

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Accountable Care Organizations: A Review of Outcomes to Medicare Patients

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By

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Table of Contents

Signature Page.....ii

Abstract.....v

Introduction.....1

Background.....4

 Accountable Care Organizations.....5

 Kaiser Permanente's Integrated Care Model.....6

Methodology.....8

Literature Review.....9

 Implications to Medicare Patients.....9

 Health Outcomes.....11

 Financial Outcomes.....12

 Literature Summary.....14

 Conceptual Framework (Donabedian Model).....15

 Structure.....15

 Process.....16

 Outcome.....18

Findings/Analysis.....19

 Discussion.....20

Conclusion.....23

References.....24

Abstract

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Accountable Care Organizations (ACOs) have been implemented as part of the Affordable Care Act (ACA) with the goal of providing high-quality care while limiting costs. Currently, some of the biggest challenges in the United States healthcare system are the high cost of care and poor health outcomes. This thesis will evaluate the effectiveness of ACOs and Kaiser's Integrated Care Model as it pertains to Medicare patients. More specifically, focusing on health and financial outcomes. ACOs and Kaiser's Integrated Care Model are assessed using the Donabedian model based on the variables of structure, process, and outcome. The findings will show whether both programs are effective in improving health and financial outcomes for their Medicare patients.

Introduction

The cost associated with healthcare has proven to steadily grow while the quality of care has decreased. Fragmented care for Medicare recipients is a well-known and well-documented problem that affects both policy and practice (Fisher, 2010). Medicare individuals typically see two Primary Care Physicians (PCPs) and five specialists per year, however those with chronic diseases may see as many as 16 PCPs (Kerrissey et al., 2021). Many aspects of patient-centered care that are present in traditional patient-physician relationships are lost in today's fragmented delivery models (Fraze et al., 2021).

The Accountable Care Organizations (ACOs) were first introduced by the Affordable Care Act (ACA) in 2012 in an effort to change the delivery payment model. As part of the Affordable Care Act, ACOs were developed as a new payment model for Medicare (Fisher, 2010). The "Triple Aim" of the ACO was intended to be: enhance patient experience of care, enhance population health, and lower per capita expenditures of care for populations. ACOs are groups of different medical professionals who take on the responsibility of treating Medicare program beneficiaries. Many ACOs view it as their duty to manage the care of patients with major chronic diseases and to provide preventative care for all of their patients (Noble & Casalino, 2013). ACOs were created partly as a shift away from the alternative payment model, FFS. To address the low-value care in the FFS model, ACOs bridged the gap between lower cost and better patient care.

According to the Centers for Disease Control and Prevention [CDC], from 1960 to 2018, the amount spent on national health has increased from \$27.2 billion to \$3,649 billion. Hospital care grew from \$9.0 billion to \$1,191.8 billion. Physician and Clinical Services grew from \$7.9 billion to \$725.6 billion (Centers for Disease Control and Prevention [CDC], 2021). A significant

cause of rising healthcare cost is due to overutilization, which makes up about a third of the United States' healthcare spending (Levine & Mulligan, 2015). The fee-for-service (FFS) reimbursement model contributes to overutilization of services due to providers being paid per service provided to the patient. FFS incentives providers to increase the procedures given and the number of visits to the provider. According to Dowd and Laugesen (2020), The FFS reimbursement consist of high fees that are distorted to diverge from the physician's marginal cost. This is resulting in not only overutilization of services, but also an increase in per capita spending.

Over 60 million persons 65 and older, as well as younger people with long-term disabilities, are covered by publicly sponsored health insurance like Medicare. Medicare covers the cost of an assortment of health services such as preventative services, hospital and physician services, and prescription drugs (Ochieng et al., 2021). According to the 2020 census report, Medicare beneficiaries make up over 19% of the total US population. To classify the characteristics of the Medicare population, The Centers for Medicare & Medicaid Services performed a beneficiary survey in 2016. According to the poll, 22% of respondents had at least five chronic diseases, 25% estimated themselves to be in fair or poor health, and 32% reported having at least one functional disability (Henry J Kaiser Family Foundation, 2019).

Similar to traditional ACOs, is the Integrated Care Model. This business model is coordinated care that combines care delivery and health coverage into one delivery system. The growing number of people with chronic conditions are applying pressure to the health systems which will eventually become unsustainable and inefficient unless changed (The World Health Organization [WHO], 2016). In 2016, the World Health Organization (WHO), implemented the framework on integrated people-centered health services (IPCHS) which calls for a shift in the

way health services are managed, funded, and delivered. The Integrated Care model is one of the most promising strategies with a process to improve the health of the population, cost containment, and sort complex care (Kadu et al., 2019). An example of this business model is Kaiser Permanente's Integrated Care Model, which is described as a membership-based, prepaid, direct health care system that provides access care and services that are coordinated across inpatient and outpatient settings, pharmacy, lab, imaging, and other ancillary services (Kaiser Permanente, 2020). Kaiser's model has archived satisfactorily performance in regards to financials, the quality of care provided, and low utilization of hospital beds which can be associated with the integrated process of the organization (Hughes et al., 2020). The ACA created ACOs and integrated care in an attempt to progress care coordination for Medicare patients while containing cost, however, the effectiveness of ACOs and Kaiser's Integrated Care Model remains unclear. Current studies explore integration in health care while only using specific care delivery interventions rather than investigating integrated care itself (Kerrissey et al., 2021). This paper aims to evaluate the effectiveness of ACOs and Kaiser's Integrated Care Model as it pertains to Medicare patients.

Background

The United States Health system is comprised of both private and public health insurance providers. Medicare, Medicaid, and the Children's Health Insurance Program are all funded by the government. The elderly, people with disabilities, and those with low incomes are all covered by these programs. 30 million individuals of all ages were without insurance as of 2021, making about 9.2% of the population. According to figure 1, 60.4% of people of all ages have private insurance. Furthermore, people over 65 were most likely to have public insurance (Cohen et al., 2022).

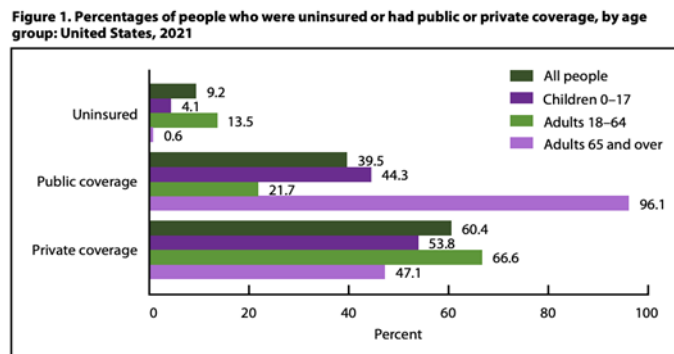


Figure 1. Acquired from cdc.gov

The ACA was introduced with three main objectives in mind: To reduce the overall cost of healthcare, one must 1. Make health insurance more affordable, 2. Expand the Medicaid program, and 3. Support care delivery models. The ACA established the ACO model in an effort to combat the rising expense of healthcare. Providers are able to establish an ACO because of the Medicare Shared Savings Program (MSSP). The Centers for Medicare & Medicaid Services are responsible for one of the biggest ACO models (CMS, 2021). ACOs encourage organizations to cut costs and boost quality by creating systems and procedures that enable healthcare professionals to better coordinate patient care (Comfort et al., 2018).

