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REDUCING MENTAL HEALTH ISSUES IN THE ELDERLY: THE EFFECTIVENESS OF A HOLISTIC MODEL OF CARE BASED ON THE HOPES

has been read by the undersigned. It is hereby recommended for acceptance by the faculty with credit to the amount of 3 semester hours.

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DEDICATION

I dedicate this work to my family. First, to my husband, Stephen, who made this journey possible. To my children, Kaylyn, Zac, and Grason, and to my niece Megan. You are my joy. To my mother, Darla, and my sisters, Dayna and Stacey. The three of you raised me and are therefore responsible for my weirdness. And last, to Jeffry, because I can.
ACKNOWLEDGEMENTS

I would like to thank the members of the committee for their guidance and unending support. Thanks to Dr. Elizabeth Keavney, who not only kept me focused, but modeled how determination and hard work can result in success. I would also like to thank Dr. Christi Bartman for believing in me, and for providing guidance throughout this process. Both of you are amazing examples of strong female leadership and highlight the excellence in teaching found within the American Public University System.
The purpose of this paper is to test the hypothesis that policy making decisions based on a holistic model of care such as HOPES programming will result in more effective standards than telehealth services in reducing mental health issues in the elderly in both rural and urban areas. The paper outlines the method in which this hypothesis was investigated, including an analysis of aging statistics, legislative behaviors that include budgetary trends after the passage of the Affordable Care Act, and industry standards on care models both in the United States and abroad that provide the most effective methods of reducing mental health issues in the elderly. A review of both HOPES programs and telehealth delivery systems was given, including the impact of Medicare and Medicaid reimbursement systems, and an analysis of the impact of reduced budgets in comparison to an increase in consumption among this population. This paper
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concludes with a discussion regarding the implications of HOPES policy implementation as the most effective and ethical means of policy decision making regarding mental health service delivery models for the elderly because of both the subsequent cost savings found through ongoing, preventative services within the HOPES model, and through the ethical standards of care within collaborative care models found to improve the quality of life for elderly patients.
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I. Introduction

The elderly population in the United States (U.S.) is increasing at a significant rate, with those over the age of 65 expected to climb to around 21.7% of the total population by the year 2030 (Administration of Aging, 2016). A rise in the elderly population translates into more spending in health care dollars overall; for every $3,628 spent on health care for a child, an elderly person spends around $18,424 (Centers for Medicare and Medicaid Services, 2014). The differences in dollars spent on health care for the elderly are complicated by many issues that include comorbid medical conditions that can result in misdiagnosis of a mental health condition, or lack of any diagnosis of a mental health condition overall. According to a longitudinal study on aging around the world by the World Health Organization (2016), many elderly peoples have undiagnosed mental health conditions due to disparities in health care and cultural attitudes regarding the aging process, largely due to depression associated with aging or comorbid health conditions such as dementia or pain issues. Considering that the elderly population have the second highest rate of suicide in the U.S., any weaknesses in the diagnosis process can have fatal implications.

Fiscal implications can also be associated with a rise in the elderly population, as health care is expected to consume around 20% of the U.S. Gross Domestic Product (GDP) by the year 2023 (World Health Organization, 2016). When looking at the Federal budget, health care funds account for about $938 billion, or 25% of the budget. These costs include Medicare, Medicaid, the Children’s Health Insurance Plan (CHIP) and marketplace subsidies (Affordable Care Act insurance marketplace), with Medicare consuming around 2/3 of the entire health care budget, or about $546 billion (Centers on Budget and Policy Priorities, 2016). If Social Security payments are added to this total, another $888 billion can be added to the aforementioned budgeting total. Looking at the amount spent on care at present, any increases in the elderly population become a
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matter of dire importance, as shown in a report submitted by the Congressional Budget Office (CBO) predicting fund insolvency by the year 2022. Attempts to stave off funding shortages, such as the passage of the Bipartisan Budget Act of 2015 that transferred a portion of payroll tax revenues from the Old Age and Survivors Insurance (OASI) fund to the Social Security Disability Insurance (DI) fund through 2018, are not enough to adequately fund health care, to include mental health care programming, for the current population, much less a growing elderly population dependent on health care dollars (Congressional Budget Office, 2014). In short, no concrete measures have been enacted to solve the budgeting problems associated with increased pressures on the nation’s health care programs. Instead, stop-gap piecemeal policies have been passed among different agencies without comprehensive planning or cooperation.

The lack of coordinated health care policy regarding care for an aging population negates any policy success, especially when considering the evolution in health care payment systems. Under the Affordable Care Act (ACA), payment systems have been mandated to move from a fee-for-service model to a pay-for-performance model (Baird, 2016). However, government policy remains behind their own mandated system, causing confusion and gaps in health care policy and reimbursement systems (Baird, 2016). The disparities apparent in the mandates laid out by the ACA and within the existing payment models have led to serious fiscal and ethical disparities in mental health care programming for the elderly population. While the ACA reduced the gap in mental health care services for the elderly population through such measures as yearly health screenings that include mental health through their Primary Care Physician (PCP), overall mental health services for the elderly have not improved significantly since the passage of the ACA (Rowe, Fulmer, & Fried, 2016). Because of the serious gaps in mental health services for a portion of the population expected to put significant fiscal pressures on society in the coming
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decades, it therefore becomes necessary to consider the type of service delivery model that will prove to be the most effective in reducing mental health issues in the elderly through its ability to operate within accepted policy standards intrinsic to public administrative theory, including: effectiveness, efficiency, equity, ethics, political feasibility, social acceptability, administrative feasibility, and technical feasibility (Denhardt & Denhardt, 2015). Within the use of these standards, the research project was focused on testing the hypothesis whether a more holistic model of care linked to improving the lives of the elderly through a collaborative care system such as Helping Older Persons Experience Success (HOPES) programming that includes education and nurse-led team care is more effective than singular programming models such as telehealth services in reducing mental health care issues in the elderly (65+) in both rural and urban areas.

Central to the hypothesis of best modeling for mental health care services for the elderly are explanations of both Medicare and Medicaid policy. The Centers for Medicare and Medicaid act as the workhorses of health insurance programming in the U.S., with Medicaid acknowledged as the largest provider of national health insurance to low-income participants, with over 70 million recipients. Medicaid provides coverage for both low-income populations as well as the majority of nursing home patients in the U.S. (Paradise, 2015). In terms of care for the elderly, Medicare is the largest and primary source of health care coverage for the elderly population. While it is not the goal of this paper to explain the multifaceted programming models of Medicare and Medicaid, as both are complex institutions intertwined with federal mandates and individual state programming models, it is necessary to provide a basic explanation of coverage of each model contained within the scope of mental health services both at the federal and state level regarding payment systems.
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Medicare is a federal program for health insurance that can be defined as a single-payer insurance program that contracts services out to about 30-55 companies (The Kaiser Family Foundation, 2015). Medicare is mainly a program for the elderly, with a uniform basic plan of coverage for those who enroll at age 65 and have contributed for at least 10 years to payroll taxes. Medicare is funded through two federally held trust funds; The Hospital Insurance Trust Fund (HI) and the Supplementary Medical Insurance Trust Fund (SMI). Both of these trust funds receive monies through several funding avenues that include general revenues, payroll taxes, and beneficiary premiums (The Kaiser Family Foundation, 2015). Basic Medicare, (Part A) pays for about 80% of health care expenses, leaving participants responsible for about 20% of health care costs. Participants that are financially able may choose to purchase additional insurance coverage through state Medicare insurance plans or through private insurers within specific coverage restrictions (Centers for Medicare and Medicaid Services, 2016b).

Medicare reimbursement policy regarding mental health care services for the elderly plays a significant role in determining what, if any, mental health care services occur. Under Medicare after passage of the ACA, collaborative care models have been encouraged through changes in reimbursement policies regarding both physical and mental health services. Mental health diagnoses are required to originate from a patient’s primary care physician (PCP), and any care (including prescription medications) or referral must be provided by the PCP in order for Medicare to render payment. The ACA further allowed Medicare to cover yearly wellness screenings and preventative screenings upon enrollment to basic plans as a means to reduce mental health care disparities for the elderly. If a mental health diagnoses is given, both inpatient and outpatient mental health services are covered under a basic Medicare plan with strict consideration of reimbursement. Outpatient care is limited to specific mental health care
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providers with therapy allowed within narrow parameters, and reimbursement is limited to licensed psychiatrists, clinical psychologists, psychiatric specialists, and social workers within therapy, group therapy and patient education environments. Inpatient care is limited to 190 days under a coverage plan that does not cover room upgrades or toiletries for elderly patients (Centers for Medicare and Medicaid Services, 2016b).

