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Improving Health Care Accessibility among Geriatric Patients in Rural Communities

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Purpose Statement

The following literature review and analysis compiles information regarding ways to improve rural geriatric healthcare accessibility through the use of interprofessional care and outreach. I also wish to bring to light the various deficiencies often seen in this realm of care, and the reasons behind the inadequate rural physician retention rates. Using this background information, I compiled various collaborative approaches which seek to ease the strain faced by the healthcare system and its elderly patients. I chose to explore this topic because of my experience working with geriatric patients as a resident aide and seeing the struggles that some elderly face while in primarily rural areas. In addition, this project allows me to use my biological and anthropological knowledge from my undergraduate education in order to identify both the specific health needs within the rural geriatric population along with their specific cultural needs.

Improving healthcare accessibility through the use of interprofessional care and outreach is an essential facet in geriatric medicine. By exploring the deficiencies of geriactric healthcare in rural and underserved areas, as well as highlighting methods that are being implemented to better serve their geriactric patients, we can identify ways in which to restructure our care systems. This review seeks to better understand the barriers that lead to decreased rural physician and geriatric specialist retention rates, evaluate the causality of insufficient healthcare access due to pre-existing barriers on rural geriactric patients, and compare the effectiveness of various collaborative interprofessional solutions to the lack of geriactic health care available.

Methods

A thorough literature review was conducted to compile the necessary information required to build a strong foundation on the relevant subject matter. This began as a deep dive into the available literature, and was specified accordingly. GoogleScholar, JSTOR, PubMed, Springer, and NCBI were the most prominently used databases, with other sources found by reading the literature cited sections of particularly helpful journal articles. Keywords used in order to narrow the search field were "IP care teams, geriatrics, rural healthcare, coverage, aging in place, and IPE".

Background

In general, rural communities experience reduced healthcare affordability, proximity, efficiency, and quality. Many patients end up substituting speciality care with visits to their local primary care providers (PCPs). With the increase of people "aging in place," or living and retiring in the same towns, there is an increased need for adequate geriactric care in these areas. In Michigan alone, 19% of the population is considered rural ("MDHHS", n.d.) In addition, rural areas tend to have a higher percentage of older populations ("MDHHS", n.d.).

In general, life expectancy is dependent on more than just one's genetic makeup. It is also reliant on gender, race, quality education, income, nutrition, and location ("HPSAs", 2016). This is important to note, because rural areas often struggle to promote these aspects of health. This coincides with a number of other realities, including lower education rates, higher poverty levels, higher levels of chronic disease, higher levels of obesity, and higher crude death rates. Access to healthcare is essential for physical, mental, and social health, as well as for preventing disease, increasing life expectancy, early disease detection, improved quality of life, and chronic disease

management (“Healthcare Access in Rural Communities,” n.d.). Rural elderly face disadvantages in the realms of socio-economic standing, health, nutrition, housing, and availability of services (Lee & Lassey, 1980). Many rural communities are developing into NORCs, or naturally occurring retirement communities, due to the increased rate of aging in place (Baernholdt et al., 2012). In rural areas, elderly are often subjected to the gradual loss of essential goods and services from close proximity (Phillipson & Scharf, 2005).

Many geriatric patients are at an increased risk for health problems, with upwards of 80% of people over 65 having one or more chronic health conditions that require long-term management, such as heart disease, lung disease, and diabetes (Horton & Johnson, 2010). Prevention, identification, treatment, and maintenance of illnesses can help seniors live longer and more independent lives (“NRHA Policy Documents,” 2015). In patients with chronic conditions, frequent follow up and proactive health care are necessary to stay on top of symptom management. The high case load volume tasked to rural physicians often lessens the individualized care that they are able to provide. There is a growing shortage of healthcare providers in rural areas, in addition to a severe deficit of specialty care providers. There are, on average, 68 doctors to every 100,000 people in rural areas, versus 84 doctors in urban areas (“HPSAs”, 2016). Health Professional shortage areas (HPSAs) are areas that need more healthcare professionals and often offer eligibility for loan repayment programs in order to attract providers. Not coincidentally, many of these areas are rural (“MDHHS”, n.d.). These deficits lead to long wait times for appointments because many providers are at maximum scheduling capacity. Rural areas have much lower rates of preventative care and screening services, which further highlights this fact (“Healthcare Access in Rural Communities,” n.d.).

Aside from lack of access to healthcare appointments in rural areas, many rural seniors face reduced access to public transportation, lack of familial support, deterring social stigmas, and privacy/confidentiality concerns ("Healthcare Access in Rural Communities," n.d.). Those residing in rural areas who have received lower levels of education often struggle with poor health literacy, meaning they do not have a firm grasp on healthcare terms and may find it difficult to navigate care systems. This can be a barrier to completing recommended treatment plans. In some instances, this is partly the fault of healthcare providers, who need to ensure all communication with their patients is clear and understandable at their comprehension level ("Healthcare Access in Rural Communities," n.d.).

