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Communication and Aging

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Abstract

Interpersonal communication has been described as a critical tool for life adjustment, linking people to their environment.[1] When communication disorders are present these links can be easily broken. Communication disorders form a diverse group of conditions that vary in terms of type, severity, and co-occurrence with other symptoms that limit mobility, vision, endurance, or cognition. Although communication disorders affect people of all ages, the prevalence and complexity of these conditions increase with age, and may be characterized by a stable, recovering or degenerative course. Disabilities associated with communication disorders may best be viewed as a dynamic process that varies over time instead of as a single static event that remains constant. Two broad trajectories of disability and aging have been described[2] and can be applied to those with communication disorders. The disability with aging group includes people who live most of their lives without disability and either experience the subtle communication problems associated with age or the onset of conditions such as stroke that occur most commonly in old age. The aging with disability group includes people who either have lifelong or early onset communication disorders as a result of cerebral palsy or multiple sclerosis (MS) and age in the context of the already-existing disability. Regardless of the trajectory, the burden of communication disorder is cumulative; it grows with age and has important implications for health care providers. This article describes various communication disabilities associated with aging and how these disabilities affect important functions such as access to health care and maintenance of social roles. Suggestions that preserve and enhance communication function in older adults are also provided in this article.

Keywords

Communication disorders; Aging; Dysarthria; Aphasia; Dual sensory impairment

COMMUNICATION DISABILITIES

Communication changes are commonly reported by older people. In a large survey of more than 12,000 Medicare beneficiaries aged 65 years or more, 42% reported hearing problems, 26% had writing problems, and 7% had problems using the telephone.[3] Using statistical procedures (sampling weights) to make inferences about the entire Medicare population, more than 16 million Medicare beneficiaries are estimated to experience communication changes. The severity of communication disabilities is based on a health-disease

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continuum.[4] At one end of the spectrum are the well elderly who wish to prevent disabling communication conditions. In the middle are the worried well or frail elders who struggle to maintain independent function, and at the other end are people with well-defined communication disabilities such as dysarthria, aphasia, and hearing loss.

Communication Changes with Typical Aging

With typical aging, communication skills change subtly at least in part because of changes in physical health, depression, and cognitive decline. Aging is responsible for physiologic changes in hearing, voice, and speech processes.[5,6] A person's age can be predicted with fair accuracy by speech characteristics including voice tremor, pitch, speaking rate, loudness, and fluency.[7] Some language skills remain intact, whereas others tend to decline. For example, vocabulary, grammatical judgment, and repetition ability are relatively stable with age; comprehension of complex utterances and naming may decline.[8] Although changes in communication skills such as voice may be subtle and gradual, they have clear life consequences such as avoidance of social situations.[9]

Aging with a Preexisting Communication Disorder

Conditions that are associated with preexisting, long-term communication disorders may compound the challenges faced by people as they age. MS, which is one such condition, is discussed in this article. MS is a chronic, progressive, neurologic condition, frequently with an onset in mid-life. Multiple lesions in the central nervous system result in a complex constellation of symptoms, including changes in communication especially changes in speech and cognition. Communication problems are common, and occur in approximately half of the people with MS.[10] They typically do not occur in isolation, but rather as part of a collection of other physical and sensory changes. Fatigue and depression are commonly referred to as invisible symptoms of MS and are particularly distressing and disruptive.[11] Even when relatively mild, communication problems have an important effect on the ability to take part in valued life situations partially because of their interaction with other symptoms of MS.[12] People aging with MS report that they need more assistance and have less freedom than their peers of the same age.[13] In a study that followed people with MS over a period of 9 years, 1 of the important changes was a narrowing of participants' social and geographic arenas. People aging with MS stayed closer to home, dropped activities, and restricted the number of people with whom they stayed in close contact.[14] Often social contacts were maintained via telephone. Thus, for those aging with a long-standing disability, the effects are cumulative reflecting normal aging processes and the potentially increasing burden of the long-standing disability.

Onset of New Communication Disorders in Old Age

In addition to changes in communication resulting from the normal aging process and those from long-standing chronic conditions, many neurologic conditions associated with communication disabilities have their onset in old age. These conditions may affect anyone regardless of disability status and are common in aging. For example, hearing loss is ranked as the third most prevalent chronic condition in older adults.[15] Nearly half of adults older than 75 years have some hearing loss. Parkinson disease, which is estimated to occur in about 1% of people more than 60 years old, is commonly associated with dysarthria.[16] One million people in the United States are estimated to have aphasia, commonly as a result of stroke.[17] Adult onset of neurologic conditions adds to the existing burden of changes with aging. When examining changes in participation and social roles after a stroke, Desrosiers and colleagues[18] found that changes could not be attributed entirely to the stroke itself but also to the process of normal aging.