Medicaid is more complicated than Medicare not only because recipients include such a diverse population, but because it is split between state and federal resources. Unlike the federal budget, most states are required to balance their budgets, which places specific restrictions of programming across the board. Further, because states receive federal funding for Medicaid programs, Medicaid is both an expenditure and a revenue within state budgeting models (The Kaiser Family Foundation, 2016). In recent years, states have struggled not only to balance their budgets, but to meet the increased needs of their populations, causing many states to rely more upon Federal grants for program funding, making Medicaid the largest payer of mental health care services in the U.S. (Medicaid.gov, 2016). For every dollar a state spends on Medicaid, they can receive matching funds from the Federal government depending on spending calculated under the Federal Medical Assistance Percentage (FMAP), and also upon state expansion of Medicaid programming under the ACA. In order to determine state funding amounts, the FMAP formula is used to determine how much an individual state qualifies for under the Medicaid program. The FMAP calculates the average per capita income of a state against the national average to determine funding based on the following formula:
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Federal Share:

\[ \text{FMAP} = 1 - 0.45 \times (\frac{\text{State Per Capita Income}^2}{\text{U.S. Per Capita Income}^2}) \]

State Share:

\[ \text{State Share} = 0.45 \times (\frac{\text{State Per Capita Income}^2}{\text{U.S. Per Capita Income}^2}) \] (Peters, 2008).

While states develop and run their own Medicaid programs, there are certain requirements that must be met in order to receive Federal funding. The ACA made mental health care an essential health benefit and it required equal access to mental health care as to physical care (Bartels, Gill, & Naslund, 2015). The ACA attempted to require states to expand their Medicaid programs but was eventually found to be an intrusion upon state’s rights, leaving states the ability to determine their specific Medicaid programs (Rosenbaum & Westmoreland, 2012). Regardless of individual state Medicaid plans, the ACA did require certain changes in all Medicaid systems that mimic the collaborative care modeling found in Medicare programming. The ACA required states to update and simplify their enrollment processes, to upgrade their delivery and reimbursement policies, and to move their Medicaid programs to community-based care (McGuire, 2016).

Medicaid has specific guidelines on what mental health services are covered and what are not. Like Medicare, Medicaid now includes a depression screening, but it has stricter guidelines on how and when it can be done. As with Medicare, it must be done in a PCP setting, but time limitations of 15 minutes are attached to any depression screening. Further, unlike Medicare, Medicaid allows for the screening to be done and the results translated to the PCP for evaluation. While more health care workers are allowed to provide mental health services under Medicaid
than allowed under Medicare, elderly Medicaid recipients are restricted from Geriatric day care programs, transportation of meals, telephone services, and interpretation or explanation of results of diagnoses under Medicaid reimbursement systems (Medicaid.gov, 2016).

II. Literature Review

Mental health issues are noted to affect one in five elderly persons (World Health Organization, 2016). A review of the literature regarding reducing mental health care issues in the elderly through a comparison of Helping Older Persons Experience Success (HOPES) policy to the more mainstream telehealth policy is important when put into the context of the rapid growth of the elderly population. Current policy regarding the mental health of the elderly is disjointed and lacking in comprehensive programming, but can be analyzed through several themes that include HOPES programming, telehealth services, policy, and payment systems.

HOPES

As HOPES programming is central to the hypothesis as the most effective means of reducing mental health issues in the elderly, it makes sense to anchor any literature review on the body of work surrounding HOPES policy. Beyond the initial study, no follow-up analysis under the HOPES name was conducted, leaving the work completed by Pratt, Bartels, and Mueser (2008) with unrealized potential as a model in reducing mental health issues among the elderly. While their study serves as the touchstone for a holistic model of care for a specific portion of the elderly population suffering from significant mental health diagnosis that could be applied to the general population, it stands alone in its methodology of including specific types of medical staff.
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working cooperatively to build patient skills while providing a whole body model of ongoing care. The study was successful in maintaining retention of participants throughout the study and in proving that collaborative, skill building models of care were useful in reducing mental health issues in the elderly. While a collaborative model of care focusing on both skill building and coordinated care was the basis of the HOPES study, it lacked substance in how to apply HOPES programming to a broader patient base, and did not once delve into the cost or payment system implications of initiating such a system (Pratt, Bartels, and Mueser, 2008). Subsequent studies picked up the idea of collaborative care models, but were rebranded under patient centered health care and concentrated more on caregiver training and patient education. Levinson, Lesser, and Epstein (2010) discussed the evolution of health care and concluded that both caregiver and patient would benefit from learning communication skills that would strengthen the bond of understanding and interaction between each. They further deducted that such skills were essential in positive goal outcomes assigned through the Affordable Care Act (ACA) that called for better primary care systems (Levinson, Lesser, & Epstein, 2010).

The ACA altered the conversation about patient centered care by incorporating some aspects of the HOPES model through the mandates regarding collaborative care. Surry M. Alang (2014), in attempting to understand the correlation between sociodemographic factors and unmet mental health care, concluded that while the ACA was a positive factor in increasing mental health care for the overall population, it did not sufficiently raise the standard of care for those seeking mental health services. Alang further determined that a variety of sources were necessary in addressing disparities in mental health care services, and focused on the creation of patient-centered medical homes as a means to increase health care services in general. Noting that primary care givers have been tasked with the brunt of diagnosing mental health care, Alang also
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argued that beyond the collaborative care model of the patient centered medical home, was the need to include community institutions such as the church in any care policy. While Alang was focused on ways to reduce stigma surrounding mental health care for the general population, his ideals give value to the basic principles of HOPES policy in that it is through a collaborative care system with a stable net of support that mental health issues will be reduced (2014). Subsequent work by Jones, et al. (2015) serves as a reasonable follow up to Alang’s study, in that they build upon his work through serious discussion of the limitations of the ACA in building patient centered medical practices capable of reducing mental health issues in the elderly. Jones et al.’s work centered on the ACA’s placement of the burden of care on primary care givers without giving them adequate training and funding authority to sufficiently deliver patient centered care. While the study focused on pointing out the weaknesses of primary care givers within the patient centered model, they did conclude that patient centered care results in more positive outcomes in general in reducing mental health issues in the elderly. However, the conclusion was lacking in concrete ideals concerning policy creation that would strengthen the patient centered model in relations to HOPES programming (Jones, et al., 2015). Some researchers, such as Helen Adamopoulos (2014), have also concluded that the collaborative care environment is successful because of the inclusion of a variety of health care workers previously marginalized from mental health care models for the elderly due to Medicare restrictions. Adamopoulos further determined that little effort would be needed to adjust Medicare policy in order to adopt a holistic model of care such as HOPES programming, and still result in billions in cost reductions, as Medicare currently spends around $30 billion for depression and dementia alone (Adamopoulos, 2014).

Any research for improving the health care model through a more interactive model of care benefits from the inclusion of a variety of works, especially if those works include models of
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care from countries with limited resources. Singh and Upadhyay (2014) substantiate models based on HOPES policy through comparisons of elderly care in India and abroad. They begin with the supposition that a holistic model of care should be the norm for any elderly population regardless of nationality, and proceed to describe the complications of mental health care diagnosis in the elderly due to a variety of comorbid conditions that often mask mental health issues. Sing and Upadhyay’s work is important when discussing mental health programming as it highlights the complications associated with creating viable mental health policy for the elderly and further indicates that one-dimensional programming is insufficient in reducing mental health care issues. Sing and Upadhyay also touch upon the need for increasing both the education levels and the number of medical providers specializing in gerontology, but weaken their position by focusing on the need to strengthen policy surrounding family caregivers. While the notion of family caregivers highlights the cultural differences between the U.S. and India, like the singular policy drive in the U.S. to increase telehealth policy over more multi-faceted policy planning, Sing and Upadhyay try to streamline goal outcomes into quantifiable programming that weakens their basic supposition of holistic care models. Within the paper is a strong argument for creating preventative programming, and for placing psychologists at the forefront of innovative care for the elderly, but it loses global viability when centered on family centered solutions (Singh & Upadhyay, 2010). This work offers a counterpoint to the Canadian model of care, which has been noted as having more resources and a more inclusive health care system than the U.S.

Analysis conducted by Nour et al. (2013) concludes that service programming similar to the HOPES study is essential in reducing mental health concerns in the elderly population. While the paper does not follow the steps included in the HOPES study, the results mirror the HOPES results in that they found collaborative health care teams led by psychologists as a critical and
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necessary component to improve elderly mental health concerns. The authors further found that education and social interactions were integral to the overall well-being of a population that appears to deal with depression and suicide at a higher rate than previously studied. What was interesting about the research was that while Canadian health care covers a larger portion of their population with more well-rounded programming and options, disparities in mental health services for the elderly were as much of a problem for them as in the U.S. What this suggests is that the answer to better mental health services for the elderly lies in the type of programming developed instead of the number of services made available, while highlighting a common theme within research regarding collaborative care models, which are consistently shortsighted in that they appear to either choose one aspect of the HOPES model as a solution, or echo the HOPES model without fully grasping its potential (Nour et al., 2013).