CMS reported an enrollment of 63,964,675 Medicare recipients as of October 2020, of those enrolled, 55.8 million are aged and 8 million are disabled. The most recent data released in

March 2022, shows that calendar year 2020, Medicare served over 33.4 million people with over \$379 billion paid in program payments. According to the U.S. Department of Health and Human Services, Administration for Community Living, in 2019, there were 54.1 million individuals age 65 and older. By 2040 and 2060, it is predicted that this population will reach 80.8 million and 94.7 million, respectively (The Medicare Payment Advisory Commission, 2022). One of the demographic groups in the country that is growing the fastest right now is the older population.

Accountable Care Organizations

The term ACO as defined by Taylor Burke (2011): describes entities that are comprised of integrated care providers that are mutually held responsible for achieving improvement of quality in care and cost containment. Quality is fostered through integration of health care services, increased financial efficacy, and transparency in cost, processes, and health outcomes (Burke T, 2011). The aim of an ACO is to deliver high value care while reducing Medicare spending costs (Trombley et al., 2019). When ACOs reach the set benchmarks, they get a sum of shared savings. More than 900 ACOs currently provide services to 10% of the population in the United States (Kaufman et al., 2019). Although there are different Medicare ACO models, they typically follow one of three models: provider-driven, MCO-driven, or regional/community partnership-driven (Matulis, 2018). Previously with FFS, healthcare providers were getting paid for each treatment and service provided. The cost of care is shared between Medicare and patients in the method of co-pays in addition to coinsurance. Shifting from FFS, under ACOs, providers are no longer receiving payment for every service or procedure performed. Participating hospitals and clinics in ACOs have financial incentives to reduce overall healthcare spending while enhancing clinical outcomes and patient satisfaction (Henke, 2020). These

incentives are done through shared savings, which provides financial incentives for the quality of care delivered instead of the number of services provided.

As of 2021, the number of participating ACOs has declined from 561 to 477 in just three years (The Centers for Medicare & Medicaid Services [CMS], 2021). According to the National Association of ACOs, the Trump Administration was to blame due to its policies. The Trump administration had created a “Pathways to Success” program which required ACOs to take on financial risk faster than the original program. It was said that the Medicare Shared Savings Program did not give enough incentives for ACOs to push value-based care. According to the CMS Administrator, Seema Verma, Medicare could no longer afford to sustain programs with frail incentives (CMS, 2018). Instead of hospital-led ACOs, Physician-led options would soon become more viable for ACOs. Additionally, ACOs agreed to meet quality and spending targets while getting a share of savings generated and also repaying Medicare for missed targets.

Kaiser Permanente's Integrated Care Model

A continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation, and palliative care services are provided to individuals as needed throughout their lives through the use of integrated care, which is defined as health services coordinated across various levels and sites of care within and outside the health sector (Goodwin, 2016). The integrated care model was created in part, to address the fragmented care that ultimately leads to an adverse effect on patients' health and care outcomes. Integrated care further pushes the shift in care delivery from care management to preventative care. Without good stability or care coordination, many patients experience fragmented integrated care from various providers, insufficient sharing of health information, and duplicate testing (World Health

Organization, 2018). This is especially a problem with those who have chronic conditions that require additional support and care.

Kaiser Permanente's Integrated Care Model is highly reputable for its efficient and high quality health care (McHugh et al., 2016). Patients in Kaiser's system receive comprehensive care that includes surgical and medical specialties, laboratory services, and pharmacy. A big component of Kaiser's model is their electronic health record (EHR) system. Kaiser's EHR system uses a data system that provides comprehensive data to physicians, patients, and care teams. This allows for timely and accurate patient records that are available to all involved in that patient's care. According to Kaiser Permanente (2021), the use of the EHR system allows their care team to deliver synchronized, value care for patients that is unified through numerous care locations. As of 2021, Kaiser serves over 1.8 million Medicare beneficiaries out of a total of 12.5 million members (Kaiser Permanente, 2021).

Methodology

This study is a qualitative analysis of archival literature from peer-reviewed journal articles and reports. The search bases used to identify relevant literature between June 1st, 2022 to July 15st, 2022, were: OneSearch and JSTOR. The search keyword terms were:

- ACOs AND Medicare Patients
- ACOs AND Coordinated Care
- ACOs AND Outcomes

The search filter criteria was peer-reviewed journals, open access, the English language, and published between 2017 and 2022. OneSearch had the additional topic filter of Accountable Care Organizations which returned 179 results for “acos and medicare patients”. For “acos and coordinated care”, OneSearch returned 65 results. For “acos and outcomes”, OneSearch returned 185 results. JSTOR had the additional topic filter of Public Policy & Administration which returned 92 results for “acos and medicare patients”. For “acos and coordinated care”, JSTOR returned 24 results. For “acos and outcomes”, JSTOR returned 57 results. All articles were screened by its title. If I found the title to be relevant, I reviewed the full text. The title keywords I was looking for were: performance, outcomes, health, and spending. Titles that did not include those keywords were excluded from the review. Resulting from my review of article title and abstract, a total of 31 articles from OneSearch and 6 articles from JSTOR were included in the literature review. Furthermore, non-peer reviewed literature was sourced through governmental websites such as the Centers for Medicare & Medicaid Services.

Literature Review

Over 75% of elderly Americans have complex health histories with various chronic conditions accounting for over 90% of Medicare spending (Fraze et al., 2021). Integrated care can help build the gap between provider communication and coordination for these patients (Fraze et al., 2021). The literature within this paper describes Accountable Care Organizations and Kaiser Permanente's Integrated Care Model and then analyzes the health and financial outcomes of these models as it pertains to Medicare patients.

Implications to Medicare Patients

In an effort to address the disparity in quality and contain the rise in healthcare costs, Medicare and Medicaid Services, profit-and non-profit insurance firms, developed the ACO concept (Wilson et al., 2020). With this model, pay for performance (PFP) holds ACOs accountable to payers and patients. Providers participate in the overall savings once population-based performance standards are met based on quality indicators and reporting reductions (Wilson et al., 2020). By preventing/reducing medical errors and unneeded procedures, the ACO aims to provide care coordination that offers Medicare patients the appropriate amount of care while keeping costs under control. As of 2020, more than 10.3 million Medicare beneficiaries were served through ACOs, representing 16% of the entire Medicare population (Center for Health Care Strategies, 2022). Medicare is the biggest single buyer of health care in the United States, Medicare accounted for 22% of the \$3.4 trillion spent in 2020 on direct patient care (Medicare Payment Advisory Commission, 2022).

