

Appalachian Rural Health Institute

ARHI

COMMUNITY HEALTH ASSESSMENT

Appalachia: An Overview of Health Concerns and Health Literacy

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Overview of Appalachia

Appalachia encompasses 200,000 square miles from New York to Mississippi and includes all of West Virginia and part of 12 other states. Twenty-nine counties in the southeast portion of Ohio are identified as part of Appalachia. About 42% of the population residing in the geographic location of Appalachia lives in rural areas compared to 20% rural population in the rest of the nation. The four counties included in this study (i.e., Athens, Hocking, Pike, Vinton) are considered rural. Over time, federal grants have provided more than 800,000 people with access to clean water and sanitation facilities. Almost 2,300 miles of roads have been completed through Appalachia at a cost of \$6.2 billion (Baran, 2004). Despite the increased roads and accessibility, many in Appalachian Ohio continue to live in remote isolated locations.

Almost 40 years since the Johnson administration created the Appalachian Regional Commission (ARC) to fight the war on poverty in Appalachia; many people continue to struggle to afford basic food and shelter. The area's poverty rate¹ declined from 31% in 1960 to 13.6% in 2000 and the percentage of adults with a high school diploma has increased by almost 70%. According to the 2000 Census, 350 of the 410 counties in the Appalachian Region have experienced a reduction in poverty rates. Originally, ranking a county with a "distressed" status (i.e., per capita income, unemployment rates, and poverty levels worse than the rest of the nation) was based on poverty rates and three-year unemployment rates that are 150% or more than the national

¹ National poverty data are calculated using the official Census definition of poverty, which has remained fairly standard since it was introduced in the 1960s and is useful for measuring progress against poverty. Under this definition, poverty is determined by comparing pretax cash income with the [poverty threshold](#), which adjusts for family size and composition (U.S. Census Bureau).

average and per capita market income that is two-thirds or less than the national average (Wood & Bischak, 2002).

Although regional poverty is still high compared to national averages, significant improvements have occurred since the ARC was first established. For example, the number of distressed counties has decreased by more than half since 1960. However, one-fourth of the counties that were distressed more than four decades ago remain distressed today and poverty is 1.2% higher than the national rate. Poverty in Appalachia has spanned from early immigrant settlers who worked and died young in coal mines and manufacturing jobs, to today's impoverished residents who work in retail and service industries. However, classifications for distressed and transitional counties, those noticeably worse off than the rest of the nation but do not meet all of the distressed criteria, have been redefined in the last few years. Recent changes in census reports of poverty rates have meant that fewer Ohio counties have the distressed or even transitional status.

Although the picture may at first glance appear optimistic, *The Ironton Tribune* recently reported that Congressman Ted Strickland (D-Ohio), has asked the ARC and Ohio Governor Bob Taft to revise the qualifications for “distressed” counties. In a letter to the governor and the ARC, Strickland argues that the US Labor Department's unemployment figures are misleading. For example, Lawrence County's local government reported an unemployment rate of 17.9% or three times the Labor Department's figure. Strickland suggests that of this 17.9%, more than 10% are unemployed individuals who have simply given up and stopped seeking work. This measure is not included in the Department of Labor's official measure of unemployment. It is possible that local demographics and census data do not adequately capture all of those who are living in poverty in the region. Pictures of Appalachia represent a case where mountain data have indeed been disaggregated, the poverty is still real, and contributing factors such as isolation, dependence on extractive industries, and lack of investment in human capital are well documented (Byers, 2002). From June 1995 to June 2001 about 70% fewer Appalachian children depended on welfare cash assistance (Joyce, Stoneburner, & Wachtel, 2001). However, this reduction does not mean families have permanently found work or left the welfare roles

Health Care in Appalachian Ohio

Athens, Hocking, Pike, and Vinton Counties are identified as Health Professional Shortage Areas (HPSA) by Health Resource Service Administration (HRSA) for primary and mental health care and all but Hocking County have dental shortage designations also. About 20% of the United States' population resides in a HPSA designated area. For primary medical care HPSA uses three criteria for determination;

- The area is a rational area for delivery of primary care.
- The area has a population to primary care physician ratio of 3500:1 or higher.
- Primary care physicians in the area are over utilized or inaccessible to the population.
- Urban areas generally have one doctor for every 600 residents, while rural areas might have only one doctor for every 2,000 residents (Bauer & Growick, 2003). In a survey conducted by the Healthcare Financial Management, 300 medical residents in their final year of training indicated that none wanted to practice in a town with a population of 10,000 or less (Bauer & Growick). Reasons why physicians choose not to work in rural areas include family issues, spouse's careers, schools, shopping, entertainment, and social

life. Some choose specialties that cannot be supported in rural areas or many just prefer life in the city.

In general, Appalachia contains a disproportionate number of retired, disabled, unemployed, and poor people. Fewer health care programs are available to serve Appalachian children compared to other Ohio counties. Lack of access to services coupled with persistent poverty may place many Appalachian children at risk (Joyce, Stoneburner, & Wachtel, 2001). Appalachian residents have less access to doctors, hospitals, specialists, and dentists than many other Ohioans. Poor health practices, limited health care opportunities, and little or no preventative care have resulted in a population with higher than national average rates of some diseases such as coronary artery disease, hypertension, diabetes, chronic lung disease, and obesity (Roark & Wallace, 1996).

