The most important finding of this summary analysis is that close to half (46 percent) of teams able to implement business plan or other initiatives also generated more than $200,000 each in enhanced revenue initiative (**Exhibit 42**). These 13 teams average almost $400,000 each and account for almost 85 percent of all enhanced revenue reported. Six of these teams achieved this level of success by implementing or having a high certainty of implementing more than one enhanced revenue initiative.

A possible area for follow-on research is to compare requested funding among teams whose business plans or other enhanced revenue initiatives were not funded with these findings. For example, if it is found that unfunded initiatives tend to be smaller in scope, research may suggest that larger initiatives are supported by business plans that are more rigorously constructed and feature more flexibility in identifying back-up funding sources in the event the original plan is jeopardized.

Exhibit 42:
Distribution MAPH Enhanced Revenue, by Project Funding Level

Level of Enhanced Revenue per Team	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue per Team
<$10,000	2 (7.1%)	$ 7,387 (0.2%)	$ 600 (~ 0.0%)	$ 7,987 (0.1%)	$ 3,994
$10,000 – $50,000	5 (17.9%)	$ 110,801 (2.8%)	$ 24,192 (1.2%)	$ 134,993 (2.2%)	$ 26,999
$50,001 – $100,000	4 (14.3%)	$ 211,690 (5.3%)	$ 62,500 (3.0%)	$ 274,190 (4.6%)	$ 68,548
$100,001 – $150,000	4 (14.3%)	$ 301,792 (7.5%)	$ 215,454 (10.5%)	$ 517,246 (8.6%)	$129,312
$150,001 – $200,000	0 (0.0%)	$ 0 (0.0%)	$ 0 (0.0%)	$ 0 (0.0%)	$ 0
>$200,000	13 (46.4%)	$3,356,430 (84.2%)	$1,754,513 (85.3%)	$5,110,943 (84.5%)	$393,149
Total	28 (100.0%)	$3,988,100 (100.0%)	$2,057,259 (100.0%)	$6,045,359 (100.0%)	$215,906

III. MAPH Skills Training and Success Producing Enhanced Revenue

MAPH provided mid- and senior-level public health professionals with management training to improve their skill levels in three areas:

1) Managing people;

2) Managing money; and

3) Managing data.

In addition, the business plan component of the MAPH curriculum offered participants an opportunity to translate these skills in their agencies and communities and exposure to civic entrepreneurship provided strategies and approaches for "outside the box" creative thinking about new fund raising opportunities, mechanisms and partnerships.

This aspect of the enhanced revenue assessment summarizes feedback from teams and their supervisors regarding the most and least useful skills learned at MAPH and their applicability for planning, implementing and operating enhanced revenue initiatives.

A. Most Useful Skills Training for Maximizing Enhanced Revenue

As described in Chapter Four, participants reported that, in general, they were particularly successful translating at their workplaces skills related to managing people and, to a somewhat lesser extent, more effectively presenting data. With regard to maximizing enhanced revenue, a number of participants noted that the three major skill sets overlap and complement each other. However, MAPH-acquired data analysis and presentation skills were most frequently cited by participants and their supervisors as most useful for attracting outside funding, followed by people skills. As one team put it, "if you can't show what you need, you will never be able to get it funded."

"All of the skill sets are necessary for generating enhanced revenue. However, while obtaining revenue without the money and data skills would have been difficult, without the people skills you cannot convince anyone that your project is worthwhile. You are always asking people to a make a change, and unless you convince them that it is necessary, you will never have success."

Year Two Team – GA

"The biggest thing I saw was probably the emphasis on data. You need to have good data to accomplish anything, and all of them (team members) showed an understanding of this importance. They are also very outcomes focused now, designing programs that have measurable outcomes, and have followed up on their projects with interviews and surveys."

Year Two Supervisor - GA

B. Least Useful Skills Training for Maximizing Enhanced Revenue

Most participants stressed that each major skill set produced value in facilitating enhanced revenue initiatives. Consistent with the feedback reported in Chapter Five, however, when asked to identify the skill least useful for application, participants pointed to managing money, because many could not directly apply most of the financial training to increasing revenue. In addition, among the teams successful in securing enhanced revenue, the financial component of most business plans often was spearheaded by one team member who typically possessed some level of financial expertise prior to attending MAPH.

> *"The financial portion was difficult because we could not directly apply it. Seemed that we needed some money to get started, and there was no money available and we did not know where to look for it."*
>
> *Year One Team – NC*

> *"The managing money skills are less useful because administration takes care of all the finances and the rest of the staff has little need to get involved."*
>
> *Year Three Team – SC*

IV. Relationship between Public Health Agency Organizational Structure and Success with Enhanced Revenue Initiatives

MAPH's goals include addressing the management needs of the public health infrastructure and workforce within the four state region. As described previously, in addition to challenges encountered within their agencies, the ability of participants to implement business plan-related and other initiatives frequently is influenced by environmental barriers. These include legal and regulatory obstacles, funding constraints due to growing state budget deficits and shifting post-September 11 public health priorities.

Many MAPH participants and their supervisors also report that their ability to work within their agencies and with community partners to plan and apply entrepreneurial approaches for funding public health needs is influenced by the organizational structures of their public health agencies. For example, local health agencies operate under the centralized authority of the state health agency in South Carolina and Virginia, while remaining largely under local control in Georgia and North Carolina. At the local level, the majority of local health departments are county agencies with policy making authority in North Carolina and Georgia. In contrast, local health departments in South Carolina and Virginia are organized as multi-county districts and enjoy little direct policy making authority.

This area of focus compares the dollar value of enhanced revenue initiatives implemented by teams from states with more centralized structures (South Carolina and Virginia) with the experiences of teams from states whose public health systems are largely under local control (Georgia and North Carolina). Given the small sample size, lack of statistical power and presence of many confounding variables influencing revenue generation, the findings of this analysis should be viewed as suggestive and illustrative only.

Despite these caveats, teams from states where public health agencies remain largely under local control enjoy a higher level of success generating enhanced revenue compared to their more centralized counterparts (**Exhibit 43**).

Exhibit 43:
State Public Health Structure and Ability to Generate Enhanced Revenue

State/Structure	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue per Team
South Carolina	9	$ 775,115	$ 884,228	$1,659,343	$184,371
Virginia	6	$ 561,018	$ 255,600	$ 816,618	$136,103
Total Centralized Agencies	**15**	**$1,336,133**	**$1,139,828**	**$2,475,961**	**$165,064**
Georgia	8	$2,007,577	$ 534,736	$2,542,313	$317,789
North Carolina	5	$ 644,390	$ 382,695	$1,027,085	$205,417
Total Decentralized Agencies	**13**	**$2,651,967**	**$ 917,431**	**$3,569,398**	**$274,569**
Grand Total	**28**	**$3,988,100**	**$2,057,259**	**$6,045,359**	**$215,906**

Teams from Georgia and North Carolina average about $275,000 in enhanced revenue, compared to about $165,000 among teams from states with more centralized public health agencies. They also have a higher percentage of teams able to earn enhanced revenue (see **Exhibit 38**). And, despite having two fewer teams, the level of total enhanced revenue generated by teams from states with decentralized public health agencies is about 44 percent higher than their more centralized neighbors.

Although these findings lack formal statistical significance, they corroborate a large body of qualitative interview data that describes the challenges faced by public health representatives who seek to apply MAPH-related skills and competencies in more centralized agencies. These findings also suggest that the relationship between centralization of public health agencies and their ability to diversify and maximize revenue may be a rich area for future research.

Influence of Public Health Administrative Structure on Success Generating Enhanced Revenue: A Site Visit Highlight

MAPH participants from a state with a highly centralized public health agency structure sought to form a 501(c)3 not-for-profit organization through which to administer a grant awarded by a local health system foundation. Although championed by the local health district, this creative approach did not parallel the interests of the state public health department. Questioning the legality of funding being controlled at the local level, the state agency proved reluctant to give up direct financial control, and the funding was ultimately allocated for other purposes.

Supervisors cited this example as an instance where a civic entrepreneurial approach, so relevant in other sectors, collided with unique management issues related to their state's public health management structure. Participants and supervisors recommended that MAPH focus more in the future on increasing the political astuteness of public health representatives and invite members of the state Board of Health to present at the MAPH to provide practical input on navigating the political process.

V. Relationship between Team Aspects of MAPH and Success Generating Enhanced Revenue

Participants attended MAPH in teams of at least three individuals. Program staff believed that a critical mass of representatives from each participating agency was necessary to significantly impact future agency effectiveness. In addition, beginning in Year Two, teams were

encouraged to include community partners to facilitate building bridges to enhance collaboration with public and private community organizations. Many participants and their supervisors also reported a positive relationship between the number of teams attending per agency and heightened organizational effectiveness through the diffusion of MAPH-acquired skills and competencies.

This sub-set of analysis examines each of these team-related features of MAPH in the context of their influence on agency effectiveness in generating enhanced revenue, including:

- the relationship between team size and success generating enhanced revenue;
- the relationship between the number of teams per agency attending MAPH and ability to generate enhanced revenue; and
- the ability of community partners to carry out revenue enhancing initiatives.

A. Team Size as a Factor in Generating Enhanced Revenue

The findings of this analysis appear to corroborate the assumption by program staff that a critical mass of representatives from each participating agency is necessary to significantly impact future agency effectiveness. More than three-quarters of the MAPH teams reporting the most success generating enhanced revenue included four or five representatives (**Exhibit 44**). These teams account for about 85 percent of all enhanced revenue and raised more revenue per team than their smaller or larger counterparts.

Exhibit 44:
Size of MAPH Teams Compared to Enhanced Revenue

Number of Members per Team	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue per Team
3	4 (14.3%)	$ 379,190 (9.5%)	$ 187,500 (9.1%)	$ 566,690 (9.4%)	$141,673
4	13 (46.5%)	$1,887,793 (47.3%)	$ 573,682 (27.9%)	$2,461,475 (40.7%)	$189,344
5	9 (32.1%)	$1,437,644 (36.0%)	$1,228,885 (59.7%)	$2,666,529 (44.1%)	$296,281
6	2 (7.1%)	$ 283,473 (7.1%)	$ 67,192 (3.3%)	$ 350,665 (5.8%)	$175,333
Total	**28 (100.0%)**	**$3,988,100 (100.0%)**	**$2,057,259 (100.0%)**	**$6,045,359 (100.0%)**	**$215,906**

MAPH participants report that spreading the work involved in developing sound business plans across a critical mass of representatives helps ensure that each business plan component receives appropriate attention by one or more people competent in that arena without creating a disproportionate burden on participants.

B. Number of Teams per Agency Attending MAPH in Relation to Enhanced Revenue

This analysis examines the relationship between the number of teams per agency attending MAPH and the level of enhanced revenue reported. The findings suggest that agencies sending more than one team to MAPH have not generally been able to translate higher levels of participation into additional enhanced revenue for their agencies and/or community partners (**Exhibit 45**).

