Hearing Loss Issues in Long Term Care Facilities

Elderly Deaf, Hard-of-Hearing, DeafBlind, Late-Deafened (D/HH/DB/LD) Residents of North Carolina

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Quick Definitions of Hearing Loss (1)

- **Deaf (D): Pre- and post-language acquisition; many identify as members of deaf community; in the U.S., American Sign Language (ASL) usually primary language; tend to ascribe to elements of Deaf culture**
- **Hard-of-Hearing (HH): Most have age-related hearing loss; likely to benefit from using assistive hearing technology to follow spoken word-at least if resources/support were more available (only about 16 percent of those needing hearing aids have or use them)**

Throughout presentation/document, D/HH/DB/LD will be used to refer to all individuals who have hearing loss

Quick Definitions of Hearing Loss (2)

- **DeafBlind (DB): Individuals with both hearing and visual losses (with many variations of severity, modes of communication, affiliations, etc.); heavy reliance on technology and support services**
- **Late-Deafened (LD): Hearing loss that occurs after speech acquisition; requires reliance on visual information such as text, notes, sometimes speechreading. Some use sign language, most don't; hearing aids usually not helpful, but some do benefit from cochlear implants**

Focus of Presentation

Majority of people with hearing loss age 65 and older are Hard-of-Hearing or Late-Deafened

Approximately 538,000 NC Residents age 65 and older have identified hearing loss (out of 1.2 million NC residents age 18 and older with hearing loss)*

*Data compiled by NC Division of Services for the Deaf and Hard of Hearing, March 20-2017.

But A Word about Deaf, DeafBlind Elderly … and Long Term Care Resources

Overarching Issue:

Limited or no [sign language or visual-kinesthetic-tactile] communication access

- **Social Isolation**
- **Lack of education/information about resources and services**
- **Difficulty accessing health care and other resources (and often increased health issues)**
- **Lower socioeconomic status; lack of adequate assets**
- **Despite long-time/life-long D/DB experience, aging can impose exacerbations or additional disabilities**

Types of Residential Facilities (1)

	Option	Description
Most Independent ↓	Aging in Place	Living in own home or with family (if needed, assistance provided by family, in-home caregivers, adaptive modifications)
	Village Concept	Linking neighbors and businesses to help each other stay in place; members pay annual fee for services like transportation, yard work, bookkeeping, etc. Example: https://dailycaring.com/how-the-village-movement-is-helping-seniors-age-in-place

Types of Residential Facilities (2)

Option	Description
Independent Living (IL)	Active community setting ("mini-college campuses"), with some in-home maintenance services and outside maintenance provided
CCRC (Continuing Care Retirement Community)	Comprehensive; range from independent to skilled nursing/hospice Most expensive of options, usually requiring initial "buy-in" expenditure

Types of Residential Facilities (3)

Option	Description
Residential Care Homes (also Adult Care or Family Care Homes (ACH, AFH)	Small groups of adults provided lodging, meal services and Activities of Daily Living (ADL) assistance; about half the cost of nursing homes
Assisted Living (AL)	For older adults with some independence but require assistance; usually 24/7 staff, meals, med mgmt., ADL assistance; usually communal dining and social/recreation areas

Types of Residential Facilities (4)

	Option	Description
↓ Least Independent	Skilled Nursing Facility (SNF)	When supervised care is required 24/7, with meals, activities, health mgmt. and support provided; always have supervising licensed MD, nurses/medical and other health providers on premises; may have Physical/Occupational Therapy staff; may have memory/dementia units

Where are D/HH/DB Elderly?

