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RESEARCH ON PEOPLE WITH DISABILITIES LIVING IN RURAL AREAS

DEAF AND HARD OF HEARING

Rural gifted students who are deaf or hard of hearing: how electronic technology can help.

Belcastro FP. Northeast Iowa Community College, Peosta, USA. Am Ann Deaf. 2004 Fall;149(4):309-13.

Electronic technology can be used to overcome many of the barriers and other factors that restrict delivery of services to rural schools; it can also expand the world of rural gifted students who are deaf or hard of hearing. Online college and high school Web sites that offer courses are listed, as well as a Web site for tutoring and one offering help for teachers of rural gifted students who are deaf or hard of hearing. Recommendations are made for ways that legislatures and rural school districts can make Internet resources and assistive technology more widely available in rural educational settings.

DEPRESSION

Correlates of late-life major depression: a comparison of urban and rural primary care patients.

Friedman B, Conwell Y, Delavan RL. Departments of Community & Preventive Medicine (BF, RLD) and Psychiatry (BF, YC), University of Rochester Medical Center, Rochester, New York. Am J Geriatr Psychiatry. 2007 Jan;15(1):28-41.

OBJECTIVES: The objective of this study was to determine whether factors associated with depression differ between elderly residents of rural and urban areas.

METHOD: The research design was cross-sectional and observational. The study subjects consisted of 926 Medicare primary care patients (650 urban and 276 rural) who were age 65+ and cognitively intact and had enrolled in a randomized, controlled Medicare demonstration. Major depression was identified by the Mini International

Neuropsychiatric Interview. A logistic regression model was estimated that included a rural-urban indicator variable, additional independent variables, and interaction terms between the rural-urban indicator and independent variables that were significant at $p < 0.10$.

RESULTS: A total of 8.3% of the rural and 14.8% of the urban patients were identified as having major depression. Reporting 0-1 close friends (odds ratio [OR]: 6.86; 95% confidence interval [CI]: 2.18-21.58), 2+ emergency room visits during the past 6 months (OR: 4.00; 95% CI: 1.19-13.43), and more financial strain (OR: 1.50; 95% CI: 1.01-2.23) were associated with significantly higher likelihood of major depression among rural as compared with urban patients. The SF-36 Physical Component Summary score had a curvilinear relationship with major depression and was higher for urban patients. The predicted probability for major depression is lower for the rural patients when financial strain is low, about the same for rural and urban patients when strain is intermediate, and higher for rural patients when strain is high.

CONCLUSIONS: Clinicians in rural areas should be vigilant for major depression among patients with very few close friends, several recent emergency department visits, and financial strain.

Depressive symptoms among older adults in urban and rural areas.

St John PD, Blandford AA, Strain LA. Section of Geriatrics, Department of Medicine, University of Manitoba, Health Sciences Centre, Winnipeg, Manitoba, Canada. pstjohn@hsc.mb.ca. Int J Geriatr Psychiatry. 2006 Dec;21(12):1175-80.

OBJECTIVES: To determine if there are differences in depressive symptoms between residents of urban areas, small town zones, and predominantly rural regions and to determine factors associated with depressive symptoms among these groups of residents.

METHOD: The study was set in the Canadian province of Manitoba amongst a community-dwelling population of older adults who were cognitively intact. The design of the study was a cross-sectional survey and measures included age, gender, education, living arrangements, number of persons providing companionship, perceived adequacy of income, functional impairment, self-rated health and the Center for Epidemiologic Studies-Depression (CES-D) scale. Urban/rural residence was measured by grouping Census sub-divisions according to 1991 Census population: urban (>19,999); small town (2500 to 19,999); or predominantly rural (<2500).

RESULTS: In the total sample ($n = 1382$), 11.5% exhibited depressive symptoms: 11.6% in urban areas ($n = 844$); 14.0% in small town zones ($n = 250$); 9.0% in predominantly rural regions ($n = 288$) ($p > 0.05$, chi-square test). No rural-urban differences were seen in multivariate models. In predominantly rural regions, living alone, perceiving one's

income as inadequate, and having functional impairment were associated with depressive symptoms. The only significant factor in small town zones was poorer self-rated health whereas in urban areas, poorer self-rated health, functional impairment, and fewer persons providing companionship were significantly related to depressive symptoms.

CONCLUSIONS: We did not observe rural-urban differences. However, the factors associated with depressive symptoms varied among older adults living in predominantly rural regions, in small towns, and in urban areas.

Differential effectiveness of depression disease management for rural and urban primary care patients.

Adams SJ, Xu S, Dong F, Fortney J, Rost K. Western Interstate Commission for Higher Education (WICHE) Mental Health Program, Boulder, CO 80301-9752, USA.
sadams@wiche.edu. J Rural Health. 2006 Fall;22(4):343-50.