Exhibit 45:
Number of MAPH Teams per Agency Compared to Enhanced Revenue

Teams per Agency	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue Per Team
1	10 (35.7%)	$1,833,073 (46.0%)	$666,064 (32.4%)	$2,499,137 (41.3%)	$249,914
≥2	18 (64.3%)	$2,155,027 (54.0%)	$1,391,195 (67.6%)	$3,546,222 (58.7%)	$197,012
Total	**28 (100.0%)**	**$3,988,100 (100.0%)**	**$2,057,259 (100.0%)**	**$6,045,359 (100.0%)**	**$215,906**

Although almost two-thirds of public health agencies reporting enhanced revenue sent two or more teams to MAPH, the enhanced revenue raised by each of these teams averaged about 21 percent below that raised by teams from agencies with only one team graduating from MAPH. This finding is not entirely surprising, as many MAPH participants and their supervisors report that the primary impacts on organizational effectiveness from multiple teams attending MAPH are intangible. These include:

- the ability to more widely disseminate MAPH-acquired skills and learning throughout the organization, particularly those related to managing people. For example, one supervisor specifically included six MAPH graduates into the office's nine member management team because they, "have a much more global perspective and have a better eye for revenue generation."

- the ability to communicate more effectively internally and externally using a "common business language."

C. Ability of Community Partners to Attract Enhanced Revenue

The presence of a community partner provided some public health teams with new avenues for generating enhanced revenue. Community organizations often enjoy greater flexibility and autonomy in fund raising than typically is the case among public health agencies. As a result, many participants whose MAPH teams included community partners indicated that they were better able to design and operate programs that expand their ability to meet community need beyond what public health departments alone can achieve. In addition, some community partners were able to leverage MAPH-acquired business plan competencies to attract new funding for their organizations.

Although community partners only began participating in the program during Year Two, they helped raise almost $1.2 million, or almost 20 percent, of total MAPH-related enhanced revenue (**Exhibit 46**). This includes $844,042 as part of MAPH team initiated projects and $341,698 raised through independent initiatives outside MAPH.

Exhibit 46:
Enhanced Revenue Produced by Community Partners, by State

State	Number of Community Partners	Community Partner Actual Revenue	Community Partner Forecasted Revenue	Community Partner Enhanced Revenue	Percent of Total Enhanced Revenue*,+
GA	1 (12.5%)	$108,000 (29.5%)	$ 0 (0%)	$ 108,000 (9.1%)	4.2%
NC	3 (37.5%)	$ 72,850 (19.9%)	$353,890 (43.2%)	$ 426,740 (36.0%)	41.5%
SC	4 (50.0%)	$185,500 (50.6%)	$465,500 (56.8%)	$ 651,000 (54.9%)	39.2%
VA	0 (0.0%)	$ 0 (0.0%)	$ 0 (0.0%)	$ 0 (0.0%)	0.0%
Total	**8 (100.0%)**	**$366,350 (100.0%)**	**$819,390 (100.0%)**	**$1,185,740 (100.0%)**	**19.6%**

** Percent of state's total MAPH enhanced revenue attributable to community partners.*

+ Total equals percent of total enhanced revenue attributable to revenue generating community partners.

Community partners appear to be particularly successful in South Carolina and North Carolina. In North Carolina, the efforts of community partners have generated over 40 percent of all enhanced revenue reported by MAPH teams in that state, while community partners in South Carolina have attracted the highest total dollar value of enhanced revenue.

Example of Enhanced Revenue Raised by Community Partner Outside MAPH

The community partner on the team is a private veterinarian with his own practice. After MAPH, he conducted a survey of his clients and found that 15 percent were located a significant distance from his office. As a result, he decided to establish a satellite office. Using his newly acquired business plan development skills, he created a new business plan for the satellite office, which he presented to his bank for a loan. After reviewing the business plan, the bank approved a $100,000 loan. He estimates that the new office will net financial surpluses of $91,950 in 2003, $110,340 in 200, and $132,408 in 2005.

Example of MAPH Team Collaborating with Community Partner

Unable to raise revenue through their MAPH business plan, the team worked with a community partner on the "Rails to Trails" initiative. The program converts old railroad tracks into walking trails and encourages citizens to use them to promote fitness and exercise. The group received grant funding of $147,000 to start the program from the American Association of Pediatrics, the CDC, the local county government and a local March of Dimes chapter. In addition, due to interest from both the CDC and RWJ, the team and community partner have forecasted follow-on revenue through 2006. They also received significant attention throughout the state for their program and, in addition to these grants, the head of the state Department of Transportation has committed approximately $400,000 of in-kind contributions by converting old railroad tracks to trails alongside roads that are under construction.

VI. Relationship between Year Attending MAPH and Number of Enhanced Revenue Initiatives

Previous chapters in this assessment have noted the role of time as both a barrier to and a possible facilitator of application of MAPH skills and competencies. This analysis complements that work by exploring the relationship between time, defined as the length of time between graduating from MAPH and 2005, the end point of our enhanced revenue forecast period, and the ability of MAPH teams to implement multiple enhanced revenue initiatives per team.

In total, the 28 MAPH teams reporting enhanced revenue average 1.45 initiatives per team (**Exhibit 47**). Year Three teams average the highest and Year One teams the lowest number of enhanced revenue initiatives. There appears to be little relationship between teams having more time to implement enhanced revenue initiatives (Year One) and greater success in the number of new initiatives launched. This suggests that time alone is not an accurate predictor or catalyst for successfully attracting funding for and launching significant numbers of new enhanced revenue initiatives.

Exhibit 47:
Year Attending MAPH compared to Number of Enhanced Revenue Initiatives

	Number of MAPH Teams	Number of Enhanced Revenue Initiatives	Initiatives per Team
Year One	3 (10.7%)	4 (9.8%)	1.33
Year Two	13 (46.4%)	16 (39.0%)	1.23
Year Three	12 (42.9%)	21 (51.2%)	1.75
Total	**28 (100.0%)**	**41 (100.0%)**	**1.46**

VII. Relationship between Levels of MAPH Market Penetration and Organizational Effectiveness

This analysis examines the relationship between MAPH's ability to penetrate the target market of public health representatives within the four states and the ensuing dollar value of enhanced revenue within those states. The purpose is to test the hypothesis that higher levels of MAPH penetration lead to higher levels of enhanced revenue.

Over the first three years of the program, MAPH achieved an overall estimated market penetration rate of over 14 percent (**Exhibit 48**). Market penetration estimates indicate significant differences across the four states. These range from a low of 5 percent in North Carolina to a high of 40 percent in Virginia. This unevenness stems from differences in the number of MAPH graduates from each state and, more importantly, differences in the number of MAPH-level representatives state representatives report are qualified to participate in the program.

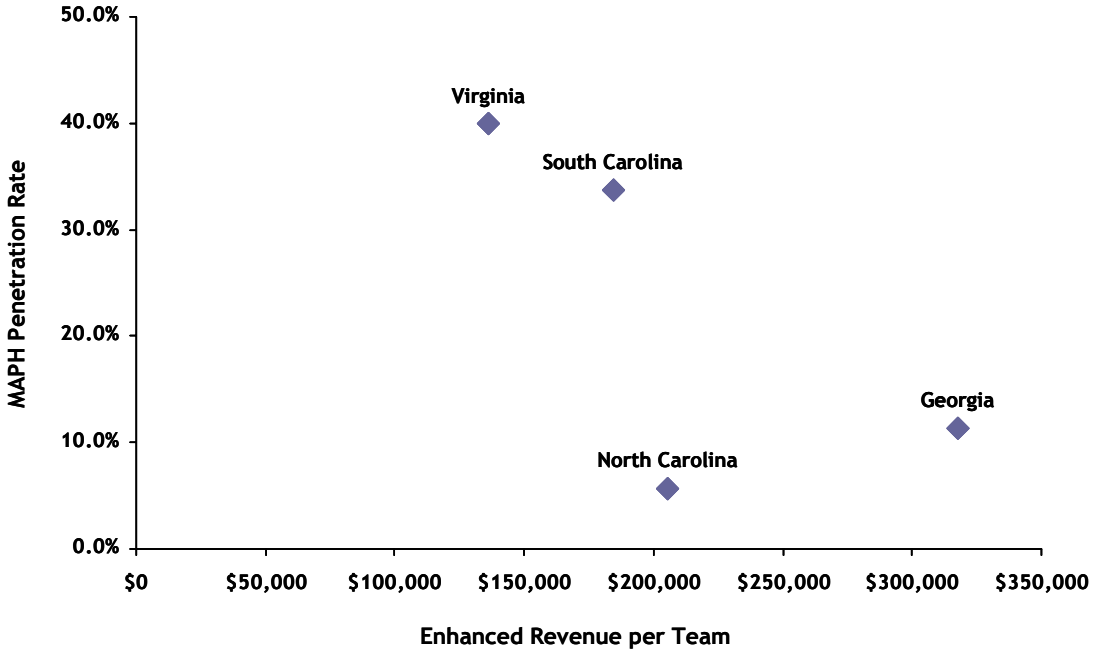
Exhibit 48:
Analysis of MAPH Market Penetration, by State

State	Number of MAPH Graduates*	Number of MAPH-level Representatives+	Market Penetration
Georgia	102 (20.8%)	900 (26.1%)	(11.3%)
North Carolina	98 (20.0%)	1,760 (50.9%)	(5.6%)
South Carolina	150 (30.6%)	445(12.9%)	(33.7%)
Virginia	140 (28.6%)	350 (10.1%)	(40.0%)
Total	**490 (100.0%)**	**3,455 (100.0%)**	**(14.2%)**

* *Management Academy for Public Health: Year Three Report. July 1, 2002*
+ *Management Academy for Public Health: Target Market and Demographic Report: Years 1 and 2. January 31, 2001.*

There appears, however, to be little direct correlation between higher levels of MAPH penetration within the ranks of representatives qualified to attend the program and higher levels of enhanced revenue (**Exhibit 49**). Virginia, with the highest level of MAPH market penetration, reports both the lowest amounts of total enhanced revenue and revenue per MAPH team. In contrast, Georgia, with the second lowest level of market penetration, reports achieving both the highest dollar value of enhanced revenue and revenue per team.

Exhibit 49:
MAPH State Market Penetration and Ability to Generate Enhanced Revenue



It is difficult to generalize about the causes of state-to-state variability, given the small number of teams reporting revenue in each state. Nevertheless, these findings suggest that a number of exogenous variables and factors other than market penetration alone influence the ability of teams across the four states to generate enhanced revenue. Interview data suggest that these include unexpected post-September 11 environmental challenges, including mounting state budget deficits and shifting public health priorities, as well as management issues unique to each state, including:

- differences in legal and regulatory barriers affecting the ability of MAPH teams to collaborate with community partners to establish flexible vehicles, including 501(c)3 organizations, to expand funding sources and opportunities;
- differences across states in the ability and willingness of public health agencies to establish new fee-based programs due to regulatory and cultural barriers; and
- differences between centralized and decentralized state public health agencies and their possible impacts on agency flexibility and opportunities for entrepreneurship.

