

## Statement of the American Academy of Family Physicians

By

Steven Furr, MD, FAAFP President, American Academy of Family Physicians

То

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On

## "Bolstering Chronic Care through Medicare Physician Payment"

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AAFP Headquarters 11400 Tomahawk Creek Pkwy. Leawood, KS 66211-2680 800.274.2237 • 913.906.6000 fp@aafp.org AAFP Washington Office 1133 Connecticut Avenue, NW, Ste. 1100 Washington, DC 20036-1011 202.232.9033 • Fax: 202.232.9044 capitol@aafp.org Chairman Wyden, Ranking Member Crapo, and distinguished members of the committee, thank you for the opportunity to testify today. My name is Steven Furr, MD, FAAFP and I am a practicing family physician from Jackson, Alabama. I am a cofounder of Family Medical Clinic of Jackson, a rural health clinic, a member of the medical staff of a small rural hospital, and medical director of the local nursing home. As the President of the American Academy of Family Physicians (AAFP), I am honored to be here today representing the more than 130,000 physician and student members of the AAFP.

As a family medicine specialist who has cared for patients for more than 35 years, I can speak firsthand about how fee-for-service payment in traditional Medicare, including its underinvestment in primary care and associated administrative burden, are impeding the delivery of high-quality, patient-centered, comprehensive primary care, which encompasses chronic care management (CCM).

Family physicians provide continuing and comprehensive medical care, health maintenance and preventive services to patients across the lifespan regardless of age, gender or type of problem. Through enduring partnerships, family physicians help patients prevent, understand, and manage illness, navigate the health system and set health goals. The defining features of primary care, including continuity, coordination, and comprehensiveness, mean family physicians are particularly well-suited to serve as the focal point of care for patients with chronic conditions.

Nearly 95 percent of adults 60 years and older have at least one chronic condition, and nearly 80 percent have two or more.<sup>i</sup> This is only projected to get worse in the coming years as the number of adults 50 years and older with at least one chronic disease is estimated to increase by almost 100 percent from 71.522 million in 2020 to 142.66 million by 2050.<sup>ii</sup> Effectively meeting the current and future needs of our patients with chronic conditions requires our nation to better leverage primary care as the foundation of our health care system. However, our current fee-for-service payment structure favors and incentivizes work that is done *to* a patient, rather than done *with* and *for* them. We need doctors who care for people, not doctors to deliver services.

I'm seeing how our failure to invest in and uplift the true value of primary care is impacting my patients every day. Our physician workforce skews heavily toward non-primary care specialists, and we have fewer primary care physicians relative to the population than in other countries. This is having severe impacts on patient access. In a recent comparison of primary care access across ten peer countries, U.S. adults were the least likely (43 percent) to have a longstanding relationship with a primary care provider and a growing number of adults have reported not having any usual source of care over the past decade.<sup>iii</sup> At the same time, three-quarters of U.S. adults (73 percent) say the health care system is not meeting their needs.<sup>iv</sup> This data is telling. People are losing their trusted relationship with a primary care physician and, in turn, their trust in the health care system.

Evidence continues to suggest this type of longitudinal relationship that I and other primary care physicians foster with our patients leads to better control of chronic conditions, fewer emergency department visits and hospital stays, and improved health outcomes.<sup>v,vi</sup> Unfortunately, traditional Medicare underinvests in these trusted relationships with patients. Low primary care payment rates in a system that rewards volume over value means physicians are pressured to see as many patients as possible. Meanwhile, overwhelming administrative burden takes time away from delivering patient care and often requires physicians to spend hours outside of the office doing documentation.

These factors are leading current primary care physicians to leave the field and, when combined with the burden of student loan debt, dissuading medical students from pursuing primary care specialties like family medicine. At a time when Americans have more chronic conditions than ever, we should be making strides to embed primary care physicians in every community. Instead,

we've created a policy framework that is actively driving prospective physicians away from primary care and perpetuating nationwide workforce shortages.

Decades of systemic underinvestment in primary care and prevention have led to poorer population health and a greater emphasis on rescue medical care, rather than health care. We as a nation have worried about increased upfront spending and implemented policies that have wrongly steered people away from high-value, low-cost services like preventive screenings and primary care office visits. **By failing to invest more upfront dollars in primary care, we're paying an even higher price.** We're spending more than ever on health care costs, both as a nation and as consumers, because we have sicker patients receiving later diagnoses and utilizing expensive settings like the emergency room and hospital as their "usual source of care."

