ALA POLICY *PERSPECTIVES*

Healthier Communities
Libraries Improve Health Literacy, Access

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Abstract

Everyone needs health information. In fact, the Pew Research Center found that health information is the second most popular type of online search (after community news and information). A wide array of programs and services are offered by an overlapping patchwork of government agencies and for-profit and non-profit organizations. And healthcare delivery continues to evolve in multiple ways, especially with patients increasingly treated as active partners in the delivery of treatment. Libraries connect people with authoritative information, technology access and training, community-aware guidance toward obtaining relevant services, and lifelong learning related to strengthening health and wellness. From the opioid crisis to telehealth to overall health literacy, libraries are well-positioned to cost-effectively collaborate to build healthier communities. This potential can be realized only with increased training for library staff and effective partnerships that appropriately leverage library assets.

Introduction

People use America's libraries as trusted access points to find, understand, and act on health and wellness information. Library professionals provide expert guidance in obtaining resources on medical research, consumer health, insurance options, personal health records and more. Patients, care providers, concerned family and friends, and policymakers all require health and wellness information to be delivered promptly, competently, and in accordance with best practices regarding confidentiality. Information must also be evaluated for validity and appropriately matched to the information seeker's needs in terms of language

"Our research points to widespread use of libraries by community residents for a range of social, economic, health, and educational purposes. Capitalizing on the library's role in the community is an opportunity to provide needed health and social services in a location many people already choose to frequent."

—Public Libraries As Partners for Health (May 2018)[1]

and technology proficiency. More broadly, library programs and services also address social determinants of health, such as education, employment and social connection.

With more than 120,000 locations across the nation, including within health and research settings, libraries are well-positioned to improve access to credible information, provide expert assistance in navigating health resources and regulations, and work with partners to develop and deliver relevant programs and services that bolster health and wellness.

The Shifting Landscape of Health and Wellness

A range of research confirms that a majority (59 percent) of U.S. adults looked online for health information in a recent year;[2] that more than one-third have used the internet in an attempt to diagnose a medical condition;[3] and that more than a quarter of internet users who looked for health information online hit a paywall.[4] Americans require accessible and authoritative help to:

- Identify local resources to address health needs
- Research symptoms and recognize when to seek expert care
- Understand proper uses of prescription and non-prescription drugs
- Maintain health through appropriate nutrition, personal care, and exercise
- Address the healthcare and wellness needs of others
- Research medical provider and insurance options
- Identify solutions to environmental and other communitywide concerns
- Plan resources for future healthcare needs

Over the past quarter century, the delivery of healthcare itself has undergone changes in practice.[5] Patients are increasingly treated by medical practitioners as active partners in the delivery of treatment. This partnership requires increased sophistication in the communication skills of both practitioners and patients. Among the factors complicating this communication are

differences in race, class, gender, language, and ethnicity in caregiver-patient relationships; the reliance of many patients on the internet to gather health information and communicate with providers; and lack of awareness by many patients that they are expected to participate more actively in their healthcare.

About 23% of public libraries report offering fitness classes (like this yoga class and other examples that follow)

PHOTO CREDIT: DREW GILBERT

Regulatory complexity surrounding healthcare is another critical contextual reality of health information consumption today. The capacity to access and understand current laws, compare insurance provisions, and understand entitlement program eligibility, requires skill and thoroughness, and may involve policies at the national, state, and local levels. This is further complicated by the wide array of programs of services offered by an overlapping patchwork of government agencies and for-profit and non-profit organizations (e.g., local health department, employer-based health maintenance organization, school-based health center, non-profit health and patient advocacy groups). For many, this is a challenging territory to navigate. Misunder-standings and failure to find information can

compromise lives, financial health, and business practices.

As a result of these shifts, today's information landscape demands Americans possess and use health literacy skills of a high order in order to assess and understand their own medical experiences. More than 90 million adults in the United States have low health literacy, according to the National Library of Medicine (NLM), with millions more lacking the optimal health literacy skills needed to participate fully in the care they receive. Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.[6] Low health literacy is associated with increased hospital use, less screening for breast cancer, lower flu immunization and higher risk of mortality for seniors.[7]

Libraries: Critical Access Points

Libraries provide authoritative information, technology access and training, community-aware guidance toward obtaining relevant services, and lifelong learning opportunities related to strengthening health literacy all while actively engaging with a range of partners to build healthy communities. In short, libraries serve as trusted onramps to health and wellness resources and services.

