

## Lakeshore Technical College

10-530-177 Healthcare Stats & Research

# Course Design

### Course Information

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| --- | --- | --- |
|  | Description | Explores the management of medical data for statistical purposes. Focuses on descriptive statistics, including definitions, collection, calculation, compilation, and display of numerical data. Vital statistics, registries, and research are examined.    **META DATA TAGS:** Healthcare Stats, Healthcare Research, Healthcare, Stats, Research, Healthcare Information Management, Healthcare Management  \*Course description and competencies derived from WTCS state-aligned curriculum development. |
|  | Career Cluster | Human Services |
|  | Instructional Level | Associate Degree |
|  | Total Credits | 2.00 |
|  | Total Hours | 36.00 |

Types of Instruction

|  |  |
| --- | --- |
| Instruction Type | Credits/Hours |
| Online | 2/36.00 |

Target Population

Students enrolled in the HIT program.

Pre/Corequisites

|  |  |
| --- | --- |
| Prerequisite | 530-176 Health Data Management |

Textbooks

|  |  |
| --- | --- |
| Basic Allied Health Statistics and Analysis | |
|  | Koch, Gerda. *Basic Allied Health Statistics and Analysis.*Publisher: Cengage Learning 2015, 2008, ISBN 978-1-133-60270-5. Required |

Learner Supplies

|  |
| --- |
| Tablet |
| Text Book |
| Internet Access |

### Core Abilities

|  |  |
| --- | --- |
| 1. | Communicate effectively |
| 2. | Demonstrate critical thinking |
| 3. | Use mathematics effectively |

### Program Outcomes

|  |  |
| --- | --- |
| 1. | Manage health data |
| 2. | Model professional behaviors and ethics |
| 3. | Maintain electronic applications to manage health information |

