EveryONE Deserves a Family Physician:

Creating the Future of Family Medicine

Margot Savoy, MD, MPH, FAAFP

SVP Education, Inclusiveness & Physician Well-Being

American Academy of Family Physicians

Associate Professor, Family & Community Medicine

Associate Professor, Population Health & Urban Bioethics

Lewis Katz School of Medicine at Temple University

Associate Professor (adj), Oral Health

Maurice Kornberg School of Dentistry at Temple University

AAFP

Learning Objectives

After attending this presentation, the participants will be able to:

1. Identify at least one challenge facing the Family Medicine as a specialty today
2. Describe how physician well-being, inclusion and total health (whole patient/family/community) care can distinguish family medicine from other careers in the future
3. Name opportunities for immediate action such as pathway/workforce, artificial intelligence and value-based care
4. Locate resources for additional review and use following the presentation

But first, a story…

- This is a **Dung Beetle** (aka scarab).
- **They are everywhere.**
  - Found on all continents except Antarctica
- **They are highly regarded AND the butt of jokes.**
  - Ancient Egyptians linked them to Khepri, the Egyptian god of the rising sun and thought they kept the earth rotating
  - Modern scientists use them to solve agricultural issues
  - Most people just make “poopy” job jokes
- **They sub-specialize.**
  - Rollers, tunnelers & dwellers
- **They work really hard & do good that serves the whole ecosystem.**
  - Can move dung balls weighing up to 50 times their own weight
  - Can bury dung 250 times their own mass in one night
  - Loosen and nourish the soil and help control fly populations


Photo by Margot Savoy (2024)

When you die, the world could just move on as if you never existed.

Storytellers determine (and shape) your story.

<u>You</u> can create your own narrative.

Your hard work makes the world go ‘round.

Hard work alone does not guarantee value.

Image from Shutterstock

Patients love their family doctor.

- Among those who had visited a family physician or primary care doctor (at least once) in the past year, **79 percent said that they were "very satisfied" or "extremely satisfied"**
  - Only one percent said that they were "not at all satisfied."
- Why?
  - He/she cares about my health, is personable/friendly, etc.
  - Communication-related reasons (he/she listens to me, takes time to talk with me, answers questions),
  - Treatment-related reasons (he/she addresses all my needs, is thorough, provides good/accurate diagnosing and treatment, etc.)
  - General intelligence and competence of their doctor
- The confidence and enthusiasm were echoed over and over.

https://physiciansfoundation.org/wp-content/uploads/2018/01/Physicians_Foundation_Consumer_Omnibus_Survey.pdf

Colleagues vary & students are unsure.

r/premed Search in r/premed

r/premed • 3 yr. ago
SecretAntWorshiper

Is Family medicine really that bad?

Question

Not sure where to ask this but I was wondering what is with all of the hate towards family medicine?

The pay is pretty good, ~200k, the residency isn't intense like some of the other specialties, its not competitive

have to

So wha

seems l

r/medicalschool • 2 yr. ago
lwronhubbard

Why You Should do Family Medicine - a 3 year update

Residency

Hey guys, u/lwronhubbard here. I wanted to give an update 3 years into being an attending as an FM doc. Original post here which I wrote while finishing up residency. Overall I really enjoy what I'm doing and probably wouldn't change a thing. It's kind of divided i

1. Work Life Balance

This is pretty nice. There's
means only office hours, a
time - so if I'm efficient wi
playing drums, doing erra
refills or other easy things
go back to working any of
around 5:30 and would sa

2. Daily Routine

I work in a fast paced prac
my own charts which is eit
receptionist, plus organiza
visits I get numerous pres
times. IF YOU ARE NOT EF
it's very easy to take home
part. With some inbox cle

r/medicalschool • 1 yr. ago
themessiestmama

The amount people look down on family medicine is astounding. "NPs can do what FM docs do. Not IM though."

Vent

Do people not realize NPs have same capabilities and abilities as a family doc 😅
1d Reply 5

Liked by creator

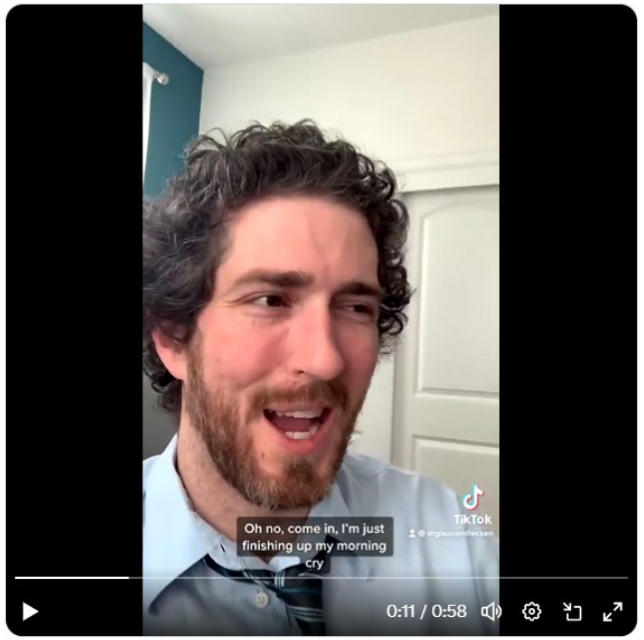
[redacted]
It's concerning imo
22h Reply 2

[redacted]
To all the people replying, maybe do abit of research before coming at me. NP school is literally to train you to diagnose, order tests, and interpret
8h Reply 1

[redacted]
They may not be as qualified as as a doctor of internal medicine but they certainly have the same capabilities as a family doctor.

Dr. Glaucomflecken
@DGlaucomflecken

Hanging out with the family physician



2:16 PM · Feb 27, 2021

Hindawi Publishing Corporation
International Journal of Family Medicine
Volume 2013, Article ID 729473, 6 pages
http://dx.doi.org/10.1155/2013/729473

Research Article

Family Doctors Seen through the Eyes of Specialists: A Qualitative Study

Anna Probst,[1,2] Iris Natanzon,[1,2] Joachim Szecsenyi,[1,2] and Stefanie Joos[1,2]

"I've got a number of family doctor colleagues, (. . .) where I also notice these are people who have gone through a certain sound clinical training, who take good care of their patients and often have a very good diagnostic nose (. . .), who are very good at deciding which specialists they send the patient to for further evaluation." (Internist 3, practice).

"In any case degraded, yes, yes. As said, the facts that they are reduced to the gateway function basically and are no longer work as a doctor. Afterwards they only are kind of a point of contact similar to a Toto Lotto office." (Radiologist 2, practice).

"I think that they are universal geniuses, and I literally mean it" (Psychiatrist 3, hospital).

CHALLENGES FACING FAMILY MEDICINE

AI generated image from Microsoft CoPilot

Margot's Top Challenges Facing FM*

01 Workforce Shortage

02 Primary Care Investment

03 Rapidly Evolving Technology

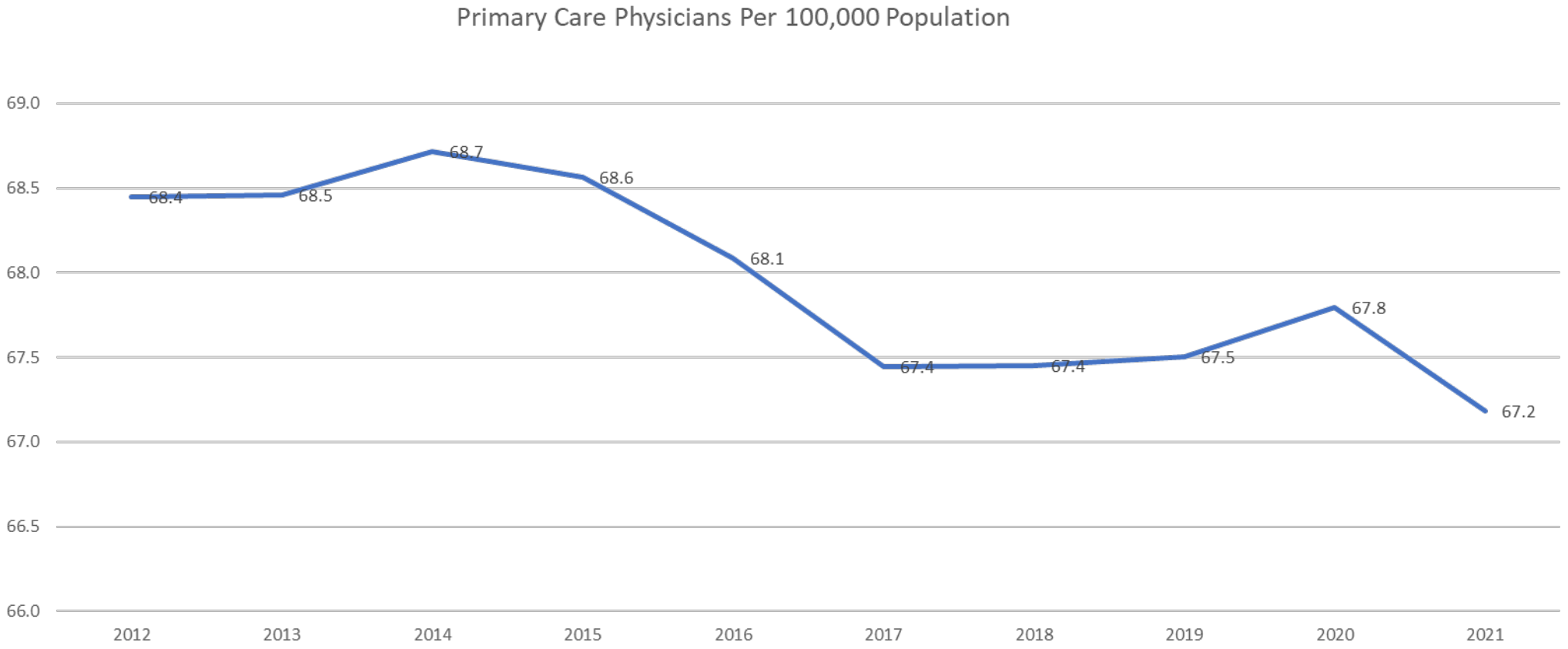
Patient Complexity & Volume 04

Care Delivery & Regulatory Changes 05

Worsening disparities & equitable access 06

*Not in order of importance or impact

US Primary Care Workforce is Shrinking



Analyses of American Medical Association Masterfile (2012-2021), Center for Medicare and Medicaid Services Physician and Other Practitioners data (2012-2021), and the American Community Survey Five-Year Summary Files (2012-2021)
Notes: Primary care specialties included family medicine, general practices, internal medicine, geriatrics, pediatrics, and osteopathy.

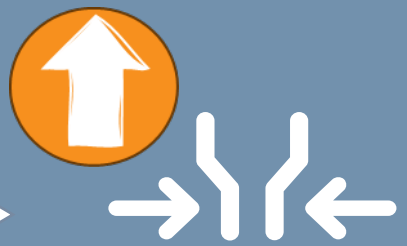
Slide adapted from Yalda Jabbarpour, MD

What is Going On?

1. Less Medical School Applications

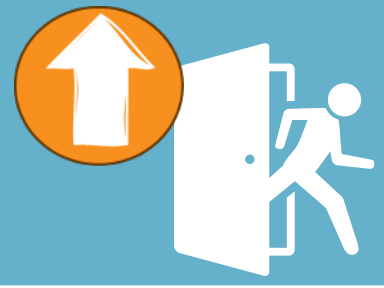
2. Less FM Residency Program Applications

3. Specialization after primary care residency



4. Burnout driving rise in transitions to non-clinical roles

5. Retirements from aging physician workforce

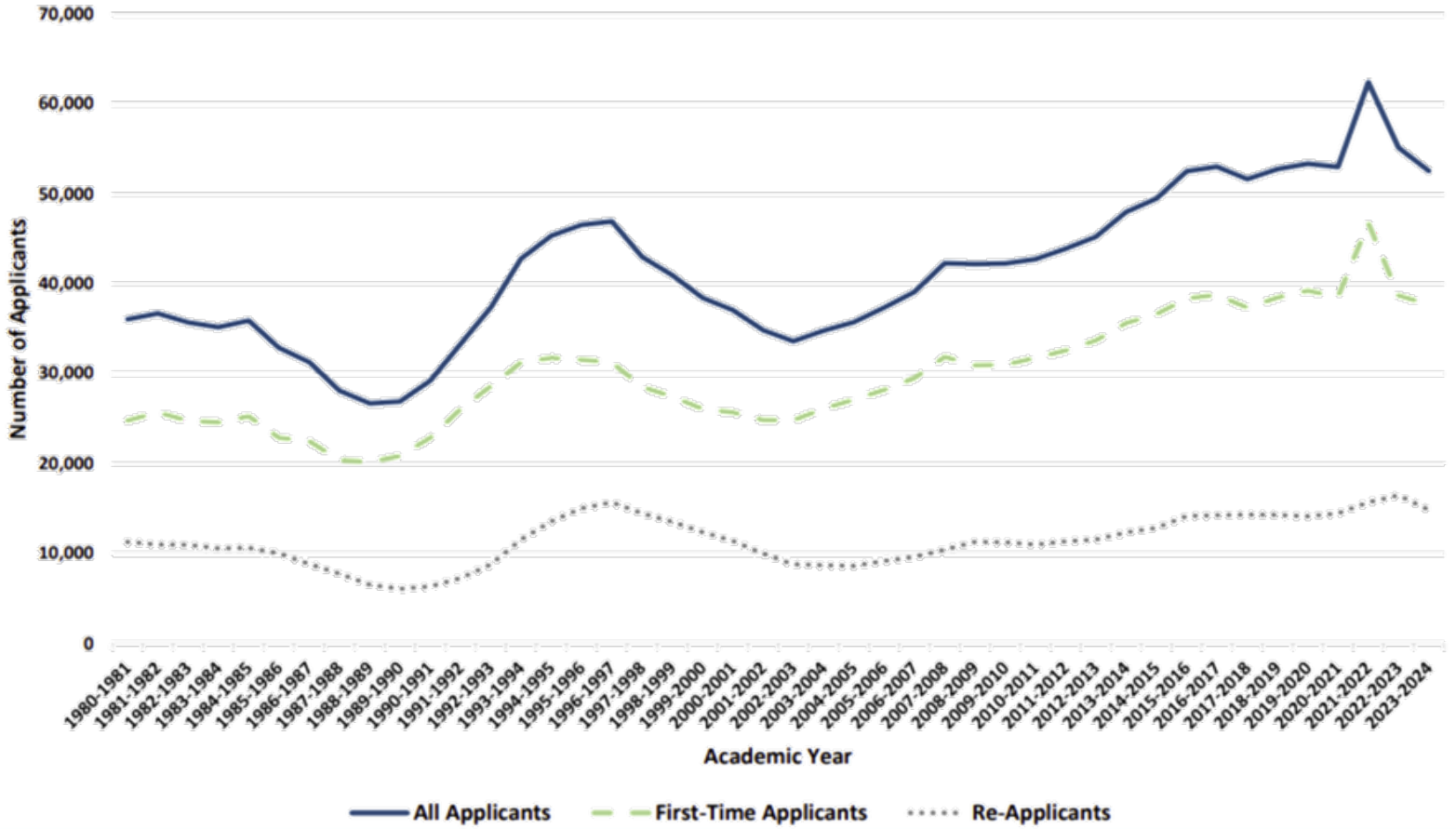


1 Less Medical School Applications

Less People Choosing Medicine

Chart 1: Applicants, First-Time Applicants, and Repeat Applicants to U.S. Medical Schools, 1980-1981 through 2023-2024

The graph below displays the number of applicants, first-time applicants, and repeat applicants to U.S. medical schools from academic year 1980-1981 through 2023-2024.



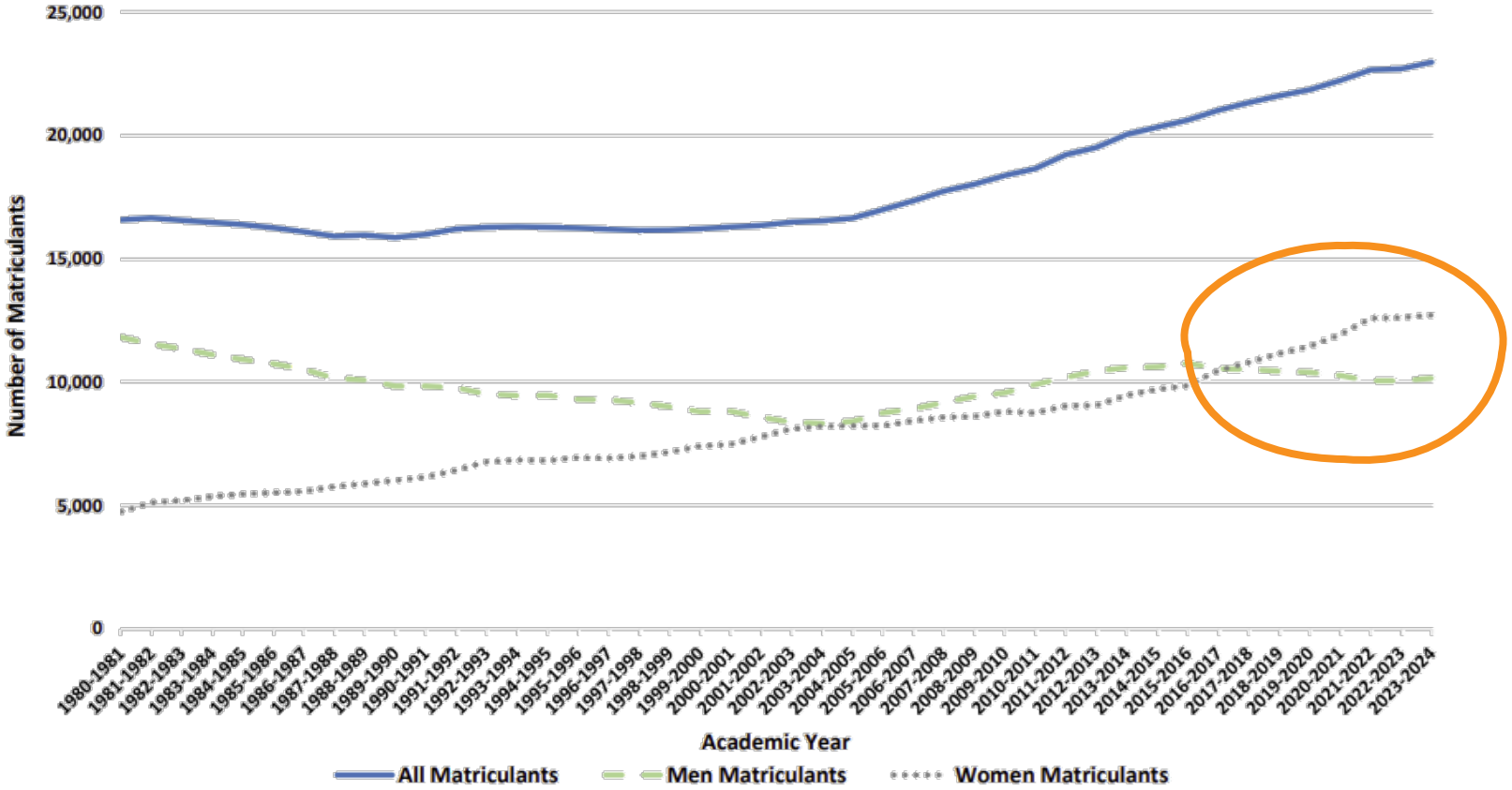
AAMC 2023 FACTS: Applicants and Matriculants Data | https://www.aamc.org/data-reports/students-residents/data/2023-facts-applicants-and-matriculants-data