Libraries are well suited to this task, due to their deep experience in building literacy skills and their widespread geographic availability in communities across the country. Libraries, with professional staff committed to equitable information access and patron privacy, offer a venue in which the public can trust that their questions will be treated respectfully, confidentially, authoritatively, and in a timely manner.[8] Libraries serve as a third information access point beyond the healthcare provider's and the patient's own personal networks.

More than 70 percent of Americans assert that libraries help people seeking health information.[9] More than one-third of library computer users (an

estimated 28 million people annually) pursue information on health and wellness, including learning about medical conditions, finding health care providers and assessing health insurance options. More than 80 percent of those seeking diet, nutrition and fitness information online at the library reported that they subsequently made changes in their diet and exercise.[10] In addition to online access to health and wellness resources, a majority of public libraries offer programs to help patrons locate and evaluate health information, as well as identify health insurance resources. Roughly one in five public libraries bring in healthcare providers to offer limited screenings and now offer fitness classes among their programming.[11]

In short, libraries support health and wellness by: providing access to authoritative, relevant health and wellness information; improving health literacy and facilitating understanding of information when barriers exist; helping community members understand health-related laws and regulations, including privacy issues and tax implications; providing health and wellness programming; and taking part in healthcare delivery through information dissemination, referrals and partnerships.

> **"When it comes to finding the best health information available, getting a blood pressure check or even finding a safe, cool place to spend an afternoon during a heat advisory, many people do not turn to their doctor or health department. In the U.S., they visit their local library."**
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> —The Nation's Health (October 2018), American Public Health Association[12]

Libraries Provide Specialized Resources

Health and wellness information is made accessible by libraries through a variety of media. By building and maintaining carefully curated (physical and

digital) collections, library staff offer health information seekers high quality resources on a full range of topics. While focused on serving the needs of medical professionals, many hospital libraries also provide collections for use by patients and their families, including videos that teach methods of home care for chronic conditions and post-surgical home care for such procedures as mastectomies and joint replacements. Medical library reference staff often hold multiple advanced degrees and bring specialized knowledge of health and evidence-based research to the work of supporting health and medical students in the university or institutional library.

School and college and research libraries supplement health and wellness-related curricula with books and subscription databases relevant to both their studies and personal health needs. On their own, more than a quarter of internet users encounter paywalls[13] that limit access, so brokering free access to these expensive resources is a valued library service. Libraries create health information portal pages on their websites pointing directly to these proprietary databases, as well as to free (and ad-free) web-based resources. These portal pages are authoritative, current, and allow community members to perform health-related research at differentiated reading and knowledge levels. Texas Woman's University's "Consumer Health LibGuide," for example, brings together library and campus resources on a web page that helps students quickly locate the specific resource(s) suited to their health and wellness concern or research need.[14]

Library professionals also create their own resources—like MedlinePlus®.[15] This free, evidence-based site is built and maintained by NLM and offers web-based health and wellness information that can be accessed by people with different educational and linguistic needs, and who play various roles in healthcare. The site offers instructional videos for healthcare consumers and technical information regarding conditions, clinical trials, and drug interactions—and all topics in between. The site is bilingual in English and Spanish and contains many resources in other languages, as well. Its information architecture is guided by library science, and it contains information drawn from medical and allied health sciences research.

PubMed,[16] also developed by NLM, provides more specialized research, with more than 29 million references to journal articles in life sciences with a concentration on biomedicine. Many of its resources are also free, and all have thorough documentation regarding their publication history and authority. In contrast to print reference materials, sites such as these are consistently updated to include both the latest information and to update older information that is no longer relevant due to results of recent studies.