### Course Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Report types of health statistics and their applications. | |
|  | Linked Core Abilities | |
|  | Communicate effectively  Demonstrate critical thinking | |
|  | Linked Program Outcomes | |
|  | Manage health data  Model professional behaviors and ethics  Maintain electronic applications to manage health information | |
|  | Assessment Strategies | |
|  | 1.1. | by reporting statistical findings of health care organizations that collect data and statistics |
|  | 1.2. | given websites to visit |
|  | 1.3. | through a report, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | Report contains the name of the organization |
|  | 1.2. | Report states the overall purpose of the organization |
|  | 1.3. | Report includes the type of information the organization collects and maintains |
|  | 1.4. | You describe healthcare statistical terms |
|  | 1.5. | You differentiate between descriptive and inferential statistics |
|  | 1.6. | You describe the purpose of keeping healthcare statistics |
|  | 1.7. | You recognize the source of healthcare statistical data |
|  | 1.8. | You describe users and uses of healthcare statistics |
|  | 1.9. | You explain the role of the HIM professional in collecting healthcare statistics |
|  | Learning Objectives | |
|  | 1.a. | Define statistics and healthcare statistical terms |
|  | 1.b. | Differentiate between descriptive and inferential statistics |
|  | 1.c. | Articulate the value of keeping healthcare statistics |
|  | 1.d. | Recognize where statistics in healthcare originate |
|  | 1.e. | Identify the users and uses of healthcare statistics |
|  | 1.f. | Explain the role of a health information professional in collecting healthcare statistics |
| 2. | Calculate utilization related statistics | |
|  | Linked Core Abilities | |
|  | Use mathematics effectively | |
|  | Linked Program Outcomes | |
|  | Manage health data | |
|  | Assessment Strategies | |
|  | 2.1. | by providing statistical calculations and analysis |
|  | 2.2. | given statistical data |
|  | 2.3. | given formulas |
|  | 2.4. | using a calculator or spreadsheet |
|  | 2.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 2.1. | You convert fractions to percentages |
|  | 2.2. | Computations use correct data |
|  | 2.3. | Computations use correct formula |
|  | 2.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 2.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 2.a. | Calculate utilization related statistics: (a) Average Length of Stay, Adult & Child; (b) Average Length of Stay, Neonatal; (c) Percentage of Occupancy, Adult and Child; (d) Percentage of Occupancy, Neonatal; (e) Bed Turnover Rate, Direct, Adult and Child; (f) Bassinet Turnover Rate, Direct, Neonatal; (g) Bed Turnover Rate, Indirect, Adult and Child; (h) Bassinet Turnover Rate, Indirect, Neonatal; (i) Average Daily Census, Adult and Child; (j) Average Daily Census, Neonatal. |
|  | 2.b. | Calculate other rates applying a standard formula |
|  | 2.c. | Tabulate the daily census |
|  | 2.d. | Describe the census taking process |
|  | 2.e. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative forms |
|  | 2.f. | Define key terms associated with utilization measures: (a) average daily census (b) average length of stay (c) bassinet count (d) bassinet count days (e) bed counts - identify beds included in and excluded from bed count (f) bed count days (g) bed occupancy (h) bed turnover - direct, indirect (i) discharge (j) discharge days (k) hospital boarder (l) hospital inpatient (m) hospital patient (n) inpatient census, daily census (o) inpatient service days (p) length of stay - identify days included in and excluded from LOS (q) medical care unit (r) medical staff unit (s) occupancy rate |
| 3. | Calculate morbidity and mortality rates and percentages | |
|  | Linked Core Abilities | |
|  | Use mathematics effectively | |
|  | Linked Program Outcomes | |
|  | Manage health data | |
|  | Assessment Strategies | |
|  | 3.1. | by providing statistical calculations and analysis |
|  | 3.2. | given statistical data |
|  | 3.3. | given formulas |
|  | 3.4. | using a calculator or spreadsheet |
|  | 3.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 3.1. | You convert fractions to percentages |
|  | 3.2. | Computations use correct data |
|  | 3.3. | Computations use correct formula |
|  | 3.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 3.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 3.a. | Calculate statistics related to hospital deaths and autopsies (a) fetal death rate (b) neonatal death rate (c) maternal death rate (d) induced termination of pregnancy ratios (e) net death rate (f) gross death rate (g) postop death rate (h) anesthesia death rate (i) adjusted autopsy rate (j) net autopsy rate (k) gross autopsy rate (l) newborn autopsy rate (m) fetal autopsy rate |
|  | 3.b. | Calculate vital statistics mortality rates (a) fetal mortality rate (b) neonatal mortality rate (c) postneonatal mortality rate (d) infant mortality rate (e) perinatal mortality rate (f) maternal mortality rate (g) induced termination of pregnancy ratios |
|  | 3.c. | Calculate other rates applying a standard formula (a) Cesarean section (b) infection rate (c) other |
|  | 3.d. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative formats |
|  | 3.e. | Define and differentiate between key terms associated with morbidity, mortality and other statistical rates (a) abortion (b) adult (c) autopsy - net, gross, adjusted (d) Cesarean section (e) child (f) coroner's/medical examiner's case (g) death rate - net, gross (h) delivery (i) discharge (j) fetal death - early, intermediate, late (k) generic/"other" rate formula (l) hospital autopsy (m) hospital patient (n) induced termination ratio I, II, III (o) infant (p) inpatient autopsy (q) inpatient death (r) live-birth (s) maternal death - direct, indirect (t) neonate (u) newborn (v) nosocomial infection (w) perinatal (x) postneonate (y) postoperative period (z) stillbirth (aa) surgical operation (bb) surgical procedure (cc) vital statistics |
| 4. | Examine research principles | |
|  | Linked Core Abilities | |
|  | Communicate effectively  Demonstrate critical thinking | |
|  | Linked Program Outcomes | |
|  | Manage health data  Model professional behaviors and ethics  Maintain electronic applications to manage health information | |
|  | Assessment Strategies | |
|  | 4.1. | given examples of research |
|  | 4.2. | given statistical reports |
|  | 4.3. | through case studies, test and/or written reports |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 4.1. | Differentiation describes the goals of each type of research |
|  | 4.2. | Differentiation describes the types of data used in each methodology |
|  | 4.3. | Research plan description includes aims, significant and preliminary research, methodology, procedures |
|  | 4.4. | You identify whether given data is reliable and valid according to criteria provided |
|  | 4.5. | You identify biases in given research examples |
|  | 4.6. | You draw valid conclusions about the meaning of the statistical data |
|  | 4.7. | You identify ethical guidelines and regulatory requirements which protect the rights and promote the welfare of human subjects involved in research |
|  | Learning Objectives | |
|  | 4.a. | Differentiate between basic and applied research |
|  | 4.b. | Differentiate between quantitative and qualitative research methodology |
|  | 4.c. | Describe the major components of a formal research plan completed by researchers applying for funding |
|  | 4.d. | Evaluate data collection methods for reliability and validity |
|  | 4.e. | Detect and describe biases that occur in research studies |
|  | 4.f. | Interpret computer generated healthcare statistical reports |
|  | 4.g. | List federal agencies involved in the development of the common rule governing human subjects research |
|  | 4.h. | Describe who is covered and who is exempt from federal regulations regarding human subjects research |
|  | 4.i. | Discuss how diversity of Institutional Review Board membership helps safeguard the welfare of human subjects involved in research |
|  | 4.j. | Outline the minimum requirements for informed consent in cases of human subjects research |
| 5. | Present statistical results | |
|  | Linked Core Abilities | |
|  | Communicate effectively | |
|  | Linked Program Outcomes | |
|  | Maintain electronic applications to manage health information | |
|  | Assessment Strategies | |
|  | 5.1. | by calculating the mean and upper and lower control limits within 2 standard deviations |
|  | 5.2. | by constructing various graphs and tables to display data |
|  | 5.3. | given statistical data |
|  | 5.4. | using reference materials on graphs and tables |
|  | 5.5. | using computer software if desired or when instructed |
|  | 5.6. | through a written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 5.1. | appropriate graph or table is chosen for a given situation |
|  | 5.2. | graphs or tables contain all necessary elements |
|  | 5.3. | graphs or tables contain appropriate title, headings and labels |
|  | 5.4. | analysis of information contained in graph or table is accurate and complete |
|  | 5.5. | you create a computerized spreadsheet to calculate and display data |
|  | Learning Objectives | |
|  | 5.a. | Utilize a control chart to set a standard for comparison and identify trends |
|  | 5.b. | Select appropriate display method for given data |
|  | 5.c. | Construct graphs from patient, healthcare or departmental/institutional data - pie chart, line graph, bar chart, histogram, Pareto chart, pictograph, scatter diagram |
|  | 5.d. | Analyze data presented in graphic form |
|  | 5.e. | Construct a frequency distribution |
| 6. | Perform functions related to vital statistics and mandatory state reporting | |
|  | Linked Core Abilities | |
|  | Communicate effectively  Demonstrate critical thinking  Use mathematics effectively | |
|  | Linked Program Outcomes | |
|  | Manage health data  Maintain electronic applications to manage health information | |
|  | Assessment Strategies | |
|  | 6.1. | by completing a birth certificate worksheet |
|  | 6.2. | using resource materials on birth certificates |
|  | 6.3. | given worksheet form and OB and NB medical records |
|  | 6.4. | given questions to answer or data to abstract |
|  | 6.5. | through an oral or written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 6.1. | you trace the flow of information and time-frame for reporting birth statistics |
|  | 6.2. | you trace the flow of information and time-frame for reporting death statistics |
|  | 6.3. | you trace the flow of information and time-frame for reporting fetal death statistics |
|  | 6.4. | you provide accurate and complete data for birth certificate worksheet |
|  | 6.5. | you provide accurate and complete data for death certificate |
|  | 6.6. | you provide accurate and complete data for fetal death report |
|  | 6.7. | you identify types of mandatory reporting (e.g. communicable diseases, neoplasms, violence related injuries, etc) |
|  | 6.8. | you trace the flow of information and time-frame for mandatory reporting |
|  | Learning Objectives | |
|  | 6.a. | Explain the purpose for collecting given data elements on birth, death and fetal death certificate |
|  | 6.b. | Describe uses of birth and death records and statistics |
|  | 6.c. | Identify where specific information items would be retrieved in completing Wisconsin certificates of birth and death |
|  | 6.d. | Describe a typical hospital process for completing birth certificates |
|  | 6.e. | Describe data edit checks built into the state birth certificate system |
|  | 6.f. | Describe documentation and reporting requirements in the case of a patient death (coroner's cases) |
|  | 6.g. | Identify confidential vs. nonconfidential information on certificates of birth and death |
|  | 6.h. | List types of deaths that must be reported to the coroner or medical examiner as mandated by Wisconsin Statute |
|  | 6.i. | Briefly explain the process of investigation used by a coroner or medical examiner |
|  | 6.j. | State the purpose of the Notice of Removal form |
|  | 6.k. | Define key terms associate with vital events |
|  | 6.l. | Categorize given communicable diseases and state reporting requirements for each |
|  | 6.m. | Define adverse reaction |
|  | 6.n. | Explain the purpose of reporting adverse reactions |
|  | 6.o. | List examples of communicable disease |
|  | 6.p. | Explain the purposes of reporting communicable disease |
|  | 6.q. | Describe the use of the cancer data collected in the mandatory reporting system |
|  | 6.r. | List Wisconsin statutes and administrative codes which apply to vital statistics registration, communicable disease reporting and cancer reporting |
|  | 6.s. | Describe the role of the Health Information Technician, MD and funeral director in vital statistics registration, communicable disease reporting and cancer reporting |
| 7. | Perform disease/procedure registry functions | |
|  | Linked Core Abilities | |
|  | Communicate effectively  Demonstrate critical thinking | |
|  | Linked Program Outcomes | |
|  | Manage health data  Maintain electronic applications to manage health information | |
|  | Assessment Strategies | |
|  | 7.1. | by abstracting and entering data into a medical registry |
|  | 7.2. | by performing other specific functions related to maintenance of a medical registry |
|  | 7.3. | using health records/medical reports |
|  | 7.4. | utilizing a manual or computerized system |
|  | 7.5. | using registry resource materials |
|  | 7.6. | through an oral or written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 7.1. | abstracted data is complete and accurate |
|  | 7.2. | your performance of other registry functions complies with current industry standards |
|  | 7.3. | you describe purposes, components and uses of registry data |
|  | 7.4. | you describe proper registry database management (case eligibility, case finding, classification, coding, abstracting) |
|  | 7.5. | you describe use of classification and coding systems used in registries (E Codes, staging systems, other) |
|  | 7.6. | you describe importance of uniformity in data collection and impact of computerization of registry data |
|  | Learning Objectives | |
|  | 7.a. | Identify national/regional registries to which health care facilities contribute statistical data (cancer, trauma, implant, other) |
|  | 7.b. | Discuss reasons for maintaining medical registries |
|  | 7.c. | Perform registry data collection and reporting functions |
|  | 7.d. | Describe components of various medical registries |
|  | 7.e. | Follow the work-flow of a cancer registry (case-finding, accessioning, abstracting, follow-up) |
|  | 7.f. | Discuss data quality issues in registry data collection |
|  | 7.g. | Describe the use of registry data |
|  | 7.h. | Describe components of a cancer program, other than the cancer registry |

