

GEORGIA HEALTH POLICY CENTER



WHAT WORKS FOR RURAL: FROM RESEARCH TO REALITY

Compendium of Rural Resources



ANDREW YOUNG SCHOOL
OF POLICY STUDIES

TABLE OF CONTENTS

Introduction	2
Cancer	3
Chronic Lower Respiratory Disease	11
Heart Disease	14
Stroke	21
Unintentional Injury.....	26

INTRODUCTION

This Compendium of Rural Resources was prepared in order to support the December 12 and 13 convening, *What Works for Rural: From Research to Reality*, a workshop supported in partnership by the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration's Federal Office of Rural Health Policy, the National Network of Public Health Institutes, and the Georgia Health Policy Center (GHPC). Its intention is to share rural research and interventions, illuminate gaps, and support the National Governor's Association's Improving Health in Rural America Learning Collaborative.

Rather than a strict review of peer-reviewed evidence, the compendium is intended to surface rural research and practice that might not ordinarily be included in an academic evidence review. GHPC undertook the compilation of the Compendium, with guidance from CDC, from October 23, 2017, to December 7, 2017, and included the following search engines or sources:*

- CDC Community Guide
- Google
- Google Scholar
- New York Academy of Medicine Grey Literature Report
- ProQuest Central
- Rural Health Information Hub Models and Innovations
- Rural Health Research Gateway
- What Works for Rural Health

The following five leading causes of rural death were included in the search: cancer, chronic lower respiratory disease, heart disease, stroke, and unintentional injury. Variations of disease search terms were also searched. For example, in addition to "unintentional injury," the terms "motor vehicle accident," "drug overdose," "opioids," and "falls" were also searched. For each topic, the terms "intervention" and "prevention" were searched in combination with the topic. For academic databases, "rural" was included in an additional title field. Searches were limited to interventions taking place in the United States and publications in the English language.

The Google and Google Scholar searches were limited to the top 100 results, as most searches returned tens and even 100,000s of results. All results from all other databases were included. Originally, the years 1997 to 2017 were included. Due to the large number of resources, the search was later restricted to 2013 to 2017, following consultation with the CDC.

Using the period 1997 to 2017:

- 8,366 items were reviewed
- 282 were included in the Compendium

When the date range was restricted to 2103 to 2107, 130 were included in the Compendium.

*CDC's Community Health Improvement Navigator was intended to serve as a resource, but the search engine was not functional when searched. It may be included in a later version.

CANCER

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Closing Preventive Care Gaps in Underserved Areas	Practice	2017	Federally Qualified Health Centers (FQHCs) and an academic center partnered to adapt and implement an office-based intervention, building on existing primary care resources to decrease gaps in preventive care measures, including cancer screenings.	After intervention implementation, White House Clinics saw a marked increase in various preventive care measures, including screenings for cancer, human immunodeficiency virus (HIV) and hepatitis C (HVC).	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/949
Levine Cancer Institute Launches Nation's First Mobile Lung CT Unit to Improve Care for Region's Underserved and Rural Patients	Practice	2017	Levine Cancer Institute today launched the first mobile lung computed tomography (CT) unit designed to address lung cancer diagnosis, treatment and survival disparities for rural populations across the Carolinas. The mobile lung unit is the first-of-its-kind to link rural populations to lung cancer education and treatment interventions through integrated mobile technology, traditional treatment facilities and medical staff.		ProQuest	https://www.prnewswire.com/news-releases/levine-cancer-institute-launches-nations-first-mobile-lung-ct-unit-to-improve-care-for-regions-underserved-and-rural-patients-300427353.html
Project ENABLE (Educate, Nurture, Advise Before Life Ends)	Practice	2017	Project ENABLE consists of: 1) an initial in-person palliative care consultation with a specialty-trained provider and 2) a semi-structured series of weekly, phone-delivered, nurse-led coaching sessions designed to help patients and their caregivers enhance their problem-solving, symptom management, and coping skills.	Patients and caregivers report lower rates of depression and burden along with higher quality of life.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/956
The Effects of Coaching Patients to List Questions before Visiting Cancer Specialists: Retrospective Evaluation of Visit Preparation in a Rural, Underserved Setting	Research	2017	A community-based organization implemented an evidence-based intervention to help rural cancer patients list questions before oncology visits.	In a sustained community-based implementation, the intervention helped patients prepare for oncology visits. Patients reported higher self-efficacy and lower anxiety.	Google	https://participatorymedicine.org/journal/evidence/research/2017/08/22/the-effects-of-coaching-patients-to-list-questions-before-visiting-cancer-specialists-retrospective-evaluation-of-visit-preparation-in-a-rural-underserved-setting/
Using Practice Facilitation to Increase Rates of Colorectal Cancer Screening in Community Health Centers, North Carolina, 2012–2013: Feasibility, Facilitators, and Barriers	Research	2017	Practice facilitation involves trained individuals working with practice staff to conduct quality improvement activities and support delivery of evidence-based clinical services. We examined the feasibility of using practice facilitation to assist federally qualified health centers (FQHCs) to increase colorectal cancer screening rates in North Carolina.	Practice facilitation is a feasible, acceptable, and promising approach for supporting universal colorectal cancer screening in FQHCs. A larger-scale study is warranted.	RHI Hub	https://www.ruralhealthinfo.org/resources/9175

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Salud es Vida Cervical Cancer Education	Practice	2017	The development of a lay health worker (promotora) curriculum that provides information on cervical cancer, HPV, and the HPV vaccine to Hispanic farmworker women living in rural southern Georgia.	Significant increases in post-test scores relating to cervical cancer knowledge and increases in positive self-efficacy among promotoras.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/879
Rural Tobacco Control and Prevention Toolkit	Practice	2017	This toolkit provides evidence-based examples, promising models, best practices, and resources that your organization can use to implement programs for tobacco control and prevention. There are seven modules in this toolkit. Each module contains information and links to resources that your organization can use to design, implement, evaluate, sustain, and disseminate rural programs for tobacco control and prevention.	<p>Module 2: This toolkit describes 14 evidence-based and promising program models for tobacco prevention and control, organized by implementation setting:</p> <ul style="list-style-type: none"> • Models for State and Local Governments • Models for Communities • Models for Worksites • Models for Healthcare Providers • Models for Schools <p>Module 3: Examples of current 330A Outreach Authority grantees and other promising programs that developed a tobacco prevention or cessation program in a rural community are provided below.</p>	RHI Hub	https://www.ruralhealthinfo.org/community-health/tobacco/3/program-clearinghouse
A Pilot Videoconference Group Stress Management Program in Cancer Survivors: Lessons Learned	Research	2016	Discusses the advantages and barriers of developing and implementing a group-based videoconference program that provides interventions to improve the psychosocial outcomes of rural cancer patients following treatment.	Study participants enrolled from across four different US states, and the majority reported at least a 30-minute commute to their cancer center. This travel burden played a meaningful role in their desire to participate in our videoconference-based program. Although participants reported that session content was well suited to addressing stress management concerns, and session facilitators were able to effectively teach program techniques (e.g. progressive muscle relaxation, cognitive-reframing) and that the program was helpful overall, only modest improvements in perceived stress were seen. Participants noted challenges of the delivery including feeling disconnected from others, difficulty focusing, technical problems, and a desire for a longer program. Thus, although the novel delivery of a group-based, psychosocial program using tablet videoconference is feasible in a survivorship program, and desired by cancer survivors, key improvements must be made in future efforts. Our enthusiasm about the potential of telehealth must be tempered with the reality that such delivery can present challenges that interfere with the intervention.	RHI Hub	https://www.ruralhealthinfo.org/resources/6921

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Alcohol Intake Among Breast Cancer Survivors: Change in Alcohol Use During a Weight Management Intervention	Research	2016	To evaluate change in alcohol use during a weight loss intervention for obese, rural-dwelling breast cancer survivors.	Findings provide preliminary evidence that a weight loss intervention may address obesity and alcohol use risk factors for cancer recurrence. Minimal mail-based contact post weight loss can maintain alcohol use reductions through 18 months, suggesting durability in these effects. These results highlight a possibility that lifestyle interventions for survivors may modify health behaviors that are not the main foci of an intervention but that coincide with intervention goals.	Google	http://cancer.jmir.org/2016/2/e15/
Cost Effectiveness of Lay Health Worker Delivered Interventions to Promote Colorectal Cancer Screening: A Randomized Trial.	Research	2016	To assess the cost effectiveness of lay health worker delivered interventions to increase colorectal cancer screening among low income Hispanics in Texas.	Lay health worker delivered interventions using small media and an interactive tablet delivered program were relatively expensive given the low impact on screening. Traditional small media print interventions, while more costly, can result in slightly higher screening rates.	Google	http://healthcare-communications.imedpub.com/cost-effectiveness-of-lay-health-worker-delivered-interventions-to-promote-colorectal-cancer-screening-a-randomized-trial.php?aid=8314
Developing an eHealth intervention for cancer symptom management for rural residents.	Research	2016	A disproportionate number of late-stage cancer diagnoses occur in rural residents. Paradoxically this population, with an increased need for palliative care, has minimal access to these services. As smartphone and high-speed internet connectivity reaches near universal penetrance across the country, eHealth technologies have the potential to address this palliative care access gap. Oncology Associated Symptoms and Individualized Strategies (OASIS) web-app was developed to provide tailored cancer symptom self-management support and address this gap.	Patients and staff in rural communities have significant cancer symptom management needs and are interested in using eHealth technologies to address these needs. OASIS was found to be accessible, user friendly, easily navigated, and visually appealing. Future research is needed to evaluate the feasibility and acceptability as well as the efficacy of OASIS.	Google	http://ascopubs.org/doi/abs/10.1200/jco.2016.34.26_suppl.207
Weight loss maintenance strategies among rural breast cancer survivors: The rural women connecting for better health trial.	Research	2016	Obesity is a risk factor for breast cancer recurrence. Rural women have higher obesity rates compared with urban women and are in need of distance-based interventions that promote long-term weight loss.	A lifestyle intervention incorporating group phone-based support improved the magnitude of weight loss maintained and increased the proportion of survivors who maintained clinically significant reductions.	ProQuest	https://www.ncbi.nlm.nih.gov/pubmed/27581328
Patient-centered outcome evaluation of the Rural Breast Cancer Survivors Intervention.	Research	2016	Patient-centered evaluation is a critical but often overlooked component of intervention research. The Rural Breast Cancer Survivors (RBCS) Intervention is a survivorship education and support intervention designed for rural breast cancer survivors. Here, we describe evaluation of the RBCS Intervention from the participants' experience.	Overall, the RBCS Intervention was helpful. Education materials addressed quality of life concerns. Breast cancer survivors developed skills in communicating with their family and oncology team. Intervention nurses were identified as the most valuable aspect of the program. Suggestions include earlier timing of survivorship education and support, and adaptation using social media access to serve other rural survivors.	Google	https://www.ncbi.nlm.nih.gov/pubmed/26452487