1 Less Medical School Applications

Yet Larger Medical School Classes

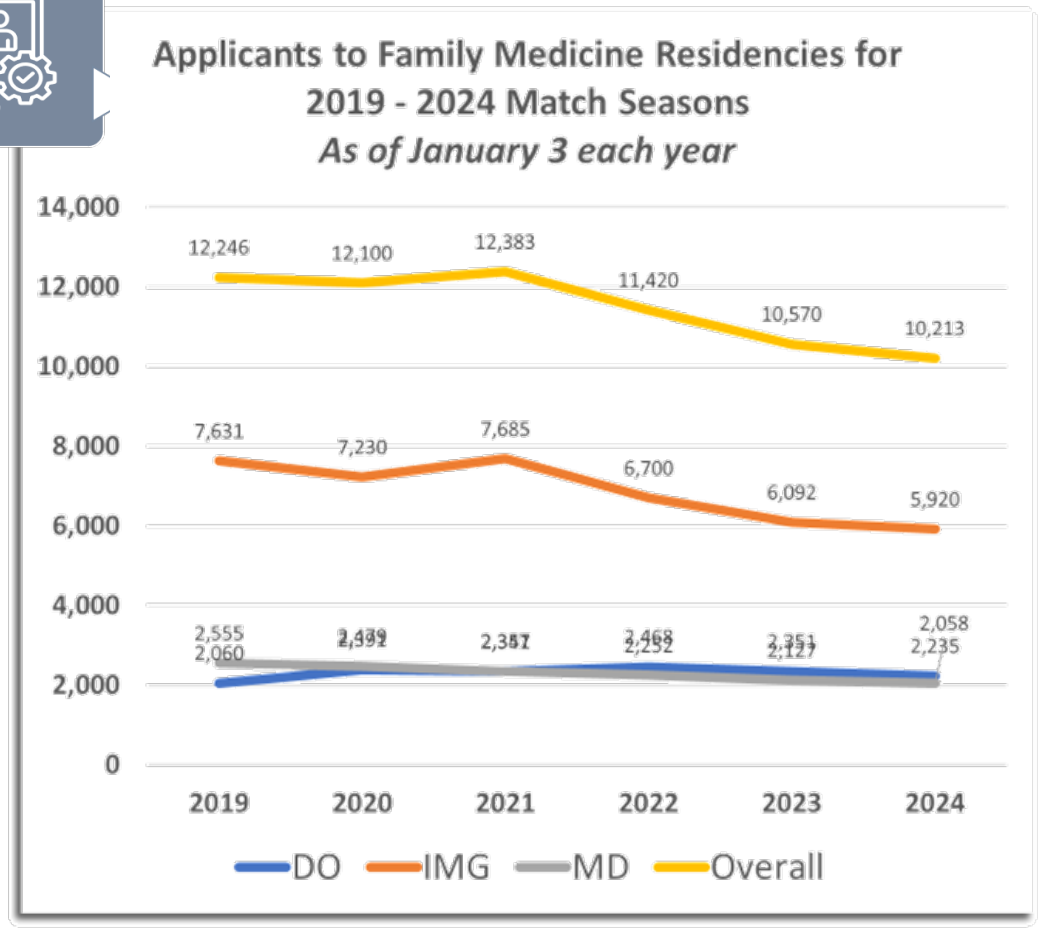
Chart 3: Matriculants to U.S. Medical Schools by Gender, Academic Years 1980-1981 through 2023-2024

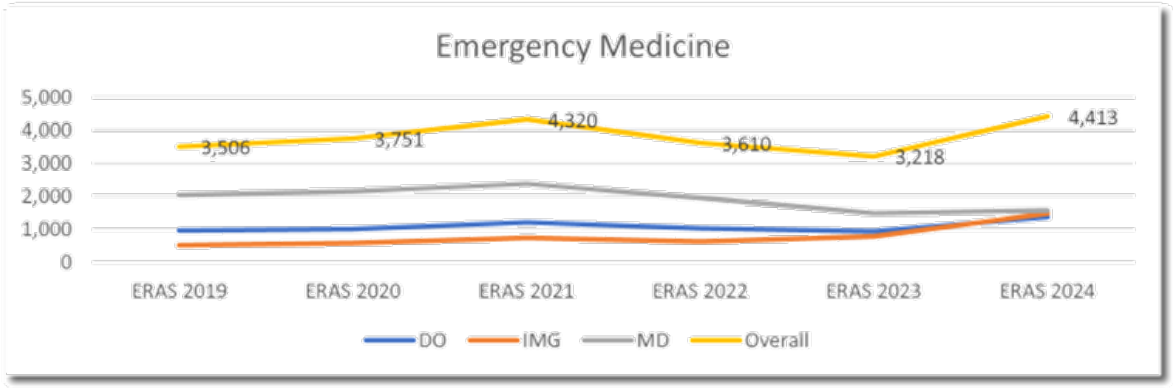
The graph below displays the number of matriculants to U.S. medical schools by gender from academic year 1980-1981 through 2023-2024. Matriculants who selected "Another Gender Identity" and declined to report gender are only reflected in "All Matriculants."

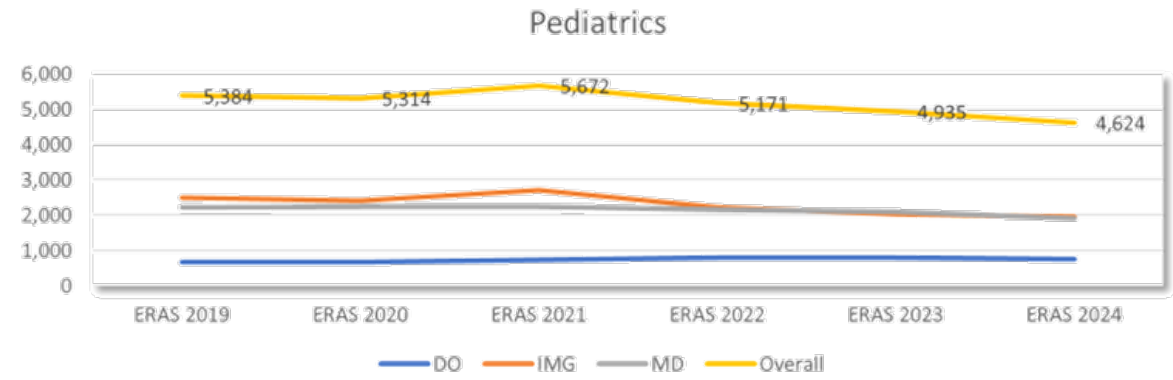


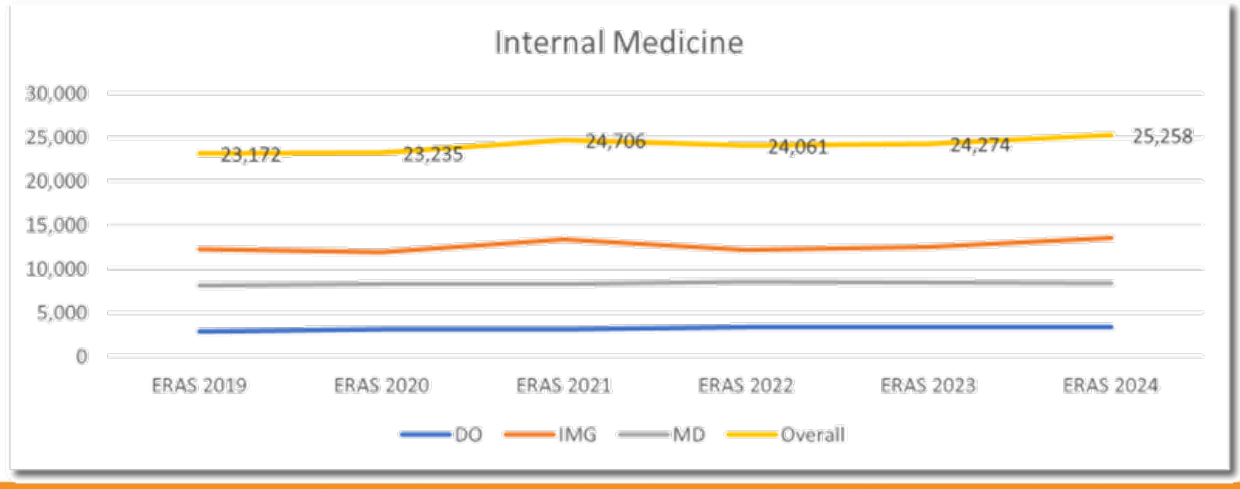
AAMC 2023 FACTS: Applicants and Matriculants Data | https://www.aamc.org/data-reports/students-residents/data/2023-facts-applicants-and-matriculants-data

Less FM Residency Program Applications



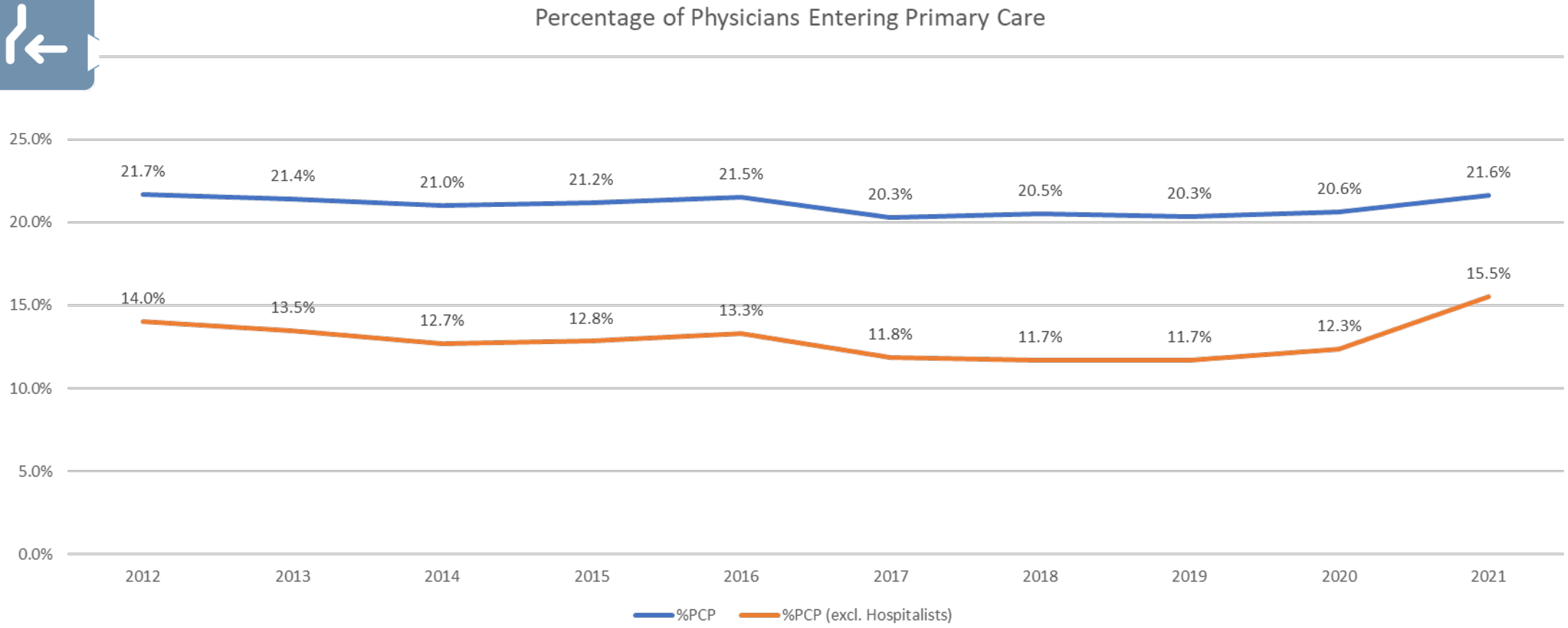






3 Specialization after primary care residency

Residency ≠ Practice in Primary Care



Data Source: Analyses of the 2023 American Medical Association Historical Residency File, the 2023 American Medical Association Masterfile, and the 2012-2021 Center for Medicare and Medicaid Services Physician and Other Practitioners data.

Notes: Primary care specialties included family medicine, general practices, internal medicine, geriatrics, pediatrics. Specialty for Doctors of Osteopathy (DOs) are not always included in the American Medical Association Masterfile, so these data may be an underestimation of the true workforce. (see limitations in Appendix for more details)

3 Specialization after primary care residency

Residency ≠ Practice in Primary Care

Where do FM Docs go?

- Hospitalists
- Urgent Care
- Telemedicine
- Part-time primary care
- Sports Medicine
- Lifestyle/Obesity Medicine

Data Source: Analyses of the 2023 Amer e, and the 2012-2021 Center for Medicare and Medicaid Services Physician and Other P

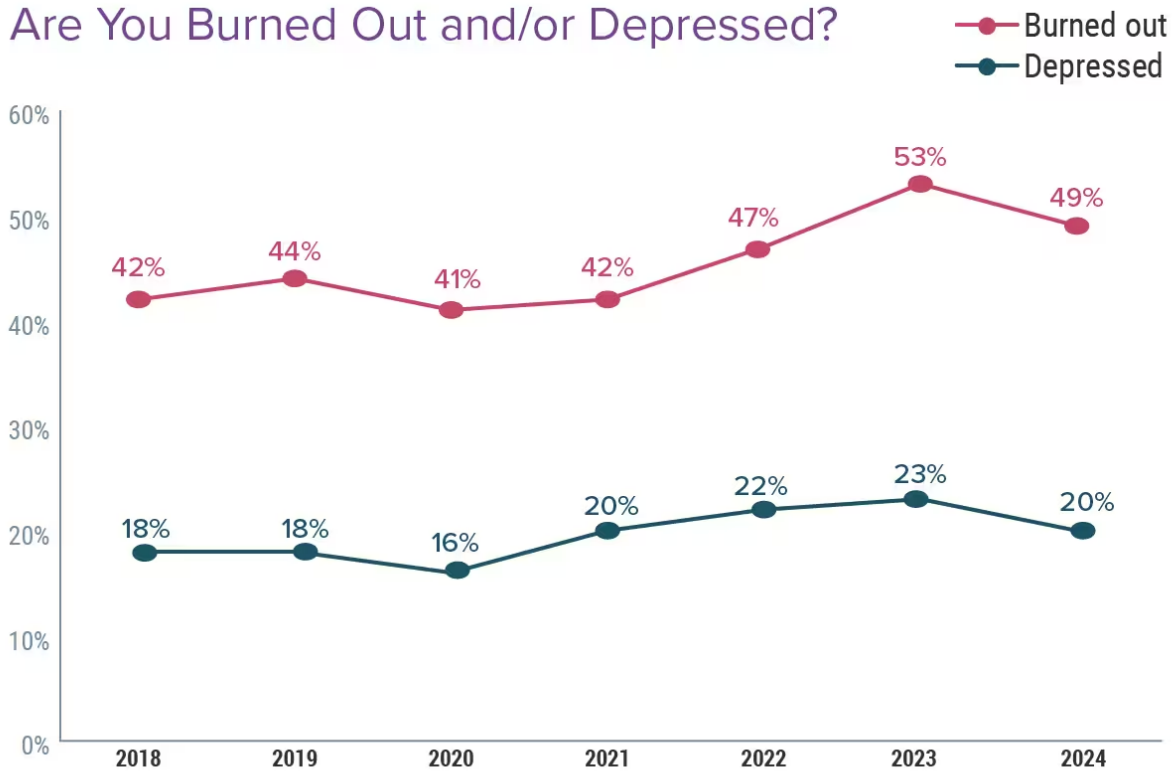
Notes: Primary care specialties included f Osteopathy (DOs) are not always included in the American Medical Association Masterfile, so these data may be an underestimation of the true workforce. (See limitations in Appendix for more details)

4 Burnout driving rise in transitions to non-clinical roles

"Burnout" Remains a Problem

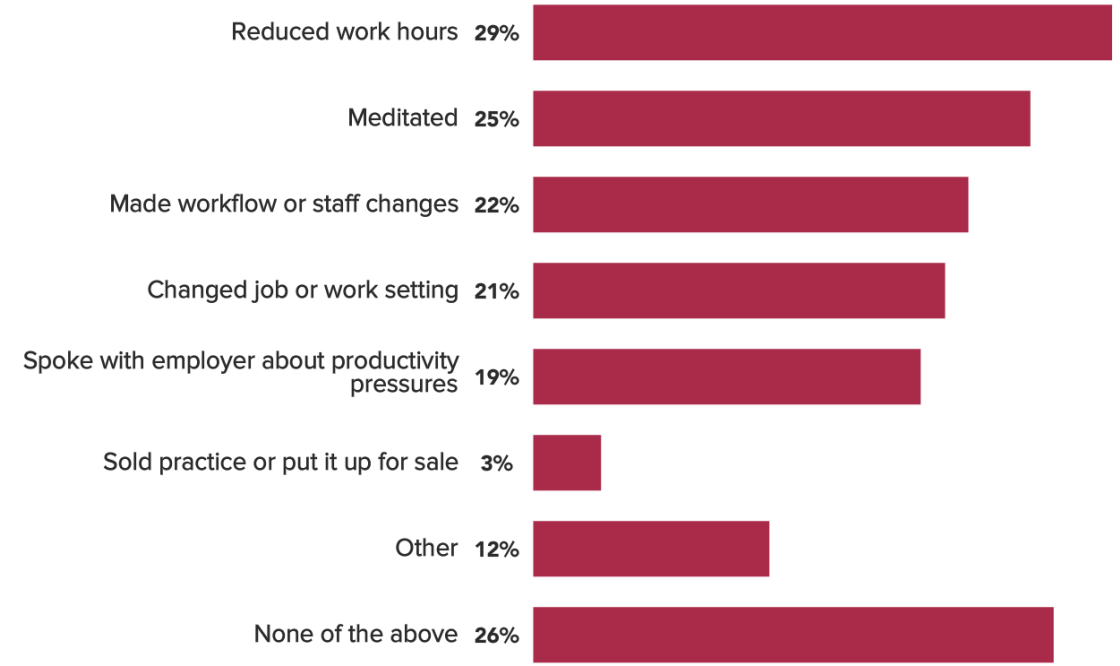
47% in 2018
57% in 2023 (#5)
51% in 2024 (#5)

Are You Burned Out and/or Depressed?



Years shown refer to years report was published. Some respondents said they were both burned out and depressed.

What Have You Done at Work to Alleviate Your Burnout?