### Grading Information

**Grading Scale**  
A 93-100%  
B 86-92%  
C 77-85%  
D 70-76%  
F 69% and less  
  
**Rationale**  
40% of final grade: 13 quizzes at 20 points each  
35% of final grade: Midterm Exam & Final Exam  
25% of final grade: Comprehensive Exam  
100%

### Course Learning Plans and Performance Assessment Tasks

Learning Plan 1 - Introduction to Health Statistics

Overview/Purpose

Upon completion of this chapter the student will define basic concepts and terms used when collecting statistical information and healthcare data and identify the requestors and users of the healthcare data.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Report types of health statistics and their applications. | |
|  | Assessment Strategies | |
|  | 1.1. | by reporting statistical findings of health care organizations that collect data and statistics |
|  | 1.2. | given websites to visit |
|  | 1.3. | through a report, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | Report contains the name of the organization |
|  | 1.2. | Report states the overall purpose of the organization |
|  | 1.3. | Report includes the type of information the organization collects and maintains |
|  | 1.4. | You describe healthcare statistical terms |
|  | 1.5. | You differentiate between descriptive and inferential statistics |
|  | 1.6. | You describe the purpose of keeping healthcare statistics |
|  | 1.7. | You recognize the source of healthcare statistical data |
|  | 1.8. | You describe users and uses of healthcare statistics |
|  | 1.9. | You explain the role of the HIM professional in collecting healthcare statistics |
|  | Learning Objectives | |
|  | 1.a. | Define statistics and healthcare statistical terms |
|  | 1.b. | Differentiate between descriptive and inferential statistics |
|  | 1.c. | Articulate the value of keeping healthcare statistics |
|  | 1.d. | Recognize where statistics in healthcare originate |
|  | 1.e. | Identify the users and uses of healthcare statistics |
|  | 1.f. | Explain the role of a health information professional in collecting healthcare statistics |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ the Syllabus, Welcome Letter and Course Schedule. |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | PREVIEW the Class 1 Introduction PPT. |
| 4. | **Prior to Week 1 Class**, READ Chapter 1 in "Basic Allied Health Statistics and Analysis." |
| 5. | PREVIEW the Chapter 1 PowerPoint. |
| 6. | PARTICIPATE in and/or View the Chapter 1 lecture. |
| 7. | COMPLETE self tests 1-1, 1-2, and 1-3 in Chapter 1. |
| 8. | COMPLETE Chapter 1 test on pages 20-21. |
| 9. | COMPLETE flashcard activity on chapter 1 at www.cengagebrain.com . Initially you will need to create a student account to have access to the activities. Click sign up in the upper right hand corner of the page to begin. |
| 10. | **Prior to Week 2**, READ Chapter 2 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Syllabus, Welcome, and Course Schedule Quiz. (proprietary) |
| 2. | Complete Quiz on Chapter 1. (proprietary) |

Learning Plan 2 - Mathematics Review

Overview/Purpose

Upon completion of this chapter the student will define, describe and create frequency distribution tables.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Present statistical results | |
|  | Assessment Strategies | |
|  | 1.1. | by calculating the mean and upper and lower control limits within 2 standard deviations |
|  | 1.2. | by constructing various graphs and tables to display data |
|  | 1.3. | given statistical data |
|  | 1.4. | using reference materials on graphs and tables |
|  | 1.5. | using computer software if desired or when instructed |
|  | 1.6. | through a written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | appropriate graph or table is chosen for a given situation |
|  | 1.2. | graphs or tables contain all necessary elements |
|  | 1.3. | graphs or tables contain appropriate title, headings and labels |
|  | 1.4. | analysis of information contained in graph or table is accurate and complete |
|  | 1.5. | you create a computerized spreadsheet to calculate and display data |
|  | Learning Objectives | |
|  | 1.a. | Utilize a control chart to set a standard for comparison and identify trends |
|  | 1.b. | Select appropriate display method for given data |
|  | 1.c. | Construct graphs from patient, healthcare or departmental/institutional data - pie chart, line graph, bar chart, histogram, Pareto chart, pictograph, scatter diagram |
|  | 1.d. | Analyze data presented in graphic form |
|  | 1.e. | Construct a frequency distribution |