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Rural Disparities in Cancer Care: A Review of Its Implications and Possible Interventions	Research	2016	A review of literature about the disparities in cancer care in rural Appalachia, specifically West Virginia.	Discusses suggestions for possible solutions to bridge the gap, such as tele-oncology, virtual tumor boards, patient support groups, and physician training programs. Includes data and statistics for rates of cancer and oncologist availability.	RHI Hub	https://www.ruralhealthinfo.org/resources/8540
Using a community-based breast health intervention to reduce structural barriers in accessing breast cancer screening services among underserved rural Latina and black women in Eastern North Carolina	Research	2016	The Pitt County Breast Wellness Initiative-Education provides culturally tailored breast cancer education and navigation to age-appropriate screening services for uninsured/underinsured Black and Latina women age 25 and older in Pitt and Edgecombe Counties, North Carolina. Using a lay health model (adapted from North Carolina Breast Cancer Screening Program Training Curriculum), we trained eight community members on breast health, breast cancer, and being an effective breast health educator. The education component includes a brief 10-minute presentation on breast health, breast cancer, and guidelines for age-appropriate breast cancer screening services. The navigation component includes assistance with the following: (1) Breast Health Assessment Tool and BCCCP applications, (2) scheduling appointments/accessing age-appropriate breast screening services, (3) interpretation, and (4) transportation.	Specifically, using a LHA community-based model allows this program to serve as a cultural mediation between underserved communities in Pitt and Edgecombe counties and health care service systems and reduces structural barriers in accessing screening services and diagnostic follow-up. Strong collaborative community partnerships will streamline the process of accessing care in an effort to ensure seamless transition within the continuum of breast cancer care.	Google	http://cebp.aacrjournals.org/content/25/3_Supplement/A34
Black Corals Cancer Education	Practice	2015	St. James-Santee Family Health Center implemented a breast and cervical cancer screening promotion program called Black Corals.	In 2 years, Pap smear and mammogram rates increased by over 10% and missed appointment rates were decreased by over 30%.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/846
Community Cancer Screening Program: Implementing Interventions to Address Disparities	Practice	2015	To help these FQHCs increase colorectal cancer screening tests among their patients, the Cancer Coalition partnered with local public health agencies, hospitals and medical specialists to identify and give referrals for average-risk patients aged 50 to 64, who were due for a screening test. Some risk factors for colorectal cancer are a low fiber and high-fat diet, family history of colorectal cancer, and a lack of regular physical activity. Health navigators were hired to coordinate care for these patients. The navigators walked the patient through the entire screening process from one-on-one education and procedure scheduling to pre-screening needs and post-screening follow up. They helped create and maintain physician and patient reminder systems as well as provided feedback on referral practices to physicians.	Results from the evaluation showed that of all the patients due for a colorectal screening test, 35% of those at the intervention clinics received a colonoscopy examination compared to only 7% of patients at non-participating clinics. The U.S. Preventive Services Task Force (USPSTF) recommends that colonoscopies be performed every 10 years, FOBT should be done once a year, and flexible sigmoidoscopy should be done every 5 years with an FOBT every 3 years. Forty-three percent of patients at the intervention clinics were likely to be compliant with these guidelines compared to only 11% of patients at nonparticipating clinics.	Google	https://www.thecommunityguide.org/stories/community-cancer-screening-program-implementing-interventions-address-disparities

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
A Media and Clinic Intervention to Increase Colorectal Cancer Screening in Ohio Appalachia	Research	2015	Conducted a group-randomized trial of a county-level intervention among adults living in 12 Ohio Appalachian counties who received a media campaign and clinic intervention focused on either CRC screening or fruits and vegetables. Participants' percentage within CRC screening guidelines was assessed with cross-sectional surveys conducted annually for four years, and validated with medical record review of screening.	The intervention was not effective in increasing CRC rates among Ohio Appalachian adults. Future research should determine how media and clinic-based interventions can be modified to improve CRC screening rates among this underserved population.	Google	https://www.hindawi.com/journals/bmri/2015/943152/
A Rural Appalachian Faith-Placed Smoking Cessation Intervention	Research	2015	Although health promotion programming in faith institutions is promising, most faith-based or placed health projects focus on diet, exercise, or cancer screening and many have been located in urban environments. This article addresses the notable absence of faith programming for smoking cessation among underserved rural US residents who experience tobacco-related health inequities. In this article, we describe our faith-oriented smoking cessation program in rural Appalachia, involving 590 smokers in 26 rural churches randomized to early and delayed intervention groups.	We present three main themes that account for participants' positive evaluation of the program; the program's ability to leverage social connections; the program's convenience orientation; and the program's financial support for smoking cessation. We also present themes on the roles of faith and church in smoking cessation programming, including some mixed perceptions on smoking stigma and comfort in church settings; challenges in faith-placed smoking cessation recruitment; and the positive perception of such programming by church leaders. We conclude that faith-placed smoking cessation programs offer great potential, although they must be administered with great sensitivity to individual and community norms.	ProQuest	http://link.springer.com/article/10.1007/s10943-014-9858-7
An Evaluation of UV-Monitoring Enhanced Skin Cancer Prevention Among Farm Youth in Rural Virginia	Research	2015	Chen et al assess the effectiveness of a health promotion intervention including an ultraviolet (UV) monitoring device in decreasing UV exposure among youth. Participants' knowledge of factors related to skin cancer, skin protection attitude, and likelihood of engaging in protection practices increased significantly. Female participants' positive tanning perception was reduced.	Participants were satisfied with the functions of the monitoring device but found the bulky design unattractive.	ProQuest	http://www.tandfonline.com/doi/abs/10.1080/19325037.2014.999966
Attitudes and Beliefs of Primary Care Providers in New Mexico About Lung Cancer Screening Using Low-Dose Computed Tomography	Research	2015	Reports on a study to determine the awareness and attitudes of rural and urban primary healthcare providers in New Mexico (8 practicing in FQHCs) who use low-dose computed tomography (LDCT) when screening high risk underserved minority populations for lung cancer.	Providers have several concerns about the feasibility and appropriateness of implementing LDCT screening. Effective lung cancer screening programs will need to educate providers and patients to support informed decision making and to ensure that high-quality screening can be efficiently delivered in community practice.	RHI Hub	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4509091/

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Determinants of First-Time Cancer Examinations in a Rural Community: A Mechanism for Behavior Change.	Research	2015	After conducting a media campaign focusing on the importance of oral and pharyngeal cancer (OPC) examinations, the study assessed mechanisms of behavior change among individuals receiving an OPC examination for the first time.	Greater exposure to media messages corresponded with heightened concern about OPC. Heightened concern, in turn, predicted receipt of a first-time OPC examination, but only among men. Improving the quality of media campaigns by engaging community stakeholders in selecting messages and delivery methods is an effective strategy in building public health interventions aimed at changing behaviors.	ProQuest	https://www.ncbi.nlm.nih.gov/pubmed/25973820
Community-Based Screening for Cervical Cancer: A Feasibility Study of Rural Appalachian Women	Research	2015	To describe women's comfort levels and perceptions about their experience self-collecting cervico-vaginal swabs for HPV testing; to determine whether nurse-guided patient navigation increases the odds of women receiving a traditional Pap test after HPV screening; and to test the hypothesis that women testing positive for oncogenic HPV would be more likely to have a subsequent Pap test than those testing negative.	Rural Appalachian women are comfortable self-collecting cervico-vaginal swabs for HPV testing. Further, efforts to re-contact women who have received an oncogenic HPV test result and an initial navigation contact may not be useful. Finally, testing positive for oncogenic HPV may not be a motivational factor for subsequent Pap testing.	RHI Hub	http://europepmc.org/articles/pmc4608378
Digital storytelling: a tool for health promotion and cancer awareness in rural Alaskan communities	Research	2015	The purpose of this study was to learn community members' perspectives about digital storytelling after viewing a digital story created by a Community Health Aide/Practitioner (CHA/P).	The majority (13) of viewers interviewed were female, all were Alaska Native and they ranged in age from 25 to 54 years with the average age being 40 years. Due to the small size of communities, which ranged in population from 160 to 2,639 people, all viewers knew the story creator or knew of the story creator. Viewers reported digital stories as an acceptable, emotionally engaging way to increase their cancer awareness and begin conversations. These conversations often served as a springboard for reflection, insight, and cancer prevention and risk-reduction activities.	ProQuest	http://www.tandfonline.com/doi/abs/10.3402/ijch.v74.28781
Effective Recruitment of Rural Breast Cancer Survivors into a Lifestyle Intervention	Research	2015	Lifestyle interventions may be effective for enhancing quality of life and prognosis among breast cancer survivors, but expanding their reach to underserved rural communities presents some unique challenges. Recruitment for this lifestyle intervention trial among rural breast cancer survivors was carried out by developing local partnerships with rural oncology practices and hospitals who were members of regional community oncology organizations. Recruitment strategies included mailing a tailored study brochure accompanied by a cover letter from providers and an opt-in/opt-out postcard, media coverage, clinic-based oncologist referrals, and community outreach.	Mailing the tailored study brochure with the opt-in postcard yielded the highest number of survivors who enrolled in the lifestyle intervention trial. Oncologist referrals yielded a small number of participants but had the highest enrollment rate, and thus appear to play an important role in motivating some patients.	Google Scholar	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4272910/

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Empowering Promotores de Salud as Partners in Cancer Education and Research in Rural Southwest Kansas	Research	2015	To describe community-based participatory processes used to develop <i>promotore</i> training on cancer research, and to assess the feasibility of training promotores from rural communities to disseminate cancer research information.	Completion rates of the training and willingness to participate in cancer research were high, supporting the feasibility of training promotores to deliver community-based education to promote cancer research participation. Nursing professionals and researchers can collaborate with promotores to disseminate cancer education and research among underserved rural Latino communities in Kansas and elsewhere. Members of these communities appear willing and interested in improving their knowledge of cancer and cancer clinical trials.	RHI Hub	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4349504/
Evaluating the efficacy of a self-guided Web-based CBT intervention for reducing cancer-distress: a randomized controlled trial	Research	2015	This study evaluated the efficacy of a self-guided Web-based cognitive behavior therapy (CBT) intervention compared to an attention control in improving cancer-related distress, health-related quality of life (HRQOL), and maladaptive coping, among people recently diagnosed with cancer.	These results provide preliminary support for the potential efficacy of a self-guided Web-based CBT program in improving aspects of HRQOL, cancer-related dis-tress, and anxious preoccupation after cancer diagnosis. This paper provides justification for, and will help inform the development of, subsequent larger multi-site studies.	Google	http://www.mascc.org/assets/Pain_Center/2016_March/march_2016-11.pdf
Patient-centered outcome evaluation of the Rural Breast Cancer Survivors Intervention	Research	2015	Patient-centered evaluation is a critical but often overlooked component of intervention research. The Rural Breast Cancer Survivors (RBCS) Intervention is a survivorship education and support intervention designed for rural breast cancer survivors. Here, we describe evaluation of the RBCS Intervention from the participants' experience.	Overall, the RBCS Intervention was helpful. Education materials addressed quality of life concerns. Breast cancer survivors developed skills in communicating with their family and oncology team. Intervention nurses were identified as the most valuable aspect of the program. Suggestions include earlier timing of survivorship education and support, and adaptation using social media access to serve other rural survivors.	ProQuest	http://link.springer.com/article/10.1007/s00520-015-2974-4
Kentucky Homeplace	Practice	2015	Rural Appalachian Kentucky residents have deficits in health resources and health status, including high levels of cancer, heart disease, hypertension, asthma, and diabetes. Kentucky Homeplace was created as a community health worker initiative to address the lifestyle choices, inadequate health insurance, and environmental factors that are believed to contribute to these diseases.	From July 2001 to June 2016, over 152,262 rural residents have been served. Preventive health strategies, screenings, educational services, and referrals are all offered at no charge to clients.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/785

