SAINT LOUIS UNIVERSITY.

Program-Level Assessment: Annual Report

Program Name: Master of Public Health (MPH) Program	**Department:** Behavioral Sciences & Health Education and Epidemiology & Biostatistics (offering concentrations in Behavioral Health & Health Education; Biosecurity & Disaster Preparedness; Biostatistics; Epidemiology; Global Health; Maternal & Child Health)
Degree or Certificate Level: Masters	**College/School:** College for Public Health & Social Justice
Date (Month/Year): June 2021	**Assessment Contact:** Anne Sebert Kuhlmann, PhD, MPH, Associate Professor & MPH Program Director, anne.sebertkuhlmann@slu.edu, 314-977-4029

In what year was the data upon which this report is based collected? AY2020-2021

In what year was the program's assessment plan most recently reviewed/updated? 2018

1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle? (Please list the full, complete learning outcome statements and not just numbers, e.g., Outcomes 1 and 2.)

CEPH, the accrediting body for public health programs, dictates 22 competencies grouped into 8 domains for all MPH students regardless of concentration. Our 2021 MPH graduates are our second cohort of students to graduate under our revised curriculum designed to meet these new CEPH accreditation guidelines. This year, we assessed student learning outcomes associated with three domains groups of the 22 competencies – Public Health & Health Care Systems (2 competencies), Leadership (2 competencies), and Communication (3 competencies).

MPH Program Learning Outcomes

Public Health & Health Care Systems

1. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
2. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

Leadership

1. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision
2. Apply negotiation and mediation skills to address organizational or community challenges

Communication

1. Select communication strategies for different audiences and sectors
2. Communicate audience-appropriate public health content, both in writing and through oral presentation
3. Describe the importance of cultural competence in communicating public health content

2. Assessment Methods: Artifacts of Student Learning

Which artifacts of student learning were used to determine if students achieved the outcome(s)? Please describe and identify the course(s) in which these artifacts were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

DIRECT Measures:

1. **Capstone projects** from the three sections of the PUBH 5960 course (two online synchronous and one online asynchronous) – Epidemiology/Biostatistics, Behavioral Sciences/Global Health/Maternal Child Health/Professional Practice, and Biosecurity Disaster Preparedness – were reviewed against the learning outcomes under the selected domains – Public Health & Health Care Systems, Leadership, and Communications. All capstone projects from the Epidemiology/Biostatistics and the Biosecurity Disaster Preparedness sections were included in the review, n=3 and n=4 projects, respectively. From the Behavioral Sciences/Global Health/Maternal Child Health/Professional Practice section, three of the 12 projects were reviewed because this is in line with our program assessment plan to review at least 10% of the Capstone projects every year and means that there are a similar number of projects from each section included in the review.

2. **Preceptor evaluations** from internships of students across all concentrations assessed students' mastery of program learning outcomes with a focus on the selected domains of Public Health & Health Care Systems, Leadership, and Communications

3. **Certified in Public Health (CPH) exam scores** of May and August 2021 graduates provide an external, nationally-standardized measure of student mastery of our CEPH-dictated competencies. While the students were required to take the CPH exam, we waived the requirement to pass the CPH exam as a graduation requirement this year due to the COVID-19 pandemic and the disruption that it caused in these students' lives and education.

INDIRECT Measures:

1. **Exit survey data** from May and August 2021 graduating students provided students' self-assessment of their mastery of each of the MPH program learning outcomes with a focus on the selected domains of Public Health & Health Care Systems, Leadership, and Communications

Madrid student artifacts are not applicable to the MPH program, nor are any other off-campus locations.

3. Assessment Methods: Evaluation Process

What process was used to evaluate the artifacts of student learning, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and **include them in/with this report document** (do not just refer to the assessment plan).

DIRECT Measures:

1. **Capstone projects** were reviewed using the same rubric as last year, updated with the new CEPH-mandated competencies. The rubric was originally developed based on the existing MSPH program assessment. Projects from all 3 sections of capstone (PUBH 5960) were reviewed this year to cover all eight of our concentrations. The review of capstone projects focused on the MPH Program Learning Outcomes in the domains selected for this year's assessment – Public Health & Health Care Systems, Leadership, and Communications. Per CEPH requirements for the capstone, students are supposed to identify a small number of the core competencies (learning outcomes) to integrate with a few concentration competencies in their capstone projects.