CONTEXT: Federally qualified health centers across the country are adopting depression disease management programs following federally mandated training; however, little is known about the relative effectiveness of depression disease management in rural versus urban patient populations.

PURPOSE: To explore whether a depression disease management program has a comparable impact on clinical outcomes over 2 years in patients treated in rural and urban primary care practices and whether the impact is mediated by receiving evidence-based care (antidepressant medication and specialty care counseling).

METHOD: A preplanned secondary analysis was conducted in a consecutively sampled cohort of 479 depressed primary care patients recruited from 12 practices in 10 states across the country participating in the Quality Enhancement for Strategic Teaming study.

FINDINGS: Depression disease management improved the mental health status of urban patients over 18 months but not rural patients. Effects were not mediated by antidepressant medication or specialty care counseling in urban or rural patients.

CONCLUSIONS: Depression disease management appears to improve clinical outcomes in urban but not rural patients. Because these programs compete for scarce resources, health care organizations interested in delivering depression disease management to rural populations need to advocate for programs whose clinical effectiveness has been demonstrated for rural residents.

Geographic access to health care for rural Medicare beneficiaries.

Hart LG, Goodman DC. Department of Rehabilitation Medicine, University of Washington School of Medicine, Seattle, Washington 98195-6490, USA. leighon@u.washington.edu. J Rural Health. 2006 Spring;22(2):140-6.

CONTEXT: Patients in rural areas may use less medical care than those living in urban areas. This could be due to differences in travel distance and time and a utilization of a different mix of generalists and specialists for their care.

PURPOSE: To compare the travel times, distances, and physician specialty mix of all Medicare patients living in Alaska, Idaho, North Carolina, South Carolina, and Washington.

METHOD: Retrospective design, using 1998 Medicare billing data. Travel time was determined by computing the road distance between 2 population centroids: the patient's and the provider's zone improvement plan codes.

FINDINGS: There were 2,220,841 patients and 39,780 providers in the cohort, including 6,405 (16.1%) generalists, 24,772 (62.3%) specialists, and 8,603 (21.6%) nonphysician providers. There were 20,693,828 patient visits during the study. The median overall 1-way travel distance and time was 7.7 miles (interquartile range 1.9-18.7 miles) and 11.7 minutes (interquartile range 3.0-25.7 minutes). The patients in rural areas needed to travel 2 to 3 times farther to see medical and surgical specialists than those living in urban areas. Rural residents with heart disease, cancer, depression, or needing complex cardiac procedures or cancer treatment traveled the farthest. Increasing rurality was also related to decreased visits to specialists and an increasing reliance on generalists.

CONCLUSIONS: Residents of rural areas have increased travel distance and time compared to their urban counterparts. This is particularly true for rural residents with specific diagnoses or those undergoing specific procedures. Our results suggest that most rural residents do not rely on urban areas for much of their care.

Quality of care for depressed elders in post-acute care: variations in needs met through services.

Proctor E, Morrow-Howell N, Lee MJ, Gledhill J, Blinne W. George Warren Brown School of Social Work, Washington University, One Brookings Drive, St. Louis, MO 63130, USA. Ekp@wustl.edu. J Behav Health Serv Res. 2006 Apr;33(2):127-41.

This paper addresses quality of post-acute care for older adults going home after hospitalization for depression. Quality was conceptualized and assessed in terms of services received for four domains of need: psychiatric, medical, functional, and psychosocial. At discharge, needs for care was assessed using medical records,

standardized instruments, and patient interviews; quality of care was assessed by whether or not needs were met by services through the first 6 weeks of post-acute care. Quality of care varied across type of need: psychiatric needs were most likely, and psychosocial needs were least likely, to be met. Urban elders received better psychiatric care than did rural elders. Elders in worse physical health received better medical and psychosocial care, but poorer psychiatric care. Elders with psychoses and living with others had better care for functional dependencies. The competing demands perspective suggests that medical illness may take priority over psychiatric care.

Rural-urban differences in depression prevalence: implications for family medicine.

Probst JC, Laditka SB, Moore CG, Harun N, Powell MP, Baxley EG. South Carolina Rural Health Research Center, University of South Carolina, 220 Stoneridge Drive, Columbia, SC 29210, USA. jprobst@gwm.sc.edu. Fam Med. 2006 Oct;38(9):653-60.

BACKGROUND AND OBJECTIVES: Rural populations experience more adverse living circumstances than urban populations, but the evidence regarding the prevalence of mental health disorders in rural areas is contradictory. We examined the prevalence of depression in rural versus urban areas.

