Primary Care Workforce Assessment

Meylakh Barshay, MD-ScM Candidate

Neil Sarkar PhD, MLIS, Associate Professor, Center for Biomedical Informatics & CEO, Rhode Island Quality Institute

Michel Klijn , Analyst, Care New England

Caroline Richardson MD, Chair of Family Medicine

Jeffrey Borkan MD, PhD, Assistant Dean

THE WARREN ALPERT
Medical School
BROWN UNIVERSITY

Outline

- How do we define “primary care”?
- What question do we want to answer?
- What are the limitations of the current workforce resources?
- What is our methodology and what are its limitations?
- What are our results?
- Future directions?

Updated Definition of Primary Care

High-quality primary care is the provision of whole-person, integrated, accessible, and equitable health care by interprofessional teams that are accountable for addressing the majority of an individual's health and wellness needs across settings and through sustained relationships with patients, families, and communities.

Source: National Academies of Sciences, Engineering, and Medicine. 2021. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington, DC: The National Academies Press. https://doi.org/10.17226/25983.

Who is a primary care provider/clinician?

- We are defining primary care by a provider's ***care***, not their ***training*** insofar as that care reflects whole person, integrated care
  - Example: an internal medicine doctor may possess the training to provider primary care but if they work predominantly as a hospitalist or subspecialist, they are not actively rendering "primary care"
  - Example: an OBGYN who predominantly provides holistic care for patients may in fact be providing "primary care"

What question do we want to answer?

- How many ***Full Time Equivalent (FTE)*** primary care clinicians, as defined by activity, do we have in the state of Rhode Island (in 2022-2023)*?

* Date ranges are for 06/01/22-07/01/2023 based on data availability in APCD

What are some prior estimates?

The State of Primary Care Physician Workforce: Rhode Island 2018 (Graham Center)

- In 2018, Rhode Island had **905 PCPs** in direct patient care:
  - Family Physicians 246
  - General Internists 402
  - Pediatricians 227
  - Geriatricians 18
  - General Practitioners 12

https://www.graham-center.org/content/dam/rgc/documents/maps-data-tools/state-collections/phys-workforce/Rhode-Island.pdf

Rhode Island Primary Care Physician Workforce Profile 2019

Active Physicians

- Family Medicine/General Practice: 311
- Internal Medicine/Pediatrics 28
- Internal Medicine 640
- Pediatrics 271
- **Total Primary Care = 1250 (1292 by AAMC count)**

Source: 2021 State Physician Workforce Data Report. Population estimates as of July 1, 2019 are from the U.S. Census Bureau (Release date: December 2019). https://www.aamc.org/media/58316/download

Kaiser Family Foundation:
Professionally Active Primary Care Physicians by Field (in Rhode Island)

Year	Internal Med	FM/GP	Pediatrics	Ob/Gyn	Geriatrics	**Total**
September 2020	1490	433	556	297	5	2781
September 2021	1490	444	554	296	6	2790
May 2022	1497	445	556	295	6	2799
September 2023	1570	459	581	301	7	2918
May 2024	1256	427	401	229	5	2318
September 2024	1324	427	414	209	7	2381

