Weeks 5 & 6 Overview

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# Study Guide

| Message | Welcome to Weeks 5 & 6 of Understanding Patient Data!   * Types of Data and Storage * Emerging Technologies |
| --- | --- |
| Reminders | * See discussion rubric for grading criteria. |
| Due Dates | * DQ 4   + Your initial post is due by 11:59 PM ET on Saturday of Week 5.   + Your replies are due by 11:59 PM ET on Monday of Week 5. * Quiz 1   + Quizzes will be made available during week 5 for a set time frame 12:00 AM Friday through 11:59 PM Sunday. * DQ 5   + Your initial post is due by 11:59 PM ET on Saturday of Week 6.   + Your replies are due by 11:59 PM ET on Monday of Week 6. |

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# Objectives

* The student will be able to identify types of patient data stores.
* The student will be able to identify emerging technologies and explain haptic feedback.

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# Instructions

**Lesson 5**

1. Required reading, text(s):

* Strome, T. (2013). Chapter 5 – Data quality and governance (pp.75-90). In T. L. Strome, *Healthcare analytics for quality and performance improvement*. Hoboken, NJ: Wiley Publishers.
* Brown, M. S. (2014). Chapters 12 – Getting familiar with your data (pp. 173-194). In M. S. Brown, *Data mining for dummies.* Hoboken, NJ: Wiley Publishers.
* Brown, M. S. (2014). Chapters 13 – Dealing in graphic detail (pp. 195-218). In M. S. Brown, *Data mining for dummies.* Hoboken, NJ: Wiley Publishers.

1. Required reading, articles:

* Leyen, L., Reumann, M., Malats, N., & Brand, A. (2017). Use of big data for drug development and for public and personal health and care. *Genetic Epidemiology, 41,* 51-60. doi:10.1002/gepi.22012
* Zernichow. B. M., & Roman, D. (2017). Usability of visual profiling in data cleaning and transformation. In: Paneto H. et al. (eds) On the move to meaningful internet systems. OTM 2017 Conferences. *Lecture Notes in Computer Science, 10574,* 1-33.

1. View the following **Lecture/Voice over PowerPoint:**

* Lecture 3-1 – *Data types and storage*

1. **DQ 4.** Respond to the question(s) below for your initial post on the DQ 4 Discussion Board. Support your responses with a referenced rationale.

* Provide one example of a type of patient data; a) describe its characteristics, b) explain what it would take to make the data actionable, and c) to what benefit.

Post your initial response by 11:59 pm Saturday. Respond to the posts of 3 individual peers on at least two separate days before the end of each weekly discussion by 11:59 pm Monday.

Please be sure to reference the Discussion Questions guide in the Assignment Outline section of the Syllabus for further assignment details.

1. **Quiz 1.** This exam is fully online and consists of 20 multiple-choice items. The quiz will include all required readings, lectures and materials covered in Weeks 5 & 6. The exam is worth up to 2.5 points towards your final grade. ***You may take the exam up to three times without penalty for doing so. ONLY the last attempt will be the score that counts towards your final grade. (NOTE: This may not be your highest quiz grade).*** **You will have 60 minutes to complete each exam from the time you start.** If you have any questions, contact the instructor. **IMPORTANT:** You will not be allowed to continue to take the exam past the availability deadline (date and time).

**Note:** Students must complete and submit the exam in a single sitting within the allotted time once they click on **Take the Quiz.** You cannot pause or stop the timer for the exam once you start—even if you visit another page in the course, logout, or your browser quits unexpectedly. You can resume the exam by clicking on the title of the exam in your course and clicking on **Resume the Quiz.**  
  
**IMPORTANT REMINDER:** Each student is expected to work on this **individually** and within the confines of the University Academic Honesty Policy (see <http://www.rowanonline.com> for University Policies and details).

**Lesson 6**

1. Required reading, text(s):

* Strome, T. (2013). Chapter 6 – Working with data (pp.91-114). In T. L. Strome, *Healthcare analytics for quality and performance improvement*. Hoboken, NJ: Wiley Publishers.

1. Required reading, articles:

* Fort, T. L., Raymond, A. H., Shackleford, S. J. (2016). The angel on your shoulder prompting you to do the right thing through the use of wearables. *Northwest Journal of Technology and Intellectual Property, 14*(2), 139-170.
* Hassan, M. M., Albakr, H., Al-Dossari, H., Mohamed, A. (2017). Resource provisioning for cloud-assisted body area network in a smart home environment. *IEEE Access, 5,* 13214-13224. doi:10.1109/ACCESS.2017.2726012
* Hu, J., Chen, X., Wang, Y., Huang, Y., & Su, X. (2017). *Cloud-assisted home health monitoring.* 2017 IEEE/ACIS 16th International Conference on Computer and Information Science (ICIS), 899-903.
* La, T-G., Qiu, S., Scott, D. K., Bakhtiari, R., Kuziek, J. W. P., Matheeson, K. E., … Chung, H-J. (2018). Two-layered and stretchable e-textile patches for wearable healthcare electronics. *Advanced Healthcare Materials, 7*(22), e1801033. doi: [10.1002/adhm.201801033](https://doi.org/10.1002/adhm.201801033)
* Tanaka, N., Elgert, V., Danielson, J., Kalachev, A., Wong, J., DaCosta, B., … Kataoka, M. (2017). *Smart wearable devices and methods for customized haptic feedback*. US patent application publication. Pub. No.: US 2017/0010672 A1

1. View the following **Lecture/Voice over PowerPoint:**

* Lecture 3-2 - *Emerging technologies*

1. **DQ 5.** Respond to the question(s) below for your initial post on the DQ 5 Discussion Board. Support your responses with a referenced rationale.

* Identify at least three smart wearable devices that can supply patient data for healthcare.
* Select one wearable with haptic feedback and explain how it works and the risks and benefits of using the device for patient data collection.
* Discuss how the technology contributes to (a) research, (b) clinical practice, (c) provider accountability and responsibility and (d) overall patient outcomes.

Post your initial response by 11:59 pm Saturday. Respond to the posts of 3 individual peers on at least two separate days before the end of each weekly discussion by 11:59 pm Monday.

Please be sure to reference the Discussion Questions guide in the Assignment Outline section of the Syllabus for further assignment details.

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