2. **Preceptor evaluations** were analyzed in Qualtrics and Excel to characterize the percentage of students assessed by their internship preceptors to show mastery of each program learning outcome. Preceptor evaluations from students completing internship during Summer 2020, Fall 2020, and Spring 2021 were analyzed. Students completing internship in Summer 2020 were a mix of 2020 and 2021 graduates. The preceptor evaluation form contained the MPH competencies for the CEPH-mandated core competencies. This is our first year with preceptor evaluation data on the CEPH-mandated core competencies.

3. **Certified in Public Health (CPH) exam** results were analyzed in Excel to track the average score of our graduates in each of the domain areas aligned with the CEPH-mandated core competencies. In this year's analysis, we focused on

the MPH Program Learning Outcomes in the Public Health & Health Care Systems, Leadership, and Communications domains.

INDIRECT Measures:

1. **Exit survey data** from May and August 2021 graduating students were analyzed in Qualtrics, Excel, and SPSS to characterize the percentage of students reporting mastery of each program learning outcome with a focus on the selected domains of Public Health & Health Care Systems, Leadership, and Communications.

Analysis of all data was conducted by the MPH Program (Anne Sebert Kuhlmann, MPH Program Director; Allese McVay, MPH Program Coordinator; and Laura Schrubb, MPH Internship Coordinator).

4. Data/Results

What were the results of the assessment of the learning outcome(s)? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

DIRECT Measures

1. **Capstone projects:** There is a disconnect between what the Capstone projects must reflect for our CEPH accreditation and the annual program assessment process that SLU expects. CEPH wants to see that Capstone projects reflect an integration of a few of our foundations competencies with some of the concentration competencies. Students are supposed to be mentored through a process of identifying appropriate foundational and concentration competencies for the projects they do. No single project could possibly reflect all 22 foundational competencies required of the program by CEPH, so students go through an identification and reflection process of selecting appropriate competencies for their Capstones. On the other hand, SLU wants use to rotate through assessment of domains of learning outcomes (groups of our 22 CEPH-mandated foundations competencies) on a 2-3 year cycle. This means that many years some or all the Capstone projects will not reflect any or most of the learning outcomes up for review as part of our annual program assessment for SLU.

   This is the situation this year. In the Epidemiology/Biostatistics section, none of the Capstone projects were designed to reflect any of the learning outcomes up for review this year. They did, however, reflect the written communication portion of the 2nd learning outcome under the *Communications* domain (Communicate audience-appropriate public health content, both in writing and through oral presentation). Similarly, in the Biosecurity Disaster Preparedness section, none of the projects were designed to reflect any of the learning outcomes up for review this year. All of them did reflect the written communication portion of the 2nd learning outcome under the *Communications* domain (Communicate audience-appropriate public health content, both in writing and through oral presentation), and one of them reflected the local/national portion of the 1st learning outcome under the Public Health & Health Care Systems domain (Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings). In the Behavioral Sciences/Global Health/Health Management & Policy/Maternal Child Health/Professional Practice section, all three projects did reflect the written communication portion of the 2nd learning outcome under the *Communications* domain (Communicate audience-appropriate public health content, both in writing and through oral presentation). In addition, one project reflected the 2nd learning outcome under the *Public Health & Health Care Systems* domain (Discuss the means by which structural bias, social inequities & racism undermine health & create challenges to achieving health equity at organizational, community & societal levels), and one project reflected the 1st learning outcome under the *Communications* domain (Select communication strategies for different audiences & sectors). Finally, two projects also reflected the 3rd learning outcome under the *Communications* domain (Describe the importance of cultural competence in communicating public health content). All Capstone projects across all three sections adequately reflected the *Evidence-Based Public Health* domain, but that domain is not up for review this year as it was reviewed last year. (see Appendices A)

2. **Preceptor evaluations:** Thirty-two preceptor evaluation forms from student internships were completed during Summer 2020, Fall 2020, and Spring 2021. Overall, the evaluations indicate strong mastery across all competencies for a large percentage of students. The "unable to assess" percentages on the part of the preceptors are to be expected given that not every internship project will require students to demonstrate all competencies. Out of the 32 students, no preceptors indicated students had "limited or no competence" on any given competency.