Telehealth

Telehealth services have become the focus of both the health care industry and policy makers as a means of reducing health care issues, including mental health care diagnosis, in the elderly. Telehealth, both in the U.S. and abroad, has been advertised as an easy option for creating policy and programming that can be clearly measured by goal outcomes focused on access and payment structure. Much of the research regarding telehealth has dealt with its ability to increase services (and thus improve health) and to reduce disparities in health care services. Snyder and Hewitt (2014) relate telehealth services to holistic models of care noted by Indian researchers Singh and Upadhyay (2014). Snyder and Hewitt (2014) note the lack of use of telehealth in urban areas over rural areas, and state that urban areas such as Chicago have a large elderly population in need of home-based services. The concept of connecting telehealth to the elderly population in a
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variety of settings can be linked to Surry’s notion of inclusion of social institutions such as the church as a means of broadening delivery systems. The idea of inclusion of religious institutions was readily accepted by Catholic ministry programs, who have been at the forefront of telehealth use within their ministry, as indicated by Snyder and Hewitt (2014), into the human element needed to reduce mental health issues. While they could have provided a larger segment of their research to solving problems in the Medicare payment system regarding telehealth services, their idea of mirroring the banking industry’s fee system for remote usage over in person banking has merit (Snyder & Hewitt, 2014). The idea of broadening the use of telehealth beyond rural areas has been reflected in work done in areas with large population gaps, such as Australia. Early work by Banbury et al. (2014) recognized the possibilities of telehealth as a means to deliver services across a broad spectrum, and focused research on telehealth’s ability to educate the elderly through group teleconferencing programs. Patient education can be related to HOPES programming, which places significant importance on skill-building in reducing mental health issues, and positive mental health outcomes due to the socialization aspect of telehealth further compares to HOPES programming that identifies social interactions as an important component in creating positive mental health behaviors. However, the Australian team focused their hypothesis upon the use of telehealth as a means of increasing patient knowledge while decreasing primary care giver time constraints without addressing barriers to cost or technical issues (Banbury et al., 2014). This exclusion was quickly addressed by Sara Czaja (2016), who conducted research addressing ways in which to reduce technical issues associated with telehealth services for the elderly. Czaja understood the importance of telehealth in an increasingly technical society and noted in a much better manner than the Australian team how the aging population has grown comfortable with the use of such technology. Within that matrix,
she indicated weaknesses in telehealth through shortages in gerontologists and health care
disparities in general in a more evolved fashion than Levinson, Lesser, & Epstein did in their
discussion of physician education. Czaja indicated that policy should be directed toward
increasing the number of specialists and decreasing health care disparities. She noted that policy
focused on applying technology across a broad means of usage would serve to fulfill both policy
mandates. However, while no specific policy recommendations were given by Czaja, her
conclusions regarding the need to increase specialized training and staffing for the elderly
population were meaningful and could certainly be compared not only to the HOPES model, but
applied at a global level (Czaja, 2016). The global possibilities of telehealth as laid out by
Dinesen et al. (2016) shored up the weaknesses in Czaja’s work by noting the need to strengthen
communications between not only physician and patient but between researchers and physician.
While Czaja pointed out the possibilities of telehealth as a means of increasing health, the
Dinesen group went a step further by presenting a thorough snapshot of telehealth programming
across several different political spectrums, noting the inefficiencies in cost present in telehealth
legislation. Dinesen et al. (2016) further observed that many policies concentrated more on
processes over value outcomes, leaving telehealth services lacking in function and ability to
evolve into more holistic programs. This group’s research addresses every aspect of weakness in
telehealth services and can be applied to the idea of HOPES programming as a means of
reducing mental health care in the elderly through their conclusions that health care cannot be
conducted within the current operating procedure of streamlined goal-oriented systems (Dinesen
et al., 2016).
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Policy

The Affordable Care Act (ACA) put in place several mandates regarding mental health services that benefit the elderly population. These mandates were meant to increase patient care and reduce perceived stigma surrounding mental health care services. Bartels, Gill, and Naslund (2015) specifically looked at the possible effects of the ACA on mental health care on an increasing elderly population and concluded that it was a positive influence overall. Beyond providing insurance for a larger portion of the population, the ACA required Medicare to pay for an annual wellness visit that included a mental health screening. Further, the ACA called for primary care givers to institute interdisciplinary care teams for patients which have the potential to mimic the collaborative care teams under the HOPES model. While the paper briefly discussed increases in telehealth services and value oriented goals and payments systems, it did not include an in-depth discussion of the ability of Medicare and Medicaid to significantly alter mental health in the elderly, with the implication being that weaknesses in the Medicare and Medicaid program will continue to result in significant disparities in health care (Bartels, Gill, & Naslund, 2015). Bartels and Naslund (2013) reflected previous authors ideas regarding the shortage of gerontologists and multiple agency oversight as the biggest weaknesses in any policy formulations and echo policy innovations considered abroad (Bartels & Naslund, 2013). Foreign health care policy often includes a broader scope of collaborative care team members to include health coaches and social workers specializing in gerontology, as well as policy based on value driven goal outcomes. However, in reviewing both proposed and current policy, other countries also appear to be focusing on telehealth as a solution to decreasing mental health issues. While some research regarding policy formation appear similar to the HOPES study in that nurses were considered to be important in any collaborative care environment, Bartels and Naslund (2013)
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deviate from previous works in that they consider evolutions in payments systems through Medicare and Medicaid as they relate to government agency oversight the overriding issue, making any conclusions shortsighted as they focused on brief health interventions instead of long-term, preventative systems (Bartels & Naslund, 2013).

Almost every study stated the need for increasing the number of specialists in gerontology. Rowe, Fulmer, and Fried (2016) determined that the obstacles of meeting this need would be important in any policy considerations regarding mental health services for the elderly. They further noted that any solutions in meeting the increasing demand for health service workers would be best served by creating policy geared toward nurse-led collaborative teams, similar to HOPES modeling and suggested by previous works. The paper briefly discussed the idea of value in determining goal outcomes for mental health care solutions, and quickly touched upon the idea of the importance of social interactions as a means of reducing mental health. While value is becoming a topic of importance, the paper would have been better served if the discussion on social interactions had been given more consideration, or not included in the paper at all, as it appeared to be an awkward addendum to an otherwise helpful paper on the needs of strengthening our health care workforce (Row, Fulmer, & Fried, 2016). The need to strengthen the workforce as it relates to policy development will continue to be of issue, as established by Kate Blackman (2016) in her brief for the National Conference of State Legislatures, including discussion of increasing health care workers, and the burgeoning use of telehealth, which overlaps in policy development as it relates to interstate licensing procedures. Since telehealth has been touted as the means of increasing access to mental health services for the elderly, who and how licensing is given has become an important policy matter. Nearly every state has legislation for review on telehealth regulation. Reciprocity, specific licensing procedures and
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qualifications, as well as interstate compacts were all outlined in Blackman's paper, leaving the reader very much aware that telehealth has significant obstacles to overcome before reaching its full potential, and that any increases in health care staff will be ineffective until licensing policy is equalized (Blackman, 2016). These limitations are spelled out in the guide created by the Centers for Medicare and Medicaid Services (2015), which was developed for primary care givers to better understand telehealth payment reimbursement procedures, and provides a comprehensive backdrop outlining the difficulties faced by health care workers considering incorporating telehealth into their practice. Very specific restrictions regarding who may use and be reimbursed for telehealth services through Medicare and Medicaid are outlined in the guide, specifically in regards to the exclusion of social workers and clinical psychologists from billing or reimbursement programs. The guide provides a suitable coding system for physicians to follow in order to understand telehealth payments processes, but by its composition, highlights the significant flaws in telehealth policy overall (Centers for Medicare and Medicaid Services, 2015).