Bike clinic @ the library

PHOTO CREDIT: BRENDAN HELMUTH

By providing access to information in appropriate cultural contexts, local libraries also support underserved health consumers with high quality information. Los Angeles (CA) Public Library's bilingual website, Health Matters/Vida Saludable, for instance, responds to the language needs of community residents. A link to this site is highlighted on the front page of the library's website, making it easier to locate these resources.[17] The site provides local health service directories, links to authoritative health-related

websites, summaries of key requirements for accessing time- and status-based health and wellness services, and links to health databases to which the library subscribes and which users can access by using their library card, often even remotely.

Library collections also offer materials related to supporting healthy lifestyles more generally, including advice on diet, exercise, chronic care needs, and other lifestyle concerns. Such concerns require accounting for a broad spectrum of topics and resources, including cookbooks that address medical dietary needs, multimedia that offer physical exercise guidance, self-help mental health materials, and even community environmental impact reports. Some libraries take healthy lifestyle maintenance collections and services even further by offering small fitness gadgets (like pedometers) as circulating materials,[21] or hosting exercise and wellness classes like as Zumba or yoga.[22]

Libraries Advance Health Literacy

Libraries not only provide access to high-quality health and wellness information, but also help people build the health literacy skills they need to navigate it. In addition, they enable access to this information by offering internet access, digital literacy training, and other sustained forms of support.

Health literacy

Like basic or digital literacy relative to overall information access and use, health literacy is fundamental to full participation in managing personal and family health and wellness. As noted by the National Network of Libraries of Medicine (NNLM), health literacy is complex and includes aspects of traditional literacy measures, numeracy skills, and cultural competency.[23]

Libraries offer guidance to community members with diverse needs related to learning about health and healthcare, nutrition, and access to government and an array of healthcare support programs and services. They also provide and enhance access to health sciences professionals seeking research regarding medical developments and clinical trials. Libraries support health literacy as they respond to specific health-related inquiries, as well as by developing collections that are responsive to health consumer concerns.

In their work to support literacy for families, children, and adults more generally libraries include wide-ranging aspects of health and wellness literacy in their programming. The Palm Beach County (FL) Public Library includes such

health-specific literacy needs in its regular adult literacy program curriculum and draws attention to its importance by ranking the need to read and understand medication labels second after job application literacy needs.[24] The Cazenova (NY) Public Library has offered adult and family literacy programming related to food pantry use[25] as well as offering driving safety sessions targeting older drivers.[26] To address high youth and adult obesity rates, more than 50 agencies have partnered with Houston (TX) Public Library's Healthy L.I.F.E. (Literacy Initiative For Everyone) program.[27] The initiative takes an intergenerational approach for families and gives them information and tools for healthy living ranging from access to the Texas Children's Health Mobile Clinic to nutrition classes offered in collaboration with Texas A&M Agrilife. Such literacy programming strands have evident ramifications on community health and wellness, as well as on information gathering skills. To support initiatives like these, the National Institutes of Health offers a suite of resources for adult literacy programs serving target groups such as older adults and English language learners that help to guide health literacy acquisition.[28]

Access technology and guidance

Given the increasing importance of accessing health and wellness information, as well as healthcare services online (e.g., telehealth), it is critical that people have access to the internet and related technology. Libraries provide public access computers that supply community members who may otherwise have limited online connectivity options with access to online health resources. Virtually all libraries also supply wifi to visitors,[29] allowing those with their own devices a quality internet connection to make use of these authoritative and up to date resources, as well.

Additionally, libraries of all types provide their communities with a variety of assistive technology equipment,[30] including computers that are operable by those with severe range of motion disorders, who are visually impaired, or who need accommodation to maneuver the large mobility equipment on which they rely into position for

computer use. Such assistive technology offers people with disabilities the freedom to access information independently and with confidentiality—including resources related to health, healthcare access, and wellness support. This decreases reliance on direct medical provider access to discern facts and information required to live as independently and healthfully as possible.