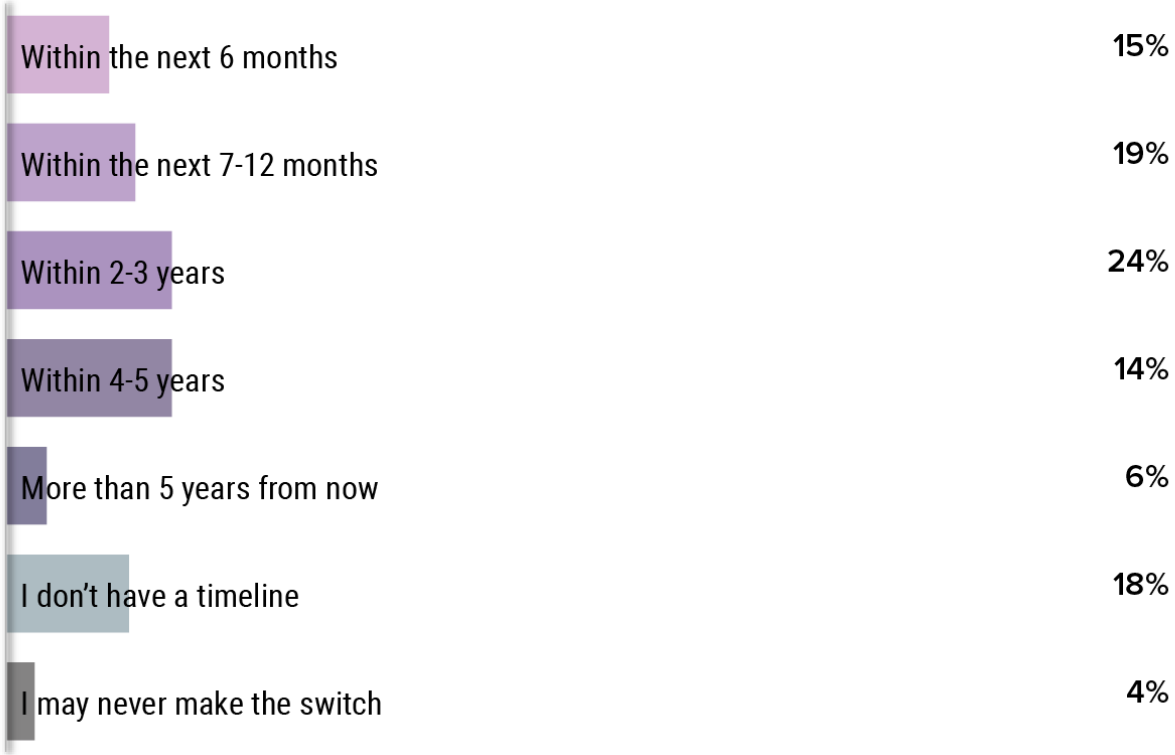


https://www.medscape.com/slideshow/2023-lifestyle-burnout-6016058#3 https://www.medscape.com/slideshow/2024-lifestyle-burnout-6016865#1

4 Burnout driving rise in transitions to non-clinical roles

Doctors Want to Leave

How Soon Do You Think You Will Switch to a Nonclinical Career?



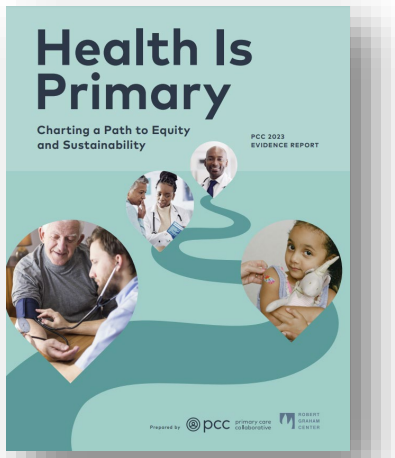
Demographics by Specialty

Family Medicine	22%
Internal Medicine	14%
Emergency Medicine	9%
Pediatrics	7%
Anesthesiology	6%
Ob/Gyn	5%
Psychiatry	4%
Radiology	2%
Surgery, General	2%
Orthopedic Surgery	2%
Physical Medicine & Rehabilitation	2%
Neurology	2%
Surgery, Specialized	2%
Cardiology	1%
Public Health & Preventive Medicine	1%
Gastroenterology	1%
Ophthalmology	1%
Nephrology	1%
Critical Care	1%
Endocrinology	1%
Otolaryngology	1%
Pathology	1%
Dermatology	1%
Urology	1%
Plastic Surgery/Aesthetic Medicine	1%
HIV/Infectious Diseases	1%
Oncology	1%
Allergy & Immunology	1%
Orthopedics	<1%
Neurological Surgery	<1%
Rheumatology	<1%
Pulmonary Medicine	<1%
Transplant Surgery	<1%
Hematology	<1%
Medical Genetics	<1%
Diabetes	<1%

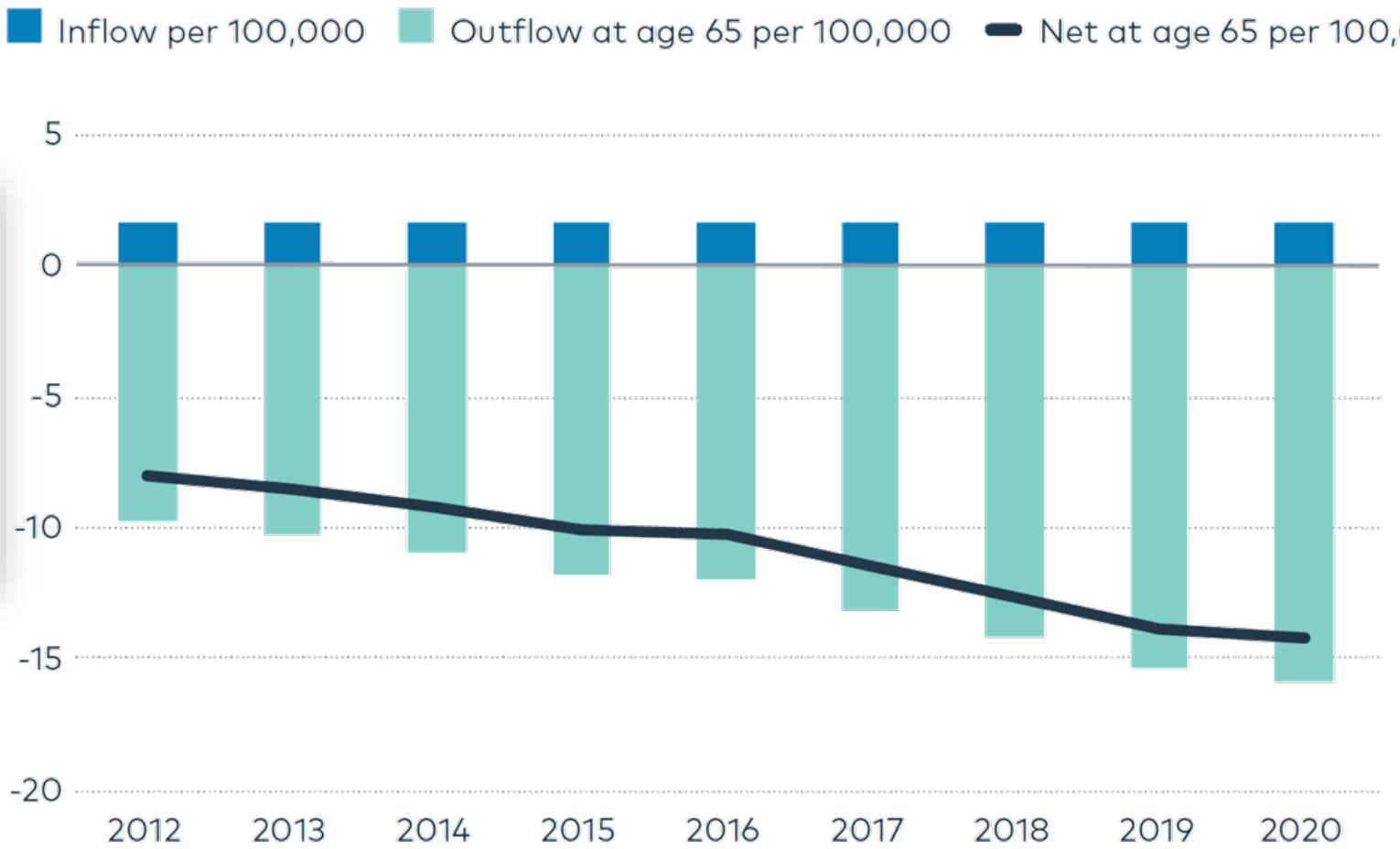
What Nonclinical Careers Are You Considering?

https://www.medscape.com/slideshow/2021-nonclinical-careers-6014472#9

5 Retirements from aging physician workforce



Inflow and Outflow, Primary Care Physicians per 100,000 Population, 2012–2020 (with Physician Retirement at Age 65)



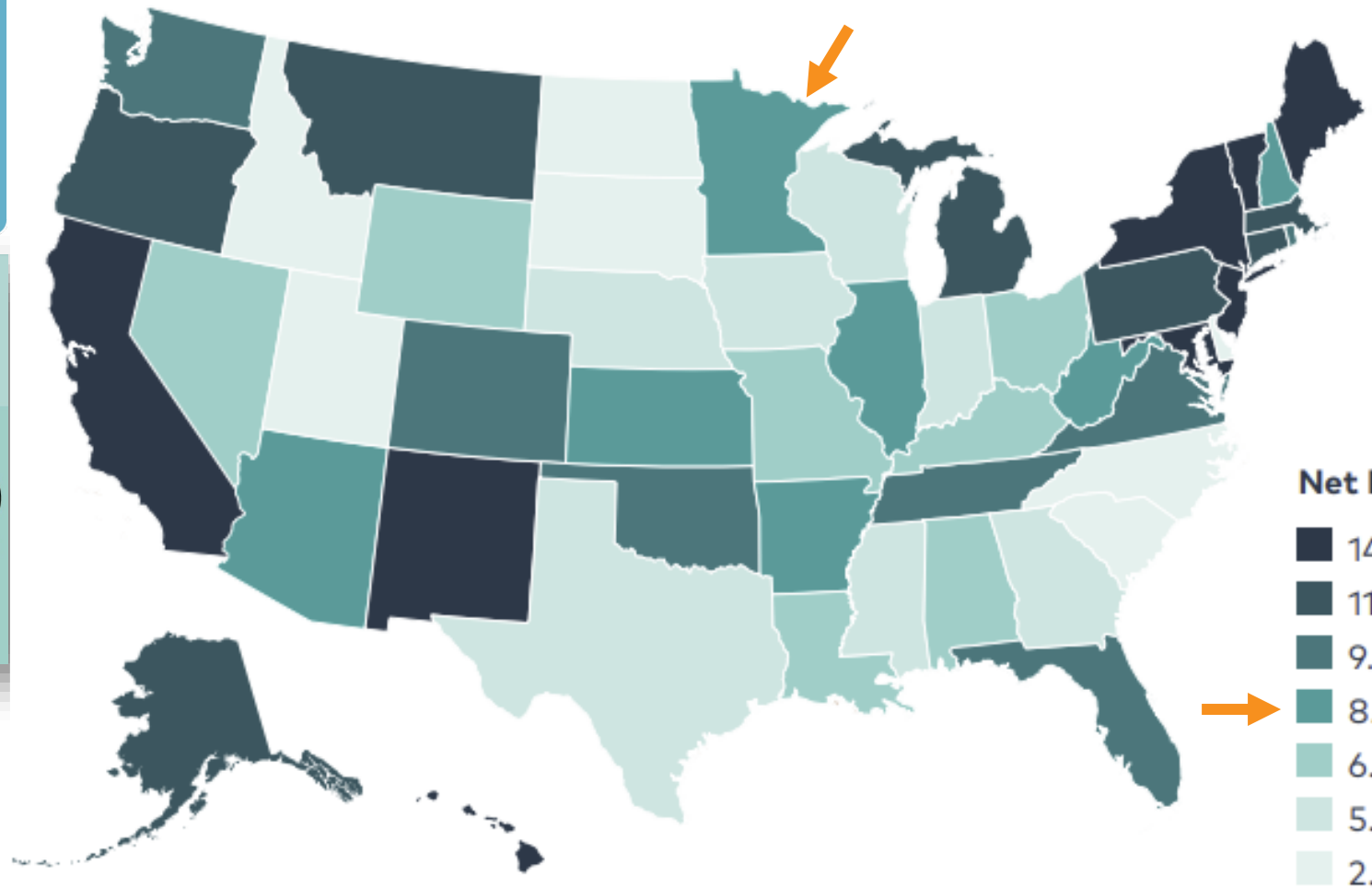
Data Source: American Medical Association Physician Masterfile 2012–2020; U.S. Census 2012–2020

Notes: As for PCPs, inflow was calculated as the number of PCPs (per 100,000 population) entering the workforce after completion of their fields training program, while outflow was calculated as the number of PCPs retiring at age 65.

https://thepcc.org/sites/default/files/resources/pcc-evidence-report-2023.pdf?utm_source=bitly&utm_medium=link&utm_campaign=2023_evidence

5 Retirements from aging physician workforce

Net Loss of Primary Care Clinicians (DO, MD, NP, PA) per 100,000 Population, per State, 2019



Data Source: American Medical Association Physician Masterfile; Medicare Provider Utilization and Payment Data: Physician and Other Supplier Public Use File; U.S. Census

Notes: Primary Care Clinicians include PCPs, NPs, and PAs. As for PCPs, inflow was calculated as the number of PCPs (per 100,000 population) entering the workforce after completion of their fields training program, while outflow was calculated as the number of PCPs retiring at age 65. As for NPs and PAs, inflow and outflow were identified based on Medicare billing such that we assumed someone billing for the first time was a new provider and when someone no longer billed for at least two consecutive years we assumed they were no longer providing those services.

https://thepcc.org/sites/default/files/resources/pcc-evidence-report-2023.pdf?utm_source=bitly&utm_medium=link&utm_campaign=2023_evidence

Margot's Top Challenges Facing FM*

01 Workforce Shortage

02 Primary Care Investment

03 Rapidly Evolving Technology

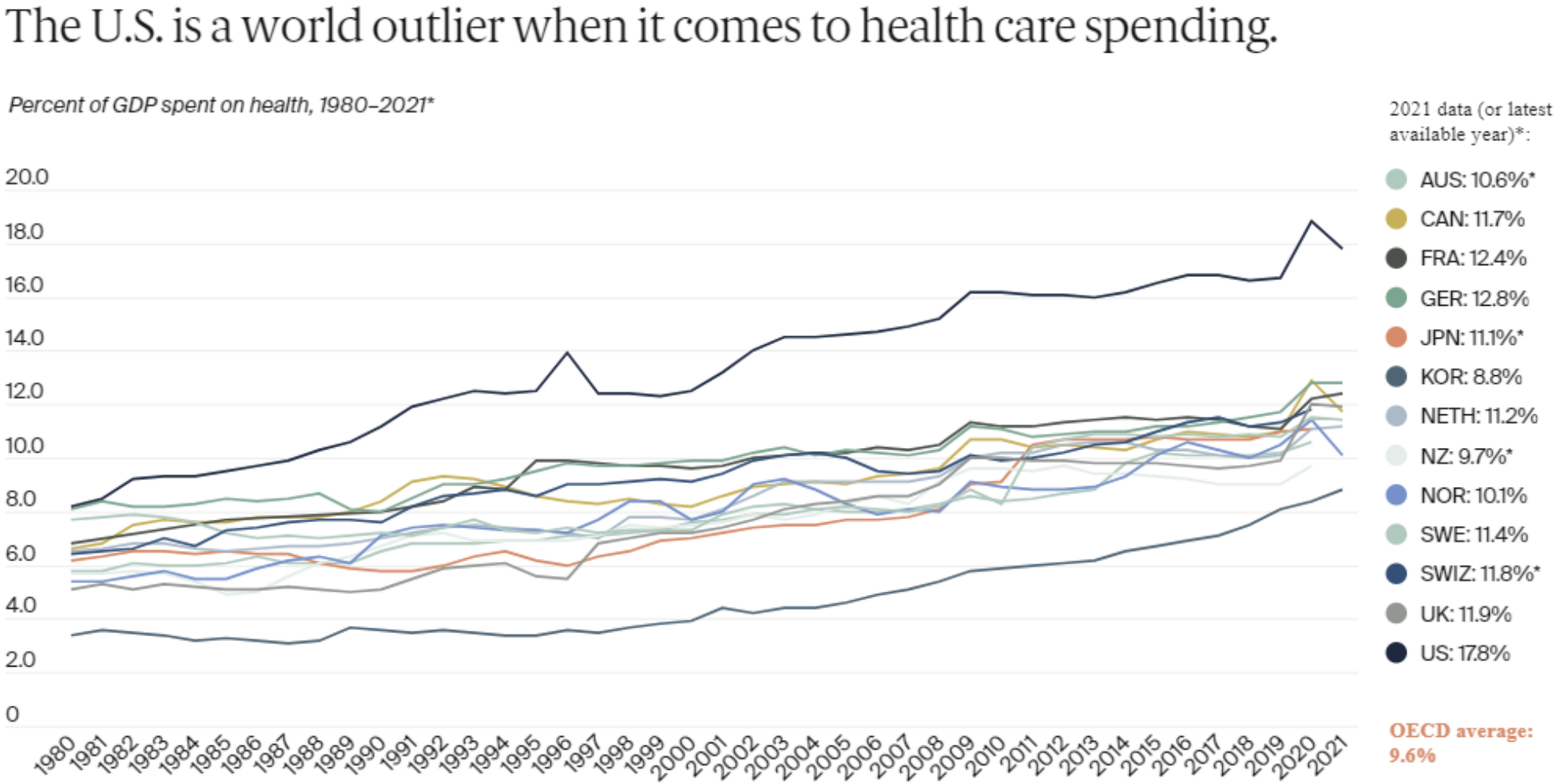
Patient Complexity & Volume 04

Care Delivery & Regulatory Changes 05

Worsening disparities & equitable access 06

*Not in order of importance or impact

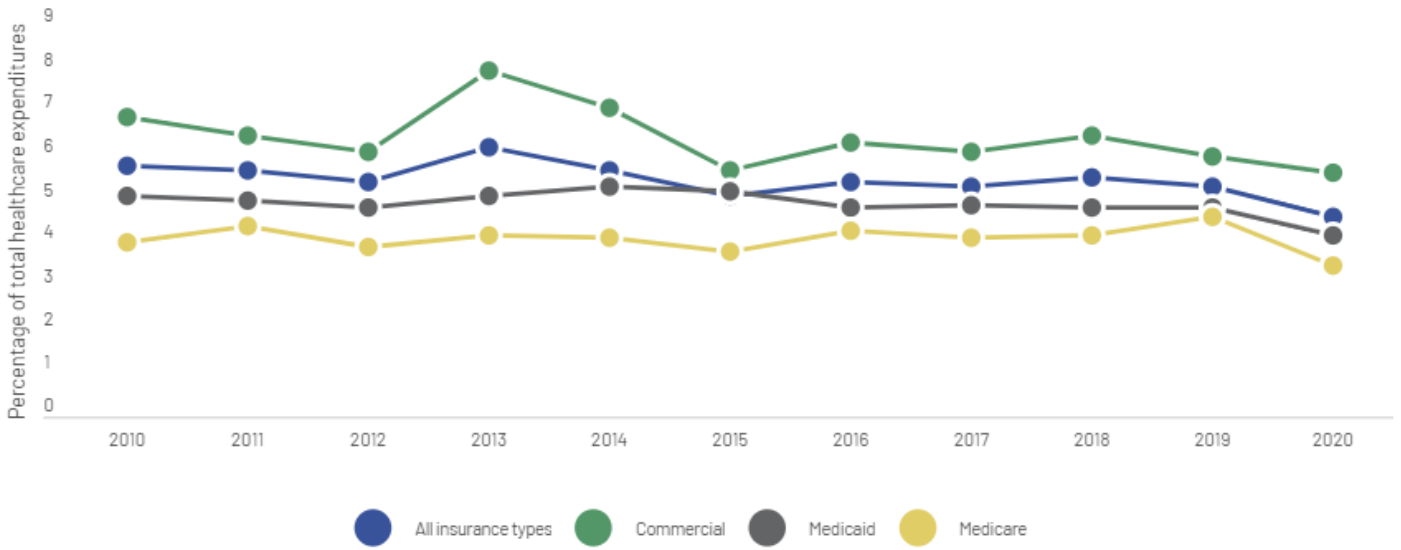
We Spend a lot on Healthcare



Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Just not in Primary Care

Figure 1: Primary Care Spending (Narrow Definition) from 2010 to 2020



Data Source: Analyses of Medical Expenditure Panel Survey (MEPS), 2010-2020. MEPS was redesigned in 2018. Data on ambulatory care expenditures derived from the consolidated, office-based, and outpatient event files. See Appendix B for details.