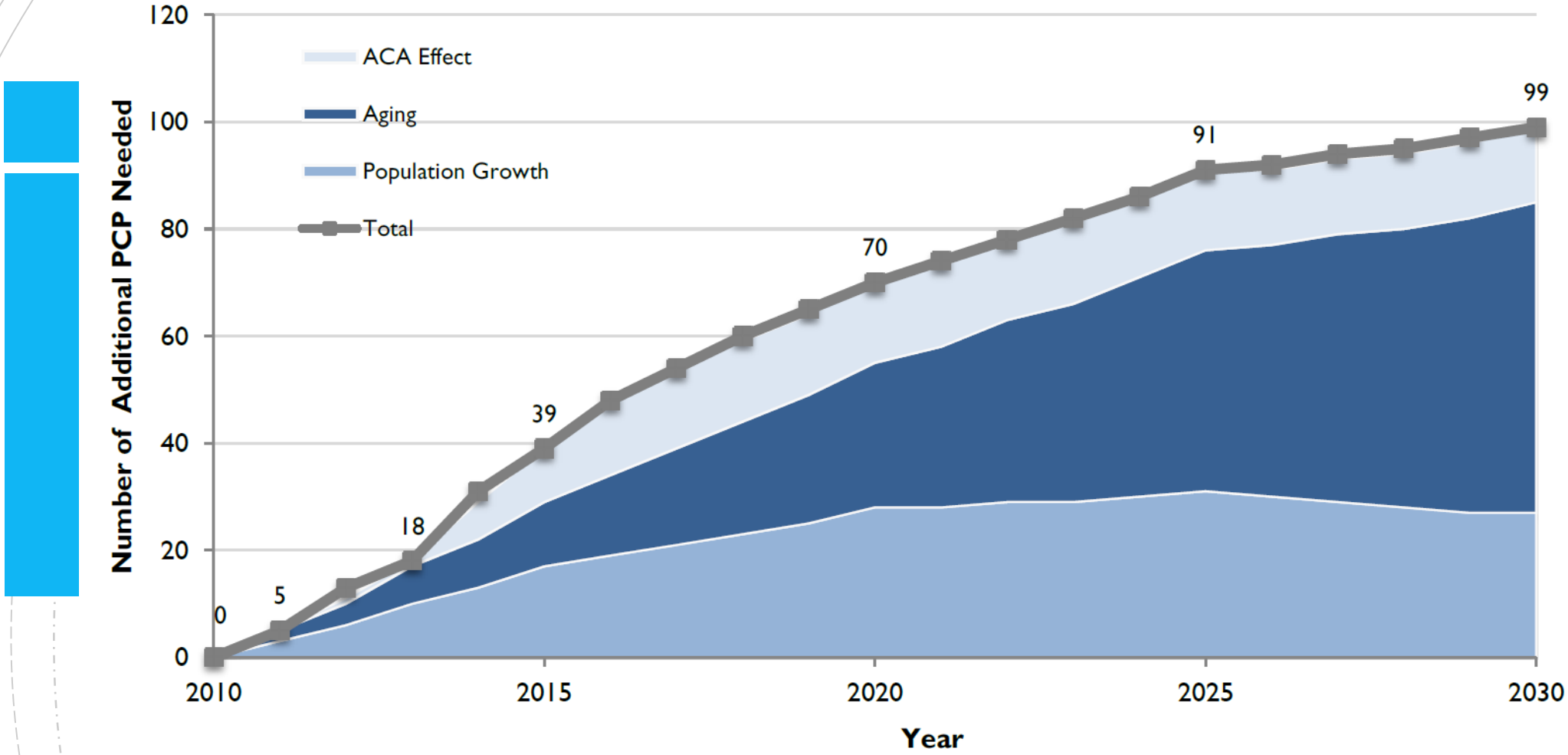
- Special data request on State Licensing Information from Redi-Data, Inc. (via KFF)

Rhode Island Primary Care Physicians Ratios per 100,000 Population 2021 (HRSA)

- Rhode Island: **108.8 per 100,000**
- Ranked 4th by State after Washington DC, Vermont, and Massachusetts

Source: 2021 AMA Physician Masterfile and the U.S. Census Bureau's State Population Totals: 2020-2022 (census.gov); https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/state-of-primary-care-workforce-2023.pdf

Rhode Island Projected Primary Care Physicians Need*



*Petterson, Stephen M; Cai, Angela; Moore, Miranda; Bazemore, Andrew. State-level projections of primary care workforce, 2010-2030. September 2013, Robert Graham Center, Washington, D.C. Based on 2010 current primary care physician workforce of 830

What are the limitations of these prior approaches?

- Identify primary care **solely** based on specialty
- Do not distinguish between full-time equivalent **(FTE)** vs. part-time equivalent **(PTE)** employees
- Exact methodology used can be opaque for different estimate sources

How did our workgroup approach the problem?