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Increasing Cervical Cancer Screening in the United States - Mexico Border Region	Research	2014	Discusses the effects of an intervention delivered by community health workers (CHWs), or Promotores de Salud, on cervical cancer screening rates in Hispanic women in the rural border area of New Mexico who were out of compliance with the recommended screening guidelines.	76.5% of women had a Pap test after the intervention. Women displayed increased knowledge about cervical cancer screening and about HPV. A culturally appropriate promotora-led intervention is successful in increasing cervical cancer screening in at-risk Hispanic women on the US-México border.	RHI Hub	http://onlinelibrary.wiley.com/doi/10.1111/jrh.12044/full
A Randomized Controlled Trial to Improve Colon Cancer Screening in Rural Family Medicine: An Iowa Research Network (IRENE) Study	Research	2013	This was a randomized controlled trial conducted between December 2008 and April 2011 to improve CRC screening in 16 rural family physician offices. Subjects due for CRC screening were randomized within each practice to 1 of 4 groups: (1) usual care; (2) physician chart reminder; (3) physician chart reminder, mailed education, CRC reminder magnet, and fecal immunochemical test (FIT) (mailed education/FIT); or (4) all the preceding plus a structured telephone call to the patient from project staff to provide education, assess interest in screening, explain the screening tests, and address barriers (mailed education/FIT plus phone call). The main outcome was completion of any CRC screening.	CRC screening rates increased significantly among patients who were overdue for screening after they received mailed educational materials and a FIT. The addition of a phone call did not further increase screening rates.	Google	http://www.jabfm.org/content/26/5/486.full
Community Cancer Screening Program (CCSP)	Research	2013	The Community Cancer Screening Program (CCSP), operated by the Cancer Coalition of South Georgia, aims to increase cancer screening among low-income, underinsured, and uninsured patients aged 50–64 who access federally qualified community health centers in rural settings. The intervention’s approach is based on the patient navigation framework, which accounts for the cultural, socioeconomic, and other factors that create patient-, provider-, and system-level barriers to cancer screening and lead to cancer health disparities. CCSP uses health navigators to overcome these barriers to colonoscopy screening. Health navigators collaborate with partnering clinics (e.g., health centers, hospitals, gastroenterology services) to implement CCSP program activities.	Among patients due for a colonoscopy, those from intervention clinics were more likely to receive a colonoscopy referral than were those from comparison clinics ($p<.001$). At the end of the study period, patients from intervention clinics were more likely to be compliant with screening guidelines than were patients from comparison clinics ($p<.001$).	Google	https://rtips.cancer.gov/rtips/programDetails.do?programId=24355707
Evaluation of a Home-Based Colorectal Cancer Screening Intervention in a Rural State	Research	2013	Distance from health care facilities can be a barrier to colorectal cancer (CRC) screening, especially for colonoscopy. Alternatively, an improved at-home stool-based screening tool, the fecal immunochemical test (FIT), requires only a single sample and has a better sensitivity-specificity balance compared to traditional guaiac fecal occult blood tests. Our objective was to determine if FITs mailed to asymptomatic, average-risk patients overdue for screening resulted in higher screening rates versus mailing educational materials alone or no intervention (i.e., usual care).	This low-intensity intervention of mailing FITs to average risk patients overdue for screening resulted in a significantly higher screening rate than educational materials alone or usual care, and may be of particular interest in rural areas.	Google Scholar	http://onlinelibrary.wiley.com/doi/10.1111/jrh.12052/full

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Evaluation of a patient navigation program to promote colorectal cancer screening in rural Georgia, USA.	Research	2013	This study evaluated the effectiveness of a patient navigation program that addresses individual and systemic barriers to CRC screening for patients at rural, federally qualified community health centers.	Results: Patients at intervention clinics were significantly more likely than patients at comparison clinics to undergo colonoscopy screening (35% versus 7%, odds ratio 57.9, $P < .01$) and be guideline-compliant on at least one CRC screening test (43% versus 11%, odds ratio 55.9, $P < .001$). Conclusions: Patient navigation, delivered through the Community Cancer Screening Program, can be an effective approach to ensure that lifesaving, preventive health screenings are provided to low-income adults in a rural setting.	Google	http://psycnet.apa.org/record/2013-28022-019
Reaching Rural Women: Breast Cancer Prevention Information Seeking Behaviors and Interest in Internet, Cell Phone, and Text Use	Research	2013	The purpose of this study was to examine the breast cancer prevention information seeking behaviors among rural women, the prevalence of Internet, cell, and text use, and interest to receive breast cancer prevention information cell and text messages. While growing literature for breast cancer information sources supports the use of the Internet, little is known about breast cancer prevention information seeking behaviors among rural women and mobile technology.	Overall, 87 % used cell phones, 20 % had an interest to receive cell phone breast cancer prevention messages, 47 % used text messaging, 36 % had an interest to receive text breast cancer prevention messages, and 37 % had an interest to receive mammogram reminder text messages. Bivariate analysis revealed significant differences between age, income, and race/ethnicity and use of cell phones or text messaging. There were no differences between age and receiving text messages or text mammogram reminders. Assessment of health information seeking behaviors is important for community health educators to target populations for program development. Future research may identify additional socio-cultural differences.	Google	https://link.springer.com/content/pdf/10.1007/s10900-012-9579-3.pdf
Tele medical Cervical Cancer Screening to Bridge Medicaid Service Care Gap for Rural Women	Research	2013	The Arkansas Medicaid program for low-income women provides cervical cancer screening, in the form of Pap smears, and treatment but no diagnostic means of bridging the two, such as a procedure called "colposcopy." Telemedicine offers a viable means to bridging this gap. Previously tele colposcopy has been used in small demonstration projects as a means to deliver colposcopy services to at-risk rural populations at a comparable quality to in-person colposcopy.	This project provides complex specialty gynecological services using telemedicine technology to overcome geographic barriers to care while producing results comparable to traditional examinations. It is cost-effective and well received by patients and can be used as a model for improving access to care among vulnerable populations.	RHI Hub	http://online.liebertpub.com/doi/abs/10.1089/tmj.2012.0148

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Testing to Prevent Colon Cancer: Results From a Rural Community Intervention	Research	2013	Despite tests that can detect and enable removal of precancerous polyps, effectively preventing this disease, screening for colon cancer lags behind other cancer screening. The purpose of this study was to develop and test a community-based participatory approach to increase colon cancer screening.	This community-based multicomponent intervention engaged hundreds of community members in wide dissemination aimed at increasing colorectal cancer screening. Although we did not find any statistically significant differences, the findings are consistent with an intervention-related increase in screening and provide preliminary evidence on the effectiveness of such interventions to improve colon cancer screening.	Google	http://www.annfammed.org/content/11/6/500.full
Research-Tested Intervention Programs	Practice		A searchable database of cancer control interventions and program materials, designed to provide program planners and public health practitioners easy and immediate access to research-tested materials. Includes programs used in rural settings.		RHI Hub	https://www.ruralhealthinfo.org/resources/4246
Task Force Findings for Cancer Prevention and Control	Practice		Range of intervention approaches reviewed by the Community Preventive Services Task Force with summaries of the Task Force findings for each. Focus on screening approaches and supporting evidence for breast, colorectal, and cervical cancer interventions. Additional interventions focus on skin cancer prevention.	Each intervention contains a link to detailed findings on evidence of effectiveness.	Google	https://www.thecommunityguide.org/content/task-force-findings-cancer-prevention-and-control

CHRONIC LOWER RESPIRATORY DISEASE

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Granville Health System’s Transitional Care Program	Practice	2017	Helps hospitals and ED patients schedule follow up appointments. In addition, the program provides home visits and safety checks.	From 2015-2016, the number of patients receiving home visits increased from 30 to 86. In addition, 2016 saw a \$73,595 reduction in inpatient readmissions and an \$11,500 reduction in self- pay readmissions of patients with high-risk diagnoses.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/951
Rural and Urban Differences in Air Quality, 2008–2012, and Community Drinking Water Quality, 2010–2015 — United States	Research	2017	To assess environmental factors that affect health, CDC analyzed three air-quality measures from the tracking network for all counties in the contiguous United States during 2008–2012. The three air-quality measures include 1) total number of days with fine particulate matter (PM _{2.5}) levels greater than the U.S. Environmental Protection Agency’s (EPA’s) National Ambient Air Quality Standards (NAAQS) for 24-hour average PM _{2.5} (PM _{2.5} days); 2) mean annual average ambient concentrations of PM _{2.5} in micrograms per cubic meter (mean PM _{2.5}); and 3) total number of days with maximum 8-hour average ozone concentrations greater than the NAAQS (ozone days).	Patterns for all three air-quality measures suggest that air quality improves as areas become more rural (or less urban). Noncore (rural) counties experienced fewer unhealthy air-quality days than large central metropolitan counties, likely because of fewer air pollution sources in the noncore counties.	Google	https://www.cdc.gov/mmwr/volumes/66/ss/ss6613a1.htm
Implementation and Outcomes of a Community-Based Pulmonary Rehabilitation Program in Rural Appalachia	Research	2017	Three rural health centers and a large referral hospital worked together to establish pulmonary rehabilitation services based on AACVPR guidelines. Each site hired at least 1 respiratory therapist.	During the first 20 months of the program, 195 unduplicated persons with qualifying chronic lung diseases started the program. Of these, 111 (57%) completed the program. Mean improvements for all 6 measures were highly significant ($P < .001$) and compared favorably with published results from hospital-based programs: dyspnea level, –1.2; 6MWT, +259 ft; NIF, +11.3 cm H ₂ O; knowledge test, +1.9; SGRQ, –6.2; BODE index, –1.1. Of the 23 smokers, 5 quit by the end of the program. The addition of respiratory therapists to these primary care teams provides important collateral benefits for the evidence-based care of patients with chronic lung diseases.	Google	http://journals.lww.com/jcrjournal/Fulltext/2017/07000/Implementation_and_Outcomes_of_a_Community_Based.10.aspx
New Mexico Mobile Screening Program for Miners	Practice	2017 (updated)	A mobile screening clinic with telemedicine capability screen miners for respiratory and other conditions.	In a recent survey, 92% of miners reported their care as very good, while the other 8% reported it as good. Since 1989, the program has served 6,685 miners.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/939

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
How telemedicine is transforming treatment in rural communities	Practice	2016	Patients previously diagnosed with heart failure, diabetes, or COPD and who experienced frequent hospitalizations are monitored by telehealth at home between periodic visits from nursing staff.	Decreased hospitalization rates for seniors enrolled in the FirstHealth Home Care Chronic Disease model in North Carolina. Response and intervention times have improved substantially, according to the program.	Google	https://www.beckershospitalreview.com/healthcare-information-technology/how-telemedicine-is-transforming-treatment-in-rural-communities.html
Decreasing Rate Of Chronic Obstructive Pulmonary Disease(COPD) Readmission In A Rural Health Care Network In Upstate NY	Practice	2014	The intervention had multiple components including education regarding COPD management by using the American Lung Association COPD management plan and inhaler instruction handouts. Also a respiratory therapist made phone calls after patient discharge to assess compliance with medications, evaluate for home health care referral, identify of patients who did not have follow up and assist with follow up with home health nursing aide or nurse. In addition, referral to pulmonary rehabilitation was offered when possible. We also had periodic meetings with leaders of the home health care organization, nursing, case management, home supply company, pulmonary and hospital quality staff to review pulmonary rehabilitation and other strategies to improve home care for COPD patients.	161 patients had a documented admission in 2012 with chronic bronchitis, emphysema, or chronic airway obstruction. We started using these interventions and collected data every quarter of 2012 and calculated the COPD readmission rates. After analysis, we found the readmission rate dropped from a baseline of 23.5% to 20.6%, 19.6% and 16.7% in each consecutive quarter.	Google Scholar	http://www.atsjournals.org/doi/pdf/10.1164/ajrccm-conference.2014.189.1_MeetingAbstracts.A5463
D13 USE OF E-HEALTH IN PULMONARY AND CRITICAL CARE MEDICINE: Internet-Mediated Recruitment of Rural Veterans In A Randomized Controlled Trial Of A Walking Program For COPD	Practice	2014	Taking Healthy Steps is an internet-mediated walking program for Veterans with COPD. Persons in the intervention arm have access to an uploading pedometer, website and e-community; receive iterative step-count feedback, individualized step-count goals, and motivational and informational messages. The principal outcome is change in health-related quality-of-life (QOL), measured by St. George's Respiratory Questionnaire (SGRQ). Subjects were identified from VA national databases using validated ICD-9 codes. Urban and rural-living status was defined using zip codes. Sampling was stratified by rural versus urban status, with equal number of invitations sent to each.	Rural-living Veterans with COPD can be recruited to participate in internet-mediated behavioral interventions. Their response rate and clinical characteristics are not different from urban-living participants.	ProQuest Central	https://search.proquest.com/central/docview/1853738824/BED3015E64764CD6PQ/11?accountid=11226