Ethical Dilemma

When examining this subject material, it is important to start by considering the ethical implications. There are many ethical frameworks that one can use to evaluate the issues in rural geriatric care. In ethics, there is a concept called utilitarianism, or consequentialism. This means that right and wrong are judged solely by the consequence of choosing particular actions. The "goodness" of an action is determined by the actual results, and not one's intentions or desired outcome. Due to this, utilitarian outlooks favor choices that bring the most benefit to the most people, maximizing freedom, knowledge, and justice (Nikitin, 2020).

There are also several ethical principles that all medical professionals are expected to adhere to. The Principle of Nonmaleficence states that above all, no harm must be done upon others. Professionals are expected to act in ways that do not cause needless harm. Of course, it is not always possible to avoid all risk, but it is possible to avoid *needless* risk. The Principle of Beneficence advises professionals to promote the welfare of others by preventing harm. This

encompasses the competent and timely delivery of medical care that takes into consideration the specific needs and values of the patient. Sometimes, this principle involves limiting one's duties so as not to deprive other patients, meaning sometimes a physician needs to limit their caseload roster so that each of their patients can be given appropriate attention. Lastly, the Principle of Utility implies that physicians should gain the confidence of their patients by giving them full service. This also underlies guidelines for how to distribute social services, and how to properly allocate efforts in medical care hierarchies (Nikitin, 2020).

Judging by these principles, it stands to reason that many of the problems facing rural healthcare are rooted in ethical dilemmas. In order for professionals to truly prevent harm, adequate healthcare access for all is a necessity. In my opinion, if a patient is unable to receive adequate care and a timely manner, and experiences bodily harm as a result, that is an ethical failing. If a professional is responsible for too many patients, and one patient's needs fall through the cracks because of it, that is an ethical failing. After all, if one is considering consequentialism, it does not matter the professional's intent to help their patients, but only whether their patients are actually cared for or not.

Lack of Attraction in Rural Areas

Issues with Rural Students

A majority of budding medical professionals choose to work in urban areas, especially those in speciality practices. This appears to be partially due to educational access barriers for rural medical students and a lack of financial incentivization to work in underserved areas. First of all, rural students are statistically less likely to go to college than their urban counterparts. They are also much less likely to attend medical schools or other healthcare higher education

routes (Hensel et al., 2007). Over half of rural students who *do* attend medical schools do not wish to return to rural areas due to the hardships endured by rural physicians ("HPSAs", 2016). Additionally, many rural students find themselves disenfranchised by the lack of rural training opportunities offered at many urban medical schools. There is a prevailing worry that an urban education will not adequately equip them to return to rural areas, as many programs cater to urban needs (Hensel et al., 2007). Despite this discouraging statistic, rural students are still comparatively 4-5 times more likely to return to work in rural areas than urban students due to familiarity (Hensel et al., 2007) (Woloschuk & Tarrant, 2004).

There are several reasons that working as a healthcare provider in rural areas is not quite as enticing for some as working in an urban setting is. For one, rural providers must accommodate large patient rosters, as the ratio of providers to patients is much higher. This means they are tasked with additional responsibilities, higher acuity cases, limited specialty supplies, and little professional support (Hensel et al., 2007). In this sense, rural practice is more demanding because of the increased contractual and time obligations (Eley el al., 2007). For example, it can be difficult to balance work life with family life given the larger patient volumes.When working in rural healthcare, there often is a lack of job flexibility, as well as a decreased lack of opportunity for further learning opportunities (Gabriel & Orpin, 2005). There can also be a lack of cultural opportunities to engage in, and there is a chance that locals will always see an urban provider as an outsider to their tight-knit community ("HPSAs", 2016).

Many rural healthcare providers experience a lack of network building amongst colleagues, lack of potential promotions, and lack of opportunities to practice procedural skills. There is also a lack of specialist consultation opportunities for general care providers and

difficulty seeking referrals (Eley el al., 2007). Meanwhile, these PCPs also require a broader knowledge of clinical practices, since general care practitioners are sometimes the first and only stop their patients make when seeking care.

It can be extremely difficult to open an entirely new practice in a rural area, as there may not be enough patients willing to switch to a new provider. One of the positives of working in rural settings is that providers often get to form closer bonds with their recurring patients, and serve them in a more personal way if time (and workload) permits (Gabriel & Orpin, 2005).

Lack of Financial Incentive to Practice in Rural Areas

Underinsured elderly are those who have health insurance but are unable to pay out of pocket expenses (Horton & Johnson, 2010). Rural patients are more likely to be on some form of Medicaid, or be dually eligible for Medicaid and Medicare, meaning less money from a visit will be paid out to rural physicians than to those working in urban clinics ("HPSAs", 2016). This often results in a lack of financial incentive for healthcare providers to practice in these areas. In addition, premiums tend to be higher in rural areas, where the median income is already much lower ("Healthcare Access in Rural Communities," n.d.). Upwards of 26% of uninsured or underinsured patients delay seeking treatment due to cost concerns, which inevitably leads to them developing higher acuity conditions later down the road which require more expensive and urgent care ("Healthcare Access in Rural Communities," n.d.) (Yamada et al., 2015).