Notes: The primary care narrow definition is restricted to primary care physicians only. The primary care specialties included family medicine, general practice, internal medicine, pediatrics, geriatrics, and osteopaths.

THE HEALTH OF US PRIMARY CARE, 2024

Minnesota

BY RADHIKA LADDHA, YALDA JABBARPOUR, MARK CARROZZA, ANURADHA JETTY, HOON BYUN AND JEONGYOUNG PARK

A 2021 National Academies of Science Engineering and Medicine (NASEM) report called for tracking progress on its recommendations for implementing high-quality primary care in the United States. Informed by the NASEM recommendations and an advisory committee of key stakeholders, the second annual primary care scorecard — co-funded by the Milbank Memorial Fund and The Physicians Foundation and developed by the Robert Graham Center — tracks national performance on key primary care indicators tied to these recommendations. This fact sheet offers state-level data for Minnesota on measures for which data were available. Further details on the methods, measures, and recommendations are available in the Scorecard Appendix.

CONTENTS

Milbank Memorial Fund

THE PHYSICIANS FOUNDATION

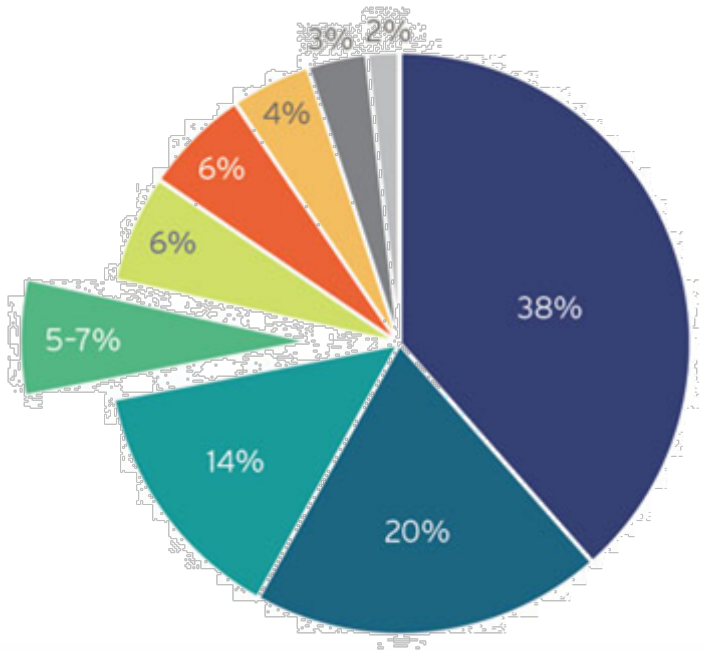
ROBERT GRAHAM CENTER

https://www.milbank.org/primary-care-scorecard/

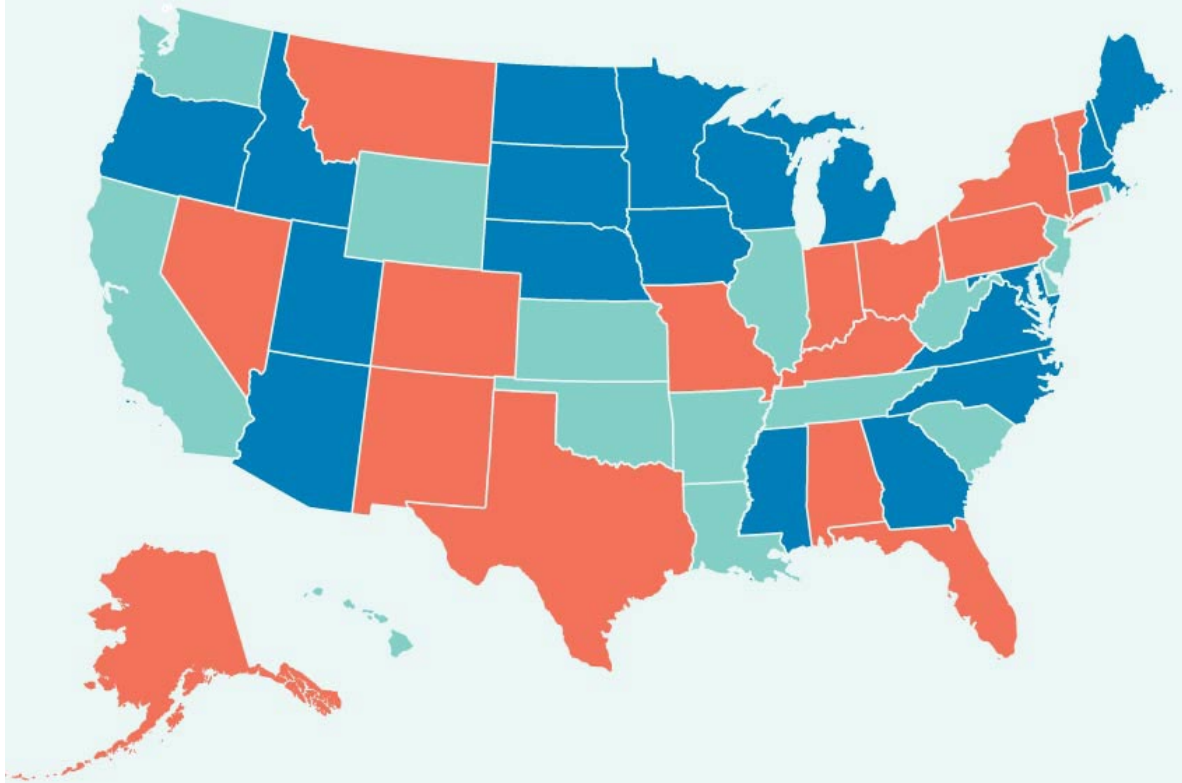
https://www.milbank.org/publications/health-of-us-primary-care-a-baseline-scorecard/i-financing-the-united-states-is-underinvesting-in-primary-care/

Health Care Spending

- Hospital care
- All other physician and professional services
- Prescription drugs and other medical nondurables
- Primary care
- Nursing home care
- Other health, residential, and personal care
- Dental services
- Home health care
- Medical durables



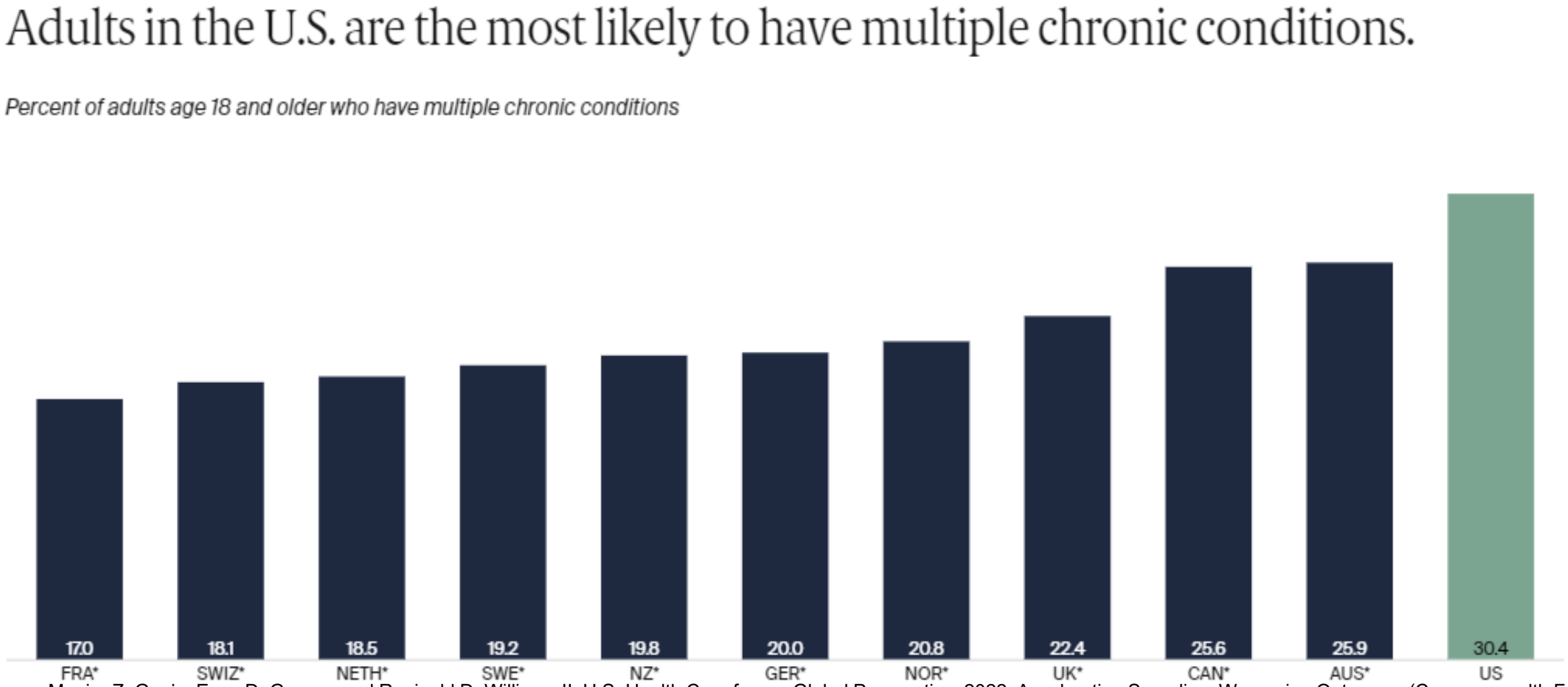
Primary Care Spending By State



- Top-Performing States (5.41%-9.48%)
- Medium-Performing States (4.28%-5.38%)
- Bottom-Performing States (3.14%-4.26%)

https://thepcc.org/sites/default/files/resources/pcmh_evidence_report_2019.pdf https://thepcc.org/resource/primary-care-spending-high-stakes-low-investment-0

And it isn't that we are just not sick…



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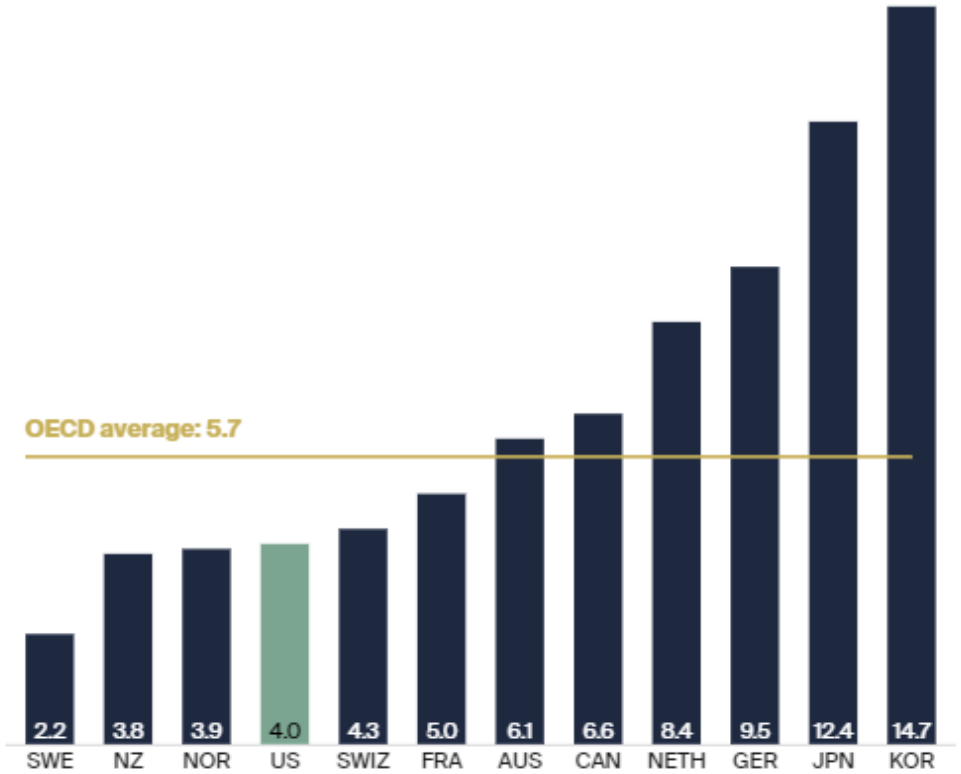
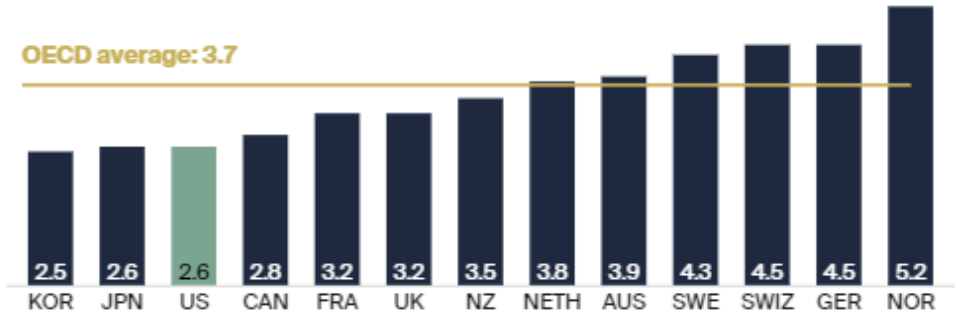
We Go to the Doctor Office Less Often

The U.S. has among the lowest rates of physician visits and practicing physicians.

Physician consultations in all settings per capita



Practicing physicians per 1,000 population



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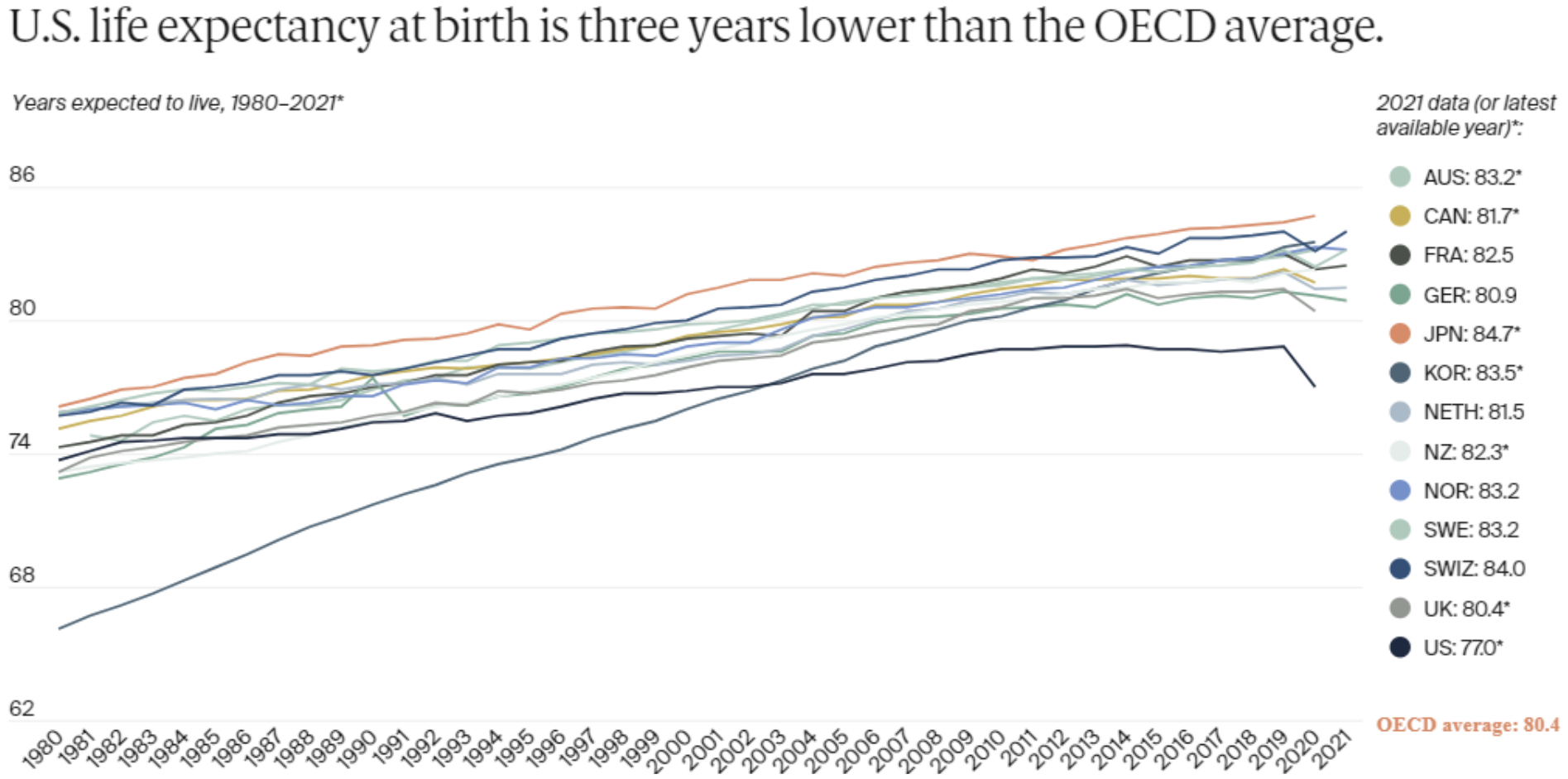
So Of Course We Get Dismal Outcomes