In the 2008 study of Aging, Demographics, and Memory, the prevalence of dementia in persons older than 71 years is estimated to be 14% of the population, with 3.4 million women and 1 million men affected by the most common form of dementia, Alzheimer disease.[19] Dementia is the general term used to describe the continuum of degenerative brain diseases characterized by cognitive impairment across multiple domains. Alzheimer disease, Pick disease, Huntington disease, Parkinson disease, multi-infarct or vascular dementia, and Lewy body disease are some of the presentations of dementia that have their own unique features but have 1 common characteristic: the presence of memory impairment, particularly impairment in the ability to learn new information.[20] Dementia affects communication and eventually limits social roles, because of the gradual deterioration of cognitive skills, including memory, attention, perception, executive functions, and problem solving. The degenerative course of dementing illnesses contributes to an ever-changing presentation of symptoms. In the early stages, individuals experience mild forgetfulness for names and objects, mild word finding, abstract reasoning, attention, language, and spatial cognition difficulties.[21] As the disease progresses, moderately severe impairments in memory, language, judgment, and activities of daily living are apparent, thus increasing the need for assistance and surveillance by caregivers. Late stage patients exhibit loss of language (ie, incoherent babbling or muteness) and decreased recognition of family and self, delusions, hallucinations, repetitive, and bizarre behaviors.[20] Individuals with dementia experience a gradual transformation from an independent, fully functioning participant in their own life, to total dependence on others, oblivious to the world around them.

IMPORTANT FUNCTIONS OF COMMUNICATION

People use communication to perform many functions in their day-to-day activities, including employment, social and leisure activities, community involvement, personal relationships, and meeting needs for daily living. Many of these functions change with typical aging. People retire from careers. Their social circles and personal relationships may change as they adjust their life roles and change their activity patterns. They may require more services such as health care services or in-home help to meet their daily needs. With these changing roles, the effects of communication disorders also change. One important way to understand the roles played by older adults is to study the tasks that occupy their time. Community-dwelling older adults who were receiving some kind of occupational therapy spent most of their time at home and alone.[22] Almost half of their time was spent in tasks involving instrumental activities of daily living. When asked to rate the importance of these activities, tasks involving communication were rated among the highest with using the telephone rated as the most important activity.

The psychosocial consequences of communication disorders in older adults have not been studied thoroughly. However, the following sections provide some examples of research that illustrate the effect of communication disorders on social roles in populations with various trajectories of disability, including cerebral palsy where people experience lifelong disability, MS where people experience the onset of disability in mid-life, and dual sensory impairment and aphasia where onset occurs in old age. This is followed by a specific discussion on the role of communication disorders and aging in an individual’s access to and management of their health care.

Maintaining Social Roles

Communication is not just about transactions such as exchanging information and transferring messages; it also serves an important role in establishing and maintaining social affiliation. Lubinski[8] proposed that communication serves several critical roles in the lives of older adults, including maintaining a sense of identity, and relieving loneliness, depression, or anxiety. Communication also allows older adults to exert influence and to

help others by listening, reflecting, and offering advice. If communication is compromised, social life is affected.

Cerebral palsy—People aging with cerebral palsy have lived their lives with a disability that may have increased with age, see the article by Strax and colleagues elsewhere in this issue for exploration of this topic. Problems with communication may result in loneliness and difficulties in developing and maintaining social relationships.[23,24] Ballin and Balandin[25] conducted in-depth interviews with adults with cerebral palsy (>40 years of age) focusing on issues of loneliness. The investigators believe that loneliness and social isolation are not the same. Loneliness is a subjective experience that correlates only weakly with objective characteristics, such as social network size or frequency of contact with friends. Analyses of these interviews suggested that these participants experienced loneliness for some of the same reasons as older adults without lifelong disability, including being without a partner or feeling of reduced person control. Communication disorders appear to put an additional burden on people aging with cerebral palsy at least in part due to unsuccessful communication with unfamiliar conversational partners, insufficient time for satisfactory communication, and unacceptable telephone communication.