Establishing a health care system that prioritizes primary care will, among many other things, require a meaningful overhaul of physician payment that will take time. However, as a starting point, I urge Congress to consider policies that work toward the following objectives:

- More appropriately valuing the work of primary care within the Medicare Physician Fee Schedule, which is the framework for many value-based payment arrangements;
- **Reforming budget neutrality requirements** that unnecessarily pit physician specialties against one another while undermining CMS' ability to invest in *all* the services a patient may need;
- Addressing existing financial barriers that dissuade patients' utilization of chronic care management and other primary care services by waiving cost sharing responsibilities; and
- Providing primary care physicians and practices with more prospective, sustainable revenue streams that allow them to tailor the care they deliver to their patient's needs.

## Reforming Fee-for-Service to Better Value Primary care

As noted in my introduction, access to longitudinal, coordinated primary care – which family physicians like me provide every day – has been shown to increase utilization of preventive care, improve outcomes for patients with chronic conditions, and reduce costly emergency visits, hospitalizations, and unnecessary specialty outpatient visits. Yet the United States has continuously underinvested in primary care with only five to seven percent of total health care spending going to primary care.<sup>vii</sup>

Last month, the AAFP's Robert Graham Center, in collaboration with the Milbank Memorial Fund and the Physicians Foundation, released the nation's second primary care scorecard, which reported that national spending on primary care decreased from 6.2 percent in 2013 to 4.7 percent in 2021. Primary care spending decreased for all payers between 2019 and 2021 with Medicare being the most pronounced with a 15 percent drop.<sup>viii</sup> While some of this decrease could be due to a drop in office visits during the pandemic, it is a trend worth noting.

The impact of this long-term underinvestment is evidenced in our nation's health. When we look at health outcomes across the world, we're not doing well by almost any measure. Compared to other high-income, peer nations, the U.S. has higher rates of obesity, diabetes, and heart disease, and a larger share of the population with multiple chronic conditions.<sup>ix</sup> A common theme across countries with better health outcomes and lower health care costs is that they invest more in their primary care system with estimates placing primary care spending between 12 and 17 percent of total health care spending for these high-performing nations.<sup>x</sup>

One of the major factors contributing to this underinvestment is the relative undervaluation of primary care in fee-for-service (FFS), the predominant payment model. In general, the Medicare Physician Fee Schedule (MPFS) values procedural services delivered by other specialists higher

than it does office visits and other cognitive services, which are most delivered by primary care physicians. Primary care and other cognitive services have been passively devalued over time as many new procedural codes with higher values have been added.<sup>xi</sup>

This devaluation has led to lower compensation for primary care physicians who specialize in treating the whole person compared to our specialist peers, despite the vital role we play in managing chronic conditions and coordinating patient care across a large team and despite the fact evidence has shown that primary care office/outpatient evaluation and management (E/M) visits are more complex and comprehensive than those delivered by other specialties.<sup>xii</sup> This devaluation is not limited to Medicare. Many other private and public payers peg their payment rates to the MPFS rates or use the relative values in the MPFS to set their rates.

FFS doesn't just underinvest in primary care – it also makes it extremely complex to get paid. We must submit unique codes for each and every service we provide – documenting both what we did and why we did it. This is incompatible with the continuous, comprehensive nature of primary care which spans everything from basic preventive services to more complex services involving chronic care management, integrated behavioral health, and care coordination. For patients with chronic conditions, these discrete services may include patient education, care planning, and managing medications, all of which are ongoing and continuous processes. Each of these services must be individually documented to justify payment for typical, comprehensive primary care, even though these services are all foundational aspects. Billing for primary care under FFS is like trying to cut a roll of paper with a hole punch rather than a pair of scissors.

The retrospective, volume-based nature of FFS also fails to account for the costs of longitudinally managing patients' overall health. It does not provide practices with the time and flexibility to invest in the care management staff and population health tools that enable practices to efficiently and effectively meet patients' individual evolving health needs. For example, FFS structures have not historically paid for wraparound patient activities, such as community health workers or care coordination, but these interventions enable family physicians to better address a patient's identified health-related social needs (HRSNs) within a patient's community context. This disadvantages patients who require more support and the physicians who care for them. While Medicare has implemented new codes for some of these services in 2024, such as community health integration and social drivers of health risk assessments, their utilization and effectiveness is not yet known.