METHOD: We performed a cross-sectional study using the 1999 National Health Interview Survey (NHIS). In face-to-face interviews, the NHIS administered the Composite International Diagnostic Interview Short Form (CIDI-SF) depression scale to a nationally representative sample of 30,801 adults, ages 18 and over.

RESULTS: An estimated 2.6 million rural adults suffer from depression. The unadjusted prevalence of depression was significantly higher among rural than urban populations (6.1% versus 5.2%). After adjusting for rural/urban population characteristics, however, the odds of depression did not differ by residence. Depression risk was higher among persons likely to be encountered in a primary care setting: those with fair or poor self-reported health, hypertension, with limitations in daily activities, or whose health status changed during the previous year.

CONCLUSIONS: The prevalence of depression is slightly but significantly higher in residents of rural areas compared to urban areas, possibly due to differing population characteristics.

Spirituality, chronic illness, and rural life.

Comment in:

J Holist Nurs. 2006 Mar;24(1):36-7.

Craig C, Weinert C, Walton J, Derwinski-Robinson B. Oregon Health & Science University, Oregon, USA.

PURPOSE: The purpose of this article is to report the findings of an exploration of the associations among spirituality, hope, depression, social support, and well-being in rural dwelling people who have one or more chronic conditions.

METHOD: A mail survey was completed by 111 rural-dwelling people with chronic illness in two rural western states.

FINDINGS: Spirituality, hope, depression, and social support had overlapping influence on well-being, although spirituality was not shown to have an independent effect. Participants reported unexpectedly high levels of hope and low levels of depression despite living with chronic illness.

CONCLUSIONS: Although spirituality did not have an independent effect, the group as a whole had active spiritual and religious lives, possibly influencing the high levels of hope and low levels of depression found.

IMPLICATIONS: The positive picture of rural people with chronic illness needs further investigation for possible mitigating effects of spirituality on problems associated with chronic illness.

DISABILITIES

Rural residents with disabilities confront substantial barriers to obtaining primary care.

lezzoni LI, Killeen MB, O'Day BL. Harvard Medical School, 330 Brookline Avenue RO-137, Boston, MA 02215, USA. Health Serv Res. 2006 Aug;41(4 Pt 1):1258-75.

OBJECTIVES: To learn about the health care experiences of rural residents with disabilities.

STUDY SETTING: Rural areas in Massachusetts and Virginia.

STUDY DESIGN: Local centers for independent living recruited 35 adults with sensory, physical, or psychiatric disabilities to participate in four focus group interviews.

DATA COLLECTION METHODS: Verbatim transcripts of interviews were reviewed to identify major themes.

PRINCIPAL FINDINGS: Interviewees described the many well-recognized impediments to health care in rural America; disability appears to exacerbate these barriers. Interviewees reported substantial difficulties finding physicians who understand their disabilities and sometimes feel that they must teach their local doctors about their underlying conditions. Interviewees described needing to travel periodically to large

medical centers to get necessary specialty care. Many are poor and are either uninsured or have Medicaid coverage, complicating their searches for willing primary care physicians. Because many cannot drive, they face great difficulties getting to their local doctor and especially making long trips to urban centers. Available public transportation often is inaccessible and unreliable. Physicians' offices are sometimes located in old buildings that do not have accessible entrances or equipment. Based on their personal experiences, interviewees perceive that rural areas are generally less sensitive to disability access issues than urban areas.

CONCLUSIONS: Meeting the health care needs of rural residents with disabilities will require interventions beyond health care, involving transportation and access issues more broadly.

Satisfaction with quality and access to health care among people with disabling conditions.

lezzoni LI, Davis RB, Soukup J, O'Day B. Department of Medicine, Harvard Medical School, Beth Israel Deaconess Medical Center, Boston, MA 02215, USA.
lezzoni@caregroup.harvard.edu. Int J Qual Health Care. 2002 Oct;14(5):369-81.

OBJECTIVES: To compare satisfaction with health care between persons with and without disabling conditions.

DESIGN: Responses to 1996 Medicare Current Beneficiary Survey.

SETTING: Nationally representative of the United States population.

STUDY PARTICIPANTS: Community-dwelling Medicare beneficiaries, older and younger than 65 years (n = 16 403).

MAIN OUTCOME MEASURE: Adjusted odds of being dissatisfied or very dissatisfied with five general quality measures and five access-to-care measures by five disabling conditions (blind or low vision, deaf or hard of hearing, difficulty walking, difficulty reaching, manual dexterity difficulties). Multivariable logistic regressions on dissatisfaction adjusted for age group, sex, disabling condition, race, ethnicity, urban versus rural residence, education, household income < \$25 000 versus > or = \$25 000, having a usual source of care, proxy respondent, and managed care.