MS—MS is a progressive neurologic condition that is typically diagnosed in mid-life when people are engaged in many preexisting roles, such as parent, spouse, friend, employee, or homemaker. An important challenge is the premature transition out of valued roles that were expected to continue into older age. For example, they may need to retire long before their nondisabled peers. Analysis of a series of in-depth interviews of people with MS who were experiencing mild communication problems suggests that participation in important roles changed markedly, not only because of the communication problems but also because of issues related to fatigue, cognitive changes, and mobility limitations commonly associated with MS.[12] People who retired early spoke of the need to construct roles that did not require flawless speech for participation. Others expressed frustration in relinquishing their valued roles. For example, a former teacher described retirement as a major loss because ‘‘education was my life.’’ Participants also felt the loss of friendship that had developed in the workplace. Thus, many of the life transitions made by peoplewith MS occur beforethe expected time. When these transitions are rapid or undesirable, psychosocial stress may occur.[26]

Sensory loss—Dual sensory loss (decreased vision and hearing acuity) is increasingly common especially in the very old and those in institutional settings. In a survey of people with dual sensory loss, more than two-thirds reported frequent difficulty in conversation especially in noisy situations or with groups.[27,28] Poor hearing is often the cause of misunderstandings and negative reactions by communication partners, yet fewer than 24% of people who could benefit from hearing aids actually purchase them.[29]

Aphasia—Aphasia is a language impairment commonly associated with left hemisphere stroke. Davidson and colleagues[30] observed older people with aphasia in everyday communication situations. They found that people with aphasia engaged in similar activities as older people without disability. For example, conversation was the most common activity for both groups. However, differences were evident in the frequency of communication activities and in specific activities such as making telephone calls, reading, writing, and business activities such as making appointments or completing forms. Thus, communication activities that were rated as important by older community-dwelling adults were more limited in those with communication disorders. Older adults with aphasia also had fewer communication partners and took part in fewer social situations than peers without aphasia. These differences were viewed as documentation of losses in relationships and social

networks experienced by people with aphasia. The differences may reflect a lack of connectedness reported by older adults with aphasia.[31]

Access to Health Care

Although maintaining social roles is important to people as they age, another significant concern is the ability to access services that they perhaps have not needed in the past, or that they now need to a greater degree. Health care is a primary example of these types of services. The ability to communicate successfully, including speaking, listening, reading, and writing, is a critical factor in obtaining health care. The importance of communication is reflected in Ruben's[32] suggestion that in the 21st century a person's fitness for survival will be defined in terms of his or her ability to communicate effectively. Communication disabilities are especially common in the hospital setting. Although they are estimated to occur in 5% to 10% of the general population, this rate is higher in people who are hospitalized. Ebert and Heckerling[33] found that approximately 16% of patients on general inpatient services had 1 or more severe disabilities affecting communication. These patients were more likely to be older men. The presence of a communication problem was significantly associated with an increased risk of experiencing a preventable adverse event.[34] Patients with communication problems were 3 times more likely to experience adverse events than those without such problems.

Limitations in communication also have an undesirable affect on outpatient health care, where time is increasingly limited for patient visits and health care relies more on communication via written information, telephone, and computer (eg, e-mail). Research focused on the Medicare population suggests a significant relationship between the presence of communication problems and dissatisfaction with health care including overall quality, accessibility, and receipt of information.[3] Iezzoni and colleagues[35] also found that older people with hearing or vision problems affecting communication were more likely to be dissatisfied with physicians' understanding of their conditions and with the time spent discussing their problem and answering questions.

In their review of empiric studies examining the physician-older patient interaction, Adelman and colleagues[36] found that several dimensions were better with younger rather than older patients. These included physician responsiveness (eg, the quality of questions), agreement in setting major goals, and joint decision making. Another issue that distinguished physician visits in the geriatric population is the frequent presence of a third party. As much as half of the time, the older patient is accompanied to the visit by someone else who may play the role of advocate, passive participant or antagonist.[36] The third party may play an important role in decision making and be a conduit for education. The term ageism has been used to describe an important barrier to good communication between health care providers and older patients.[37] This type of bias may lead to communication that is characterized by stereotyped expectations rather than the recognition of highly variable individual characteristics of older patients. It is also associated with interaction patterns in which the physician dominates.

CLINICAL IMPLICATIONS

Although people aging with communication disabilities are certainly a heterogeneous group, some issues with important clinical implications are common to all. First, research suggests that quality of life in older adults is related to more than health status. Social contacts may be as valued as health status in quality of life.[38] Although people with communication disabilities may experience more challenges developing and maintaining social contacts, factors they report as important to quality of life may be similar to those reported by people aging without communication disorders. After interviewing people living with aphasia,

Cruice and colleagues[39] found several factors related to quality of life including having affirming experiences in sharing one's life with others, having control over one's life, taking part in personally rewarding leisure activities, coping with loss and change, and continuing to grow personally.

Second, the burden of disability is cumulative with the added conditions associated with aging. Because the burden of disability increases with aging, adaptive resources may be insufficient to accommodate the cumulative effects of these sources of disablement. Finally, the presence of communication problems is especially taxing in areas in which older adults are experiencing increasing needs, such as accessing health care. Communication disabilities hinder the implementation of strategies to compensate for many aspects of disablement. Therefore, health care providers should be aware of potential communication disabilities and make provisions for these problems when interacting with older adults. The final section provides a review of issues and suggestions for enhancing communication in health care settings and in everyday social interaction.