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
QUALITY IMPROVEMENT: ADMISSION TO DISCHARGE: Decreasing Rate of Chronic Obstructive Pulmonary Disease (COPD) Readmission in A Rural Health Care Network In Upstate NY	Practice	2014	The intervention had multiple components including education regarding COPD management by using the American Lung Association COPD management plan and inhaler instruction handouts. Also a respiratory therapist made phone calls after patient discharge to assess compliance with medications, evaluate for home health care referral, identify of patients who did not have follow up and assist with follow up with home health nursing aide or nurse. In addition, referral to pulmonary rehabilitation was offered when possible. We also had periodic meetings with leaders of the home health care organization, nursing, case management, home supply company, pulmonary and hospital quality staff to review pulmonary rehabilitation and other strategies to improve home care for COPD patients.	After analysis, we found the readmission rate dropped from a baseline of 23.5% to 20.6%, 19.6% and 16.7% in each consecutive quarter.	ProQuest Central	https://search.proquest.com/central/docview/1853738750/BED3015E64764CD6PQ/12?accountid=11226
Taking Healthy Steps: rationale, design and baseline characteristics of a randomized trial of a pedometer-based internet-mediated walking program in veterans with chronic obstructive pulmonary disease	Research	2014	This manuscript describes the design and rationale of a randomized controlled trial that tests the effectiveness of Taking Healthy Steps, an Internet-mediated walking program for Veterans with COPD (half in study were rural living Veterans).	<p>Veterans with COPD can be recruited to participate in an online walking program. We successfully recruited a cohort of older Veterans with a significant level of disability including Veterans who live in rural areas using a remote national recruitment strategy.</p> <p>Our baseline (enrollment) data suggest that by using remote communication tools it is feasible to recruit often hard-to-reach individuals, including: rural and remote residents.</p>	Google	https://bmcpulmmed.biomedcentral.com/articles/10.1186/1471-2466-14-12
Community Intervention Model to Reduce Inappropriate Antibiotic Use	Research	2013	This study assesses the design and implementation of the community intervention component of IMPART in 12 rural Utah and Idaho communities. Following initial implementation, the intervention was evaluated and redesigned based on health behavior theory.	Over 10% of interview respondents were familiar with IMPART. Those exposed to intervention materials tended to be younger, female, and more likely to have had a family member with recent respiratory illness. Of those who had seen the project Self-Care Guide, 62% reported having a copy and 32% had talked to others about the information it contained. Correct responses to antibiotic knowledge questions were higher among those with high (OR=2.02) and low exposure (OR=1.27) to the intervention versus no exposure.	Google Scholar	http://www.tandfonline.com/doi/abs/10.1080/19325037.2010.10599123

HEART DISEASE

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Web-Based Interventions Alone or Supplemented with Peer-Led Support or Professional Email Counseling for Weight Loss and Weight Maintenance in Women from Rural Communities: Results of a Clinical Trial	Research	2017	This trial compared the effectiveness of a web-based only (WO) intervention with web-based supplemented by peer-led discussion (WD) or professional email counseling (WE) across 3 phases to achieve weight loss and weight maintenance in women from underserved rural communities.	Web-based interventions assisted women from rural communities in achieving 6-month weight loss, with weight regain by half at 30 months. No group differences were potentially due to the robust nature of the web-based intervention.	ProQuest	https://www.hindawi.com/journals/job/2017/1602627/abs/
Promoting Heart Health Among Rural African Americans.	Research	2017	The purpose of this study was to evaluate a culturally relevant cardiovascular health promotion intervention that could potentially reduce cardiovascular disease risk among a group of rural African American adults by improving intentions, attitudes, norms, and self-efficacy to increase produce consumption, reduce dietary saturated fat intake, and increase exercise.	The culturally relevant cardiovascular health promotion program presented to cluster groups of rural African American participants had positive influences on psychosocial variables associated with engaging in cardiovascular health recommendations. Nurse-led interventions in community settings can potentially reduce cardiovascular disease risk.	Google	http://journals.lww.com/jcnjournal/Abstract/publishahead/Promoting_Heart_Health_Among_Rural_African.99503.aspx
Love Your Heart	Practice	2017	Love Your Heart trains local organizations to host community events about heart health.	Since 2015, the program has reached 196,124 participants through 267 programs held in 33 counties (24 of which are rural).	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/964
Roane County Hypertension Control	Practice	2017	Roane County Family Health Care (RCFHC) uses community-oriented, outcome- and team-based care to combat their rural community members' high rates of hypertension.	In 2014, RCFHC succeeded in achieving hypertension control rates in at least 70% of patients, and was named a 2014 Hypertension Control Champion by the U.S. Department of Health and Human Services.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/798
Chronic Disease Self-Management Program	Practice	2017	<p>The Chronic Disease Self-Management Program (CDSMP) is a 6-week workshop originally developed at Stanford University that has been studied and consistently found to be effective through 20+ years of research.</p> <p>While not developed specifically for, has been implemented in many rural communities.</p>	<p>CDSMP participants showed significant improvements in the following health measures:</p> <ul style="list-style-type: none">• Communication with their doctors• Self-reported health• Exercise• Fatigue and health distress• Disability and social role/activity limitations <p>Additionally, some studies show that participants spend fewer days in the hospital, which can result in healthcare cost savings. A national study found a \$364 net savings rate per person as a result of CDSMP services.</p>	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/734

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Rural Obesity Prevention Toolkit	Practice	2017	<p>This toolkit is designed to help a program to identify factors in the community that promote obesity, convene partners to help address those problems, and apply proven obesity prevention strategies.</p> <p>The toolkit is made up of seven modules. Each concentrates on different aspects of obesity prevention programs. Modules also include resources for you to use in developing a program for your area.</p>	Module seven contains examples of 330A Outreach Authority grantees and other organizations that have developed promising rural obesity programs. Information on implementing programs in clinical, school, and community settings can be found in Module 5: Addressing Obesity in Different Settings.	RHI Hub	https://www.ruralhealthinfo.org/community-health/obesity
Effects of a home-based activation intervention on self-management adherence and readmission in rural heart failure patients: the PATCH randomized controlled trial	Research	2016	Heart failure (HF) patients discharged from rural hospitals have higher 30-day readmission rates. Self-management (SM) reduces readmissions, but adherence to SM guidelines is low in the rural HF population. We tested a home-based intervention to enhance patient activation and lead to improved SM adherence.	It is feasible to conduct a randomized controlled trial in HF patients discharged from rural critical access hospitals. Significantly higher patient-reported SM adherence was not accompanied by lower clinical biomarkers or readmission rates. Further research is needed to understand mechanisms that influence outcomes and healthcare utilization in this population.	ProQuest	https://bmccardiovascdisord.biomedcentral.com/articles/10.1186/s12872-016-0339-7
Impact of pre-hospital electrocardiograms on time to treatment and one year outcome in a rural regional ST-segment elevation myocardial infarction network	Research	2016	Pre-hospital electrocardiograms (ECGs) are believed to reduce time to reperfusion in ST Segment Elevation Myocardial Infarction (STEMI) patients. Little is known of their impact on clinical outcomes in a rural setting. Geisinger regional STEMI network provides percutaneous coronary intervention (PCI) care to over a 100-mile radius in rural central Pennsylvania.	In a rural regional STEMI network, pre-hospital ECGs decreased time from first medical contact to reperfusion by 50% and were associated with an excellent clinical outcome at 1 year.	ProQuest	http://onlinelibrary.wiley.com/doi/10.1002/ccd.26567/full
Preventing Weight Gain in Women in Rural Communities: A Cluster Randomized Controlled Trial	Research	2016	Obesity is reaching epidemic proportions in both developed and developing countries. Even modest weight gain increases the risk for chronic illness, yet evidence-based interventions to prevent weight gain are rare. This trial will determine if a simple low-intensity intervention can prevent weight gain in women compared to general health information.	A low intensity lifestyle program can prevent the persistent weight gain observed in women. Key features included community integration, nonprescriptive simple health messages, small changes to behavior, low participant burden, self-weighing, and delivery including a mix of group, phone, and SMS text reminders. The findings support population strategies to halt the rise in obesity prevalence.	ProQuest	http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001941

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
A systematic review of lifestyle interventions for chronic diseases in rural communities	Research	2016	Rural Americans suffer disproportionately from lifestyle-related chronic diseases (e.g., obesity, diabetes, hypertension, cardiovascular disease, and breast cancer). Interventions that consider the distinctive characteristics of rural communities (e.g., access to healthcare, income, and education) are needed. As an initial step in planning future research, we completed a systematic review of dietary intake and physical activity interventions targeting rural populations.	Additional lifestyle intervention research is needed to identify effective approaches promoting healthy diet and exercise and chronic disease prevention in rural communities. Studies that include rigorous designs, adequate sample sizes, and generalizable results are needed to overcome the limitations of published studies.	Google	https://www.gapha.org/wp-content/uploads/2016/06/3-5.404-A-systematic-review-of-lifestyle-interventions.pdf
Effectiveness of a Pharmacist-Led Cardiovascular Risk Reduction Clinic in Rural Perry County, Alabama	Research	2016	The Cardiovascular Risk Reduction Clinic (CRRC) in Perry County, Alabama, provides free pharmacist-led services. Clinic goals include improving health outcomes and reducing cardiovascular risk factors.	Pharmacist-led management of patients with cardiovascular risk factors significantly reduced blood pressure and allowed more patients to meet their hypertension treatment goals. Despite being modest, reductions in blood pressure and BMI help reduce overall cardiovascular risks.	Google	https://www.hindawi.com/journals/ijcd/2016/4304761/
Outcomes of a Clinic-Based Educational Intervention for Cardiovascular Disease Prevention by Race, Ethnicity, and Urban/Rural Status	Research	2016	Heart disease is the leading killer of women and remains poorly recognized in high-risk groups. We assessed baseline knowledge gaps and efficacy of a survey-based educational intervention.	Significant knowledge gaps persist for heart disease in high-risk women, suggesting that these gaps and groups should be targeted by educational programs. We specify areas of need, and we demonstrate efficacy of a clinic-based educational intervention that can be of utility to busy healthcare professionals.	Google	http://online.liebertpub.com/doi/abs/10.1089/jwh.2015.5387?journalCode=jwh
Providing Cardiology Care in Rural Areas Through Visiting Consultant Clinics	Research	2016	Workforce experts predict a future shortage of cardiologists that is expected to impact rural areas more severely than urban areas. However, there is little research on how rural patients are currently served through clinical outreach. This study examines the impact of cardiology outreach in Iowa, a state with a large rural population, on participating cardiologists and on patient access.	Cardiologists in Iowa and adjoining states have expanded access to office-based cardiology care from 18 to 89 of the 99 counties in Iowa. In these 71 counties without a full-time cardiologist, visiting consultant clinics can accommodate more than 50% of office visits in the patients' home county.	Google	http://jaha.ahajournals.org/content/5/7/e002909
Rural Promising Practice Issue Brief: Remote, Telephone-Based Delivery of Cardiac Rehabilitation	Practice	2016	To address the social, geographic and financial barriers that prevent rural Veterans from accessing cardiac rehabilitation, the U.S. Department of Veterans Affairs (VA) Office of Rural Health (ORH) supported a telephone-based rehab program that delivered in-home cardiac rehabilitation.	In this pilot program, rural patients who elected to use home-based rehabilitation reported higher satisfaction and attained higher rates of program completion, compared to those using on-site facilities. Costs for the two programs were comparable, as were health outcomes after 12 weeks. The project demonstrated that a remote, telephone-based program is an effective and feasible option with strong rates of completion and high levels of patient satisfaction.	Google	https://www.ruralhealth.va.gov/docs/promise/ORH_Promising_Practice_Cardiac_Nov2016_508.pdf
Heartland OK	Practice	2016	Heartland OK, which began in 5 rural counties, is a care coordination model that works to reduce heart disease and stroke risks for patients.	25% of patients met their hypertension goals within 90 days.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/930