   Under the *Public Health & Health Care Systems* domain, 13 of 17 preceptors who were able to assess students on the "Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings" competency rated them as significant or above average competence. The remaining 4 students were rated as moderate or average competence. Twenty-two of 26 preceptors who were able to assess students on the "Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels" competency rated them as significant or above average competence while the remaining 4 students were rated as moderate or average competence.

   Under the *Leadership* domain, 18 of 26 preceptors who assessed students on the "Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making" competency rated them as significant or above average competence. The remaining 8 students were rated as moderate or average competence. Twelve of 16 preceptors who assessed students on the "Apply negotiation and mediation skills to address organizational or community challenges" competency rated them as significant or above average while the remaining 4 students were rated as moderate or average competence.

   Under the *Communications* domain, 24 of 29 preceptors assessed our students as having significant or above average competence on the "Select communication strategies for different audiences and sectors" competency while the other 5 students were assessed as moderate or average competence. Similarly, 21 of 27 preceptors rated our students as significant or above average competence on the "Communicate audience-appropriate public health content, both in writing and through oral presentation" competency with the other 6 students assessed as moderate or average competence. Finally, for the "Describe the importance of cultural competence in communicating public health content" competency, 17 of 20 preceptors assessed their students as having significant or above average competence while the other 3 were assessed as moderate or average competence. (Appendix B)

3. **Certified in Public Health (CPH) exam:** Since our students did not take the CPH exam last year due to COVID-19 and the shift to online learning, this was our first cohort of students taking the exam where the exam content matched the new CEPH accreditation competencies implemented in our revised curriculum. Our graduating students had an 83% pass rate on the CPH exam in April 2021. This is somewhat lower than previous years, and slightly below the national pass rate of 85%. Given the context of COVID-19, the program chose not to require students to pass the exam for graduation in order to minimize additional stressors placed on the students this spring.

   Students' average score in the *Leadership* domain was somewhat higher this year (12.3 out of 17) than average scores for the domain in 2019 (11.4). Scores in the *Communications* domain were similar this year (13.9 out of 18) to scores in the domain from 2019 (13.8). The CPH exam does not have a separate domain labeled *Public Health & Health Care Systems*. Instead, the knowledge and skills pertaining to this domain are sprinkled throughout the other domains, meaning that average scores are not available for this domain.

   The lowest institutional average scores were in the domains of *Law and Ethics*, *Policy in Public Health*, and *Public Health Biology and Human Disease Risk*. *Policy in Public Health* and *Law and Ethics* have been two of our lowest categories in previous years as well, so we will keep an eye on the courses associated with these areas and make necessary revisions. (Appendix C)

INDIRECT MEASURES

Exit survey data from graduating students: Thirty-nine of our fifty-two graduating students completed the exit survey (75.0% response rate). Our response rate increased this year from last year's 58.3% response due to sending the survey out at the end of April with time to send periodic reminders, including one from the Program Director stressing the importance of assessment. We still hope to obtain a >90% response rate next year and plan to either require completion of the survey as a program graduation requirement or offer an entry into a gift card raffle as an incentive. These graduates were the second graduating cohort under the new CEPH core competencies and revised MPH curriculum, so ratings within the program learning outcomes were able to be compared across the two years of data.

Students assessed themselves higher in all 3 learning outcomes under the *Public Health and Health Care Systems*, *Leadership*, and *Communication* domains this year. Of the 39 students who completed the self-assessment of their learning outcomes, over 80% of the students rated themselves as above average or very proficient in 1 of the 2 learning outcomes under the *Public Health and Health Care Systems* category, compared to over 70% in this same learning outcome in 2020. The learning outcome of Comparing the organization, structure and function of health care, public health and regulatory systems had 63.9% of students rate themselves as above average or very proficient, compared to only 48.6% last year.

Under *Leadership*, slightly over 60% of the students rated themselves as above average or very proficient for both learning outcomes, compared to around 50% in 2020.

Under *Communication*, over 70% of students rated themselves as above average or very proficient for the three learning outcomes, compared to over 60% for the first 2 learning outcomes and slightly over 70% for the third outcome in 2020. (Appendix D)

5. Findings: Interpretations & Conclusions

What have you learned from these results? What does the data tell you?

The Capstone projects are a good metric in years when the Evidence-Based Public Health domain is up for review, but it is not a good metric in other years of the assessment cycle. This is a year when the Evidence-Based Public Health domain was not part of our review, so most of the Capstone projects only reflected part of one learning outcome under the Communications domain. Because CEPH requires that students identify a small number of foundational competencies to integrate with some concentration competencies in their Capstone projects, the individual projects will always reflect a different selection of learning outcomes, but almost all projects always contain at least a component of the Evidence-Based Public Health domain.