Payment Systems

The discussion of mental health care for the elderly is a complex issue requiring the review of many different moving parts regarding care and policy. Programming cannot be discussed without considering policy, and policy cannot be considered without discussion of payment systems. Each outcome is reliant on the other and while researchers differ in the exact means to restructure payments systems into a more manageable and cost efficient system, most agree that Medicare and Medicaid policy is a critical component to any solution. Most works focusing on payment systems include some aspect of Geisinger’s notion of value, which has become the
model of care systems at every level. Paulus, Davis, and Steele (2008) pondered the idea of what constituted the best standard for delivering the most value for the patient and how it has evolved through Geisinger’s work into accepted payment system models. While the work is based mainly on creating specific standards of care using electronic health records, technology, and integrated teams, it also notes the previously discussed notion of holistic care as the most appropriate means of delivery. Even in a paper focused on streamlining payment systems, patient value and patient driven care is given credence as the path unto which health care should follow. Payment systems however, are the core of the paper, and are given significant consideration regarding physician reimbursement systems, pay for performance standards, and financial incentives. While the idea of health care systems is discussed in depth, mental health care is left out of the discussion, either by circumstance or by choice, leaving the implications for national policy discussion within the paper lacking in substance (Paulus, Davis, & Steele, 2008). The use of the Geisinger model for payment systems as an efficient means of creating effective health care programming can be related to measures beyond payment systems, as discussed by Maeng et al. (2015) in their research concerning reductions in acute inpatient care services compared to the use of Geisinger models of patient centered medical homes. The study found significant reductions occurring for those adapting this model, and further concluded that while over time cost saving numbers would diminish, the overall result of using the Geisinger model contained both cost savings and patient health value. The authors research supports previous studies that indicate patient centered care is the most feasible and effective means of creating value based care; however, like many others, research ignores the mental health care component in HOPES programming that recognizes the impact mental health can have on the overall health of the elderly population (Maeng, et al., 2015).
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In order to gain a complete picture of payment systems, it is necessary to explore populations of unique and extreme circumstances, such as Pande, Gillespie, and Stapleton (2016) did in their research into mental health and elderly prison inmates. Through an analysis of the Medicare and Medicaid standards in correlation to value and ethical implications of caring for elderly prisoners who do not qualify for these benefits as they age, new meaning can be applied to policy regarding the cost of care to the overall elderly population. States struggle to meet the growing health care demands of both the general elderly population as well as a growing prisoner population, and have tried to shift the burden of cost to the federal level. Through their study of the possible moral dilemma of caring for an elderly prison population, Pande, Gillespie, and Stapleton (2016) provide yet another facet to the problem of creating holistic care models within the most efficient payment system (Pande, Gillespie, & Stapleton, 2016). While the authors work into an aging prison population presents a unique look at care models, the review of an apparently superior health care system abroad also provides an opportunity to consider ways in which to improve payment systems within U.S. borders. Bock et al. (2014) underlined this very idea through their research on the elderly German populations out of pocket payment systems for health care. Germany has a large elderly population as well as a one of the most expensive health care systems in the world, yet is experiencing rising numbers of both health care and mental health care disparities. Bock’s team analyzed a variety of aspects concerning out of pocket expenses for the German elderly population, including pharmaceutical expenses, medical supplies, dental prostheses, inpatient expenses, and nursing care. What they found was unexpected in that it was hypothesized that inpatient expenses and nursing care would account for the highest out of pocket expense; instead, more commonplace items such as dental prostheses, medical supplies, and pharmaceuticals were noted to be the most expensive items
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purchased by the elderly even though German health care systems provided either full coverage or caps on expenses for these items. While the conclusion was that out of pocket expenses were expected to rise, no discussion regarding ethical outcomes of such expenses were explored. Instead, discussion centered on disparities in value of items, such as exclusion of coverage for electric wheelchairs but coverage for push wheelchairs, thus indicating a quality of life issue not fully explored in most research, yet hinted at through language surrounding the socioeconomic status of elderly study participants (Bock et al., 2014).

III. Theoretical Framework

Research regarding the development of best care models for reducing mental health issues in the elderly are widespread and complex, with many moving parts that can impede the researcher from recognizing competing hypothesis and comorbid conditions. While current literature incorporates singular components of the Helping Older Persons Experience Success model (HOPES), it falls short of across-the-board understanding and incorporation of HOPES standards, leaving serious gaps in the ability of care givers to practice effective mental health care policy. Further, among the discussion of collaborative care standards, researchers either limit the discussion of comprehensive restructuring of mental health policy for the elderly or omit mental health policy altogether in considering holistic care standards. Additionally, much of the literature is based on the assumption of a choice theory model of care, which places care decisions in the hands of the consumer, or patient. Within the framework of health care, choice theory supposes that in a free-market-system, patients will determine the standards and costs of health care through educated decisions that will subsequently streamline health care services (Geyman, 2012). However, choice theory also assumes that the patient is cognitively able to...
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make rational decisions regarding care. This does not mean that choice theory should be dismissed as a rationale for determining best care models; instead, choice theory can be supported within the theoretical framework if the assumption of decision making is shifted to a collaborative-care model of decision-making that includes the patient.

IV. Methodology

For the purposes of this research, the starting point of creating a model of care under the HOPES criteria, beyond evaluation of the initial HOPES study and subsequent creation of payment systems, were grounded on mandates set forth in the Affordable Care Act (ACA), as it stands as the most influential factor in restructuring future mental health care policy (American Society on Aging, 2014). Population statistics, while not fundamental in creating a model of mental health care based on HOPES programming, were also considered as they highlight the necessity of restructuring care in a society that will be significantly affected by increases in this portion of the population.

Ethical considerations play a part in determining best practices, as do fiscal challenges in creating efficient policy. Ethics and efficiency are not always compatible concepts, leading this researcher to the conclusion that a mixed method research structure offered the most reliable basis in determining success, encompassing both quantitative and qualitative measurement components in order to articulate a cohesive theoretical framework and methodology. A mixed method research structure was further deemed necessary as overlaps in assignment of research as either quantitative or qualitative do occur within the research model. This overlap is seen in the effects of policy implementation and payment and reimbursement systems on quality of life.
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issues for the elderly. Quantitative measurement tools such as population statistics for the elderly population are relevant in determining the underlying basis of why creating policy reducing mental health care issues in the elderly is a necessary endeavor. Further, statistical information in regards to increased pressures placed on health care models were analyzed to measure best practices in creating effective models of care with success measured by keeping costs contained within current budgeting processes, or at reduced costs. This was done through analysis of:

1. Payment Systems
2. Models of Care
3. Foreign Health Care Models

While quantitative measurements play a part in shaping mental health care models, qualitative measurement was the core determiner in both the framework and methodology of the research. Qualitative measurement tests a diverse set of variables such as ethical care, quality of life issues (education), and morality (fiscal cost of elderly care). Collaborative Care models such as HOPES programming act as the independent variable in the research model, with cost and effectiveness of results within the collaborative care model acting as dependent variables. Success was determined by:

1. Measurable reductions in mental health diagnosis among the elderly population.
2. Cost contained within current delivery models or at reduced rates.

On the surface, the use of such measurements appear to be basic suppositions, but in reality represent multiple ideals regarding scope of care, as well as host to numerous complex personal ideological values concerning society, aging, and death. In order to narrow the focus of such complex ideas into a cohesive unit of measurement relevant to the study, qualitative
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measurements (independent variables) were analyzed and measured against HOPES programming models to test cost and effectiveness within the following areas of analysis:

1. Collaborative Care Models
2. Telehealth Delivery Systems
3. Foreign Models
4. Payment Systems

Much of the data used to conduct the quantitative analysis was gathered from the statistical database within the Centers for Medicare and Medicaid as well as the U.S. Department of Health and Human Services. This database on health care rates and disorders was further used to formulate costs and mental health utilization rates. Peer-reviewed journals also contributed in formulating analysis of both quantitative and qualitative indicators of value and cost. In order to determine future projections of both payment systems and collaborative care model costs, the projected Medicare and Medicaid budget as developed by the Congressional Budget Office was used to gather statistical information.

Population Statistics

Population statistics from the U.S. were analyzed and compared to population projections from other countries in order to determine the impact on health care services in relation to GDP that population increases may produce, with data collected through the following means:

1. Research conducted at the Imperial College in London by Steve Beales on the impact of aging societies at the global level.
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2. Research conducted in the School of Engineering at the University of Tokyo by Shinichiro Yamashita, Isamu Ohsawa, Masachika Yamane, Tsuyoshi Matsuo, Kiyoshi Uzawa and Jun Takahashi (2012) into reducing weights of objects to provide ease of use in an aging society.


4. The U.S. Census Bureau report of population statistics.

Payment Systems

Payment Systems analysis was conducted by comparing payment models within Medicare and Medicaid policy on reimbursement such as ACO’s and bundled payment systems, against budget projections within different regions of care. Regions of care offered insight into creating models of care and payment systems that would work among different care settings with differing resources. These budget projections and cost saving models were then compared to enrollment within Medicare and Medicaid and to mental health conditions of the enrolled elderly population to determine if mental health services payment could be incorporated into a holistic model of care within projected payment models and within different health care settings.

Research was gathered from:

1. Centers for Medicare and Medicaid Services: Medicare Accountable Care Organizations 2015 Performance Year Quality and Financial Results

2. Research conducted by Kendall & Lampert (2015) into reducing waste in health care services that reviewed data collected from The Centers for Medicare and Medicaid Services projections into possible cost savings under Bundled Payment Systems.
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Collaborative Care

Collaborative Care data, both qualitative and quantitative, was compared by model study to calculate cost savings realized from use of collaborative care models that included patient-centered medical home analysis. Both regional cost results (quantitative) and model of care savings (qualitative and quantitative) figures were analyzed and compared to calculate the ability of a collaborative care model to work within current and projected budgetary figures.

