Information literacy and professional competencies

1999: ALA Defines health literacy

2020: HHS establishes health literacy goals for the nation

Information skills linked to 8 Essential Public Health Services

A Competency-based Framework for Health Education Specialists - 2010

Healthy People 2020
## Analytic/Assessment Skills

<table>
<thead>
<tr>
<th></th>
<th>1 Monitor</th>
<th>2 Diagnose Investigate</th>
<th>3 Educate</th>
<th>4 Partner</th>
<th>5 Policies</th>
<th>6 Enforce</th>
<th>7 Link People</th>
<th>8 Competent Workforce</th>
<th>9 Evaluation</th>
<th>10 Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B6. Examines the integrity and comparability of data</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1B9. Interprets quantitative and qualitative data</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1B10. Makes community-specific inferences from quantitative and qualitative data</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1B11. Uses information technology to collect, store, and retrieve data</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Basic Public Health Sciences Skills

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>6B5. Conducts a comprehensive review of the scientific evidence related to a public health issue, concern, or intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6B6. Retrieves scientific evidence from a variety of text and electronic sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6B7. Determines limitations of research findings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Linked to 8 essential public health services**

**Described in 7 Tier 2 Core Competencies**

---

Council on Linkages Between Academia and Public Health Practice) and the Essential Services (July, 2010): Analytic/Assessment and basic public health sciences skills
## Information literacy skills mapped to Health Education Areas of Practice

### Find [health] information

<table>
<thead>
<tr>
<th>I. Assess Individual and Community Needs for Health Education</th>
<th>II. Plan Health Education Strategies</th>
<th>IV. Serve as a Health Education Resource Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assess existing health-related data</td>
<td>G. Assess factors that affect [program] implementation</td>
<td>A. Use health-related information resources</td>
</tr>
<tr>
<td>1. Identify diverse health-related databases</td>
<td>1. Determine the availability of information and resources needed to implement health education programs for a given audience</td>
<td>2. Select a data system commensurate with program needs</td>
</tr>
<tr>
<td>B. Respond to requests for health information</td>
<td></td>
<td>B. Respond to requests for health information</td>
</tr>
<tr>
<td>1. Identify information sources needed to satisfy a request.</td>
<td></td>
<td>1. Identify information sources needed to satisfy a request.</td>
</tr>
</tbody>
</table>

### Retrieve [health] information

<table>
<thead>
<tr>
<th>VI. Serve as a health education resource person</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Use health-related information resources</td>
</tr>
<tr>
<td>4. Access health information resources</td>
</tr>
<tr>
<td>C. Select resource material for dissemination</td>
</tr>
<tr>
<td>2. Apply various processes to acquire resource materials</td>
</tr>
</tbody>
</table>
### Analyze [health] information

<table>
<thead>
<tr>
<th>I. Assess Individual and Community Needs for Health Education</th>
<th>IV. Serve as a Health Education Resource Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assess existing health-related data</td>
<td>A. Use health-related information resources</td>
</tr>
<tr>
<td>1. Critique sources of information (advanced)</td>
<td>3. Determine relevance of various computerized health information resources</td>
</tr>
<tr>
<td>F. Infer needs for health education from obtained data</td>
<td>1. Evaluate applicability of resource materials for a given audience</td>
</tr>
<tr>
<td>1. Analyze needs assessment data</td>
<td></td>
</tr>
</tbody>
</table>

### Use [health] information

<table>
<thead>
<tr>
<th>I. Assess Individual and Community Needs for Health Education</th>
<th>IV. Conduct Evaluation and Research Related to Health Education</th>
<th>IV. Serve as a Health Education Resource Person</th>
<th>VII. Communicate and Advocate for Health and Health Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assess existing health-related data</td>
<td>A. Develop plans for evaluation and research</td>
<td>B. Respond to requests for health information</td>
<td>B. Apply a variety of communication methods and techniques</td>
</tr>
<tr>
<td>2. Use computerized sources of health-related information</td>
<td>1. Synthesize information presented in the literature</td>
<td>2. Refer requests to valid sources of health information</td>
<td>6. Use oral, electronic, and written techniques for communicating health information</td>
</tr>
<tr>
<td>4. Select valid sources of information about health-related information</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
National Library of Medicine (NLM/NIH)
1836 - present