Regarding the CPH exam, we believe not instituting the passing requirement in addition to the stress of completing most of their classes online over the past year led to a decrease in sufficient preparation for the exam. We expect the pass rate to increase next year to our previous rate of over 90% since the passing graduation requirement will be re-instituted.

Related to the Exit Survey, the current percentages for self-assessment by May and August 2021 graduates suggest that we still need to take a closer look at how and where these learning outcomes are introduced and reinforced in the current curriculum, especially for the competencies under the *Leadership* domain. Our revisions to the curriculum and individual courses overall, however, seem to be increasing students' proficiency of the competencies and learning outcomes.

There is an overall disconnect between how we must assess the 22 CEPH-mandated core competencies for the program among all of our students on a yearly basis and how our annual program assessment for SLU is set up to rotate through domains of these competencies/learning outcomes on a 2-3 year cycle. Neither the capstone projects nor the internship preceptor evaluations are intended to reflect all domains with the 22 CEPH-mandated core competencies at the same time, so under the current assessment plan there will always be gaps in our assessment

data. The MPH Program needs to work with the Director of Assessment at SLU to better align our required CEPH assessment process with our annual program assessment for SLU.

6. Closing the Loop: Dissemination and Use of Current Assessment Findings

A. When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

Results from the annual program assessment are shared with the MPH Steering Committee, consisting of faculty representatives from all concentrations in the MPH program, during the first meeting of the academic year in August. Results will also be shared with the chairs of the 3 departments whose faculty teach and advise in the MPH program so that they can share and discuss the results in their monthly faculty meetings.

B. How specifically have you decided to use these findings to improve teaching and learning in your program? For example, perhaps you've initiated one or more of the following:

Changes to the Curriculum or Pedagogies	• Course content • Teaching techniques • Improvements in technology • Prerequisites	• Course sequence • New courses • Deletion of courses • Changes in frequency or scheduling of course offerings
Changes to the Assessment Plan	• Student learning outcomes • Artifacts of student learning • Evaluation process	• Evaluation tools (e.g., rubrics) • Data collection methods • Frequency of data collection

Please describe the actions you are taking as a result of these findings.

The MPH program is entering the 3rd year of a 3-year self-study process in preparation for our next reaccreditation through the Council on Education in Public Health (CEPH). This will be our first reaccreditation under CEPH's "new" criteria that dictate 22 core (foundational) competencies for all MPH students regardless of concentration (previously, programs developed their own set of 8-10 core competencies plus additional concentration competencies). As part of this self-study process, we are reviewing all syllabi to ensure that competencies mapped to each course in our master course-by-competency matrix are being taught and assessed in those courses and that the assessments (artifacts of student learning) are appropriate and aligned with the competencies in the courses. We are also working to standardize syllabi and assessments in courses that have multiple sections, while still allowing some academic freedom for the instructors to modify courses to their strengths and expertise which is a tricky balance. This syllabus review and standardization process is helping identify areas of weakness in the curriculum and strengthen those areas. It should have a ripple effect of also helping to improve outcomes for our annual program assessment for SLU.

Specifically, we are working to standardize the multiple sections of PUBH 5010: Mission and Practice of Global Public Health and PUBH 5050: Health Care Across the Lifespan. Both courses directly build skills and competency in the Public Health & Health Care Systems domain. Such standardization will help ensure that all our students receive high-quality instruction and an opportunity to enhance their knowledge and skills in this domain.

Finally, we plan to revise the content of the preparatory course (PUBH 5950: Special Studies) that all students take before the CPH exam so that students receive more active review prior to taking the nationally-standardized exam. This, along with reinstituting passing the exam as a graduation requirement, should help boost our pass rate up again above 90%.

Otherwise, since this is the first year of full data collection under the revised CEPH criteria, we will review the data for another year before making additional changes.

If no changes are being made, please explain why.

7. Closing the Loop: Review of Previous Assessment Findings and Changes

A. What is at least one change your program has implemented in recent years as a result of assessment data?

Last year was our first year of program assessment based on the revised CEPH criteria and their 22 mandated competencies; however, we were unable to collect complete data for AY 2019-2020 because of the COVID-19 pandemic. Therefore, we did not make any changes based on our previous assessments' findings.