National[1]	**Total of 44 facilities identified with most or all D/HH/DB/DL elderly residents** **Most were IL, fewest were SNF** **Most residents HH; fewest DB**
North Carolina **(Meetings with Regional Coordinators, DSDHH Regions)**	**Few, scattered D/HH/DB/DL, mostly isolated individuals[2]** **Rarely provided appropriate communication access, resources**
Raleigh Capital Deaf Seniors (CDS) Meeting	**Retirees generally live independently or with family** **Little or no idea how they would manage otherwise** **Limited or lack of knowledge about residential resources or community options**

[1]NAD, Very Well Health, A Place for Mom websites
[2]A bit startling, given at least one study (ACS, Survey 2016) suggesting 12K D/HH NC residents over 65 in "institutions"

Issues Affecting People Age 65+ with Hearing Loss (1)

Issue	Impact (of Untreated/Underserved Hearing Loss)
Health	Hearing loss among most under-identified, unaddressed, underestimated of medical conditions Untreated hearing loss associated or correlated with multiple medical conditions (e.g., diabetes, dementia or other cognitive/memory disorders, CV disease/stroke, mental health, as well as with cumulative genetic and ototoxic conditions; also associated with poorer physical functioning, "incident disability," e.g., falls) Many with diagnosed hearing loss have difficulty sustaining hearing evaluation, treatment, aural rehabilitation d/t non-auditory age-related health changes Untreated hearing loss is significant predictor of more frequent hospitalization and institutionalization (e.g., SNFs) Proper treatment of hearing loss is associated with fewer hospital and ER visits, improved physical, cognitive, social and mental health functioning

Issues Affecting People Age 65+ with Hearing Loss (2)

Issue	Impact (of Untreated/Underserved Hearing Loss)
Economic	**Higher health costs noted for individuals not using/accessing hearing care services:** **Overall spending over 30 percent more; lifetime medical expenses about $33K more (than those without hearing loss, or who have had hearing health care)** **Across all service types, Medicare beneficiaries with untreated hearing loss spent 35 percent more on inpatient, 47 percent more on outpatient; SNF residents spent $800 more; home health users spent about $300 more*** **Given about 538,000 NC residents 65 and older with hearing loss, overall studies suggest somewhere between $286 million to over $1 billion in additional health expenditures for this group than for those without hearing loss or who had hearing health care**

*Willink, Reed, & Lin, 2019

Issues Affecting People Age 65+ with Hearing Loss (3)

Issue	Impact (Untreated/Underserved Hearing Loss)
Psychosocial	Significant impact on quality of life: Untreated hearing loss correlated with diminished cognitive and physical functioning, loss of independence, increasing social isolation, mental health issues Perpetuation of stereotypes about older people; stigma about disabilities; sense of "oppression" or discrimination Resistance/unwillingness to recognize hearing loss (invisibility, attributions to other reasons such as inattention, laziness) Difficulty affording hearing health care and treatment; most not adequately covered by insurance Despite preponderance (i.e., as many as 80 percent in SNFs) of hearing loss among residents, institutional facilities tend to be "difficult listening situations"(noisy); widespread shortage of hearing health care knowledge/skills among staff, including evaluation, treatment and management

Barriers Against Management of Hearing Loss in Elderly People (1)

Issue	Barrier(s)
Environmental	Living spaces poorly designed or not optimal for visual-kinesthetic communication access, interaction Poor management of noise levels, especially in communal areas Lack of widespread and consistent visual alert/announcement systems Lack of available and functioning auditory assistive systems and devices

Barriers Against Management of Hearing Loss in Elderly People (2)

Issue	Barrier(s)
Psychosocial	Hearing loss not systematically identified as issue or priority (e.g., during health/mental health examinations or assessments) Severity of, or dissembling about, hearing loss not noticed/recognized/addressed Reluctance to discuss hearing loss due to perceived/actual stigma, fear of being a burden, impact on self-image (e.g., vanity about hearing aids) Difficulty accessing hearing health care (referral process, finding and visiting specialists, rural limitations); experiencing perceived/actual dismissiveness or oppression by providers Lack of cultural competency about Deaf Culture/community among providers

Barriers Against Management of Hearing Loss in Elderly People (2)

