



Knowledge Activity: Implementing Clinical Decision Support (Master's)

Learning objectives

1. Identify and use secondary data presentations (3)
2. Validate the reliability and use secondary data sources (3)
3. Utilize software in the completion of HIM processes (3)
4. Explain analytics and decision support (2)
5. Apply report generation technologies to facilitate decision-making (3)
6. Utilize basic descriptive, institutional, and healthcare statistics (3)
7. Evaluate data from varying sources to create meaningful presentations (5)
8. Validate data from secondary sources to include in the patient's record, including personal health records (3)
9. Take part in the development of information management plans that support the organization's current and future strategy and goals (4)
10. Apply analytical results to facilitate decision-making (3)
11. Analyze organizational action based on knowledge obtained from data exploration and mining (4)
12. Evaluate initial and on-going training programs (5)
13. Examine required documentation & record structures (4)
14. Evaluate data from varying sources to create meaningful presentations (5)
15. Compile data from secondary sources (6)
16. Appraise benefit realization of information techniques (5)
17. Formulate enterprise-wide CDI strategic and operational methods (6)
18. Create integrative health information analytics for effective enterprise-wide planning (6)

Student instructions

1. If you have questions about this activity, please contact your instructor for assistance.
2. You will review the chart of *Ernesto Cortez* to complete this activity. Your instructor has provided you with a link to the **Implementing Clinical Decision Support (MS)** activity. Click on **2: Launch EHR** to review the patient chart and begin this activity.
3. Refer to the patient chart and any suggested resources to complete this activity.



4. Document your answers directly on this activity document as you complete the activity. When you are finished, you will save this activity document to your device and upload this activity document with your answers to your Learning Management System (LMS).

Glossary

Clinical Decision Support: (CDS) is defined as a process for enhancing health-related decisions and actions with pertinent clinical knowledge and patient information to improve healthcare delivery. In the EHR clinical decision support includes alerts, reminders and documentation templates aimed to improve clinical processes and outcomes. For the purposes of Meaningful Use clinical decision support builds upon the foundation of an EHR to provide healthcare providers with information to enhance health and health care. (Health IT.Gov, 2016)

The activity

The Clinic where you work implemented a Clinical Decision Support (CDS) protocol one year ago. The CDS protocol was smoking cessation. The providers and staff were instructed to follow the protocol based on the CDS Start Kit: Smoking Cessation. The goals for implementation were, 1) 80% of patients seen in the first year would have a documented smoking status and, 2) 100% of patients who currently smoke would be encouraged to quit and provided with smoking cessation literature.

Most clinicians feel they did a good job of assessing smoking status and encouraging patients to quit. The Clinic administration would like to see whether the CDS Smoking Cessation protocol goals were met this year. You need to analyze the data from the first year of Smoking Cessation CDS. You ran a report on 500 clinic patients looking for a smoking status documented in the problem list.

Access the report (an Excel spreadsheet included with this activity under **1: Overview and Resources**) and follow the instructions below to create a Pivot Table using that Excel spreadsheet.

Pivot table instructions:

- a. In the spreadsheet, select and highlight all the cells that include data.
- b. Then select **Insert>Pivot Table**
- c. Leave the default selections as they are (defaults are: “Select a table or range”/ ‘Problem List’ and New Worksheet). Press OK.



- d. On the right-hand side of the pivot table screen, click and drag the “Smoking Status assessed in last 12 months” check box into the Columns box.
- e. Then click and drag the “Current Smoking Status” check box into the Rows box.
- f. Finally, click and drag the “Smoking Status assessed in last 12 months” into the Values box.

Examine the resulting pivot table and answer the following questions.

Questions

*For questions that ask for percentages, round your answer to the nearest percentage.

1. The Smoking Cessation CDS protocol was implemented at the Central Clinic one year ago. Of the 500 patients included in the report population, what percentage of patients were seen in the Clinic within the last 12 months?

52%

2. What percentage of patients in the report population were not seen in the Central Clinic within the last 12 months?

48%

3. Based on the data in the report and the implementation period of the Smoking Cessation CDS, what number of patients should be included in the evaluation criteria for the CDS goals?

261

4. Of the patients who were seen in the Clinic during the last 12 months, what percentage have a known smoking status in their problem list?

36%

5. Of the patients who were seen in the Clinic during the Smoking Cessation CDS protocol, i.e. during the last 12 months, for what percentage is smoking status unknown, i.e. either not assessed or not documented in the problem list?



64%

6. Of the patients who were not seen in the Clinic during the Smoking Cessation CDS protocol, i.e. not seen in the Clinic during the last 12 months, for what percentage was smoking status known, i.e. either current smoker or never smoker?

31%

7. How many more patients who were part of the CDS protocol during the last year have an identified smoking status than patients who were not included in the CDS protocol, i.e. not seen in the Clinic over the last 12 months?

