

Electronic Resources

Digital Health and Patient Engagement

Using digital tools to connect, inform, and involve patients

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MHA 621
Healthcare Informatics

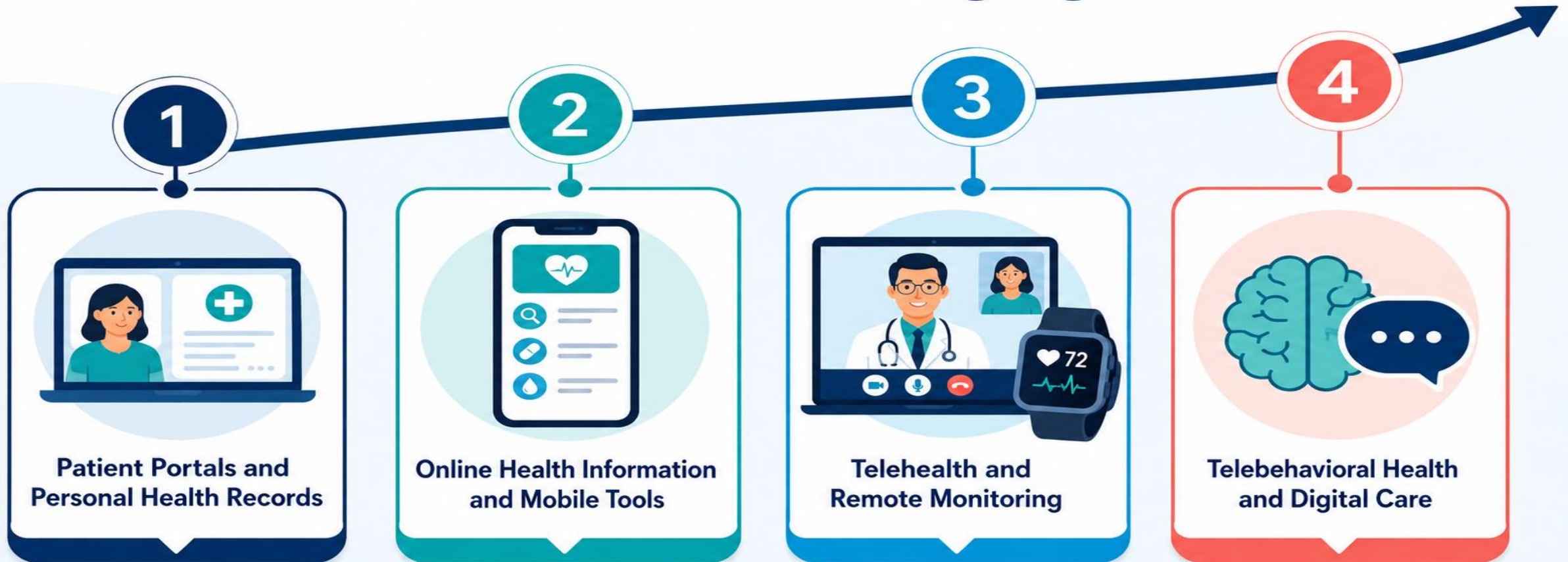
Lecture 3



Intended Learning Outcomes

- **By the end of this lecture, you should be able to:**
- 1. Explain personal health engagement.**
 - 2. Describe patient portals and personal health records.**
 - 3. Evaluate online health information and mobile health tools.**
 - 4. Compare the main types of telehealth.**
 - 5. Explain how digital tools support patient care and engagement.**

Personal Health Engagement



Abbreviations

EHR:



Electronic Health Record

IT:



Information Technology

PGHD:



Patient-Generated Health Data

PHR:



Personal Health Record

RPM:



Remote Patient Monitoring

Foundations of Personal Health Engagement



What Is Personal Health Engagement?

➤ Personal health engagement means that a person:

- Takes an active role in managing health.
- Uses reliable information and professional advice.
- Considers personal needs, abilities, and preferences.
- Participates in preventing and managing illness.
- Works with healthcare professionals as a partner.

From Passive Patient to Active Partner

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- **The traditional approach expected patients to:**
 - Follow instructions without much discussion.
 - Depend mainly on healthcare professionals.
 - Accept the care plan created for them.
- **The newer approach treats patients as partners who help make informed decisions about their health.**

Changing Patient Expectations

➤ People expect to be treated as individuals and partners.

- Digital services are common in everyday life.
- Patients expect similar convenience in healthcare.
- Many people want clear information about costs and choices.
- Sensors and home devices allow health monitoring between visits.

Digital Health Tools

➤ Common digital health tools include:

- Patient portals.
- Personal health records.
- Health and wellness applications.
- Wearable devices and home sensors.
- Telehealth and remote-monitoring services.