Issue	Barrier(s)
Psychosocial	Hearing loss not systematically identified as issue or priority Severity, compensation or cover-up of hearing loss not noticed/recognized Reluctance to discuss due to perceived/actual stigma, fear of being a burden, impact on self-image Difficulty accessing health care (e.g. referral process, finding specialists, rural limitations); feeling “oppressed” by providers Lack of cultural competency about Deaf Culture/community among providers

Barriers Against Management of Hearing Loss in Elderly People (3)

Issue	Barrier(s)
Economic	Perceived/actual difficulty affording hearing health care or treatment Limitations of health insurance coverage Additional costs of medical care due to misdiagnosis or misdirected treatment by not addressing hearing loss issues

Barriers Against Management of Hearing Loss in Elderly People (4)

Issue	Barrier(s)
Medical & Health	Hearing loss often overlooked or minimized ("part of aging") Providers reluctant to treat due to added cost (time, expense, inadequate reimbursement) Lack of knowledge or expertise about medical and/or social impact of hearing loss Difficulty obtaining/maintaining staff trained in hearing loss issues, as well as Deaf culture/community familiarity

Barriers Against Management of Hearing Loss in Elderly People (5)

Issue	Barrier(s)
Technological	Inconsistent or flawed “user-friendliness” of hearing aids and auditory assistive devices
	Appropriateness of applied technology (e.g., goodness of fit)
	Consistent and reliable maintenance of technology (repair, replacement)

Overcoming Barriers for Hearing Loss Mitigation, Management for Elderly People (1)

Issue	Deaf	DeafBlind	Hard-of-Hearing	Late-Deafened
Centrality of Hearing Loss	Recognition of the centrality of hearing health care needs for all individuals: Removal of barriers for access to, and maintenance, of hearing health Appropriate audiological evaluations, as well as hearing aid fittings, on regular or consistent basis Maintenance of audiologic rehabilitation Provision of other assistive devices as needed Promotion/encouragement/support of involvement of family and friends Ongoing education and training of all staff about hearing loss identification, treatment, management			

Overcoming Barriers for Hearing Loss Mitigation, Management for Elderly People (2a)

Issue	Deaf	DeafBlind	Hard-of-Hearing	Late-Deafened
Environmental and Psychosocial Adaptation	Enhancement of audio-visual-kinesthetic accessibility in office/treatment spaces Improvement of compatibility/interoperability of hearing technology and communication systems. (Blazer, Domnitz & Liverman, 2016) Incorporation of Universal Design (UD) principles into new/future construction of retirement communities and facilities (www.dangermondkeane.com/deafspace-design-guide); David (2008)			

Overcoming Barriers for Hearing Loss Mitigation, Management for Elderly People (2b)

Issue	Deaf	DeafBlind	Hard-of-Hearing	Late-Deafened
Environmental and Psychosocial Adaptation	**Promotion and maintenance of appropriate resources for social interactions and activities, including with families, friends and other D/HH/DB/LD people ("centrality of connectedness"). (*ADA Requirements for Effective Communication*, January 2014)** **Establishment of ongoing contracts with deaf community resources, sign language interpreters, support service providers, and other agencies providing communication facilitation (e.g., CART* services), as well as organizations involved with or serving D/HH/DB/LD individuals. In NC, the DSDHH is a major resource**			

*Communication Access Realtime Translation

Overcoming Barriers for Hearing Loss Mitigation, Management for Elderly People (3)

Issue	Deaf	DeafBlind	Hard-of-Hearing	Late-Deafened
Education and Training	Increase public health information about hearing loss and hearing health care, by empowering consumers and communities Improving health care accessibility and affordability, including, for example, purchase or provision of Over-the-Counter (OTC) hearing aids and devices Promote individual, employer, private sector and community-based actions to support hearing health and effective communication (Blazer, Domnitz, Liverman, 2016)			

Overcoming Barriers for Hearing Loss Mitigation, Management for Elderly People (4a)

Issue	Deaf	DeafBlind	Hard-of-Hearing	Late-Deafened
Optimizing of Communication Skills and Resources	Unambiguous and consistent flagging of chart records, including indications of preferred communication styles (sign language, use of personal amplifiers, text or notes, etc.). Speechreading may be preferred by some, but is not always the most trustworthy form of communication. Availability, use and upkeep of communication technologies (e.g., videophones, visual alert systems and listening devices, as well as of hearing aids).			