18

8. Is it much more likely that the Clinic has identified a patient's smoking status under the new CDS protocol? Explain and quantify your answer.

An increase of 18 newly documented patients indicates more patients have been seen. However, does this confirm the amount that has been assessed? With minimal improvement, the compliance level has not been met.

9. Based on the report of Central Clinic patients, was the CDS protocol goal for Smoking Cessation (*80% of patients seen in the first year would have a documented smoking status*) met? How can you tell?

No. Again, the compliance level goal was not met

10. Based on the report of Central Clinic patients, was the CDS protocol goal for Smoking Cessation (*100% of patients who currently smoke would be encouraged to quit and provided with smoking cessation literature*) met? How can you tell?

You cannot confirm the goals were met without data, smoking literature, or documentation.

Open the EHR of Ernesto Cortez, one of the Central Clinic patients seen within the Smoking Cessation CDS window. Review the EHR, paying special attention to the Notes, Problems, and Alerts tabs. As you review the EHR, answer the following questions.



EHR Audit Questions

11. Where is Ernesto's smoking status recorded in the EHR? List all areas.

Alerts, Problems, and Notes

12. Based on Ernesto's EHR record alone, was the CDS protocol goal to provide *patients who currently smoke encouragement to quit and smoking cessation literature* met in his case? How can you tell?

1) Yes.

2) Description/Rationale: Current everyday smoker; 1 PPD x 10 years, motivated but unsuccessful in quitting.

3) Action To Take: Provided verbal encouragement and patient smoking cessation brochure. I will provide phone call counseling and check-in weekly, starting in one week.

13. Is the *Current every day smoker* clinical reminder up to date? How do you know?

No. The "Reminder Status" is listed as overdue

14. Are you able to quantify how many patients Central Clinic clinicians encouraged or the methods that most helped patients to quit smoking from this data? Why or why not?

To my knowledge, there is no clinical documentation within the EHR of the outcome

Critical Thinking Questions

15. The CDS Smoking Cessation protocol calls for every patient's current smoking status to be assessed and documented in the EHR. Do you think this protocol was followed over the last 12 months? Please explain your answer.

No. There is no documentation listed within the "Care Plan." However, the "History and Physical Details" has notes stating

PLAN:



- Start metformin 500 mg BID PO, lipitor 10 mg QD PO
- Encouraged to quit smoking and lose weight
- Gave patient smoking cessation patient brochure

16. Evaluation of Goal 1: *80% of patients seen in the first year will have a documented smoking status.* Indicate whether this goal was met, not met, or unable to determine given the current available information. Explain your rationale for the evaluation of Goal 1.

No, the goal was not met. The goal was 80%, but only 36% of patients were seen

17. What are your recommended changes related to meeting Goal 1 next year?

- 1) Improve patient access to the physician
- 2) Increase the quantity/quality of patient education materials given to the patient
- 3) Increase the number of patients who receive preventative health exams/procedures
- 4) EHR systems must be compliant with present technology standards for reporting data expandable for growth in the size of the practice
- 5) EHR should allow for and promote the eventual goal of having all communication with patients, medical specialists' offices, labs, and imaging facilities accomplished electronically rather than by phone to enhance efficiency and documentation

18. Evaluation of Goal 2: *100% of patients who currently smoke would be encouraged to quit and provided with smoking cessation literature.* Indicate whether this goal was met, not met, or unable to determine given the current available information. Explain your rationale for the evaluation of Goal 2.

You cannot confirm the goals were met without data, smoking literature, or documentation.

19. What are your recommended changes related to meeting Goal 2 next year?



- 1) EHR should allow for maintaining a patient education “library” with materials that are easily accessed and printed for patients
 - 2) The system should serve as a data tracking and monitoring solution to assist in meeting parameters compliant with Meaningful Use
 - 3) If the practice is going to grow, the EHR should produce large amounts of data encouraging analytic opportunities that can lead to substantial cost savings
20. The Central Clinic Medical Director would like to implement more CDS protocols this year and asks for your number one recommendation for success. Based on the data in the report and the EHR, what is your advice?

The CDS should encompass:

- 1) Computerized alerts and reminders for providers and patients
- 2) Clinical guidelines
- 3) Focused patient data reports and summaries
- 4) Diagnostic support
- 5) Contextually relevant reference information

Submit your work

Document your answers directly on this activity document as you complete the activity. When you are finished, save this activity document to your device and upload this activity document with your answers to your Learning Management System (LMS). If you have any questions about submitting your work to your LMS, please contact your instructor.



References

CDS Starter Kit: Smoking Cessation. Retrieved March 2, 2014 from <http://www.healthit.gov/policy-researchers-implementers/cds-implementation>

HealthIT.gov. Clinical Decision Support (CDS). Retrieved March 2, 2014 from <http://www.healthit.gov/>