B. How has this change/have these changes been assessed?

N/A

C. What were the findings of the assessment?

N/A

D. How do you plan to (continue to) use this information moving forward?

N/A

IMPORTANT: Please submit any assessment tools (e.g., rubrics) with this report as separate attachments or copied and pasted into this Word document. Please do not just refer to the assessment plan; the report should serve as a stand-alone document.

Appendix A;
Assessment Rubric for MPH Capstones (Epidemiology/Biostatistics, SP21, n=3)

Learning Outcomes	LO Assessed by this Capstone (Yes/No)	Capstone Demonstrates Achievement of Competency (Ambient Air & Stroke Morbidity …)	Capstone Demonstrates Achievement of Competency (Healthcare Expenditures & Diabetes…)	Capstone Demonstrates Achievement of Competency (Ambient Air & Stroke Morbidity II…)	Overall
Public Health & Health Care Systems					
1. Compare the organization, structure & function of health care, public health & regulatory systems across national & international settings	No	-	-	-	N/A
2. Discuss the means by which structural bias, social inequities & racism undermine health & create challenges to achieving health equity at organizational, community & societal levels	No	-	-	-	N/A
Leadership					
1. Apply principles of leadership, governance & management, which include creating a vision, empowering others, fostering collaboration & guiding decision	No	-	-	-	N/A
2. Apply negotiation and mediation skills to address organizational or community challenges	No	-	-	-	N/A

Communications					
1. Select communication strategies for different audiences & sectors	No	-	-	-	N/A
2. Communicate audience-appropriate public health content, both in writing & through oral presentation	Yes (in writing)	Yes	Yes	Yes	Yes (in writing)
3. Describe the importance of cultural competence in communicating public health content	No	-	-	-	N/A

Appendix A;
Assessment Rubric for MPH Capstones (BSHE, GLOH, HMP, MCH & PFP, SP21, n=3 of 17)

Learning Outcomes	LO Assessed by this Capstone (Yes/No)	Capstone Demonstrates Achievement of Competency (Diabetes Health Literacy…)	Capstone Demonstrates Achievement of Competency (Food as Medicine…)	Capstone Demonstrates Achievement of Competency (Not-For-Profit Service Providers' Toolkit…)	Overall
Public Health & Health Care Systems					
1. Compare the organization, structure & function of health care, public health & regulatory systems across national & international settings	No	-	-	-	N/A
2. Discuss the means by which structural bias, social inequities & racism undermine health & create challenges to achieving health equity at organizational, community & societal levels	Mixed	-	Yes	-	Yes, for the one that was designed to address this competency
Leadership					
1. Apply principles of leadership, governance & management, which include creating a vision, empowering others, fostering collaboration & guiding decision	No	-	-	-	N/A
2. Apply negotiation and mediation skills to address organizational or community challenges	No	-	-	-	N/A

Communications					
1. Select communication strategies for different audiences & sectors	Mixed	Yes	-	-	Yes, for the one that was designed to address this competency
2. Communicate audience-appropriate public health content, both in writing & through oral presentation	Yes (in writing)	Yes	Yes	Yes	Yes (in writing)
3. Describe the importance of cultural competence in communicating public health content	Mixed	Yes	-	Yes	Yes, for the ones that were designed to address this competency

Appendix A;
Assessment Rubric for MPH Capstones (Biosecurity & Disaster Preparedness, SP21, n=4)

Learning Outcomes	LO Assessed by this Capstone (Yes/No)	Capstone Demonstrates Achievement of Competency (Hospital Preparedness Plans…)	Capstone Demonstrates Achievement of Competency (Technologies in Disaster Response…)	Capstone Demonstrates Achievement of Competency (Public Health Programming, Rural vs Urban…)	Capstone Demonstrates Achievement of Competency (STIs & COVID-19…)	Overall
Public Health & Health Care Systems						
1. Compare the organization, structure & function of health care, public health & regulatory systems across national & international settings	Mixed	-	-	Yes (for local health department settings in the U.S., especially around funding & staffing)	-	Yes, for the one that addressed this competency
2. Discuss the means by which structural bias, social inequities & racism undermine health & create challenges to achieving health equity at organizational, community & societal levels	No	-	-	-	-	N/A
Leadership						
1. Apply principles of leadership, governance & management, which include creating a vision, empowering others, fostering collaboration & guiding decision	No	-	-	-	-	N/A
2. Apply negotiation and mediation skills to address organizational or community	No	-	-	-	-	N/A

challenges						
Communications						
1. Select communication strategies for different audiences & sectors	No	-	-	-	-	N/A
2. Communicate audience-appropriate public health content, both in writing & through oral presentation	Yes (in writing)	Yes	Yes	Yes	Yes	Yes (in writing)
3. Describe the importance of cultural competence in communicating public health content	No	-	-	-	-	N/A

