**Annual Assessment Report for 2020-2021 AY**

Reports completed on assessment activities carried out during the 2020-2021 AY will be due September 30th 2021 and must be e-mailed to the Director of Assessment, Dr. Douglas Fraleigh (douglasf@csufresno.edu).

Provide detailed responses for each of the following questions within this word document. Please do NOT insert an index or add formatting. For purposes of this report, you should only report on two or three student learning outcomes (department’s choice) even if your external accreditor requires you to evaluate four or more outcomes each year. Also be sure to explain or omit specialized or discipline-specific terms.

Department/Program: Public Health Degree: MPH

Assessment Coordinators: Drs. Perez and Zografos

1. Please list the learning outcomes you assessed this year.

**Outcome 1.1:** Graduates will be able to interpret quantitative and qualitative data.

**Outcome 3.1:** Graduates will be able to interpret demographic, statistical, programmatic, and scientific information for use by professional and lay audiences.

1. What assignment or survey did you use to assess the outcomes and what method (criteria or rubric) did you use to evaluate the assignment? **Please describe the assignment and the criteria or rubric used to evaluate the assignment in detail and, if possible, include copies of the assignment and criteria/rubric at the end of this report.**

**Outcome 1.1:** The Exit Survey was utilized to assess this outcome. The question was as follows: “The MPH program curriculum is designed to ensure the development of various foundational and concentration competencies. Please rate your perceived level of competence to analyze and interpret quantitative and qualitative data.” The response categories were “extremely competent”, “moderately competent”, “slightly competent”, and “not competent”. Percentages of those that responded “extremely competent” and “moderately competent” were calculated to evaluate the question. Please see attached exit survey.

**Outcome 3.1:** Students enrolled in PH 209 (Advanced Concepts in Epidemiology) during the spring 2021 semester took a final exam consisting of eight questions. Of the eight questions, only items #2, #3, and #4 were aligned with this learning outcome. Each exam question was evaluated by the instructor and the points possible varied from 1 to 3 points per question.

1. What did you learn from your analysis of the data? Please include sample size (how many students were evaluated) and indicate how many students (number or percentage instead of a median or mean) were designated as proficient. Also indicate your benchmark (e.g. 80% of students will be designated as proficient or higher) and indicate the number of students who met that benchmark.

**Outcome 1.1:** The exit survey is administered each semester. Since the sample sizes tend to be small, this report includes two years of data (AY 19-20 and AY 20-21). Out of 13 students, 13 (100.0%) reported they were “extremely competent” or “moderately competent” when asked to rate their perceived level of competence to analyze and interpret quantitative and qualitative data. The benchmark for this outcome was for at least 80% of students to report “extremely competent” or “moderately competent”, therefore; this benchmark was met. Although the benchmark was met for this outcome, the exit survey data were self-reported and must be interpreted with caution.

**Outcome 3.1:** Out of 12 students, 4 (33.3%) were deemed proficient. The benchmark for this outcome was for at least 80% of students to score 80% or higher on the embedded questions specific to this learning outcome, therefore; the benchmark was not met.

1. What changes, if any, do you recommend based on the assessment data?

**Outcome 1.1:** The benchmark for this outcome was met, yet only one measure (the exit survey) was used to assess this outcome. In the next academic year, the faculty will identify additional courses that align with this program outcome and rubrics will be developed for assignments for assessment purposes if needed.

**Outcome 3.1:** The students did not meet the benchmark for this outcome. The department faculty discussed possible reasons for this finding and determined that the switch to “virtual education” may have contributed. Although some of the MPH courses are offered online, this course is not ideal for online learning as it is a “hands-on” course that consists of formulas and problem-solving exercises. Additionally, it is possible that some of the students performed poorly due to factors outside the class, including those related to the COVID-19 pandemic. It is recommended that this outcome be evaluated again in future years to assess long-term performance.

1. If you recommended any changes in your response to Question 4 in your 2018-19 assessment report, what progress have you made in implementing these changes? If you did not recommend making any changes in last year’s report please write N/A as your answer to this question.