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Strong Hearts, healthy communities: a rural community-based cardiovascular disease prevention program	Research	2016	This community-based study will be a two-arm randomized controlled efficacy trial comparing a multi-level, community program (Strong Hearts, Healthy Communities) with a minimal intervention control program (Strong Hearts, Healthy Women). Strong Hearts, Healthy Communities was developed by integrating content from three evidence-based programs and was informed by extensive formative research (e.g. community assessments, focus groups, and key informant interviews).	Strong Hearts, Healthy Communities aims to reduce cardiovascular disease morbidity and mortality, improve quality of life, and reduce cardiovascular disease-related health care burden in underserved rural communities. If successful, the long-term goal is for the program to be nationally disseminated, providing a feasible model to reduce cardiovascular disease in rural settings.	RHI Hub	https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-016-2751-4
Prevention through Care Navigation Outreach Program	Practice	2015	Community Health Workers were utilized to create a system of coordinated care in the counties of Montrose, Ouray, and San Miguel.	1,192 people were screened for diabetes and cardiovascular disease. As a result, many at-risk patients lowered their cholesterol levels and blood pressure through this program.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/835
Program Evaluation of Remote Heart Failure Monitoring: Healthcare Utilization Analysis in a Rural Regional Medical Center	Research	2015	Remote monitoring for heart failure (HF) has had mixed and heterogeneous effects across studies, necessitating further evaluation of remote monitoring systems within specific healthcare systems and their patient populations. "Care Beyond Walls and Wires," a wireless remote monitoring program to facilitate patient and care team co-management of HF patients, served by a rural regional medical center, provided the opportunity to evaluate the effects of this program on healthcare utilization.	The findings from this project indicate that a remote HF monitoring program can be successfully implemented in a rural, underserved area. Reductions in healthcare utilization were observed among program participants, but reductions were also observed among a matched cohort, illustrating the need for rigorous assessment of the effects of HF remote monitoring programs in healthcare systems.	RHI Hub	http://online.liebertpub.com/doi/abs/10.1089/tmj.2014.0093
A Church-Based Pilot Study Designed to Improve Dietary Quality for Rural, Lower Mississippi Delta, African American Adults	Research	2015	Piloted a 6-month, church-based, behavioral intervention, Delta Body and Soul (DBS), for African American (AA) adults in the Lower Mississippi Delta (LMD). DBS was designed to improve overall dietary quality in LMD AA adults. The intervention included six once monthly group-based educational sessions implemented by trained church members.	Participants were predominately AA, female, and overweight or obese. Retention rate was 79 %. High adherence, defined as attendance at four or more educational sessions, was associated with dietary quality improvement and reduced blood glucose. Implementation of the DBS pilot intervention was feasible and may result in dietary quality and clinical improvements.	ProQuest	http://link.springer.com/article/10.1007/s10943-014-9823-5

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Development of a Faith-Based Stress Management Intervention in a Rural African American Community	Research	2015	Faith-based mental health interventions developed and implemented using a community-based participatory research (CBPR) approach hold promise for reaching rural African Americans and addressing health disparities. To describe the development, challenges, and lessons learned from the Trinity Life Management, a faith-based stress management intervention in a rural African American faith community.	<p>The community identified the key concepts that should be included in a stress management intervention.</p> <p>The faith-based "Trinity Life Management" stress management intervention was developed collaboratively by a CAB and an academic research team. The intervention includes stress management techniques that incorporate Biblical principles and information about the stress-distress-depression continuum.</p>	ProQuest	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5366254/
Effect of Lifestyle-Focused Text Messaging on Risk Factor Modification in Patients With Coronary Heart Disease	Research	2015	To examine the effect of a lifestyle-focused semipersonalized support program delivered by mobile phone text message on cardiovascular risk factors.	Among patients with coronary heart disease, the use of a lifestyle-focused text messaging service compared with usual care resulted in a modest improvement in LDL-C level and greater improvement in other cardiovascular disease risk factors. The duration of these effects and hence whether they result in improved clinical outcomes remain to be determined.	Google Scholar	http://jamanetwork.com/journals/jama/fullarticle/2442937
Cardiovascular Disease: Interventions Engaging Community Health Workers	Research	2015	Community Guide Systematic Review	<p>The Task Force finds strong evidence of effectiveness for interventions that engage community health workers in a team-based care model to improve blood pressure and cholesterol. They find sufficient evidence of effectiveness for interventions that engage community health workers for health education, and as outreach, enrollment, and information agents to increase self-reported health behaviors (physical activity, healthful eating habits, and smoking cessation) in clients at increased risk for CVD. Economic evidence indicates these interventions are cost-effective.</p> <p>A small number of studies suggest that engaging community health workers improves appropriate use of healthcare services and reduces morbidity and mortality related to CVD. When interventions engaging community health workers are implemented in minority or underserved communities, they can improve health, reduce health disparities, and enhance health equity.</p>	Google	https://www.thecommunityguide.org/findings/cardiovascular-disease-prevention-and-control-interventions-engaging-community-health
Community-Wide Cardiovascular Disease Prevention Programs and Health Outcomes in a Rural County, 1970-2010	Research	2015	<p>Few comprehensive cardiovascular risk reduction programs, particularly those in rural, low-income communities, have sustained community-wide interventions for more than 10 years and demonstrated the effect of risk factor improvements on reductions in morbidity and mortality.</p> <p>To document health outcomes associated with an integrated, comprehensive cardiovascular risk reduction program in Franklin County, Maine, a low-income rural community.</p>	Sustained, community-wide programs targeting cardiovascular risk factors and behavior changes to improve a Maine county's population health were associated with reductions in hospitalization and mortality rates over 40 years, compared with the rest of the state. Further studies are needed to assess the generalizability of such programs to other US county populations, especially rural ones, and to other parts of the world.	Google	https://jamanetwork.com/journals/jama/fullarticle/2089352

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Short-Term Effectiveness of a Lifestyle Intervention Program for Reducing Selected Chronic Disease Risk Factors in Individuals Living in Rural Appalachia: A Pilot Cohort Study	Research	2014	The Complete Health Improvement Program (CHIP) is a community-based, comprehensive lifestyle modification approach to health that has shown success in addressing this problem. This pilot study demonstrates the effectiveness of CHIP in an underserved, rural, and vulnerable Appalachian population.	Two hundred fourteen participants in CHIP collectively demonstrated significant reductions in body mass index, systolic and diastolic blood pressure, and fasting blood levels of total cholesterol, low-density lipoprotein, and glucose. If these results can be repeated in other at-risk populations, CHIP has the potential to help reduce the burden of preventable and treatable chronic diseases efficiently and cost-effectively.	ProQuest	https://www.hindawi.com/journals/apm/2014/798184/abs/
The Empirical Foundations of Telemedicine Interventions for Chronic Disease Management	Research	2014	The telemedicine intervention in chronic disease management promises to involve patients in their own care, provides continuous monitoring by their healthcare providers, identifies early symptoms, and responds promptly to exacerbations in their illnesses. This review set out to establish the evidence from the available literature on the impact of telemedicine for the management of three chronic diseases: congestive heart failure, stroke, and chronic obstructive pulmonary disease.	The preponderance of evidence from studies using rigorous research methods points to beneficial results from telemonitoring in its various manifestations, albeit with a few exceptions. Generally, the benefits include reductions in use of service: hospital admissions/re-admissions, length of hospital stay, and emergency department visits typically declined. It is important that there often were reductions in mortality. Few studies reported neutral or mixed findings.	RHI Hub	https://www.ruralhealthinfo.org/resources/5597
Cooperative Strategies to Develop Effective Stroke and Heart Attack Awareness Messages in Rural American Indian Communities, 2009-2010	Research	2013	During 2009 and 2010, the Montana Cardiovascular Health Program, in collaboration with 2 tribal health departments, developed and conducted culturally specific public awareness campaigns for signs and symptoms of heart attack and stroke via local media. Telephone surveys were conducted before and after each campaign to evaluate the effectiveness of the campaigns.	Carefully designed, culturally specific campaigns may help eliminate disparities in the recognition of heart attack and stroke warning signs in AI communities.	RHI Hub	https://www.ruralhealthinfo.org/resources/6218
Prevalence of the American Heart Association's "Ideal Cardiovascular Health" Metrics in a Rural, Cross-sectional, Community-Based Study: The Heart of New Ulm Project	Research	2013	The American Heart Association (AHA) recently created the construct of "ideal cardiovascular health" based on 7 cardiovascular health metrics to measure progress toward their 2020 Impact Goal. The present study applied this construct to assess the baseline cardiovascular health of a rural population targeted with a community-based cardiovascular disease prevention program.	Prevalence of ideal cardiovascular health is extremely low in this rural population. To make progress toward the 2020 Impact Goal, targeted community-based interventions must be implemented based on the most prevalent cardiovascular risk factors.	RHI Hub	https://www.ruralhealthinfo.org/resources/9477

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Developing a Research Agenda for Cardiovascular Disease Prevention in High-Risk Rural Communities	Research	2013	The National Institutes of Health convened a workshop to engage researchers and practitioners in dialogue on research issues viewed as either unique or of particular relevance to rural areas, key content areas needed to inform policy and practice in rural settings, and ways rural contexts may influence study design, implementation, assessment of outcomes, and dissemination. Purpose was to develop a research agenda to address the disproportionate burden of cardiovascular disease (CVD) and related risk factors among populations living in rural areas.	Participants created a comprehensive CVD research agenda that identified themes and challenges, and provided 21 recommendations to guide research, practice, and programs in rural areas.	ProQuest	http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.300984
HeartBeat Connections: A Rural Community of Solution for Cardiovascular Health	Research	2013	HBC uses EHR data to identify residents at high CVD risk in a rural community. Participants receive coaching from a registered dietitian or a registered nurse focused on lifestyle behavior changes and preventive medication initiation/titration.	Innovative population health approaches that use EHR data to address common barriers to CVD prevention and engage communities in addressing population health needs are needed to help more patients prevent coronary events.	Google	http://www.jabfm.org/content/26/3/299.full
Rural Project Examples: Cardiovascular disease	Practice		Rural Health Information Hub compilation of rural cardiovascular interventions, organized by evidence-level	Provides summary results for each intervention listed as well as a link to more in-depth information about each intervention	Google	https://www.ruralhealthinfo.org/community-health/project-examples/topics/cardiovascular-disease
Task Force Findings for Cardiovascular Disease	Practice		<p>A review of cardiovascular disease interventions along with supporting from the CDC’s Community Guide. Interventions reviewed include: Clinical Decision-Support Systems (CDSS); Interactive Digital Interventions for Blood Pressure Self-Management; Interventions Engaging Community Health Workers; Reducing Out-of-Pocket Costs for Cardiovascular Disease Preventive Services for Patients with High Blood Pressure and High Cholesterol; Team-Based Care to Improve Blood Pressure Control; and Self-Measured Blood Pressure Monitoring Interventions for Improved Blood Pressure Control</p> <p>Evidence review not specific to rural</p>	Each intervention contains a link to detailed findings on evidence of effectiveness	Google	https://www.thecommunityguide.org/content/task-force-findings-cardiovascular-disease