VIII. Concentrated Examination of MAPH Effectiveness in South Carolina

A. Introduction

This final area of focus features a more concentrated examination of the effects of high levels of MAPH penetration on the effectiveness of public health agencies in South Carolina in implementing enhanced revenue initiatives. The original purpose of a special focus on South Carolina was based upon two assumptions:

1) A perception prior to the study that South Carolina would have the greatest penetration of eligible public health professionals attending MAPH; and
2) The hypothesis that this high level of MAPH market penetration also leads to high levels of enhanced revenue.

The remainder of this special South Carolina focus includes:

- a summary of key findings;
- a detailed assessment of enhanced revenue generated by South Carolina teams;
- a summary of the most and least useful MAPH skills reported by South Carolina teams;
- a distillation of the status of enhanced revenue initiatives and intangible benefits stemming from MAPH, based upon six site visits to South Carolina public health agencies; and
- a summary of enhanced revenue reported by South Carolina teams who did not participate in site visits.

B. Summary of Key Findings

As described earlier in this chapter, South Carolina has produced the largest number of MAPH graduates and achieved a high market penetration rate (33.7 percent). As illustrated in

Exhibit 49 above, however, there appears to be no correlation between a high level of MAPH penetration within the ranks of South Carolina representatives qualified to attend the program and high levels of enhanced revenue.

This suggests that exogenous factors other than market penetration alone influence the ability of MAPH teams to generate enhanced revenue. Interview data suggest that these include unexpected post-September 11 environmental challenges, including mounting state budget deficits and shifting public health priorities, as well as the possible impact of a centralized state public health structure on agency flexibility and opportunities for entrepreneurship.

Although no relationship between high levels of MAPH penetration and high levels of enhanced revenue could be found in South Carolina, interview data suggests that high penetration produces intangible benefits that improve organizational performance and efficiency. These include:

- a broader and deeper intra-organizational dissemination of MAPH skills and competencies;
- greater willingness to partner with outside organizations; and
- enhanced ability to think and communicate using a common business language.

Other key findings emerging from this special focus on the impact of MAPH in South Carolina include:

- South Carolina's teams report significant MAPH-related enhanced revenue.
- In common with the experiences of MAPH teams from other states:
  - grants serve as the primary funding source for South Carolina's enhanced revenue initiatives.
  - a small number of South Carolina teams account for over 80 percent of enhanced revenue.
  - South Carolina teams report that managing data and people are the most useful and managing money the least useful MAPH skill for generating enhanced revenue.
- In contrast with the experiences of MAPH teams from other states:
  - fee-for-service revenue sources are marginal contributors to enhanced revenue initiatives in South Carolina.
  - there is a clear relationship between team size and enhanced revenue, with larger teams enjoying greater success.
  - there is a positive relationship in South Carolina between the number of MAPH teams per agency and ability to generate enhanced revenue.

C. Detailed Assessment of Enhanced Revenue Generated by South Carolina Teams

The purpose of this detailed assessment is to examine the enhanced revenue generated by South Carolina's MAPH teams across a series of sub-analyses that largely parallel those carried out across all four states earlier in this chapter. These correspond to research questions of interest and include the following areas of focus:

- A summary of enhanced revenue generated in South Carolina;
- Distribution of enhanced revenue by payment source;
- Distribution of MAPH business and non-business plan-related enhanced revenue by program year;
- Distribution of enhanced revenue by project funding level;
- Enhanced revenue in relation to MAPH team size; and
- Enhanced revenue in relation to the number of MAPH teams per agency.

1. South Carolina Teams Report Significant Enhanced Revenue

Similar to MAPH's overall experience, about 38 percent of South Carolina teams interviewed report success with MAPH-related revenue generating programs. Since 1999, their success resulted in about $1.7 million in enhanced revenue attributable to translation of MAPH-acquired skills and competencies (**Exhibit 50**).

Teams able to implement revenue generating initiatives report raising an average of over $184,000 each, with about half ($775,115) tied to existing initiatives. The remainder is forecast to phase-in between now and 2005.

Exhibit 50:
Ability to Generate MAPH-related Enhanced Revenue

Generated Enhanced Revenue	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue per Team
Yes	9 (37.5%)	$775,115	$884,228	$1,659,343	$184,371
No	15 (62.5%)	$ 0	$ 0	$ 0	$ 0
Total	**24 (100.0%)**	**$775,115**	**$884,228**	**$1,659,343**	**$69,139**

2. South Carolina's Enhanced Revenue Sources are Largely Grant-based

Also comparable to the three other states, grants serve as the primary funding source for South Carolina enhanced revenue initiatives. Together, government and non-governmental grant funding represent about 92 percent of enhanced revenue, with fee-based initiatives making up the balance (**Exhibit 51**).

In contrast with other states, however, no foreseeable future fee-for-service revenue sources have been reported by South Carolina MAPH teams. As a result, absent currently

unanticipated initiatives, agencies are likely to experience a growing dependence on public and private grant funding sources that historically have been sensitive to economic factors.

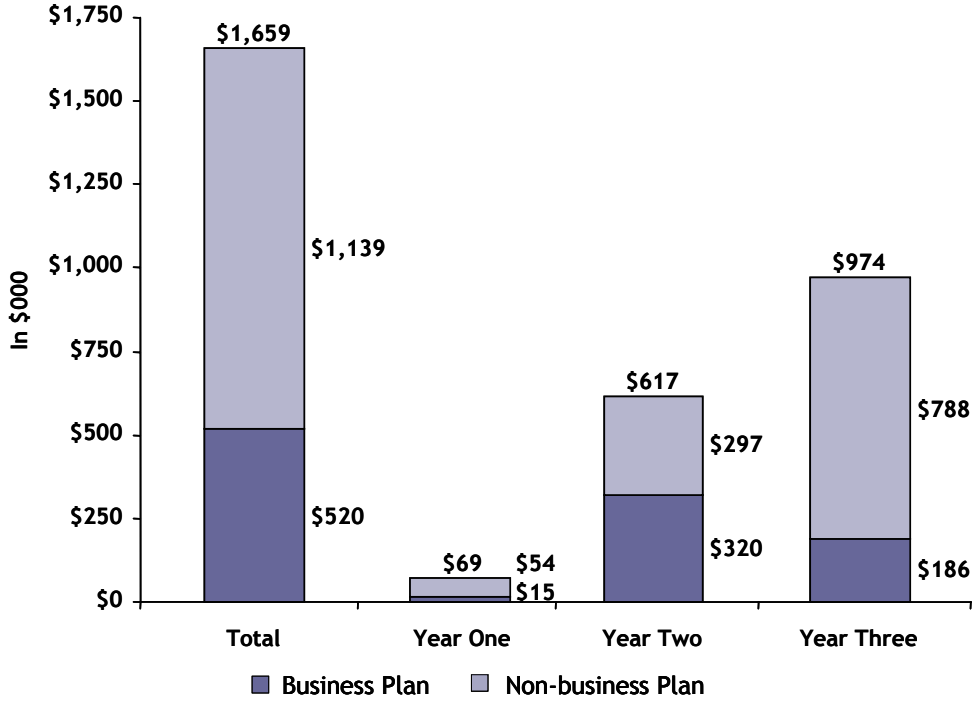
Exhibit 51:
MAPH Enhanced Revenue, by Payment Source

Payment Source	Actual Revenue	Forecasted Revenue	Enhanced Revenue
Grants			
Government	$293,462 (37.9%)	$317,028 (35.9%)	$ 610,490 (36.8%)
Non-government	$347,372 (44.8%)	$567,200 (64.1%)	$ 914,572 (55.1%)
Fee-for-service	$134,281 (17.3%)	$ 0 (0.0%)	$ 134,281 (8.1%)
Total	**$775,115 (100.0%)**	**$884,228 (100.0%)**	**$1,659,343 (100.0%)**

3. Among South Carolina's Teams, Levels of Enhanced Revenue are Inversely Related to Time and Stem Largely from Non-MAPH Business Plans

This analysis examines the level of success achieved by South Carolina's MAPH teams attracting enhanced revenue through business and non-business plan sources by program year. Overall, over two-thirds (69 percent) of enhanced revenue stems from non-MAPH business plan related initiatives (**Exhibit 52**). Contrasting with the experiences of other states, South Carolina's growth in enhanced revenue is inversely related to time, with Year Three teams reporting the most success generating enhanced revenue.

Exhibit 52:
Comparison of Business and Non-business Plan Enhanced Revenue, by Year



4. A Small Number of South Carolina's Successful Teams Produce the Great Majority of Enhanced Revenue

Consistent with the experiences reported by the three other states, a small number of teams (four), averaging about $334,000 each, have accounted for over 80 percent of South Carolina's enhanced revenue (**Exhibit 53**).

Exhibit 53:
Distribution MAPH Enhanced Revenue, by Project Funding Level

Level of Enhanced Revenue per Team	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue per Team
<$10,000	1 (11.1%)	$ 7,000 (0.9%)	$ 0 (0.0%)	$ 7,000 (0.4%)	$ 7,000
$10,000 – $50,000	1 (11.1%)	$ 41,500 (5.4%)	$ 0 (0.0%)	$ 41,500 (2.5%)	$ 41,500
$50,001 – $100,000	2 (22.2%)	$ 96.690 (12.5%)	$ 52,500 (5.9%)	$ 149,190 (9.0%)	$ 74,595
$100,001 – $150,000	1 (11.1%)	$ 88,692 (11.4%)	$ 37,500 (4.3%)	$ 126,192 (7.6%)	$126,192
$150,001 – $200,000	0 (0.0%)	$ 0 (0.0%)	$ 0 (0.0%)	$ 0 (0.0%)	$ 0
>$200,000	4 (44.5%)	$541,233 (69.8%)	$794,228 (89.8%)	$1,335,461 (80.5%)	$333,865
Total	9 (100.0%)	$775,115 (100.0%)	$884,228 (100.0%)	$1,659,343 (100.0%)	$184,371

5. There is a Clear Relationship between Team Size and Enhanced Revenue in South Carolina

The relationship between team size and levels of enhanced revenue is more clearly delineated in South Carolina than is the case among the other three states. In contrast with these states, larger MAPH teams with five and six members experience much greater success generating enhanced revenue than their smaller counterparts (**Exhibit 54**). Although the nine MAPH teams reporting success with enhanced revenue initiatives average over $184,000 each, the three teams with five or six members average over $313,000 per team.

Exhibit 54:
Size of MAPH Teams Compared to Enhanced Revenue

Number of Members per Team	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue per Team
3	2 (22.2%)	$ 69,190 (8.9%)	$ 52,500 (5.9%)	$ 121,690 (7.3%)	$ 60,845
4	4 (44.4%)	$199,612 (25.8%)	$398,228 (45.0%)	$ 597,840 (36.0%)	$149,460
5	2 (22.2%)	$235,692 (30.4%)	$375,500 (42.5%)	$ 611,192 (36.9%)	$305,596
6	1 (11.0%)	$270,621 (34.9%)	$ 58,000 (6.6%)	$ 328,621 (19.8%)	$328,621
Total	**9 (100.0%)**	**$775,115 (100.0%)**	**$884,228 (100.0%)**	**$1,659,343 (100.0%)**	**$184,371**

6. There is also a Positive Relationship in South Carolina between Number of Teams per Agency and Enhanced Revenue

This analysis examines the relationship between the number of teams per agency attending MAPH from South Carolina and the level of enhanced revenue reported. Similar to the other

states, two-thirds of successful teams came from agencies that have sponsored two or more teams (**Exhibit 55**). Unlike other states, however, South Carolina agencies that sent multiple teams to MAPH have been able to translate higher participation rates into higher levels of enhanced revenue. These teams average twice as much enhanced revenue as those from agencies with only one MAPH team.