For these reasons, the AAFP has long advocated to accelerate the transition to value-based care using alternative payment models (APMs) that provide prospective, population-based payments to support the provision of comprehensive, longitudinal primary care. We strongly believe well-designed APMs provide primary care a path out of the under-valued and overly burdensome FFS payment system that exists today, and in turn will better enable the Medicare program to meet the needs of its growing and aging beneficiary population in new and innovative ways. Unfortunately, a dearth of primary care APMs and the inadequacy of FFS payment rates that often underlie APMs are undermining the transition to value-based care. Because most APMs are designed based on FFS payment rates, modernizing FFS payment for primary care is one essential strategy to support physicians' transition into value-based care.

Therefore, while FFS is not the future the AAFP envisions for primary care, it is the present. Federal policymakers must ensure the current FFS system appropriately and sustainably compensates primary care physicians to make more meaningful progress toward the future – one that rewards value over volume of services.

We have been encouraged by recent regulatory policy changes aimed at more appropriately valuing and paying for primary care and other types of cognitive care in Medicare. The AAFP greatly appreciates that CMS finalized and Congress supported implementation of the G2211 add-

on code in 2024, which can be billed alongside offices visits that are part of an ongoing, longitudinal care relationship. G2211 is an incremental but meaningful step in appropriately valuing primary care and supporting longitudinal, holistic patient-physician relationships, relative to other services in the fee schedule.

However, the zero-sum, budget-neutral nature of the MPFS is undermining investments like G2211. Existing budget neutrality requirements force CMS to offset increases or additions anywhere in the MPFS with across-the-board cuts to *all* services in the MPFS, including those most delivered by primary care physicians. In short, this means Medicare cannot appropriately pay for all the services a patient might need, and it perpetuates inequities in the fee schedule, which bleed into and impact the success of primary care practices in VBP arrangements and outside of Medicare.

For these reasons, the Academy has long called for reforms to budget neutrality requirements, which are unnecessarily pitting physician specialties against one another. We strongly urge the Committee to consider proposals such as increasing the current budget neutrality threshold, which has not been updated since the fee schedule was created in 1992, correcting the impact of overor under-utilization assumptions by CMS on the availability of funds, and more regularly updating the direct costs used to calculate practice expense Relative Value Units (RVUs). I'd also like to raise the suggestion that federal policymakers should think of budget neutrality in broader terms than it currently is. As I've discussed, proper investment in primary care yields the potential to increase long-term cost savings through outcomes such as reduced emergency department visits, hospitalizations, and better management of chronic conditions. I would make the case that those savings should be considered as part of the direct budgetary impacts of increasing primary care investments in Medicare.

In terms of other opportunities to improve CCM in traditional Medicare, I'd like to discuss the experience of family physicians and their patients in utilizing some of the CCM codes. In 2015, Medicare began paying physicians for delivering non-face-to-face CCM through separate codes. Being able to bill for CCM has been an overall positive experience for our practice. However, there remain some operational challenges such as patient cost-sharing requirements that are limiting uptake by patients who would truly benefit from this type of additional support. A 2022 study found that MPFS billing codes for preventive medicine and care management services are being underutilized even though primary care physicians were providing code-appropriate services to many patients. The median use of the preventive and care coordination billing codes was 2.3 percent among eligible patients.<sup>xiii</sup>

I've had patients in my practice opt out of receiving these services simply because the \$15 or so a month they faced in cost-sharing was not financially feasible. In almost every case these were the very patients that would most benefit from CCM. This rings true for many of the other new codes Medicare has implemented, including G2211, SDOH risk assessments, and community health integration services. Patients are not used to paying for these services and, understandably, are likely to be resistant to doing so. If we want to incentivize usage of these high-value services, we must waive patient cost-sharing.

In many ways, CCM is a preventive service in that it reduces emergency department and other outpatient visits. Removing cost-sharing for CCM and other primary care services increases access to these services without increasing overall health care spending.<sup>xiv</sup> The available evidence indicates that reducing or removing cost barriers to primary care increases utilization of preventive and other recommended primary care services, which improves both individual beneficiary and population health. For example, while cost-sharing for most preventive services is waived across payers, many patients don't access all the preventive care recommended for them because they don't know what is or isn't covered or they are concerned they might be charged for raising other health issues in the same visit.