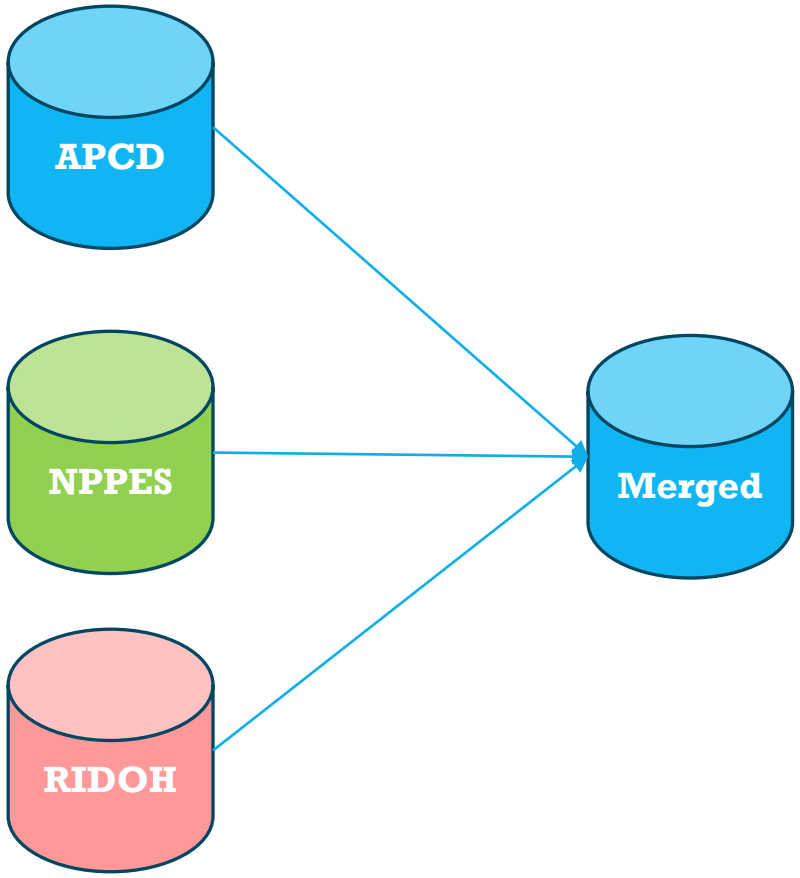
- Define a set of CPT codes that are *unambiguously* primary care:
  - 'G0402', 'G0438-G0439', '99381-99387', '99391-99397', '90471' (see appendix slide for more)
- Generate list of provider NPIs and number of primary care encounters
- Procure a list of all active providers from RIDOH
- Query the National Plan and Provider Enumeration System (NPPES) for all providers (by NPI) who EITHER:
  - Matched on name to RIDOH, matched on license number to RIDOH, OR were noted to have a business/personal/license address in RI

Methodology

- Billed Claims from 06/2022 to 06/2023
- Limited to CPT codes associated with “primary care” [wellness visits, establish care]

- Preliminary source of all MD/DO/PA/NP clinicians based on state and licensure taxonomy
- Clinician metadata (address, gender, specialty)

- Triangulation source for MD/DO/PA clinicians that are licensed in Rhode Island



How was this triangulated?

- “Gut check” the order of magnitude against prior estimates
- Leveraging multiple data sources reduces risk of error
- Obtaining samples of primary care providers and FTE estimates from local groups including CNE, Coastal, and RIPCPC and comparing predicted vs. actual FTE percentages

A note on conservatism

- As a general approach, our analysis skewed conservative:
  - Sensitivity analysis was conducted for adding marginal CPT codes, leading to the conclusion that our CPT list was highly sensitive to identifying primary care providers
  - FTE % estimates were based on claims patterns of both physicians and APPs even though APPs tend to bill less frequently, artificially inflating physician FTE

What are the limitations?