Ballroom dancing @ the library

PHOTO CREDIT: JENN CARSON

An increasing number of healthcare maintenance agencies encourage consumers to engage with them online or via mobile applications (apps).[31] Such technology choices by healthcare providers assume that beneficiaries have the requisite equipment, skills, and inclination needed to access services in these ways. In addition, many government agencies, including the U.S. Department of Veterans Affairs (VA), require applicants to request services online. Library staff guide those seeking such services in how to complete intake forms, maintain online privacy, and interact with remote care providers, especially in areas far from the physical locations of health providers. To bridge equipment and technology skill gaps, libraries work as community partners through such efforts as California's Veterans Connect @ the Library initiative.[32]

Libraries also help people find the best health and wellness apps and learn how to use them. This service is relevant to patrons, patients, caregivers, as well as students and medical professionals. The Claude Moore Health Sciences Library at the University of Virginia, for example, highlights different "Spotlight Mobile App" for nursing and pharmacy students and researchers on its website.[33] Public libraries often include MedlinePlus Mobile among the mobile-friendly resources they recommend to community members.

Libraries Help Navigate Complex Landscape

Accessing health-related government programs and understanding health laws and regulations, including insurance and tax implications is often challenging. Libraries help Americans navigate this terrain, while maintaining high standards of privacy and confidentiality.

Health-related programs

Libraries provide up-to-date and practical information for seniors seeking access to Medicare, community members needing to access Social Security benefits including disability insurance, and other Medicaid access guidance. In addition to offering the appropriate factual information, libraries improve access in practical ways for health consumers who need technology or communication enhancements, such as Plain Language[34] documentation, or multilingual materials. Veterans and foster families learning about government health subsidy options related to their status rely on libraries to help them identify specific access points to programs which demand computer use to gain services and information.

Similarly, libraries help Americans navigate health insurance resources. Insurance policy documentation demands relatively high literacy levels to read, understand, and compare insurance options—which is compounded for Americans who

are newest to health insurance coverage.[35] On its website, the Denver Public Library offered guidance to those with insurance access questions related to Open Enrollment, as well as an invitation to contact the library by phone or online with further questions.[36] Other libraries also provide opportunities for engagement with experts. For instance, the Hutchinson (KS) Public Library, hosts assistance time and space for library users to meet one-on-one with insurance enrollment experts.[37] Libraries also offer space where consumers and employers can meet with partner organizations serving the community through business organizations, public clinics, and other area-wide focus to discuss the financial and legal implications of health insurance options available locally.[38]

BECAUSE LIBRARIANS KNOW INFORMATION IS THE BEST MEDICINE FOR HEALTHCARE QUESTIONS.

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90 million U.S. adults have low health literacy, according to the National Library of Medicine

For years, many public libraries have hosted tax preparation experts in the library who offer low- and moderate-income community members help with income tax preparation at no cost. With changes in tax law related to how healthcare expenses are figured, such tax experts now address a significant part of consumer health and wellness information. Outside tax preparation season, health insurance information and tax expertise is needed by consumers who are making insurance decisions for themselves and their families, as well as by employers who need to understand how to

abide by tax code regulations related to employee health insurance benefits. The Dallas (TX) Public Library, for example, addresses the health insurance regulation component of tax preparation on its webpage about the library's free in-person tax help service.[39]

Clarity about health-related laws

Healthcare access legislation is complex and is built on a combination of federal and state laws and regulations. Library professionals guide health consumers in locating up to date rules. Changes also may be made through electoral processes, such as ballot measures regarding local access to medical marijuana[40] or Oregon's Death with Dignity Act,[41] and are tracked by library staff to clarify for health consumers such legislation's effective dates. Library staff do not interpret legal issues; however, many libraries host pro bono lawyer programs[42] to serve community members who need additional help in understanding the application of current legislation pertinent to their healthcare decisions.

Privacy and confidentiality

The core values of American libraries include principles also highly valued by healthcare service providers and health law. Chief among these shared values are the privacy an individual can expect when using either library or health services, and the confidentiality libraries and healthcare services provide regarding consultation between client and service member. The federal Health Insurance Portability and Accountability Act (HIPAA) defines healthcare provider privacy standards.[43] Many states address privacy standards for libraries within their general regulatory codes. This synchronicity between health privacy and information privacy is, along with information evaluation skills, one of the chief reasons libraries have been identified as appropriate and strong partners in the health consumer service environment.