Exhibit 55:
Number of MAPH Teams per Agency Compared to Enhanced Revenue

Teams per Agency	Number of Teams	Actual Revenue	Forecasted Revenue	Enhanced Revenue	Enhanced Revenue Per Team
1	3 (33.3%)	$ 58,660 (7.6%)	$270,728 (30.6%)	$ 329,388 (19.9%)	$109,796
≥2	6 (66.7%)	$716,455 (92.4%)	$613,500 (69.4%)	$1,329,955 (80.1%)	$221,659
Total	**9 (100.0%)**	**$775,115 (100.0%)**	**$884,228 (100.0%)**	**$1,659,343 (100.0%)**	**$184,371**

7. Most/Least Useful MAPH Skills Training for Maximizing Enhanced Revenue in South Carolina

As described earlier in this chapter, MAPH provided mid- and senior-level public health professionals with management training to improve their skill levels in three areas:

1) Managing people;

2) Managing money; and

3) Managing data.

This aspect of the heightened focus on South Carolina summarizes feedback from teams and their supervisors regarding the most and least useful skills learned at MAPH and their applicability for implementing successful enhanced revenue initiatives.

The most useful MAPH skills reported by South Carolina teams paralleled those reported by teams in other states. Data analysis and presentation skills were most frequently cited (eight citations), followed closely by people skills (seven citations). Most useful data management skills reported include software training and heightened effectiveness in data analysis and presentation of findings. The most frequently cited "managing people" skills enhancements include more effective internal and external communication and improved negotiation skills.

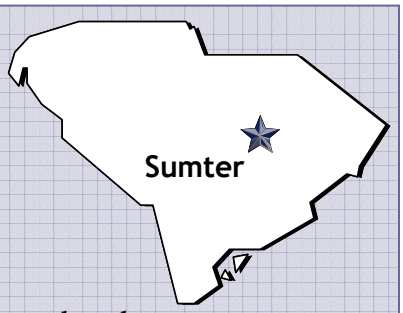
When asked to identify the skill least useful for application, participants pointed to managing money, because many could not directly apply most of the financial training to increasing revenue. Typical responses include:

- "the really detailed budget information was not applicable at our level;" and
- "the financial skills were too theoretical."

D. South Carolina Enhanced Revenue Site Visits

In addition to conducting a detailed financial analysis of the ability of South Carolina's MAPH teams to generate enhanced revenue, eight observational site visits were conducted to select public health agencies to assess the status of their enhanced revenue initiatives, challenges encountered and intangible benefits stemming from MAPH participation. A summary of each site visit is presented below.

Location: Sumter, SC



Team: SC2.2001

Community Partner?: No

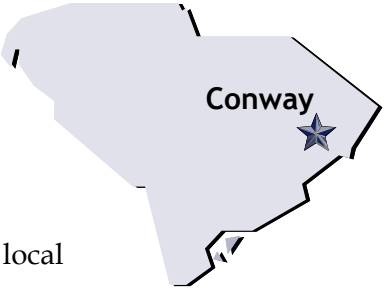
Revenue Generated: Total = $126,192 ($88,692 Business Plan, $37,500 Non-business Plan)

Business Plan Title/Description: "Soulfully Fit" Initiative

Project Goals/Challenges: Partnered with local African American churches to promote fitness and healthy eating, funded by a CDC Cardiovascular Grant.

Intangible Benefit: "We now have a good relationship with the environmental health zoning and planning body, come in contact a lot more and, therefore, we have developed a solid relationship with them."

Location: Conway, SC



Team: SC5.2000

Community Partner?: No

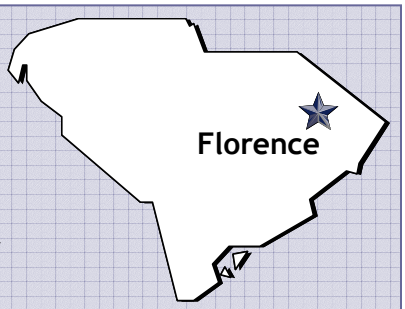
Revenue Generated: Total = $328,621 ($38,621 Business Plan $290,000 Non-business Plan)

Non-business Plan Description: Provide Diabetes Education to local Diabetes Groups

Project Goals/Challenges: Funding from Medical University of South Carolina for the hiring of a state employee for five years to provide technical assistance to local diabetes foundations.

Intangible Benefit: "If you are in the South Carolina Public Health System for a long time, you begin to think of the way we do things in South Carolina as the only way. When we talked to people from Virginia [at MAPH] they told us how they did it, which served as an influx of new ideas."

Location: Florence, SC



Team: SC2.2000

Community Partner?: No

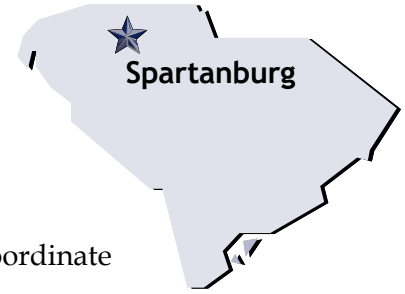
Revenue Generated: $280,888 (all Business Plan revenue)

Business Plan Title/Description: "Don't Guess, Get Answers", Diabetes Education and Screening Programs

Project Goals/Challenges: Diabetes education and screening program initially was funded by the Duke Endowment and now largely reimbursed by Medicare, Medicaid and private insurance. Anticipate additional funding from Duke Endowment, RWJ and Office of Rural Health to expand program.

Intangible Benefit: "Our communication has really improved. I am now not afraid of public speaking, and have been giving a number of presentations about diabetes education to various stakeholders."

Location: Spartanburg, SC



Team: SC1.2001

Community Partner?: No

Revenue Generated: **Total =** $240,952 ($10,000 Business Plan $230,952 Non-business Plan)

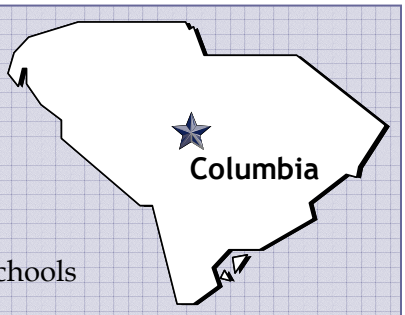
Business Plan Description: Establish 501(c)3 corporation to coordinate planning activities

Non-business Plan Description: Conduct hepatitis C screenings

Project Goals/Challenges: Original BP modified to a workforce training grant, but Non-business Plan funding for hepatitis C screenings for the local population funded by the CDC.

Intangible Benefit: The team was able to network beyond their own organization to learn how other public health departments address problems.

Location: Columbia, SC (#1)



Team: SC2.1999

Community Partner?: No

Revenue Generated: Total = $69,000 ($15,000 Business Plan $54,000 Non-business Plan)

Business Plan Description: Improving Indoor Air Quality in Schools (funding from Environment Health grant)

Non-business Plan Description: Expansion of original business plan (funding from DHHS)

Project Goals/Challenges: Address the problem of air quality at schools for asthmatic children.

Intangible Benefit: "The business plan really helped enhance our skills in grant writing. We have been pursuing more creative ways to raise money and we have become much more outcomes focused. This has really helped improve our grant applications."

Location: Columbia, SC (#2)

Team: SC7.2000

Community Partner?: Yes

Revenue Generated: No Revenue

Business Plan Description: Creation of Office of Oral Health

Project Goals/Challenges: Project proved too ambitious to implement at the time. Another more senior program champion currently is spearheading the creation of the office.

Intangible Benefit: "People actually think about making money. There is a realization that people can actually make money off of the services they provide."

Location: Orangeburg, SC

Team: SC8.2000

Community Partner?: No

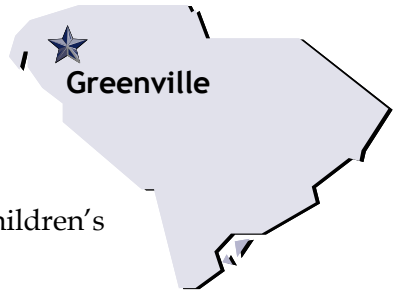
Revenue Generated: No Revenue

Business Plan Description: Eliminating Health Disparities

Project Goals/Challenges: Massive staffing cuts and huge budget shortfalls were major challenges to implementation.

Intangible Benefit: "Staff meetings are much more effective now. Meetings are more structured and more about working together as a team."

Location: Greenville, SC



Team: SC14.2001

Community Partner?: No

Revenue Generated: No Revenue

Business Plan Description: Effects of Domestic Violence on Children's Health

Project Goals/Challenges: The business plan was too large. There was not enough staff or money available to implement.

Intangible Benefit: To minimize impact of budget cuts, in areas of overlap with another provider, the team was able to effectively partner with the provider and ensure that services continued at a reduced level.

E. Summary of Enhanced Revenue Reported by Teams Uninvolved with Site Visits

Four South Carolina MAPH teams not part of the site visit process also report generating enhanced revenue. Their goals, challenges and levels of success are summarized below (**Exhibit 56**).

Exhibit 56:
Other South Carolina MAPH Teams Reporting Enhanced Revenue, 1999 - 2001

Team	Community Partner	Revenue Generated	Type of Project	Project Goals/Challenges
SC3.2001 Pee Dee Health District	Yes	**$485,000** (all Non-business Plan)	Rails to Trails Program	Converts old Railroad tracks to walking trails to promote exercise. The program is funded by multiple sources including the CDC, the March of Dimes and the American Association of Pediatrics.
SC10.2001 Catawba Health District	No	**$80,190** (all Business Plan)	Healthy and Whole	Promote cardiovascular health using faith based community partner, funded by a CDC Cardiovascular Health Grant.
SC5.2001 Appalachia I Health District	Yes	**$41,500** $6,890 Business Plan; $34,610 Non-business Plan)	Bone Density Screenings	Increase use of heel density screening machine at local hospital stemming from greater awareness about osteoporosis. Funded by two pharmaceutical companies.
SC1.2000 Greenville	No	**$7,000** (all Non-business Plan)	Health local public health conference	Corporate funding was used to pay for speakers for the conference.

IX. Implications of Enhanced Revenue Findings for MAPH Sustainability/Replicability

MAPH is a young program. During its four years of initial funding, it successfully navigated challenges through flexibility, adaptability and a consistent focus on quality. As a result, the program generally scored highly on factors that influence success and in relation to its goals.

An important future outcome will be the program's ability to ensure its sustainability within a rapidly evolving environment and lack of certainty regarding future program sponsors. As a result, establishing a critical mass of evidence regarding program outcomes is a key enabler for building a sustainable platform for continuing and growing the program.