In 1998, Appalachian children were nearly 20% more likely to be uninsured than other Ohio children with uninsured rates ranging from a low of 6.0% to a high of 18.6% (Joyce, Stoneburner, & Wachtel). Uninsured children are more likely than insured children to be sick as newborns, less likely to be immunized on time, and less likely to receive medical treatment for trauma, injury, ear infections, tooth decay, or other health problems. Most uninsured children live with parents who work, but lack adequate health insurance coverage. In recent years Medicaid has expanded to provide coverage for more of these children, but many adults still lack adequate coverage. However, it has been said that having a Medicaid card is something like a hunting license as it entitles you to a provider, but you can't always find one. Many poor and working-class families with severely ill children struggle to find a doctor willing to treat them and advocate on their behalf (Bauer & Growick, 2003).

Health Literacy

Literacy includes oral literacy and written literacy. The most common causes of illiteracy include socioeconomic status, poverty, low parental educational attainment, and home environments in which parents fail to instill basic literacy skills, especially reading, in their children. Appalachian people often have a distinct dialect or speech pattern and culture. It is imperative that those serving individuals in this culture are aware of dialects patterns and cultural distinctions so that effective communication can occur with patients, clients and community members. Some Appalachian people have been noted to be at high risk for communication impairments and have low literacy levels (Roark & Wallace, 1996). Appalachians generally fit into one of three categories: (a) those who maintain many of the traditional features of Appalachian culture, (b) those who maintain some of the traditional features, and (c) those who maintain few or none of the features (Owens, 2000).

The term "health literacy" relates to the ease with which health information can be read and understood. Health literacy, as defined by the American Medical Society, is the ability to read, understand, and act upon health information and it is fundamental in the promotion of human health and in the improvement of healthcare. Health literacy not only includes reading and writing, but also entails numeracy, listening, and speaking that relies on cultural understandings and conceptual knowledge (Institute of Medicine, 2004). Health literacy also can be defined as the ability to read, understand, and act on health care information (American Medical

Association Foundation 2004; Potter & Martin, 2003). Health literacy specifically includes the level to which “individuals have the ability to obtain, process, and understand basic health information and services including the ability to read and understand prescription bottles, appointment slips, and other important health related materials and services to make proper health decisions” (U.S. Department of Health and Human Services, 2000).

One out of five Americans reads at a fifth grade level or below and the average American reads at the 8th or 9th grade level (Institute for Healthcare Advancement, n.d.). In 1992, the National Adult Literacy Survey (NALS) surveyed participants from all over the United States. Individuals were evaluated and given a reading level ranging from 1 to 5. Level 1 readers are the poorest readers, Level 5 readers are those that read well. In the 1992 study 48% of participants were identified as Level 1 or 2 readers (Kirsch, Jungeblut, Jenkins, & Kolstad (1993). A level 1 reader has difficulty with printed materials and usually will identify themselves as a poor reader. A level 2 reader has low test scores, but may not always identify themselves as a poor reader. These individuals were considered to be functionally illiterate in the NALS. A total of 32% of the participants scored a Level 3 score (i.e., high school level, the minimum for adequate success in our culture). Only 20% of the participants were identified as Level 4 or 5 readers (i.e., those reading at a post-secondary school level). A level 3 or higher reader has speaking, reading, writing, and math skills that let them integrate information, perform several tasks, and produce new information

In 1996, the Ohio State University Agriculture Extension Agency surveyed Ohioans using the National Adult Literacy Survey (Ohio State University, 2001). In the entire state, 45% of participants scored at a Level 1 or 2. In three of the four counties being assessed for the ARHI project (Hocking, Pike and Vinton), more than 50% of residents scored at Levels 1 or 2. It is a known fact that a great number of persons residing in Athens County have post-secondary degrees due to the number of persons either seeking post-secondary education or being part of the universities where higher education is provided. This fact most certainly skewed the results for Athens County. The 1996 Ohio NALS survey identified less than 45% of the readers in Athens County as Level 1 or 2 readers.

Adult literacy is a serious problem that undermines individual health, community’s health, and quality of life. Although low health literacy can affect anyone regardless of background or educational level, studies show that limited literacy skills are a stronger predictor of an individual's health status than age, income, employment status, education level, and racial or ethnic group (Foulk, Carrol, & Wood, 2001). Health information must be meaningful, useful, and helpful. Practitioners, as well as those seeking care, often rely upon pharmacy handouts, pharmaceutical company brochures, and medication instructions that are often written for those with a literacy level higher than eighth grade. Persons with lower literacy levels may have problems reading and understanding instructions.

Most health care materials are written above the 10th grade level (Institute for Healthcare Advancement, n.d.). In relation to medical outcomes, individuals with low health literacy are at greater risk than others. Those with lower health literacy make more medication and treatment errors and are less likely to comply with treatments, drug regimens, scheduled appointments, and may lack the skills needed to successfully negotiate the health care system. Low health literate

individuals are less likely to seek health care, are at a greater risk for acute illness, and, require more acute care hospital stays (Kirsch, et al., 1993). Negative health care outcomes for patients and can cost agencies, clinics, physicians, and patients money and time.

Cultural knowledge is defined as the implicit values and behaviors that form accepted practices within a cultural group; it is acquired through lived experience and influences all aspects of our lives (Xiadong & Kinser, 2003). Culture provides information and experiences that shape our expectations and assist us to interpret events. Culture is unique to individuals, but shared with members of one's cultural group. While Appalachians may have been isolated in their rural communities at one time, more and more are becoming acculturated beyond their communities through, education, the media, and travel.

A person's background or culture provides a frame of reference. Persons from Appalachia have a traditional context that may differ from those living in other regions of Ohio and may be different from outsiders or professional experts who have relocated to the region. Language and culture have an impact on quality-of-care and need to be considered when communicating health information about diagnosis, treatment, informed consent, and self-management of health problems (Osborne, 2000). Culturally-specific materials appropriate for use with Appalachian or rural populations may be necessary for use with health concerns.

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