Currently, one of the factors of Medicare spending growth is the aging of the baby boomers into the Medicare program. Over 62.6 million people were covered by Medicare in 2020, including 8.5 million disabled people and 54.1 million people over 65. (The Centers for

Medicare & Medicaid Services, 2021). By the time all baby boomers achieve Medicare eligibility in 2030, there will be a surge in the amount of persons with Medicare coverage (Medicare Payment Advisory Commission, 2022). As shown in figure 2, the number of those that will be covered under Medicare will be over 93 million including younger adults who qualify due to a long-term disability (The Kaiser Family Foundation, 2022).

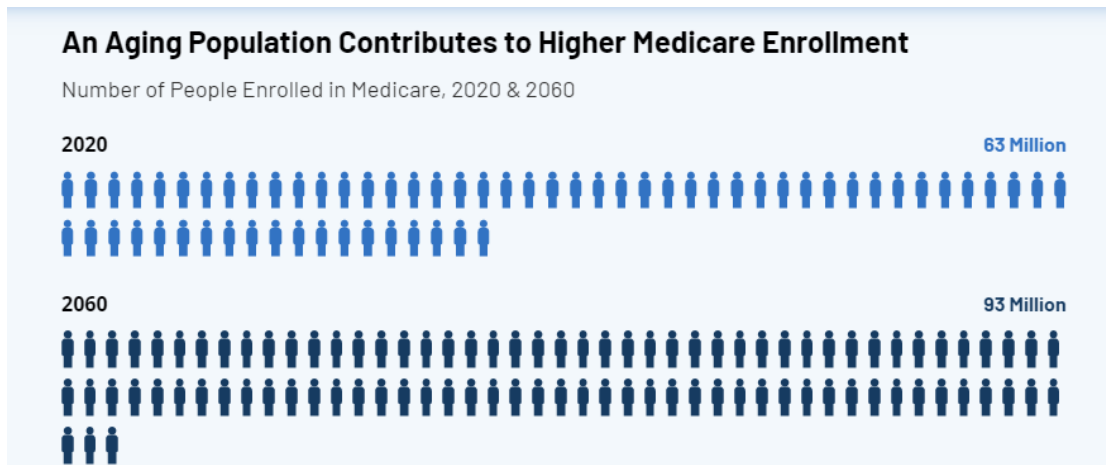


Figure 2. Sourced from KFF.org

The implementation of integrated care for those under Medicare requires many specialty providers who have experience treating different types of patients. As stated above, Medicare covers those with old age and younger adults with disabilities, so home-based providers and other ancillary providers must be in-network. Medicare patients have complex and cost excessive health issues due to age or disability (Fraze et al., 2021). The increase in aging populations and multi-morbidity requires a shift from treatment of acute illness to continuous care for chronic conditions (Hughes et al., 2020).

According to the National Committee for Quality Assurance [NCQA] (2013), many effective integration models have a small number of enrollees and are very embedded with the local providers and community. Typically, they are lacking the analytic capability and resources

that typical health plans have established for handling big datasets and provider systems (NCQA, 2013).

Kaiser Permanente's model of integrated care is frequently seen as a leading model of a successful integrated care plan (The Brookings Institution, 2015). Kaiser provides care to its Medicare members through various interconnected entities that serve as the backbone for an efficient delivery system. Haslam (2021) states that four key characteristics set Kaiser apart from all other integrated care models and makes them successful: complete integration within the entire system, prepaid revenue, comprehensive EHR, and physician leadership. Through Kaiser's model, Clinicians can easily refer members through in-network primary care physicians, specialists, and other healthcare professionals. Kaiser's system supports patient optimization across integrated care pathways that include ancillary departments such as nutritionist and physical therapists (Khatod, 2018).

The integrated data system for Kaiser provides members and their healthcare professionals' access to their personal data through a member portal and supports Telehealth services. Within the data system, Kaiser uses the data to track population health to identify and improve community health disparities (Kaiser Permanente, 2021). The fundamental goal of Kaiser's model is to increase the quality of care through coordination, improve access, and cost containment (McHugh et al., 2016).

Health Outcomes

Due to most of the Medicare population having one or more health challenges such as diabetes or cardiovascular issues, having an organization that is responsive to their health needs is crucial (Ivey, et al., 2018). Patients with complex health needs require more coordinated,

frequent, and wide-ranging healthcare that is tailored to both their socioeconomic and clinical concerns to reach successful care (Fraze et al., 2021).

The value-based contracts with ACOs give providers financial incentives to use evidence-based treatments like patient care plans (Fraze et al., 2021). The reimbursement is tied to the quality of service and patient satisfaction. Patient satisfaction such as a provider's communication with the patient in health care organizations have been used as an indicator to measure the provider's performance (Price et al., 2014). Additionally, engaging patients within the ACO network can help providers coordinate care through the continuum of care which allows more opportunities to create the point of care interventions (Diana et al., 2019). Instead of focusing on the fee-for-service model, this model incentivizes the providers to consider the total cost of treating and caring for patients. As patient and provider engagement rises, ACOs develop interventions using health information technology to actively manage the health of their members (Fullerton, et al., 2016). For complex patients, a shift in care was made from hospitals to low-cost settings that focuses on disease management, prevention, and the social or behavioral determinants of health (Lin, et al., 2016).

The use of ACOs has also led to outcomes that are negatively impacted by the criteria for the quality metrics that are used to evaluate the general level of care (Reisman, 2018). Clinicians may avoid a needed readmission in fear of a negative impact on their quality score. ACOs have lowered inefficient delivery of care cost for low-risk populations, however, the high-risk beneficiaries need a more advanced solution for efficient care (Reismans, 2018).

Financial Outcomes

One of the largest federal health insurance programs in the US is the Medicare program (Deng & Bentez-Silva, 2021). The most recognized and used payment system is fee-for-service

(FFS), wherein healthcare providers are paid based on the services provided. FFS encourages healthcare professionals to concentrate on the quantity of care they give patients, which causes a gap between the quantity and the quality of care. Paying providers per service influences overutilization, remains fragmentation, discourages prevention, and does not encourage quality care (Cattel, et al.,2020). FFS focuses on managing care rather than preventative care.