Collaborative Care data was gathered from the following:

2. Federally Qualified Health Centers rules under Section 1861(aa)(1)(C) of the Social Security Act pertaining to exceptions of care modeling, payment, and Medicare policy.
4. Regional cost savings predictions constructed by Muhlestein, Saunders, & McClellan (2016) formulated from a study concerning Accountable Care Organizations.
5. Substance Abuse and Mental Health Services Administration 2016 report on program study results to improve community mental health centers and to establish certified community behavioral health clinics.
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Telehealth:

Telehealth information was obtained from the following:

1. Centers for Medicare and Medicaid reimbursement policy and data utilization costs.

Foreign Models

Foreign model analysis was conducted by comparing health care costs between differing countries in comparison to GDP in relation to the U.S. Further, models of care were compared to the U.S. model through both spending and resource allocation. Data was gathered from:

4. GDP data obtained from the United States Census Bureau, 2016.
5. Government of India Ministry of Home Affairs population database.
8. The Peter G. Peterson Foundations 2016 data analysis of United States per capita health care compared to other developed countries.
9. U.S. Census Bureau population database
Limitations

A lack of uniform data regarding the effectiveness of both collaborative care models and evolutions in payment systems limited the results of the research study. The study therefore relied on projections formulated by the Centers for Medicare and Medicaid Services, as well as the U.S. Department of Health and Human Services, the Congressional Budgeting Office, and studies conducted on payment and care models. Further, the study was predicated by mandates set forth in the ACA, which is expected to undergo review and possible repeal during the next Congressional session. Any results indicated by cost savings and value of care models found through the study may be subjected to new policy parameters that would alter budgeting predictions of both cost and delivery systems.

V. Results

The ACA guaranteed that holistic models encapsulated under collaborative care programming would be adopted by health care providers through mandates set forth by the ACA within Medicare and Medicaid policy, and through system restructuring regarding payment changes that included value-based reimbursement and bundled payment systems (Baseman, Boccuti, Moon, Griffin, Dutta, 2016). The Centers for Medicare and Medicaid have further pushed for incorporation of a collaborative care model by offering grants to health care providers that participate in the State Innovation Program (SIP) that funds experimental models of health care programs in order to determine best practices (Van Vleet & Paradise, 2014). Results of participants in the SIP are parallel to the hypothesis set forth in this paper that holistic models of
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care provide significant reductions in mental health care disparities among the elderly population, even though they lack inclusion of specific and critical facets of the HOPES programming model.

Analysis of collaborative care models based upon policy standards set by the Centers for Medicare and Medicaid determined the direction of analysis, and for the purposes of this study, holistic care set within collaborative care models were the focus of analysis in determining effectiveness in meeting the health care needs of the elderly population through both effectiveness of care and within current cost structures.

Population

Increases in the elderly population around the world are expected to rise over the next few decades, making health care policy a global issue. The following graph shows the increase in the elderly population by country, with predictions of about a 20% increase in the elderly population for the U.S.
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Figure 1. Elderly Population Growth (Source: Yamashita et al., 2012).

When taken into consideration against population numbers of the younger work force, the consequences of increases in the elderly population highlights the pressures that will be placed on infrastructure to deliver adequate health care services within decreased models of fiscal revenues. Figure 2 depicts the serious decline in production versus consumption that necessitates consideration of more efficient health care models for the elderly:

![Elderly Population Growth](image)

**Figure 2. Elderly v. Workforce (Source: http://www.aglobalvillage.org)**

Payment Systems

Payment systems are tied to testing the viability of a holistic model of mental health care for the elderly similar to HOPES programming, for without cost savings, profitability, or cost containment, neither policy makers or health care providers will be motivated to alter mental health care delivery models for the elderly. While private insurers and health care providers are also affected by mental health care programming for the elderly, it is within the Medicare and Medicaid agencies that the largest fiscal impact and policy adjustments will be felt in any mental health care re-modeling. Therefore, analysis concerning payment systems within mental health care models included cost and enrollment of participants in Medicare and Medicaid agencies since the elderly population is intrinsically dependent on both of these programs, as shown in the
enrollment numbers for each agency. Medicare’s enrollment for those over age 65 is around 45 million people, with Medicaid’s enrollment for those over age 65 around 5.4 million (U.S. Department of Health and Human Services, 2014). Spending parameters were also measured through budget amounts concerning each program:

**Budget 2014**

Medicare: $618.7 billion

Medicaid: $495.8 billion

The types of mental health issues which the elderly population may be diagnosed was also broken down by Medicare participants over the age of 65. This categorization was helpful in understanding costs associated in creating a holistic model of care and understood to occur frequently as a comorbid condition:

<table>
<thead>
<tr>
<th>MENTAL HEALTH CONDITION</th>
<th>MEDICARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL ENROLLEES</td>
<td>22,582,221</td>
</tr>
<tr>
<td>Alzheimer’s/Other Dementia Conditions</td>
<td>1,698,680</td>
</tr>
<tr>
<td>Anxiety Disorder</td>
<td>1,264,621</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>149,626</td>
</tr>
<tr>
<td>Depressive Disorder</td>
<td>1,753,441</td>
</tr>
<tr>
<td>Schizophrenia/Related Disorders</td>
<td>276,451</td>
</tr>
</tbody>
</table>

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The breakdown of possible mental health disorders by Medicare enrollment in comparison to payment models based upon holistic models resulted in both quantitative and qualitative results stemming from specific models of payment systems that include:

1. Accountable Care Organizations (ACO)

2. Bundled Payments Systems

What is important to note in the results obtained from analyzing payment system costs within a collaborative care model is that these systems of care are unevenly used across the U.S., resulting in a diverse set of fiscal outcomes in comparison to traditional fee-for-service payment models. However, it is also important to note that uneven results among these payment systems stem from their very infancy, and that ACO’s, and Bundled payment systems, represent evolutions in U.S. health care payment models toward a value-based, streamlined, reimbursement system in healthcare.

ACO’s operating through policy developed within the Centers for Medicare and Medicaid have some level of risk. Care is delivered within a group of care facilities with shared responsibility for care and outcomes, with reimbursement subject to performance. An ACO represents a collaborative care model at the financial level, in that care may be delivered from outside of a care team, but is considered integral to payment outcomes. An ACO further represents the epitome of value-based payments by the nature of its organization and reimbursement mandate. While not a holistic model of care per se, it can be perceived as a holistic payment model through the notion of group accountability of care through patient goals, spending parameters, and accountability of overall cost (Vogas & Singer, 2016). As mentioned previously, cost containment within the ACO payment model is still in the testing phase, but
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early results indicate that savings within an ACO can produce cost savings when viewed through regional outcomes:

<table>
<thead>
<tr>
<th>REGION</th>
<th>% OF COST SAVINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwest</td>
<td>23%</td>
</tr>
<tr>
<td>Northeast</td>
<td>27%</td>
</tr>
<tr>
<td>South</td>
<td>38%</td>
</tr>
<tr>
<td>West</td>
<td>24%</td>
</tr>
</tbody>
</table>

Table 2. ACO Cost Savings by Region. Recreated from Muhlestein, D., Saunders, R., & McClellan, M., 2016.

Weaknesses in the ACO model appear to lie in the differences in health care organizational structure within an ACO model. Savings were directly correlated to the degree of collaborative care modeling used by an organization, with organization size sometimes inhibiting positive results (Muhlestein, Saunders, and McClellan, 2016). Since smaller health care participants were more successful in the ACO model, it can be hypothesized that it is the quality of group care within the delivery model that resulted in savings rather than the number of providers within the ACO model.

Bundled payment systems are also included in Medicare and Medicaid policy under the ACA and offer insight into the ability of a holistic model of care to function within current budgetary constraints under a bundled payment systems allocation of resources through the differing payment systems. Bundled payment systems have three different levels of participation in which payment and cost are treated as coverage plans. The first level bundles payments of cost into 46
specific services. The second, and most popular, bundle includes hospitalization and all ensuring services, and 90 days of post-hospitalization care. The third bundle covers care from admission to home health care services. This system is also operable under a holistic model of care, but foreign modeling systems should be used as a cautionary tale of both resource allocation impact and cost containment, as bundled payment systems are projected to exceed $10 million annually and without oversight on bundled payment systems pricing, expenditures could negate cost savings (Mechanic, 2016). Savings within bundled payment systems are based on negotiating:

1. Negotiate total cost < Fee-for-service
2. Negotiate realized Savings < Fee for service between payers/providers

Calculating cost savings within a bundled payment system was measured against Medicare’s traditional fee-for-service program. As bundled payment systems are still being tested in a variety of health care settings, system testing has been limited to physical health issues among the elderly population including major surgery procedures such as heart surgery, hip, and knee replacement (National Conference of State Legislatures, 2016). Mental health issues have been excluded from major testing models of bundled payment systems, but the results of overall testing indicate the ability of a holistic model of care to be incorporated into a bundled payment model. As with ACO’s, bundled payment systems have produced scattered, limited results also affected by region. However, unlike the ACO model, bundled payment systems appear to have produced more cost savings (in the Northeast region of the U.S.), with around a 5% reduction in costs. The most significant findings on the ability of bundled payment systems to effectively work within a collaborative care model of mental health care for the elderly are found within projections of future cost savings based on widespread incorporation of modeling:
As shown in Table 3, savings under a bundled payment system are expected to occur, but not until at least 2018. Projecting these savings to future models of care using bundled payment systems within Medicare make sense as they mimic the current payment structure already used by Medicare in procuring contracts for insurance providers within the health care coverage system, making incorporation of a holistic model of care for mental health care services for the elderly similar to the HOPES programming model feasible under such pricing models. The budget for Fiscal Year 2017 under the Centers for Medicare and Medicaid (2016a) under current policy structure produce the most profound understanding of incorporating mental health care into a collaborative care model for the elderly through cost savings predictions regarding specific changes in Medicare and Medicaid programming with (-) denoting cost savings:

| Table 3. Savings from Bundled Payments (Source: http://www.thirdway.org) |
| --- | --- |
| Medicare | 0.0 | 0.0 | 0.0 | 0.7 | 5.6 | 16.9 | 29.6 | 43.2 | 53.2 | 57.3 | 206.5 |
| Medicaid-federal | 0.0 | 0.0 | 0.0 | 0.1 | 1.2 | 3.5 | 6.0 | 8.7 | 10.6 | 11.3 | 41.4 |
| Total federal | 0.0 | 0.0 | 0.0 | 0.8 | 6.7 | 20.3 | 35.7 | 51.9 | 63.8 | 68.7 | 248.0 |
| Medicaid-state | 0.0 | 0.0 | 0.0 | 0.1 | 0.8 | 2.4 | 4.2 | 6.0 | 7.3 | 7.8 | 28.6 |
| Private health insurance | 0.0 | 0.0 | 0.0 | 0.7 | 5.5 | 16.3 | 28.1 | 40.1 | 48.3 | 51.1 | 190.1 |
| Out of pocket spending | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total- Medicare, Medicaid, PHI + OOP | 0.0 | 0.0 | 0.0 | 1.6 | 13 | 39.1 | 57.9 | 98 | 119.4 | 127.5 | 465.7 |
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<table>
<thead>
<tr>
<th>Support Delivery System Reform</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment Incentives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement Bundled Payment Systems</td>
<td>-700</td>
<td>-9850</td>
</tr>
<tr>
<td>ACO’s expanded to include nurses</td>
<td>-470</td>
<td>-9850</td>
</tr>
<tr>
<td>ACO payment include Cost Sharing</td>
<td>-40</td>
<td>-150</td>
</tr>
<tr>
<td>Bonus payments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expand Value-based purchasing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expand Medicare coverage of Telehealth</td>
<td>-60</td>
<td>-160</td>
</tr>
<tr>
<td>Eliminate 190 limit on Inpatient Psychiatric Care</td>
<td>160</td>
<td>1020</td>
</tr>
</tbody>
</table>


The result of programming changes outlined in the FY 2017 Medicare and Medicaid budget show that while payment reform that includes incentives and bonus payments are not expected to affect cost, measures that move the system toward a collaborative care system, including an expansion of telehealth services, are expected to result in cost savings. This includes an increase in payments to nursing staff within collaborative care teams. Of note is the prediction that an expansion of behavioral health care services outside of the collaborative care environment are expected to increase cost instead of produce savings. However, even without moving these types of services into the collaborative care model, other changes in health care policy measured
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against cost increases in mental health care services outweigh any increases in costs related to mental health care.

Collaborative Care Models

Working from this standard of review, a holistic model of care was determined to offer significant reductions in mental health conditions among the elderly and offered immediate and future cost savings under a collaborative model of care similar to HOPES programming (Duarte et al., 2015). Looking at Table 4, projections from an increased use of telehealth services, expansion of psychiatric services under Medicare and Medicaid, and increased use of bundled payment systems show significant cost savings under current budget predictions. These numbers support a model of care that incorporates mental health services within the immediate model of care and the inclusion of tertiary services such as dieticians and telehealth services. However, while research conducted on collaborative care models effectiveness in reducing mental health care disparities in the elderly population were observed, there was some concern that reductions in diagnoses as well as cost savings were due to reduced use of resources rather than overall improvements in mental health care services themselves (Hoffman, 2015). Further, collaborative care models operate from the notion of a PCP led team, with mental health care providers, whose payments are tied to referral by a PCP within the Medicare and Medicaid system, working outside of the immediate collaborative care model:
Figure 3. Diagram of Collaborative Care (Source: http://www.psychiatrictimes.com)

It was further noted that, as with payment models, collaborative care cost saving conclusions are based on estimations of future savings founded upon current market trends. How much savings a collaborative care model will provide is difficult to quantify in real-time, as results from studies are related to the region the study was conducted; specifically, when broken down regionally, striking differences in savings were reported:
Figure 4. Savings by Region. Prepared by Jennifer Sparkman. Data obtain from Salmon et al., 2012.

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Care Savings Per Patient Per Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Coast</td>
<td>$27.00</td>
</tr>
<tr>
<td>Midwest</td>
<td>$6.56</td>
</tr>
<tr>
<td>East Coast</td>
<td>$1.78</td>
</tr>
</tbody>
</table>

The differences realized by regional analysis highlights the complexity of programming models to meet specific population requirements. Urban areas, rural areas, cost of living, and availability of resources all factor into any cost calculations, and are subject to not only changes in the elderly population, but upon economic trends related to the continuation of the ACA, and the ability of legislatures to continue to budget Medicare and Medicaid programs sufficiently. However, overall, it was recognized that while there are differences in cost savings among those who used a holistic model of care over more traditional primary care treatment, the majority of research supports that significant savings will be realized from use of a collaborative care model, both through immediate savings and through future changes in health behaviors of the elderly that are a result of holistic care models (Salmon et al., 2012). Specifically, changes were substantially reported through:

1. Reduction in Pharmaceutical use
2. Reduction in Unmet Mental Health Needs
While patient-centered medical homes (PCMH) move closer to incorporation of HOPES programming standards with the inclusion of more mental health care interaction between the PCP and mental health care practitioners within a nurse-led team, they stop short of full inclusion of mental health specialists in the collaborative care environment.

The above model appears to include mental health care specialists in the care model through the inclusion of specialists in team care. However, because of lags in reimbursement policy within Medicare and Medicaid, mental health care specialists are still relegated to the referral system operating under a PCP led team. Despite exclusion from direct team involvement in elderly health care, patient-centered medical homes are more easily quantifiable than the research conducted to date on the collaborative care model, and highlights the ability of a successful HOPES model for treating mental health issues among the elderly, in that research regarding...
PCMH’s has concluded that elderly patients cared for in a PCMH environment are more likely to receive mental health care services than those treated in a more traditional setting with real cost savings measureable on both a macro and micro-level scale:

![Figure 6. Savings (Source: http://www.integration.samhsa.gov)](image)

On a qualitative scale of measurement, the PCMH model provides significant results in reducing the use of pharmaceuticals, which is often the solution of care within a PCP environment, replacing medications as the first line of defense with mental health counseling to a portion of the population already facing comorbid conditions that often require substantial pharmaceutical interventions (Jones et al., 2015). This is an important step in the evolution of mental health care services for the elderly, as one of the weaknesses noted in the collaborative care environment was that the PCP was expected to screen, diagnose, treat, and/or refer elderly patients regardless of the PCP’s experience or expertise in dealing with geriatric issues (Jones et al., 2015).

Telehealth

Considering that the majority of elderly most in need of telehealth services receive coverage through either Medicare or Medicaid, telehealth should be included in any discussion of holistic
models of care. Further, telehealth has been popular with legislatures over other evolutions in health care models because of an easily measurable policy to offer both constituents and health care workers. As with ACO’s and bundled payment systems, telehealth models within Medicare and Medicaid programming has been undergoing experimentation in both delivery models and payment systems. In order to remain within the Federal coverage structure, telehealth must qualitatively demonstrate:

1. Reduction in Hospitalizations among patients with chronic illnesses
2. Reductions in visits to hospital emergency rooms

Both of these measurements correlate to reductions in hospital utilization costs common in elderly patients (Mechanic & Olfson, 2016). While cost savings through Medicare and Medicaid have been projected (See Table 4) for telehealth services, it is through both quantitative and qualitative measurement that its effectiveness in reducing mental health care disparities in the elderly in both urban and rural areas can be found as one influences the other (Dorsey & Topol, 2016). These measurements include:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number of Patients</th>
<th>% Decrease in Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>8,954</td>
<td>20.4</td>
</tr>
<tr>
<td>Hypertension</td>
<td>7,447</td>
<td>30.3</td>
</tr>
<tr>
<td>Chronic heart failure</td>
<td>4,089</td>
<td>25.9</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>1,963</td>
<td>20.7</td>
</tr>
<tr>
<td>Posttraumatic stress disorder</td>
<td>129</td>
<td>46.1</td>
</tr>
<tr>
<td>Depression</td>
<td>337</td>
<td>56.4</td>
</tr>
<tr>
<td>Other mental health condition</td>
<td>653</td>
<td>40.9</td>
</tr>
<tr>
<td>Single condition</td>
<td>10,885</td>
<td>24.8</td>
</tr>
<tr>
<td>Multiple conditions</td>
<td>6,140</td>
<td>26.0</td>
</tr>
</tbody>
</table>

Table 5. Reduction in Utilization (Source: https://stevebrownpress.wordpress.com)
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However, despite the perceived relationship between qualitative and quantitative influences on conditions through telehealth use, the extent to which the social interaction element of telehealth services impacts reductions in mental health diagnosis in the elderly are still unclear.