Elderly individuals are more likely to live on fixed, low incomes, which leads to the lack of ability to seek proper health treatments and hospice services. Over the years, there have been increasing cuts to food assistance programs, low-income housing support, Medicaid, and chronic disease prevention screenings. The Affordable Care Act has helped to build up the rural cohort

by supplying grants to rural physicians and lowering overall drug costs (Jaffe, 2015). Regardless, it is projected that healthcare costs will continue to rise roughly 8% each year, which will more severely impact disadvantaged and geriatric populations (Yamada et al., 2015).

Elderly who repeatedly delay healthcare reduce their health status by 48% on average, which inevitably leads to a greater need for care utilization (Yamada et al., 2015). As healthcare costs continue to rise, many of these costs are felt more by rural and impoverished individuals, as they often pay more for services. The more education an elderly person has, the more likely they are to place importance in and be able to afford care. As such, there are clear health disparities between rural and urban areas (Yamada et al., 2015).

These issues can all be very daunting to professionals looking to engage in rural medicine. Some healthcare providers report becoming disenfranchised with the field upon entering rural care; their goal was to help and serve, but they are unable to serve everyone. Unfortunately, the issue of insurance price-gouging and healthcare costs is too vast an issue to be covered in its entirety in this paper. The implementation of universal healthcare coverage could help to alleviate some of the financial strain felt in poor, rural areas (Horton & Johnson, 2010). Further research is required in order to full understand the impact that insurance policies can have on rural geriatric health.

Helping Rural Students

It is my opinion that healthcare students should receive interprofessional education and cover core concepts of geriatric medicine more in-depth throughout their training. Medical schools should also consider revising their admissions procedures to be more holistic in nature and allow for more rural students to engage with this higher education despite perhaps not being

afforded the same opportunities as their urban counterparts. One such example of this is Michigan State University's admissions process and their rural training program. MSU has emphasized their desire to recruit more rural students and even has a specific desire to train rural students on-site in rural communities while also educating them about the barriers faced by rural patients. When evaluating student applications, the university stresses the importance of recruiting students who excel in more areas than just academics. They want to recruit compassionate, hardworking, creative, and unique individuals that can help to revolutionize the field of medicine (MSU.edu).

While there is no clear evidence of widespread program admission bias against rural students, there are certainly less rural than urban applications submitted in proportion to population across the country (Hensel et al., 2007). However, there is literature which demonstrates that standardized tests, often required for college education, are geared towards urban students of higher socioeconomic status, giving them a competitive score advantage when applying to higher education (Beck & Shoffstall, 2005). Medical schools need to strengthen their advertising to draw in more rural students, and persuade those offered admission to accept the educational opportunity. Those looking to practice in generalist fields are typically more willing to work in rural areas, so schools should consider scouting these interested students early on (Rabinowitz et al., 2001).

In general, there needs to be increased curricular experiences, mentoring opportunities, financial support, and debt reduction for disadvantaged students hoping to pursue rural care (Hensel et al., 2007). It takes significantly longer for a family care physician, for example, to repay their massive educational loans when the average pay is lower in rural areas (Jaffe, 2015).

Specific enhancements could be further explored, including reimbursements, scholarships, improved loan forgiveness, and relocation aid (Rowe et al., 2016). Long term incentives such as these, that extend beyond just the repayment of student loans, could help to encourage professionals to work in rural areas and could increase rural retention rates. Mechanisms could include the "development of a National Geriatric Service Corps, modeled after the National Health Service Corps" (Rowe et al., 2016, p. 5). which provides loan repayment opportunities to healthcare workers who work in HPSAs.

There is one program that stood out to me in its efforts to support rural students. The Physician Shortage Area Program (PSAP) at Jefferson Medical College recruits competitive rural applicants who demonstrate the desire to work in rural areas. They boast an extensively holistic admissions process. Their program includes required rural training, clerkship, and residency, as well as an assigned faculty advisor with whom a student will discuss the difficulties of rural medicine. This program has been shown to promote a high retention rate, and has subsequently contributed greatly to the Pennsylvania rural workforce (Hensel et al., 2007).

There is a worsening lack of nurses and other medical professionals in elderly care, with fewer than 1% of nurses being formally certified in geriatrics (Rowe et al., 2016). Programs should also consider reducing the financial burdens to those specializing in geriatric medicine, because the cost and time required to pursue a career in geriatrics is much higher than to become a general practitioner (Hensel et al., 2007). The financial return is also lower, seeing as "fee-for-service" systems means that geriatric specialists see decreases to their income despite having likely completed more training than an ordinary PCP (Rowe et al., 2016). This lack of

reward is discouraging to those hoping to enter the field. Perhaps reimbursements for elderly clinical services could be utilized.