Although providers assume joint responsibility for overall quality of care and cost, the financial performance varies across ACOs and the patient population (Kaufman et al., 2019). According to the CMS (2021), following three years of net savings for Medicare, ACOs that took part in the Medicare Shared Savings Program (SSP) in 2020 earned performance payments (shared savings) totaling nearly \$2.3 billion while saving Medicare about \$1.9 billion. In 2020, CMS estimated that it saved Medicare over \$4.1 billion, a \$1.5 billion increase since 2019, and the average savings per beneficiary was gross of \$390. Additionally, 67% of ACOs shared savings in 2020, and 513 ACOs reconciled in 2020 CMS stated that analyzes are showing that ACOs lower Medicare spending by 1-2%. (CMS, 2021).

Implemented in the 1990s, the Integrated Delivery Network offered a similar model to ACOs, value-based care. According to a study by (Goldsmith, 2020), little evidence was provided by the Integrated Delivery Network that combining hospital and physician care has aided in promoting or lowering costs. Rather, evidence shows that the integration has raised physical costs and money spent on the cost of care. The failure of the Integrated Delivery Network caused many physicians to be skeptical of the ACO model as they feared the cost of care services will once again rise (Goldsmith, 2020). Additionally, in the beginning years of integration of ACOs, there was little evidence that the quality of service and the lower cost was resulting from ACOs (Goldsmith, 2020). Without supporting evidence, many hospitals were not

willing to participate in ACOs which resulted in a lower hospital quality rank, which in turn reduced reimbursement.

Before the enactment of ACOs, Medicare spending was excessive due to the overutilization of services and a high cost of care. Research done by (Summers et al., 2015) showed that ACOs have saved Medicare money by spending less on inpatient and post-acute care and providing more services in the physician's office. Additionally, money is saved through fewer repeat tests through the use of EHR.

Literature Summary

The growing awareness of the poorly integrated, fragmented health system over the past decade has prompted the inception of the ACO model (Peckham, et al., 2022). Integrated care and the ACO models share the same aim of improving value of care, system effectiveness, and cost containment. There is limited research on the qualities of ACOs that contribute to their possible impact. To have a successful payment model reform, a more in-depth understanding of the intervention and the evaluation of evidence is needed (Peckham, et al., 2022). Delivery models can influence the level of care integration in addition to influencing how health services are used (Fraze et al., 2021). Medicare beneficiaries would benefit from additional research on the effectiveness of ACOs and integrated care.

Conceptual Framework: The Donabedian Model

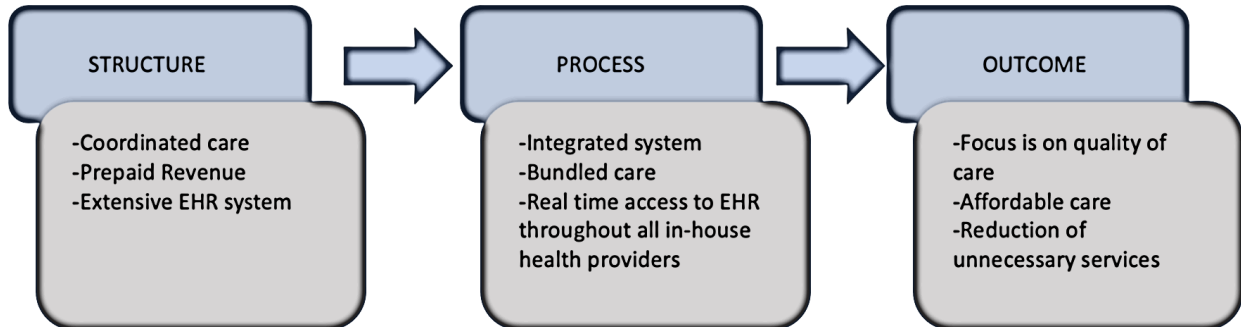


Figure 2. Conceptual Model: ACOs & Integrated Care Model application of the Donabedian model.

The conceptual framework for this thesis is the Donabedian model. The Donabedian model expresses the significance of considering three sequential categories: structure, process, and outcome to evaluate interaction as it relates to health care services (Donabedian et al., 1966). Figure 2 was created to represent the structure, process, and the outcome model as used by Donabedian to outline the design and impact of ACOs and integrated care models on Medicare patients.

Structure

The structure in this thesis refers to the elements of the service/provider. The structure in Kaiser and ACO models are the factors that serve as the foundation. The main factors are coordinated care, preventative health, and the EHR system. Medicare ACOs have many different forms, the projected form will consist of both physicians and hospitals in an integrated care system (Morris, 2018). According to Morris (2018), the focus should first be to develop an integrated delivery system to serve as the foundation for ACOs while establishing the data system to deliver performance based outcome measurements.

According to a report by the Health Catalyst (2021), ACOs and Integrated Care should focus on providing structure for the increasing risk to the models. The four key components listed are:

1. Knowing the goal
2. Educating and engaging stakeholders and physicians
3. Letting the patient be the guide
4. Creating a framework for operational success

The four components will help promote an ongoing process of success that drives decisions (Health Catalyst, 2021).

Process

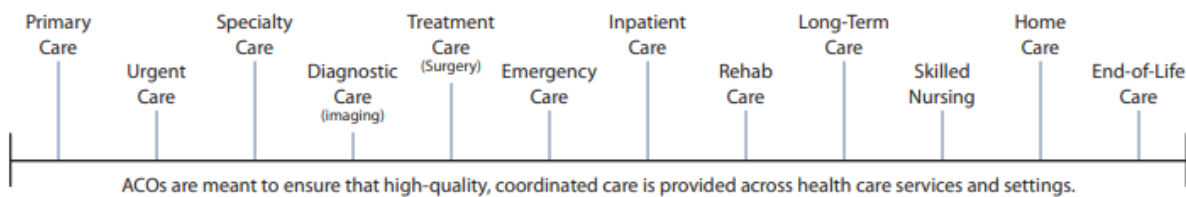


Figure 3. Acquired from Summers, et al. (2015)

The process of the Donabedian model is described as the procedure in which the structure is put in place. The process measures indicate the action taken to get the desired outcome. As shown in figure 4, ACOs have various different providers in-network to provide coordinated care for all patients. According to Summers et al. (2015), “ACOs are intended to help fix the fragmented nature of the current health care system by improving coordination and communication among health care providers and between providers and patients” (paras. 3). Primary care, specialists, hospitals, home health, and any other specialists required are all included in an ACO. Care coordination teams are committed to helping patients and families receive care wherever they are, in addition to providers.

The use of EHR is heavily relied on for communication across all providers as well as patients. To structure this communication, ACOs use health information technology tools to track patients' medical information. Kaiser's model also provides integrated care mainly through the EHR system, HealthConnect (Barnes, 2014). Additionally, integrated transitions from end to end was created for all members in an effort to keep them safe after a hospitalization (Barnes, 2014). An example of this is a patient with a chronic disease who frequently uses the Emergency Department (ED), physicians can further study the EHR of these patients and refer them over to the specialized medical personnel. The creation of clinical pathways and protocols allows standardization of care through ED evaluations. These protocols are aimed at avoiding unnecessary tests and services while focusing on evidence-based practices (Barnes, 2014).