- Claims Data Limitations
  - Some providers are not included in APCD: direct primary care, VA-only providers, Indian Health Service though they are expected to have relatively ***minor*** contributions
  - The Gobeille Supreme Court decision has reduced the claims reported to APC. Approximately 80% of total commercial spending & 80% of commercially covered lives are in APCD*
  - There is a trade-off of sensitivity/specificity in CPT code list
- Provider Data Limitations:
  - Licensure data is not consistent (particularly when it comes to states). Furthermore, there are likely CT/MA providers caring for Rhode Islanders and vice versa
- Provider practice:
  - Providers often have idiosyncratic billing patterns that can artificially inflate/deflate their productivity though there is no expected systematic direction of error

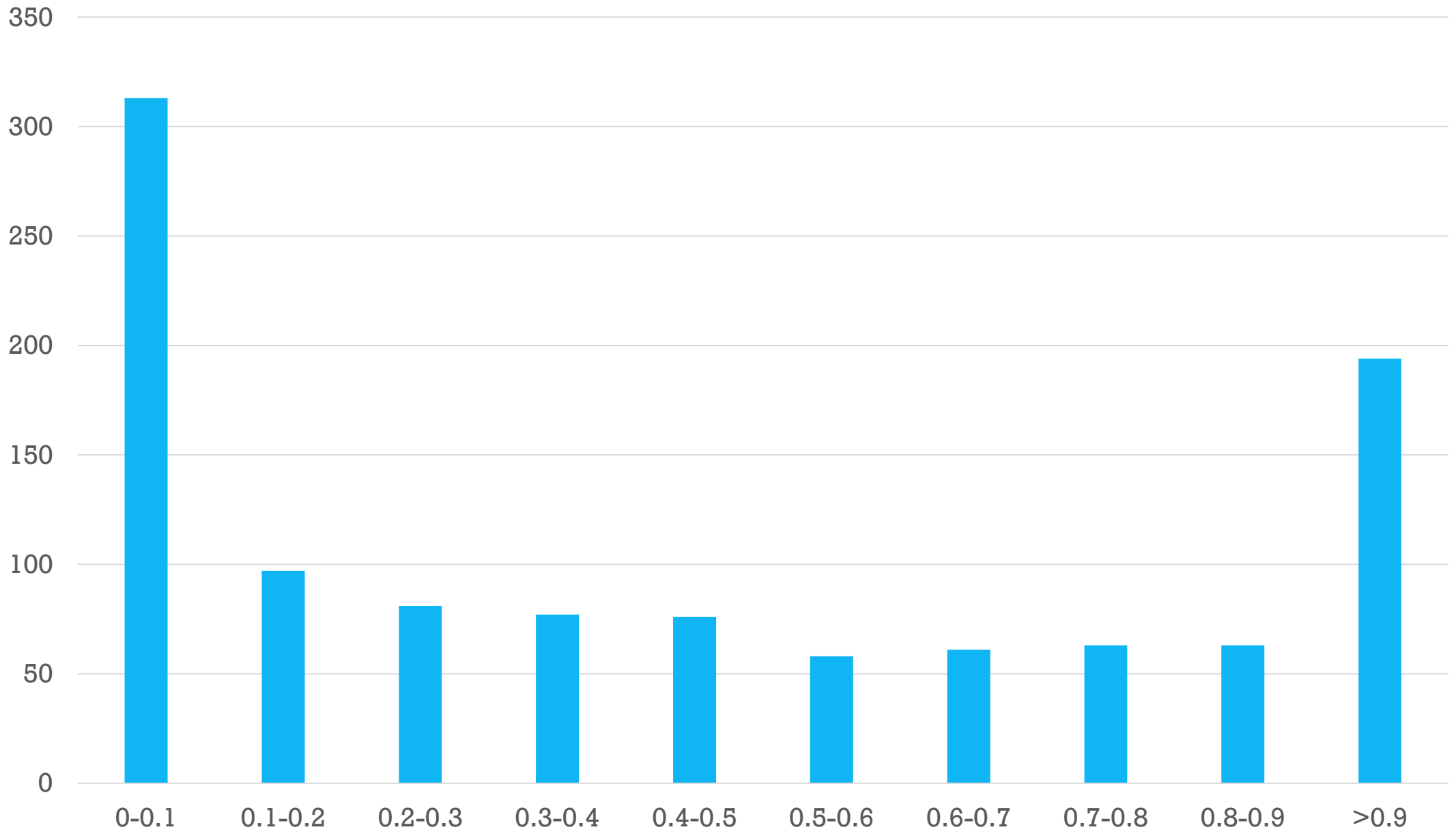
* https://ohic.ri.gov/sites/g/files/xkgbur736/files/2024-05/OHIC%20Cost%20Trends%20Chartbook_20240513%20FINAL.pdf

What are the *preliminary* results (physicians)?