"Funding geriatric training programs, modifying standards of state licensing boards to require professional competence, investigate adequacy and appropriateness of current training, and implementing CMS requirements for geriatric competencies and dementia training" can help to improve the competency of medical students ("Addressing the Health Needs..," n.d., p. 18). The Institute of Medicine and the Partnership for Health in Aging states that the training of healthcare professionals in geriatric care is currently inadequate (Solberg et al., 2015). Changes must be made to reality first and foremost.

Cultural Appropriateness- QOL

Quality of life refers to one's mental, physical, social, and emotional well-being (Baernholdt et al., 2012). There are several studies that have been conducted comparing the subjective (opinion-based) and objective (concrete) quality of life experienced by both rural and urban elderly. In many cases, there is a disconnect between these two variables, as one's experienced reality doesn't perfectly line up with their true circumstances (Lee & Lassey, 1980). Urban elderly have long been shown to have stronger indicators for good objective QOL, but a weaker advantage when it comes to emotional well-being. In other words, one study comes to the conclusion that while rural elderly score lower in objective indicators of QOL (income, health services, etc), they often score as high or higher than urban elderly in subjective indicators, if somewhat paradoxically (Lee & Lassey, 1980).

In another study, rural seniors experience higher levels of social closeness, extended familial support, less fear of crime, and easier retirement processes that may counteract the

effects of lower objective QOL indicators (Lee & Lassey, 1980). It has also been insisted that older subjects had high quality of life levels, but rural seniors had lower levels of social functioning that urban seniors did (Baernholdt et al., 2012). This is likely due to the social isolation experienced by the aforementioned group, and the lack of public transportation readily available to the elderly. People in rural areas reported a higher number of chronic conditions, activities of daily living (ADL) function, memory problems, poverty levels, and mental health issues (Baernholdt et al., 2012). However, while the two groups' health care utilization was similar, urban elderly were more willing to stay in hospitals longer, despite their closer geographical proximity to hospitals themselves (Thorson & Powell, 1992) .

As with everything, there are some professionals who disagree with the aforementioned conclusions. They argue that in certain cases, urban elderly can often face rather hostile and unsupportive environments. Although cities offer improved modes of transportation, they can be equally isolating, disengaging, and vulnerable. This goes to show that the relationship between geographic location and QOL is not always clear (Phillipson & Scharf, 2005).

One study insists that as community size increases, subjective well being decreases, and health and income increase. Overall objective health and QOL were lower for rural seniors (Lee & Lassey, 1980). Another difference between the two groups is that urban elderly are more likely to see a care provider for small ailments, while rural elderly tend to be more independent, self-reliant, and personally autonomous. Despite a longer distance to medical care being a deterrent in objective terms, many rural elderly report not being bothered by travel distances they face (Thorson & Powell, 1992) , despite it being considered a barrier to healthcare.

Health behaviors refer to individual health care utilization and physical activity (Baernholdt et al., 2012). There are many potential reasons behind ineffective rural healthcare and healthcare cost inequities. In one study, predisposing factors such as personal attitude, beliefs, and sociology-demographic differences were found to be negatively correlated with delayed healthcare delivery. In addition, improving healthcare accessibility, financing options, socio-economic support, and public health information dispersal can alleviate healthcare inequality (Yamada et al., 2015). The study utilized what is called a "precede-proceed" model that intertwines experimental and theoretical frameworks to highlight actions and consequences. For example, a 10% increase in enabling favors such as improved insurance coverage or increase in income are associated with a 1% increase in financing options, as well as an increase in healthcare seeking behavior (Yamada et al., 2015).

Fully understanding the differences in mindset between rural and urban elderly groups can help advise fully-informed policy-making to provide the best culturally appropriate care to the two groups. Medical Anthropology is an important tool to utilize in this endeavor. Professionals in this field seek to understand how people in different cultures and social groups explain cases of ill health. Similarly, Cross-Cultural Gerontology explores the ways in which biological and social aging are entirely separate entities which both explain health behaviors (Helman, 2014).

Food Deserts

One's environment can have an important impact on one's health behaviors. Rural areas tend to have higher rates of obesity, less exercise, less access to healthy and affordable foods (Seguin et al., 2014). It was discovered that lack of free time, lack of easy access to affordable

exercise, lack of healthy food options, and social boundaries were all common nutrition barriers. Diet interventions that utilize beneficial oral supplements have also been linked to a decreased risk of age-related health risks and hospital admissions ("Addressing the Health Needs..," n.d.). Junk food is much cheaper than nutritious meals and is faster to consume. A lack of time and sedentary obligations leads many to under-exercise. Social boundaries can influence behavior in negative and positive ways, with stigmas attached. For example, social events can encourage unhealthy eating, or overeating. While it is possible for people in small, tight-knit communities to encourage each other to participate in health-promoting physical activity, oftentimes this is difficult for isolated, rural elderly.