STROKE

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
A Rural Hospital's Journey to Becoming a Certified Acute Stroke-Ready Hospital	Practice	2017	An interdisciplinary Stroke Continuous Process Improvement Committee was formed. We conducted a gap analysis to address current stroke care processes. Chart audits were performed, and strategies to meet the requirements for recognition as an Acute Stroke Ready Hospital (ASRH) were implemented. The ASRH guidelines guided our certification journey.	ASRH certification was achieved. In addition, stroke care outcomes such as door-to-computed tomography results, door-to-international normalized ratio results, door teleneurology consultation, and door-to-needle time have improved.	Proquest	https://search.proquest.com/central/docview/1863564542/C47E9151AEF24A01PQ/8?accountid=11226
Alabama Partnership for TeleHealth	Practice	2017 updated	A nonprofit organization that promotes and supports new and existing telehealth programs across the state of Alabama.	The establishment and support of many telehealth networks at multiple sites across Alabama providing telehealth services for a variety of organizations. Multiple health networks were established with corrections facilities, behavioral health facilities, hospitals, clinics, and schools in the areas of psychiatry, stroke, primary care, wound care, and pain management. APT collaborates with multiple partners in over 60 sites. Small rural hospitals no longer need to hire a neurologist or other specialists to be on staff; rather they can contract with a specialist and connect with him/her remotely via telehealth to evaluate patients.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/793
Application of emerging technologies to improve access to ischemic stroke care	Practice	2017	In this paper the authors discuss the importance of emerging technologies—mobile stroke treatment units, telemedicine, and robotically assisted angiography—as future tools for expanding access to the diagnosis and treatment of acute ischemic stroke.	Emerging technologies, such as MSTUs, telemedicine, and RACA may significantly decrease access impediments for rural patients. Growing evidence of the critical nature of “door-to-needle” times has promoted the development of MSTUs with early evidence supporting improved stroke treatment provision where MSTUs are deployed. Similarly, telemedicine has shown significant promise for improving access to AIS diagnosis and treatment for rural patients by leveraging high-quality videoconferencing and teleradiology technologies. The advent of robotically assisted endovascular technologies, although in their infancy, also shows promise in decreasing complex procedure times and reducing endothelial damage.	Google	http://thejns.org/doi/full/10.3171/2017.1.FOCUS16520

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Case Studies Demonstrating Stroke Telemedicine in the Rural Emergency Department	Research	2017	These cases demonstrate how emergency nurses in a rural setting can use technology to collaborate with specialists to evaluate and treat stroke patients. Emergency nurses play an integral role in telemedicine by being the physical body in the room, thus serving as the hands of the remote provider during patient assessment. ⁸ Bedside nurses continue to evaluate and treat the patient while collaborating with both the emergency physician and the consulting specialist via the telemedicine link.	Telemedicine facilitates delivery of specialized care to a wide population. ⁴ Ninety-day stroke patient outcomes show no difference between patients who received rt-PA at a community hospital with telemedicine consultation and patients who received rt-PA at a tertiary stroke center. ^{5,6} Both patients and health care providers express high satisfaction levels with telestroke consultations.	Proquest	https://search.proquest.com/central/docview/1863559943/abstract/C640992CE1E748C8PQ/21?accountid=11226
Community Health Coaches for Successful Care Transitions	Practice	2017 updated	The Health Coach Project of Oconee Memorial Hospital in South Carolina was developed to help reduce hospital readmissions. The target population was patients over the age of 65 with diabetes, congestive heart failure, or other heart disease who were recently discharged to home health. The program recruited and trained community members to act as Health Coaches (HCs). The HCs mentored discharged patients with the goals of reducing hospital readmissions and helping patients move from home health care to self-care.	A total of 62 patients were served by the initial project. Hospital leaders and staff were pleased with the results of the project and indicated that they would like to it to continue. HRSA's Office of Performance Review staff deemed the program a "promising practice." Participants in the Health Coach program demonstrated abilities to: Monitor and track their chronic health conditions of diabetes, heart failure, or cardiovascular disease; Make lifestyle changes related to these conditions; Reduce fall risk factors; and Access assistance from healthcare and community agencies.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/375
Healthy People: Healthy Communities	Practice	2017 updated	A case management program for Kentucky counties of Boyle, Garrard, Lincoln, and Mercer. Registered nurses served as case managers and followed up with service recommendations for clients. They reviewed the stroke risk information with clients and discussed lifestyle changes and appropriate community-based services that could assist clients in achieving their health goals. The EMRMC project coordinator then orchestrated participating health departments' nurses for monthly client follow up. This intervention provided needed lifestyle adjustment education to achieve program goals. This program was modeled after the University of Kentucky Heart Health Program , a program used to assist clients with setting personal goals, provide concise teaching materials for health education.	Decreased the risk of stroke and heart disease among program participants.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/823
Lone Star Stroke (LSS) Research Consortium	Practice	2017	The V-STOP intervention consisted of 6 weekly sessions of self-management classes and clinic visits delivered via videoconferencing, with one or two individual telephone counseling sessions.	Participants' mean satisfaction scores were 4.7 out of 5, indicating very high approval of the program. Attendance was 87 percent, almost twice as high as at an equivalent in-person program. Access was improved as participants saved, on average, 160 km by traveling to a community center instead of the main veterans administration facility. Stroke risk knowledge and self-management behaviors such as communication with healthcare providers significantly improved from baseline.	Google	http://lonestarstroke.com/research-2/v-stop-ii/

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Improving Access to Stroke Care in the Rural Setting: The Journey to Acute Stroke Ready Designation	Practice	2017	A multidisciplinary team of ED clinicians, hospital leadership, and community participants was formed to develop a structured care algorithm and intensive process improvement initiatives to guide the Acute Stroke Ready Hospital application process.	In the 7 months since implementation, door-to-laboratory results have improved by an average of 12 minutes, door-to-computed tomography interpretation has improved by 3 minutes, time to intravenous thrombolytics has improved to less than 60 minutes, and patient transfer within 2 hours of arrival has also improved. ED provider average response time has been reduced by 5 minutes, and time to neurology via telemedicine has been reduced by almost 10 minutes.	Proquest	https://search.proquest.com/central/docview/1863564451/abstract/A2B320A586A9445EPQ/45?accountid=11226
Intermountain Healthcare TeleHealth Services	Practice	2017 updated	Developed an Intermountain TeleHealth Services strategy to provide consultation and emergency medical help electronically for patients and clinicians in both urban and remote areas. Stroke – Connects patients in EDs to neurologists at Intermountain Medical Center. Real-time evaluations and consults are given to providers who are on-site with the patient. Neurologists are constantly available to assess stroke victims and help local clinicians deliver the appropriate care. Median response time for providers is 3 minutes, and door-to-needle times are decreasing.	Intermountain has installed video and audio conferencing platforms in over 1,200 locations. To date, mortality rates and length of hospital stays have decreased, and patient retention has increased.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/925
Kansas Heart and Stroke Collaborative	Practice	2017	The Kansas Heart & Stroke Collaborative A Rural Clinically Integrated Network, focused on a care delivery and payment reform model to improve rural Kansans' heart health and stroke outcomes and reduce total cost of care for that population. A CMMS Innovation Center HCIA2 Cooperative Award with The University of Kansas Hospital.	KHSC's acute and ambulatory interventions are succeeding and KHSC participation is accelerating beyond expectations and new conditions being added. Developed KHSC Communications Committee to improve patient handoff's and feedback loops. Partnered with all 20 EMS Services in EMS Region I to look at funding and training opportunities. KHSC model is improving quality, outcomes and lowering costs, as well as capturing new revenue. KHSC is sustainable	Google	http://webs.wichita.edu/depttools/depttoolsmemberfiles/conferences/2017%20GPHC/Handouts/General%20Session/Heart%20and%20Stroke%20Collab/GPH%20Conf%202017.pdf
University of Mississippi Medical Center: Center for Telehealth	Practice	2017 updated	The University of Mississippi Medical Center created the Center for Telehealth to deliver quality specialty services through telehealth video conferencing and remote monitoring tools to the underserved areas of Mississippi.	The program has been successfully implemented throughout many of the state's rural hospitals and has reduced transfers and geographic barriers for patients.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/245
Heart-Healthy Lenoir Project	Practice	2016	A community-based research project was designed to develop and test better ways to tackle cardiovascular disease from prevention to treatment. (In rural, eastern, NC)	The end goal includes the development of long-lasting strategies and approaches within the community to help decrease the risk and disparities in risk of cardiovascular disease.	Google (RHI Hub)	https://www.ruralhealthinfo.org/community-health/project-examples/769

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Heartland OK	Practice	2016 entered	Heartland OK, which began in 5 rural counties, is a care coordination model that works to reduce heart disease and stroke risks for patients.	<p>As of July 2015, 32 patients were referred to the program, 10 of whom actively participated. Within 90 days of being enrolled, 25% of participants met their hypertension goals. Patients often continue with Heartland OK even after meeting blood pressure goals.</p> <p>Using an ROI calculation tool developed at the University of Kentucky under the direction of Dr. Glen Mays, Heartland OK was found to save \$160 for every \$1 invested in it for an estimated 45% reduction in cardiovascular disease (CVD) event admissions in the pilot counties' regional hospital.</p>	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/930
Telestroke: An Approach to the Shortage of Neurologists in Rural Areas	Research	2016	<p>The primary hypothesis of this study was how the use of telestroke in rural health facilities can increase quality outcomes of stroke intervention in hospital emergency rooms if neurologists are not available.</p> <p>The method for this study was a qualitative study using literature review.</p>	Telestroke has provided swift, lifesaving treatment and has afforded patients the ability to be treated in an efficient manner in rural areas where neurologists may not always be available. It has been reported that Telestroke in rural areas has increased the ability to treat patients by being able to access a neurologist for assistance in evaluating the patient to determine if administering lifesaving treatments were needed. The utilization of Telestroke has been shown to increase the use of IV Tissue Plasminogen Activator (tPA) which improves outcomes such as better quality of life, lower disability and improved rehabilitation. Employment of Telestroke is discussed as an efficient means of providing 24/7 neurological consultation to stroke patients in rural hospitals. Employment of Telestroke is discussed as an efficient means of providing 24/7 neurological consultation to stroke patients in rural hospitals.	Google	http://mds.marshall.edu/cgi/viewcontent.cgi?article=1152&context=mgmt_faculty
Addressing rural health disparities through policy change in the stroke belt	Practice	2016	A variety of stakeholders in Lenoir County, North Carolina were surveyed and interviewed, ranking the winnability, defined as feasibility and acceptability, of each of the 24 COCOMO recommended strategies based upon local culture, infrastructure, funding, and community support.	Policies to improve physical activity opportunities were deemed the most winnable, whereas policies that would limit advertisement of unhealthy food and beverages were deemed the least winnable. The most winnable food-related strategy was improving mechanisms to procure food from local farms. Stakeholders perceived the public as unfavorably disposed toward government mandates, taxes, and incentives.	Google	http://europepmc.org/articles/pmc4800020
Expanding Collaborative Technologies in Rural Veteran Health Care Using Telerobotic Stroke Therapy Delivery and Monitoring Systems	Practice	2015	Rural, veteran stroke survivors were provided a telerobotic device to support therapeutic rehabilitation.	Telerehabilitation robotic devices can be used as a tool to extend effective, evidence-based, and specialized rehabilitation services for upper and lower limb rehabilitation to rural Veterans with poor access to care.	Google	http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7210472