Appendix B. Preceptor Evaluation of Student Competencies – May & August 2021 Graduates
Public Health & Health Care Systems, Leadership, and Communication

Table 1. Public Health and Health Care Systems - Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings

		Frequency	Percent
Valid	Significant or above average competence	13	40.6
	Moderate or average competence	4	12.5
	Limited or no competence	0	0.0
	Unable to assess	15	46.9
Total		32	100.0

Table 2. Public Health and Health Care Systems - Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

		Frequency	Percent
Valid	Significant or above average competence	22	68.8
	Moderate or average competence	4	12.5
	Limited or no competence	0	0.0
	Unable to assess	6	18.8
Total		32	100.0

Table 3. Leadership - Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making

		Frequency	Percent
Valid	Significant or above average competence	18	56.3
	Moderate or average competence	8	25.0
	Limited or no competence	0	0.0
	Unable to assess	6	18.3
Total		32	100.0

Table 4. Leadership - Apply negotiation and mediation skills to address organizational or community challenges

		Frequency	Percent
Valid	Significant or above average competence	12	37.5
	Moderate or average competence	4	12.5
	Limited or no competence	0	0.0
	Unable to assess	16	50.0
Total		32	100.0

Appendix B. Preceptor Evaluation of Student Competencies – May & August 2021 Graduates
Public Health & Health Care Systems, Leadership, and Communication

Table 5. Communication - Select communication strategies for different audiences and sectors

		Frequency	Percent
Valid	Significant or above average competence	24	75.0
	Moderate or average competence	5	15.6
	Limited or no competence	0	0.0
	Unable to assess	3	9.4
Total		32	100.0

Table 6. Communication - Communicate audience-appropriate public health content, both in writing and through oral presentation

		Frequency	Percent
Valid	Significant or above average competence	21	65.6
	Moderate or average competence	6	18.8
	Limited or no competence	0	0.0
	Unable to assess	5	15.6
Total		32	100.0

Table 7. Communication - Describe the importance of cultural competence in communicating public health content

		Frequency	Percent
Valid	Significant or above average competence	17	53.1
	Moderate or average competence	3	9.4
	Limited or no competence	0	0.0
	Unable to assess	12	37.5
Total		32	100.0

Appendix D. Certified in Public Health (CPH) Exam Average Scores by Domain, 2021 and 2019

Table 1. CPH Exam Average Institutional Scores by Domain Area

Domain Area	**Number of Domain Items**	**2021 Average Score***	**2019 Average Score***
Collaboration and Partnership	18	14.1	13.6
Communication**	18	13.9	13.8
Evidence-Based Approaches to Public Health	18	12.6	13.7
Health Equity and Social Justice	17	12.4	12.6
Law and Ethics	17	11.9	12.5
Leadership	17	12.3	11.4
Policy in Public Health	17	11.5	11.4
Program Management	18	13.2	14.5
Program Planning and Evaluation	18	13.8	14.0
Public Health Biology and Human Disease Risk	17	11.4	13.0

*MPH students did not take the CPH exam in 2020, so average institutional scores are not available.
Domains in **bold are the focus of this year's annual program assessment; the Public Health & Health Care Systems domain is not a separate domain on the CPH exam, instead the content is spread throughout the other domains.

