

National Primary Care Physician Inventory (NPCPI) 2011

The 2011 NPCPI provides measures of primary care physician supply for Version 3.1 PCSAs. The data sources are 2011 American Medical Association Physician Masterfile (AMA MF) and 2011 100% Medicare Part B and Outpatient claim data. The Medicare files include claims for fee-for-service beneficiaries.

The deliverable is one dbf format file at the PCSA-layer:

hrsa_npi_pcsa2011_v20140909.dbf for 7,144 PCSAs and 11 variables.

For detailed information of each variable, please refer to data dictionary:

HRSA National Physician Inventory Data Dictionary 0914.pdf

Methods:

1. AMA definition – same as the New Access Point (NAP) project

Primary care physician as listed in the 2011 AMA. Only clinically active, non-federal, primary care physicians were included in the calculations.

Determination of “Active” Status

Physicians considered active—and thereby included in the count of primary care providers— were non-federal (as defined by “present employment” variable not = 081-086) and flagged as clinically active (i.e., have ClinActive = 1 (true))

ClinActive is defined as follows:

- a. Clinically Active Indicator (variable name: ClinActive)
 - Initialize ClinActive to 1 (true).
 - Set ClinActive to 0 (false) if Type of Practice [TOP] is NOT equal to:
 - '012' = Resident
 - '020' = Direct Patient Care
 - '072' = Semi-retired
 - '100' = No Classification
 - Set ClinActive to 0 (false) if AMA’s Major Professional Activity [MPA] (as derived from “type of practice” and “present employment” variables) is equal to:
 - 'ADM' = Administration

'INA' = Inactive
'LOC' = Locum Tenens
'MTC' = Medical Teaching
'RES' = Research
'OTH' = Other
'TFG' = Temporally Foreign Physician
'UNA' = Address Unknown

- Set ClinActive to 0 (false) if age is greater than 80.

Determination of "Primary Care"

For physicians to be considered primary care providers, they are first flagged as either general primary care (PrimCare = 1) **or** OB/GYN primary care (ObgPCare = 1). The definitions of the ASAPS primary care indicators are as follows:

a. Primary Care Indicator (variable name: PrimCare)

- Initialize PrimCare to 0 (false).
- Set PrimCare to 1 (true) if primary specialty (Spec1) *is equal to*:

'ADL' = Adolescent Medicine (Pediatrics)
'AMI' = Adolescent Medicine (Internal Medicine)
'FP' = Family Practice
'FM' = Family Medicine
'FPG' = Geriatric Medicine (Family Practice)
'FPP' = Psychiatry/Family Practice
'GP' = General Practice
'IFP' = Internal Medicine/Family Practice
'IM' = Internal Medicine
'MPD' = Internal Medicine/Pediatrics
'PD' = Pediatrics

b. OB/GYN Primary Care Indicator (variable name: ObgPCare)

- Initialize ObgPCare to 0 (false).
- Set ObgPCare to 1 (true) if primary specialty (Spec1) *is equal to*:

'GYN', 'OBG', 'OBS'

Determination of FTEs

Current residents (Resident = 1 (true)) and physicians who are listed as semi-retired (SemiRet = 1 (true)) are counted as active but assigned base FTEs of only 0.1 and 0.5,

respectively, while physicians greater than 70 years of age also are counted as active, but receive gradually discounted FTE (i.e. 0.9 for age 71, 0.8 for age 72, 0.7 for age 73, 0.6 for age 74, 0.5 for age 75, 0.4 for age 76, 0.3 for age 77, 0.2 for age 78, 0.1 for age 79). Physicians \geq age 80 are not counted. All other clinically active, non-federal physicians are given a base FTE value of 1.0.

SemiRet and Resident are defined as follows:

a. Semi-retired Status Indicator (variable name: SemiRet)

- Set SemiRet to 1 (true) if type of practice (TOP) = '072'; else set SemiRet to 0 (false).

b. Current Resident Indicator (variable name: Resident)

Set Resident to 1 (true) if MPA is equal to "HPR: Resident" OR type of practice (TOP) is '012 Resident'; else set to 0 (false).

Location of Physicians

Office ZIP Codes are first used to assign practice location. If office ZIP Code is missing, preferred mailing ZIP Code is used. ZIP Codes are assigned to 2010 Census Tracts based on ZIP to Track crosswalk file. Census Tracts are then assigned to PCSAs based on the standard Tract to Version 3.1 PCSA crosswalk file. Physicians are excluded if they practiced outside the 50 states and Washington DC.

2. Medicare physician definition:

Only Medicare physicians identified in the claims files and who link to the AMA Masterfile by NPI are included. The following criteria only apply to AMA non-pediatric physicians.

Physicians are assigned to a primary specialty based on the plurality of their work relative value units (wRVUs) from claims. We first identified claims of the linked AMA non-pediatric physicians from the 2011 100% Part B Physician/Supplier Claims and 100% RHCs and FQHCs claims from the Outpatient claims. In addition, we also included claims from Critical Access Hospitals (CAHs) that used Option II payment from Outpatient claims (i.e. hospitals bill for physicians via facility bills).

For Part B claims, we used the physician specialty code on the claims. Because Outpatient File does not contain physician specialty codes, we applied an annual NPI-specialty crosswalk file based on Part B claims developed at Dartmouth to assign a specialty code for each physician who had claims at RHCs/FQHCs. For physicians who only practiced at FQHCs/RHCs (i.e. they did not have a Part B claim), we assumed they were primary care physicians. For those CAH physicians whose claims from the

Outpatient file, we used their NPI physician taxonomy to classify their specialty (they did not submit any Part B claims). We then summed up wRVUs for each physician by specialty for all of their claims. The final Medicare specialty of each physician is the specialty with the highest value of wRVU. We kept those with primary care specialty (TDI specialty group codes: internal medicine, family practice, pediatrics, obstetrics/gynecology or from FQHCs/RHCs without a B claim) as Medicare primary care physicians.

The practice location of Medicare primary care physicians was the practice ZIP code from the NPI file. We assigned a PCSA to each Medicare primary care physician based on the same crosswalk files as used for the AMA location assignment.

Determination Medicare FTEs:

We did not calculate Medicare FTES, but we applied the AMA FTE value to the linked physicians. That is, Medicare claims were used to identify specialty and location, not physician clinical efforts.

3. Population estimates:

The 2010 PCSA project PCSA civilian population estimates are used for PCSA tabulations.

4. Physician rates (unadjusted):

Three types of primary care physician (PCP) supply were calculated:

- 1). PCP count with AMA specialty and location
- 2). PCP count with AMA specialty and location for residents and pediatricians, and AMA FTEs with Medicare specialty and location for AMA-Medicare linked MDs.
- 3). PCP count with AMA specialty and location for residents and pediatricians, AMA FTEs with Medicare specialty and location for AMA-Medicare linked MDs, and AMA FTEs, specialty and location for unlinked AMA MDs.

Three corresponding rates (MD to civilian population ratios) were calculated using 2010 civilian population.