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Therefore, the AAFP <u>supports</u> the Chronic Care Management Improvement Act (H.R. 2829), which would waive patient cost-sharing for the CCM codes under traditional Medicare. We urge Congress to pass this and other legislation to remove cost-sharing barriers to other primary care services.

## Supporting the Transition to Primary Care Value-Based Payment

Alternative payment models (APMs), when well-designed and implemented to meaningfully support primary care, provide practices with predictable, stable revenue streams that afford them the funding and flexibility needed to build teams and implement technology and infrastructure to deliver high-quality, patient-centered care – without the administrative complexity of FFS.

Value-based payment (VBP) arrangements, such as population-based payments or accountable care organizations (ACOs), better support and encourage physicians to deliver a more comprehensive set of services, such as care coordination and addressing HRSN, through prospective payment and flexibility. These types of arrangements invest in the longitudinal, continuous relationships primary care physicians have with their patients in ways that FFS has not historically and enable practices to tailor their care to better support patients with chronic conditions while improving related health outcomes. For example, practices might host monthly diabetes group visits to improve A1C. The frequent touches and support from these group visits can lead to better health outcomes for patients with type 2 diabetes and help the practice meet quality measure requirements.

In the Comprehensive Primary Care Plus (CPC+) model tested by the Center for Medicare and Medicaid Innovation, participating practices reported they used the model's prospective payments to invest in care delivery transformation that would not have been possible if FFS was their only source of revenue. Some of these transformations included key CCM activities, such as: providing patients with after-hours access to a physician or other clinical staff member who has real-time access to the practice's EHR; using designated care managers, typically on-site staff who are nurses or medical assistants, to deliver longitudinal care management services; and co-location of a pharmacist at the practice site to support comprehensive medication management. To be clear, the primary difference that afforded practices the opportunity to make these investments is that the payment was *prospective*; while they are possible to make in FFS, the retrospective payment makes it much more challenging for practices to do so.

Given these and other benefits, there is mounting multi-stakeholder, cross-industry support for a primary care payment system that rewards value and holds promise for improving health, addressing disparities, and slowing the overall growth of health care costs. Federal policymakers should increase participation opportunities in primary care models that align with the AAFP's guiding principles for VBP and meet practices where they are, allowing them to gain a foothold in and stay in VBP.

Congress tried to provide an on-ramp for more practices to participate in APMs with the passage of the Medicare Access and CHIP Reauthorization Act (MACRA) and implementation of the Meritbased Incentive Payment System (MIPS), which was intended to provide clinicians with experience being measured on their performance. The AAFP supported the intent of fostering continuous performance improvements that lead to better outcomes for patients. Unfortunately, continuous cuts to Medicare FFS payments have inhibited most practices from making the necessary investments that would allow them to successfully move into APMs. Further, the current design of MIPS, which focuses on individual clinician performance using largely process rather than outcomes measures, does not appear to be driving care improvements as much as it is adding administrative complexities that detract from patient care while unfairly penalizing small and rural practices. MACRA requires CMS to apply payment adjustments to Medicare Part B FFS payments based on an eligible clinician's (EC) performance in MIPS. Clinicians with a MIPS final score above the performance threshold receive a positive adjustment while those below the threshold receive a negative adjustment. The adjustments must be budget neutral – meaning the total value of annual positive adjustments are equal to the total value of negative adjustments. As such, both the positive adjustments are made on a sliding scale with the exception that those in the bottom quartile automatically receive the maximum penalty for the year.

While most physicians have met or exceeded the MIPS performance threshold in past performance years, physicians in small and rural practices consistently have lower than average MIPS scores. As the performance threshold increases, it will become more difficult for small and rural practices to avoid a negative payment adjustment, which can be up to 9 percent to their Medicare Part B services. Given these challenges, I urge Congress to consider reforms to the MIPS program to alleviate the administrative costs of reporting to the program, ensure it drives meaningful quality improvement, and assist physician practices in building the necessary competencies to transition into alternative payment models.

Congressional action is also needed to ensure federal policies provide appropriate support and incentives to physician practices moving into APMs. I appreciate that Congress passed legislation last month to extend the advanced APM (AAPM) incentive payment through performance year 2024, albeit at a lower amount.