Another core value of libraries is intellectual freedom. This principle also speaks directly to the needs of health consumers who use library resources to seek information free of concern of surveillance and with confidence that sensitive topics (such as addiction or abortion) will receive balanced treatment in library collections and resources. Intellectual freedom principles assure health information consumers that factual authority of current laws and scientific knowledge, regardless of personal beliefs or opinions held by

Affordable Care Act Enrollment

The Public Library Association has engaged with The Robert Wood Johnson Foundation and Community Catalyst, a national health advocacy organization working to build consumer and community leadership, to spread awareness about the enrollment process for the Affordable Care Act. Because of their accessibility, reach and ability to address a broad range of issues including health literacy, public libraries have been recruited to join with other groups targeting key populations (such as young adults, immigrant communities, and persons who identify as LGBTQ). Through this project, PLA and partners such as Feeding America, the National Urban League, and the National Association of Community Health Centers are using plain-language, consumer-facing materials developed by health-literacy media in many languages to advertise the open enrollment and special enrollment periods. Materials emphasize key messages around financial assistance, in-person help and the shortened open enrollment period. PLA is providing training and support to public libraries to distribute materials, create displays, hold events and use social and other media to spread key messages.

individual staff or anyone else, can be obtained while both privacy and confidentiality of information transactions are maintained.

Understanding both HIPAA compliance and the effects of compliance on healthcare providers' communications with patients and clients is addressed specifically by college and research libraries through guides they publish and maintain for their communities. Purdue University (IN) Libraries' "Social Media: An Integration Guideline for Teaching and Learning: Strategic considerations"[44] advises faculty members of the importance of being aware of HIPAA, along with copyright, anti-harassment, and other policies and laws when using social media for teaching and learning. The library is well positioned to point community members, including both health consumers and providers, to specific laws, regulations, and the need for awareness of such governing documentation.

Partners in Healthcare Delivery & Programming

Libraries contribute in many additional and concrete ways to building healthy communities, including offering guidance to local healthcare resources, serving as important hubs for public health and emergency event information, and working with a range of partners to provide health and wellness services directly to community members.

Health program partnerships at libraries

With more than 120,000 libraries across the United States, libraries offer extensive community partnership potential. Visiting chronic care monitoring services, such as mobile blood pressure clinics and diabetes screening opportunities use library property, including meeting rooms and parking lots, as service points. The Merrimack (NH) Public Library serves as the site of a pop-up public health immunization clinic. Services include blood pressure screening and HIV testing as well as vaccinations.[45]

Libraries also engage in partnerships with health providers to bring free chronic health and health safety education to their communities through programming online and in person. In New Jersey, libraries partner with Quality Innovation Network-Quality Improvement Organizations (QIN-QIOs) to provide free diabetes and chronic disease management education to community members in libraries.[46] In collaboration with the health department, the Wilkes County (NC) Public Library offers a highly popular program for expectant parents and childcare providers that addresses infant sleep safety.[47] From the community health partner perspective, libraries are valuable partners

Embedded Library

When prime real estate became available in the Cuyahoga County (OH) Public Hospital in 2012, the county library took over the former florist shop and turned it into a busy branch that served patients and families, but also the hospital's 4,000 employees with a range of services. It functions like other branches in the country, although with a stronger focus on providing consumer health information. It provides public computer access and the only publicly available fax service in the hospital, which has proved particularly important for transmitting insurance forms. Every baby born in the hospital receives a visit from a library volunteer, who provides a new baby packet and library card. The DVD checkout also is popular—particularly with rehabilitation patients with long-term stays. Overall, the range of services provides vital connections to technology resources, as well as magazines, books and other materials that can inform patients and families, while also distracting them from worry and anxiety.

in health information and care delivery because libraries can leverage their in-depth knowledge of the community to help the partner determine when and where to offer health support. For health consumers, the library can be easier to access and a less stressful environment than a hospital or clinic.

Healthcare service provision at libraries

In addition to these programmatic efforts in which healthcare partners are invited to host services within libraries, some libraries offer direct healthcare to community members who are visiting the library.[48] The Pima County (AZ) Public Library hosts a full-time public health nurse and in partnership with the Pima County Health Department the library hosts a larger team of public health nurses that make regular visits to library locations.[49] Nurses at the library handle assessments, blood pressure screenings, and the delivery of health education support to library visitors who can receive help on the spot or make an appointment for a later date. The nursing schedule is posted on the library's website.

