Developing Awareness of Digital Health Literacy in Healthcare Students

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## Objectives

- Define health literacy.
- Discuss "digital" health literacy (eHealth).
- Describe how digital health literacy can be incorporated into the curriculum for healthcare programs.

#### What is Health Literacy?

- The Patient Protection and Affordable Care Act of 2010 defines health literacy as the "degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions" (Centers for Disease Control and Prevention, 2015, para 1).
- People use health literacy skills to realize their potential in health situations.
- These skills are applied to make sense of health information and services or provide health information and services to others.



Health Literacy Month is October 1-31 (Institute for Healthcare Advancement, 2019).

#### Issue: Low Health Literacy

Nearly 50% of Americans have issues with low health literacy, which can lead to negative health outcomes (Institute of Medicine, 2004).

The Health Literacy Umbrella



#### **Older Adults and Health Literacy Needs**

- Older adults have large and diverse information needs, & are the sickest, most expensive, and fastest growing segment of the US population are seniors 65 years and older (Levine, Lipsitz, & Linder, 2016).
- Includes the needs of caregivers for both immediate and long-term healthcare planning.
- Can potentially reduce elder abuse, as most instances arise from economic need, lack of education, or other societal need (National Academies of Science, Engineering, & Medicine, 2018).



#### Healthcare Professionals and Health Literacy

- Patient engagement and partnership are important for patients to manage their own healthcare.
- Healthcare professionals provide health information and services to others.
- Include doctors, nurses, dentists, pharmacists, public health workers and allied professions (e.g., counselors, social workers).

<u>Tasks:</u>

- Help patients and others find health information and obtain health services.
- Communicate with and educate patients and support personnel.
- Understand patient requests and support optimal outcomes.

# What is "Digital" Health Literacy (eHealth)?

• Digital Health Literacy is the "ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem" (World Health Organization, 2017, slide 8).

#### Implications for educators:

- Health Information Technology (HIT) includes the use of electronic devices and systems
- These are now integral to healthcare globally.
- Students in healthcare disciplines must be knowledgeable and skilled in informatics (O'Connor, et al., 2017)

#### The "Digital Divide" and Healthcare Curricula

- Unfortunately, there is often a digital divide.
- Levy, Janke, and Langa (2015) found that only 9.7% of older adult patients with low health literacy used the Internet to obtain health information.
- Previously, the digital divide was mostly a disparity in access now, the issue tends to me related to needed skills in searching for and using health information (Manganello, et al., 2017).
- Strategies to incorporate eHealth learning into healthcare curricula include toolkits and suggested learning activities for different disciplines and levels (Vottero, 2017).

### **Teaching Digital Health Literacy**

- Healthcare students routinely use the internet to search for healthcare information (Wang, et al., 2017), a shift from a decade ago when most used books and colleagues for daily information.
- Competency in using technology (e.g., internet searches, word processing) is not **information literacy** (able to access & determine the information needed, apply critical analysis to the information and its sources) (Foster & Sethares, 2017).
- Student education about digital resources can also support patient education on digital health literacy:
  - Using internet search engines, patient portals, self check-in kiosks
  - Recognizing the value of such resources
  - Agreeing to text and email reminders
  - Using healthcare mobile applications (apps) and devices

#### **Curriculum Integration for Healthcare Students**

- To meet the goals of Healthy People 2020, digital health literacy needs to part of the curriculum for healthcare programs (U.S. Department of Health and Human Services, 2010).
- There is a need to create student learning activities that promote awareness and competence in digital health literacy.

#### Suggested goals of curricular initiatives:

- Support patient education proficiency: Supports a patient's ability to read, understand, and apply health-related information.
- Find and evaluate resources: Includes traditional and digital resources.

#### Key Points in Curricular Initiatives

- Ability to identify those patients with low literacy signs of poor literacy may be poor compliance with treatments and appointments, confusion about medication, and making excuses for not reading.
- Be able to **communicate using plain language** short explanations for diagnosis and treatment options, avoiding clinical lingo. Distill information into key messages that focus on behavioral change to achieve desired clinical outcomes.
- Learn how to use the "**Teach Back**" method check for understanding, use open-ended questions, re-teach if necessary (AHRQ, 2017).
- Evaluate patient education materials for readability the NIH recommends that health materials should be written at no more than the 6<sup>th</sup> -7<sup>th</sup> grade level (Hutchinson, Baird, & Garg, 2016).
- Test readability (Flesch-Kincaid Grade Level and Flesch Reading Ease Score) to support patient-centered care (Zeng & Hu, 2018).

#### **Curricular Strategies**

Sample Learning Activities for Healthcare Students

## Learning Activity: The Teach Back Method

- Asking patients to repeat in their own words what they need to know or do, in a non-shaming way.
- NOT a test of the patient, but of how well you explained a concept.
- A chance to check for understanding and, if necessary, re-teach the information (AHRQ, 2017).