In the 2018-19 assessment report, the department faculty recommended changes, however; these changes were not made because the competencies/learning outcomes associated with the MPH program were revised by the accrediting body. The syllabi and all surveys (exit, employer, and alumni) now reflect these revised competencies/learning outcomes. These new learning outcomes will also be included in all future assessment reports.

1. What assessment activities will you be conducting during AY 2021-22?

The department faculty are in the process of revising the SOAP document to include the revised competencies/learning outcomes. As was mentioned in item #4, the quantitative and qualitative learning outcome will be assessed again during AY 21-22. Additionally, one indirect measure will be assessed as well.

1. Identify and discuss any major issues identified during your last Program Review and in what ways these issues have or have not been addressed.

The MPH program will be undergoing program review this academic year. A summary of the issues identified in the previous program review is provided below.

**Item #1 (Curriculum-Competencies)**

* The Council on Education for Public Health (CEPH), the accrediting body for the MPH program, identified new competencies for all MPH programs. The faculty have met to match competencies to the course syllabi. A discussion pertaining to the how the assignments addressed each competency was also completed during an MPH Faculty Retreat held in November of 2018. Future SOAP documents will reflect these changes.

**Item #2 (Curriculum-Online Course Development)**

* The faculty has offered some of the content-heavy curriculum online to assist in remaining competitive with other master-level programs offering courses and programs online. PH 206 was offered online for the first time in the fall 2017 semester, PH 213 was offered online for the first time in the spring 2019 semester, PH 225A was offered online for the first time in the fall 2019 semester, and PH 280 was offered online for the first time in the fall 2020 semester.

**Item #3 (Tracking of Current Students)**

* An Excel spreadsheet was created for each cohort to track student progress to ensure course completion (including letter grades earned), and fulfillment of program requirements (i.e., classified standing, writing requirement, advancement to candidacy, fieldwork placement, thesis/project completion, etc.).

**Item #4 (Attrition/”Revolving Door”)**

* A policy was created to reduce the number of students who drop in and out of the program. This policy states that students will need to reapply to the university and to the program for a leave of absence extending more than one semester. Additionally, this policy states that readmission to the MPH program will not be allowed after more than two semesters.

**Item #5 (Graduation Rates)**

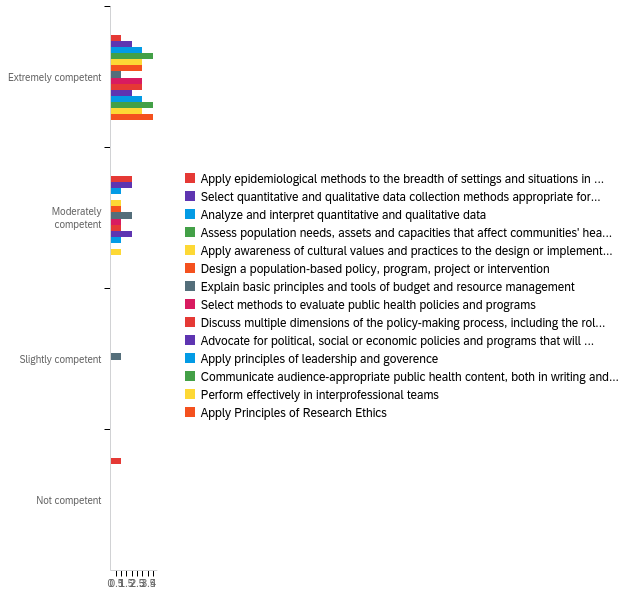
* The process to increase graduation rates began during the fall semester of 2013 with the inclusion of more restrictive admission standards. Additionally, the culminating experience courses were redesigned and now consist of class meetings, and this has resulted in higher graduation rates. Additionally, the MPH faculty created a third culminating experience option (comprehensive examination), which launched this semester.

**Item #6 (Collaboration with UC Merced)**

* No progress was made on this action item. The MPH Director and the Department Chair are investigating additional opportunities for collaboration, including a joint MPH/PhD program or a joint MPH/MBA program.