RESULTS: Of an estimated 33.58 million non-institutionalized Medicare beneficiaries, 64.1% (estimated 21.51 million) reported at least one disabling condition. Among younger beneficiaries, 10.4% with any major disability were dissatisfied with their care overall, as were 4.6% without disabilities. Nevertheless, persons with disabilities generally had significantly higher adjusted odds of dissatisfaction. For elderly persons with any major disability, the adjusted odds ratios (95% confidence interval) of dissatisfaction were: 3.2 (2.4-4.3) for overall quality; 3.2 (2.2-4.6) for access to

specialists; 4.4 (3.1-6.4) for follow-up; and 4.2 (3.1-5.7) for ease of getting to doctors. Elderly managed care enrollees were less satisfied with access to specialists, but more satisfied with costs.

CONCLUSIONS: The quality domains generating the greatest dissatisfaction were anticipated, given the nature of disabling conditions. Improving these areas requires attention inside and outside the health care system. Redesigning practice settings and procedures, and changing payment policies offer the only solutions to some problems.

MENTAL HEALTH

The impact of religiousness, spirituality, and social support on psychological well-being among older adults in rural areas.

Yoon DP, Lee EK. J Gerontol Soc Work. 2007;48(3-4):281-98.

This paper presents the results of a study on the impact of spirituality, religiousness, and social support on the psychological well-being among rural elderly. With a rural community sample of 215 older adults, hierarchical regression analyses found significant associations between dimensions of spirituality/religiousness, social support, and psychological well-being, with spirituality/religiousness inversely related to depression and social support, positively related to life satisfaction. Findings of this study suggest that practitioners need to develop programs or services that are congruent with religious/spiritual beliefs and practices in order to better enhance the psychosocial well-being and improve the quality of life among older persons in rural areas.

Psychosocial factors and coping strategies of adolescents in a rural Pennsylvania high school.

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OBJECTIVES: To evaluate the coping levels of rural adolescents and gender differences of coping strategies and psychosocial factors. To identify the relationships of coping strategies with psychosocial factors of rural adolescents.

DESIGN: A cross-sectional study.

SAMPLE: A convenience sample of 72 students attending a rural high school in southwestern Pennsylvania.

MEASUREMENTS: Subjects completed the Coping Response Inventory-Youth (CRI-Y), the State-Trait Anger Expression Inventory (STAXI), the Screen for Child Anxiety Related Emotional Disorder (SCARED), the Reynolds Adolescent Depression Scale (RADS), and the Rosenberg Self-Esteem Scale (RSES).

RESULTS: Significant gender differences were found for psychosocial factors of depression, self-esteem, and anxiety. Several significant relationships were observed between coping strategies and psychosocial factors of rural adolescents. Additionally, using content analysis, seven categories were determined based on the content of the open-ended question on the CRI: familial factors, peer relationships, etc.

CONCLUSIONS: These rural adolescents endorsed higher levels of avoidance coping than normative samples. Rural adolescents reported many problems needing proper coping skills in their everyday lives. This study provides information to public health professionals working with rural adolescents that could be used to help them attain more effective coping strategies.

Rural and urban disparities in health-related quality of life among veterans with psychiatric disorders.

Wallace AE, Weeks WB, Wang S, Lee AF, Kazis LE. Department of Psychiatry, Veterans Affairs Medical Center, White River Junction, Vermont 05009, USA. amy.e.wallace@dartmouth.edu. Psychiatr Serv. 2006 Jun;57(6):851-6.

OBJECTIVES: The authors studied whether rural and urban disparities in health-related quality of life, demonstrated previously among veterans, persist among veterans with common psychiatric disorders.

METHOD: A cohort of 748,216 users or anticipated users of Veterans Affairs services completed the Veterans Short Form Health Survey in 1999. From the survey, the authors determined health-related quality-of-life scores (physical [PCS] and mental [MCS] health component summaries) and used ICD-9-CM codes to identify veterans with six mental health disorders—depression, anxiety, posttraumatic stress disorder, alcohol dependence, schizophrenia, and bipolar disorder. With Rural-Urban Commuting Area codes to determine urban residency, the prevalence of psychiatric illness and health-related quality of life were compared across rural and urban groups.

RESULTS: All psychiatric disorders except anxiety disorders not related to posttraumatic stress disorder were more prevalent in urban settings. However, rural veterans within mental illness cohorts had worse PCS and MCS scores. Differences in PCS scores were substantial, ranging between 2.27 for schizophrenia and 3.39 for alcohol dependence ($p < .001$ for all diagnoses). Differences in MCS scores were statistically significant but modest. In regression models, rural-urban disparities within psychiatric disorder cohorts persisted after sociodemographic factors were controlled for.