Through Kaiser's integrated care system, "Complete Care", care models are created to enhance care coordination (Kanter et al., 2013). Complete care includes care management teams which consists of RNs, LVNs, nurse practitioners, pharmacists, and medical doctors. These teams' communicate with one another through EHRs by documentation of interventions and verbal communication via phone (Kanter et al., 2013). Additionally, evidence-based treatment guidelines are at the high consideration when directing actions and outcomes (Kanter et al., 2013).

Acute Care Demand Management (KP onCall) is a call center for clinical advice that is available to all KFHP members. KP onCall allows members to have 24/7 telephone access to nurses who can direct members to the correct setting (The Kaiser Family Foundation, 2022). The purpose of the program was to relieve the ED demand and guide members to different healthcare providers as needed (The Kaiser Family Foundation, 2022). In 2011, out of 85,000 calls

received, only 18% were sent to the ED, it was found that members who called, indicated they would have gone to the ED otherwise (The Kaiser Family Foundation, 2022).

Outcome

The outcome measures demonstrate the impact of the service on the patient. The outcomes in this thesis are quality focused care, cost containment, and improved patient outcomes. ACOs serve millions of Medicare patients yearly, if care coordination is properly used through the structure and process measures, patients are less at risk for adverse outcomes. The correct implementation of the structure and process is crucial for successful outcomes.

McDonald KM et al. (2007) states that an intervention without an effective strategy would not improve care coordination.

Medicare patients are over the age of 65 or young disabled adults and therefore, as the care becomes more complicated, the outcome relies heavily on the structure and process. According to Peckham et al. (2022), “The ACO model is recognized as a model of integrated care that aligns with the “process-based” definition of integrated care described by the World Health Organization, where “integration is a coherent set of methods and models on the funding, administrative, organizational, service delivery and clinical levels designed to create connectivity, alignment, and collaboration within and between the cure and care sectors” (paras.2). The application and efficiency of integration differ through ACOs due to the provider group individualities such as the patient population, and IT infrastructure (Kaufman et al., 2019). Ultimately, without properly examining the structure and process measures, the quality-of-care outcomes are greatly affected (Reimold, et al., 2021). Furthermore, defining the structure and outcome leads to more effective and efficient care (Reimold, et al., 2021).

Findings/Analysis

Type of spending	Unadjusted sample mean in the pre-period	Differential change	95% CI	P value
Total spending	\$42,714	– \$253	– \$439 to – \$66	0.008
inpatient hospital spending	\$15,413	\$1	– \$119 to \$121	0.990
Outpatient spending	\$3670	– \$43	– \$103 to \$16	0.150
Physician fees and tests	\$9181	\$2	– \$36 to \$39	0.936
Post-acute care facilities	\$9232	– \$75	– \$141 to – \$9	0.027
Home health services	\$3606	– \$21	– \$64 to \$21	0.854
Hospice	\$731	\$0	– \$5 to \$4	0.322
DME	\$880	– \$27	– \$40 to –\$14	< 0.001

Post-acute care facilities include skilled nursing facilities and facility-based rehabilitative care

Figure 4. Acquired from Figueroa et al., 2020)

A study by Figueroa et al. (2021) examined whether ACOs are linked to savings among Medicare beneficiaries with frailty as shown in figure 5. The use of the study above is important due to the connection to the Medicare beneficiary population. According to the Centers for Medicare & Medicaid Services [CMS], 49% of beneficiaries are between the ages of 65 and 74, 26% are between 75 and 84 years of age, and 11% are ages 85 or older (CMS, 2021). Additionally, heart disease, heart failure, kidney disease, chronic obstructive pulmonary disease, and Alzheimer’s/dementia are among the top 10 chronic conditions for the Medicare population (CMS, 2021). Frailty was defined as a fail older person in an increased state of vulnerability, thereby leading to negative outcomes such as falls and mortality (Kim & Schneeweiss, 2014). Older individuals are at a substantial risk of having multiple chronic diseases and associated functional impairment (The Centers for Disease Control and Prevention, 2020). Using data from Medicare claims from 2009 to 2016, recipients with frailty were identified based on at least 2 claims-based indicators such as: history of falling, muscle weakness, malnutrition, and difficulty walking (Kim & Schneeweiss, 2014). After collecting the data, a difference-in-differences analysis was used to compare changes in Medicare spending. Spending before and after

enrollment in the MSSP program were compared to that of a control group of people with frailty who were treated by clinicians not involved in ACOs. The results, shown in figure 4, represent the savings to ACO beneficiaries. By 2016, the differential change mean averaged to \$253 in savings to those enrolled in ACOs (Figueroa et al., 2021). According to the results, costs linked to post-acute care facilities showed a significant reduction in spending amongst those enrolled in ACOs vs. those not enrolled (Figueroa et al., 2021). Figueroa et al. states that there were no significant changes in physician fees or inpatient hospital spending (Figueroa et al., 2021).

Discussion

The Frailty study by Figueroa et al., (2021) compares the change in care savings for frail Medicare patients under ACOs to frail patients not enrolled in an ACO. The use of this study is suitable given that the number of persons aged 65 and older is projected to increase quickly and reach over two billion by 2050 (Clegg et al., 2013). As previously stated, Medicare covers 54.1 million people ages 65 and older which accounts for more than 80% of Medicare beneficiaries (The Centers for Medicare & Medicaid Services, 2021). Frailty is a term used to describe how adults become more susceptible to sudden, dramatic changes in health as they age as a result of the body losing its natural muscle strength (Young, 2013). Frail adults typically have weak muscles and also usually have other conditions such as memory issues and arthritis (Young, 2013). As stated, Alzheimer's/dementia are one of the top 10 chronic conditions for Medicare patients, physiological and structural changes in the brain are linked to aging (Clegg et al., 2013). Additionally, frailty has also been associated with physiological loss in the respiratory and cardiovascular system (Clegg et al., 2013).

According to the Institute of Medicine, a variation in Medicare spending is mainly due to post-acute care spending which includes skilled nursing facilities, home health care, and long-

term hospitals (The Institute of Medicine, 2013). The cost of post-acute care services have been shown to be a driver of spending, making them a focal point for improvement (Kibria et al., 2013). A study done by Kennedy et al., (2020) examined whether the collaboration between ACOs and post-acute care facilities have executed well on cost and quality measures. The success of the ACO model, the ability of ACOs to achieve shared savings, and ultimately patient outcomes will be impacted by their capacity to improve post-acute care cost and quality performance (Kennedy et al., 2020). The coordination between hospitals and post-acute care facilities offers ACOs the chance to reduce costs by fostering provider communication (Kennedy et al., 2020). Data collected from the Medicare Payment Advisory commission showed that 1.7 million Medicare beneficiaries used a post-acute care facility at least once in 2013, which resulted in about \$298 in spending per day (Kennedy et al., 2020). It was concluded that participation in ACOs have been linked to lower post-acute spending without sacrificing care quality (Kennedy et al., 2020).