Food is one of the primary determinants of health, so if rural seniors do not have access to healthy foods or exercise opportunities, they may be more susceptible to poor health (Seguin et al., 2014). Food deserts refer to "communities or neighborhoods where residents are unable to purchase nutritious food easily due to distance from a market, price, lack of transportation, and/or absence of healthy options" ("NRHA Policy Documents," 2015, p. 6)

The reasons for lack of exercise and healthy eating reflects trends seen in urban areas. In order to improve rural health, policy-makers and activists must address both social and environmental barriers in order to fully support individual health, nutrition, and physical activity improvements. There are certain health and exercise programs that provide free live online classes and workshops for those over 65, such as Silver Sneakers (Silversneakers.com). Several states have worked to ensure that seniors receiving public food assistance have access to farmer's markets ("NRHA Policy Documents," 2015). Initiatives such as these should be further

expanded, since it's important to promote active living, accessible healthy foods, and social support.

Streamlining Care

Cultural Competency Training

It's important to place emphasis on training healthcare workers to be conscious of the socio-demographic backgrounds of their patients. Healthcare providers should attend cultural competency training to improve collaboration with community health workers and patients (Horton & Johnson, 2010). Being aware of the cultural differences that may be prevalent in a rural community can help to reduce potential health disparities. For example, if providers are not respectful of a patient's beliefs and rituals, the patient may be more likely to distrust professional advice and attempt self-medication. The same applies if the provider is an ineffective communicator, or doesn't first establish rapport with the patient. This is especially important when working with minority groups (Horton & Johnson, 2010).

Effective communication with those from different cultural and socio-economic backgrounds can allow for appropriate and successful chronic illness prevention strategies to be implemented. Healthcare providers should be trained to demonstrate appreciation, rather than frustration, for the differences between their patients. For example, in the LEARN Model, providers are made aware of their potential biases. This cultural competency helps to reduce health disparities (Horton & Johnson, 2010).

In addition to cultural competency, healthcare professionals should also be trained in structural competency. Structural training "requires clinicians to see and act on structural barriers to health, to adapt imaginative structural approaches from fields outside of medicine, and to

collaborate with disciplines and institutions outside of medicine" (Hansen and Metzl, 2016, p. 1). This will allow care providers to better adapt to the needs of their patients, and will help them combat the commonly issues facing rural seniors.

Paths being Pursued

There are many changes to be pursued through governmental, healthcare systems, nonprofit, faith-based organizations, and business pathways (Horton & Johnson, 2010). Specifically, it is possible to sponsor community outreach programs designed to target the healthcare deficits experienced by rural geriatric patients. For example, the Department of Agriculture's Distance Learning and Telemedicine Program was awarded "$20 million in grants to providers and institutions to provide rural Americans access to medical services and improve educational opportunities" (Jaffe, 2015, p. 6) North Dakota boasts care facilities that offer scholarships and signing bonuses to LPN's and RN's designed to help them pay off their student loans. This has increased job retention rates in the area, seeing as ⅔ of the state's nursing homes employ temporary contract RN's (Jaffe, 2015). Meanwhile, the Kansas government encourages its communities to involve "local government, the aging network, business, community leaders, and volunteers [...] to encourage a population approach to eldery policy and services" ("NRHA Policy Documents," 2015, p. 6).

Several nationwide programs actively work to support the elderly generation. The Old Americans Act outlines various approaches to policies and services designed to promote health and access to healthcare among seniors ("NRHA Policy Documents," 2015). The American Association of Retired Persons (AARP) campaigns to involve elders in their communities, while spreading awareness of the needs of seniors ("NRHA Policy Documents," 2015). The Eldercare

program in Canada is a "publicly funded program that facilitates access to community care services and acts as a single-entry point to community care for elder services" (Horton & Johnson, 2010, p. 6). The US Department of Human Services Medicare-Medicaid Coordination Office is responsible for serving dual-enrollees and has been charged with eliminating regulatory barriers and improving care coordination ("Centers for Services," n.d.)

Volunteer efforts (such as the Foster Grandparents Program, Retired and Senior Volunteer Program, and the Senior Companions Program) have long waiting lists, and only serve a few people (Rowe et al., 2016). Regardless they are beneficial initiatives that bring meaningful improvements to the lives of the seniors involved. Perhaps it could be possible to reengineer federal programs such as these to reach a wider audience and serve more of the elderly population.

Streamlining Care Models

It is important to focus less on short term solutions and shift focus longer term solutions, prevention, and care management. There are several promising modes of streamlining care through holistic approaches, all of which have been proven to be effective in reducing redundancy and generally improving geriactric care. Improving care coordination, collaborating with community health workers, and implementing case management have shown to be especially effective. Several models seek to improve the quality, efficiency, and coordination of care.