Appendix D. MPH Exit Survey, Self-Assessment of Competencies – May/August 2021 Graduates vs. 2020 Graduates
Public Health & Health Care Systems, Leadership, and Communication

Table 1. Public Health and Health Care Systems – Compare the organization, structure, and function of health care, public health and regulatory systems across national and international settings

Response Options		2021 Self-Assessment			2020 Self-Assessment		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Somewhat proficient	0	0.0	0.0	7	20.0	22.6
	Proficient	13	33.3	36.1	7	20.0	22.6
	Above Average Proficiency	14	35.9	38.9	9	25.7	29.0
	Very Proficient	9	23.1	25.0	8	22.9	25.8
	Total	36	92.3	100.0	31	88.6	100.0
Missing	System	3	7.7		4	11.4	
Total		39	100.0		35	100.0	

Table 2. Public Health and Health Care Systems – Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community, and societal levels

Response Options		2021 Self-Assessment			2020 Self-Assessment		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Proficient	5	12.8	13.9	5	14.3	16.1
	Above Average Proficiency	12	30.8	33.3	7	20.0	22.6
	Very Proficient	19	48.7	52.8	19	54.3	61.3
	Total	36	92.3	100.0	31	88.6	100.0
Missing	System	3	7.7		4	11.4	
Total		39	100.0		35	100.0	

Appendix D. MPH Exit Survey, Self-Assessment of Competencies – May/August 2021 Graduates vs. 2020 Graduates
Public Health & Health Care Systems, Leadership, and Communication

Table 3. Leadership – Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making

Response Options		2021 Self-Assessment			2020 Self-Assessment		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Not at all proficient	2	5.1	5.7	0	0.0	0.0
	Somewhat proficient	4	10.3	11.4	5	14.3	16.7
	Proficient	7	17.9	20	7	20.0	23.3
	Above Average Proficiency	10	25.6	28.6	7	20.0	23.3
	Very Proficient	12	30.8	34.3	11	31.4	36.7
	Total	35	89.7	100.0	30	85.7	100.0
Missing	System	4	10.3		5	14.3	
Total		39	100.0		35	100.0	

Table 4. Leadership – Apply negotiation and mediation skills to address organizational or community challenges

		2021 Self-Assessment			2020 Self-Assessment		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Not at all proficient	2	5.1	5.7	0	0.0	0.0
	Somewhat proficient	6	15.4	17.1	5	14.3	16.7
	Proficient	5	12.8	14.3	8	22.9	26.7
	Above Average Proficiency	9	23.1	25.7	6	17.1	20.0
	Very Proficient	13	33.3	37.1	11	31.4	36.7
	Total	35	89.7	100.0	30	85.7	100.0
Missing	System	4	10.3		5	14.3	
Total		39	100.0		35	100.0	

Appendix D. MPH Exit Survey, Self-Assessment of Competencies – May/August 2021 Graduates vs. 2020 Graduates
Public Health & Health Care Systems, Leadership, and Communication

Table 5. Communication – Select communication strategies for different audiences and sectors

		2021 Self-Assessment			2020 Self-Assessment		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Not at all proficient	0	0.0	0.0	1	2.9	3.3
	Somewhat proficient	1	2.6	2.9	2	5.7	6.7
	Proficient	8	20.5	22.9	6	17.1	20.0
	Above Average Proficiency	13	33.3	37.1	10	28.6	33.3
	Very Proficient	13	33.3	37.1	11	31.4	36.7
	Total	35	89.7	100.0	30	85.7	100.0
Missing	System	4	10.3		5	14.3	
Total		39	100.0		35	100.0	

Table 6. Communication – Communicate audience-appropriate public health content, both in writing and through oral presentation

		2021 Self-Assessment			2020 Self-Assessment		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Somewhat proficient	1	2.6	2.9	2	5.7	6.7
	Proficient	8	20.5	22.9	4	11.4	13.3
	Above Average Proficiency	9	23.1	25.7	13	37.1	43.3
	Very Proficient	17	43.6	48.6	11	31.4	36.7
	Total	35	89.7	100.0	30	85.7	100.0
Missing	System	4	10.3		5	14.3	
Total		39	100.0		35	100.0	

Appendix D. MPH Exit Survey, Self-Assessment of Competencies – May/August 2021 Graduates vs. 2020 Graduates
Public Health & Health Care Systems, Leadership, and Communication

Table 7. Communication – Describe the importance of cultural competence in communicating public health content

		2021 Self-Assessment			2020 Self-Assessment		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Valid	Somewhat proficient	2	5.1	5.7	0	0.0	0.0
	Proficient	6	15.4	17.1	5	14.3	16.7
	Above Average Proficiency	9	23.1	25.7	7	20.0	23.3
	Very Proficient	18	46.2	51.4	18	51.4	60.0
	Total	35	89.7	100.0	30	85.7	100.0
Missing	System	4	10.3		5	14.3	
Total		39	100.0		35	100.0	