CONCLUSIONS: Although less likely than their urban counterparts to have mental disorders, rural veterans with mental illness experienced a greater disease burden and were likely to incur greater health care costs. Improving access to mental health care for veterans in rural settings may narrow quality-of-life disparities among rural and urban veterans.

Telemedicine in the state of Maine: a model for growth driven by rural needs.

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As of mid-2002, Maine had one of the largest state-wide telemedicine systems, comprising over 150 facilities among 90 health, mental health, and social service provider organizations in two collaborative networks. The rapid growth of telemedicine in this rural, economically disadvantaged state is largely attributable to collaborative development and the service activities of the Maine Telemedicine Services division of a rural community health center, HealthWays/Regional Medical Center at Lubec (RMCL). Annual clinical uses of the system across a broad array of interactive videoconferencing applications currently exceed 1,000 instances for institutional telemedicine and 800 instances for home telehealth. The major applications include mental health/psychiatry, endocrinology/diabetes management, primary care, specialty pediatrics, genetics, and dermatology. Primary care usage derives from a relatively novel use of a mobile telemedicine boat to serve small islands off mid-coastal Maine. Strong future growth is expected in prison telemedicine, emergency medical triage, and nontraditional services such as video relay interpretive services for the deaf, domestic violence advocacy and legal services, and case management for community reintegration of juvenile offenders. The relative success of the two large networks managed by RMCL's Maine Telemedicine Services is evident from the criteria that system usage (1) addresses defined clinical needs, (2) has demonstrable organizational support, (3) is accepted by physicians and patients, (4) exhibits measurable cost and clinical benefits, and (5) is moving toward sustainable operations. Potential bases for this success are discussed in comparison with other networks.

The utility of videoconferencing to provide innovative delivery of psychological treatment for rural cancer patients: results of a pilot study.

Shepherd L, Goldstein D, Whitford H, Thewes B, Brummell V, Hicks M. Department of Medical Oncology, Prince of Wales Hospital, Randwick, New South Wales, Australia. J Pain Symptom Manage. 2006 Nov;32(5):453-61.

The unmet psychological needs of rural cancer patients are numerous. Telepsychology is a novel and feasible option that may provide cost-savings and help overcome

inequalities in access to specialists. This is the first known study of psychological treatment for people with cancer delivered entirely via videoconferencing. We hypothesized that a telepsychology service would improve rural cancer patients' anxiety and depression levels and quality of life, and would be an acceptable, satisfactory, and practical mode of service delivery. Twenty-five cancer patients attended an average of three sessions with a clinical psychologist providing brief cognitive-behavioral therapy. Questionnaires were completed at pre-, post-, and 1-month follow-up. Patients benefited in terms of anxiety ($P=0.01$) and quality of life ($P=0.04$). The service was both practical and acceptable. These preliminary positive results provide a firm basis to conduct a randomized controlled trial of face-to-face interaction vs. videoconferencing.

MULTIPLE SCLEROSIS

Health promotion for people with disabilities: development and evaluation of the Living Well with a Disability program.

Ravesloot CH, Seekins T, Cahill T, Lindgren S, Nary DE, White G. Rural Institute, University of Montana, Missoula, MT 59812, USA. Health Educ Res. 2006 Oct 10.

People with disabilities can benefit from health promotion opportunities to reduce the incidence and severity of secondary conditions that further limit their participation in society. This paper describes participatory action research (PAR) methods we used to develop, implement and evaluate the Living Well with a Disability program. Community-based agencies that provide information and referral services to people with disabilities (independent living centers funded under Title VII, Rehabilitation Act) recruited a convenience sample of 246 people with mobility impairments to participate in a randomly assigned, wait-list control health promotion intervention study. Paper-and-pencil outcome measures included the secondary conditions surveillance instrument, unhealthy days and health care utilization. Logistic regression on outcomes controlling for demographic variables and pre-test measures indicated reductions in all three outcome variables. People with mobility impairments who participated in the Living Well with a Disability program reported less limitation from secondary conditions, fewer unhealthy days and less health care utilization. PAR methods are particularly important to design useful interventions for this population.

Rural-urban comparisons of nursing home residents with multiple sclerosis.

Buchanan RJ, Wang S, Zhu L, Kim M. College of Health and Human Services, University of North Carolina at Charlotte, 9201 University City Blvd, Charlotte, NC 28223-0001, USA. rbuchan@email.uncc.edu. J Rural Health. 2004 Winter;20(1):85-91.

CONTEXT: Multiple sclerosis (MS) is the most common neurologic disease that disables younger adults, affecting as many as 350,000 Americans.

PURPOSE: The objectives of this study are to develop profiles of nursing home residents with MS from rural areas and compare them to residents with MS who lived in urban areas, suburban areas, and large towns.