New delivery models that seek to alleviate some of the strain experienced by the current healthcare system and its patients are currently being explored ("Addressing the Health Needs..," n.d.). Examples include freestanding emergency departments or other similar arrangements in

which existing resources are reallocated to suit needs. Community Paramedicine refers to setups in which EMTs and paramedics operate in expanded versions of their roles to aid in healthcare delivery speed and efficiency ("Healthcare Access in Rural Communities," n.d.).

The Community Healthcare Worker Model aids in healthcare access by using professionals in the field as liaisons and advocates of patients. They serve as system navigators and peer coaches: helping patients with chronic conditions learn how to seek out and pay for appropriate care in an otherwise complicated system ("Healthcare Access in Rural Communities," n.d.). The healthcare workers can also ease transitions across care and clinical settings ("Addressing the Health Needs..," n.d.). There are additional models that deliver "team based primary care in the home for people with chronic conditions" (Rowe et al., 2016). The Case Management Model of Care assigns case managers to uninsured and underinsured patients for the first six months after they enter their healthcare system. The case manager teaches them to navigate their insurance system, which ensures continued care and reduces the risk of patients falling through the cracks (Horton & Johnson, 2010). This is rather similar to the Community Healthcare Worker Model in that patients are guided through the hurdles associated with healthcare. These kinds of models are beneficial because prevention efforts are cost effective and prevent elderly patients from slipping through the cracks.

Transitional Care Models consist of nurse-coordinated team models that center around elderly patients at high risk of developing chronic diseases. Although not in wide practice yet, trial clinics funded by the NIH reported promising levels of success (Rowe et al., 2016). Later in this essay, an example of this model will be discussed in further detail.

Online Telemedicine

Access to healthcare can be limited for those who require assistance with ADLS or IADLS (instrumental activities of daily living) (“NRHA Policy Documents,” 2015). Throughout the COVID-19 pandemic, we have seen the uses and applications of online telemedicine flourish. This has allowed patients to receive timely healthcare without risking exposure and infection. This has proved especially useful for elderly patients, who are at an increased risk of contracting the virus. In general, online visits allow for rural geriatric patients in particular to be evaluated by specialists in a timely manner. This is especially important in cases where elderly patients live a considerable distance away from specialist care, if there are long wait times for a local specialist, or if the patient does not have reliable transportation. In the case of elderly patients, a case manager or community healthcare worker could step in to ensure that the patient has adequate access to internet services and technology knowledge/capabilities (“Healthcare Access in Rural Communities,” n.d.).

Outreach

Healthcare access services should be expanded, because medicine is not equally accessible to all. Viewing it as such allows patient needs to go unaddressed. It is important for healthcare providers to continue properly referring patients to pre-existing services which allow them to pursue the best healthcare. The Eldercare Locator online service can also be used to find local agencies and organizations that offer numerous services for the elderly. In addition, clinics contacting the local county social service agencies on behalf of patients can help them find reliable transportation services to and from visits (211.org) (“Rural Aging Introduction,” n.d.) . Computer-based forms of patient education are utilized to improve communication and raise awareness of relevant community programs (Horton & Johnson, 2010). State Aging and

Disability Resource Centers are intended to connect seniors with the services available to them and coordinate the care and support they need ("NRHA Policy Documents," 2015).

Delivery services for prescriptions should be expanded upon, which would allow rural geriatric patients to receive their medications in a timely manner despite a lack of transportation. Prescription delivery services can sometimes lead to lower copays as well; the North Carolina Mobile Medication Program is an example of a holistic approach that simplifies care instructions through assessment and home visits. Nurses identify any potential barriers the patient may have to following medical instructions, and then trained technicians help to build the patient's skillset ("Better Government Competition, n.d.). Using existing public transportation requires physical capability and mental acuity. Thus, transportation services for in-person appointments can be expanded to be better accessible for those who most need it. This is an important investment because 34% of those on Medicare had difficulties finding services to be transported to appointments (Horton & Johnson, 2010).

With the current healthcare and Medicaid/Medicare systems being as complicated as they are, successfully enrolling in insurance, making appointments, and following medical advice can be unmanageable. Many rural geriatric patients experience difficulty with system navigation and feelings of loss of control. Those with lower levels of education, (more common in rural areas), may find this even more daunting (Horton & Johnson, 2010). Community-based Care Transitions Programs are designed to "improve the quality of care transitions, reduce readmissions for high-risk Medicare beneficiaries, and document measurable savings" ("NRHA Policy Documents," 2015, p. 5). Utilizing simplified treatment instructions, proactive case

management, and active patient collaboration can help to ensure that geriatrc patients feel included in their care plans and valued in their health decisions.