San Francisco (CA) Public Library has employed a social worker since 2009[50] to connect with library users experiencing homelessness in need of social services, including mental health care. The social worker's presence humanizes a population that may otherwise be treated as a security risk, rather than individuals in need of healthcare, social support, and respect as community members. The Lawrence (KS) Public Library now offers access to lighting designed to provide library visitors with sunlight therapy to diminish health issues arising from lack of natural sunshine, sometimes known as Seasonal Affective Disorder, or SAD.[51]

Telehealth[52] initiatives that aim to deliver services to remote clients also look to libraries as partners. Libraries can help to bridge the technology gap between healthcare providers and health consumers who do not have access to personal computer equipment and software that satisfies HIPAA standards. Virginia's Inova Health and Wellness program includes public library visits by health experts to provide educational

programming, as well as other telehealth options for library settings.[53] In 2017, the Jackson County (KY) Public Library began partnering with the Peoples Rural Telephone Cooperative (PRTC) and the Veterans Administration Hospital in Lexington to create the nation's first Virtual Living Room Telehealth Center to bring care to Appalachian veterans.[54]

> **"Providing telehealth services is eliminating the burden of travel that so many veterans face commuting to and from Lexington [KY]. We wanted to provide the service, and our public library graciously offered the space."**
>
> —Keith Gabbard, CEO, Peoples Rural Telephone Cooperative

Libraries also take their services to healthcare settings. Salt Lake County (UT) Library Services collocates children's collections in clinic and medical settings. The Library's Byington Reading Room is situated in a medical building and the room—a full-service children's library containing books, computers, and library staff—is heavily used by families for whom it might be difficult to visit a more traditional library.[55]

Guidance to local healthcare resources

Libraries provide access to the local, state, and national medical board ratings consumers need to make wise decisions about the quality of care available to them. Libraries can also help people understand hospital specialties and ratings, which supports personal healthcare decision making, as well as community planning, such as zoning board decision making to minimize alcohol and tobacco sales near schools or residential areas.[56] As trusted and neutral spaces libraries serve as prime locations for information ranging from food pantry schedules to services and support for abuse survivors because they provide authoritative resources with confidentiality. In addition to answering inquiries about such services, libraries use spaces within their buildings to post locations,

hours, and services of local crisis organizations. Libraries also support health support groups like Alcoholics Anonymous that need information resources for their members to use in a confidentiality-aware space. Libraries can maintain relevant collections with attention to linguistic and cultural needs. More broadly, health and wellness advocacy groups require authoritative information about local health delivery options, strengths, and challenges—and libraries can serve as guides in gaining an understanding of these.

 Academic libraries also partner with departments and organizations on their campuses to provide health information and services. The Northwestern University Libraries have partnered with the university's Counseling and Psychological Services (CAPS) to offer their "Let's Talk" program where students have the opportunity to drop in and speak with a counselor weekly in an informal setting. The Libraries also promote the services of CAPS as well as wellness tips and strategies on the library's digital signage and through handouts

available during finals week. The Galvin Library at the Illinois Institute of Technology offers the Stress Free Zone in partnership with the Student Health and Wellness Center to offer a quiet space for relaxation.[57]

Furthermore, because libraries also provide remote services, by phone, email, instant message, and even delivery services, health information consumers can get the information they need without making physical visits to the library building. Library staff contribute high-quality information to local 211 services[58] which in turn allows community members to discover agencies, institutions, and support groups that are available locally which provide health and healthcare assistance for specific needs and in the moment of need.

Public health and emergency event information

Libraries supply accurate and timely information on public health matters including vaccinations,

Addressing the Opioid Crisis

In October 2017, a national public health emergency was declared by the federal government under the Public Health Services Act. Public health and human service organizations are working on responses that include healthcare, education, law enforcement and the judicial system, emergency services, drug and addiction counseling, and community services. Public libraries nationwide are joining this response in a range of ways.