These payments have served as an important tool for attracting physicians to participate in AAPMs, which require significant upfront (and often ongoing) investments in new staff, technology, and other practice improvements. Primary care practices have also used the AAPM bonus payments to offset the cost of investing in care delivery transformation that drives success in these models by improving patient outcomes and lowering spending. Expiration of the AAPM incentive payment could institute an additional barrier to continued AAPM participation for physician practices and further impede family physicians' ability to transition value-based payment models.

Congress should also consider legislation to provide CMS with authority to modify AAPM qualifying participant thresholds to ensure independent practices are not left behind. The Value in Health Care Act (S. 3503), which the AAFP has endorsed, is one piece of legislation that would do so.

However, primary care physicians still face significant barriers to entering and sustaining participation in VBP arrangements, even when they align with AAFP's principles. Practices must comply with an ever-increasing number of federal and state regulations, negotiate contracts with multiple payers, acquire and effectively aggregate and analyze data to track patient utilization, treatment adherence, and identify outstanding needs – all while doing our primary job of taking care of patients. This creates an immediate and high barrier to entry, particularly for independent practices that don't have the upfront capital or resources.

To address this problem, federal policymakers should increase options for primary care practices to benefit from APMs that provide upfront or advance payments and other supports to enable the investments required to be successful. For example, practices participating in CPC+ not only received population-based, per-member-per-month (PMPM) payments, but CMMI provided them with a robust data dashboard and other technical assistance that enabled new practices to join the model and successfully reduce emergency visits and hospitalizations. CMMI also partnered with state Medicaid agencies and commercial payers to drive alignment across payers in CPC+ regions, which in turn provided practices with greater financial support across their contracts and accelerated care delivery innovations.

We are encouraged by CMS' recent announcement of a new model, ACO Primary Care Flex, which will heed our recommendations and provide low revenue ACOs participating in the Medicare Shared Savings Program (MSSP) with a one-time upfront shared savings payment and a prospective PMPM payment. CMMI's forthcoming Making Care Primary (MCP) model, which is set to launch in July, also builds upon lessons learned from CPC+ and Primary Care First (PCF) and provides participants who are new to value-based care with upfront payments to develop infrastructure and build advanced care delivery capabilities. CMMI is also working with state Medicaid agencies and other payers in the selected states to align MCP and state programs, helping facilitate the multi-payer alignment that has contributed to successful aspects of earlier models.

Congress should also consider providing CMMI with additional flexibility in how it evaluates the success of primary care models. Currently, federal statute only allows CMMI to expand models that reduce health care spending and maintain quality, or improve performance on quality metrics without increasing spending. Demonstrating savings in primary care often takes several years as physicians build relationships with their patients, use data to better manage their care, and increase utilization of preventive and other high-value services, like care management.

The current statutory framework has prevented CMMI from making important model improvements or continuing to test models that do not show significant savings within a short model test period, ultimately causing more complexity and financial instability for participating physician practices. Further, all CMMI primary care model evaluations have been done at the national level, which may be masking regional successes. Congress should consider enabling and encouraging CMMI to evaluate several other markers of success for primary care APMs, such as whether they successfully bring new physicians into value-based payment, improve patient experience measures, markedly improve care delivery transformation, enable more beneficiaries to access the behavioral health services they need, and when applicable, evaluate models both nationally and regionally. These additional criteria would allow CMMI to continue testing models that show early markers of success and iterate upon them to meet current patient, clinician, and market needs.

While value-based payment can and should be used to buoy primary care practices, health systems, hospitals, payers, and other large companies will continue to enter these models. Federal policymakers should take steps to ensure value-based payment is being used as a tool to significantly increase our nation's investment in primary care, not as a leverage point to increase profits in other business areas. In other words, payments and financial rewards from APMs should be reinvested into the primary care practice, not redirected to other service lines or books of business.

In closing, thank you again for the opportunity to provide this testimony. On behalf of the AAFP and as a family physician, I look forward to working with the Committee to advance policies that invest in high-quality primary care, improve patients' outcomes and experiences, and better support family physicians by more appropriately paying for the work we do. We all have the same goal: to improve the lives of the people we serve.