This assessment finds that graduates from the first three MAPH years have been able to apply skills and competencies gained through the program to generate over $6 million in enhanced revenue to benefit their agencies and communities. Their ability to generate robust outside funding has important implications for the program's future. First, it verifies in evidence-based terms the soundness of the demonstration model and its transferability to public health settings. Second, it provides support for marketing activities geared toward potential funding sources.

As described earlier, MAPH participants also are more aware of the need to collaborate with community partners and more willing to explore entrepreneurial opportunities that arise through such partnerships. This heightened capacity to strengthen and build bridges between public health and other public and private community organizations supports the post-September 11 movement toward greater coordination between public and private health sectors.

MAPH also may wish to consider examining additional states with more decentralized public health agency structures as potential candidates for program replication. Although a statistically significant correlation could not be established, this assessment found that teams from public health agencies in less centralized demonstration states were far more successful in pursuing funding opportunities than their counterparts in more centralized states.

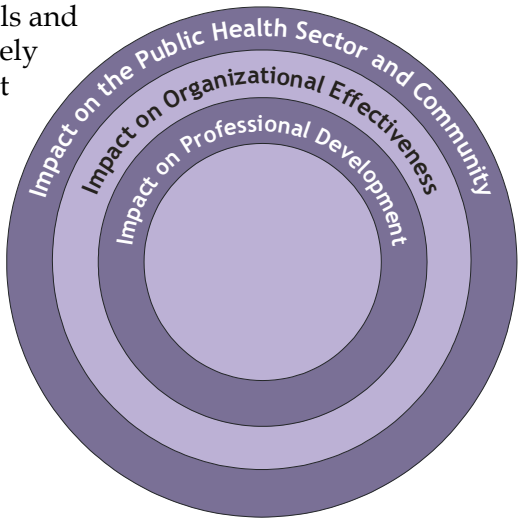
In another less direct, yet important sense, these findings may only be the "tip of the iceberg" in terms of quantifying the economic benefits of new MAPH-related programs. The revenues and employment originating from these health care-related programs also can have a sizable multiplier effect on other local economic sectors. In the short term, the addition of newly funded programs within a community ripples through other local economic sectors, as new demand for goods and services affects the income, employment and wage levels of other local organizations. In the longer term, expanded availability of health care services also may influence regional economic development.

Chapter Seven continues by identifying additional tangible and intangible impacts beyond enhanced revenue that MAPH may be influencing.

CHAPTER SEVEN: MEASURING PROGRAM IMPACT

I. Introduction

MAPH seeks to equip public health employees with skills and abilities that enhance their capability to respond effectively to an increasingly complex and demanding environment that creates both challenges and opportunities within the public health arena. Chapter Five described participants' ability to translate these skills back to their work setting and Chapter Six detailed their ability to translate skills into enhanced revenue. This chapter places the program under a review lens by identifying program impacts within three domains that may be influenced by MAPH. These include: 1) impact on of MAPH professional development; 2) impact on organizational performance; and 3) impact on the field of public health and community.



II. Impact on Professional Development

As described previously, after the program's first year, heightened emphasis was placed on improving the individual management competency of public health professionals. MAPH expects that heightened management skills and competencies will translate to professional development. This evaluation examines the program's impact on participants' professional development from a number of perspectives, including:

- increased areas of responsibility;
- changes in position/roles;
- influence on professional goals; and
- change in time spent in professional development activities.

A. Increased Areas of Responsibility

Overall, about 56 percent of respondents reported taking on increased responsibility in the workplace since enrolling in MAPH. **Exhibit 57** illustrates a number of key areas of responsibility within public health organizations in relation to the extent to which graduates experienced increased responsibilities.

Exhibit 57:
Extent to Which MAPH Increased Areas of Responsibility

Area of Responsibility	Responsibilities Expanded n (%)
Supervise staff (n = 247)	89 (36.0%)
Budgeting or financial management (n = 240)	90 (37.5%)
Policy analysis (n = 238)	83 (34.9%)
Care coordination (n = 232)	46 (19.8%)
Manage or run health programs (n = 238)	91 (38.2%)
Manage or oversee health departments (n = 236)	78 (33.1%)
Data analysis (n = 238)	100 (42.0%)
Provision of clinical services (n = 233)	42 (18.0%)
Carry out health education (n = 232)	74 (31.9%)
Community partnership development (n = 236)	123 (52.1%)

These findings suggest that MAPH-acquired skills and competencies are seeing more wide spread translation to increased responsibilities in areas where they can be deployed most effectively and are a priority for agencies. These include development of community partnerships and areas such as data analysis and program management, where enhanced management skills can be targeted to improve internal and external organizational effectiveness.

MAPH participants have seen more limited growth in responsibility in areas less directly related to the types of management and business skills and competencies honed by MAPH, such as provision of clinical services and patient care coordination.

We also examined responses by program year among those who reported taking on increased responsibilities, in an attempt to understand the possible influences of time and other environmental factors on the ability of participants to take on increased responsibility in the work place (**Exhibit 58**).

Exhibit 58:
Extent to which Respondents Report Expanded Work Responsibility, by Year

Area of Responsibility	Year One	Year Two	Year Three	Total
Supervise staff	20 of 40 (50.0%)	36 of 102 (35.3%)	33 of 105 (31.4%)	89 of 247 (36.0%)
Budgeting or financial management	15 of 39 (38.5%)	36 of 99 (36.4%)	39 of 102 (38.2%)	90 of 240 (37.5%)
Policy analysis	18 of 38 (47.4%)	29 of 99 (29.3%)	36 of 101 (35.6%)	83 of 238 (34.9%)
Care coordination	9 of 36 (25.0%)	17 of 98 (17.4%)	20 of 98 (20.4%)	46 of 232 (19.8%)
Manage or run health programs	20 of 40 (50.0%)	34 of 98 (34.7%)	37 of 100 (37.0%)	91 of 238 (38.2%)
Manage or oversee health departments	19 of 41 (46.3%)	27 of 96 (28.1%)	32 of 99 (32.3%)	78 of 236 (33.1%)
Data analysis	18 of 38 (47.4%)	37 of 99 (37.4%)	45 of 101 (44.6%)	100 of 238 (42.0%)
Provision of clinical services	7 of 38 (18.4%)	16 of 98 (16.3%)	19 of 97 (19.6%)	42 of 233 (18.0%)
Carry out health education	17 of 38 (44.7%)	27 of 97 (27.8%)	30 of 97 (30.9%)	74 of 232 (31.9%)
Community partnership development	25 of 40 (62.5%)	53 of 98 (54.1%)	45 of 98 (45.9%)	123 of 236 (52.1%)

** Survey respondents were asked to respond to each barrier separately. As a result, some respondents chose not to answer certain questions. Therefore, the total number of respondents for each barrier varies.*

The proportion of Year One graduates able to take on increased responsibility since graduating exceeded other years across most areas of comparison. This suggests that time may influence the extent to which MAPH participants have been able to increase their levels of responsibility in management-related functions. These positive outcomes also may be influenced by the fact that a higher proportion of more senior public health managers attended MAPH during its first year compared to later classes.

Over one-third of Year One participants classified themselves as directors or administrators, compared to approximately 20 percent and 10 percent among Year Two and Year Three participants, respectively. As a result, they may be more likely to be in a position to influence growing their responsibilities more rapidly in such areas as supervising staff, policy analysis, community partnership development and managing health departments.

"Following MAPH, I took on a new role as Executive Director of the Governor's Council on Women's and Children's Health."
- MAPH Year One Participant

B. Changes in Position and/or Role

In addition to examining the influence of MAPH training on a participant's ability to take on increasing responsibility, the evaluation also assessed MAPH's influence on the participant's position and/or role within their organization.

"Before MAPH, I was a lead analyst and not in a supervisory role. After MAPH, I was promoted, and I am now directing a department with nine staff members."
- MAPH Year Three Participant

The majority (over 80 percent) have not changed their positions since enrolling in and completing MAPH. About eight percent have been promoted and continue to work at the same organization. An additional three percent now work at a new organization in a more senior position.

There are a number of possible factors that may influence this outcome:

- MAPH graduates already occupy mid- to senior-level positions within their sponsoring organizations. As a result, opportunities for formal upward career mobility may be limited. In fact, 37 percent of Year One, 20 percent of Year Two and 11 percent of Year Three participants classified themselves as directors or administrators.

> *"While my position has not changed, my supervisor now expects a lot more from me."*
> *- MAPH Year Two Participant*

- The relatively short three-year window of review encompassed by this evaluation may be too short a time span to appropriately reflect significant career mobility in many public health settings.

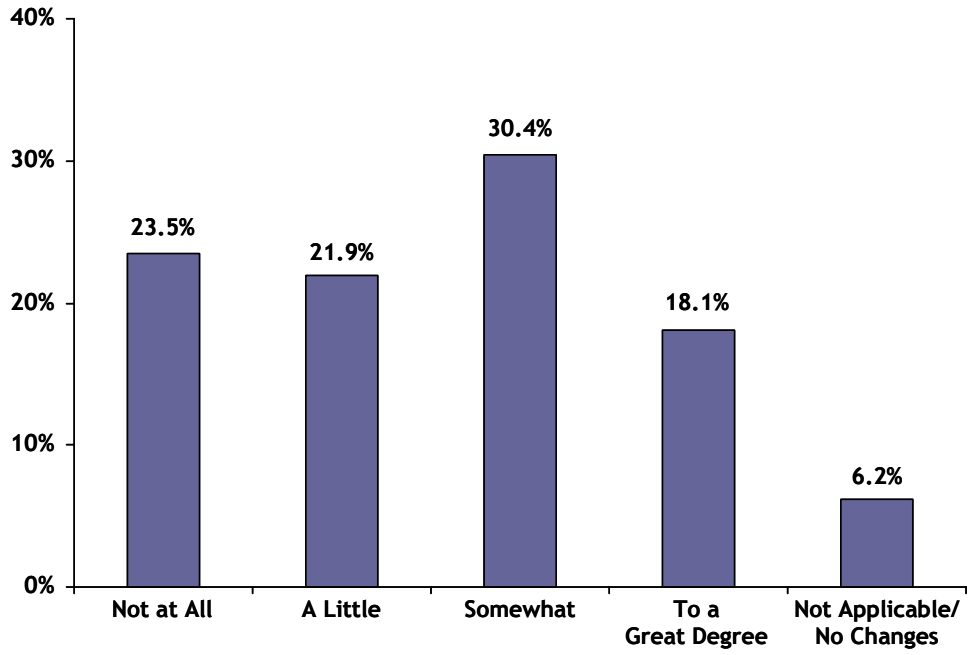
- Unexpected post-September 11 environmental challenges, including mounting state budget deficits, generally may dampen promotion prospects for public health employees and lengthen "time in grade" for current managers.

Although most MAPH participants have not experienced a formal change in their positions, participants and supervisors agreed that many are well positioned to enhance the effectiveness of their organizations. This, in turn, may provide a foundation for future promotional opportunities.

Recognizing that professional growth may be defined more broadly than formal promotion alone, the evaluation also assessed the degree to which attending MAPH influenced changes in the roles participants assumed in their organizations.

Nearly half (48.5 percent) reported that attending MAPH has either "somewhat" or "to a great degree" influenced changes in their roles (**Exhibit 59**).

