UNIT 42
IMPROVING HEALTH

Objectives: at the end of the lesson, students will be able to:
1. learn and use basic vocabulary related to health and wellness;
2. read short texts about healthy habits and summarize key points;
3. practice forming arguments using specific terms and quantifiers;
4. discuss how technology affects health.

Lead-in: Let's talk!
1. How can technology benefit doctors and hospitals?
2. What kind of medical technology do you know about?

Vocabulary Building
Key Terms

ADM – (Automated Dispensing Machine) is a hospital machine that measures out specific amounts of medication into containers

CDSS – (Clinical Design Support System) is a system that helps doctors diagnose problems. It also suggests treatment options

EHR – (Electronic Health Record) is a computerized version of a patient's health record

PACS – (Picture Archiving and Communication System) is a system that captures and stores medical images from different sources

CPOE – (Computerized Provider Order Entry) is a system that lets a doctor fill out electronic orders

EMM – (Electronic Materials Management) is a system that helps hospitals keep track of medications and medical supplies

Lab-on-a-chip – is a tiny device that holds cells and fluid that a doctor can analyze easily

Microrobotic tweezers – are very tiny tweezers that allow a doctor to operate on extremely small or delicate areas

Implanted microchip – a tiny device in a person's body that releases specific amounts of medicine

Interoperability – the ability to easily send or combine electronic health data from one system into another

Barcoding – a system in which doctors scan medicines and match them to patients

Activity: Mark each statement as True or False.

1.EHR systems can help improve patient care by providing access to patient's medical history.

2. PACS is primarily used for electronic communication between patients and doctors.

3. Microrobotic tweezers can be used to perform surgeries without physical contact.

4. Interoperability is unnecessary in modern healthcare systems.

5. ADM involves the use of algorithms to assist in clinical decisions.

6. EMM solutions help healthcare organizations manage mobile devices and applications.

7. A CDSS cannot help in preventing medication errors.

Grammar Focus: Quantifiers: much, many, little, few, some, any

To show large quantity use: **much, many, a lot of or lots of**

To show small quantity use: **(a) few, (a) little, a bit of, some or any**

Use ***A LOT OF + noun***

Example: EMM (Electronic Medication Management) systems are used in **a lot of** hospitals to ensure that patients receive the correct medication dosage, greatly reducing errors and improving overall health outcomes.

Use ***A LOT or LOTS (no of)*** at the end

Example: I met my best friend and we talked **lots.** I like her **a lot**.

Use ***MUCH + uncountable nouns***. It is often used in negative (-) and question (?) sentences.

Example: There isn't **much** data in the HER system.

Use ***MANY + countable nouns***

Example: How **many** labs results are stored in the PACs?

Use ***SOME*** in **(+)** positive sentences:

Example: CPOE (Computerized Physician Order Entry) systems are adopted by **some** healthcare facilities to manage patient treatment orders, reducing errors and ensuring that some of the most critical aspects of healthcare delivery are handled efficiently.

Use ***ANY*** in **(-)** negative and **(?)** question

Example: We didn't have **any** problems.

Use ***SOME*** in **(?)** questions when you offer or ask for something

Example: Would you like **some** coffee? Can I have some tea?

Few /little VS. a few / a little

FEW / LITTLE = almost none; not enough

Example: There is **little** reliance on traditional methods now, given the advantages of technology.

Example: Few healthcare institutions have fully integrated microrobotic technologies.

A FEW / A LITTLE = not a lot, but enough

Example: CPOE (Computerized Physician Order Entry) systems are utilized in many healthcare facilities, and even **a few** adjustments in how orders are processed can lead to better health outcomes for a lot of patients.

Example: EMM (Electronic Medication Management) systems are used in many hospitals, and even **a little** improvement in medication accuracy can significantly enhance patient health outcomes.

Activity: Choose the right quantifiers for each sentence.

1. Is there _____ interest in implementing CDSS among healthcare providers? (much/ many) 2. How _____ EHR systems are currently in use in our region? (much/many) 3. There is _____ reliance on traditional methods now, given the advantages of technology. (little/few) 4. _____ healthcare institutions have fully integrated microrobotic technologies. (little/few) 5. There are _____ challenges to achieving interoperability across different systems. (some/any) 6. Are there _____ resources available for training staff on using PACS? (some/any)

Reading

In the rapidly evolving field of healthcare technology, many innovations have significantly improved patient care and data management. For example, Electronic Health Records (EHR) have become essential for storing patient information, enabling healthcare providers to access much of a patient's history with just a few clicks. However, little progress has been made in ensuring that different EHR

systems can communicate with each other effectively, leading to few institutions achieving true interoperability.

In the realm of diagnostics, some notable advancements include lab-on-a-chip technologies that allow for quicker analysis of blood samples. While there are many benefits to these innovations, there are also concerns about data privacy and security. Are there any regulations in place to protect patient information in these new systems? In general, while healthcare technology holds great promise, there remain significant challenges to overcome.

Activity: Choose the correct quantifier (much, many, little, few, some, or any) to fill in the blanks in the sentences below.

1. There is _____ research supporting the effectiveness of telemedicine in rural areas.
2. How _____ hospitals have adopted robotic surgery systems?
3. Unfortunately, there is still _____ collaboration between different healthcare systems regarding data sharing.
4. _____ healthcare providers are concerned about the cost of implementing new technologies.
5. We need to ensure that there isn't _____ data loss during system migrations.
6. Are there _____ solutions available to address these healthcare challenges?

Speaking

Activity: Discussion

Ask students to use the vocabulary terms and quantifiers in their responses.

- How do you think ADM systems will change patient care in the next 10 years?
- Will optic scanners become more common in every doctor's office?
- Do you think EHR systems will help solve any current healthcare challenges?

Encourage answers like "I believe that a few more years of development will make EHR systems even more reliable, helping many doctors improve patient care".

Activity: Pair Work - Case Study

Give students a healthcare-related problem, such as a hospital dealing with high rates of medication errors or a clinic trying to improve patient data accuracy.

In pairs, students discuss how they would solve the problem using EMM, EHR, ADM, CPOE, or optic scanners, incorporating quantifiers in their discussion.

Example: "If we implement a few ADM machines, we could reduce the number of errors by a lot. Even just a little improvement in the EHR system could make it easier for doctors to access any important patient history."

Home assignment

Students choose one of the technologies (EMM, EHR, ADM, CPOE, optic scanners). They need to research and write about its benefits, and its impact on healthcare.