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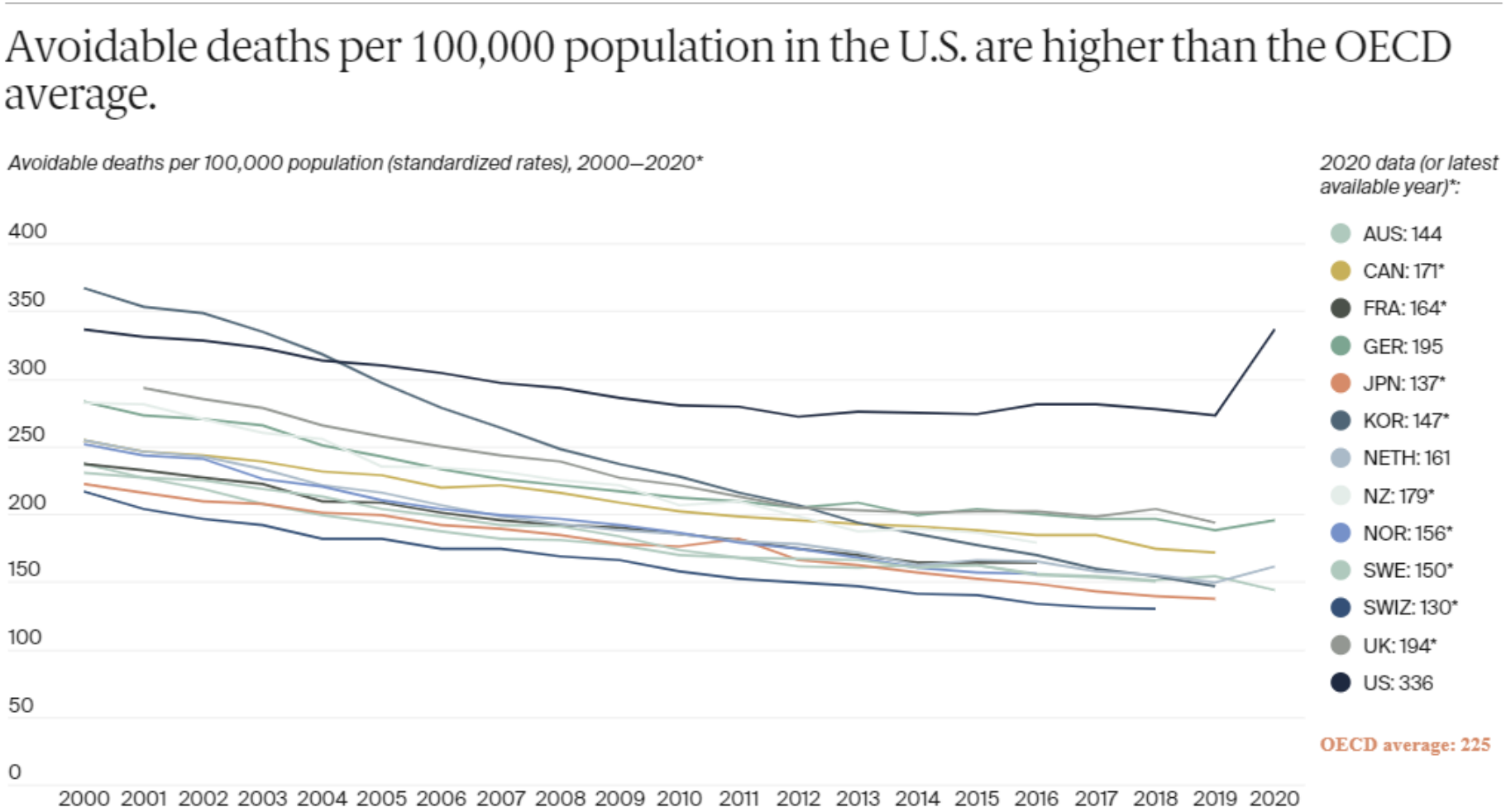
We Even Die From Avoidable Things More



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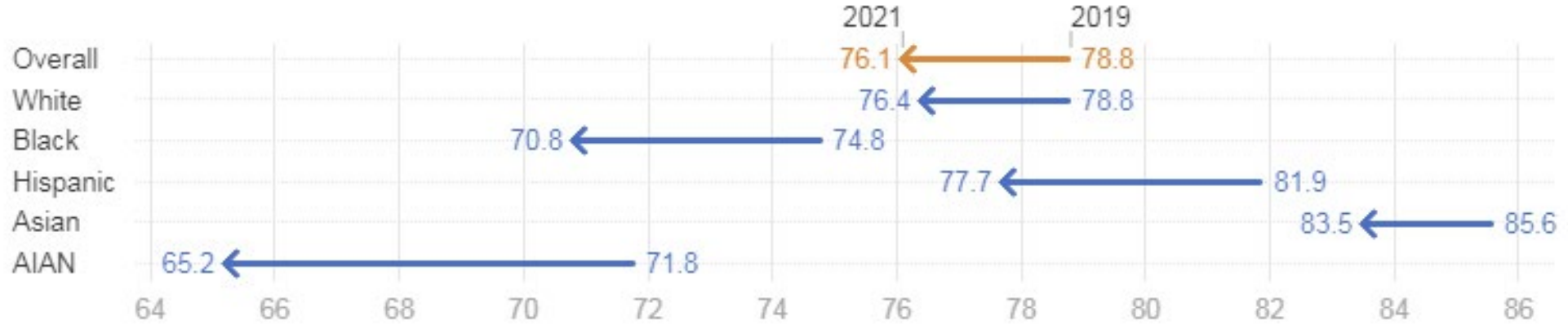
Our Dismal Outcomes Show Disparities

Figure 4

Life Expectancy in Years by Race/Ethnicity, 2019-2021



NOTE: Estimates based on provisional data for 2021 and final data for 2019 life expectancy at birth. Persons of Hispanic origin may be of any race but are categorized as Hispanic for this analysis; other groups are non-Hispanic.

SOURCE: Arias E, Tejada-Vera B, Kochanek KD, Ahmad FB. Provisional life expectancy estimates for 2021. Vital Statistics Rapid Release; no 23. Hyattsville, MD: National Center for Health Statistics. August 2022. DOI: https://dx.doi.org/ 10.15620/cdc:118999. • PNG

KFF

https://www.kff.org/racial-equity-and-health-policy/issue-brief/disparities-in-health-and-health-care-5-key-question-and-answers/

Primary Care Access = Longer Lives

Original Investigation

February 18, 2019

Association of Primary Care Physician Supply With Population Mortality in the United States, 2005-2015

Sanjay Basu, MD, PhD[1,2,3]; Seth A. Berkowitz, MD, MPH[4]; Robert L. Phillips, MD, MSPH[5]; et al

» Author Affiliations | Article Information

JAMA Intern Med. 2019;179(4):506-514. doi:10.1001/jamainternmed.2018.7624

Key Points

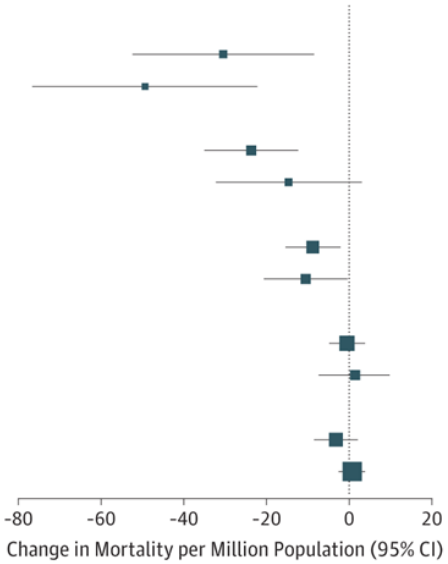
Question What is the association between primary care physician density and population-level mortality?

Findings In this epidemiological study of US population data, every 10 additional primary care physicians per 100 000 population was associated with a 51.5-day increase in life expectancy. However, from 2005 to 2015, the density of primary care physicians decreased from 46.6 to 41.4 per 100 000 population.

Meaning Greater primary care physician supply was associated with improved mortality, but per capita primary care physician supply decreased between 2005 and 2015.

FREE

Disease and Physician Type	Change in Mortality per Million Population, (95% CI)
Cardiovascular	
Primary care	-30.4 (-52.4 to -8.4)
Cardiologist	-49.4 (-76.8 to -22.0)
Cancer	
Primary care	-23.6 (-35.0 to -12.3)
Oncologist	-14.6 (-32.2 to 3.0)
Respiratory tract	
Primary care	-8.8 (-15.3 to -2.2)
Pulmonologist	-10.5 (-20.6 to -0.4)
Infectious	
Primary care	-0.5 (-4.7 to 3.7)
Infectious diseases specialist	1.3 (-7.2 to 9.8)
Substance/injury	
Primary care	-3.2 (-8.4 to 2.1)
Psychiatrist/substance specialist	0.7 (-2.5 to 3.8)



https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2724393

Access is Declining

- Reason 1: The primary care **workforce** is not growing fast enough to meet population needs.
- Reason 2: The number of trainees who enter and stay on the professional **pathway to primary care practice** is too low, and too few primary care residents have community-based training.
- Reason 3: The US continues to **underinvest in primary care**.
- Reason 4: **Technology** has become a burden to primary care.
- Reason 5: **Primary care research** to identify, implement, and track novel care delivery and payment solutions is lacking.

https://www.milbank.org/publications/the-health-of-us-primary-care-2024-scorecard-report-no-one-can-see-you-now/

Rural and Low-Income Communities are Hit Hardest

Figure 1. Ratios of Primary Care Physicians per 100,000 Population by U.S. State, 2021

State	Ratio
Connecticut	89.7
Delaware	81.9
District of Columbia	161.9
Hawaii	103.0
Maryland	94.4
Massachusetts	113.0
New Hampshire	93.5
New Jersey	82.1
Rhode Island	108.8
Vermont	118.2

Source: 2021 AMA Physician Masterfile and the U.S. Census Bureau's State Population Totals: 2020-2022 (census.gov).

- In 2021 7.3% of U.S. counties did not have a primary care physician at all. About 5% of rural counties, mostly non-core counties, have no family physicians.
- National ratio is 80.8 per 100K population but is it maldistributed with shortages in communities of greatest need most often.

Margot's Top Challenges Facing FM*

01 Workforce Shortage

02 Primary Care Investment

03 Rapidly Evolving Technology

Patient Complexity & Volume 04

Care Delivery & Regulatory Changes 05

Worsening disparities & equitable access 06

*Not in order of importance or impact

“As a medical specialty with significant depth and breadth of experiences and expertise, family medicine is perfectly positioned to lead and support innovative initiatives in primary care technology”

- Health IT Tools beyond the EMR
- Big Data
- Primary Care Data Models
- Quality Measures
- Practice Technology
- Patient Technology

Published in final edited form as:

Fam Med. 2015 September ; 47(8): 628–635.

A Family Medicine Health Technology Strategy for Achieving the Triple Aim for US Health Care

Dr. Robert L. Phillips Jr, MD, MSPH, **Dr. Andrew W. Bazemore, MD, MPH**, **Dr. Jennifer E. DeVoe, MD, DPhil**, **Dr. Thomas J. Weida, MD**, **Dr. Alex H. Krist, MD, MPH**, **Dr. Michael F. Dulin, MD, PhD**, and **Dr. Frances E. Biagioli, MD**

The American Board of Family Medicine, Lexington, KY (Dr Phillips); The Robert Graham Center, American Academy of Family Physicians, Washington, DC (Dr Bazemore); Oregon Health & Science University (Drs DeVoe and Biagioli) and OCHIN, Inc, Portland, OR (Dr DeVoe); College of Community Health Sciences, University of Alabama (Dr Weida); Virginia Commonwealth University (Dr Krist); and Carolinas HealthCare System (Dr Dulin)

BACKGROUND AND OBJECTIVES

Health information technology (health IT) and health technology, more broadly, offer tremendous promise for connecting, synthesizing, and sharing information critical to improving health care delivery, reducing health system costs, and achieving personal and community health. While efforts to spur adoption of electronic health records (EHRs) among US practices and hospitals have been highly successful, aspirations for effective data exchanges and translation of data into measureable improvements in health outcomes remain largely unrealized. There are shining examples of health enhancement through new technologies, and the discipline of family medicine is well poised to take advantage of these innovations to improve patient and population health. The Future of Family Medicine led to important family medicine health IT initiatives over the past decade. For example, the American Academy of Family Physicians (AAFP) Center for Health Information Technology and the Robert Graham Center provided important leadership for

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4926766/pdf/nihms794468.pdf

Editorials

Is Artificial Intelligence the Key to Reclaiming Relationships in Primary Care?

Winston Liaw, MD, MPH, and Ioannis A. Kakadiaris, PhD, University of Houston, Houston, Texas
Zhou Yang, PhD, MPH, American Board of Family Medicine, Lexington, Kentucky

It's 2030. Your next patient is Mrs. Jones, a 60-year-old with heart failure. A computer program that simulates human conversation, or a chatbot, scheduled the visit after asking the patient questions and noting that weight measurements from her internet-connected scale had been increasing. She enrolled in a heart failure management program when an artificial intelligence (AI) prediction tool identified her as being at high risk of an exacerbation this year. In addition to using the smart scale, a social worker, pharmacist, and dietitian ensure that the patient has everything she needs to manage her heart failure.

You walk into the room and hug her with both arms because you are not bringing your laptop to the encounter. You talk about her son, who recently died from cancer. During the encounter, an AI program that analyzes facial expressions by using video images recommends that you screen Mrs. Jones for depression. When answering the questions, she cries, recalling the sadness that has accompanied her son's death. You do not feel rushed because a program powered by AI is writing your notes and sending prescriptions for the medications you adjust.

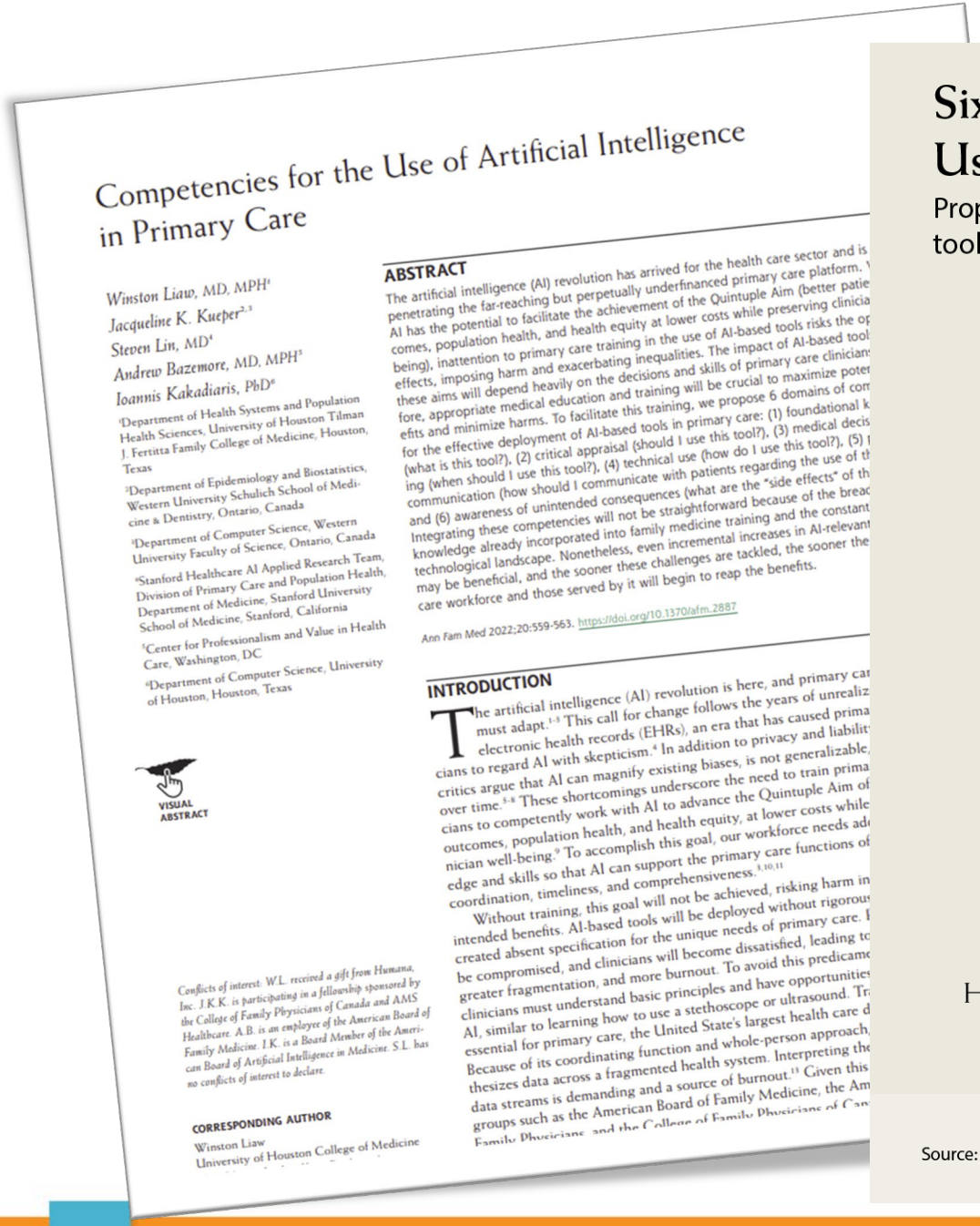
Over the past decade, AI (i.e., technologies that perform tasks that normally require human intelligence) has been integrated into clinical decision support systems to provide timely information at the point of care and inform medical decision-making.[1,2] Although this sounds like science fiction and reduce the time spent on documentation by 62% (from 13.5 to five minutes).[4] Chatbots compile symptoms to triage patients and can ensure that patients access primary care in a timely manner. AI interprets smartphone images to assist with the diagnosis of skin lesions and can reduce unnecessary referrals.[5]

Physicians are turning to AI because the computerization of health care has led to an avalanche of data and rising rates of burnout. With primary care physicians spending more time on documentation in electronic health records than on face time with patients,[6] there is a disconnect between the healers we want to be and the data managers we have become. As AI performs tasks amenable to automation, the hope is that family physicians can focus on the responsibilities that cannot be easily replicated, such as building relationships, weighing preferences, and managing complexity.[7]

Although AI has the potential to be the solution that primary care needs to reclaim relationships, it could just as easily make things worse by leading to endless alerts, nonsensical notes, misdiagnoses, and data breaches. Critics argue that AI is already worsening disparities and magnifying biases. For instance, one study found that an algorithm trained on insurance claims was biased against Black patients.[8] Despite having more comorbidities than White patients, Black patients were less likely to be referred to a care management program. Black patients have his-

> "Physicians are turning to AI because the computerization of health care has led to an avalanche of data and rising rates of burnout. With primary care physicians spending more time on documentation in electronic health records than on face time with patients, **there is a disconnect between the healers we want to be and the data managers we have become.**"

https://www.aafp.org/pubs/afp/issues/2021/1200/p558.pdf



Competencies for the Use of Artificial Intelligence in Primary Care

Winston Liaw, MD, MPH[1]
Jacqueline K. Kueper[2,3]
Steven Lin, MD[4]
Andrew Bazemore, MD, MPH[5]
Ioannis Kakadiaris, PhD[6]

[1]Department of Health Systems and Population Health Sciences, University of Houston Tilman J. Fertitta Family College of Medicine, Houston, Texas
[2]Department of Epidemiology and Biostatistics, Western University Schulich School of Medicine & Dentistry, Ontario, Canada
[3]Department of Computer Science, Western University Faculty of Science, Ontario, Canada
[4]Stanford Healthcare AI Applied Research Team, Division of Primary Care and Population Health, Department of Medicine, Stanford University School of Medicine, Stanford, California
[5]Center for Professionalism and Value in Health Care, Washington, DC
[6]Department of Computer Science, University of Houston, Houston, Texas

VISUAL ABSTRACT

Conflicts of interest: W.L. received a gift from Humana, Inc. J.K.K. is participating in a fellowship sponsored by the College of Family Physicians of Canada and AMS Healthcare. A.B. is an employee of the American Board of Family Medicine. I.K. is a Board Member of the American Board of Artificial Intelligence in Medicine. S.L. has no conflicts of interest to declare.