Foreign Models

Foreign models of mental health care services for the elderly that have developed a more encompassing policy than the U.S. serve to highlight why the U.S. has moved to include value into repayment priorities in conjunction with cost savings. Analysis of foreign models of mental health care services for the elderly also provides insight into allocation of resources within specific spending parameters, as well as disparities that continue to occur despite regulated health care models. Health care disparities remain higher than most other countries, even though U.S. health care spending is around 17% of the country’s Gross Domestic Product (GDP), and spends more per capita than any other country:

Figure 7. Health Expenditure of GDP by Country (Source: http://www.oecd-ilibrary.org)
While a review of foreign modeling must take into consideration smaller GDP’s and population differences, commonalities exist among countries along the spending spectrum related to aging populations and immigration challenges that have placed pressures on national budgets (Bock et al., 2014). Countries comparable to the U.S. in resources and budgeting, such as Canada and Germany, show that both have comprehensive mental health care coverage for every citizen, yet still have unmet mental health care needs for their elderly population. Analysis of their health care systems reveals that these disparities are mostly a result of a strict allocation of resources for specific conditions and limits on disbursement of resources in dealing with conditions. While Canadians have a greater variety of mental health care options compared to the U.S., elderly Canadian patients may experience long wait times in obtaining diagnosing and treatment. In comparison, Germany, who has one of the most expensive health care systems in the world, provides treatment according to income, leaving those with the lowest income levels with only basic coverage (Bock et al., 2014). Unlike the United Kingdom with its socialized healthcare system, both Canada and Germany have similarities to the system that is emerging in the U.S. after the passage of the ACA:

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While Canada’s health care system appears to be comprehensive, services that directly impact the elderly are mostly excluded from the public health insurance program. Long-term nursing care, in-home care, some prescription drugs, and vision care are out of pocket expenses for the elderly population in Canada, which is the reverse in U.S. health care policy. This means that Canadians chose to provide coverage for the majority of their population at the expense of what was perceived to be a smaller segment of citizens. To date, Canada has addressed the problem by providing private insurance policies for elderly citizens, but such measures are not fiscally sound and are placing significant financial strains on budgeting processes. In terms of comparison to the U.S., it highlights the need to consider long-terms consequences of resource allocation on the entire population (Blomqvist & Busby, 2012).

Germany differs from Canada but is comparable to the U.S. in that coverage is related to income. Both public and private insurance utilize income as a measurement in determining payment participation, which can be compared to the insurance marketplace exchanges created under the ACA in the U.S. (Institute for Quality and Efficiency in Health Care, 2015). Further, unlike Canadian health care in which patients are not involved in the billing or payment processes, Germany leans toward the U.S. system of some services requiring patient payment before reimbursement. Looking at countries like Canada and Germany provides the U.S. the ability to learn from those who provide comprehensive mental health care for their elderly yet still have unmet mental health care needs. These countries are also facing population pressures comparable to the U.S.:
Figure 9 highlights the extreme pressures that will continue to be placed on both industrial and undeveloped countries in coming decades. Germany is in the unique position of having its death rate exceed its birth rate, with population increases credited to a growing immigrant population. This can be compared to immigration issues thought to be occurring in the U.S., and used to understand how to handle pressures placed on programs such as Medicaid that often provide service to immigrants facing difficult circumstances, which can effect low-income elderly services (Population Reference Bureau, 2016). The German model is especially important in researching best mental health care models for the elderly in that is shows how strict allocation of resources appear to be associated with most comprehensive coverage systems, which does not reduce disparities in mental health care, but instead exacerbate care disparities. However, both Canada and Germany do show that comprehensive care systems are possible within cost containment structures.
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Analysis of smaller countries’ health care systems serve as a counterpoint to countries like Canada and Germany in that they have growing elderly populations and smaller budgeting options. India has a large general population with a rapidly growing elderly population and experiences extreme poverty, large rural areas, and limited resources. How India is handling mental health issues in the elderly within a framework of limited resources, both fiscal and concrete, highlights the notion that holistic models of care within strict budgeting parameters can be constructed:

<table>
<thead>
<tr>
<th>Population</th>
<th>% Elderly</th>
<th>% Rural/Urban</th>
<th>GDP % of World Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDIA</td>
<td>1.252 Billion</td>
<td>8%</td>
<td>72%/28%</td>
</tr>
<tr>
<td>U.S.</td>
<td>318.9 Million</td>
<td>14.5%</td>
<td>20%/80%</td>
</tr>
</tbody>
</table>


India serves as an example for the U.S. because of the mirrored differences in population structure and economy in dealing with the elderly population. How India is dealing with a growing elderly population in a country with such large rural areas compared to the U.S. can help the U.S. address its own population issues. India differentiates itself from other countries in that it places great importance on the role of family in providing care for the elderly population (Singh & Upadhyay, 2014). Like the U.S., India has a shortage of gerontologists and mental health care workers in general. In the U.S., there are around 7,428 board certified gerontologists, or a 1: 870 ratio of gerontologist to patient. To understand the increasing shortage of workers in this area, the ratio should be around 1: 300 (Brittain, 2016). In India, quantifying gerontologists
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is nearly impossible, as the resources to train and track specialists is still in development. To meet the increasing needs of the elderly population, India broadened its mental health care model to allow non-mental health trained personnel to diagnose and treat mental health care issues. The Indian health care model is based upon notions of holistic care, comparable to the HOPES model, in that it is a collaborative effort (family caregivers included) that educates and treats elderly patients (Bartels & Naslund, 2013).

VI. Discussion

The elderly population is growing word-wide, and regardless of opinion on how many resources should be expended on caring for a segment of the population with more years behind than ahead, any economy faced with more entitlements than revenues will face an economic downturn. This downturn will occur in conjunction with a portion of the population facing an increase in health care issues, and consumption of more health care dollars than the younger, less populated workforce will be able to produce. Aging does not impart innate knowledge of how to deal with the last chapter of life, leaving a very large portion of the population at risk of increased mental health disorders at a time when faced with increasing physical health conditions. Difficult questions concerning how far care models should go in providing care, especially mental health care models, will be an integral part of budgetary planning for policy makers. The movement toward preventative care for the younger population and its effects on the elderly population health have yet to be analyzed, making the lack of quantifiable data regarding fiscal outcomes of a holistic model of care for elderly mental health due largely to the fact that such health care models are currently in their testing phase.
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The ACA and Payment Systems

The ACA produced upheaval in mental health care systems at the same time that the health care industry realized that increases in the elderly population could no longer be ignored. The lack of quantifiable data makes it difficult to calculate cost savings within a collaborative care model, which is further complicated by the variety of models such as ACO’s and bundled payment systems, with the move to patient-centered medical homes (the closest to a HOPES programming model to date) meaning that it may be a number of years before any quantifiable results can be verified. While some researchers, such as Helen Adamopoulos (2014) have concluded that billions of dollars in savings will occur from the move to a collaborative care, value-based payment system, such findings cannot be substantiated within the current economic climate surrounding health care policy. Further, with the 2016 Presidential election came rumors of the repeal of the ACA and its mandates on health care and mental health care policy. While it may take some time for Congress to respond, the rumors themselves may cause the health care industry to pause any evolutions in mental health care models for the elderly until it is ascertained if funding reorganization will occur, and if any policy issues will arise (Humer, 2016). This type of behavior could mean a lack of collection of data regarding both mental health care models and payment systems.

Evolutions in payment systems stem from the creation of the Geisinger payment system that incorporates value into reimbursement policy. This system was a reaction to fee for service models that had created a system ignoring health outcomes and operating in an inverted reward environment (Paulus, Davis, & Steele, 2008). Under the ACA, reimbursement policy moved toward a value-based system of payment for health care facilities, but allowed Medicare to continue to provide payments based on a fee for service model. This discrepancy in aligned
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Payment systems continue to cause problems in moving toward a holistic programming model for elderly mental health services, as it has caused confusion and lags in payment remodeling (Rowe, Fulmer, & Fried, 2016). Further, payment systems based on value are not viewed as explicitly profitable as a fee for service system, especially considering the growing number of elderly dependent on Medicare and Medicaid coverage. While value-based reimbursement systems are able to reduce mental health care disparities in elderly patients through mandating value in care, lagging profits for facilities based on such a system will take time to allow the health care industry to adjust. The lag in profit through a value-based system of care relates to elderly use of hospitals and long-term care facilities. Since price is negotiated largely through Medicare and Medicaid services, there is a perceived lower ceiling on profits exaggerated by a value-based system compared to the traditional fee for service model. The ACA affixed penalties to hospitals with higher readmission rates, adding pressure to facilities already facing regulations regarding Medicaid rules and care organization requirements which included mandating that facilities create integrated care teams required under the ACA (Bartels, Gill, & Nasland, 2015). While the ACA mandated overarching changes in care, payment systems were given more leeway, as previously mentioned in design competitions for modeling best care, causing many of the adjustments made by facilities to center around what type of reimbursement system to adopt, which is further related to region, resources, and workforce. The outcomes of the payment systems currently being tested is yet to be fully evaluated as to best practices, but offer insight into the ability of holistic care models to operate in a positive manner (Baseman, Boccuti, Moon, Griffin, Dutta, 2016).
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Medicare and Medicaid