METHOD: We analyzed all admission assessments for residents with MS (13,357 assessments) in the Minimum Data Set between June 23, 1998, and December 31, 2000, that also had the resident's ZIP code of primary residence before admission.

FINDINGS: Urban and rural comparisons of residents with MS demonstrate a range of significant demographic differences. Significantly greater proportions of MS residents from rural areas exhibited a sense of initiative or involvement in activities of the nursing facility compared with residents with MS from urban and suburban areas. The differences in the utilization of physical and occupational therapies were striking, with MS residents from rural areas averaging significantly fewer minutes of these therapies. We also found that MS residents from rural areas averaged fewer minutes of psychological therapy in the nursing facility and also were less likely to have seen a licensed mental health specialist than MS residents from urban areas.

CONCLUSIONS: Nursing home residents with MS from rural areas receive fewer therapies and less mental health care than residents with MS from other areas.

Satisfaction with mental health care among people with multiple sclerosis in urban and rural areas.

Buchanan RJ, Schiffer R, Wang S, Stuijbergen A, Chakravorty B, Zhu L, Suk Kim M, James W. Department of Political Science and Public Administration, Mississippi State University, MS 39762, USA. rjb161@ps.msstate.edu Psychiatr Serv. 2006 Aug;57(8):1206-9. Comment in: Psychiatr Serv. 2006 Nov;57(11):1655.

OBJECTIVES: This study explored urban and rural differences in mental health needs and treatments among people with multiple sclerosis, as well as their satisfaction with access to and quality of mental health care.

METHOD: Data were collected in a nationwide survey of 1,518 people with multiple sclerosis.

RESULTS: More than 40 percent of people with multiple sclerosis in each urban or rural area had received a diagnosis of depression, and more than 90 percent of them received mental health services, regardless of location of residence. However, rural residents were significantly less likely than their urban counterparts to receive the recommended combined medication and psychotherapy for treatment of depression.

CONCLUSIONS: Current mental health care systems, even in rural areas, are capable of reaching out to patients with neuromedical illnesses, such as multiple sclerosis.

Patients perceive some limitations in quality and accessibility, and recommended treatment differs between urban and rural areas.

Telemedicine and the delivery of health services to veterans with multiple sclerosis.

Hatzakis M Jr, Haselkorn J, Williams R, Turner A, Nichol P. Veterans Affairs Puget Sound Health Care System, Seattle Division, Rehabilitation Care Services, 1660 South Columbian Way, Seattle, WA 98108, USA. michael.hatzakis@med.va.gov. J Rehabil Res Dev. 2003 May-Jun;40(3):265-82.

Telemedicine involves the provision of health care and sharing of medical knowledge using telecommunications technologies. Preventive, diagnostic, and therapeutic services, as well as patient education and assistance with self-management of health, can be provided via telemedicine. The Veterans Health Administration (VHA) has a wide range of telemedicine capabilities. Given limitations on studying its effectiveness, telemedicine is often applied to new patient populations without explicit evaluation of efficacy. Evaluating the potential use of telemedicine services through supporting literature from other disorders may be possible. This paper discusses applying telemedicine to the care of individuals with multiple sclerosis (MS) when few published evaluations exist in MS. In this paper, we (1) provide a background on the use of telemedicine in the private sector and in the VHA, (2) discuss the use of current telemedicine literature to management of individuals with MS, and (3) review the strengths and limitations of telemedicine as a care delivery vehicle.

Urban/rural differences in the use of physician services by people with multiple sclerosis.

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OBJECTIVES: to identify any urban/rural differences among people with multiple sclerosis (MS) in the utilization of physician services and MS-focused care, as well as differences in patient perceptions of access and quality.

METHOD: data were collected by surveying 1,518 people with MS throughout the United States, equally divided among urban, urban-adjacent rural areas, and more remote rural areas. Standard SAS procedures were used to analyze the results.

RESULTS: significantly larger proportions of people with MS in rural areas had a family or general practitioner as their primary physician while a significantly larger proportion of people with MS in urban areas had a neurologist as their primary physician. Rural residents traveled significantly greater distances to receive MS-focused care than their urban counterparts. People with MS living in more remote rural areas averaged less

satisfaction with their access to a neurologist and to MS-focused care, and less satisfaction with the quality of care received, than people with MS in urban areas.

CONCLUSIONS: limited availability of MS specialists in rural areas, and greater travel time and distance required to receive care from these providers, present future challenges to providing appropriate and high quality MS-focused care to people living with MS in rural areas.

SUBSTANCE ABUSE

Comorbid substance and mental disorders among rural Americans: Results from the national comorbidity survey.