Exhibit 59:
MAPH's Influence on Changes in Position or Responsibilities



These findings varied somewhat by program year, with the earliest class again reporting somewhat greater success in this arena, with only about nine percent reporting no change in position or responsibility since attending MAPH, compared to about 26 percent among graduates from Years Two and Three.

C. Influence on Professional Goals

This evaluation also examined to what degree participating in MAPH changed participants professional goals. Two-thirds (66 percent) reported that MAPH "somewhat" (43 percent) or "considerably/significantly" (23 percent) improved their ability to plan and act on professional goals. Little variation in response was observed across program years.

> *"The concepts and knowledge I was exposed to changed what I read professionally. I incorporate business concepts into planning. This has changed my overall plan for future jobs. Thank you!"*
>
> *- MAPH Year Three Participant*

A number of participants cited MAPH for providing them with an impetus to continue their education. Many had been away from an academic environment for some time and felt "inspired by the quality of teaching" at MAPH.

> *"MAPH rekindled my academic interest. It was more than simple continuing education, which is a job requirement. MAPH allowed me to return to the intense academic setting and really take advantage of the education provided."*
>
> *- MAPH Year Three Participant*

D. Change in Time Spent on Professional Development Activities

We examined changes in time spent by MAPH participants in selected professional development activities. This measure is useful to see if they are spending more of their time on management-related and/or networking activities, including raising their profiles beyond their public health agencies. This includes changes in time spent participating in professional associations, publishing articles or otherwise becoming more visible in the public health or broader health care arenas.

Almost half (45 percent) of respondents reported either "somewhat" or "significantly" increasing time spent engaging in professional development activities. These participants reported that the MAPH experience produced heightened confidence and comfort for expanding their involvement in activities, such as:

- publishing in peer reviewed journals;
- participating in community coalitions to raise the visibility of public health;
- interacting with other public agencies;
- presenting in new venues and to more interdisciplinary audiences; and
- increasing interest and involvement in professional networking.

Changes in time spent by MAPH participants in professional development activities showed only slight variation when examined across program years.

These findings suggest that MAPH graduates are spending more time on professional development activities that help heighten the profile and build the field of public health and

public health management. There also appears to be increased "spill over" to arenas outside their organizations, as MAPH-trained public health employees report placing greater emphasis on interacting with community-based organizations.

III. Impact on Organizational Effectiveness

Participants reported that MAPH enhanced their ability to apply a number of management skills that can be linked to improved organizational performance (**Exhibit 60**).

Exhibit 60:
Influence of MAPH on Participants Job-related Competencies

Factor	Not at All or A Little n (%)	Somewhat Changed n (%)	Considerably or Significantly Changed n (%)
Level of confidence in performing your job responsibilities (n = 265)	49 (18.5%)	139 (52.5%)	77 (29.0%)
How job responsibilities are carried out (n = 266)	61 (22.9%)	137 (51.5%)	68 (25.6%)
Relationship with colleagues and people you supervise (n = 265)	101 (38.1%)	110 (41.5%)	54 (20.4%)
Relationship with supervisor and senior staff (n = 264)	119 (45.1%)	101 (38.2%)	44 (16.7%)
Functioning of your department or unit (n = 265)	112 (42.3%)	112 (42.3%)	41 (15.4%)

Supervisors also reported that their expectations of MAPH were met with regard to its impact on organizational effectiveness and efficiency. When asked what they observed as the greatest benefits of MAPH participation to their institutions, supervisors most frequently cited: 1) successfully implementing business plans important to the organization (as described in Chapter Six, many of these business plans resulted in enhanced revenue that benefited public health agencies, community partners and local communities); 2) disseminating management skills more broadly across the organization; and 3) being able to leverage available resources more effectively. As a result, many supervisors reported promoting MAPH and encouraging qualified staff with the necessary commitment and energy to apply.

More specifically, participants and supervisors indicated that MAPH improved participants' organizational effectiveness in both tangible and intangible ways. Intangible effects include:

- **heightened confidence levels.** When asked to describe which job-related competency was most influenced by attending MAPH, most participants pointed to enhanced self-confidence, citing its positive impact on work place relationships and contribution to enhanced organizational efficiency and effectiveness. Heightened confidence also reportedly benefited MAPH graduates in negotiating contracts and interacting with community health care providers.

  Supervisors observed growing confidence through the body of learning amassed by those participating in the program. Several noted that, although the public health sector often is not supportive of its employees, since participating in the program, their employee's confidence levels rose across most or all of their areas of responsibility.

- **improved professional relationships and ability to manage people.** Participants reported that MAPH improved their willingness and ability to become more proactive in building relationships with staff at all levels in their organizations. A majority reported that MAPH changed their relationships with supervisors and other senior staff, as well as their colleagues and people they supervise either "somewhat" or "considerably/significantly." These responses generally remained consistent across program years.

  "I feel more confident and empowered by MAPH. I believe that it helps level the playing field, giving more people overlapping skills which allow them to work together more efficiently."
  - MAPH Year Two Participant

  Many graduates pointed to the usefulness of MAPH's 360º feedback instrument in improving delegation and priority setting which, in turn, helped strengthen their relations with superiors and subordinates. Others, whose supervisors previously attended MAPH, noted improved interpersonal communications and ability to more effectively relate on different levels.

  Supervisors agreed, reporting that MAPH participants have improved their ability to motivate employees, effectively delegate and resolve conflicts and, in some instances, influence people beyond their formal spheres of authority as a result of enhanced leadership and communications skills.

- **enhanced ability to frame and prioritize problems.** Supervisors reported that participants are better able to decide which problems are likely to have the greatest organizational impact and are more effective in "navigating the resolution of insurmountable problems through the system."

- **improved ability to work as a team.** Supervisors observed that participants able to continue working together as a team after their MAPH experience were more effective, particularly in those public health settings where management is organized around executive management teams. They also were more effective in disseminating MAPH-acquired skills more broadly throughout their organizations.

A major tangible impact on organization effectiveness resulted from a keener focus on entrepreneurial methods and approaches. As described earlier, exposure to civic entrepreneurship and application of those skills through MAPH and other business plans resulted in significant levels of enhanced revenue.

Improving the Ability to Work as a Team After MAPH

Four teams from the Fulton County Department of Health and Wellness attended MAPH. These MAPH graduates were selected by the County Health Director, based on a demonstrated commitment to public health and "readiness to move to the next level." He now views them as a "special resource" and has created a SWAT team comprised of MAPH graduates. The team convenes, as needed, to carry out crisis management and to deal with special projects. Through a train-the-trainer (TOT) approach, managers also are systematically disseminating MAPH-acquired skills throughout their departments.

IV. Impact on the Public Health Sector and Community

The evaluation explored the extent to which participating in MAPH has inspired public health professionals and their organizations to achieve a heightened profile and pursue larger roles within the broader health care and/societal arena (i.e., the "spillover effect" beyond sponsoring organizations) from a number of perspectives. These included:

- expanded external relationships;
- influence on community partners;
- impact of social marketing and civic entrepreneurship; and
- synopsis of selected public health agency site visit highlights.

A. Expanded External Relationships

While only a small proportion of respondents (11 percent) reported either a considerable or significant change in their ability to expand their efforts beyond their public health agency, another 42 percent have made inroads in this area (**Exhibit 61**). Supervisors also cite a greater willingness for participants to explore partnering with outside organizations to establish an expanded presence in areas of mutual interest and to more aggressively pursue funding opportunities. As noted earlier, including community organizations in MAPH provided new opportunities for generating enhanced revenue and paved the way for future collaboration.

> *"Following MAPH, we assumed a more prominent role in the community. Now my role is similar to that of a public relations person, and I have been able to improve the image of public health within the community."*
>
> *- MAPH Year Two Participant*

Exhibit 61:
Extent to Which MAPH Changed External Relationships

	Not at All or A Little n (%)	Somewhat n (%)	Considerably/ Significantly n (%)	Total n (%)
Year One	16 (36.3%)	22 (50.0%)	6 (13.7%)	44 (100.0%)
Year Two	47 (45.2%)	44 (42.3%)	13 (12.5%)	104 (100.0%)
Year Three	61 (52.1%)	45 (38.5%)	11 (9.4%)	117 (100.0%)
Total	**124 (46.8%)**	**111 (41.9%)**	**30 (11.3%)**	**265 (100.0%)**

MAPH's emphasis on including community partners also may be having additional, positive spill-over effects, as over half of respondents reported that their responsibilities for developing community partnerships increased. They also reported that public health agencies throughout the four demonstration states are placing heightened emphasis on collaborating with community partners, including hospitals and community-based physicians, to rationalize better delivery of clinically-oriented traditional public health services. By emphasizing the role of community partners and their inclusion in team business plan-guided projects, MAPH has helped support continued development of "win-win" public-private partnerships.

This model is growing and may prove to be an important feature of the future public health landscape. As a result, the future direction of MAPH should continue emphasizing community

partnerships as collaboration vehicles for public health agencies and continue including community representatives on MAPH teams.

It is important to remember that not a great deal of time has passed since many of the participants completed MAPH and that translating management skills to this level may take time to unfold. And, identifying and measuring the influence of MAPH alone, as is the case for other management and leadership development programs, may be more challenging than for programs whose environments may be more stable and expected outcomes more narrowly focused.

Participants cited a number of venues through which they have achieved a heightened presence beyond their pubic health agencies:

- Improved relationships and more awareness of partnering opportunities with community-based organizations, including local universities and health service organizations and other regional and national public health agencies;
- More involvement with community advisory boards;
- Maintaining strong linkages with business plan target populations; and
- Carrying out more ambitious pursuit of outside funding, as discussed throughout the evaluation chapter describing participant success in generating enhanced revenue for their agencies and community partners.

> *"I developed a relationship with the Chamber of Commerce. Previously, the Chamber had not taken an active role in public health, but they were impressed with my business sense and, since then, we have been able to partner with them."*
>
> *- Year Three MAPH Participant*

The site visit synopses presented at the end of this chapter profile specific examples of applying MAPH skills across these external venues.

B. Influence on Community Partners

Community partners who attended MAPH reported being more attuned to seeking out and pursuing partnering opportunities with public health organizations and disseminating MAPH-acquired skills and competencies at their own organizations. As described in Chapter Six, community partners helped raise about $1.2 million in enhanced revenue, including over $844,000 as part of MAPH business plans and about $342,000 outside MAPH.

Almost 55 percent of community partners reported being able to develop business plans other than the plan required for attending MAPH in the relatively short time since their graduation. Others reported successfully applying and disseminating MAPH program material and skills at their home organizations.

MAPH Impact on the Community Partner Organization: A Site Visit Highlight

A Year Two team from the Fulton County Department of Health and Wellness included a community partner from Grady Memorial Health System, the Atlanta area's largest safety-net provider. He praised the program, citing its applicability to Grady and noting that through it, he brought "a piece of MAPH" back to his staff. In the area of managing people, he meets with his staff regularly to discuss MAPH distance learning material and what can be learned and applied from them. Although already a CPA, he credits MAPH's adult learning approach with giving him effective tools to teach financial management to non-financial hospital managers. He also credits civic entrepreneurship with challenging him and, through a trickle-down effect, his staff to think about hospital services as products and develop creative mechanisms for marketing them beyond traditional safety-net populations.