Overcoming Barriers for Hearing Loss Mitigation, Management for Elderly People (4b)

Issue	Deaf	DeafBlind	Hard-of-Hearing	Late-Deafened
Optimizing of Communication Skills and Resources	Typically uses ASL or other visual-kinesthetic communication Need qualified Sign Language interpreter services Use of pertinent auxiliary aids and services	Typically uses ASL and/or other visual-kinesthetic-tactile communications Need qualified Sign Language interpreter services, Support Service Providers (SSPs), etc. Use of pertinent auxiliary aids and services	Pertinent auxiliary aids and services typically useful (e.g., FM systems, CART, personal amplifiers) Environmental/contextual adaptations that enhance auditory, visual and kinesthetic interactions	

Proposals/Ideas

Overall: Universal Design (UD)

New facilities and renovations of existing facilities should explicitly incorporate more UD elements supportive of residents with hearing and/or visual limitations

www. dangermondkeane.com/deafspace-design-guide
David, M. (2008). *Universal Design and Barrier-Free Access: Guidelines for Persons with Hearing Loss.* Ottawa, Ontario: Canadian Hard of Hearing Association

Promote development of facilities (or designated sections/wings of facilities) dedicated to D/HH/DB residents, with specialized staff and resources

Willoughby, L. (2014). Unpacking barriers to quality care for Deaf people in residential aged care facilities. *Disability and Society*, 29(2), 173-83

Identification and Treatment

Require facilities serving elderly people to systematically provide appropriate hearing assessments, treatment, auditory rehabilitation follow-up and maintenance (e.g., seven to 14 day observation/evaluation period following nursing home admission)

Centers for Medicare & Medicaid Services. (October, 2017 Version). Long-term care facility resident assessment instrument 3.0 user's manual, version 1.15. Available at:www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/MDS30RAIManual.html

Ad Hoc Committee on Audiology Service Delivery in Home Care and Institutional Settings (Spring, 1997) Guidelines for audiology service delivery in nursing homes. Ad Hoc Committee on Audiology Service Delivery in Home Care and Institutional Settings. ASHA Supplement, 17, 15-29

