

Serving individuals who are DHH in rural communities

DHH individuals in rural communities: A brief introduction.

Individuals who are deaf or hard-of-hearing (DHH) who live in rural areas face a different set of challenges from those living in more populated regions. As a result, DHH individuals who live in rural areas require supports and services that address their unique needs.

Rural areas are defined as those outside a metropolitan statistical area (MSA). An MSA consists of a city having a population of 50,000 or more plus adjacent areas that are metropolitan in character and are economically and socially integrated with the central city. National data suggests that the prevalence of individuals who are DHH is greater in rural areas.¹

Resource limitations affect DHH individuals in rural areas.

- ❁ Poverty is particularly challenging in rural areas, with 15% of residents living below the poverty line, compared to 12% of residents in urban areas.²
- ❁ In rural areas, service delivery is impacted by several factors, including but not limited to:
 - ❁ Geographic barriers and seasonal problems (e.g., geographic isolation, heavy flooding).
 - ❁ Population sparsity.
 - ❁ Inadequate teacher qualifications and/or preparation.³
- ❁ A shortage of qualified interpreters is a critical issue in rural settings where it is especially difficult to attract and retain these professionals.^{4,5}
- ❁ Special education personnel often do not receive adequate training in the use of instructional and assistive technology specific to the population they serve, as regional institutions of higher education frequently are lacking in special education programs or provide limited course work in these areas.⁶ A lack of funding and underdeveloped infrastructure place additional limitations on efforts to develop such programs.⁷
- ❁ Personnel training on the use of educational technology is important for professionals who work with DHH individuals in rural settings, but is not always readily available. This type of training is crucial for student access to coursework, delivering instruction, recommending assistive devices, locating resources, and providing consultative services to students and their families.^{8,9,10,11}
- ❁ DHH individuals in rural areas may be more affected by a lack of information exchange through technological mediums than their urban counterparts.¹²

Risk factors for mental health and social isolation.

Rates of mental health problems in rural areas among the general population are comparable to those in urban areas.¹³ However, DHH individuals face a greater number of mental health risk factors than their hearing counterparts¹⁴ and the impact of mental health disorders for DHH in rural areas is more severe than that of urban areas due to issues of:

- ❁ **Accessibility:** Lack of transportation to and from services, inability to pay for services, and a shortage of interpreters.
- ❁ **Availability:** Of the 65 million U.S. residents who live in a “professional shortage area”, 85% of those individuals live in rural areas.¹⁵ This issue is compounded with an even greater scarcity of mental health professionals who are qualified to work with individuals who are DHH.
- ❁ **Acceptability:** Rural communities often hold more stigmatizing views about mental illness and psychotherapy. The impact of stigma is largely related to traditional cultural beliefs and a lack of understanding of mental health issues.^{16,17}

Social isolation is a significant concern for DHH individuals in rural areas.¹² In addition to having a limited social network of individuals who share a preferred communication modality, they may also face limited access to various forms of electronic communication, such as text messaging or email.

- ❁ Social isolation can constrain language development during childhood and adolescence, which further limits access to communication.
- ❁ Limited access to communication is a threat to mental health, as communication is critical to psychosocial development, regardless of degree of hearing loss or modality of communication.^{18,19,20}

What are potential solutions to serving DHH individuals in rural areas?

Electronic and online technology

- ❁ Online technology makes distance learning a viable modality for delivering content in just about any academic area. Virtual high schools and universities offer access to courses that were previously unavailable in smaller or rural schools.⁴
- ❁ Technology can dramatically reduce the impact of time and distance for rural education and overcome many barriers to service delivery,^{21,22,23} as distance learning can be accessed through several modalities, such as videoconferencing and web-based courses²⁴.
- ❁ Online technology and distance learning has the potential to alleviate the social isolation experienced by SDHH in rural settings.⁴

- ❁ Sign language interpreting services can be provided through **Video Remote Interpreters (VRIs)**, which can help remediate the interpreter shortage in rural areas.
- ❁ With regard to mental health services, **Computer-Based Assessment (CBA)** and **Computer-Based Therapy (CBT)** can be used across mental health conditions, including depression, anxiety, suicidal feelings, and addiction.²⁵
 - ❁ CBA provides visual presentation of questions and is available in a variety of different languages.
 - ❁ CBA dramatically reduces therapist time,²⁶ which reduces resource expenditure associated with seeking mental health services (e.g., transportation, financial cost).
 - ❁ CBTs use web-based, interactive materials that are diverse in format, with some programs approximating elements of face-to-face therapy.¹⁶

Co-teaching

Co-teaching is defined as two or more teachers collaborating and jointly delivering academic content, with both individuals taking active roles in teaching a diverse group of students, including students with and without special needs. The use of co-teaching with students who are DHH (SDHH) in rural settings is supported for several reasons.^{27,28}

- ❁ Increases instructional options for students by combining the strengths and expertise of two teaching professionals together.
- ❁ Improved program intensity by providing opportunities to receive in-depth instruction because students can become more involved with two educators present.
- ❁ Co-teaching in blended classrooms reduces stigma for students with special needs, as negative attributes are often associated with students receiving services outside of the classroom.
- ❁ Presents the opportunity to foster mutual support among professionals so that co-teachers can work together to determine and meet student needs.

Itinerant teachers

Itinerant teachers for SDHH travel from between schools, providing instruction and services for students, and consultation with families and school personnel. Although the itinerant teachers have been used extensively for SDHH in rural communities, empirical research on the effectiveness of the itinerant method is sparse. However, existing research supports the use of the itinerant model as a critical component of inclusive educational practice in rural settings.^{29,30,31}

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