Simmons LA, Havens JR. Departments of Family Studies and Health Services Management, University of Kentucky, Lexington, KY, USA. J Affect Disord. 2006 Sep 13; [Epub ahead of print]

BACKGROUND: The purpose of this study was to examine whether rural inhabitants were more likely than urban inhabitants to meet the criteria for comorbid mental health and substance abuse or dependence disorders.

METHOD: Data were from the National Comorbidity Survey, and included 5185 (532=rural; 4653=urban) persons age 14-54 years of age who were interviewed using the Composite International Diagnostic Interview (CIDI). Logistic regression that accounted for the complex survey data and weighting scheme was utilized.

RESULTS: Participants residing in rural areas were more likely to meet the DSM-III-R criteria for past month alcohol abuse or dependence if they also met the diagnostic criteria for past month major depressive disorder (MDD) or lifetime antisocial personality disorder (ASPD), adjusting for age, race, gender, education and income. Similarly, rural participants were more likely to meet the criteria for comorbid drug abuse or dependence in the past month if they met the diagnosis for either past month MDD, generalized anxiety disorder or lifetime ASPD, controlling for demographic characteristics. Rural residents with any current mental disorder also were less likely to seek treatment than their urban counterparts.

LIMITATIONS: Data were collected in 1991 and do not capture changes in prevalence of comorbidities. Also, the small number of rural residents sampled resulted in small cell sizes for some comorbidities.

CONCLUSIONS: Rural residents were significantly more likely to meet the criteria for substance disorders given they also met the criteria for a mental disorder, and those with

any current mental disorder were less likely to seek treatment. Since the overall prevalence of these disorders does not differ between rural and urban inhabitants, findings suggest that rural persons may lack access to adequate treatment for their mental health disorders and subsequently may be self-medicating with alcohol and/or drugs.

Efficacy of auricular acupressure as an adjuvant therapy in substance abuse treatment: a pilot study.

Tian X, Krishnan S. Department of Health Science at New Mexico State University, Las Cruces, NM, USA. Altern Ther Health Med. 2006 Jan-Feb;12(1):66-9.

CONTEXT: Substance abuse and its related problems have become a serious public health issue, particularly in underserved border and rural communities. Conventional therapies have not always been effective. Literature regarding the use of auricular acupressure in substance abuse treatment is limited.

OBJECTIVES: To examine the efficacy of auricular acupressure in addition to usual care in substance abuse treatment, which has been limited.

DESIGN AND SETTING: This placebo-controlled pilot study was carried out in a community mental health center in a US-Mexico border city (Las Cruces) in southwestern New Mexico.

PARTICIPANTS: A majority were Hispanic males with an average age of 32.8 years. Participants reported an average lifetime use of drug of choice of 14 years.

INTERVENTION: In addition to usual care, participants received specific acupressure treatment and placebo acupressure treatment. The acupressure treatment was offered once a week for 6 consecutive weeks.

MAIN OUTCOME MEASURES: The Hopkins Symptom Checklist (SCL-20) Depression Scale was administered before and after 6 weeks of treatment to assess changes in emotional distress. Brief Substance Craving Scale was used at baseline and weekly for 6 weeks to assess changes in craving.

RESULTS: Both specific and placebo acupressure groups showed a significant reduction in craving at the end of treatment, with the specific acupressure group having a greater and more steady reduction in craving. Both specific acupressure and usual-care-only groups demonstrated a significant reduction in emotional stress.

CONCLUSIONS: Overall, there was a positive response to the specific auricular acupressure treatment on psychological distress, craving, and drug/alcohol use

measures. These encouraging preliminary results need to be duplicated in studies with larger sample sizes and longer treatment phases.

Unmet need for community-based mental health and substance use treatment among rural adolescents.

Anderson RL, Gittler J. Health Management and Policy, College of Public Health, University of Iowa, USA. rachel-anderson@uiowa.edu. Community Ment Health J. 2005 Feb;41(1):35-49.

This research assessed the extent of unmet service need for rural youth with mental health (MH) and/or substance use (SU) problems. All adolescents (12-18 years old) living in a three-county region of Iowa and discharged from outpatient MH or SU treatment were included (n = 177). Chart review was used to retrospectively assess service utilization and clinical characteristics at time of admission and discharge. Two-thirds (64%) of adolescents with co-occurring disorders did not receive treatment consistent with widely supported guidelines recommending that individuals with co-occurring disorders receive treatment for both their MH and SU problems. Higher severity of depression, more supports, prior MH service utilization and lower prevalence of prior abuse predicted the receipt of dual services. Finally, adolescents with co-occurring problems who received only MH treatment showed improvement on MH needs at discharge but no improvement on SU needs. Similarly, adolescents with co-occurring problems who received only SU treatment showed improvement on SU needs but not on MH needs. There is considerable unmet treatment need among rural adolescents with co-occurring disorders. Efforts to improve care must focus on adolescent, familial, program, funding and policy factors that act as barriers to unifying philosophies and practices needed to advance appropriate care.