C. Social Marketing and Civic Entrepreneurship

MAPH exposed public health participants to two arenas specifically designed to foster use of creative, entrepreneurial business practices within and beyond the public health arena:

1) Social marketing; and

2) Civic entrepreneurship.

In the business world, social marketing techniques are used to target audiences, to determine consumers' needs and desires and to develop targeted strategies for selling products. The skills training at MAPH encouraged participants to use similar techniques to market public health programs.

"Using the social marketing skills I learned at MAPH, I approached a number of businesses with an offer to provide them with influenza vaccinations. They agreed, and we designed the program so that it has been entirely funded by revenue. It has proved to be such as success that I have been able to hire a number of new staff to expand the program using only money that has been generated from the program."

- MAPH Year Three Participant

Over 60 percent of respondents were able to apply skills in social marketing to "some" or "a great extent." Participants able to apply these skills indicated a new ability to identify priority populations and customize their social marketing approach to build support for public health and to encourage healthy behavior.

Participants less able to apply social marketing skills faced two primary challenges: 1) an organizational culture resistant to change; and 2) non-applicability with job responsibilities. Despite these obstacles, after attending MAPH, respondents reported an increased willingness to "push back" and continue advocating the importance of social marketing.

Exposure to civic entrepreneurship was intended to provide MAPH participants with strategies for thinking creatively about public programs, including developing innovative funding mechanisms and partnerships with community businesses and other health care organizations and agencies. The goal for training in this area was for MAPH participants to "think outside the box" and seek new fund raising opportunities outside those traditionally pursued by public health agencies.

Overall, about 59 percent of respondents reported some level of success in applying civic entrepreneurship skills. For example, one MAPH team created a fee-based program to provide routine physical examinations for the county police department. The program lowered costs for the police department, while generating a profit for the district health department. The result

was a "win-win" for both organizations and stimulated interest in developing additional revenue generating programs.

Participants less able to apply these entrepreneurial skills pointed to challenges similar to those encountered pursuing social marketing initiatives: 1) non-supportive organizational culture; 2) non-applicability with responsibilities at work; and 3) lack of time.

A non-supportive organizational culture frequently was coupled with legal and regulatory barriers. Together, these factors have limited many participants' abilities to venture beyond traditional relationships and funding sources.

Participants also reported that "lack of time" was a growing challenge to applying civic entrepreneurship skills. Between Year One and Year Three, the proportion of participants reporting lack of time as a challenge to applying civic entrepreneurship skills rose from about six percent to almost 28 percent.

While many expressed a willingness to develop new types of relationships and funding sources, their work load leaves little time to conduct these types of new activities. This situation has been exacerbated in recent years as public health departments face funding cuts stemming from state budget deficits and growing responsibilities for disease surveillance and bioterrorism.

V. MAPH Site Visit Highlights

In many respects, the culmination of the MAPH experience is the opportunity it provides to translate enhanced management skills into heightened professional and organizational effectiveness and visibility. Each team's business plan, for example, represents an opportunity to leverage skills and competencies acquired and refined through participation in MAPH and apply them to issues important to the future of their public health agency.

In order to understand the dynamics involved in translating MAPH-related growth in management skills in "real world" public health care settings better, eight site visits were conducted between October 2002 and December 2002. Each served to help assess the impact of the program across different organizational settings and local environments.

We chose to profile three of these site visits in relation to the ability of MAPH participants at each site to implement their business plans and apply MAPH-acquired skills at their agencies and in their communities. Each site visit synopsis emphasizes different aspects of the MAPH experience. Public health agencies featured include:

- **Northwest Georgia Health District 1-1,** located in Rome, Georgia, where, in partnership with another public agency, a MAPH team was able to leverage effectively their business plan to improve the quality of care and expand services to abused children.

- **Wilkes County Health Department,** located in Wilkesboro, North Carolina, where several teams of MAPH graduates were able to build on MAPH-acquired expertise to create effective community partnerships.

- **Lord Fairfax Health District,** located in Winchester, Virginia, where two teams of MAPH participants were able to use their newly acquired skills to improve communication and collaboration throughout the entire agency.

SITE VISIT HIGHLIGHT

Location: Northwest Georgia District 1-1 Public Health Agency. Located in the city of Rome and one of 19 public health districts in Georgia, this District Public Health Agency provides a wide range of services to the residents of a largely rural ten county health district in Northwest Georgia.

Background and Business Plan Description: In 2000 and 2001, four teams from the Agency attended the MAPH. A Year Two team from Catoosa County implemented a business plan that dovetailed with a state mandate to address a growing incidence of child abuse and neglect among at risk families. It was funded as one of eight state-wide pilot sites.

Partnering with the local Department of Family and Children Services (DFCS), the "Our Kids Count" program features Nurse Home Visitation. This model seeks to improve outcomes by adding public health registered nurses to an existing DFCS home visit program largely staffed by social workers. The role of registered nurses is to improve clinical evaluation, diagnosis and care coordination for abused and neglected children. With a case load of 20 to 25 families, nurse-social worker teams visit at-risk families at regular intervals to enhance parenting skills and link families to community resources to prevent child abuse and neglect.

MAPH Impact: The MAPH business plan was implemented successfully in early 2002, and team members cite very positive results in reducing the number of confirmed cases of child abuse and neglect in Catoosa County. As one anecdotal measure of the program's success, the County Sheriff called the health department about six months after the program's inception to inquire about their activities, citing a significant drop in the number of reported child abuse and neglect cases. Since implementation, the program has become a model and is being evaluated for possible replication in other counties throughout Georgia.

To support program implementation, the team aggressively solicited grant and donation funding commitments for 2002-2003, totaling about $280,000 from multiple sources. These included grant funding from DFCS ($100,000), the Community Partnership for Protecting Children ($171,000) and donations from local public and private donors ($9,000). To help ensure program sustainability, the Agency began billing Medicaid for services in July 2002, and discussions were underway with DFCS regarding revenue sharing at the time of the site visit.

In addition to improving health outcomes and generating enhanced revenue, the District Health Director cited the influence of the MAPH business plan in lifting the Agency's profile in the community. Examples include fostering a stronger collaborative relationship with the County Commissioner's office and securing their first contract with a local hospital system to provide OB/GYN back-up for family planning services.

Other useful outcomes of MAPH training reported by participants and their supervisors include greater willingness to network and speak before outside organizations, heightened effectiveness in using data analysis to improve organizational performance, improved hiring practices and greater confidence in carrying out their responsibilities.

SITE VISIT HIGHLIGHT

Location: Wilkes County Health Department, located in the county seat of Wilkesboro, North Carolina, serves a population of about 65,000.

Background and Business Plan Descriptions: Wilkes County is a good example of a public health department that has actively leveraged the MAPH experience to implement two successful business plans, each addressing a growing local need.

Voted "most fundable business plan" by their MAPH colleagues, the Year Three team focused on a local health disparity by improving dental health among the children of Wilkes County, ages six months to three years, through a dental varnishing initiative carried out in partnership with local physicians and a community dental clinic. The health department and community partners bill and receive relatively robust Medicaid payments for these services. Continued program sustainability also is expected to be supported by the Governor's Dental Health Taskforce.

A Year Two team addressed access issues stemming from growing inmigration of Spanish speaking residents by collaborating with a local rural community health center to reduce inappropriate emergency department use and expand access to primary care services by hiring a bi-lingual practice manager, expanding interpreter services and developing a marketing plan to promote Center use. Grant funding of $55,000 from a North Carolina-based foundation supported these start-up activities. Since 2000, patient encounters have doubled at the community health center.

MAPH Impact: Both teams noted the usefulness of MAPH training, particularly the business plan component and managing people skills, in successfully implementing their initiatives and improving the effectiveness of their departments. They also cited several important success factors:

- **Legal and regulatory barriers did not impair program implementation.** A common environmental success factor overlaying both initiatives was county government support for the local health department to retain and reinvest its share of enhanced revenue produced by community-based programs. Team members underscored the need to look at creative ways to maximize and diversify revenue opportunities to compensate for funding currently at risk due to state budget cuts. Civic entrepreneurship was cited as a transferable feature of MAPH training that expanded their horizons beyond traditional public health approaches.

- **All health department managers have attended MAPH, and both teams continue to work together.** These factors have created cohesion and continuity among staff, heightened their effectiveness in implementing community initiatives and enhanced organizational performance. Maximizing MAPH's penetration throughout the department has also deepened its impact by fostering widespread intra-organizational dissemination of management practices, especially those related to managing people.

SITE VISIT HIGHLIGHT

Location: Lord Fairfax Health District. The district office is located in the city of Winchester, Virginia. The district spans five counties in northern Virginia.

Background and Business Plan Descriptions: Two teams from the Lord Fairfax Health District participated in MAPH, one in Year Two of the program and one in Year Three. Though one team achieved some success generating revenue through its business plan, Lord Fairfax is a good example of the importance of the intangible benefits developed through the business plan projects.

The Year Two team designed a plan to educate the public and health care workers in the district about hepatitis C, focusing their education efforts on hospitals. During the course of implementing the program, team members also developed partnerships with tattoo artists, helping them to protect their customers and themselves from hepatitis C. In total, the team generated $10,000 through a grant from the National Association of County and City Health Officials (NACCHO).

The Year Three team fully embraced the concept of civic entrepreneurship learned at MAPH. The team's business plan was designed to address social problems faced by middle school students (e.g., school dropout, teen pregnancy) through a mentoring program. With the encouragement of their advisor, the team sought to move beyond traditional revenue sources, such as grants, and look for other ways to generate project funds. In this case, the team structured their finance plan around obtaining funds from local tourism and fuel industries. The team continues to work with area businesses to obtain these funds.

MAPH Impact: Participants from both teams expressed great satisfaction with their experience with MAPH and their ability to translate the skills they learned on the job. The teams were particularly vociferous about several intangible benefits related to their MAPH experience.

- **Team Building.** Prior to MAPH, many of the team members came from different areas of responsibility within the district. As a result, their ability to work together was limited. By participating in MAPH together, they learned how to work more effectively as a team and to maximize each other's talents. In addition, the team-based approach of MAPH has improved participants' abilities to work with other public health staff throughout the district.

- **Financial Training.** Through financial training, all team members "now speak the same language" when discussing budgets and finances. Consequently, they are better able to communicate ideas and make decisions. The teams also have made finance an issue that everyone cares about, not just the person who is specifically responsible for that duty.

- **Impact of Multiple Teams.** Participants from Year Two provided insights to the Year Three team, helping them to avoid pitfalls and improve their learning experience. For example, on advice from the Year Two team, Year Three participants met weekly to manage the difficult task of writing their business plan. In providing this insight, the Year Two team was able to revisit their experience at MAPH and reassert their commitment to employing the skills they learned.

CHAPTER EIGHT: CONCLUSIONS AND RECOMMENDATIONS

The findings from this evaluation suggest that, overall, MAPH has established a solid foundation and strong reputation during its four years of operation. MAPH participants and their supervisors valued the program very highly and agreed that, when measured against its goals, and considering the program's relatively short tenure and an increasingly challenging post-September 11 environment, it is a success and fulfills a unique and valuable niche within the public health arena.