➤ **Digital tools should support care—not become a barrier to care.**

Engagement and the Quadruple Aim

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➤ Patient engagement may contribute to:

- Better patient experience.
- Better population health.
- Lower healthcare costs.
- Better care-team wellbeing.

➤ These four goals are called the Quadruple Aim.

Patient Portals and Personal Health Records



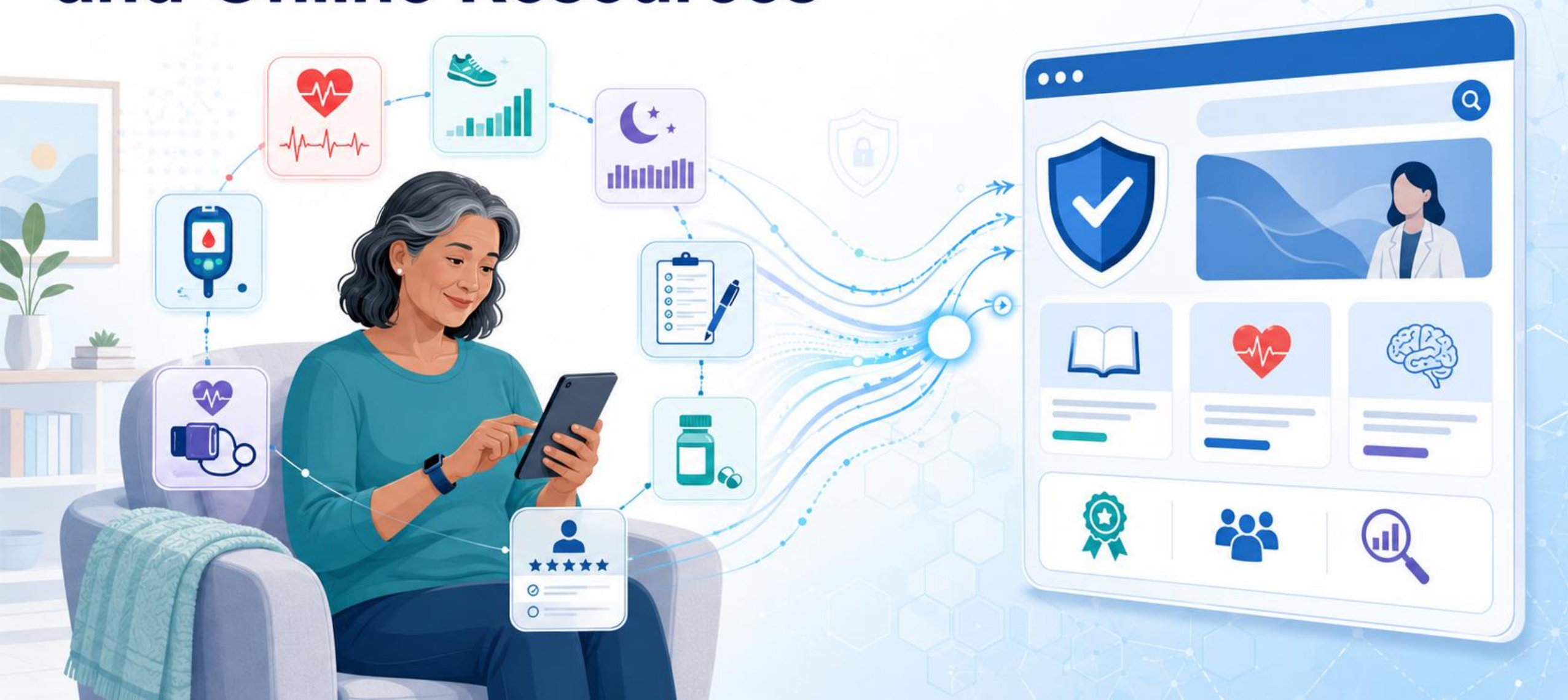
What Is a Personal Health Record?

- A Personal Health Record (PHR) is an electronic collection of a person's health information.
- It may contain:
 - Medical history.
 - Medicines and health problems.
 - Laboratory and imaging results.
 - Allergies and immunizations.
 - Information from different healthcare providers.

What Is a Patient Portal?

- A patient portal is a secure online service connected to a healthcare organization.
- Patients and caregivers may use it to:
 - Request appointments and prescription renewals.
 - View test results and clinical notes.
 - Send secure messages.
 - Request referrals.
 - Review bills and make payments.

Patient-Generated Information and Online Resources



Patient-Generated Health Data

- **Patient-Generated Health Data (PGHD) are health data created or recorded by patients or caregivers.**
- **Examples include:**
 - Blood pressure
 - Blood glucose
 - Weight
 - Symptoms
 - Physical activity

Information Before a Visit

➤ **A portal may allow patients to complete:**

- Health questionnaires
- Consent forms
- Medical and family history
- Current symptoms
- Social and lifestyle information

➤ **This may give patients more time and reduce documentation work during the visit.**

Wearables and Home Monitoring

➤ Wearables collect information during daily life.