WOMEN

Access to breast cancer screening services for women with disabilities.

Mele N, Archer J, Pusch BD. University of Memphis, Loewenberg School of Nursing, 610 Goodman Street, Memphis, TN 38152, USA. nmele@memphis.edu. J Obstet Gynecol Neonatal Nurs. 2005 Jul-Aug;34(4):453-64.

OBJECTIVES: To identify barriers to breast cancer screening services encountered by women with physical disabilities.

DESIGN: Phenomenologic design using a semi-structured interview guide to explore the experiences of women with disabilities seeking breast cancer screening services.

SETTING: Face-to face interviews conducted in the homes of women from the urban and rural mid-south.

PATIENTS/PARTICIPANTS: A purposive sample of women with motor or sensory disabilities, age 21 to 65, was recruited for this study based on community type and type and severity of disability. Community collaborators working with people with disabilities identified eligible participants.

RESULTS: Although the study focused on breast cancer screening services, women also described financial, architectural, environmental, and attitudinal barriers that affected all of their health care services. Women described poor transportation, heavy doors, and inaccessible exam tables and bathrooms. They felt devalued by their providers and believed that their symptoms were often overlooked. Women with disabilities want to be partners in their own health care.

CONCLUSIONS: Women with physical disabilities face both financial and nonfinancial barriers to access that may result in delayed detection and increased risk of poorer outcomes from breast cancer. Providers require education about working with women with disabilities.

Correlates of depression in rural women with physical disabilities.

Hughes RB, Nosek MA, Robinson-Whelen S. Rosemary B. Hughes, PhD, is a senior research scientist at the Rural Institute on Disabilities at the University of Montana, Missoula. She conducted this study while working with the Center for Research on Women with Disabilities at Baylor College of Medicine, Houston, Texas. J Obstet Gynecol Neonatal Nurs. 2007 Jan;36(1):105-114.

OBJECTIVES: To describe demographic and disability-related characteristics, to examine the patterns of treatment for depression, and to investigate correlates of depression severity and predictors of who receives treatment among a sample of depressed rural women with physical disabilities.

DESIGN: A correlational analysis of data gathered from women recruited for a depression intervention study.

SETTING: Rural centers for independent living located in nine different states across the United States.

PARTICIPANTS: Women (N = 134) who reported at least mild depression and expressed interest in participating in a depression intervention study. Main outcome measures: Depressive symptomatology based on the Beck Depression Inventory-II; treatment for depression in the past 3 months.

RESULTS: The majority of participants reported moderate to severe depression (n = 101, 75.4%), with nearly 20% reporting thoughts of suicide. At risk of severe depression were women who were younger, had greater problems with pain, had more limited mobility, and were less satisfied with their social network. Despite the high levels of depressive symptomatology in the sample, more than one third of the women had not received recent treatment for depression.

CONCLUSIONS: This study suggests that depression and access to treatment are critical issues for women with physical disabilities living in rural areas.

Influence of a computer intervention on the psychological status of chronically ill rural women: preliminary results.

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BACKGROUND: Adaptation to chronic illness is a lifelong process presenting numerous psychological challenges. It has been shown to be influenced by participating in support groups. Rural women with chronic illness face additional burdens as access to information, healthcare resources, and sources of support are often limited. Developing virtual support groups and testing the effects on psychosocial indicators associated with adaptation to chronic illness may help remove barriers to adaptation.

OBJECTIVES: To examine the effects of a computer-delivered intervention on measures of psychosocial health in chronically ill rural women including social support, self-esteem, empowerment, self-efficacy, depression, loneliness, and stress.

METHOD: An experimental design was used to test a computer-delivered intervention and examine differences in psychosocial health between women who participated in the intervention (n = 44) and women in a control group (n = 56).

RESULTS: Differences between women who participated in the intervention and controls were found for self-esteem, $F(1,98) = 5.97, p = .016$; social support, $F(1,98) = 4.43, p = .038$; and empowerment, $F(1,98) = 6.06, p = .016$. A comparison of means for depression, loneliness, self-efficacy, and stress suggests that differences for other psychosocial variables are possible.

DISCUSSION: The computer-based intervention tested appears to result in improved self-esteem, social support, and empowerment among rural women with chronic illness. Descriptive but nonsignificant differences were found for other psychosocial variables (depression, loneliness, self-efficacy, and stress); women who participated in the intervention appeared to improve more than women in the control group.

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