Denver Public Library (CO) created a team of community resource specialists, including several social workers who connect people to needed services.[59] The team also includes peer navigators who are trained to provide referrals to recovery programs, lead peer discussion groups, and help people navigate the social service system. DPL's staff works closely with their local public health agency, syringe access programs, police department, treatment providers, and recovery support programs. The library was a partner in the development of Denver's opioid response strategic plan, released in 2018.[60]

Invited to be an awareness-building partner in a proactive community action plan, the Peoria (IL) Public Library used the book *Dreamland. The True Tale of America's Opiate Epidemic* as its "Peoria Reads!" book and wove it into a series of public meetings with *Dreamland* author Sam Quinones, a documentary screening, forums, roundtables, and a community summit.[61]

With funding from the Institute of Museum and Library Services, work is underway currently by OCLC in partnership with PLA to identify, synthesize, and share knowledge and resources from efforts like those in Denver and Peoria to help public libraries and their community partners develop effective strategies to address the opioid epidemic in America.[62]

personal safety during epidemics (such as in cases where extreme weather has disrupted local water treatment leading to a risk for water-borne disease transmission), and emergency preparedness and events. Many libraries are designated by local government authorities as emergency responders in times of events such as catastrophic earthquakes.[63] In the case of library staff, emergency duties typically include managing information hubs for both the community and those in other locations seeking news about it. Libraries work to separate rumor from fact, which helps focus the energy and resources needed for actual response and recovery. This role makes use of librarians' skills and trustworthiness as information evaluators and authorities. In fact, librarians may pursue a disaster information specialization by completing training developed by the Medical Library Association and the NLM.

Building healthy communities

Libraries promote community health more widely through hosting community health fairs, participating in benefit sporting events such as fundraising runs, and empowering community members with data and data collection training to support initiatives like neighborhood sidewalk construction that give residents the opportunity to exercise safely on high traffic streets.[64]

Libraries support food and nutrition related health and wellness measures, recognizing that access to nutritious food is critical for wellbeing. Many U.S. public libraries, such as the Topeka & Shawnee County (KS) Public Library, work with local supplementary food partners to provide school vacation meals for those ages birth through 18, as well as healthy snacks on weekdays during afterschool hours.[65] Hundreds of libraries are now serving federally funded summer meals to children to ensure that they don't go hungry.[66] Many public and school libraries also offer children and families practical experience with healthy eating, from garden to table.

The Free Library of Philadelphia (PA) has taken food and nutrition to another level with the creation of a community kitchen and more than 350 classes each year.[67] The Culinary Literacy Center is a commercial-grade kitchen that serves as a classroom and dining space for Philadelphians. Teachers can bring students to the hands-on lab, where they can learn math via measuring, reading via recipes, and science via seeing what pops out at the end of the cooking process. Chefs of all ages can experiment with new foods, new tools, and new ideas. The Free Library also operates a neighborhood library in South Philadelphia that is co-located with pediatric primary care services, a city-run health center and a recreation center in a first of its kind facility called the Community Health and Literacy Center.

> **"I see libraries not just as a critical place for learning, but a critical place for community. Being able to partner with libraries to get food out is a wonderful win-win situation. We have the food, and they have the patrons who need it. It doesn't matter if you live in the city, inner ring suburbs or rural areas, hunger is everywhere. Libraries are ideal partners in this work because libraries are everywhere, too."[68]**
>
> —Kristin Warzocha, President, Greater Cleveland Food Bank

Libraries also support the health and wellness of elderly community members. Dominican University (IL) has developed a Tales and Travel program specifically for community members with dementia.[69] Materials collected into kits for this service provide the borrower with thematically connected books and objects that may trigger memories. This not only helps provide moments of memory for those with dementia, it can give family members and caregivers opportunities to share these moments and strengthen relationships. Multiple studies have shown games and play are just as important and valuable for adult learning as it is for children. The Rochester Hills (MI) Public Library, for instance, offers Findaway's Launchpad tablets with brain games on them, as well as providing space for puzzles, soduku and board games to support active social play.

Challenges and Ways Forward

Decision makers and community planners should include libraries when developing and delivering health and wellness information and services. The role libraries play in providing community members with access to high quality health information, improving health literacy, helping people understand health-related laws and regulations, and collaborating with government and community partners to deliver health and wellness information and services supports the achievement of health and wellness planning goals.