Improving routine screening methods can help to alleviate rural healthcare deficiencies. This is being accomplished by "ensuring that national clinical guidelines adequately include evidence-based screening procedures for age related diseases, expanding public awareness campaigns to drive early detection screenings, eliminating Medicare beneficiary copays for preventive screening procedures, and expanding community health programs that provide access to screening in low income communities" ("Addressing the Health Needs..," n.d., p. 14)

Lastly, emphasis must be placed on making communities more elder-friendly: allowing the elderly to better fulfill their own needs such as independence, socialization, and health even in rural areas. ("NRHA Policy Documents," 2015). This can be done by addressing basic needs, promoting social and civic engagement, and promoting the formation of meaningful connections between community members (Feldman & Oberlink, 2003). Specifically, successful aging in place requires there to be opportunities for financial security, healthcare, social opportunities, housing (and accessibility), transportation, and safety (Feldman & Oberlink, 2003).

Comprehensive Family Care Training

A lack of familial support can make navigating healthcare and transportation difficult for seniors, especially in socially isolated rural areas (Horton & Johnson, 2010). For this reason, there is a growing need for home health care. However, it is increasingly difficult to staff these services in rural areas due to issues with insurance coverage, workforce shortages, and physical isolation. Rural Medicare recipients also often have limited access to hospice services ("Healthcare Access in Rural Communities," n.d.).

In order to aid in the aging-in-place process, there are an increasing amount of programs intended to train a person's spouse or family member to help care for the patient. For example, North Dakota has a program which trains a low-income senior's family members to properly administer at-home care (Jaffe, 2015). For those who are fortunate enough to be in close proximity to family members, this can help to alleviate some of the difficulty in seeking home-health care.

Alternatively, nursing homes are an option for those whose needs exceed the family's capabilities, or who do not have familial support. While these facilities can offer high quality care, they also cost many thousands of dollars per year (Wood, 2013). This cost is unmanageable for some, even with the help of insurance. Besides, while the homes offer structured living, community, and daily care, they also come with a loss of freedom and independence.

The Role of InterProfessional Collaboration

Physicians trained in high-resource urban areas may find themselves ill-equipped or uncomfortable when beginning work in areas without plentiful resources and access to high-end medical equipment. It's been found that specialty-driven, urban models of medical education don't work as effectively in rural areas, since the core principles may not be transferable. The lack of coordination between PCP and geriatricians can impede care, hence the need for IP training. IPE, or Inter-professional Education, refers to "when two or more professions learn with, from, and about each other in order to improve collaboration and the quality of care" (Zhang et al., 2011, p. 2).

Normally, many patients report receiving care that is "uncoordinated, fragmented, and unable to meet their needs" (Rowe et al., 2016). In addition, conflicting medical advice between

care providers can lead to worsened health. All issues of higher care costs, lack of timely referrals, less advanced care planning, and less patient involvement can be helped by effective IP collaboration. Through doing so, patient care coordination and positive health behavior education can be promoted ("Healthcare Access in Rural Communities," n.d.).

Chronic health conditions can be best managed by a collaborative case approach and regular follow up, which can be achieved through team-based care coordination. As discussed previously, primary care is arguably the most important aspect of rural geriatric care, as PCPs are often the first entry point to the health system. Therefore, if we can reform and streamline these services to encompass IP values, we can further improve a patient's healthcare experience. Besides, "elders benefit with the best care possible when congruence exists between standards of professional practice and licensure" ("NRHA Policy Documents," 2015, p. 3). The WHO and National Center of Interprofessional Practice and Education are vocal supporters of making IP care widespread (Solberg et al., 2015). Additionally, the current number of geriatric specialists is roughly only half the need, hence the need for IP cross-training to cover the shortages (Rowe et al., 2016).

Rural PCPs often face barriers that may lead to fragmented and inefficient care delivery. Incorporating rural team-based care and utilizing professionals from multiple fields can help to streamline services and promote creativity, teamwork, communication and multi-directional thinking strategies ("Addressing the Health Needs..," n.d.). A coordinated delivery of primary and long-term care can can help alleviate some of the strain experienced by rural healthcare providers and their patients. IP coordination reduces risk of negative drug interactions, fragmented care, and preventable hospitalizations ("Addressing the Health Needs..," n.d.).

Access to palliative care for patients through an interdisciplinary team can alleviate stress and medical contradictions (Rowe et al., 2016).

Formation of IP Teams

Education

Many of these IPE goals can be achieved through the implementation of effective IP educational programs. There are several notable examples that deserve recognition. The Rural Interprofessional Program Emergency Retreat (RIPPER) in Australia uses IPE learning and simulation practice in order to prepare various healthcare students for effective rural care. Students work in small IPE teams to practice problem solving and honing their own professional skills while maintaining a strong focus on a holistic view of health (Whelan et al., 2009). This program allows for students to develop a better understanding of the roles occupied by each profession while also drawing awareness of the importance of collaboration when serving patients. It places particular emphasis on the social outlook on health. The simulation education utilized was intended to create a realistic clinical context in which the students could train. The problems presented in the simulation challenged the expertise of each healthcare student so that they would play off each others' strengths in order to succeed. Most students reported that this program was helpful in improving their delivery of care and interprofessional collaboration skills (Whelan et al., 2009).