# Learning Activity: Email and Text Reminders for Adherence

- Compliance with medication regimens and adherence to overall health care recommendations is often a challenge in patient management.
- Patient education focuses on the need for compliance, adherence, and follow up care.
- Healthcare students should be educated on the use of email and text reminders for this purpose.
- Studies have shown that email and text messaging can reduce "no shows" (keeping patient appointments) and also increase medication compliance (Schwebel & Larimer, 2018).

## Learning Activity: Evaluate Web Resources for Readability

- Have students to analyze the reading level and accuracy of web-based resources, such as websites, using a validated scoring tool such as the Flesch-Kincaid Score.
- Patient education information should be no higher than the 6<sup>th</sup> to 7<sup>th</sup> grade reading level.
- Web-based educational materials often are at the 10<sup>th</sup> grade reading level or higher (Hutchinson, Baird & Garg, 2016).



# Learning Activity: Create Personal Health Records & Use EHR

- Have students to creating personal health records and discuss their experience.
  - Students do not have to share their personal health history for this exercise.
- Spend time educating students on using Electronic Health Records (EHR).
  - The 2009 Health Information Technology for Economic and Clinical Health (HITECH) Act promoted use of health information technology (HIT)
  - Most US healthcare sites have adopted an EHR system
  - Benefits are improved access to patient information, prescribing and placing orders, accessing test results
  - Usability is still suboptimal (Ratwani, Reider, & Singh, 2019).

## Learning Activity: Patient Portals

- Healthcare students need to be educated about patient portals.
- Portals are accessed via mobile technology or traditional computers with internet access.
- Portals permit secure two-way messaging & allow patients to review laboratory results, clinical records, & request prescription refills.
- However, there may be a digital divide that exists among certain groups of patients – patient education is an important aspect of successful utilization.
- Among older adults, those who are 70 and older are less likely than those who are 65 to 69 years of age to use the patient portal (Gordon & Hornbrook, 2016).

# Learning Activity: Self Check-In Kiosks

- Educating healthcare students about computerized kiosks at clinics and hospitals helps support patient education tasks.
- In some clinics, patients register themselves using computerized kiosks.
- In one study, an oncology practice with an average patient age of 62.5 years, check-in time decreased to two minutes through the use of self-check in kiosks.
- This clinic has also had a 38% increase in the collection of email addresses from patients through this system (Pack, 2014).

# Learning Activity: Utilizing Healthcare Apps & Devices (1 of 5)

- It is important to teach students about health software applications (apps) for patient engagement, patient education, or provider use.
- Many available for free from governmental agencies such as the Centers for Disease Control and Prevention (CDC).
- <u>Example:</u> BAM! Dining Decisions App (CDC, 2017).



# Learning Activity: Utilizing Healthcare Apps & Devices (2 of 5)

- Another interactive tool provides individual plans for calorie intake and diet, based on sex, age, and exercise frequency – case studies can be created for healthcare and health psychology students.
- "Get Your My Plate Plan" (USDA, 2018).
- Also provides nutrition and physical activity information via education materials and toolkits.

AGE GROUP	CALORIE LEVEL								
Ages 2-3	1,000	1,200	1,400						
Ages 4-8	1,200	1,400	1,600	1,800	2,000				
Ages 9-13	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200
Ages 14+	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200



# Learning Activity: Utilizing Healthcare Apps & Devices (3 of 5)

- During community screenings or patient education sessions, healthcare students can use the AHRQ ePSS (Electronic Preventive Services Selector) downloadable app for tablet/smartphone.
- App generates patient-specific recommendations for preventive care and screenings based on the US Public Service Task Force, using patient data for age, sex, pregnancy status, sexual activity status, and tobacco use (AHRQ, n.d.).
- Nursing students found this app to be easy to use and helpful in providing guidance to event participants (George & DeCristofaro, 2016)



# Learning Activity: Utilizing Healthcare Apps & Devices(4 of 5)

• In keeping with the best practice regarding patient-tailored recommendations for care, the Immunization Catchup Scheduler from the CDC allows one to generate a unique immunization schedule from birth to 18 years of age for an individual pediatric patient (CDC, n.d.).



# Learning Activity: Utilizing Healthcare Apps & Devices (5 of 5)

- Many people think that older adults are resistant to the use of electronic devices and/or mobile apps.
- However, studies have shown that with education and support, older adults are able to use and benefit from such aids.
- An example is a wearable tracker device, demonstrated to improve self-efficacy, behavior change, and wellness (Gualtieri, Rosenbluth, & Phillips, 2016).



#### Conclusion

- The impact of low health literacy on patient outcomes is huge.
- Curricular initiatives should incorporate informatics so that healthcare graduates are prepared to function in our highly technological healthcare environment.
- Patient education is a key part of health literacy and healthcare students must have the necessary tools to assess and support health literacy – digital health literacy is a crucial element, since digital resources are becoming the standard primary source of information.
- Curricular initiatives should support knowledge and skills in digital health literacy in order to improve communication, facilitate safe patient care, support quality outcomes and efficiency.

## Thank you!

# Questions?

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