Mission: Helping the public health workforce find and use information effectively to improve and protect the public's health.

https://phpartners.org/ph_public/AboutMission
Grade 5 lesson plans for consumer education

BOGGART AND FEAR IN Harry Potter
grade level: 7–10 | subject: history and social studies
This lesson plan examines two text selections from Harry Potter and the Prisoner of Azkaban and Harry Potter and the Order of the Phoenix, books three and five of the series, which feature a boggart—a shape-shifter that turns into whatever one fears most. Students evaluate various characters’ fears represented by the boggart and build connections between their analyses of the characters’ fears and the students’ own experiences.

GENETIC TRAITS IN Harry Potter
grade level: 5–8 | subject: science and technology
This lesson introduces students to the concept of genetic inheritance. It consists of two classes and a pre-lesson activity in which students learn genetic terms and concepts, such as DNA, chromosomes, gene, allele, homozygous, heterozygous, recessive and dominant genes, genotype, phenotype, complex traits, Mendelian inheritance, and Punnett square. Students then apply the concepts to identify possible inheritance patterns and genotypes of magical ability demonstrated by several characters in the Harry Potter series.
National Network of Library of Medicine (NNLM)

Supporting health literacy is critical to the mission

**NNLM offers funding to**
- improve access to health information, increase engagement with research and data
- expand professional knowledge
- support outreach that promotes awareness and use of NLM resources in local communities.

**Membership Benefits**
- training opportunities, eligibility for project funding
- document delivery services
- emergency preparedness planning and response
- partnerships with other NNLM members
**Emerging Trends: Medical Data and Me Community Awareness Project**

The project aims to increase the community's awareness of precision medicine. $9,579

EOA 2017-18: Leveraging Health Literacy and Community Health Resources to Improve Senior Care

The overall goal of the proposed project is to strengthen and enhance access to local and national health information resources for the Washoe County, NV, community of seniors and senior caregivers. $8,950
Regional Medical Libraries

Explore the pinpoints below and learn more about the NNLM Regional Medical Libraries and their respective territories.
“Participant input is vital to the success of our program, and we are intentionally integrating participants into our efforts, from our governance to our scientific planning.”

—Dara Richardson-Heron, M.D., chief engagement officer, All of Us Research Program, NIH.
**All of Us Mission and Objectives**

**Nurture relationships**
with one million or more participant partners, from all walks of life, for decades

**Our mission**
To accelerate health research and medical breakthroughs, enabling individualized prevention, treatment, and care for all of us

**Deliver the largest, richest biomedical dataset ever**
that is easy, safe, and free to access

**Catalyze a robust ecosystem**
of researchers and funders hungry to use and support it
A Transformational Approach to Diversity

Reflecting the country’s rich diversity to produce meaningful health outcomes for communities historically underrepresented in biomedical research.
## All of Us Research Program Underrepresented in Biomedical Research (UBR) Populations