### Learning Activities

|  |  |
| --- | --- |
| 1. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 2. | PREVIEW the Chapter 2 PowerPoint. |
| 3. | PARTICIPATE in and/or VIEW the Learning Plan 2 lecture. |
| 4. | READ Chapter 2 in "Basic Allied Health Statistics and Analysis." |
| 5. | COMPLETE self tests 2-1, 2-2, 2-3, 2-4, 2-5 and 2-6 in Chapter 2. |
| 6. | COMPLETE textbook exercises 2.2, 2.4, 2.6, & 2.8. |
| 7. | COMPLETE Chapter 2 test on pages 42-44. |
| 8. | COMPLETE flashcard activity on chapter 2 at www.cengagebrain.com . |
| 9. | **Prior to Week 3**, READ Chapter 3 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete and Submit Textbook Exercises 2.2, 2.4, 2.6, & 2.8. |
| 2. | Complete Quiz on Chapter 2. (proprietary) |

Learning Plan 3 - Patient Census Data

Overview/Purpose

Upon completion of this chapter the student will identify different types of healthcare facilities and providers and how patient data collection applies to each.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Report types of health statistics and their applications. | |
|  | Assessment Strategies | |
|  | 1.1. | by reporting statistical findings of health care organizations that collect data and statistics |
|  | 1.2. | given websites to visit |
|  | 1.3. | through a report, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | Report contains the name of the organization |
|  | 1.2. | Report states the overall purpose of the organization |
|  | 1.3. | Report includes the type of information the organization collects and maintains |
|  | 1.4. | You describe healthcare statistical terms |
|  | 1.5. | You differentiate between descriptive and inferential statistics |
|  | 1.6. | You describe the purpose of keeping healthcare statistics |
|  | 1.7. | You recognize the source of healthcare statistical data |
|  | 1.8. | You describe users and uses of healthcare statistics |
|  | 1.9. | You explain the role of the HIM professional in collecting healthcare statistics |
|  | Learning Objectives | |
|  | 1.a. | Define statistics and healthcare statistical terms |
|  | 1.b. | Differentiate between descriptive and inferential statistics |
|  | 1.c. | Articulate the value of keeping healthcare statistics |
|  | 1.d. | Recognize where statistics in healthcare originate |
|  | 1.e. | Identify the users and uses of healthcare statistics |
|  | 1.f. | Explain the role of a health information professional in collecting healthcare statistics |
| 2. | Perform disease/procedure registry functions | |
|  | Assessment Strategies | |
|  | 2.1. | by abstracting and entering data into a medical registry |
|  | 2.2. | by performing other specific functions related to maintenance of a medical registry |
|  | 2.3. | using health records/medical reports |
|  | 2.4. | utilizing a manual or computerized system |
|  | 2.5. | using registry resource materials |
|  | 2.6. | through an oral or written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 2.1. | abstracted data is complete and accurate |
|  | 2.2. | your performance of other registry functions complies with current industry standards |
|  | 2.3. | you describe purposes, components and uses of registry data |
|  | 2.4. | you describe proper registry database management (case eligibility, case finding, classification, coding, abstracting) |
|  | 2.5. | you describe use of classification and coding systems used in registries (E Codes, staging systems, other) |
|  | 2.6. | you describe importance of uniformity in data collection and impact of computerization of registry data |
|  | Learning Objectives | |
|  | 2.a. | Identify national/regional registries to which health care facilities contribute statistical data (cancer, trauma, implant, other) |
|  | 2.b. | Discuss reasons for maintaining medical registries |
|  | 2.c. | Perform registry data collection and reporting functions |
|  | 2.d. | Describe components of various medical registries |
|  | 2.e. | Follow the work-flow of a cancer registry (case-finding, accessioning, abstracting, follow-up) |
|  | 2.f. | Discuss data quality issues in registry data collection |
|  | 2.g. | Describe the use of registry data |
|  | 2.h. | Describe components of a cancer program, other than the cancer registry |

### Learning Activities

|  |  |
| --- | --- |
| 1. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 2. | READ Chapter 3 in "Basic Allied Health Statistics and Analysis." |
| 3. | PREVIEW the Chapter 3 PowerPoint. |
| 4. | PARTICIPATE in and/or VIEW the Learning Plan 3 lecture. |
| 5. | COMPLETE self tests 3-1 and 3-2 in Chapter 3. |
| 6. | COMPLETE Chapter 3 textbook exercises 3.2, 3.4, 3.6, 3.8 & 3.10. |
| 7. | COMPLETE Chapter 3 test on pages 62-63. |
| 8. | COMPLETE flashcard activity on chapter 3 at www.cengagebrain.com . |
| 9. | **Prior to Week 4**, READ Chapter 4 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete and Submit Textbook Exercises 3.2, 3.4, 3.6, 3.8, & 3.10. |
| 2. | Complete Quiz on Chapter 3.  (proprietary) |

Learning Plan 4 - Percentage of Occupancy

Overview/Purpose

Upon completion of this chapter the student will review and apply basic mathematical terms, functions and computations.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Calculate utilization related statistics | |
|  | Assessment Strategies | |
|  | 1.1. | by providing statistical calculations and analysis |
|  | 1.2. | given statistical data |
|  | 1.3. | given formulas |
|  | 1.4. | using a calculator or spreadsheet |
|  | 1.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | You convert fractions to percentages |
|  | 1.2. | Computations use correct data |
|  | 1.3. | Computations use correct formula |
|  | 1.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 1.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 1.a. | Calculate utilization related statistics: (a) Average Length of Stay, Adult & Child; (b) Average Length of Stay, Neonatal; (c) Percentage of Occupancy, Adult and Child; (d) Percentage of Occupancy, Neonatal; (e) Bed Turnover Rate, Direct, Adult and Child; (f) Bassinet Turnover Rate, Direct, Neonatal; (g) Bed Turnover Rate, Indirect, Adult and Child; (h) Bassinet Turnover Rate, Indirect, Neonatal; (i) Average Daily Census, Adult and Child; (j) Average Daily Census, Neonatal. |
|  | 1.b. | Calculate other rates applying a standard formula |
|  | 1.c. | Tabulate the daily census |
|  | 1.d. | Describe the census taking process |
|  | 1.e. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative forms |
|  | 1.f. | Define key terms associated with utilization measures: (a) average daily census (b) average length of stay (c) bassinet count (d) bassinet count days (e) bed counts - identify beds included in and excluded from bed count (f) bed count days (g) bed occupancy (h) bed turnover - direct, indirect (i) discharge (j) discharge days (k) hospital boarder (l) hospital inpatient (m) hospital patient (n) inpatient census, daily census (o) inpatient service days (p) length of stay - identify days included in and excluded from LOS (q) medical care unit (r) medical staff unit (s) occupancy rate |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 4 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | PREVIEW the Chapter 4 PowerPoint. |
| 4. | PARTICIPATE in and/or VIEW the Learning Plan 4 lecture. |
| 5. | COMPLETE self tests 4-1 through 4-21 in Chapter 4. |
| 6. | COMPLETE Chapter 4 textbook exercises 4.2, 4.4, 4.6 & 4.8. |
| 7. | COMPLETE Chapter 4 test on pages 82-85. |
| 8. | **Prior to Week 5**, READ Chapter 5 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete and Submit Textbook Exercises 4.2, 4.4, 4.6, & 4.8. |
| 2. | Complete Quiz on Chapter 4.  (proprietary) |