**MPH Exit Survey Item**

**Q15 - The MPH program curriculum is designed to ensure the development of various foundational and concentration competencies. Please rate your perceived level of competence to:**



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| # | Field | Minimum | Maximum | Mean | Std Deviation | Variance | Count |
| 1 | Apply epidemiological methods to the breadth of settings and situations in public health practice | 1.00 | 6.00 | 2.75 | 1.92 | 3.69 | 4 |
| 2 | Select quantitative and qualitative data collection methods appropriate for a given public health context | 1.00 | 2.00 | 1.50 | 0.50 | 0.25 | 4 |
| 3 | Analyze and interpret quantitative and qualitative data | 1.00 | 2.00 | 1.25 | 0.43 | 0.19 | 4 |
| 4 | Assess population needs, assets and capacities that affect communities' health | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 4 |
| 5 | Apply awareness of cultural values and practices to the design or implementation of public health policies or programs | 1.00 | 2.00 | 1.25 | 0.43 | 0.19 | 4 |
| 6 | Design a population-based policy, program, project or intervention | 1.00 | 2.00 | 1.25 | 0.43 | 0.19 | 4 |
| 7 | Explain basic principles and tools of budget and resource management | 1.00 | 3.00 | 2.00 | 0.71 | 0.50 | 4 |
| 8 | Select methods to evaluate public health policies and programs | 1.00 | 2.00 | 1.25 | 0.43 | 0.19 | 4 |
| 9 | Discuss multiple dimensions of the policy-making process, including the role of ethics and evidence | 1.00 | 2.00 | 1.25 | 0.43 | 0.19 | 4 |
| 10 | Advocate for political, social or economic policies and programs that will improve health in diverse populations | 1.00 | 2.00 | 1.50 | 0.50 | 0.25 | 4 |
| 11 | Apply principles of leadership and goverence | 1.00 | 2.00 | 1.25 | 0.43 | 0.19 | 4 |
| 12 | Communicate audience-appropriate public health content, both in writing and through oral presentation | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 4 |
| 13 | Perform effectively in interprofessional teams | 1.00 | 2.00 | 1.25 | 0.43 | 0.19 | 4 |
| 14 | Apply Principles of Research Ethics | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 4 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | Question | Extremely competent |  | Moderately competent |  | Slightly competent |  | Not competent |  | Total |
| 1 | Apply epidemiological methods to the breadth of settings and situations in public health practice | 25.00% | 1 | 50.00% | 2 | 0.00% | 0 | 25.00% | 1 | 4 |
| 2 | Select quantitative and qualitative data collection methods appropriate for a given public health context | 50.00% | 2 | 50.00% | 2 | 0.00% | 0 | 0.00% | 0 | 4 |
| 3 | Analyze and interpret quantitative and qualitative data | 75.00% | 3 | 25.00% | 1 | 0.00% | 0 | 0.00% | 0 | 4 |
| 4 | Assess population needs, assets and capacities that affect communities' health | 100.00% | 4 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 4 |
| 5 | Apply awareness of cultural values and practices to the design or implementation of public health policies or programs | 75.00% | 3 | 25.00% | 1 | 0.00% | 0 | 0.00% | 0 | 4 |
| 6 | Design a population-based policy, program, project or intervention | 75.00% | 3 | 25.00% | 1 | 0.00% | 0 | 0.00% | 0 | 4 |
| 7 | Explain basic principles and tools of budget and resource management | 25.00% | 1 | 50.00% | 2 | 25.00% | 1 | 0.00% | 0 | 4 |
| 8 | Select methods to evaluate public health policies and programs | 75.00% | 3 | 25.00% | 1 | 0.00% | 0 | 0.00% | 0 | 4 |
| 9 | Discuss multiple dimensions of the policy-making process, including the role of ethics and evidence | 75.00% | 3 | 25.00% | 1 | 0.00% | 0 | 0.00% | 0 | 4 |
| 10 | Advocate for political, social or economic policies and programs that will improve health in diverse populations | 50.00% | 2 | 50.00% | 2 | 0.00% | 0 | 0.00% | 0 | 4 |
| 11 | Apply principles of leadership and goverence | 75.00% | 3 | 25.00% | 1 | 0.00% | 0 | 0.00% | 0 | 4 |
| 12 | Communicate audience-appropriate public health content, both in writing and through oral presentation | 100.00% | 4 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 4 |
| 13 | Perform effectively in interprofessional teams | 75.00% | 3 | 25.00% | 1 | 0.00% | 0 | 0.00% | 0 | 4 |
| 14 | Apply Principles of Research Ethics | 100.00% | 4 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 4 |

**PH 209 Final Exam**

Name:

ID:

**Instructions**: Please complete this exam entirely on your own. Show your calculations as partial credit may be given. Return the exam in Canvas by 7:00 p.m.