<table>
<thead>
<tr>
<th>UBR Description</th>
<th>Algorithm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td>Is reported and is Hispanic, Latino or Spanish; race is reported and identified as something other than White</td>
</tr>
<tr>
<td>Age</td>
<td>Under 18 or over 65</td>
</tr>
<tr>
<td>Sex</td>
<td>Assigned female or intersex at birth</td>
</tr>
<tr>
<td>Sexual and Gender Minorities (SGM)</td>
<td>Is reported and is not Man, or is different than participant-reported sex at birth; sexual orientation is reported and is not straight</td>
</tr>
<tr>
<td>Income relative to FPL</td>
<td>Is reported and below Federal Poverty Level</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>Is reported and is less than a high school degree</td>
</tr>
<tr>
<td>Geography</td>
<td>Zip code is reported and is contained in the list of rural zip codes (&gt;50% of population resides in a non-metro county and/or rural Census Tract)</td>
</tr>
<tr>
<td>Access to Care</td>
<td>Participant needed or needs any medical visit in the past 12 months or currently, but cannot readily use the health care system or could not pay for medical care as needed</td>
</tr>
<tr>
<td>Disability</td>
<td>Participant has a physical and/or mental disability</td>
</tr>
</tbody>
</table>
The Value of Participating in *All of Us*

- **An opportunity to learn** some of your own health indicators and get your own data

- **An opportunity to fight disease** and improve the health of future generations

- **The opportunity to ensure that your community is included** in the studies that may lead to new understanding and new treatments

- **The opportunity to be part of a movement** to make our health care more precise, more personal, and more effective
**All of Us Research Program: Triple Engagement Strategy**

**Health Care Provider Organizations**
- Regional medical centers
- Federally Qualified Health Center pilot sites
- Veterans Affairs medical centers

**Participant Center**
Scripps Research Institute leads
“direct volunteer” outreach with many partners, e.g.:
- Walgreens
- Blue Cross Blue Shield Association
- National Blood Collaborative
- WebMD

**NIH Engagement Partners**
- Community and faith-based organizations
- Patient advocacy groups
- Provider associations
- NIH Institutes and Centers
Health Education

Assure that authoritative health information is accessible to the public.

Teach patrons to locate, understand and evaluate authoritative health information.

Provide in-service trainings in order to increase knowledge about and skills to help patrons use authoritative on-line health education.

Awareness

Increase understanding and engagement in the All of Us Research Program

Teach patrons about personal health information in order to enable informed healthcare decisions

AOU mission

To accelerate health research and medical breakthroughs, enabling individualized prevention, treatment, and care for all of us
Measuring our impact on...

• Public Library systems
• Public Library staff
• Engagement and awareness of NIH All of Us Research Program
All of Us Research Program Goals and Objectives

1. Increase understanding and awareness of the program
2. Teach people about personalized health in order to make more informed healthcare decisions

Public Library Staff
- Increase public accessibility to authoritative online health information
- Provide health education about the attributes and benefits

Health Educator
Provide in-service trainings in order to increase knowledge about and skills to help patrons use authoritative on-line health education
NNLM SCR
Health Educator
Scope of Work

▪ A health educator will provide *All of Us* program support, extend the educational offerings of the *All of Us* program, promote the *All of Us* program, provide health information in-service training for library staff, and offer health information education to the Public Library community.

▪ Duties will include developing and offering a health information outreach program for the public library system, with the goal of having educational programming integrated into each branch within the system.
2019 Goals and Objectives

• 1. Make authoritative health information and health education accessible to the public.
• 2. Provide education in locating, understanding and accessing quality health information.
• 3. Increase understanding and engagement in the *All of Us* Research Program.
• 4. Provide education on personal health information which will enable individuals to make informed decisions concerning their healthcare.
• 5. Offer in-service education to library staff to increase knowledge and skills in providing health information to the community.
NNLM SCR Primary Focus

1. Train Library Staff
2. Supplement existing programs
3. Start new health programs
4. Establish and strengthen community partnerships

This project has been supported in part or in full by Federal funds through the National Library of Medicine of the National Institutes of Health under award number UG4LM012345 with the University of North Texas Health Science Center. The content is the responsibility of the authors and does not necessarily represent the official views of the NIH.
2019 Deliverables

- Conduct health information needs assessments of each library branch.
- Offer at least 4 health programming sessions every month.
- Coordinate/ Recruit speakers from the community health professionals.
- Organize a large annual event.
- Develop courses to supplement the existing public libraries’ health information program.
Potential Partners