Learning Plan 5 - Length of Stay

Overview/Purpose

Upon completion of this chapter the student will define census collection methods and terms and describe and compute census data.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Calculate utilization related statistics | |
|  | Assessment Strategies | |
|  | 1.1. | by providing statistical calculations and analysis |
|  | 1.2. | given statistical data |
|  | 1.3. | given formulas |
|  | 1.4. | using a calculator or spreadsheet |
|  | 1.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | You convert fractions to percentages |
|  | 1.2. | Computations use correct data |
|  | 1.3. | Computations use correct formula |
|  | 1.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 1.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 1.a. | Calculate utilization related statistics: (a) Average Length of Stay, Adult & Child; (b) Average Length of Stay, Neonatal; (c) Percentage of Occupancy, Adult and Child; (d) Percentage of Occupancy, Neonatal; (e) Bed Turnover Rate, Direct, Adult and Child; (f) Bassinet Turnover Rate, Direct, Neonatal; (g) Bed Turnover Rate, Indirect, Adult and Child; (h) Bassinet Turnover Rate, Indirect, Neonatal; (i) Average Daily Census, Adult and Child; (j) Average Daily Census, Neonatal. |
|  | 1.b. | Calculate other rates applying a standard formula |
|  | 1.c. | Tabulate the daily census |
|  | 1.d. | Describe the census taking process |
|  | 1.e. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative forms |
|  | 1.f. | Define key terms associated with utilization measures: (a) average daily census (b) average length of stay (c) bassinet count (d) bassinet count days (e) bed counts - identify beds included in and excluded from bed count (f) bed count days (g) bed occupancy (h) bed turnover - direct, indirect (i) discharge (j) discharge days (k) hospital boarder (l) hospital inpatient (m) hospital patient (n) inpatient census, daily census (o) inpatient service days (p) length of stay - identify days included in and excluded from LOS (q) medical care unit (r) medical staff unit (s) occupancy rate |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 5 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | PREVIEW the Chapter 4 PowerPoint. |
| 4. | PARTICIPATE in and/or VIEW the Learning Plan 5 lecture. |
| 5. | COMPLETE self tests 5-1 and 5-2 in Chapter 5. |
| 6. | Complete Chapter 5 textbook exercises 5.2, 5.4 & 5.6. |
| 7. | COMPLETE Chapter 5 test on pages 101-104. |
| 8. | COMPLETE flashcard activity on chapter 5 at www.cengagebrain.com . |
| 9. | **Prior to Week 6**, READ Chapters 6 and 7 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Quiz on Chapter 5.  (proprietary) |
| 2. | Complete and Submit Textbook Exercises 5.2, 5.4, & 5.6. |

Learning Plan 6 - Death (Mortality) Rates

Overview/Purpose

Upon completion of these chapters the student will explain and compute occupancy and length of stay formulas and how they apply to hospital operations.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Calculate utilization related statistics | |
|  | Assessment Strategies | |
|  | 1.1. | by providing statistical calculations and analysis |
|  | 1.2. | given statistical data |
|  | 1.3. | given formulas |
|  | 1.4. | using a calculator or spreadsheet |
|  | 1.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | You convert fractions to percentages |
|  | 1.2. | Computations use correct data |
|  | 1.3. | Computations use correct formula |
|  | 1.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 1.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 1.a. | Calculate utilization related statistics: (a) Average Length of Stay, Adult & Child; (b) Average Length of Stay, Neonatal; (c) Percentage of Occupancy, Adult and Child; (d) Percentage of Occupancy, Neonatal; (e) Bed Turnover Rate, Direct, Adult and Child; (f) Bassinet Turnover Rate, Direct, Neonatal; (g) Bed Turnover Rate, Indirect, Adult and Child; (h) Bassinet Turnover Rate, Indirect, Neonatal; (i) Average Daily Census, Adult and Child; (j) Average Daily Census, Neonatal. |
|  | 1.b. | Calculate other rates applying a standard formula |
|  | 1.c. | Tabulate the daily census |
|  | 1.d. | Describe the census taking process |
|  | 1.e. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative forms |
|  | 1.f. | Define key terms associated with utilization measures: (a) average daily census (b) average length of stay (c) bassinet count (d) bassinet count days (e) bed counts - identify beds included in and excluded from bed count (f) bed count days (g) bed occupancy (h) bed turnover - direct, indirect (i) discharge (j) discharge days (k) hospital boarder (l) hospital inpatient (m) hospital patient (n) inpatient census, daily census (o) inpatient service days (p) length of stay - identify days included in and excluded from LOS (q) medical care unit (r) medical staff unit (s) occupancy rate |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 6 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | COMPLETE self tests 6-1 through 6-4 in Chapter 6 and self tests 7-1 through 7-3 in Chapter 7. |
| 4. | PREVIEW the Chapter 6 PowerPoint. |
| 5. | PARTICIPATE in and/or View the Learning Plan 6 lecture. |
| 6. | COMPLETE Chapter 6 Textbook exercises 6.2, 6.4, 6.6, 6.8, 6.10, 6.12, 6.14, 6.16, & 6.18. |
| 7. | COMPLETE Chapter 6 test on pages 119 - 122. |
| 8. | COMPLETE flashcard activities on chapters 6 at www.cengagebrain.com . |
| 9. | **Prior to Week 7**, READ Chapter 7 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete and Submit Textbook Exercises 6.2, 6.4, 6.6, 6.8, 6.10, 6.12, 6.14, 6.16, & 6.18. |
| 2. | Complete Quiz on Chapter 6. (proprietary) |
| 3. | Complete Midterm Exam. (proprietary) |