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Telestroke Centers as an Option for Addressing Geographical Disparities in Access to Stroke Care in South Carolina, 2013	Research	2015	Telestroke centers can increase access to proper and timely diagnosis and treatment of stroke, especially for rural populations, thereby reducing disability and death. Census tract information was used to map primary stroke centers geographically and to identify areas that would benefit from additional access to medical care via telestroke centers (health care facilities that provide information on stroke care from a distance).	Results indicate that in 2013, approximately half of the South Carolina population did not have access to a primary stroke center within a 30-minute drive of their home, and 30% did not have access within 60 minutes. Increasing access to prompt evaluation, diagnosis, and treatment of stroke and improving long-term quality of life requires the addition of telestroke centers in areas without primary stroke centers and examination of the effects of these centers on stroke incidence and mortality in South Carolina.	RHI Hub	https://www.ruralhealthinfo.org/resources/8567
Implementation of transcranial Doppler ultrasonography screening and primary stroke prevention in urban and rural sickle cell disease populations	Research	2014	Transcranial Doppler (TCD) ultrasonography identifies children with sickle cell disease (SCD) at increased risk of stroke. Initiation of chronic transfusions as primary stroke prevention in children with abnormal TCD significantly reduces stroke risk. Here, we report the results describing the implementation of TCD screening and primary stroke prevention in both urban and rural clinical practices.	A total of 195 patients were included in the evaluation of SOC screening, overall 41% achieved SOC. There was no difference in SOC between the two clinics (35% urban and 47.4% rural). The majority of patients with abnormal TCDs are on chronic transfusions (83%), and none have experienced a stroke. Monitoring of effects of transfusion was difficult with 38% and 31% of rural patients lacking documentation of Hgb S% and ferritin levels, respectively, in the past year.	Google	http://onlinelibrary.wiley.com/doi/10.1002/pbc.25306/abstract
The Empirical Foundations of Telemedicine Interventions for Chronic Disease Management	Research	2014	This review set out to establish the evidence from the available literature on the impact of telemedicine for the management of three chronic diseases: congestive heart failure, stroke, and chronic obstructive pulmonary disease. By design, the review focuses on a limited set of representative chronic diseases because of their current and increasing importance relative to their prevalence, associated morbidity, mortality, and cost. Furthermore, these three diseases are amenable to timely interventions and secondary prevention through telemonitoring.	The preponderance of evidence from studies using rigorous research methods points to beneficial results from telemonitoring in its various manifestations, albeit with a few exceptions. Generally, the benefits include reductions in use of service: hospital admissions/re-admissions, length of hospital stay, and emergency department visits typically declined. It is important that there often were reductions in mortality. Few studies reported neutral or mixed findings.	RHI Hub	https://www.ruralhealthinfo.org/resources/5597 Article: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4148063/

UNINTENTIONAL INJURY

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Influencing Policy to Reduce Motor Vehicle Crashes in a Rural Community: A Multiple Streams Approach	Practice	2017	<p>The purpose of this project was to implement and examine the role of a Nurse Policy Entrepreneur in reducing Motor Vehicle Crashes (MVC) in a rural community. Applying the Multiple Streams Approach, the action research study concentrated on the role of a Nurse Policy Entrepreneur to gather data to explore specific local contributing factors and issues related to motor vehicle crashes; review current policies and best practices; and meet with stakeholders/ decision makers to create a window for policy change to reduce injury and fatalities from MVC.</p> <p>Applying the Multiple Streams Approach, the action research study concentrated on the role of a Nurse Policy Entrepreneur to gather data to explore specific local contributing factors and issues related to motor vehicle crashes; review current policies and best practices; and meet with stakeholders/ decision makers to create a window for policy change to reduce injury and fatalities from MVC.</p> <p>The Nurse Policy Entrepreneur analyzed public MVC data from 2013–2015. Teen injury crash prevention was selected as the issue to be addressed with a local policy. Policy analysis included comparison with peer counties and current literature to identify best practice. Results found top performing peer counties all utilized a Carteens Program for juvenile traffic offenders.</p>	<p>The purpose of this project was to implement and examine the role of a Nurse Policy Entrepreneur in reducing Motor Vehicle Crashes (MVC) in a rural community.</p> <p>Briefings to stakeholders by the Nurse Policy Entrepreneur created an open policy window through sharing a framed message to support the Carteens Program. At the conclusion of the public stakeholder meeting, in addition to verbal support, a modified Organizational Change Recipient's Belief Scale tool was used for assessment. Results revealed the coalition's belief that teen injury MVC's in the county was a problem (discrepancy), Carteens was the appropriate solution (appropriateness), along with principle support for the project. More neutral results were found for both efficacy which measured their own power to change the problem and personal impact from the change.</p> <p>After reviewing the data, and consulting advisors, the judge approved the policy change for teen traffic offenders, signifying success of the Nurse Policy Entrepreneur to effect policy.</p>	Proquest	https://search.proquest.com/docview/1909385135?pq-origsite=gscholar
The Dawn Center Intensive Outpatient Program	Practice	2017	The Dawn Center offers an outpatient program for patients with substance abuse and addiction.	Patients can receive counseling and treatment closer to home while becoming a part of the local recovery community.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/908
Treating the Rural Opioid Epidemic	Practice	2017	Abuse of prescription and illicit opioids has become at top priority public health issue in the past decade, and its effects on rural communities cannot be understated. Effective, evidence-based treatment of opioid use disorders is urgently needed in small towns across America. However, multiple barriers stand in the way of appropriate treatment availability and quality. These include a shortage of rural physicians who provide Medication Assisted Treatment (MAT).	We review several key opportunities to remedy this problem, most importantly a dual focus on making MAT an option in all rural communities and fully funding rural mental health infrastructure.	Google	https://www.ruralhealthweb.org/NRHA/media/Emerge_NRHA/Advocacy/Policy%20documents/Treating-the-Rural-Opioid-Epidemic_Feb-2017_NRHA-Policy-Paper.pdf

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Rural Opioid Prevention and Treatment Strategies: The Experience in Four States	Practice	2017	<p>The nature and scope of the opioid crisis vary across rural communities and require multifaceted, community-based strategies to address the problem.</p> <p>Based on interviews with key stakeholders in Indiana, North Carolina, Vermont, and Washington State, this qualitative study explores promising state and community strategies to tackle the opioid crisis in rural communities and identifies rural challenges to the provision of OUD prevention, treatment, and recovery services.</p>	<p>Promising Strategies for Addressing Opioid Use in Rural Areas The results of our interviews identified the following promising strategies to OUD prevention and treatment that are relevant to rural areas:</p> <ul style="list-style-type: none"> • Engaging the local community to address opioid issues, including broad-based coalitions; • Encouraging prescribers to adopt evidence-based opioid prescribing guidelines; • Implementing hospital emergency department (ED) protocols to manage access to opioids; • Expanding access to medication-assisted treatment (MAT) through primary care-based models; • Supporting community buprenorphine prescribers through hub and spoke and telehealth models; and • Developing models to support recovery and reduce relapse in rural communities 	Google	https://muskie.usm.maine.edu/Publications/rural/WP62-Rural-Opioid-Prevention-Treatment-Strategies.pdf
Stem the Tide: Addressing the Opioid Epidemic	Practice	2017	Toolkit	Presents a report on various methods hospitals and health systems can use to address the opioid epidemic. Discusses non-opioid pain management, prescribing practices, and treatment for substance use disorders, among other topics. Highlights several rural programs in the Case Examples sections.	RHI Hub	http://www.aha.org/content/17/opioid-toolkit.pdf
The Health Wagon: A Telehealth Resource in a Rural Wilderness	Practice	2017	Telehealth for opioid use and suicide.	Highlights The Health Wagon, a mobile health service that has been serving rural Virginia for more than 30 years. Initially providing care out of the back of a Volkswagen, this service has expanded to providing care using Remote Area Medical vehicles, telehealth, Health devices, and drones. The area served has high rates of chronic disease, opioid abuse, and suicide.	RHI Hub	https://mhealthintelligence.com/news/the-health-wagon-a-telehealth-resource-in-a-rural-wilderness
Fit & Strong!	Practice	2017	An 8-week physical activity, behavior change, and falls prevention program geared to older adults with osteoarthritis.	Participants gained confidence with increased exercise, lessened stiffness, improved joint pain and improved lower extremity strength and mobility.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/726
MaineGeneral Harm Reduction Program	Practice	2016	The MaineGeneral Harm Reduction Program provides community education and training for healthcare staff and first responders in rural Kennebec and Somerset counties.	During the grant period, MaineGeneral trained 45 deputies and 246 healthcare staff and educated 60 community members.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/966

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Intervention, Treatment, and Prevention Strategies to Address Opioid Use Disorders in Rural Areas	Practice	2016	A guide designed to assist state Medicaid directors, healthcare providers, and other stakeholders who work to reduce opioid addiction. Includes descriptions of successful state initiatives implemented to reduce deaths due to overdose, and improve access to quality care for rural, low-income individuals experiencing opioid addiction. Provides an infographic displaying the prevalence and increase of substance abuse disorder in the U.S.		RHI Hub	http://nashp.org/intervention-treatment-and-prevention-strategies-to-address-opioid-use-disorders-in-rural-areas/
Outer Cape Health Services Community Resource Navigator Program	Practice	2016	The Community Resource Navigator Program works with local social services and town agencies, faith-based institutions, hospitals, the criminal justice system, and others to identify and connect clients to needed services.	Clients are gaining access to the care they were once lacking. The program also helps community partners and stakeholders work together to reduce the impact of risks associated with behavioral health symptoms, substance use disorder, and social determinants of health.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/911
Addressing the Opioid Epidemic in Rural Washington and Idaho	Practice	2016	In Washington and Idaho, six rural health clinics representing over 20 sites are working through the difficult questions to make sure their policies, workflow, and clinical visits are all aligned and implemented to address the crisis that has swept the nation.	<p>The project approaches the problem in part through guided self-assessments and shared learning opportunities, during which the clinics can dive into the project's six building blocks for safe, team-based opioid prescribing in primary care.</p> <p>Leadership and consensus: Build organization-wide consensus to prioritize safe, more selective, and more cautious opioid prescribing.</p> <p>Use a registry to proactively manage patients: Implement pro-active population management before, during, and between clinic visits of all chronic opioid therapy patients to ensure that care is safe and appropriate and to measure results of chronic opioid therapy improvement activities.</p> <p>Revise policies and standard work: Revise and implement clinic policies and define standard work for health care team members to achieve safer opioid prescribing and chronic opioid therapy management in each clinical contact with chronic opioid therapy patients.</p> <p>Planned, patient-centered visits: Through planned visits, conduct proactive population management before, during, and between clinic visits of all patients on chronic opioid therapy to ensure that care is safe and appropriate. Support patient centered, empathic communication for chronic opioid therapy patient care.</p> <p>Caring for complex patients: Develop policies and resources to ensure that patients who become addicted to opioids, or who develop complex opioid dependence, are identified and provided with appropriate care, either in the care setting or by outside referral.</p> <p>Measuring success: Continuously monitor progress and improve with experience.</p>	Google	http://www.migrantclinician.org/files/MCN%20Streamline%20Fall%202016.pdf