- Health Literacy Councils
- Health Department
- Public Health Department
- Sororities/ Fraternities
- Coalitions
- Nonprofit Organizations

- Home Instructions for Parents of Preschool Youngsters
- Kiwanis Club
- Rotary Club
- Community Centers
- Area Agency on Aging
Activity Ideas

- Cooking/ Nutrition Class
- Yoga/ Zumba Class
- Diabetes Class/ Partner with someone to take glucose level
- Hypertension Class/ Partner with someone to take blood pressure
- DNA Arts & Crafts with the children
- Health-related story time

- Parenting Class
- Health-related Movie with discussion before and after the movie
- Medline Plus, Genetics Home Reference, Clinical Trials, Drug Portal overview class
- Communicating effectively with your health physician
Train medical students to give public library staff presentations about genetic traits using Grade 5 lesson plans.
## Information literacy skills mapped to Health Education Areas of Practice

### Find [health] information

<table>
<thead>
<tr>
<th>I. Assess Individual and Community Needs for Health Education</th>
<th>II. Plan Health Education Strategies</th>
<th>IV. Serve as a Health Education Resource Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assess existing health-related data</td>
<td>G. Assess factors that affect [program] implementation</td>
<td>A. Use health-related information resources</td>
</tr>
<tr>
<td>1. Identify diverse health-related databases</td>
<td>1. Determine the availability of information and resources needed to implement health education programs for a given audience</td>
<td>2. Select a data system commensurate with program needs</td>
</tr>
<tr>
<td>B. Respond to requests for health information</td>
<td>1. Identify information sources needed to satisfy a request.</td>
<td></td>
</tr>
</tbody>
</table>

### Retrieve [health] information

<table>
<thead>
<tr>
<th>VI. Serve as a health education resource person</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Use health-related information resources</td>
</tr>
<tr>
<td>C. Select resource material for dissemination</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Analyze [health] information

<table>
<thead>
<tr>
<th>I. Assess Individual and Community Needs for Health Education</th>
<th>IV. Serve as a Health Education Resource Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assess existing health-related data</td>
<td>A. Use health-related information resources</td>
</tr>
<tr>
<td>1. Critique sources of information (advanced)</td>
<td>3. Determine relevance of various computerized health information resources</td>
</tr>
<tr>
<td>F. Infer needs for health education from obtained data</td>
<td>F. Infer needs for health education from obtained data</td>
</tr>
<tr>
<td>1. Analyze needs assessment data</td>
<td>1. Evaluate applicability of resource materials for a given audience</td>
</tr>
</tbody>
</table>

### Use [health] information

<table>
<thead>
<tr>
<th>I. Assess Individual and Community Needs for Health Education</th>
<th>IV. Conduct Evaluation and Research Related to Health Education</th>
<th>IV. Serve as a Health Education Resource Person</th>
<th>VII. Communicate and Advocate for Health and Health Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assess existing health-related data</td>
<td>A. Develop plans for evaluation and research</td>
<td>B. Respond to requests for health information</td>
<td>B. Apply a variety of communication methods and techniques</td>
</tr>
<tr>
<td>2. Use computerized sources of health-related information</td>
<td>1. Synthesize information presented in the literature</td>
<td>2. Refer requests to valid sources of health information</td>
<td></td>
</tr>
<tr>
<td>4. Select valid sources of information about health-related information</td>
<td></td>
<td>6. Use oral, electronic, and written techniques for communicating health information</td>
<td></td>
</tr>
</tbody>
</table>
Train self

- All of Us Content
- MedlinePlus [https://medlineplus.gov/](https://medlineplus.gov/)
- General Health Information
NLM Resources

- All of Us Interactive Portal
- ClinicalTrials [https://www.clinicaltrials.gov/](https://www.clinicaltrials.gov/)

Why are health literacy programs important?
Authoritative online health information: MedlinePlus®