Learning Plan 7 - Hospital Autopsies and Autopsy Rates

Overview/Purpose

Upon completion of this chapter the students will differentiate between key terms associated with autopsy - net, gross, and adjusted.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Calculate morbidity and mortality rates and percentages | |
|  | Assessment Strategies | |
|  | 1.1. | by providing statistical calculations and analysis |
|  | 1.2. | given statistical data |
|  | 1.3. | given formulas |
|  | 1.4. | using a calculator or spreadsheet |
|  | 1.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | You convert fractions to percentages |
|  | 1.2. | Computations use correct data |
|  | 1.3. | Computations use correct formula |
|  | 1.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 1.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 1.a. | Calculate statistics related to hospital deaths and autopsies (a) fetal death rate (b) neonatal death rate (c) maternal death rate (d) induced termination of pregnancy ratios (e) net death rate (f) gross death rate (g) postop death rate (h) anesthesia death rate (i) adjusted autopsy rate (j) net autopsy rate (k) gross autopsy rate (l) newborn autopsy rate (m) fetal autopsy rate |
|  | 1.b. | Calculate vital statistics mortality rates (a) fetal mortality rate (b) neonatal mortality rate (c) postneonatal mortality rate (d) infant mortality rate (e) perinatal mortality rate (f) maternal mortality rate (g) induced termination of pregnancy ratios |
|  | 1.c. | Calculate other rates applying a standard formula (a) Cesarean section (b) infection rate (c) other |
|  | 1.d. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative formats |
|  | 1.e. | Define and differentiate between key terms associated with morbidity, mortality and other statistical rates (a) abortion (b) adult (c) autopsy - net, gross, adjusted (d) Cesarean section (e) child (f) coroner's/medical examiner's case (g) death rate - net, gross (h) delivery (i) discharge (j) fetal death - early, intermediate, late (k) generic/"other" rate formula (l) hospital autopsy (m) hospital patient (n) induced termination ratio I, II, III (o) infant (p) inpatient autopsy (q) inpatient death (r) live-birth (s) maternal death - direct, indirect (t) neonate (u) newborn (v) nosocomial infection (w) perinatal (x) postneonate (y) postoperative period (z) stillbirth (aa) surgical operation (bb) surgical procedure (cc) vital statistics |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 7 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | COMPLETE self tests 7-1 through 7-3 in Chapter 7. |
| 4. | PREVIEW the Chapter 7 PowerPoint. |
| 5. | PARTICIPATE in and/or View the Learning Plan 7 lecture. |
| 6. | COMPLETE Chapter 7 Textbook exercises 7.2, 7.4, 7.6, 7.8, 7.10 & 7.12. |
| 7. | COMPLETE Chapter 7 test on page 109. |
| 8. | COMPLETE flashcard activities on chapters 7 at www.cengagebrain.com . |
| 9. | COMPLETE Course Survey. Please take a few moments to complete this 3 question anonymous survey regarding this course. Your feedback is much appreciated and we hope to use it to improve your learning experience in the remaining weeks of the semester. |
| 10. | **Prior to Week 8**, READ Chapter 8 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | COMPLETE and Submit Textbook Exercises 7.2, 7.4, 7.6, 7.8, 7.10 & 7.12. |
| 2. | Complete Quiz on Chapter 7. (proprietary) |

Learning Plan 8 - Morbidity and Other Misc. Rates

Overview/Purpose

Upon completion of this chapter the student will define mortality rates during inpatient stays and how they can provide useful information in local communities.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Calculate morbidity and mortality rates and percentages | |
|  | Assessment Strategies | |
|  | 1.1. | by providing statistical calculations and analysis |
|  | 1.2. | given statistical data |
|  | 1.3. | given formulas |
|  | 1.4. | using a calculator or spreadsheet |
|  | 1.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | You convert fractions to percentages |
|  | 1.2. | Computations use correct data |
|  | 1.3. | Computations use correct formula |
|  | 1.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 1.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 1.a. | Calculate statistics related to hospital deaths and autopsies (a) fetal death rate (b) neonatal death rate (c) maternal death rate (d) induced termination of pregnancy ratios (e) net death rate (f) gross death rate (g) postop death rate (h) anesthesia death rate (i) adjusted autopsy rate (j) net autopsy rate (k) gross autopsy rate (l) newborn autopsy rate (m) fetal autopsy rate |
|  | 1.b. | Calculate vital statistics mortality rates (a) fetal mortality rate (b) neonatal mortality rate (c) postneonatal mortality rate (d) infant mortality rate (e) perinatal mortality rate (f) maternal mortality rate (g) induced termination of pregnancy ratios |
|  | 1.c. | Calculate other rates applying a standard formula (a) Cesarean section (b) infection rate (c) other |
|  | 1.d. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative formats |
|  | 1.e. | Define and differentiate between key terms associated with morbidity, mortality and other statistical rates (a) abortion (b) adult (c) autopsy - net, gross, adjusted (d) Cesarean section (e) child (f) coroner's/medical examiner's case (g) death rate - net, gross (h) delivery (i) discharge (j) fetal death - early, intermediate, late (k) generic/"other" rate formula (l) hospital autopsy (m) hospital patient (n) induced termination ratio I, II, III (o) infant (p) inpatient autopsy (q) inpatient death (r) live-birth (s) maternal death - direct, indirect (t) neonate (u) newborn (v) nosocomial infection (w) perinatal (x) postneonate (y) postoperative period (z) stillbirth (aa) surgical operation (bb) surgical procedure (cc) vital statistics |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 8 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | COMPLETE self tests 8-1 through 8-3 in Chapter 8. |
| 4. | PREVIEW the Chapter 8 PowerPoint. |
| 5. | PARTICIPATE in and/or View the Learning Plan 8 lecture. |
| 6. | Complete Chapter 8 Textbook exercises 8.2, 8.4, 8.6, 8.8, 8.10, 8.12 & 8.14. |
| 7. | COMPLETE Chapter 8 test on pages 150-152. |
| 8. | COMPLETE flashcard activity on chapter 8 at www.cengagebrain.com . |
| 9. | **Prior to Week 9**, READ Chapter 9 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Textbook exercises 8.2, 8.4, 8.6, 8.8, 8.10, 8.12 & 8.14. |
| 2. | Complete Quiz on Chapter 8.  (proprietary) |