CORRESPONDING AUTHOR
Winston Liaw
University of Houston College of Medicine

ABSTRACT

The artificial intelligence (AI) revolution has arrived for the health care sector and is penetrating the far-reaching but perpetually underfinanced primary care platform. AI has the potential to facilitate the achievement of the Quintuple Aim (better patie comes, population health, and health equity at lower costs while preserving clinicia being), inattention to primary care training in the use of AI-based tools risks the op effects, imposing harm and exacerbating inequalities. The impact of AI-based tool these aims will depend heavily on the decisions and skills of primary care clinician fore, appropriate medical education and training will be crucial to maximize poter efits and minimize harms. To facilitate this training, we propose 6 domains of com for the effective deployment of AI-based tools in primary care: (1) foundational k (what is this tool?), (2) critical appraisal (should I use this tool?), (3) medical decis ing (when should I use this tool?), (4) technical use (how do I use this tool?), (5) communication (how should I communicate with patients regarding the use of th and (6) awareness of unintended consequences (what are the "side effects" of th Integrating these competencies will not be straightforward because of the breac knowledge already incorporated into family medicine training and the constant technological landscape. Nonetheless, even incremental increases in AI-relevant may be beneficial, and the sooner these challenges are tackled, the sooner the care workforce and those served by it will begin to reap the benefits.

Ann Fam Med 2022;20:559-563. https://doi.org/10.1370/afm.2887

INTRODUCTION

The artificial intelligence (AI) revolution is here, and primary car must adapt.[1-3] This call for change follows the years of unrealiz electronic health records (EHRs), an era that has caused prima cians to regard AI with skepticism.[4] In addition to privacy and liabilit critics argue that AI can magnify existing biases, is not generalizable, over time.[5-8] These shortcomings underscore the need to train prima cians to competently work with AI to advance the Quintuple Aim of outcomes, population health, and health equity, at lower costs while nician well-being.[9] To accomplish this goal, our workforce needs ad edge and skills so that AI can support the primary care functions of coordination, timeliness, and comprehensiveness.[1,10,11]

Without training, this goal will not be achieved, risking harm in intended benefits. AI-based tools will be deployed without rigorous created absent specification for the unique needs of primary care. be compromised, and clinicians will become dissatisfied, leading to greater fragmentation, and more burnout. To avoid this predicame clinicians must understand basic principles and have opportunities AI, similar to learning how to use a stethoscope or ultrasound. Tr essential for primary care, the United State's largest health care d Because of its coordinating function and whole-person approach, thesizes data across a fragmented health system. Interpreting the data streams is demanding and a source of burnout.[13] Given this groups such as the American Board of Family Medicine, the Am Family Physicians, and the College of Family Physicians of Can

Six Competencies for Physicians Who Wish to Properly Use Artificial Intelligence in the Primary Care Setting

Proposed domains of competency for the effective deployment of Artificial Intelligence tools in the health care setting

Foundational Knowledge

What is this tool?

Critical Appraisal

Should I use this tool?

Decision Making

When should I use this tool?

Technical Use

How do I use this tool?

Patient Communication

How do I tell patients about this tool?

Unintended consequences

What are the side effects of this tool?

Source: Liaw W, et al. Competencies for the Use of Artificial Intelligence in Primary Care. *AnnFamMed.* 2022.

ANNALS OF FAMILY MEDICINE

https://www.annfammed.org/content/annalsfm/20/6/559.full.pdf

Margot's Top Challenges Facing FM*

01 Workforce Shortage

02 Primary Care Investment

03 Rapidly Evolving Technology

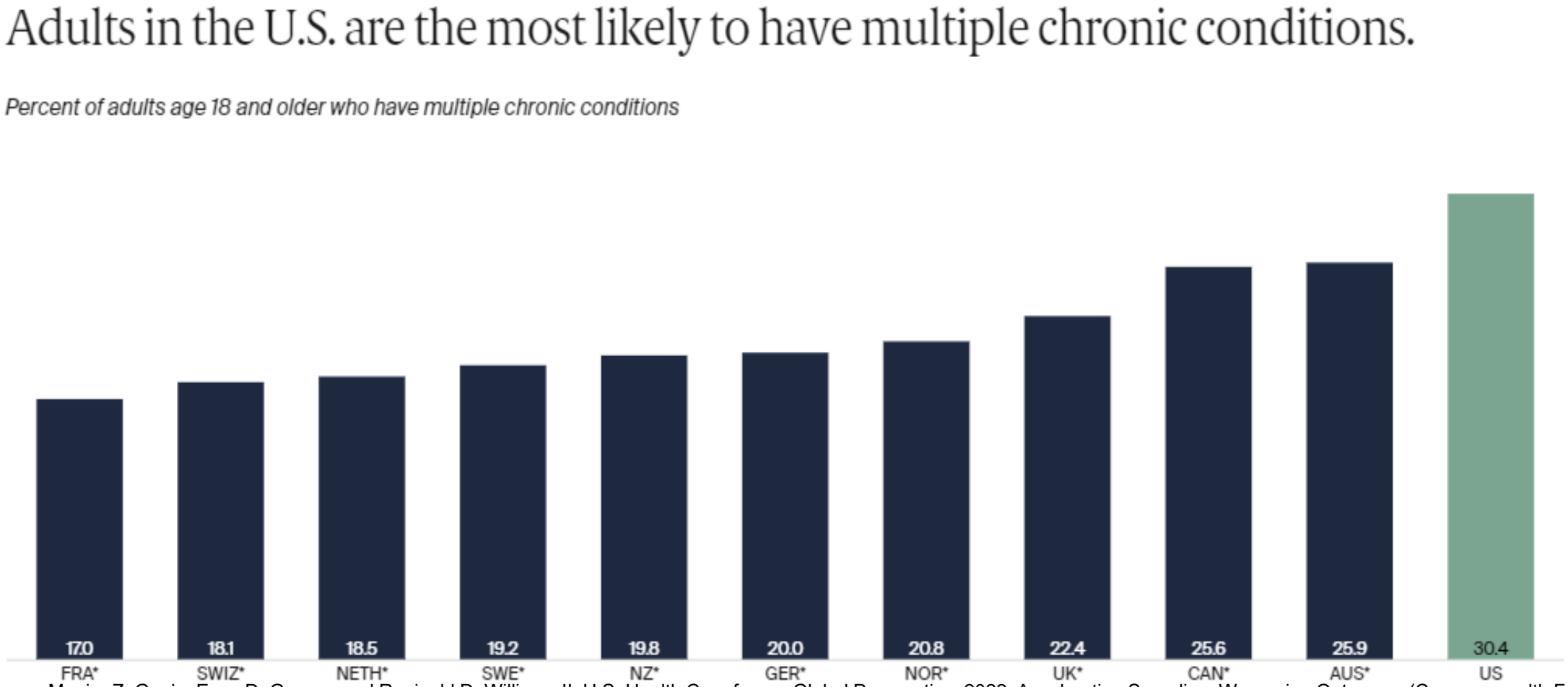
Patient Complexity & Volume 04

Care Delivery & Regulatory Changes 05

Worsening disparities & equitable access 06

*Not in order of importance or impact

And it isn't that we are just not sick…



Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Differences in the Complexity of Office Visits by Physician Specialty: NAMCS 2013–2016

John D. Goodson, M.D.[1,2], Sara Shahbazi, Ph.D.[1], Karthik Rao, M.D.[1], and Zirui Song, M.D., Ph.D.[1,2]

[1]Wang 625, Massachusetts General Hospital, Boston, MA, USA; [2]Harvard Medical School, Boston, MA, USA.

BACKGROUND: Specialty-to-specialty variation in use of outpatient evaluation and management service codes could lead to important differences in reimbursement among specialties.

OBJECTIVE: To compare the complexity of visits to physicians whose incomes are largely dependent on evaluation and management services to the complexity of visits to physicians whose incomes are largely dependent on procedures.

DESIGN, SETTING, AND PARTICIPANTS: We analyzed 53,670 established patient outpatient visits reported by physicians in the National Ambulatory Medical Care Sur-

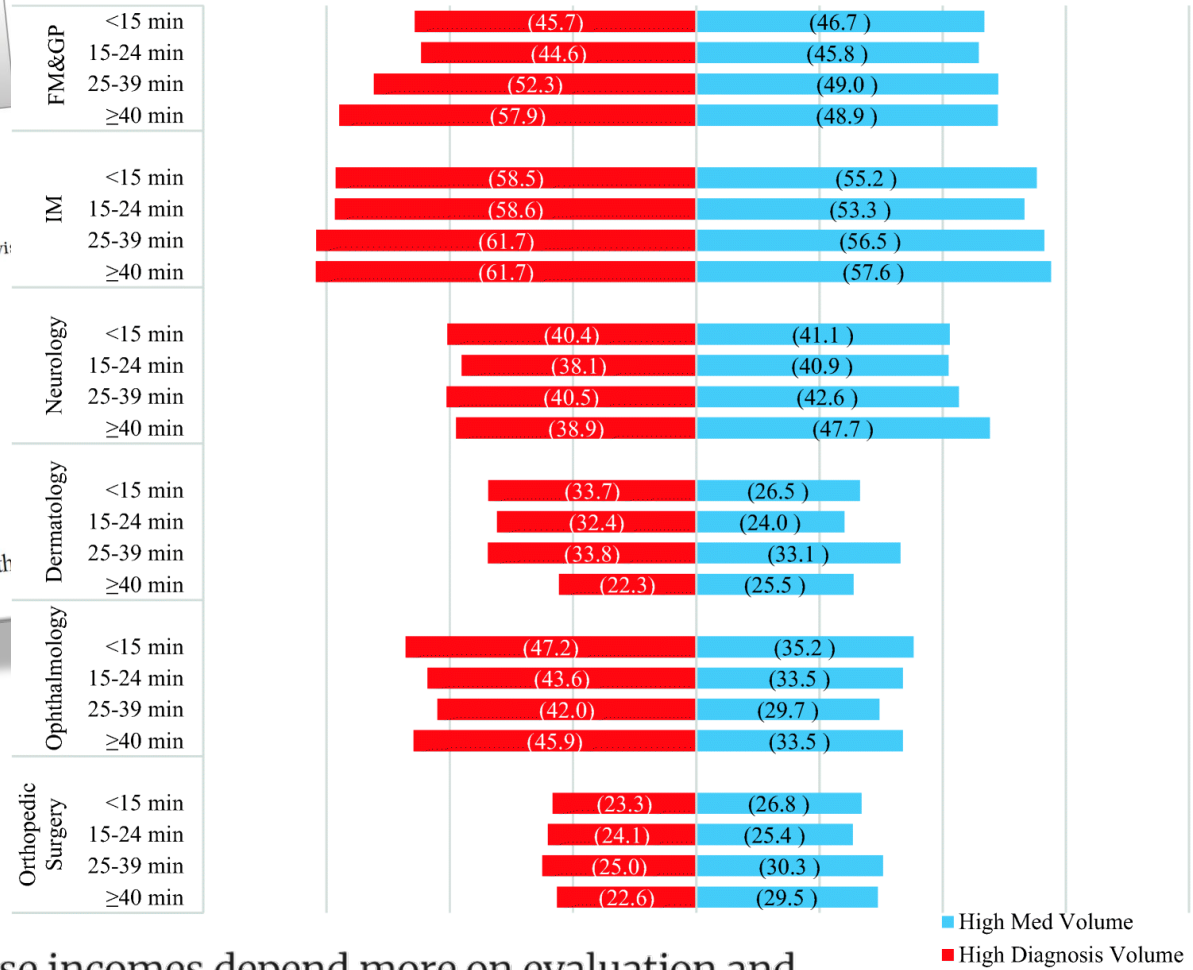
KEY WORDS: evaluation and management services; outpatient vi complexity; duration of visit; NAMCS.

J Gen Intern Med 35(6):1715–20
DOI: 10.1007/s11606-019-05624-0

BACKGROUND

Office visits are the most common service delivered in th

Percent distribution of complex visits, by time-based visit levels and type of specialty, 2013–2016.

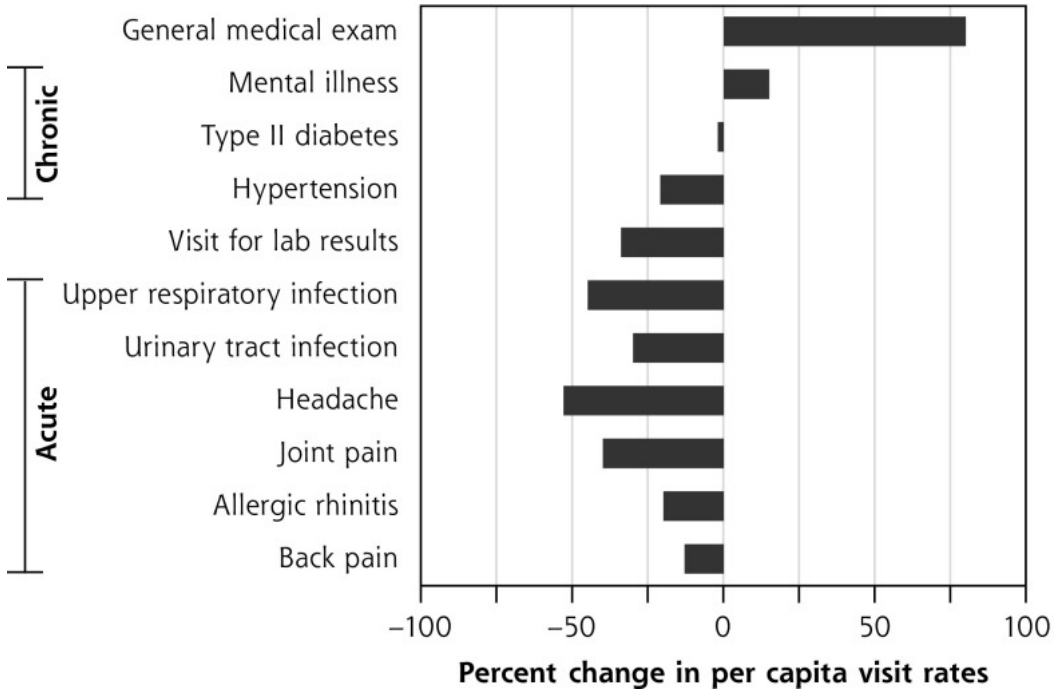


Conclusion

Within the same duration visits, specialties whose incomes depend more on evaluation and management codes on average addressed more clinical issues and managed more medications than specialties whose incomes are more dependent on procedures.

https://link.springer.com/article/10.1007/s11606-019-05624-0/figures/2

Trends show a decrease in acute care visits; increase in complexity of visits for physicians



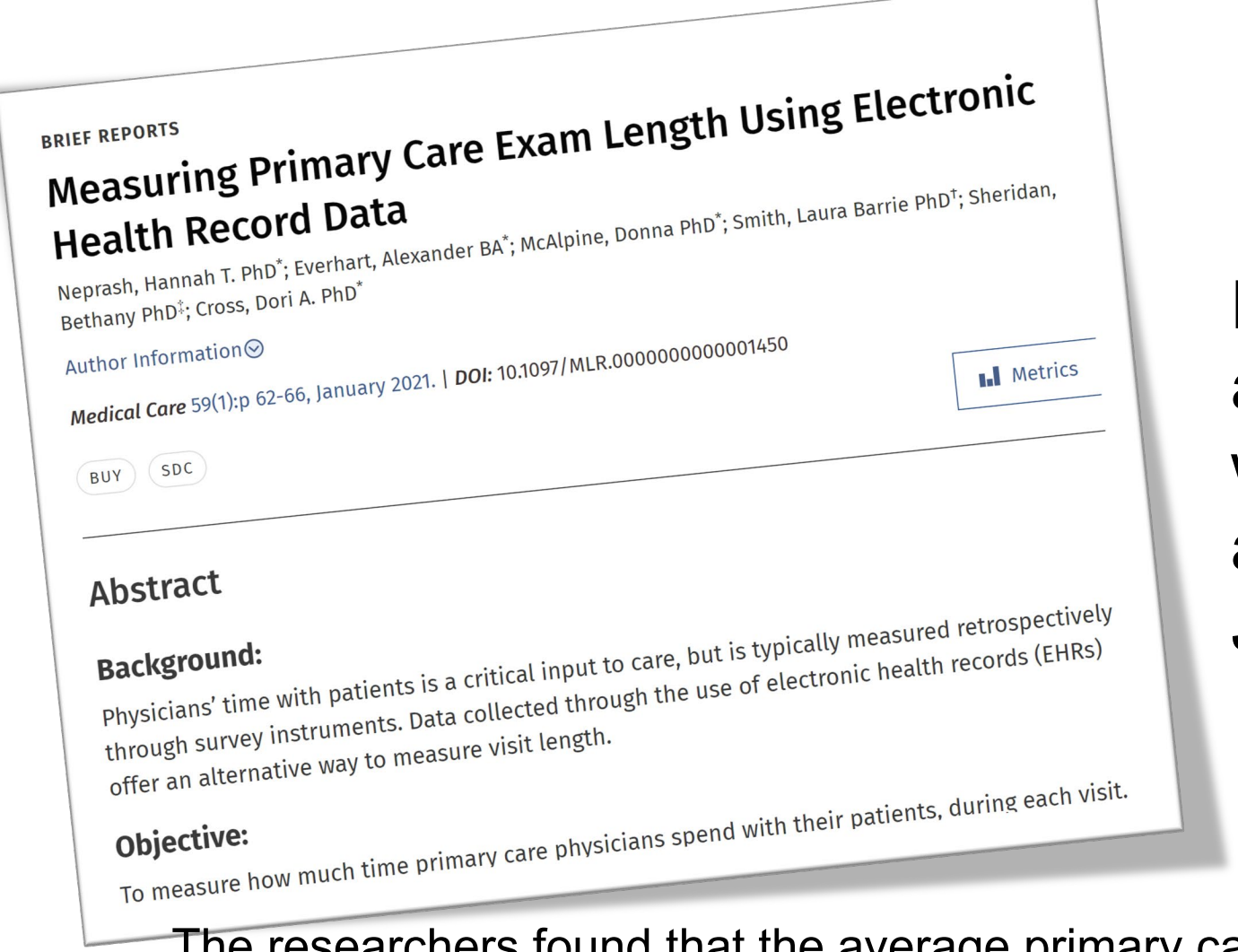
Visit Characteristics Per Primary Care Visit, 2008-2015

	2008[a]	2015[a]	Percent Change[b]	8-Year Trend[c] (95% CI)
Mean visit duration, min[d]	19.3	21.6	12	2.4 (1.1-3.8)
Mean diagnoses, No.[e]	2.0	2.3	15	0.30 (0.16-0.43)
Mean medications, No.[f]	3.1	3.9	26	0.82 (0.59-1.1)
Mean preventive services, No.[g]	0.34	0.59	76	0.24 (0.12-0.36)
Mean procedures, No.[h]	0.06	0.08	33	0.02 (0.01-0.03)

NACMS = National Ambulatory Medical Care Survey.