- Home devices can record health measurements between visits.
- Applications can organize and display the results.
- Data may be shared with the healthcare team.
- Clinicians still need clear rules for interpreting the information.

Benefits and Limitations of Digital Engagement



Patient Activation

➤ Patient activation describes a person's:

- Knowledge about health
- Confidence in managing health
- Skills needed for self-care
- Willingness to take action

➤ Digital tools may support activation, but results depend on the design and implementation of the tool.

1. Digital Engagement and Quality

➤ Digital engagement may improve quality by:

- Helping patients understand their care.
- Supporting medication use.
- Improving attendance at preventive visits.
- Allowing faster symptom reporting.
- Helping patients identify record errors.

2. Digital Engagement and Cost

➤ **Digital tools may reduce costs by:**

- Improving health outcomes.
- Preventing unnecessary complications.
- Reducing some in-person visits.
- Supporting care at home.
- Making communication more efficient.

➤ **Savings are not automatic; the tool must be useful and properly integrated.**

Engagement, Satisfaction, and Loyalty

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➤ Patients value digital services that provide:

- Convenient access.
- Clear communication.
- Timely responses.
- Easy appointment management.
- Useful information between visits.

➤ **A poor digital experience may lead patients to seek care elsewhere.**

Why People Stop Using Digital Tools?

➤ Common reasons include:

- The tool is difficult to use.
- It provides little useful information.
- Too many portals require different passwords.
- The information lacks explanation or context.
- The tool is poorly connected to normal care.

The Digital Divide

➤ **Some people have greater difficulty using digital healthcare because of:**

- Limited internet or device access
- Low digital or health literacy
- Older age or disability
- Language barriers
- Lack of training and support

➤ **Digital services should not remove traditional access options.**

Designing Better Digital Tools

➤ Effective tools should be:

- Easy to access and understand
- Useful for a clear health need
- Integrated with professional care
- Personalized to the user
- Supported by evidence and privacy protection

➤ **More features do not always create a better tool.**

Telehealth and Remote Care



What Is Telehealth?

- Telehealth means providing or supporting healthcare through electronic communication when the patient and provider are in different locations.
- **It may involve:**
 - Telephone communication.
 - Live video.
 - Secure electronic messages.
 - Sharing clinical information.
 - Remote monitoring.

Three Types of Telehealth

1. **Synchronous:** the patient and provider communicate live.
 2. **Asynchronous:** information is sent for later review.
 3. **Remote Patient Monitoring (RPM):** patient measurements are reviewed from a distance.
- A service may combine more than one type.
 - The correct type depends on the patient and clinical need.

1. Synchronous Telehealth

➤ **A synchronous visit occurs in real time.**

- The patient and provider are present at the same time.
- Communication may use audio and video.
- Questions can be answered immediately.
- The provider can observe the patient.
- A stable connection and private location are important.

2. Asynchronous Telehealth

- Asynchronous care is also called store and forward.
- It may include:
 - Pre-visit questionnaires
 - Health-status updates
 - Secure portal messages
 - Clinical photographs
 - Information reviewed later by the provider
- It is useful when an immediate live response is unnecessary.

3. Remote Patient Monitoring

➤ **Remote Patient Monitoring may collect:**

- Blood pressure and pulse.
- Respiratory rate and oxygen saturation.
- Weight.
- Blood glucose.
- Electrocardiogram information.

➤ **The patient may be at home, in an ambulance, or in another care facility.**

1. Preparing for Telehealth

A. Before the visit:

- Confirm the patient has a suitable device and connection.
- Confirm that the location provides privacy.
- Test the platform when necessary.
- Prepare a backup plan for technical failure.
- Collect important pre-visit information.

2. Conducting a Good Telehealth Visit

B. During and after the visit:

- Confirm that the patient can see and hear the provider.
- Watch for signs that the patient is not engaged.
- Use an interpreter or caregiver when appropriate.
- Summarize the plan and use teach-back.
- Document the visit and arrange follow-up.

Uses of Telehealth

➤ Telehealth may support:

- Primary and urgent care.
- Mental health services.
- Stroke and emergency assessment.
- Home and postoperative care.
- Skilled nursing and intensive-care services.

Telebehavioral Health

- **Telebehavioral health uses technology to provide mental-health services.**
 - Better access with less travel.
 - Greater privacy and convenience.
 - Continued support between visits.
 - Improved patient–care-team communication.
- **Workforce, affordability, and technology barriers may remain.**

Wrap-Up

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1. Digital health changes patients from passive recipients into active partners.
2. Portals and PHRs improve access to records and communication.
3. Online information must be checked for quality and reliability.
4. Telehealth includes live care, store-and-forward care, and remote monitoring.
5. Digital tools create value when they are accessible, useful, safe, and connected to care.



Thank You