Learning Plan 9 - Statistics Computed within the HIM Department

Overview/Purpose

Upon completion of this chapter the student will define and compute obstetrical and fetal related terms and rates.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Calculate morbidity and mortality rates and percentages | |
|  | Assessment Strategies | |
|  | 1.1. | by providing statistical calculations and analysis |
|  | 1.2. | given statistical data |
|  | 1.3. | given formulas |
|  | 1.4. | using a calculator or spreadsheet |
|  | 1.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | You convert fractions to percentages |
|  | 1.2. | Computations use correct data |
|  | 1.3. | Computations use correct formula |
|  | 1.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 1.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 1.a. | Calculate statistics related to hospital deaths and autopsies (a) fetal death rate (b) neonatal death rate (c) maternal death rate (d) induced termination of pregnancy ratios (e) net death rate (f) gross death rate (g) postop death rate (h) anesthesia death rate (i) adjusted autopsy rate (j) net autopsy rate (k) gross autopsy rate (l) newborn autopsy rate (m) fetal autopsy rate |
|  | 1.b. | Calculate vital statistics mortality rates (a) fetal mortality rate (b) neonatal mortality rate (c) postneonatal mortality rate (d) infant mortality rate (e) perinatal mortality rate (f) maternal mortality rate (g) induced termination of pregnancy ratios |
|  | 1.c. | Calculate other rates applying a standard formula (a) Cesarean section (b) infection rate (c) other |
|  | 1.d. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative formats |
|  | 1.e. | Define and differentiate between key terms associated with morbidity, mortality and other statistical rates (a) abortion (b) adult (c) autopsy - net, gross, adjusted (d) Cesarean section (e) child (f) coroner's/medical examiner's case (g) death rate - net, gross (h) delivery (i) discharge (j) fetal death - early, intermediate, late (k) generic/"other" rate formula (l) hospital autopsy (m) hospital patient (n) induced termination ratio I, II, III (o) infant (p) inpatient autopsy (q) inpatient death (r) live-birth (s) maternal death - direct, indirect (t) neonate (u) newborn (v) nosocomial infection (w) perinatal (x) postneonate (y) postoperative period (z) stillbirth (aa) surgical operation (bb) surgical procedure (cc) vital statistics |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 9 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | PREVIEW the Chapter 9 PowerPoint. |
| 4. | Participate in and/or View the Learning Plan 9 lecture. |
| 5. | COMPLETE self tests 9-1 through 9-4 in Chapter 9. |
| 6. | Complete Chapter 9 Textbook exercises 9.2, 9.4, 9.6, 9.8, 9.10 & 9.12. |
| 7. | COMPLETE Chapter 9 test on pages 166-168. |
| 8. | COMPLETE flashcard activity on chapter 9 at www.cengagebrain.com . |
| 9. | **Prior to Week 10**, READ Chapters 10 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Textbook Exercises 9.2, 9.4, 9.6, 9.8, 9.10 & 9.12. |
| 2. | Complete Quiz on Chapter 9.  (proprietary) |

Learning Plan 10 - Descriptive Statistics in Healthcare

Overview/Purpose

Upon completion of these chapters the student will define various types of healthcare rates occurring in facilities and compute certain types of designated rates.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Calculate morbidity and mortality rates and percentages | |
|  | Assessment Strategies | |
|  | 1.1. | by providing statistical calculations and analysis |
|  | 1.2. | given statistical data |
|  | 1.3. | given formulas |
|  | 1.4. | using a calculator or spreadsheet |
|  | 1.5. | through a case study, test and/or quiz |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | You convert fractions to percentages |
|  | 1.2. | Computations use correct data |
|  | 1.3. | Computations use correct formula |
|  | 1.4. | Computations are accurate to the nearest whole number or decimal point |
|  | 1.5. | Computations are labeled appropriately |
|  | Learning Objectives | |
|  | 1.a. | Calculate statistics related to hospital deaths and autopsies (a) fetal death rate (b) neonatal death rate (c) maternal death rate (d) induced termination of pregnancy ratios (e) net death rate (f) gross death rate (g) postop death rate (h) anesthesia death rate (i) adjusted autopsy rate (j) net autopsy rate (k) gross autopsy rate (l) newborn autopsy rate (m) fetal autopsy rate |
|  | 1.b. | Calculate vital statistics mortality rates (a) fetal mortality rate (b) neonatal mortality rate (c) postneonatal mortality rate (d) infant mortality rate (e) perinatal mortality rate (f) maternal mortality rate (g) induced termination of pregnancy ratios |
|  | 1.c. | Calculate other rates applying a standard formula (a) Cesarean section (b) infection rate (c) other |
|  | 1.d. | Retrieve appropriate data for given formulas when data is presented in tabular and narrative formats |
|  | 1.e. | Define and differentiate between key terms associated with morbidity, mortality and other statistical rates (a) abortion (b) adult (c) autopsy - net, gross, adjusted (d) Cesarean section (e) child (f) coroner's/medical examiner's case (g) death rate - net, gross (h) delivery (i) discharge (j) fetal death - early, intermediate, late (k) generic/"other" rate formula (l) hospital autopsy (m) hospital patient (n) induced termination ratio I, II, III (o) infant (p) inpatient autopsy (q) inpatient death (r) live-birth (s) maternal death - direct, indirect (t) neonate (u) newborn (v) nosocomial infection (w) perinatal (x) postneonate (y) postoperative period (z) stillbirth (aa) surgical operation (bb) surgical procedure (cc) vital statistics |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 10 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | COMPLETE self tests 10-1 through 10-6 in chapter 10. |
| 4. | PREVIEW the Chapter 10 PowerPoint. |
| 5. | Participate in and/or View the Learning Plan 10 lecture. |
| 6. | Complete Chapter 10 Textbook exercises 10.2 & 10.4. |
| 7. | COMPLETE Chapter 10 test on pages 183-185. |
| 8. | COMPLETE flashcard activities on chapter 10 at www.cengagebrain.com . |
| 9. | **Prior to Week 11**, READ Chapter 11 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Quiz on Chapters 10.  (proprietary) |
| 2. | Complete Textbook Exercises 10.2 & 10.4. |

Learning Plan 11 - Presentation of Data

Overview/Purpose

Upon completion of this chapter the student will utilize standards of comparison and identify trends. The student will select appropriate ways to display data, construct graphs, charts, histogram and diagrams and analyze data presented in graphic form.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Present statistical results | |
|  | Assessment Strategies | |
|  | 1.1. | by calculating the mean and upper and lower control limits within 2 standard deviations |
|  | 1.2. | by constructing various graphs and tables to display data |
|  | 1.3. | given statistical data |
|  | 1.4. | using reference materials on graphs and tables |
|  | 1.5. | using computer software if desired or when instructed |
|  | 1.6. | through a written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | appropriate graph or table is chosen for a given situation |
|  | 1.2. | graphs or tables contain all necessary elements |
|  | 1.3. | graphs or tables contain appropriate title, headings and labels |
|  | 1.4. | analysis of information contained in graph or table is accurate and complete |
|  | 1.5. | you create a computerized spreadsheet to calculate and display data |
|  | Learning Objectives | |
|  | 1.a. | Utilize a control chart to set a standard for comparison and identify trends |
|  | 1.b. | Select appropriate display method for given data |
|  | 1.c. | Construct graphs from patient, healthcare or departmental/institutional data - pie chart, line graph, bar chart, histogram, Pareto chart, pictograph, scatter diagram |
|  | 1.d. | Analyze data presented in graphic form |
|  | 1.e. | Construct a frequency distribution |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 11 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | COMPLETE self tests 11-1 through 11-4 in chapter 11. |
| 4. | PREVIEW the Chapter 11 PowerPoint. |
| 5. | PARTICIPATE in and/or View the Learning Plan 10 lecture. |
| 6. | Complete Chapter 10 Textbook exercises 11.2 & 11.4, & 11.6. |
| 7. | COMPLETE Chapter 11 test on pages 183-185. |
| 8. | COMPLETE flashcard activities on chapter 11 at www.cengagebrain.com . |
| 9. | **Prior to Week 12**, READ Chapter 12 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Quiz on Chapters 11.  (proprietary) |
| 2. | Complete Textbook Exercises 11.2 & 11.4, 11.6. |