Rao A, Shi Z, Ray KN, Mehrotra A, Ganguli I. National Trends in Primary Care Visit Use and Practice Capabilities, 2008-2015. Ann Fam Med. 2019 Nov;17(6):538-544. doi: 10.1370/afm.2474. PMID: 31712292; PMCID: PMC6846275.

ROBERT GRAHAM CENTER



BRIEF REPORTS

Measuring Primary Care Exam Length Using Electronic Health Record Data

Neprash, Hannah T. PhD*; Everhart, Alexander BA*; McAlpine, Donna PhD*; Smith, Laura Barrie PhD†; Sheridan, Bethany PhD‡; Cross, Dori A. PhD*

Author Information

Medical Care 59(1):p 62-66, January 2021. | **DOI:** 10.1097/MLR.0000000000001450

Metrics

BUY SDC

Abstract

Background:

Physicians' time with patients is a critical input to care, but is typically measured retrospectively through survey instruments. Data collected through the use of electronic health records (EHRs) offer an alternative way to measure visit length.

Objective:

To measure how much time primary care physicians spend with their patients, during each visit.

Primary care physicians spend an average of 18.0 minutes with their patients, according to a study published in the January issue of *Medical Care*.

The researchers found that the average primary care exam was 18.0 minutes long (standard deviation, 13.5 minutes). Exams, on average, ran 1.2 minutes later than their scheduled duration (standard deviation, 13.5 minutes). **More than two-thirds of visits deviated from the schedule by five minutes or more.** Compared with visits scheduled for 20 or 30 minutes, visits scheduled for 10 or 15 minutes were more likely to exceed their allotted time.

Margot's Top Challenges Facing FM*

01 Workforce Shortage

02 Primary Care Investment

03 Rapidly Evolving Technology

Patient Complexity & Volume 04

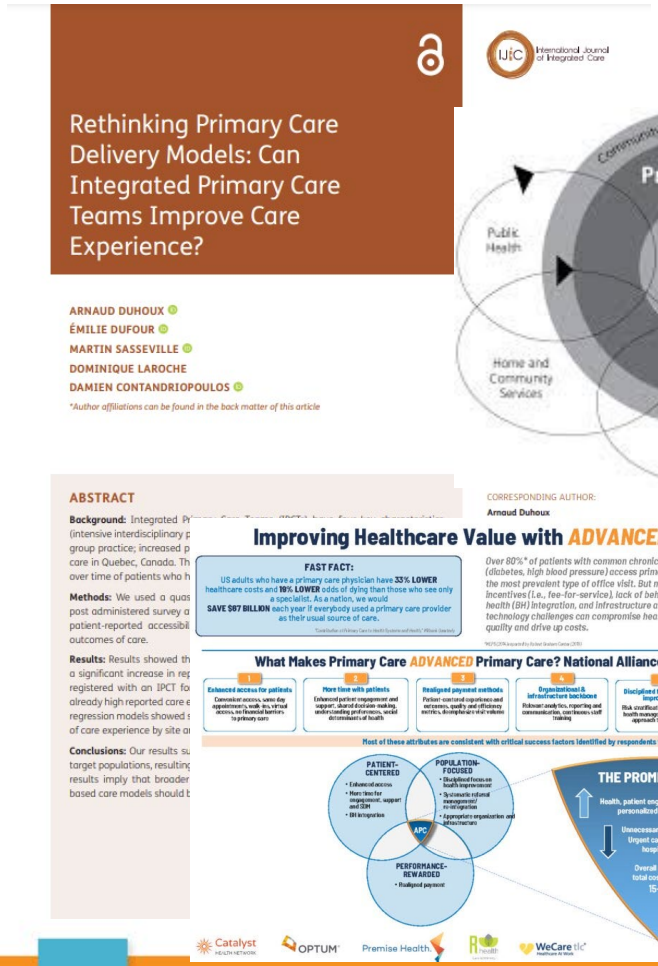
Care Delivery & Regulatory Changes 05

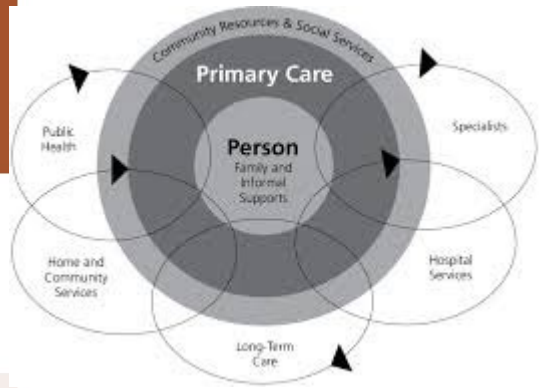
Worsening disparities & equitable access 06

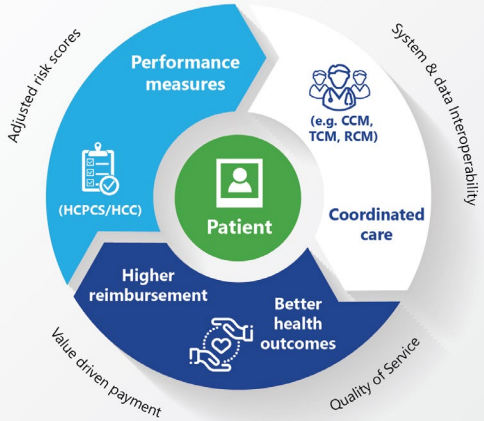
*Not in order of importance or impact

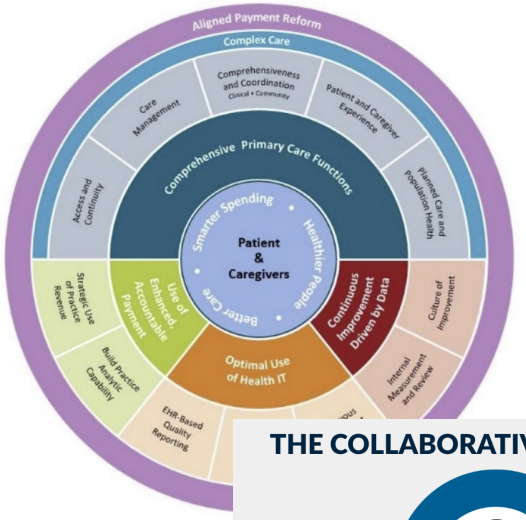
There are a lot of Primary Care Models

Figure 1: Primary Care First and CPC+ Driver Diagram









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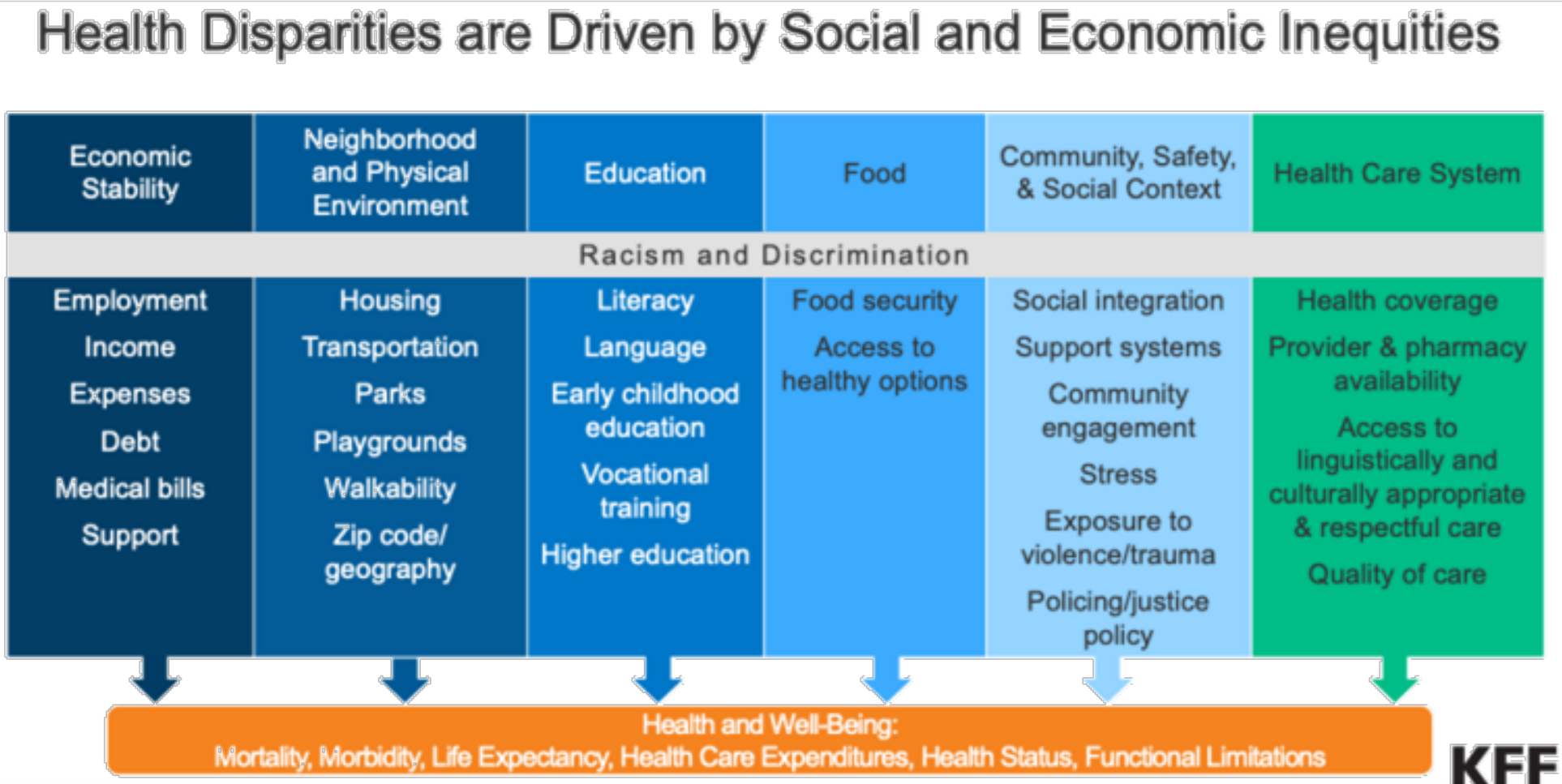
*Not in order of importance or impact

The Net Result is a Lack of Access Which Worsens Health Disparities

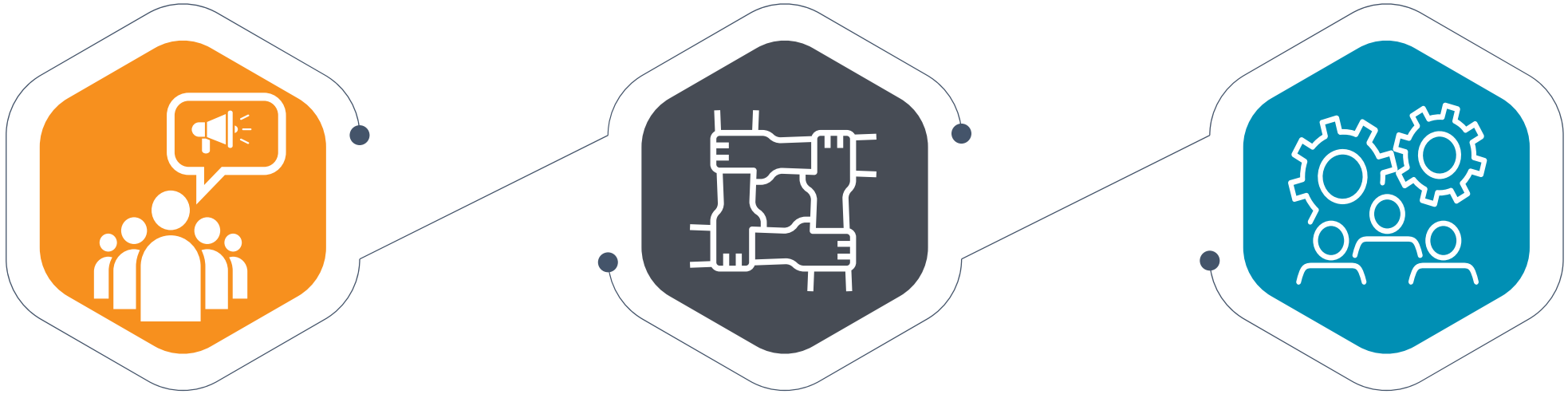


https://www.kff.org/racial-equity-and-health-policy/issue-brief/disparities-in-health-and-health-care-5-key-question-and-answers/

“Family Physicians leading care teams delivering inclusive, patient-centered care in communities IS the answer. Everyone deserves a Family Physician. To do that we need to be supported through investments that sustain and expand our practice AND protect our well-being. Ensuring this will attract future family physicians, retain practicing family physicians and ensure access to the most critical life-saving disparity closing intervention: family physicians.”

- Margot to anyone, anytime, anywhere

How Are We Going to Get There?



ADVOCACY

CONNECTION

EDUCATION

ADVOCACY

Tell Our Stories to Drive Change

Decoding What's Going on With G2211 and Modifier 25

Feb. 19, 2024

By David Tully
Vice President, AAFP Government Relations

Following the AAFP's big win on G2211 at the end of 2023 and the Jan. 1 implementation of that Medicare add-on code — which pays more accurately for the complex, high-value visits that primary care physicians provide as part of a continuous relationship with a patient — the Academy started hearing from members who are frustrated by a wrinkle in the new policy: its exclusion from evaluation and management visits for which family physicians are used to coding modifier 25.

As I said in this blog last November, the 2024 Medicare physician fee schedule says clinicians cannot bill G2211 alongside modifier 25 (which is used when performing a procedure or providing some other service, such as the Medicare annual wellness visit, on the same day as an E/M visit). Last summer, the Academy asked CMS to create an exception for annual wellness visits that would allow clinicians to use both G2211 and modifier 25; the final 2024 MPFS did not take up this guidance.

So this month, we continued to make our case for CMS to correct this problem in the upcoming 2025 Medicare physician fee schedule, pointing out inconsistencies in CMS' policy and zeroing in on how crucial it is for family physicians to be able to use G2211 in tandem with modifier 25.

"The AAFP urges CMS to allow payment for G2211 when attached to an E/M visit appended with modifier 25," said our Feb. 7 letter. "We support the goals of the G2211 add-on code and are very concerned that the restriction on visits with modifier 25 works against those goals by preventing family physicians from receiving the resources needed to account for the complex care that serves as the continuing focal point for all needed health care services they provide to Medicare beneficiaries in office E/M visits. Further, the policy creates incentives to offer fragmented care."

To fix this issue, our letter called on CMS to

- eliminate restrictions on the payment of G2211 when modifier 25 is attached to the E/M code, "to ensure family physicians can continue to offer Medicare beneficiaries comprehensive services in a single visit," and
- allow G2211 to be applied to home and residence evaluation and management services to more accurately reflect the value of comprehensive primary care home visits.

The letter is just the initial salvo in our advocacy for the 2025 MPFS, and it reflects feedback the Academy has received from members in the wake of G2211's implementation. The AAFP is also in touch with private payers about G2211.

We know that a big reason behind your frustration is the prohibition of G2211 payment alongside modifier 25 when the E/M visit is entirely consistent with CMS' thinking on G2211. For example (and as we just reminded CMS), more than 75% of the time it's a family physician or an internist handling the AWV — as you would expect for the centerpiece visit for a patient's most necessary health care. So why shouldn't G2211 also apply to an E/M service that happens in the same visit as the AWV, or any other

Grassroots Advocacy Resources

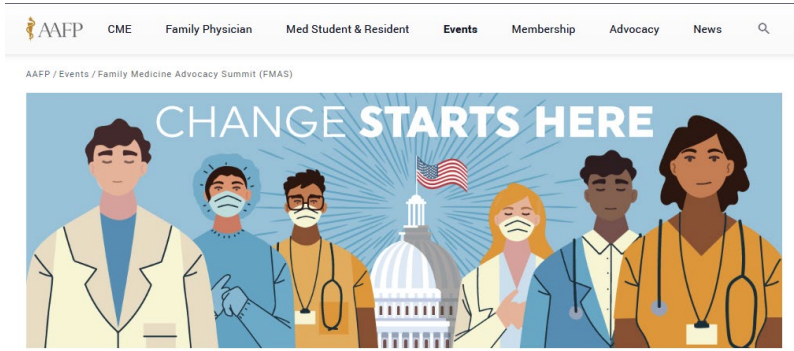
Get involved with federal advocacy.

Family Medicine Action Network

Join FMAN to stay in the know.

Join the Academy: Speak Out Now

Contact your members of Congress.



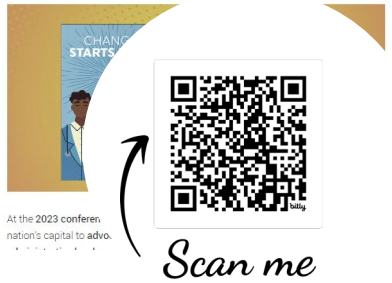
Family Medicine Advocacy Summit

Sunday, May 19—Tuesday, May 21, 2024
Grand Hyatt Washington
Washington, DC

REGISTER

Already registered? You may edit your registration anytime.