Communication in Heath Care Settings

Health literacy, defined as the ability to understand the basic health information and services necessary for making appropriate decisions about health services, is becoming an increasingly critical factor in health care communication. It has been estimated that one-third of people older than 65 years have inadequate or marginal health literacy.[40] This proportion is no doubt much higher in those with communication disabilities. Although accommodations such as wheelchair ramps to allow physical access to health care and other facilities are now taken for granted, similar accommodations to improve access to health care settings for those with health literacy issues are often not acknowledged as part of standard clinical practice.[41]

Iezzoni and colleagues[35] suggest that 3 types of accommodations in health care settings are needed to improve access to health care for people with communication disorders. These include brick and mortar (eg, a quiet room with furniture that allows eye to eye contact), tools (eg, reading material appropriate for people with aphasia), and policy changes (eg, longer appointments). A list of general suggestions for communicating with older adults with communication disabilities is provided in Box 1. Excellent resources are also available to guide patients in talking with doctors.[42] Other guidelines are being developed and effective written materials are available.[43,44] For example, Hoffman and Worral[44] suggest that key stakeholders pretest and give feedback about educational material for people with communication disorders, particularly disorders affecting language comprehension or cognitive function. Their recommendations for effective written material focus on content (eg, inclusion of a clear purpose statement), language (eg, aim for 5th to 6th reading grade level), organization (eg, use subheadings and bulleted lists), layout (eg, use large print), and illustrations (eg, use simple line drawings).

Box 1

Suggestions for communicating with older adults with communication disability

- Know the patient's communication strengths and weaknesses
- Make sure that sensory aids (eg, eye glasses, hearing aids, communication devices, memory aids) are available and used
- Take extra time for communication
- Make sure the environment is communication friendly, that is, quiet, well lit, furniture arranged for face-to-face interactions

- Use living room language not medical terminology
- Speak slowly and simplify your sentences
- Supplement verbal descriptions with pictures and writing
- Confirm understanding with teach-back approaches
- Limit the information given in one session
- Provide take-home educational material in the preferred format and at the appropriate reading level

In addition to these types of accommodations, it is important to identify the roster of decision makers who will be involved in the care of each individual patient. This set of decision makers may be large, diverse, and changing, and may include those who accompany the older person to the health care visit and those who do not, for example, distant adult children.[45] Once the set of decision makers has been identified it is important that educational materials are provided to all and that a partnership is formed between health care providers and decision makers. The goals of this partnership include identification of the problems, potential option or options and expectations, and the pros and cons of each option. The health care provider should determine the patient's preferred format for receiving information (written, verbal, Internet), explore the concerns, and identify the preferred level of involvement in decision making. The health care provider should also check the patient's understanding of the information and provide ample opportunity for questions. Arrangement should be made for future review of the decisions.

Enhancing Everyday Communication

By definition, communication involves an exchange between people. Thus, the focus of intervention to address communication disabilities must be on the person with the disorder and the communication partner. Research suggests that training communication partners such as nursing assistants in residential facilities can bring about encouraging changes such as more positive communication without increasing care-giving time.[46] Several programs for enhancing everyday communication are available. Some of these programs provide a general framework for enhancing communication, including approaches to enrich communication opportunities (eg, modifying the physical and social environment in resident care facilities) or enhancing communication effectiveness through identification of communication strategies for the person with the communication disorder and frequent communication partners. These strategies may involve manipulating the environment by decreasing background noise, distractions, and distance between speakers.[4,47–49] Other programs involve training in specific techniques, such as use of memory books and other written and graphic cues for people with dementia.[50]

SUMMARY

People who age with communication disabilities face many challenges in areas such as maintaining social roles and identity and accessing needed services such as health care. Although research in this area is as yet limited, preliminary evidence suggests that many of the challenges of aging with a communication disorder are common across different types of communication disorders and different times of onset. Because of the complex and chronic nature of many of the communication disorders experienced by older adults, intervention efforts must include strategies to reduce overall disability even in the context of persistent communication disorders. These strategies may include working with the person with the disability and with people in that person's environment and broader social institutions to

maximize accessibility to a wide range of settings and situations for people with communication disabilities. Because of the increasing need for health care in older adults, and the higher prevalence of communication disorders in older adults, health care providers need to be well versed in the appropriate strategies for communicating effectively with these populations. Their medical institutions will need to support health care providers with the tools and training to serve these populations most efficaciously. Further research is needed to better understand the experiences and implications of aging with communication disorders, and to learn how to best minimize the disability associated with those disorders. In summary, older people with communication disabilities form a diverse group in which the burden of disability increases over time. Because these disabilities may interfere with access to health and maintenance of valued social interaction, identification and management is critical.

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