Medicaid has proven to be a more inclusive program for lower income patients across the age spectrum, as it has programmed policy to include allowances for a wider variety of health care workers into its payment structure. While Medicare has a stricter policy on care and repayment systems, because it has close ties to Medicaid systems with a comparable policy structure, it could easily accommodate incorporation of HOPES programming by the allowance of payment for a wider variety of health care workers than is currently permitted. Patient-centered medical homes have been given the ability to operate under expanded care parameters under the ACA, and the health care field in general have embraced this evolution in care models. The move toward a value-based model of repayment for both telehealth and holistic care models fits well with a collaborative model of health care delivery, and therefore works well with a model of care based upon the HOPES program model, especially when considering developing policy within the parameters of the Medicaid system. Currently, however, the weaknesses in payment systems is the lack of correlation in care delivery systems. While it is clear that there are unique features at the regional level in creating care systems, Medicare and Medicaid programs, regardless of any weaknesses in programming, have proven that a central policy at the federal level that allows for lower level fine-tuning is possible in delivering health care programming (Bartels, Gill, & Naslund, 2015).

Collaborative Care Models

Many of the concerns regarding collaborative care models are that they reduce actual interactions between patients and specialists who may be better able to give accurate mental
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health diagnosis, even though studies support positive mental health outcomes for those elderly patients treated in a collaborative care environment (Kaye, 2014). This suggests that incorporation of a holistic model of care similar to HOPES programming would bolster any weaknesses found in the collaborative care model by the inclusion of mental health care specialists in the team of caregivers for each patient, and can be further supported by the recent evolution of the collaborative care model into patient-centered medical homes, as previously suggested by Surry Alang (2016).

Telehealth

Telehealth policy has been expanded greatly in the last few years, with 29 states and the District of Columbia having passed legislation regarding telehealth (American Telemedicine Association, 2016). However, telehealth as the answer to reducing mental health diagnosis in the elderly falls short of a long-term answer not only because of the singular nature of its policy, but also due to questions regarding safeguarding patient confidentiality within the online environment (Henley, 2016). Much of the pending legislation concerns security issues regarding telehealth use. Texas has tried and failed to implement a policy of requiring patients to meet in person with a physician before qualifying for telehealth repayment services, and many states are deliberating requiring picture identification in order to access telehealth services (Henley, 2016). Regardless of any security concerns, telehealth does play a role in the incorporation of any holistic model of care for the elderly. By placing telehealth under the umbrella of a holistic model of care for the elderly, telehealth has the ability to expand care services to the elderly without any increases in cost since telehealth is already part of the coverage system.
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Weaknesses

Weaknesses in current mental health care policy for the elderly have been analyzed in much of the current literature, and have been outlined in both state and federally sponsored review of programs (Substance Abuse and Mental Health Services Administration, 2016). Subsequently, gaps in programming are clearly found in the original HOPES study outlining increased comorbid conditions in elderly patients with pre-existing mental health conditions (Pratt, Bartels, Mueser, & Forester, 2008). The gaps outlined in the HOPES study will therefore be useful in ascertaining weaknesses in current models, and for setting the standard for policy restructuring. Gaps in programming quickly become apparent in both the evolution of health care practices and in collaborative care systems. Patient-led health care models under choice theory neglect cognitive obstacles the elderly population may experience, and the literature disregards or ignores cognitive diagnoses that can hinder elderly patients from participating successfully in patient-led systems (Paulus, Davis, & Steele, 2008). Further, collaborative care itself has the potential to expose a variety of weaknesses in any care plan, as primary care physicians have been tasked under the ACA to lead collaborative care units in diagnosing and follow-up care of mental health diagnoses (Persky, 2015). This mandate exposes qualitative weaknesses in health care workers in general including lack of education, issues related to stigma, and disparities associated with ageism (Alang, 2015). Additionally, the move to collaborative care systems (to include telehealth policy) highlights weaknesses quantitatively through the analysis of Medicare and Medicaid policy regarding payment systems, service delivery models, and reimbursement guidelines (Centers for Medicare and Medicaid Services, 2016a).
VII. Recommendations

The ultimate goal in developing an effective model of mental health care for the elderly is one that encompasses the whole patient; mind, body, soul. While care models to date have stopped short of full inclusion of mental health care providers into the immediate team-care model, social entities that include the church community have limited services, mostly in urban areas, that illustrate the impact care for the soul can impart upon the health of a person. However, implementing any singular care model for the elderly will be difficult considering the vast network of Federal/State, private/government institutes that work with individual and cooperative health care providers. Under such a system, evolutions in both care models and payment systems would need to be developed that worked under within a collaborative care model that included full membership of mental health care providers:

**HOPES MODEL**

Figure 10. HOPES MODEL. Prepared by Jennifer Sparkman with data obtained from Pratt, Bartels, and Mueser, 2008.
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In order for a model based upon HOPES programming to work effectively, restructuring within the Medicare and Medicaid agencies, noted to be the largest provider and influence upon health care policy for the elderly, would need to consider adjustments in both policy mandates and payment systems.

Policy Mandates

Health care policy is a complex system affecting individual health practices, cooperative organizations, long-term care services, and hospital systems. Initiating an over-arching policy on collaborative care for the elderly under such a system will need to consider differences in circumstances along these parameters. What works in an urban care setting may be impossible in a more rural setting due to resource restrictions and logistics. The importance of telehealth in a holistic model of care becomes evident when considering these differences, making the need to adjust policy regarding telehealth necessary. At present, telehealth is considered a separate issue within health care modeling. However, creating policy that recognizes a holistic model of care for the elderly would place telehealth under the umbrella of a singular model. This would streamline policy formation, create standardized goal demarcations regarding telehealth policy delivery and repayment, and allow telehealth to be a uniform service of care.

Policy under Medicare and Medicaid also needs to be adjusted to allow for the development of a holistic model of care. Medicare already has goal-oriented policy in place but the current policy that requires mental health services to originate from the PCP would be restructured within the HOPES model of care to include mental health screening by a mental health professional as part of the examination process. While the ACA required that a yearly screening
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that includes a mental health screening be conducted, follow-up care has been lacking in the process. To better facilitate this process, Medicare should be restructured to include a wider variety of auxiliary health care workers including mental health providers, nursing staff, and dietary workers, such as are allowed under the Medicaid system. As for Medicaid, since policy is already in place to allow for a wider variety of staff, weaknesses in the Medicaid delivery system should be strengthened in order to provide for more value-based care including increasing appointment times to better serve the patient. Time is a gift to the elderly patient, and explanations of care are often delivered in a rushed environment. By increasing appointment time (15 minutes under the Medicaid system) by as little as 5 minutes, value in care can be discovered. Finally, both Medicare and Medicaid ignore the social aspect of care for the elderly, and have excluded social programs for policy and payment systems. Geriatric day programs and group therapy settings as part of the holistic care model could easily be included in policy programming under a restructured policy system.

Payment Systems

Mandates under the ACA rightly initiated programs that urged health care providers in both rural and urban areas to design and test policy and payment models. Both ACO’s and bundled payment systems are being widely tested, with disparate results. ACO’s inherent weakness lies in success equated to the care team leader’s ability to drive programming. Bundled payment systems, however, have produced more effective cost saving results within a variety of settings, and are expected to produce significant cost savings in projection models. While no one payment system can as of yet be recommended due to the ongoing testing of new models within unique resource settings, what is apparent is that the drive to base payment systems on a value-based
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system will not be successful until Medicare and Medicaid align their current reimbursement
system to the mandates they have placed on the health care community. Fee-for-service models
currently in place are in direct opposition to policy mandating health care facilities to enact
value-based payment models.

Research

Further research is necessary in both policy and repayment models. Value-based care has
taken root in the health care setting, and regardless of the continuation of the ACA, will continue
to influence care choices. No in-depth discussion regarding pharmaceuticals occurred in this
paper’s research design, except to note that restructuring of payment models resulted in reduced
use of pharmaceuticals in treating mental illness in the elderly within a collaborative care model.
However, both increases in the elderly population and restructuring of models of care and
payment delivery systems will influence the pharmaceutical industry significantly. If the U.S.
continues on the path toward a model of care similar to foreign systems, research into resource
allocation effects will be critical in determining if a holistic model of care utilizing delivery and
payment systems structured on a value-based system will be effective in an economy facing
budgetary restrictions and a shrinking market. Finally, clinical research should be conducted on
the efficacy of a holistic model of care similar to HOPES programming on elderly patient mental
health. Only through actual investigation within the elderly population can the effectiveness of a
true holistic model of care be determined.
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