Reform efforts face a significant challenge in successfully interpreting policies and programs because it requires a deep knowledge of the interventions proposed, the outcome evidence, and the context in which the intervention will be carried out (Peckham et al., 2022). The findings suggest that savings were driven primarily by post-acute care reduction in spending rather than changes to inpatient hospital spending that was previously found among Medicare patients (Figueroa et al., 2021). These findings highlight the need for care management plans under ACOs which may lead to inpatient hospital savings.

Further research on care management might be helpful in discovering a savings opportunity for ACOs. ACOs could utilize care plans as a means for savings for individuals with multiple comorbidities who normally are responsible for a drive in healthcare cost (Fraze et al.,

2021). Improved care coordination and chronic disease management for cost circumstances are broadly highlighted and acknowledged to be a main mechanism that is pushing cost containment (Luo et al., 2020).

Conclusion

The implementation of ACOs and integrated care are a milestone in healthcare for the United States. The aim of these models is to provide cost containment while improving patient health outcomes. The current state of healthcare is lacking patient care coordination and cost containment particularly for Medicare patients with numerous care needs. The ACA's solution of ACOs and integrated care is showing to be a promising lead in decreasing overall cost while promoting better patient outcomes.

In the future, more research on ACO outcomes is recommended to support a better understanding of the appropriate structure needed to guarantee ACOs yield improved health and continued cost savings. Additionally, more research is needed to fully evaluate the impacts ACOs and Integrated Care are having on Medicare patients. It's crucial to identify the mechanisms influencing the economic and health impacts of ACOs and Integrated Care in order to create a solid evidence base for decision-makers and practitioners (Kadu et al., 2019). The additional research will help guide policymakers in the decision making process when trying to further contain cost and improve patient health outcomes.

References

- Albright, L. (2016). *Preventive Care Quality of Medicare accountable care organizations* - JSTOR. Preventive Care Quality of Medicare Accountable Care Organizations: Associations of Organizational Characteristics With Performance. . Retrieved July 1, 2022, from <https://www.jstor.org/stable/26418141>
- Barnes, C. A. (2014, March). Kaiser Permanente Transitions [PDF]. [Http://app.ihp.org](http://app.ihp.org)., http://app.ihp.org/FacultyDocuments/Events/Event-2378/Presentation-9436/Document/7692/Kaiser_Permanente_Transition_Care_Bundle.pdf
- Burke T. (2011). Accountable care organizations. *Public health reports (Washington, D.C. : 1974)*, 126(6), 875–878. <https://doi.org/10.1177/003335491112600614>
- Casalino, L. P. (2014). *Categorizing accountable care organizations: Moving toward patient ...* Categorizing Accountable Care Organizations: Moving Toward Patient-Centered Outcomes Research That Compares Health Care Delivery Systems. *Health Services Research*. Retrieved July 1, 2022, from <https://onlinelibrary.wiley.com/doi/10.1111/1475-6773.12254>
- Cattel, D., & Eijkenaar, F. (2020). Value-Based Provider Payment Initiatives Combining Global Payments With Explicit Quality Incentives: A Systematic Review. *Medical Care Research and Review*, 77(6), 511–537. <https://doi.org/10.1177/1077558719856775>
- Centers for Medicare & Medicaid Services [CDC]. (2021). *Medicare beneficiaries at a glance*. CMS. Retrieved August 1, 2022, from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Beneficiary-Snapshot/Bene_Snapshot

Centers for Medicare & Medicaid Services [CDC] . (2018, December). *Press release CMS finalizes "pathways to success," an overhaul of Medicare's national ACO Program*. CMS. Retrieved July 27, 2022, from <https://www.cms.gov/newsroom/press-releases/cms-finalizes-pathways-success-overhaul-medicare-national-aco-program>

Centers for Disease Control and Prevention [CDC] . (2021, May 7). *FastStats - health expenditures*. Centers for Disease Control and Prevention. Retrieved July 18, 2022, from <https://www.cdc.gov/nchs/fastats/health-expenditures.htm>

Center for Health Care Strategies. (2022, May). *Medicare accountable care organizations in California: An overview*. Dhcs.ca.gov. Retrieved July 20, 2022, from <https://www.dhcs.ca.gov/services/Documents/Medicare-ACOs-in-CA-Overview.pdf>

Clegg, A., Young, J., Iliffe, S., Rikkert, M. O., & Rockwood, K. (2013). *Frailty in elderly people*. *Lancet* (London, England), 381(9868), 752–762. [https://doi.org/10.1016/S0140-6736\(12\)62167-9](https://doi.org/10.1016/S0140-6736(12)62167-9)

Colla, C. H., & Fisher, E. S. (2017, April 1). *Moving forward with accountable care organizations: Some answers, more questions*. *JAMA internal medicine*. Retrieved July 1, 2022, from <https://www.ncbi.nlm.nih.gov/pubmed/28192555>

Cohen, R. A., Cha, A. E., Terlizzi, E. P., & Martinez, M. E. (2022, May). *Health Insurance Coverage: Early release of estimates from the national ... National Health Interview Survey Early Release Program*. Retrieved July 7, 2022, from <https://www.cdc.gov/nchs/data/nhis/earlyrelease/insur202205.pdf>

- Comfort, L. N., Shortell, S. M., Rodriguez, H. P., & Colla, C. H. (2018). Medicare Accountable Care Organizations of Diverse Structures Achieve Comparable Quality and Cost Performance. *Health services research*, 53(4), 2303–2323. <https://doi.org/10.1111/1475-6773.12829>
- Deng, Y., & Benítez-Silva, H. (2021). An Empirical Model of Medicare Costs: The Role of Health Insurance, Employment, and Delays in Medicare Enrollment. *Econometrics*, 9(2), 25. <https://doi.org/10.3390/econometrics9020025>
- Diana, M. , Zhang, Y. , Yeager, V. , Stoecker, C. & Counts, C. (2019). *The impact of accountable care organization participation on hospital patient experience*. *Health Care Management Review*, 44 (2), 148-158. doi: 10.1097/HMR.0000000000000219.
- Donabedian, Avedis, "Evaluating Quality of Medical Care," *Milbank Memorial Fund Quarterly*, Volume 44 (1966). 166-206.
- Dowd, B. E., & Laugesen, M. J. (2020). Fee-for-service payment is not the (main) problem. *Health services research*, 55(4), 491–495. <https://doi.org/10.1111/1475-6773.13316>
- Figueroa, J.F., Lam, M.B., Phelan, J. Accountable Care Organizations Are Associated with Savings Among Medicare Beneficiaries with Frailty. *J GEN INTERN MED* 36, 3891–3893 (2021). <https://doi.org/10.1007/s11606-020-06166-6>
- Fisher, E. S. (2010). *The effects of Medicare accountable organizations on inpatient*. The Effects of Medicare Accountable Organizations on Inpatient Mortality Rates. *Inquiry : a journal of medical care organization, provision and financing*. Retrieved July 1, 2022, from <https://journals.sagepub.com/doi/full/10.1177/0046958018800092>