Learning Plan 12 - Basic Research Principles

Overview/Purpose

Upon completion of this chapter the student will identify key vital statistic events and compute rates around specific defined categories.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Perform functions related to vital statistics and mandatory state reporting | |
|  | Assessment Strategies | |
|  | 1.1. | by completing a birth certificate worksheet |
|  | 1.2. | using resource materials on birth certificates |
|  | 1.3. | given worksheet form and OB and NB medical records |
|  | 1.4. | given questions to answer or data to abstract |
|  | 1.5. | through an oral or written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | you trace the flow of information and time-frame for reporting birth statistics |
|  | 1.2. | you trace the flow of information and time-frame for reporting death statistics |
|  | 1.3. | you trace the flow of information and time-frame for reporting fetal death statistics |
|  | 1.4. | you provide accurate and complete data for birth certificate worksheet |
|  | 1.5. | you provide accurate and complete data for death certificate |
|  | 1.6. | you provide accurate and complete data for fetal death report |
|  | 1.7. | you identify types of mandatory reporting (e.g. communicable diseases, neoplasms, violence related injuries, etc) |
|  | 1.8. | you trace the flow of information and time-frame for mandatory reporting |
|  | Learning Objectives | |
|  | 1.a. | Explain the purpose for collecting given data elements on birth, death and fetal death certificate |
|  | 1.b. | Describe uses of birth and death records and statistics |
|  | 1.c. | Identify where specific information items would be retrieved in completing Wisconsin certificates of birth and death |
|  | 1.d. | Describe a typical hospital process for completing birth certificates |
|  | 1.e. | Describe data edit checks built into the state birth certificate system |
|  | 1.f. | Describe documentation and reporting requirements in the case of a patient death (coroner's cases) |
|  | 1.g. | Identify confidential vs. nonconfidential information on certificates of birth and death |
|  | 1.h. | List types of deaths that must be reported to the coroner or medical examiner as mandated by Wisconsin Statute |
|  | 1.i. | Briefly explain the process of investigation used by a coroner or medical examiner |
|  | 1.j. | State the purpose of the Notice of Removal form |
|  | 1.k. | Define key terms associate with vital events |
|  | 1.l. | Categorize given communicable diseases and state reporting requirements for each |
|  | 1.m. | Define adverse reaction |
|  | 1.n. | Explain the purpose of reporting adverse reactions |
|  | 1.o. | List examples of communicable disease |
|  | 1.p. | Explain the purposes of reporting communicable disease |
|  | 1.q. | Describe the use of the cancer data collected in the mandatory reporting system |
|  | 1.r. | List Wisconsin statutes and administrative codes which apply to vital statistics registration, communicable disease reporting and cancer reporting |
|  | 1.s. | Describe the role of the Health Information Technician, MD and funeral director in vital statistics registration, communicable disease reporting and cancer reporting |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 12 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | PREVIEW the Chapter 12 PowerPoint. |
| 4. | Participate in and/or View the Learning Plan 10 lecture. |
| 5. | COMPLETE self tests 12-1 through 12-4 in chapter 12. |
| 6. | COMPLETE Chapter 12 test on pages 218-220. |
| 7. | COMPLETE the flashcard activity on chapter 12 at www.cengagebrain.com . |
| 8. | **Prior to Week 13**, READ Chapter 13 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Textbook Exercises 12.2. |
| 2. | Complete Quiz on Chapter 12.  (proprietary) |

Learning Plan 13 - Inferential Statistics

Overview/Purpose

Upon completion of this chapter the student will identify the characteristics (such as the center or the spread) of data sets discussed in previous chapters.

Target Competencies

|  |  |  |
| --- | --- | --- |
| 1. | Present statistical results | |
|  | Assessment Strategies | |
|  | 1.1. | by calculating the mean and upper and lower control limits within 2 standard deviations |
|  | 1.2. | by constructing various graphs and tables to display data |
|  | 1.3. | given statistical data |
|  | 1.4. | using reference materials on graphs and tables |
|  | 1.5. | using computer software if desired or when instructed |
|  | 1.6. | through a written assessment |
|  | Criteria | |
|  | Your performance will be successful when: | |
|  | 1.1. | appropriate graph or table is chosen for a given situation |
|  | 1.2. | graphs or tables contain all necessary elements |
|  | 1.3. | graphs or tables contain appropriate title, headings and labels |
|  | 1.4. | analysis of information contained in graph or table is accurate and complete |
|  | 1.5. | you create a computerized spreadsheet to calculate and display data |
|  | Learning Objectives | |
|  | 1.a. | Utilize a control chart to set a standard for comparison and identify trends |
|  | 1.b. | Select appropriate display method for given data |
|  | 1.c. | Construct graphs from patient, healthcare or departmental/institutional data - pie chart, line graph, bar chart, histogram, Pareto chart, pictograph, scatter diagram |
|  | 1.d. | Analyze data presented in graphic form |
|  | 1.e. | Construct a frequency distribution |

### Learning Activities

|  |  |
| --- | --- |
| 1. | READ Chapter 13 in "Basic Allied Health Statistics and Analysis." |
| 2. | PREVIEW the Competency, Performance Standards and Learning Activities for this learning plan. |
| 3. | PREVIEW the Chapter 13 PowerPoint. |
| 4. | Participate in and/or View the Learning Plan 11 lecture. |
| 5. | COMPLETE self tests 13-1 through 13-10 in chapter 13. |
| 6. | COMPLETE Chapter 13 test on pages 243-244. |
| 7. | COMPLETE the flashcard activity on chapter 13 at www.cengagebrain.com . |
| 8. | **Prior to week 14**, READ Chapter 14 in "Basic Allied Health Statistics and Analysis." |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete Quiz on Chapter 13.  (proprietary) |
| 2. | Complete and Submit Textbook Exercise 13.2. |
| 3. | Complete Comprehensive Exam. (proprietary) |

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