The University of Florida has an intensive day program offered to their healthcare students which incorporates geriatric care learning opportunities with real life care studies. The students undergo training with a nurse educator, clinical pharmacist, palliative care physician, and bioethicist in order to identify situations that call for interprofessional collaboration and how

best to collaboratively solve these problems. Most attendees reported that this boot camp helped them along their journey to become an effective care provider (Solberg et al., 2015).

Program Utilization

There have been several clinical models, both in theory and in practice, that involve interprofessional geriatric engagement. One such model trains family medicine residents in IPC and involves a clinic that boasts professionals from medicine, psychology, social work, nursing, and pharmacy that work collaboratively to provide coordinated care to elderly patients. Their physical closeness greatly shortens referral times and improving patient outcomes while also allowing for learning opportunities for each professional (Hallei-Tierney et a., 2018). Alternatively, Interdisciplinary Acute Care for Elders (ACE) models have been shown to lead to reductions in functional decline and emergency visits. ("Addressing the Health Needs..," n.d.).

The Senior Collaborative Care Program in Canada incorporates a model sharing geriatric responsibilities between multiple professionals. The team consists of primarily NPs, FPs, and RNs. In addition, the team has a dietician, pharmacist, social worker, and visiting geriatrician. This structure allows for uninhibited interactions and learning opportunities between team members, as well as group problem solving (Moore et al., 2012). In fact, many of these learning opportunities were found to be bi-directional, meaning each team member was both contributing knowledge and advice while also learning from the group. This program is a good example of a Transitional Care Model (Rowe et al., 2016).

In this scenario, the nurses were utilized to their full potential while the visiting geriatrician was in appropriate circumstances (not excessively) (Moore et al., 2012). This is especially important considering the short supply of geriatricians nationwide. The geriatrician

was used for diagnostic clarifications at the nurses' request as well as when determining long term condition management strategies. Additional consults were only conducted if necessary. In this program, the roles and expectations of each team member were thoroughly defined in order to eliminate needless overlap. The role of the NP also involved being a case coordinator for the incoming patients. The IP teams formed 'plans of attack' with each other during monthly meetings, and follow up arrangements were negotiated between the IP team and the community health workers and family caregivers (Moore et al., 2012).

Whereas most IP opportunities do not involve the geriatrician working at the site, this in-person model eliminates fragmented and slowed communication. This allows for direct learning and collaboration between professionals, as well as shared goal planning. Having a visiting in-person geriatrician is much more efficient than having to schedule them on a phone consult. In addition, offering creative scheduling opportunities that allow certain clinical services outside of normal hours can allow patients working low-wage jobs seek to care ("Healthcare Access in Rural Communities," n.d.).

In order to fully utilize IPE, professionals in rural areas should be utilized at the uppermost domain of their licensure. This way, by working at the top of their licensure, clinicians can cover some of the practical shortages prevalent in rural areas ("Healthcare Access in Rural Communities," n.d.). Specifically, leveraging the unique skill-set of nurses and other advanced-practice providers can alleviate the strain on rural PCPs ("Addressing the Health Needs..," n.d.). If the patient needs care that is beyond the scope of their initial provider, the provider must elevate the concern and consult with another professional. Both providers are then considered accountable and responsible for the patient ("NRHA Policy Documents," 2015).

For example, nurses who are allowed to work at the full scope of their practice "manage complex patients both in the hospital and [...] after discharge. This intensive collaborative care management can produce a significant decline in ED visits and lower health care costs" (Jaffe, 2015, p. 5). Guided-care nurses would work in partnership with PCPs to deliver coordinated physical and mental healthcare for depression and other multi-morbid conditions in a cost-effective manner ("Addressing the Health Needs..," n.d.). Clinics must also focus on increasing the number of nurse educators, increase financial assistance, and expand nursing workforce development programs ("Addressing the Health Needs..," n.d.).

IP collaboration allows care providers to identify early on if a patient is declining and allows for proactive, not reactive, care to occur. Each member in an IP team can assert their unique knowledge, overcome patient barriers, and work against team conflicts (Hallei-Tierney et a., 2018). In fact, training programs exist to help break the communication barriers between NPs and PCPs, such as the Chief Resident Immersion Training Program which prepares residents to care for older adults. Participants must develop an interdisciplinary quality improvement (QI) action plan in order to complete the program (Gnanasekaran, 2018).

Conclusion

Collaborative education implementation, in addition to patient outreach, can be utilized to improve rural geriatric health care access, leading to improved outcomes and patient-provider relationships. As this literature review reveals, the issue behind the shortcomings of rural geriatric care is layered and complex. Further research is needed in order to determine the most culturally and fiscally appropriate ways in which to improve healthcare access and delivery for the nation's aging populations.

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