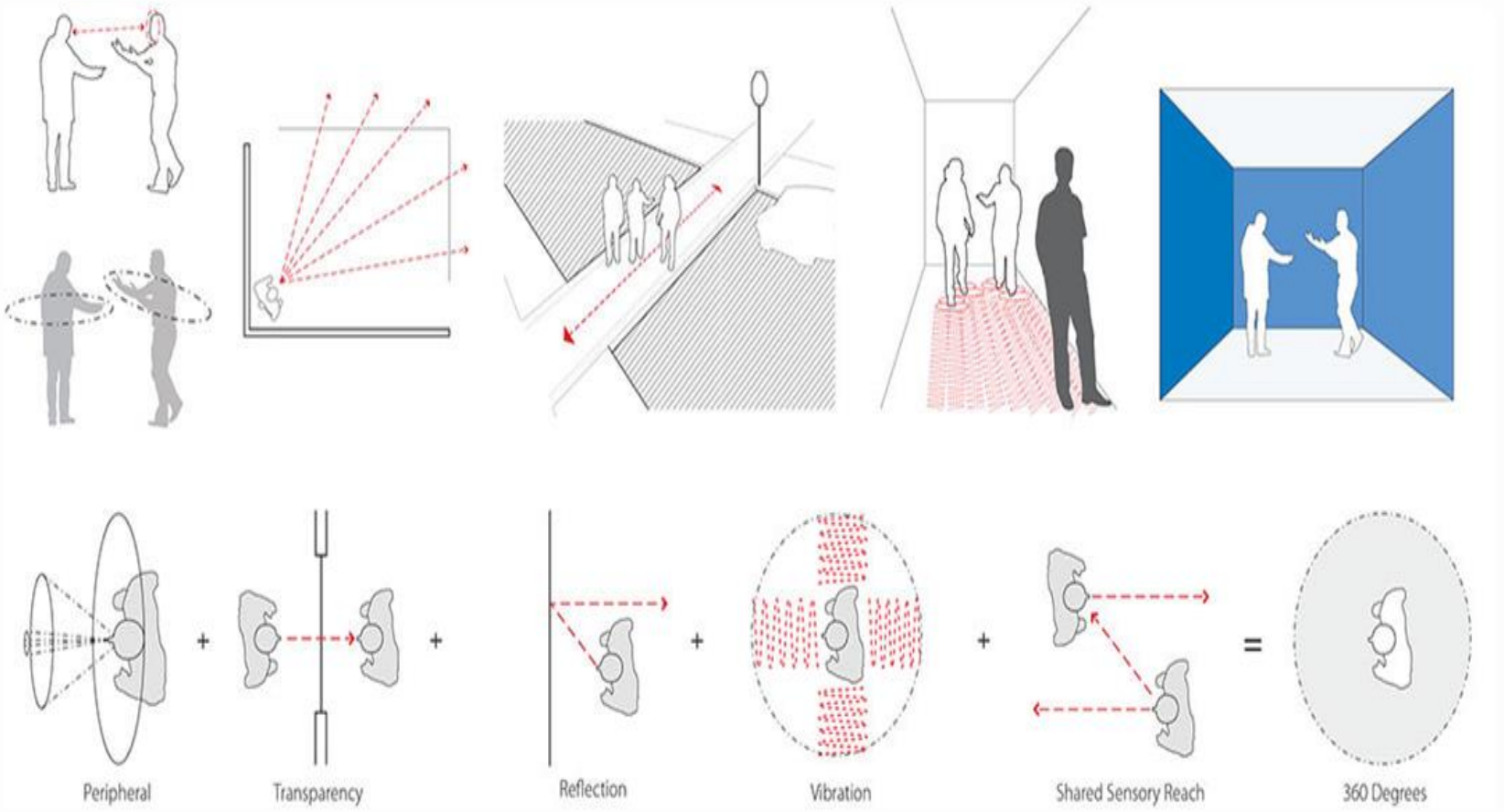
Education and Training

Promote requirements for annual training about working with residents with hearing/visual impairment, as well as their families