- Fraze, T. K., Beidler, L. B., Briggs, A., & Colla, C. H. (2021). Translating Evidence into Practice: ACOs' Use of Care Plans for Patients with Complex Health Needs. *Journal of general internal medicine*, 36(1), 147–153. <https://doi.org/10.1007/s11606-020-06122-4>
- Frean, M., Covington, C., Tietschert, M., Bahadurzada, H., So, J., & Singer, S. J. (2021). *Patient experiences of integrated care in medicare accountable care organizations and medicare advantage versus traditional fee-for-service*. *Medical Care*, 59(3), 195–201. <https://doi.org/10.1097/MLR.0000000000001463>
- Fullerton, C. A., Henke, R. M., Crable, E., Hohlbauch, A., Cummings, N. (2016). *The impact of Medicare ACOs on improving integration and coordination of physical and behavioral health care*. *Health Affairs*, 35, 1257-1265. doi:[10.1377/hlthaff.2016.0019](https://doi.org/10.1377/hlthaff.2016.0019)
- Goldsmith, J. (2020, December 1). *Integrated Delivery Networks: In search of benefits and market effects*. National Academy of Social Insurance. Retrieved July 1, 2022, from <https://www.nasi.org/research/medicare-health-policy/integrated-delivery-networks-in-search-of-benefits-and-market-effects/>
- Goodwin, N. (2016, October 28). *International Journal of Integrated Care*. Retrieved July 1, 2022, from <https://doi.org/10.5334/ijic.2530>
- Haslam, S. (2021, August 24). *Integrated care: The Kaiser Healthcare Model*. Woodruff Sawyer. Retrieved July 22, 2022, from <https://woodruff Sawyer.com/employee-benefits/integrated-care-kaiser-healthcare-model/>
- Health Catalyst. (2021, December 20). *Clinically integrated networks vs. acos*. Health Catalyst. Retrieved July 22, 2022, from <https://www.healthcatalyst.com/insights/acos-cins-past-present-future>

Henke, R. (2020). *Medicaid accountable care organizations and childbirth outcomes* . Medical Care Research and Review. Retrieved July 1, 2022, from

<https://journals.sagepub.com/doi/10.1177/1077558718823132>

Henry J Kaiser Family Foundation. (2019, February). *An overview of medicare - KFF*. kff.org .

Retrieved July 19, 2022, from <https://files.kff.org/attachment/issue-brief-an-overview-of-medicare>

Hughes, G., Shaw, S. E., & Greenhalgh, T. (2020, May 20). *Rethinking Integrated Care: A*

Systematic Hermeneutic Review of the Literature on Integrated Care Strategies and

Concepts. Onlinelibrary.wiley.com. Retrieved July 19, 2022, from

<https://onlinelibrary.wiley.com/doi/10.1111/1468-0009.12459>

Institute of Medicine. (2013). *Variation in health care spending: Target decision making, not geography*. Washington, DC: National Academies Press.

Ivey, S. , Shortell, S. , Rodriguez, H. & Wang, Y. (2018). *Patient Engagement in ACO Practices and Patient-reported Outcomes Among Adults With Co-occurring Chronic Disease and*

Mental Health Conditions. *Medical Care*, 56 (7), 551-556. doi:

10.1097/MLR.0000000000000927.

Kadu, M., Ehrenberg, N., Stein, V., & Tsiachristas, A. (2019). Methodological Quality of

Economic Evaluations in Integrated Care: Evidence from a Systematic

Review. *International journal of integrated care*, 19(3), 17.

<https://doi.org/10.5334/ijic.4675>

- Kaiser Family Foundation. (2022, June 7). *The facts about Medicare spending*. KFF. Retrieved July 22, 2022, from <https://www.kff.org/interactive/medicare-spending/>
- Kaiser Permanente. (2021, October 13). *Medicare Health Plan receives highest rating*. Kaiser Permanente Look inside KP Northern California. Retrieved July 20, 2022, from <https://lookinside.kaiserpermanente.org/medicare-health-plan-receives-highest-rating/>
- Kaiser Permanente. (2020, September 14). *Our model*. Our Model | Kaiser Permanente. Retrieved July 19, 2022, from <https://about.kaiserpermanente.org/our-story/news/public-policy-perspectives/integrated-care>
- Kanter, M. H., Lindsay, G., Bellows, J., & Chase, A. (2013). Complete care at Kaiser Permanente: transforming chronic and preventive care. *The Joint Commission Journal on Quality and Patient Safety*, 39(11), 484-494.
- Kaufman, B. G., Spivack, B. S., Stearns, S. C., Song, P. H., & O'Brien, E. C. (2019). Impact of Accountable Care Organizations on Utilization, Care, and Outcomes: A Systematic Review. *Medical Care Research and Review*, 76(3), 255–290.
<https://doi.org/10.1177/1077558717745916>
- Kennedy, G., Lewis, V. A., Kundu, S., Mousqués, J., & Colla, C. H. (2020). *Accountable Care Organizations and Post-Acute Care: A Focus on Preferred SNF Networks*. *Medical Care Research and Review*, 77(4), 312–323. <https://doi.org/10.1177/1077558718781117>
- Kerrissey, M. , Frean, M. , Traboulsi, A. & Singer, S. (2021). *Higher Medicare Expenditures Are Associated With Better Integrated Care as Perceived by Patients*. *Medical Care*, 59 (7), 565-571. doi: 10.1097/MLR.0000000000001558.