These library skills and roles—combined with regular interaction with community members—position libraries to serve as powerful collaborators in strategizing and delivering local health and wellness programs. In Wisconsin, the director of the Crandon Public Library is a member of the Forest County Community Coalition, which is made up of stakeholders from a range of community organizations that work together to support a healthy county. Participation in this coalition helps keep the library and library resources front and center in health-related planning.[70]

Training and Funding Needs

While libraries have much to offer communities in terms of supporting health and wellness, they also face challenges to doing so. According to a statewide survey of Pennsylvania public libraries, the two biggest challenges of their work are captured in two broad themes: need for additional preparation and training to address patrons' socioeconomic needs and resource constraints. "Respondents felt that decision makers sometimes mistakenly view libraries simply as a source of free books, rather than recognizing that libraries provide a broad range of services to people who would otherwise fall through the cracks."[71] As health information systems become more complex and individuals have greater need to navigate these systems to make choices about health providers, insurance and more, library staff must continuously upgrade skills and knowledge of credible health information resources and services. Assuring broad professional awareness of these training opportunities is a responsibility shared by state libraries, library associations, and library administrators.

Closely related is the challenge to keeping digital and physical collections and referrals up to date in a complex and dynamic sector. Healthcare and health information delivery agencies may produce and distribute helpful materials such as videos addressing practical home care for children with asthma, without being able to update the content or the format of such resources as they age out of usefulness. Regulatory and political changes that impact the distribution of information can also present a challenge to libraries in their efforts to serve health information consumers. Without robust broadband at libraries, multimedia websites with high quality health and wellness information, as well as telehealth applications, can be difficult to access reliably. Thus, working to ensure that libraries across the country have affordable high-capacity broadband connectivity is essential. Facilitating community education regarding online privacy, especially in matters such as personal health information, can also be compromised by uncertainty in regulatory support for online privacy and HIPAA standards.

> **"In health care and other areas, libraries are combining the access and trust characteristics of a third place with a hub role in the community—using partnerships with other institutions to connect people with services and help."[72]**
>
> —How Public Libraries Help Build Healthy Communities (March 2017)

Growing Internet of Things (IoT)

Technology access, health literacy and privacy/security concerns also are intertwined in the vastly expanding area of health and the Internet of Things—interconnection via computing devices that are worn (like a FitBit or heart monitor) or embedded in everyday objects (like Alexa or Nest),

enabling them to send and receive data. Analyst firm Gartner estimates there will be 20.4 billion IoT devices installed by 2020. While these devices can enable remote tracking to support medical diagnosis, as well as management of chronic illness, there are serious questions about data security across this vast network of broadband-enabled devices. And Internet-enabled health research via smart speakers can be even more problematic than a traditional online search, as a July 2018 article in *Quartz* magazine found.[73] Consumer education to the potential benefits and risks or limitations of "smart" technology will be increasingly important in an increasingly connected world.

Contemporary information-related barriers to achieving optimal health and wellness, including lack of broadband access[74] and critical information evaluation skills,[75] exist in every community to greater and lesser degrees. Achieving American health and wellness goals requires library support of health consumer literacy and community planners' support of libraries in their joint efforts to overcome these barriers. Libraries and librarians are "health literacy first responders."[76] Libraries are key contributors to personal health, the health

of the communities, and our collective goal of a healthy nation.[77] This stems from the ability of libraries to collect and disseminate authoritative information in a timely and appropriate manner to suit the health consumer's need, with the assurance of confidentiality, intellectual freedom, and equity of service to all.[78] These values, as well as widespread geographic presence, make libraries invaluable partners in reaching health planning goals.

It is a joint responsibility of decision makers and librarians to leverage libraries in addressing new opportunities and challenges on the horizon. Public policy changes may generate new needs for libraries to address. New technologies and innovative applications of existing technologies may also enable new opportunities for which libraries can help communities to engage.

In particular, library leaders will need to take the initiative and make the case to decision makers—speaking in their language to explain how libraries represent cost-effective means for addressing the community's critical health care challenges.

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