- **1083** physicians were identified who provided primary care:
  - 379 Internal Medicine
  - 309 Family Medicine
  - 251 Pediatricians
  - 120 OBGYNs
  - 24 “other”
- When adjusting for FTE percentage estimates, this made for

~520 FTE primary care physicians

Distribution of % FTE Physicians



What are the *preliminary* results (NPs & PAs)?

- **401 NPs** were identified who provided primary care
  - When adjusting for FTE percentage estimates, this made for **~104** FTE primary care NPs
- **133 PAs** were identified who provided primary care
  - When adjusting for FTE percentage estimates, this made for **~36** FTE primary care PAs
- Of note, **54** other clinicians were identified with other credentials including nurse and midwife

What does this imply about the current primary care gap?

- ***520*** Physicians + ***104*** NPs + ***36*** PAs = ***660*** primary care clinicians
  - As of 2023, there are 1,095,962 Rhode Islanders
  - At a patient panel size of 1200: 792,000 patients covered, 303,962 patients without a PCP (which would require 250+ more PCPs)
  - At a patient panel size of 1500: 990,500 patients covered, 105,962 patients without a PCP (which would require 70 more PCPs)
- Of note, as expected based on FTE equivalent hours, these panel sizes are far larger than what APCD suggests

Why invest in this methodology?

- In addition to the goals outlined earlier in this talk, using this project as a proof of concept for a workforce pipeline enables:
  - Reproducibility (into the future)
  - Sustainability of effort (prior work has been very manual)
  - Inherent transparency of methodology (the code tells the story!)
  - Accuracy – prior estimates over-index on specialty and lose meaningful signal!

Thank you!

Data for analysis was obtained through an approved request to the Rhode Island All-Payer Claims Database as administered by the Rhode Island Department of Health (RIDOH). Data was obtained for 2022-2023. RIDOH is not responsible for the author's analysis, opinions and conclusions contained in this document.

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Appendix

CPT Code	Description
G0402	INIT PREV PE LTD NEW BENEF DUR 1ST 12 MOS MCR
G0438	ANNUAL WELLNESS VISIT; PERSONALIZ PPS INIT VISIT
G0439	ANNUAL WELLNESS VST; PERSONALIZED PPS SUBSQT VST
99381	INITIAL PREVENTIVE MEDICINE NEW PATIENT <1YEAR
99382	INITIAL PREVENTIVE MEDICINE NEW PT AGE 1-4 YRS
99383	INITIAL PREVENTIVE MEDICINE NEW PT AGE 5-11 YRS
99384	INITIAL PREVENTIVE MEDICINE NEW PT AGE 12-17 YRS
99385	INITIAL PREVENTIVE MEDICINE NEW PT AGE 18-39YRS
99386	INITIAL PREVENTIVE MEDICINE NEW PATIENT 40-64YRS

CPT Code	Description
99387	INITIAL PREVENTIVE MEDICINE NEW PATIENT 65YRS&>
99391	PERIODIC PREVENTIVE MED ESTABLISHED PATIENT <1Y
99392	PERIODIC PREVENTIVE MED EST PATIENT 1-4YRS
99393	PERIODIC PREVENTIVE MED EST PATIENT 5-11YRS
99394	PERIODIC PREVENTIVE MED EST PATIENT 12-17YRS
99395	PERIODIC PREVENTIVE MED EST PATIENT 18-39 YRS
99396	PERIODIC PREVENTIVE MED EST PATIENT 40-64YRS
99397	PERIODIC PREVENTIVE MED EST PATIENT 65YRS& OLDER
90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE

Description text: https://portal.ct.gov/-/media/ohs/primary-care-and-community-health-reforms/primary-care-subgroup/2021-meetings/10-26-21/ct-ohs-primary-care-definition-2021-10-1.pdf