

Introduction to Medical Informatics

Electronic Health Record (EHR)
Lecture 3



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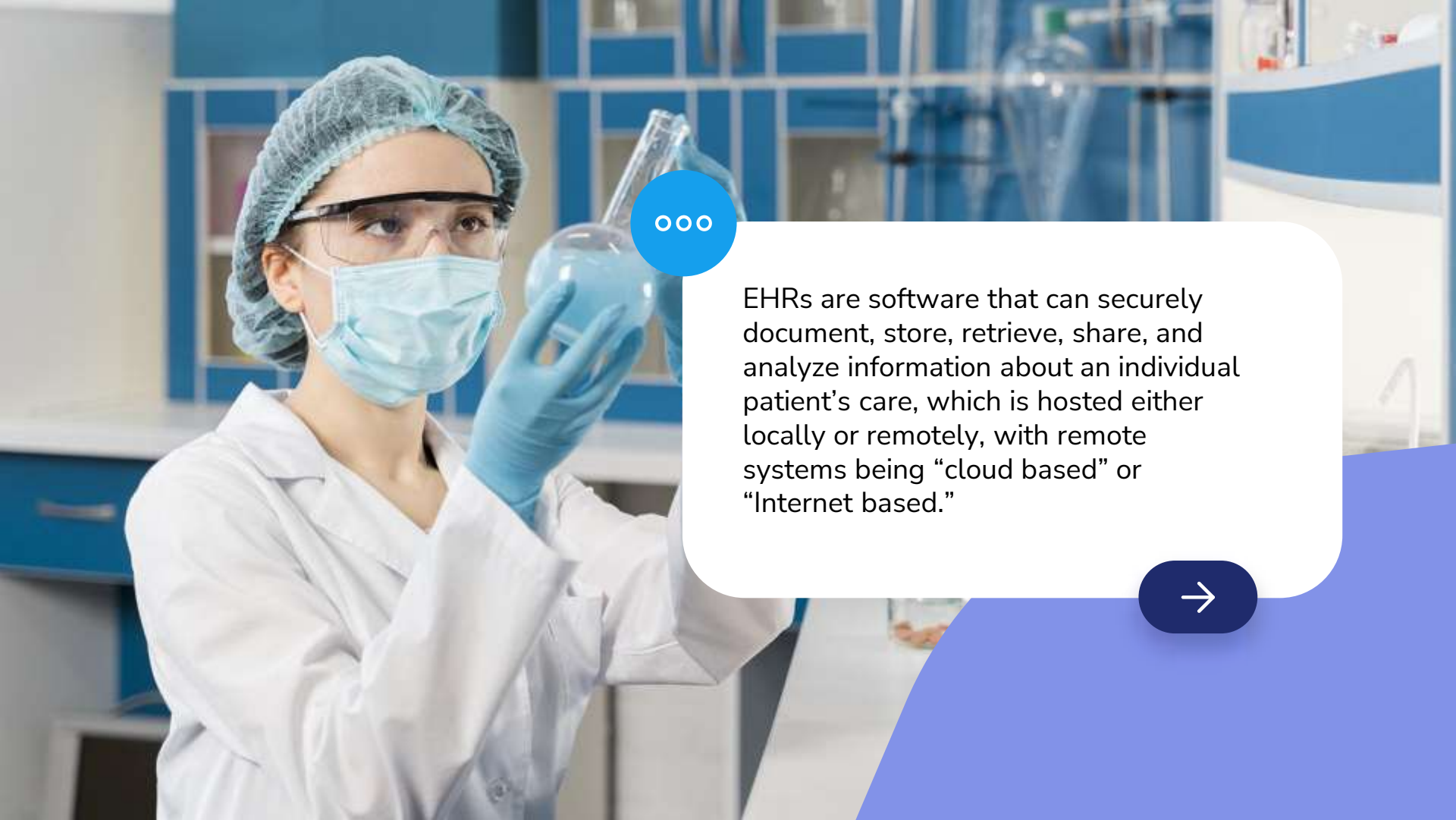
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What is (CPOE)

01

Electronic Health Record (EHR)





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EHRs are software that can securely document, store, retrieve, share, and analyze information about an individual patient's care, which is hosted either locally or remotely, with remote systems being "cloud based" or "Internet based."



EHR

in 1991, Institute of Medicine (IOM) recommended HER as a solution for many problems



EHR records are now being created, used, edited, and viewed by multiple independent entities including primary care physicians, hospitals,

The Computer-Based Patient Record: An Essential Technology for HealthCare.

EHR---- EMR-----PHR



EHR **Electronic Health** **Record**

An electronic record of health-related information that can be created, managed and consulted by authorized clinicians and staff across more than one healthcare organization



EMR **Electronic Medical** **Record**

An electronic record of health-related information on an individual that can be created, gathered, managed and consulted by authorized clinicians and staff within one healthcare organization



PHR **Personal Health** **Record**

An electronic record of health-related information on that can be drawn from multiple sources while being managed, shared and controlled by the individual.

HER---- EMR-----PHR



EHR

Clinical Records Only



EMR

Also includes other
provider records



PHR

Also includes personal
health information



01

**Why do we
need EHRs?**



The following are the most significant reasons why our healthcare system would benefit from the widespread transition from paper to electronic health records

Paper records are severely limited.

Quality of care and patient safety.



Need for improved efficiency and productivity

- Financial savings
- Need for aggregated data
- Technological advances

Advantages of EHRs



- Viewing a more complete patient medical history, diagnoses, medications, treatment plans, immunization dates, allergies, radiology images, and laboratory test results from one or multiple clinicians.
- Accessing to evidence-based tools that can help clinical decision making.
- Automating and streamlining provider workflows
- Allowing a patient's medical information to move with them and enable physicians to stay apprised of their care with other physicians

Electronic Health Record Key Components



- 1- Clinical decision support system (CDSS).
- 2-Secure messaging (e-mail)
- 3- Computerized physician order entry (CPOE)
- 4- Referral management
- 5-Practice management
- 6-Results retrieval
- 7-Prior encounter retrieval
- 8-Patient reminders
- 9-Electronic encounter notes
- 10-Multiple input methods
- 11-Access via mobile technology
- 12- Remote access from home
- 13-Electronic prescribing
- 14- Integration with images
- 15- Public health reporting
- 16-Problem summary lists
- 17-Ability to scan in data
- 18-Ability to graph and track results
- 19-Ability to create patient lists
- 20-Ability to create registries
- 21-Privacy/security compliance
- 22-Robust backup systems
- 23-Support for client server or
- 25-application service provider (ASP) modes



Computerized Physician Order Entry (CPOE)

CPOE is an EHR feature that processes orders for medications, lab tests, imaging, consults and other diagnostic tests.



CPOE has many potential benefits:

- 1-Reduce Medication Errors
- 2-Reduce costs
- 3-Reduce Variation of Care
- 4-Unintended adverse consequences





Thanks!

Do you have any questions?