Founded in 1947, the AAFP represents 130,000 physicians and medical students nationwide. It is the largest medical society devoted solely to primary care. Family physicians conduct approximately one in five office visits -- that's 192 million visits annually or 48 percent more than the next most visited medical specialty. Today, family physicians provide more care for America's underserved and rural populations than any other medical specialty. Family medicine's cornerstone is an ongoing, personal patient-physician relationship focused on integrated care. To learn more about the specialty of family medicine and the AAFP's positions on issues and clinical care, visit www.aafp.org. For information about health care, health conditions and wellness, please visit the AAFP's consumer website, www.familydoctor.org.

<sup>iii</sup> Gumas ED et al. "Finger on the Pulse: The State of Primary Care in the U.S. and Nine Other Countries," March 28, 2024. The Commonwealth Fund. Accessed online at: <u>https://www.commonwealthfund.org/publications/issue-briefs/2024/mar/finger-on-pulse-primary-care-us-nine-countries</u>.

<sup>iv</sup> The Harris Poll, "The Patient Experience: Perspectives on Today's Healthcare." 2023. Accessed online at: <u>https://www.aapa.org/download/113513/?tmstv=1684243672</u>

<sup>v</sup> Jennifer Arnold, "<u>Fostering Long-Term Doctor-Patient Relationships to Improve Outcomes</u>," Duke Health, January 17, 2017.

<sup>vi</sup> Cabana MD, Jee SH. Does continuity of care improve patient outcomes? J Fam Pract. 2004 Dec;53(12):974-80. PMID: 15581440

<sup>vii</sup> Jabbarpour Y, Greiner A, Jetty A, et al. Investing in Primary Care: A State-Level Analysis. Patient-Centered Primary Care Collaborative and the Robert Graham Center; July 2019.

<sup>viii</sup> Jabbarpour Y, Jetty A, Byun H, Siddiqi A, Petterson S, Park J. The Health of US Primary Care: 2024 Scorecard Report — No One Can See You Now. The Milbank Memorial Fund and The Physicians Foundation. February 28, 2024.
<sup>ix</sup> Turner A, Miller G, and E Lowry. "High U.S. Health Care Spending: Where Is It All Going?," The Commonwealth Fund. Published October 4, 2023. Available online at:

https://www.commonwealthfund.org/publications/issuebriefs/2023/oct/highus-health-care-spending-where-isit-all-going. \* Baillieu R, Kidd M, Phillips R, et al. The Primary Care Spend Model: a systems approach to measuring investment in primary care BMJ Global Health 2019;4:e001601.

<sup>xi</sup> Linzer M, Bitton A, Tu SP, et al. The End of the 15-20 Minute Primary Care Visit. J Gen Intern Med. 2015;30(11):1584-1586. doi:10.1007/s11606-015-3341-3

<sup>xii</sup> Katerndahl, D; Wood, R; Jaén, CR. Complexity of ambulatory care across disciplines. Healthcare. 2015, Available at: https://doi.org/10.1016/j.hjdsi.2015.02.002.

<sup>xiii</sup> Sumit D. Agarwal, Sanjay Basu, Bruce E. Landon The Underuse of Medicare's Prevention and Coordination Codes in Primary Care: A Cross-Sectional and Modeling Study. Ann Intern Med.2022;175:1100-1108. [Epub 28 June 2022]. doi:10.7326/M21-4770

<sup>xiv</sup> Ma, Q. Sywestrzak, G. Oza, M. Garneau, L. DeVries, A. "Evaluation of Value-Based Insurance Design for Primary Care." (2019). The American Journal of Managed Care. 25: 5. <u>https://www.ajmc.com/view/evaluation-of-valuebased-insurance-design-for-primary-care</u>.

<sup>&</sup>lt;sup>i</sup> National Council on Aging. Chronic Inequities: Measuring Disease Cost Burden Among Older Adults in the U.S. A Health and Retirement Study Analysis. Page 5, Figure 2. April 2022. Accessed online at: <u>https://ncoa.org/article/the-inequities-in-the-cost-of-chronic-disease-why-it-matters-for-older-adults</u>.

<sup>&</sup>lt;sup>ii</sup> Ansah JP, Chiu CT. Projecting the chronic disease burden among the adult population in the United States using a multi-state population model. Front Public Health. 2023 Jan 13;10:1082183. doi: 10.3389/fpubh.2022.1082183. PMID: 36711415; PMCID: PMC9881650.