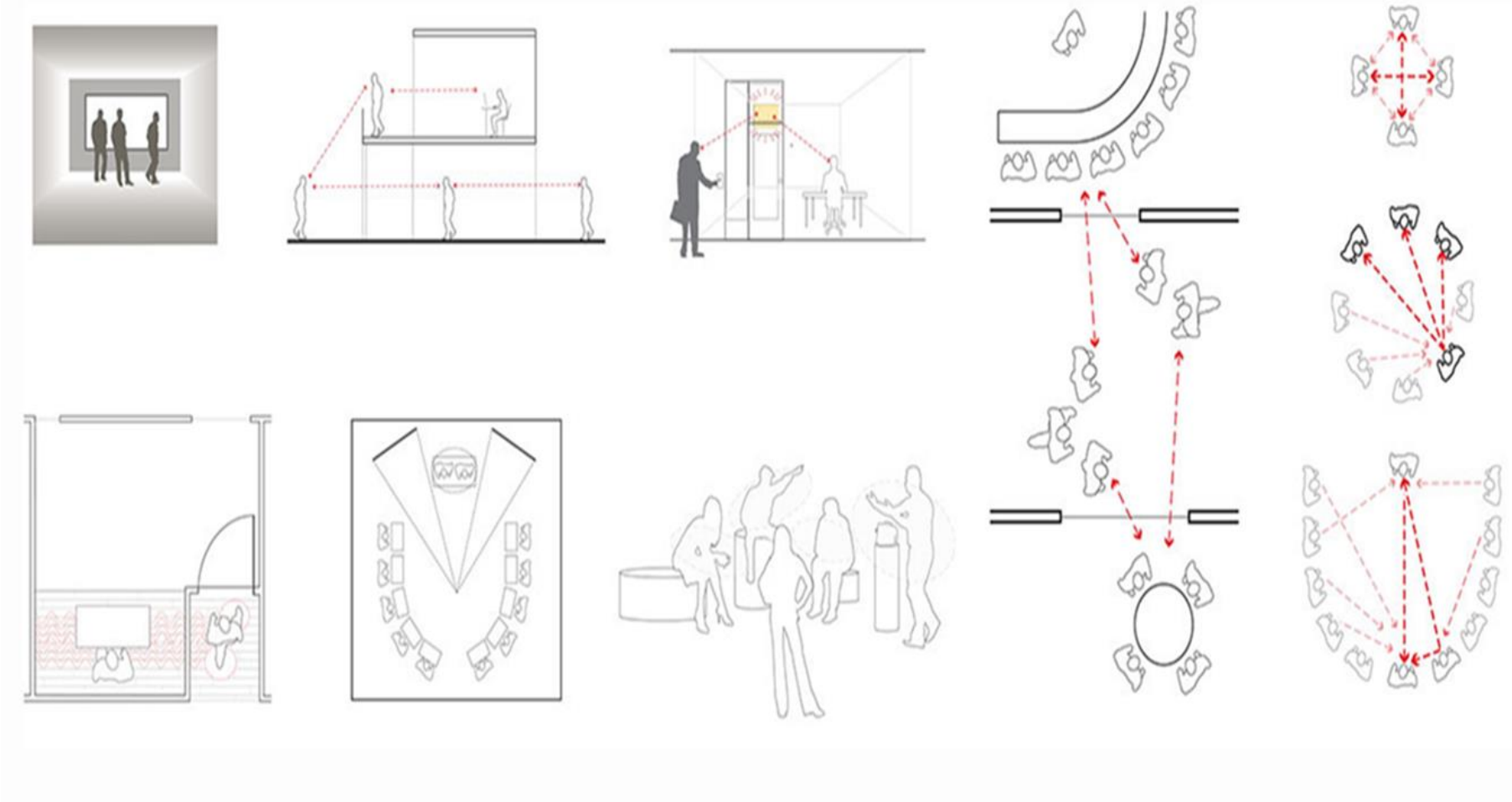
HTTPS://ASPE.HHS.GOV/BASIC-REPORT/COMPENDIUM-RESIDENTIAL-CARE-AND-ASSISTED-LIVING-REGULATIONS-AND-POLICY-2015-EDITION#NC

See also Lamb, H., Jones, A. (2017). Provision of audiologic care in nursing homes: A study of in-service training with facility staff members. *Journal of Communication Disorder Assistive Technology*, 1, 1-17

DEAFSPACE DESIGN GUIDE (1)



DEAFSPACE DESIGN GUIDE (2)



DEAFSPACE DESIGN GUIDE (3)

- **Sensory Reach: D/HH "read" environment; facilitate spatial awareness in 360° (e.g., windows in walls that divide rooms)**

- **Space and Proximity: need enough distance to accommodate full dimension of signing/visual space (e.g., moveable chairs without arms**

DEAFSPACE DESIGN GUIDE (4)

- **Mobility and Proximity: signers and speechreaders need wider space for visual communication (e.g., wider hallways, curved corners)**

- **Light and Color: reducing glare, shadows, backlighting (e.g., matte paint in colors contrasting with skin color, diffuse lighting)**

DEAFSPACE DESIGN GUIDE (5)

- **Acoustics: reverberations, vibrations, background noise distracting and sometimes painful (e.g., used carpeted tiles, place air conditioners or generators in less disruptive locations)**

Collaboration between Gallaudet University's DeafSpace Project and Dangermond Kean Architecture (Dka) to help define the principles of optimal building design applicable to all institutions that serve deaf individuals*

*http://dangermondkeane.com/deafspace-design-guide