1. Based on the Survival curve below, what is the approximate median survival time for patients in Group A? (2 pts.). (Note: it may take a few moments for the graph to be displayed. It will open though. You might work on other questions in the meantime).
2. The data in the 2 x 2 table are obtained from an epidemiologic case control study evaluating the association between coffee use and heart disease. Please calculate the crude odds ratio. How would you interpret the odds ratio? (1 pt.).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cases | Controls |  |
| Coffee Use | 90 | 60 |  |
| No Coffee | 60 | 90 |  |
|  | 150 | 150 | 300 |

1. After stratifying the data in #1 above on smoking history, the stratum-specific 2 by 2 tables are found below. Please calculate the stratum-specific odds ratios. Do you conclude that there is effect modification? Why or Why not? (2 pts.).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Smokers** | Cases | Controls | **Nonsmokers** | Cases | Controls |
| Exposed | 80 | 40 | Exposed | 10 | 20 |
| Not Exposed | 20 | 10 | Not Exposed | 40 | 80 |
|  | 100 | 50 |  | 50 | 100 |

1. Based on the data on #2 above, please calculate the smoking adjusted odds ratio using the method of Mantel-Haenszel. What do you conclude regarding confounding in the coffee-heart disease association? (3 pts.)

1. The table below presents the survival experience of seventeen (17) patients followed for 30 months. Using the method of Kaplan and Meier, please calculate the cumulative proportion surviving at the end of the study. (3 pts.)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time to death (months) | Event | Exposed to risk of Death | Number of deaths | Proportion who died at this time | Proportion living at this time | Cumulative Survival |
| 4 | Death | 17 | 2 |  |  |  |
| 10 | Death | 15 | 1 |  |  |  |
| 14 | Withdrawal | 14 | 0 |  |  |  |
| 20 | Death | 13 | 3 |  |  |  |
| 24 | Death | 10 | 2 |  |  |  |
| 25 | Death | 8 | 1 |  |  |  |
| 30 | Withdrawal | 7 | 0 |  |  |  |

1. When two separate exposures are assessed for the joint impact on disease risk, the relationship may be additive or multiplicative. Based on the table below, please calculate the incidence rates (on the left) assuming an additive association. Please calculate the attributable risk (on the right) assuming an additive relationship. (2 pts.)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Additive Model, Incidence |  | Factor A - | Factor A + |  | Additive Model, Attributable risk |  | Factor A - | Factor A + |
|  | Factor B - | 2 | 6 |  |  | Factor B - | 0 | ? |
|  | Factor B + | 8 | ? |  |  | Factor B + | ? | ? |

1. In the town of Niles, Illinois there were seven (7) cases of childhood leukemia observed between 1956 and 1960. If the town of Niles experienced the same rate of childhood leukemia as the state of Illinois as a whole, only 2.1 cases of childhood leukemia would be expected. What is the probability of observing exactly seven cases of childhood leukemia assuming a Poisson distribution? What is the 95%conficence limit around an observed value of seven (7). Base on these calculations, do you think the finding of seven cases is statistically significant? (3 pts.)
2. A new screening test for chlamydia has been developed for use in an asymptomatic population. The results of the screening test are provided in the table below. Please fill in the empty cells of this table. Based on these data from this study:

What is the prevalence of disease in the screened population?

What is the number of false negative results?

Which is better, sensitivity or specificity?

What is the predictive value of a positive screening test?

(4 pts.)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **chlamydia** | **No chlamydia** |  |
| **Screen test +** | 160 |  | 240 |
| **Screen test -** |  | 1810 |  |
|  | 310 | 1890 | 2200 |