Virtually all participants (95 percent) reported that MAPH fulfilled the expectations they had when applying to the program. These included how to manage people better, how to develop and implement a business plan, how to sharpen and apply management skills in public health settings and how to enhance intra/interagency communications.

Public health agency supervisors familiar with MAPH agreed. Almost all reported observing heightened organizational effectiveness stemming from the ability of MAPH participants to disseminate heightened management skills more broadly across their organizations. Finally, almost all supervisors and about 85 percent of responding participants reported that they definitely would recommend MAPH to other public health professionals qualified to attend the program.

This evaluation concludes with a set of summary conclusions regarding program impact and effectiveness organized around each of the three major evaluation questions. Each conclusion is followed by recommendations.

The recommendations have emerged with significant qualitative input from current and former MAPH internal and external stakeholders and are meant to strengthen an already robust program further. They are designed to provide UNC, the program sponsors and the CDC Foundation opportunities to enhance the program, to facilitate its continued evolution and to influence raising the profile of participants and their sponsoring organizations within and beyond the public health care arena.

1) ***What were the characteristics of the collaboration between the UNC School of Public Health and Kenan-Flagler School of Business in planning and implementing MAPH?; what were the intended and unintended outcomes of the collaboration?; and what were the implications of the collaboration for MAPH sustainability and/or replicability in other contexts?***

Conclusion

The UNC collaboration between the schools of public health and business was very successful and a key factor in the success of the MAPH pilot project. Major driving forces in the success of the collaboration included a long-term strategic vision and unwavering commitment by the Deans of the two schools, strong and committed program leadership, sufficient funding and resources and the presence of an on-going quality improvement process to maintain program relevance and effectiveness.

Recommendations

In the event that MAPH chooses to replicate its program beyond the four state demonstration phase, it is recommended that a collaboration model similar to that at UNC be an integral component of the program. To effectively implement the model will require a concentrated level of effort by Deans, program staff and faculty that is effectively coordinated to rapidly address opportunities and react to challenges. To help ensure a seamless future collaboration process and structure, it is recommended that:

- Replication strategies include background preparation and environmental assessments, including carrying out on-site needs assessments at public health agencies in potential replication regions to ensure the program's relevance.

- The scale of the replication model be customized to match available funding without compromising program quality and relevance. The scale of any future replication initiatives will be framed by the level of resources available from public and private funders. The challenge for UNC collaboration stakeholders will lie in developing strategies to match available resources with the current level of program quality. UNC should consider extending the MAPH quality improvement process beyond curriculum refinement to serve as a tool to support aligning program quality with available resources.

- A leadership succession strategy be agreed upon that ensures continuity of credible leadership that maintains focus and commitment to a favorable corporate culture supporting inter-school collaboration.

2) ***To what extent did participants apply what they learned at MAPH on the job?; and what influenced application or non-application of MAPH-acquired or enhanced management skills and competencies?***

Conclusion

Overall, participants reported being able to apply the skills they learned at MAPH on the job. They were most successful applying skills related to managing people, citing improved communication, presentation and staff management skills. Participants also were able to use many of the data management skills acquired at MAPH, particularly analysis and effective presentation of data driven findings. While some participants and their supervisors considered the financial skills useful, many found these skills were not applicable to their job responsibilities. Other reported barriers to practical skills application included lack of time and insufficient financial and staff resources stemming from new and shifting post-September 11 priorities and growing state budget deficit-related funding constraints.

Recommendations

These recommendations focus both narrowly, on refining selected MAPH program components, and more broadly, on exploring opportunities to build internal and external synergies to support heightened visibility and future program growth.

- **Consider Refining Selected MAPH Program Components**. MAPH participants and their supervisors have pointed to a number of program-related areas that they believe may benefit from further refinement. These include:

  - ***Beginning the 360 degree evaluation sessions earlier in the program and expanding the number of sessions.*** MAPH graduates found the individualized feedback they received through the 360 degree evaluation valuable, as it provided perspectives about their individual management styles, effectiveness and areas of strength and weakness in a structured, supportive framework. Many felt, however, that conducting the entire program module in one session was inadequate. UNC should consider beginning the 360 degree feedback experience earlier in the program and expanding the number of sessions to meet individual participant's development needs better.

  - ***Resizing the scope of MAPH business plans.*** MAPH participants and their supervisors report that successful public health initiatives tend to be smaller in scope and somewhat less ambitious than typical MAPH business plans. To be more consistent with the types of projects that appear more likely to be successfully implemented by public health agencies, UNC should consider de-emphasizing large scale business plan projects in favor of smaller scale initiatives. This approach may improve the ability of public health agencies to maintain momentum and local support for these initiatives and increase the likelihood of successful implementation.

  - ***Conducting an on-site needs assessment to inform program development.*** Many MAPH participants and their supervisors reported that some program content was not applicable to their individual work environments. To address this issue, they recommended that program representatives visit public health agencies to assess participant needs prior to finalizing the content of program components. In the future, UNC should consider refining the current quality improvement process as it relates to curriculum development to reflect agency input and keep abreast of management training needs that are directly transferable to participants' work sites.

  - ***Restructuring the distance learning component of the program.*** Most MAPH participants felt that the functionality and user friendliness of the distance learning component could be improved. They also pointed to the lack of a clear line of sight between material presented on-line and its relevance to their duties and responsibilities. Specific recommendations made by MAPH graduates include:

    - improving website user friendliness by adding features that allow distance learners to pause, fast-forward and reverse play back of on-line presentation material and selectively access presentation content of interest to them;

- improving the integration of distance learning program content with the skills training carried out at UNC;

- reducing the time required to complete on-line program modules by distilling relevant content and reducing the volume of reading material; and

- incorporating interactive modules that allow on-line adult learners to dialogue and receive real-time answers to questions raised by the distance learning program content.

- ***Adjusting the length of sessions carried out at UNC.*** Many MAPH participants cited exhaustion and inability to retain new knowledge during the later stages of lengthy training sessions at UNC. While acknowledging that some progress has been made, UNC program staff and faculty should continue to explore opportunities to avoid over compression of presentation material.

- ***Including more emphasis on strengthening program assessment skills in future curriculum design***. Supervisors and MAPH graduates from a number of public health agencies noted a heightened emphasis on incorporating program assessment or evaluation components into public health initiatives to provide ongoing feedback to help shape the program and measure outcomes. UNC should consider either incorporating a new training module that focuses on program evaluation into the MAPH curriculum or emphasizing this more during development and implementation of business plans.

- ***Enhancing participants' awareness of the political process***. To improve the prospects of achieving their goals and for the public health arena to more effectively compete for limited resources, many participants and their supervisors stressed the importance of better understanding the political process and how to make local and state political leadership aware and supportive of public health priorities. UNC should consider a new program component focusing on the tools of political advocacy, reaching and influencing opinion leaders and understanding the relationships between the public health sector, politics and the policy development process.

  Featuring guest speakers, including lobbyists and others knowledgeable regarding the political process, the new program module would provide participants with valuable tools to heighten the visibility of public health issues and agencies and help them compete more effectively in the political arena.

- **Explore Opportunities to Build Internal and External Synergies.** MAPH's success to date also may provide opportunities to support activities that heighten program visibility and facilitate effective future growth strategies. These include:

  - ***Exploring opportunities to develop synergies with other related management programs inside and outside MAPH***. There is some evidence that, while awareness of MAPH and its goals and activities is expanding, it remains limited beyond the four states. This may change as the pool of public health employees expands over time, MAPH alumni achieve heightened visibility, ongoing opportunities for

networking and collaboration emerge and the program implements a plan to ensure future sustainability/replicability.

UNC and program sponsors could consider further facilitating this process by fostering collaboration between MAPH and other programs or organizations with compatible interests related to management development to help create opportunities to share dialogue, insights and methods. Doing so could help build a broader base of knowledge and support to help build the field of public health management.

The on-site training sessions at UNC are one possible forum to increase interaction between MAPH and other relevant organizations. They could serve as settings for co-production of knowledge and networking. Potential partners might include:

- other management development programs carried out by the UNC Schools of Business and Public Health, such as the National Public Health Leadership Institute;

- the American Public Health Association and other high profile state and national health care industry associations and organizations; and

- other compatible not-for-profit and for-profit organizations involved with management/executive leadership development.

- ***Conducting research to target future public health markets***. UNC program staff and the MAPH state representatives have successfully attracted widespread and enthusiastic program participation by public health agencies across the four states. However, state budget deficit-related funding constraints, shifting priorities reported by many public health agencies and other environmental factors may present obstacles for achieving desired future participation rates. UNC and program sponsors should consider conducting research to identify and analyze the size, geographic characteristics and nationwide variations in the available pool of public health employees qualified to participate in MAPH. This information would help the program develop and implement marketing and recruitment initiatives better, as well as provide a baseline against which to assess the future recruitment potential for this discipline.

- ***Funding opportunities for ongoing interaction among MAPH graduates.*** Although participants reported being very satisfied with the networking opportunities available to them while participating in the program, they reported limited success in creating an ongoing network for interaction after the formal MAPH experience is over. Lack of ongoing connectivity limits the potential of the program to build a growing infrastructure of graduates who, by interacting across program years and disciplines, can create the synergies and continuity needed to lift their and MAPH's leadership profiles.

  To help address this issue, UNC might consider seeking funding to develop an alumni network or association to maximize opportunities for ongoing interaction and collaboration among participants.

3) To what extent have MAPH participants translated their training into revenue enhancements for their organizations?; which aspects of MAPH were most effective in supporting revenue enhancement initiatives?; what organizational/environmental facilitators and barriers were encountered by MAPH participants to generating enhanced revenue?; and were there significant variations in enhanced revenue across states?

Conclusion

Graduates from the first three years of MAPH successfully applied skills and competencies gained from the program to generate over $6 million in enhanced revenue. Much of this funding has been used by local public health agencies to improve access to primary and preventive care for at-risk populations. These outcomes provide strong quantitative evidence regarding the soundness of the demonstration model and its transferability to public health settings. They also furnish valuable input to energize program marketing activities directed toward potential new markets and funding sources.

Recommendations

In the event that MAPH chooses to replicate its program beyond the four states, it is recommended that staff closely examine potential replication options in relation to factors that respondents report may influence the success of public health agencies in generating enhanced revenue. It is also recommended that UNC consider incorporating these factors into their evaluation criteria for selecting future replication regions. Possible evaluation factors related to enhanced revenue include:

- the extent to which local legal and regulatory barriers are likely to affect the ability of public health managers to successfully carry out entrepreneurial revenue generating initiatives;
- the extent to which exogenous factors, such as state budget deficits and post-September 11 shifts in public health priorities, affect the time and financial resources available for public health professionals to carry out successful revenue generating initiatives;
- the extent to which local internal corporate culture facilitates or impedes the willingness of public health agencies to establish new fee-based revenue producing programs; and
- the extent to which opportunities exist for public health agencies to collaborate with local public and private community organizations to jointly explore entrepreneurial opportunities.