- Khatod, M. (2018). *Kaiser Permanente: Joint Arthroplasty in an Integrated Capitated Care Delivery Model*. *The Journal of Arthroplasty*, 33(6), 1649–1651.
<https://doi.org/10.1016/j.arth.2018.01.029>
- Kibria, A., Mancher, M., McCoy, M. A., Graham, R. P., Garber, A. M., & Newhouse, J. P. (Eds.). (2013). *Variation in health care spending: target decision making, not geography*.
- Kim, D. H., & Schneeweiss, S. (2014). Measuring frailty using claims data for pharmacoepidemiologic studies of mortality in older adults: evidence and recommendations. *Pharmacoepidemiology and drug safety*, 23(9), 891-901.
- Levine, D., & Mulligan, J. (2015). Overutilization, overutilized. *Journal of health politics, policy and law*, 40(2), 421–437. <https://doi.org/10.1215/03616878-2882281>
- Lin, Y., Yin, S., Huang, J., & Du, L. (2016). Impact of pay for performance on behavior of primary care physicians and patient outcomes. *Journal of Evidence-Based Medicine*, 9(1), 8-23.
- Luo, N., Hammill, B. G., DeVore, A. D., Xu, H., Fonarow, G. C., Albert, N. M., Mentz, R. J. (2020). *Outcomes and cost among Medicare beneficiaries hospitalized for heart failure assigned to accountable care organizations*. *The American Heart Journal*, 226, 13–23.
<https://doi.org/10.1016/j.ahj.2020.04.028>
- Matulis, R. (2018). *The history, evolution, and future of Medicaid Accountable Care ... - CHCS*. The History, Evolution, and Future of Medicaid Accountable Care Organizations. Retrieved July 1, 2022, from https://www.chcs.org/media/ACO-Policy-Paper_022718.pdf
- McDonald KM, Sundaram V, Bravata DM. *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies* (Vol. 7: Care Coordination). Rockville (MD): Agency for Healthcare Research and Quality (US); (2007). jun. (Technical Reviews, No. 9.7.) 3,

Definitions of Care Coordination and Related Terms. Available from:

<https://www.ncbi.nlm.nih.gov/books/NBK44012/>

McHugh, M. D., Aiken, L. H., Eckenhoff, M. E., & Burns, L. R. (2016). Achieving Kaiser Permanente quality. *Health care management review*, 41(3), 178–188.

<https://doi.org/10.1097/HMR.0000000000000070>

Medicare Total Enrollment. Centers for Medicare & Medicaid Services Data. (2021). Retrieved July 21, 2022, from <https://data.cms.gov/summary-statistics-on-beneficiary-enrollment/medicare-and-medicare-reports/medicare-total-enrollment>

Morris, D. E. (2018, March 13). *Clinical integration and acos: For practicing physicians and their patients*. BDC Advisors. Retrieved July 22, 2022, from

<https://www.bdcadvisors.com/clinical-integration-and-acos-for-practicing-physicians-and-their-patients/#:~:text=Although%20Medicare%20ACOs%20may%20take%20several%20forms%2C%20the,cost%20of%20health%20care%20for%20a%20defined%20population.>

National Committee for Quality Assurance. (2013, March). Integrated care for people with Medicare and Medicaid - the scan foundation. The Scan Foundation. Retrieved July 22, 2022, from https://www.thescanfoundation.org/media/2013/03/ncqa-integrated_care_for_people_medicare_medicare-3-6-13.pdf

Noble, D. J., & Casalino, L. P. (2013, March 20). *Can accountable care organizations improve population health?: Should they try?* JAMA. Retrieved July 1, 2022, from

<https://www.ncbi.nlm.nih.gov/pubmed/23512057>

Ochieng, N., Cubanski, J., Neuman, T., Artiga, S., & Damico, A. (2021, February 16). *Racial and ethnic health inequities and medicare - overview*. KFF. Retrieved July 19, 2022, from

<https://www.kff.org/report-section/racial-and-ethnic-health-inequities-and-medicare-overview/>

Peckham, A., Rudoler, D., Bhatia, D., Allin, S., Abdelhalim, R., & Marchildon, G. P. (2022).

What Can Canada Learn From Accountable Care Organizations: A Comparative Policy Analysis. International Journal of Integrated Care, 22(2), 1–1.

<https://doi.org/10.5334/ijic.5677>

Price R. A., Elliott M. N., Zaslavsky A. M., Hays R. D., Lehrman W. G., Rybowski L., Cleary P.

D. (2014). *Examining the role of patient experience surveys in measuring health care quality.* Medical Care Research and Review, 71(5), 522–554

Reimold, K. E., Faridi, M. K., Pekow, P. S., Erban, J., Flannelly, C., Luikart, Y., ... Lagu, T.

(2021). *The Relationship Between Governing Board Composition and Medicare Shared Savings Program Accountable Care Organizations Outcomes: an Observational Study.*

Journal of General Internal Medicine : JGIM. <https://doi.org/10.1007/s11606-021-07053-4>

Reisman, L. (2018). High-Risk Patients And ACO Savings. *Health Affairs*, 37(4), 678.

<https://doi-org.libproxy.csun.edu/10.1377/hlthaff.2018.0110>

Summers, L., Muhlestein, D., Birchfield, L., Ness, D., & De Lisle, K. (2015, May). *The impact of accountable care how accountable care impacts the way consumers receive care.*

NationalPartnership.org. Retrieved July 26, 2022, from

<https://www.nationalpartnership.org/our-work/resources/health-care/impact-accountable-care.pdf>

The Brookings Institution. (2015, May). *Kaiser Permanente – California: A Model for Integrated Care for the Ill and Injured*. Brookings.edu. Retrieved July 2022, from https://www.brookings.edu/wp-content/uploads/2016/07/KaiserFormatted_150504RH-with-image.pdf

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Peckham, A., Rudoler, D., Bhatia, D., Allin, S., Abdelhalim, R., & Marchildon, G. P. (2022, April 1). *International Journal of Integrated Care*. Retrieved July 26, 2022, from <https://www.ijic.org/articles/10.5334/ijic.5677/>

U.S. Department of Health and Human Services, Administration for Community Living. (2022, May 4). Projected future growth of older population. ACL Administration for Community Living. Retrieved July 7, 2022, from <https://acl.gov/aging-and-disability-in-america/data-and-research/projected-future-growth-older-population>

Wilson, M., Guta, A., Waddell, K., Lavis, J., Reid, R., & Evans, C. (2020). The impacts of accountable care organizations on patient experience, health outcomes and costs: a rapid review. *Journal of health services research & policy*, 25(2), 130–138. <https://doi.org/10.1177/1355819620913141>

World Health Organization. (2018). *Continuity and coordination of care: a practice brief to support implementation of the WHO Framework on integrated people-centred health services*.

World Health Organization [WHO]. (2016, May 28). *World Health Assembly adopts framework on integrated people-centred health services*. World Health Organization. Retrieved July 19, 2022, from <https://www.who.int/news/item/28-05-2016-world-health-assembly-adopts-framework-on-integrated-people-centred-health-services>

World Health Organization [WHO]. WHO global strategy on people-centred and integrated health services: interim report [Internet]. *World Health Organization*; 2015. [cited 2021 Aug 31]. Report No.: WHO/HIS/SDS/2015.6. Available from: <https://apps.who.int/iris/handle/10665/155002>.

Young , J. (2013). *Frailty – what it means and how to keep well over the winter months*. NHS choices. Retrieved August 1, 2022, from <https://www.england.nhs.uk/blog/frailty/>