Take an active role in shaping family medicine's future



https://www.aafp.org/advocacy.html

ADVOCACY

Tell Our Stories to Drive Change

Preparing individuals who connect with students on what it really means to be a family physician

Cohort 1	Cohort 2	Cohort 3
AAFP chapter staff & member leaders	High school and college educators and advisors	FMIG faculty & student leaders

https://www.aafp.org/membership/initiatives/family-medicine-champions.html

ADVOCACY

CONNECTION

Tell Our Stories to Drive Change

SUBSCRIBE TO THE PODCAST

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RSS (About RSS)

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https://www.aafp.org/news/blogs/insidefm.html

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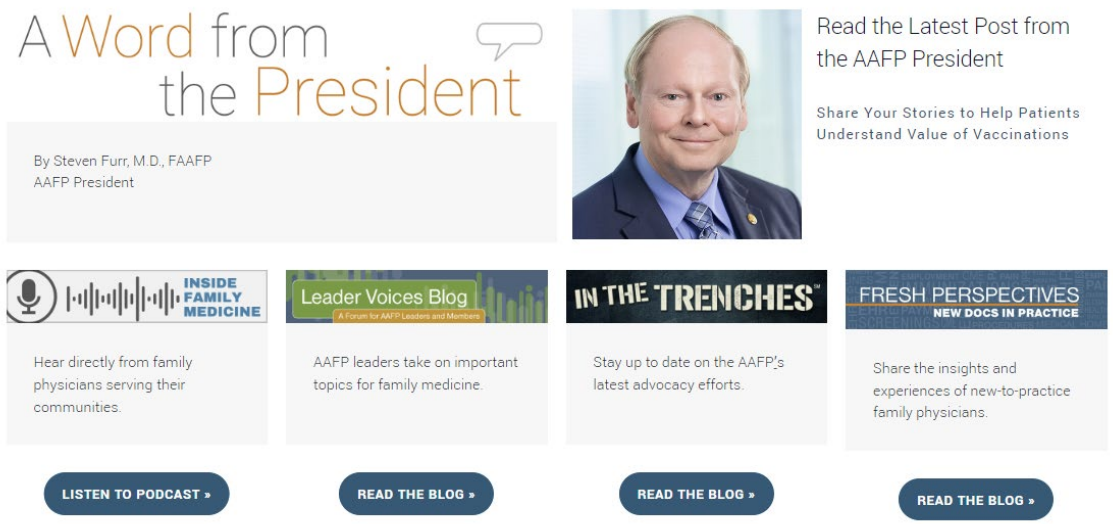
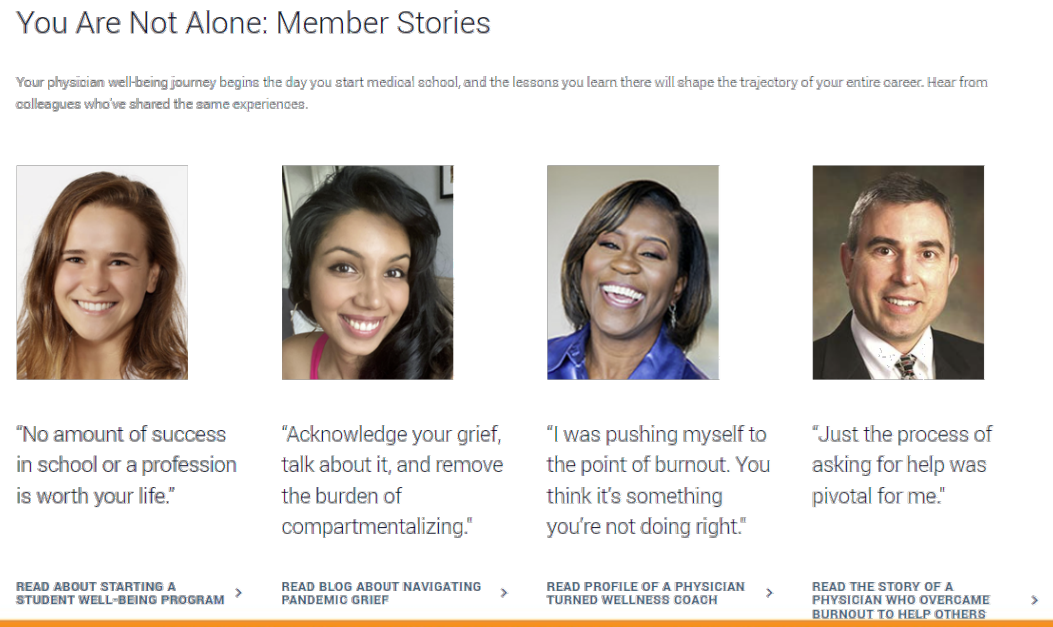


https://www.aafp.org/news.html



https://www.aafp.org/membership/initiatives/well-being-initiative.html

Tell Our Stories to Drive Change

ADVOCACY

CONNECTION

EDUCATION

Leading Physician Well-being Certificate Program

Creating Leaders of Change and Champions of Well-being

Physician leadership has never been a more important skill for the family physician than it is today. Thoughtful and capable family physician leaders can provide stability in uncertain times for their office teams, among their health system colleagues, and within their community. This physician leadership enhances the quality of care that teams can provide to their patients, improves the morale of the care team, and helps communities stay focused on health-enhancing activities.

Leading Physician Well-being (LPW), developed by the AAFP, is a unique certificate program designed to help you develop the leadership skills you need to spearhead that change among the physicians and other clinicians in your practice or health care organization.

All AAFP active members are eligible for LPW. Residents are eligible if they have the support of their residency program and should submit a letter of support from their program director. Starting in 2024, nonmembers are eligible for the program.

The application period for the 2024 program year is now open. Applications will be reviewed on a rolling basis. The final date to submit an application is May 31, 2024. Final acceptance e-mails will be sent June 14, 2024.

**If you are not a member of AAFP, you will be asked to create an account. There is no cost associated with doing this. Log in with the AAFP to begin your application.

APPLY NOW

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Applications are open through May 31, 2024.

AAFP | Conference Home | Registration And Hotel | Schedule | Speakers | EPosters | Scholarships

2024 Physician Health and Well-being Conference

Monday, May 6—Wednesday, May 8, 2024

JW Marriott Camelback Inn Resort & Spa
Scottsdale, AZ

The only national event *solely focused* on the well-being needs of physicians.

REGISTER TODAY

ADD TO CALENDAR

Reclaim your spark. Rediscover your joy.

As much as you care about your patients' health, you can't let it come before *your* heal
in three days of interactive learning, growth and connection during the AAFP's 2024 P
Well-being Conference, May 6–8 in Scottsdale, Arizona, and return home refreshed an

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https://www.aafp.org/membership/initiatives/well-being-initiative.html

ADVOCACY

CONNECTION

Tap Into Our Collective Wisdom

BEST PRACTICES FOR

Health Care Organizations Employing Family Physicians

The American Academy of Family Physicians (AAFP) has developed a set of principles for he
and prioritize family medicine and primary care to optimize the employment of family physi
that plan to employ family physicians and want to better understand what matters to them,
recommended practices within each principle that employers can use to help promote cont
relationship—which, in turn, leads to better health outcomes—and to improve professional s
physicians, advance the performance objectives of health care organizations, and support e

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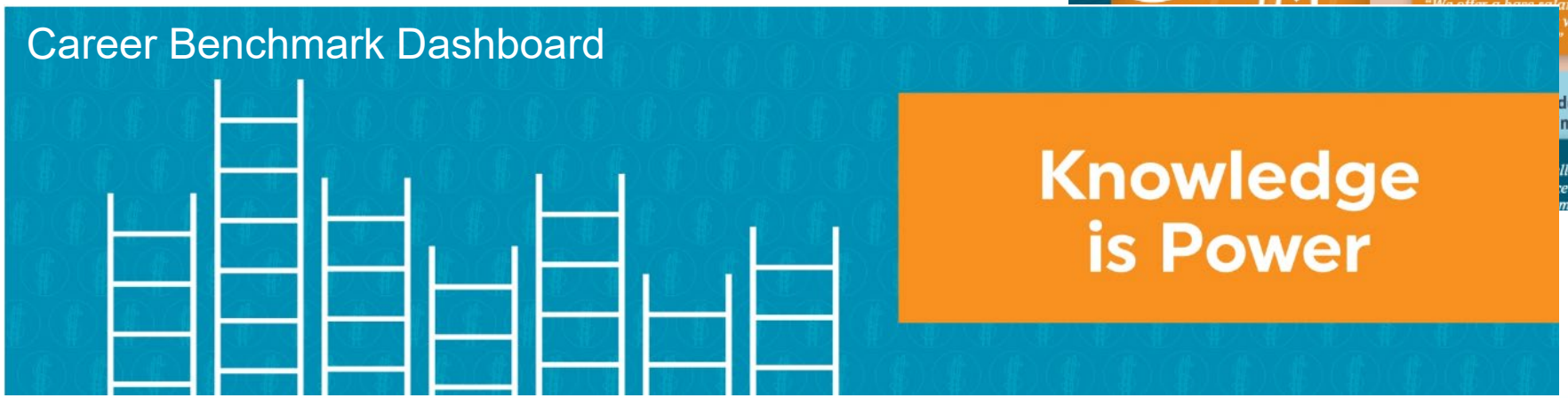
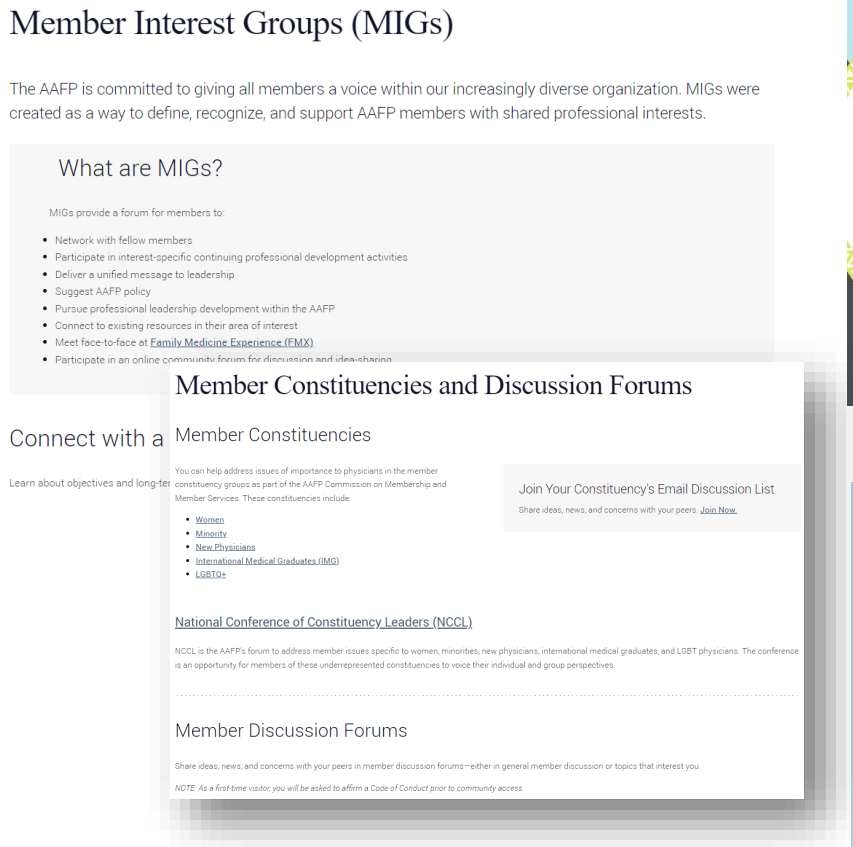


CONNECTION

Tap Into Our Collective Wisdom

https://www.aafp.org/events/aclf-nccl/nccl.html



https://bit.ly/3lqo1fa

https://www.aafp.org/events/fmx.html

EDUCATION

Learn & Grow Skills Together

Get paid for the care you deliver.

Find comprehensive tools and resources to help you code accurately and optimize documentation and payment.

- Billing & Coding Resources

- G2211

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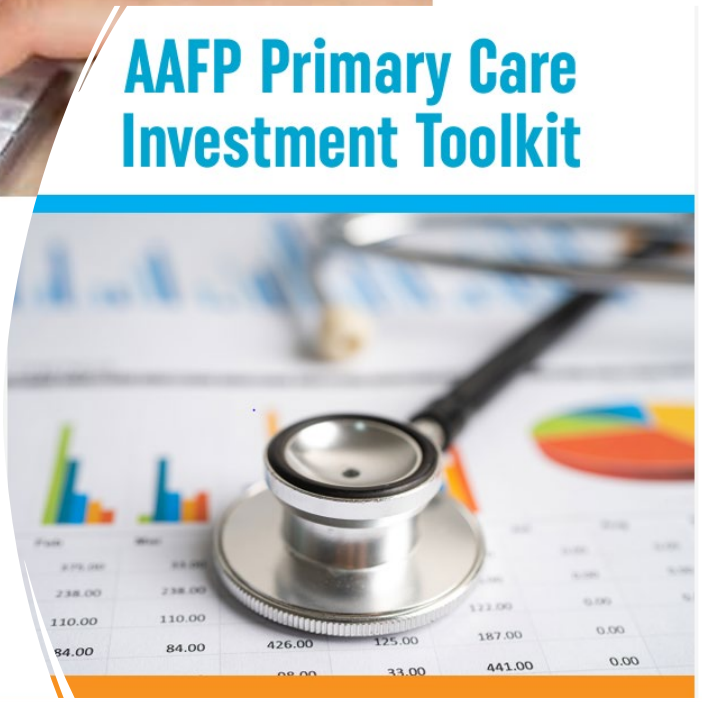
- Primary Care Investment Toolkit

- Primary Care Investment Matrix



Learn & Grow Skills Together

EDUCATION

AAFP CME Family Physician Med Student & Resident Events Membership Advocacy News

AAFP / About Us / Policies / All Policies / Ethical Application of Artificial Intelligence in Family Medicine

Ethical Application of Artificial Intelligence in Family Medicine

Family physicians provide an
provide preventive care, addr
care in their communities, es
health inequity, including syst
term relationships with patie
to talk about sensitive topics
physician-patient interaction

AI or machine learning (AI/M
coordination of care) and ent
medicine. To that end we bel
medicine.

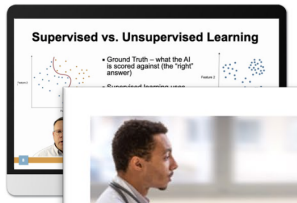
AI/ML should be evaluated w
the patient experience at sca

AAFP CME Family Physician Med Student & Resident Events Membership Advocacy News

AAFP / AAFP CME / Practice Management / AI in Family Medicine: Transforming Your Practice

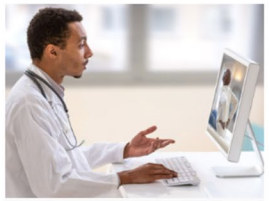
AI in Family Medicine: Transforming Your Practice

Free Online CME



This 3-part course is designed to teach you how to use the emerging technology of artificial intelligence (AI) to support and enhance your practice.

Technological innovations can reduce administrative burden, improve payment models, and protect the scope of family medicine. AI can process data to predict



Comparing Telehealth Services

Learn about your options and how to choose the right technology and vendors.

Telehealth and the End of the Public Health Emergency

Get answers to common questions about telehealth after May 11, 2023.

Legal Requirements for Telemedicine

Learn more about the telehealth legal requirements for your state.

Setting up Professional Continuous Glucose Monitoring

Get a quick overview of the process of getting your professional CGM program started.

Technology in Medicine

FP Essentials #537 - February 2024 - includes optimizing electronic health records; telemedicine; remote pat

5 Credits

Online

DPC SUMMIT

Direct Primary Care Summit

Elevate your professional satisfaction, patient care, business expertise, and passion for family

Credit Pending

Thu Jun 20 - Sun Jun 23 '24

Dallas, TX

Using Technology to Reduce Admin Burden

Free up more time for patient care with innovations you can integrate into practice today.

8.75 Credits

Online

Solutions to Admin Burden: Inbox

Learn groundbreaking new ways of alleviating administrative burden.

1 Credit

Online

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https://www.aafp.org/cme/topic/practice-management.html

Learn & Grow Skills Together

EDUCATION

ADVOCACY

[Administrative Simplification Resource Library]

Documentation Burden

Continuous process improvements such as these can help you spend more time with patients and less time with paperwork.

REDUCE DOCUMENTATION BURDEN >

Prior Authorization

Complementing the AAFP's advocacy for prior authorization reform: guidance to help your practice streamline the PA process.

REDUCE PRIOR AUTHORIZATION BURDEN >

EHR Inbox

Ahead of essential systemic changes the Academy is pushing to realize: key ways to reduce time spent on inbox management.

REDUCE EHR INBOX BURDEN >

Techniques

Technologies

Transformations

[Advocating to Reduce Payer Burden]

FPM

BEYOND THE BELTWAY:
IMPROVING PAYMENT & REDUCING BURDEN

AAFP

Learn & Grow Skills Together

EDUCATION

ADVOCACY

The EveryONE Project™

Education and resources to help you advocate for health equity

Center For Diversity and Health Equity GO TO CDHE

The Center identifies and addresses social determinants of health, empowering you to improve health outcomes for your patients.

The EveryONE Project™
Advancing health equity in every community

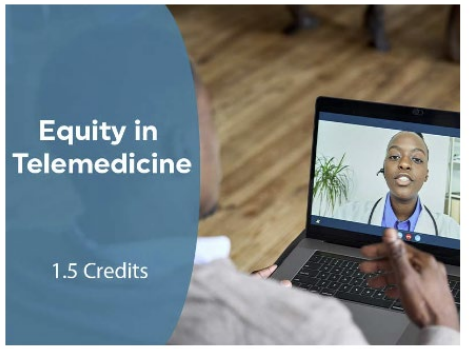
neighborhood navigator

Neighborhood Navigator USE TOOL

Use this interactive tool at the point of care to connect patients with supportive resources in their neighborhoods.

IN COURSE

gies to reduce



Equity in Telemedicine BEGIN COURSE

Explore the pros and cons of telemedicine in providing equitable care, including its effects on existing barriers to care.

Scan me

https://www.aafp.org/cme/topic/health-equity.html

EveryONE Deserves a Family Physician

01 Workforce Shortage

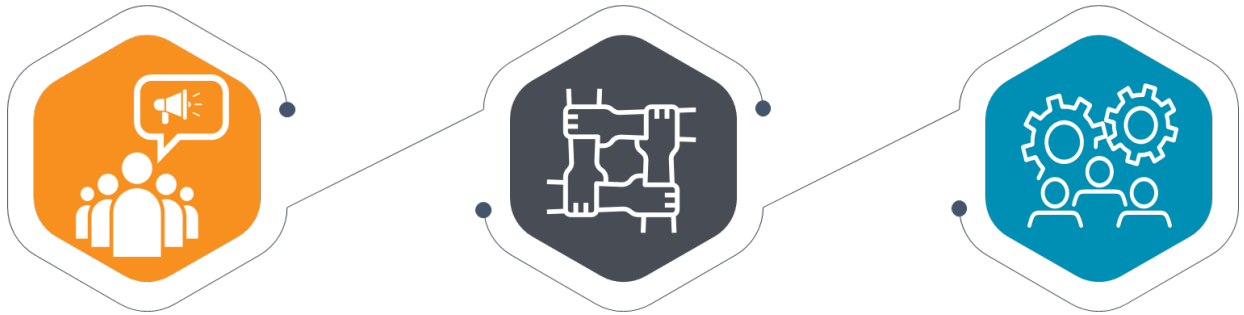
02 Primary Care Investment

03 Rapidly Evolving Technology

Patient Complexity & Volume 04

Care Delivery & Regulatory Changes 05

Worsening disparities & equitable access 06



- Tell our stories to drive change
- Tap into our collective wisdom
- Learn & grow skills together

AMERICAN ACADEMY OF FAMILY PHYSICIANS

STRONG MEDICINE FOR AMERICA