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Adoption of a Tai Chi Intervention, Tai Ji Quan: Moving for Better Balance, for Fall Prevention by Rural Faith-Based Organizations, 2013–2014	Research	2016	We used both multistage, purposeful random sampling and snowball sampling to recruit FBOs and exercise instructors in 7 West Virginia counties. Two forums were held with stakeholders to identify barriers and facilitators to program adoption. We calculated separate adoption rates for organizations and exercise instructors.	It took up to 3 months to recruit each FBO with an adoption rate of 94%. We made 289 telephone calls, sent 193 emails and 215 letters, distributed brochures and flyers to 69 FBOs, held 118 meetings, and made 20 trips over a period of 31 days (8,933 miles traveled). Nineteen of 22 trained exercise instructors started classes, an instructor adoption rate of 86%. Key issues regarding adoption were the age requirement for participants, trust, education, and competing priorities.	RHI Hub	https://www.cdc.gov/pcd/issues/2016/16_0083.htm
Tightening the Belt: Increasing Occupant Restraint Use on the Hopi Reservation	Practice	2015	The Hopi Tribe in Arizona received a grant from CDC to develop a motor vehicle injury prevention program. Over the four years of the program, both safety belt and child safety seat use increased. (Released 2015)	Safety belt and child safety seat use increased on the Hopi Tribe Reservation in northeast Arizona thanks to the creation of the Hopi Tribal Motor Vehicle Injury Prevention Program (TMVIPP).	Google	https://www.thecommunityguide.org/sites/default/files/assets/SafetyBelt-AZ.pdf
Project Renew	Practice	2015	Project Renew trains and certifies first responders, healthcare staff, and laypeople in naloxone administration.	Project Renew has saved 10 lives since its inception.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/962
Addiction Recovery Mobile Outreach Team (ARMOT)	Practice	2015	ARMOT provides 1) case management and recovery support services to individuals with substance use disorders and 2) education and support to rural hospital staff, patients, and their loved ones.	In the first 18 months of its grant cycle, ARMOT made 254 referrals.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/940
Nevada Rural Opioid Overdose Reversal (NROOR) Program	Practice	2015	The Nevada Rural Opioid Overdose Reversal (NROOR) Program, led by a Critical Access Hospital (CAH), furnishes naloxone and provides education on prescription opioid use and overdose.	EMTs greatly appreciated the naloxone training and the naloxone kits.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/937
Gloucester Angel Program	Practice	2015	The Gloucester Police Department initiated an opioid outreach program to help facilitate treatment for people suffering from addiction.	The ANGEL program has referred over 400 people to treatment facilities, reduced the cost of overnight incarcerations, and has developed a new bond with the community in the fight against opioid abuse.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/903

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Comparative Study of Compliance among Patients Attending an Opiate Outpatient Treatment Center in Rural Appalachia	Research	2015	This study sought to measure the extent to which treatment type (medical treatment (MS) or faith-based component of service (FBS)) predicts compliance when measured by number of clean urine drug screens (UDSs) and number of kept pill count, over and above dual diagnosis, college education, and income.	According to this study, type of treatment did not significantly impact compliance in the tristate area of Appalachia as measured by clean UDSs or kept pill count.	Proquest	https://search.proquest.com/docview/1729568744?pq-origsite=gscholar
Disparity in Naloxone Administration by Emergency Medical Service Providers and the Burden of Drug Overdose in US Rural Communities	Research	2015	We determined the factors that affect naloxone (Narcan) administration in drug overdoses, including the certification level of emergency medical technicians (EMTs).	Naloxone is less often administered by EMT-basics, who are more common in rural areas. In most states, the scope-of-practice model prohibits naloxone administration by basic EMTs. Reducing this barrier could help prevent drug overdose death.	Google Scholar	http://ajph.aphapublications.org/doi/full/10.2105/AJPH.2014.302520
Caring for pregnant opioid abusers in Vermont: A potential model for non-urban areas	Research	2015	In this review, we discuss how we managed the challenges of developing a comprehensive program for treatment of opioid dependence during pregnancy. In addition, we outline our approach for facilitating the development of community-based programs to help these patients and families in rural regions of Vermont.	We found that integration and coordination of services that promote maternal recovery and ability to parent are key requirements for treatment of opioid dependence during pregnancy. Close relationships between our tertiary care center, local hospitals, community health care infrastructure, and legislators bolstered our efforts. In particular, appreciation for the severity and importance of the opioid-dependence problem in Vermont among health care providers and state legislators was paramount for our success in developing a state-wide treatment program.	RHI Hub	http://www.sciencedirect.com/science/article/pii/S0091743515002315
Barriers to implementation of opioid overdose prevention programs in Ohio	Research	2015	A cross-sectional self-report survey of opioid overdose prevention programs (OOPPs) in Ohio was conducted between August and October 2014 to characterize programs and ascertain barriers to successful implementation.	OOPPs have rapidly expanded in Ohio during the past 3 years. Although recent legislative changes have addressed some of the reported implementation barriers, stigma and the cost of naloxone remain significant problems.	Google Scholar	https://www.researchgate.net/profile/Christine_Wilder/publication/287483612_Barriers_to_Implementation_of_Opioid_Overdose_Prevention_Programs_in_Ohio/links/5685b33208ae197583952435.pdf
Right Side UP Fall Prevention	Practice	2015	The Right Side Up program was implemented in rural Otter Tail County to address the prevention and management of falls and risk for falls through in-home assessments given by interdisciplinary healthcare professionals and students.	Short-term outcomes revealed 100% of participants found the visit and recommendations for falls prevention to be helpful, and 78% implemented these recommendations.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/782
Opioid-Associated Outbreaks: Preparation & Prevention Lessons from the Indiana HIV/HCV Outbreak among People Who Inject Drugs	Practice	2014	In response to this (HIV and HCV) outbreak, Indiana's Governor Mike Pence declared a public health emergency and authorized an emergency needle exchange program.	The rapid response to the outbreak in Scott County by local, state, and federal officials was critical to shortening the acute response period.	Google	http://nacchopreparedness.org/opioid-associated-outbreaks-preparation-prevention-lessons-from-the-indiana-hivhcv-outbreak-among-people-who-inject-drugs/

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Can We Build an Efficient Response to the Prescription Drug Abuse Epidemic? Assessing the Cost Effectiveness of Universal Prevention in the PROSPER Trial	Research	2014	Sixth graders from twenty-eight rural public school districts in Iowa and Pennsylvania were blocked by size and geographic location and then randomly assigned to experimental or control conditions (2002-2010). Within the intervention communities, prevention teams selected a universal family and school program from a menu of EBPIs. All families were offered a family-based program in the 6th grade and received one of three school-based programs in 7th-grade. The effectiveness and cost-effectiveness of each school program by itself and with an additional family-based program was assessed using propensity and marginal structural models.	This work demonstrates that universal school-based EBPIs can efficiently reduce nonmedical prescription opioid use. Further, findings illustrate that family-based programs may be used to enhance the cost-effectiveness of school-based programs.	RHI Hub	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4131945/
Effects of a Randomized Controlled Recurrent Fall Prevention Program on Risk Factors for Falls in Frail Elderly Living at Home in Rural Communities	Research	2014	This study adopted an assessor-blinded, randomized, controlled trial methodology. Subjects were enrolled in a 12-week recurrent fall prevention program, which comprised strength training, balance training, and patient education. Muscle strength and endurance of the ankles and the lower extremities, static balance, dynamic balance, depression, compliance with preventive behavior related to falls, fear of falling, and fall self-efficacy at baseline and immediately after the program were assessed. Sixty-two subjects (mean age 69.2±4.3 years old) completed the program – 31 subjects in the experimental group and 31 subjects in the control group.	When the results of the program in the 2 groups were compared, significant differences were found in ankle heel rise test, lower extremity heel rise test, dynamic balance, depression, compliance with fall preventative behavior, fear of falling, and fall self-efficacy (p<0.05), but no significant difference was found in static balance.	Google Scholar	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4243515/
Effects of a Fall Prevention Program on Falls in Frail Elders Living at Home in Rural Communities	Research	2013	This study was conducted to determine the effects of a fall prevention program on falls, physical function, psychological function, and home environmental safety in frail elders living at home in rural communities. Methods: The design of this study was a nonequivalent control group pre posttest design. The study was conducted from July to November, 2012 with 30 participants in the experimental group and 30 in the control group. Participants were registered at the public health center of E County. The prevention program on falls consisted of laughter therapy, exercise, foot care and education. The program was provided once a week for 8 weeks and each session lasted 80 minutes.	The risk score for falls and depression in the experimental group decreased significantly compared with scores for the control group. Compliance with prevention behavior related to falls, knowledge score on falls, safety scores of home environment, physical balance, muscle strength of lower extremities, and self-efficacy for fall prevention significantly increased in the experimental group compared with the control group.	Google	http://eds.b.ebscohost.com/abstract?site=eds&scope=site&jrnl=20053673&AN=97559883&h=toz4FqNV3izjP2ODQla3%2fl%2fzwwGYXurPNzfp3MKOiSJfG4Gu4i4SzdcSAyW2ivFTX59yUI7oHlvBUGgHN%2faYiA%3d%3d&crl=c&resultLocal=ErrCrlNoResults&resultNs=Ehost&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authype%3dcrawler%26jrnl%3d20053673%26AN%3d97559883

Title	Research/ Practice	Date	Intervention	Result	Search Engine	Link
Safe Native American Passengers Course (SNAP)	Practice		Indian Health Service curriculum, 1 full day, basic knowledge only(not a certification course)		Google	https://crihb.org/injury-prevention/
SLV N.E.E.D.: Naloxone Education Empowerment Distribution Program	Practice		Education efforts for health workers and the larger community, in addition to establishing a naloxone overdose reversal drug program.	Nearly all first responders are now trained to administer naloxone, participating pharmacies keep adequate naloxone stock, and ongoing service region dialogue to address opioid abuse.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/899
Integrated Chronic Pain Treatment and Training Program	Practice		The ICPTTP standardizes and streamlines chronic pain management in primary care clinics.	The ICPTTP has reduced patients' average daily morphine equivalent dose, and 25% of program participants have stopped taking opioids altogether.	RHI Hub	https://www.ruralhealthinfo.org/community-health/project-examples/968
Rural Prevention and Treatment of Substance Abuse Toolkit	Practice		This toolkit provides evidence-based examples, promising models, program best practices, and resources that can be used by your organization to implement substance abuse prevention and treatment programs. There are seven modules in this toolkit. Each module contains resources and information that your organization can use to develop, implement, evaluate, and sustain rural programs to prevent and treat substance abuse	Module 2: Evidence-Based and Promising Substance Use Disorder Program Models: <ul style="list-style-type: none"> Medication Assisted Treatment Models Behavioral Therapy Models Harm Reduction Models Care Delivery Models Peer-based Recovery Support Models Prevention Models Module 3: Program Clearinghouse	RHI Hub	https://www.ruralhealthinfo.org/community-health/substance-abuse
Implementing Medication-Assisted Treatment for Opioid Use Disorder in Rural Primary Care: Environmental Scan Volume 1	Practice		Toolkit	Details challenges and barriers to implementing medication-assisted treatment (MAT) for opioid use disorder (OUD) in a primary care setting, such as healthcare policy, workforce, and financing, among others. Includes 250 tools and resources to help overcome barriers and support implementation MAT in rural areas.	RHI Hub	https://integrationacademy.ahrq.gov/sites/default/files/MAT_for_OUD_Environmental_Scan_Volume_1_1.pdf

Georgia Health Policy Center
Andrew Young School of Policy Studies
Georgia State University
ghpc.gsu.edu

