



American Medical Group Association®



Primary Care Panel Size: Exploratory Analysis



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Approach – Primary Care Panel Size

- Obtained lists of primary care providers from two medical groups
 - Physicians—Family Medicine, General Internal Medicine, Pediatrics
 - Advanced Practice Providers (APPs)
- Tested four attribution methods
 - To whom?
 - Physicians and APPs treated similarly—attribute based on plurality of clinical activity
 - Attributed to a physician, if the patient saw a physician
 - What clinical activity?
 - E&M office visits
 - All E&M visits and procedures
- Explored proportion of provider’s workload due to non-attributed patients
- Identified differences between groups in use of APPs
- Labeled patients by preliminary measures of risk/severity/complexity

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Berenson-Eggers Type of Service (BETOS) Codes

- BMP**
- **M – EVALUATION AND MANAGEMENT**
 - **M1A/B OFFICE VISITS – NEW/ESTABLISHED** ← **BM1**
 - M2A/B/C HOSPITAL VISIT – INITIAL/SUBSEQUENT/CRITICAL CARE
 - M3 EMERGENCY ROOM VISIT
 - M4A/B HOME VISIT/NURSING HOME VISIT
 - M5A/B/C/D SPECIALIST – PATHOLOGY/PSYCHIATRY/OPHTHALMOLOGY/OTHER
 - M6 CONSULTATIONS
 - **P – PROCEDURES**
 - P0 ANESTHESIA
 - P1 MAJOR PROCEDURE – BREAST, COLECTOMY, CHOLECYSTECTOMY, TURP, HYSTERECTOMY
 - P2 MAJOR PROCEDURE – CARDIOVASCULAR (CABG, ANEURYSM, THROMBOENDARTERECTOMY)
 - P3 MAJOR PROCEDURE – ORTHOPEDIC (HIP FRACTURE, HIP REPLACEMENT, KNEE REPLACEMENT)
 - P4 EYE PROCEDURE – CORNEAL TRANSPLANT, CATARACT+LENS INSERTION, RETINAL DETACHMENT
 - P5 AMBULATORY PROCEDURES – SKIN, MUSCULOSKELETAL, INGUINAL HERNIA, LITHOTRIPSY
 - P6 MINOR PROCEDURES – SKIN, MUSCULOSKELETAL, OTHER
 - P7 ONCOLOGY
 - P8 ENDOSCOPY
 - P9 DIALYSIS SERVICES
 - **I – IMAGING, T – TESTS; D – DURABLE MEDICAL EQUIPMENT**
 - **O – OTHER – AMBULANCE, CHIROPRACTIC, ENTERAL/PARENTERAL NUTRITION, VISION, HEARING AND SPEECH SERVICES, CHEMOTHERAPY, OTHER DRUGS, IMMUNIZATION**

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Clinical Activity and FTE

- Determine provider activity: July 2012 – December 2013
 - BM1 – BETOS M1 only – Evaluation & management office visits, new and established patients
 - BMP – All BETOS M and P – All E&M services and procedures
- Compute – over 18 month period
 - span of activity – first & last dates of patient service
 - number of days patients were seen
 - average number of encounters per day worked → distinguish full-time from part-time

	Group A		Group B	
	Total Providers		Total Providers	
Providers on list provided by the Group and in Humedica data	77		255	
	Physicians	APPs	Physicians	APPs
Providers by category	51	26	142	73
Providers with activity in 18 mo. (7/1/2012 – 12/31/2013)	48	26	116	53
Providers with ≥ 240 days of activity over 18 mo.	45	24	103	45
Providers with ≥ 6 encounters/day worked = Full-Time	38	18	101	41
	68%	32%	71%	29%

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Attributing a Patient to a PCP

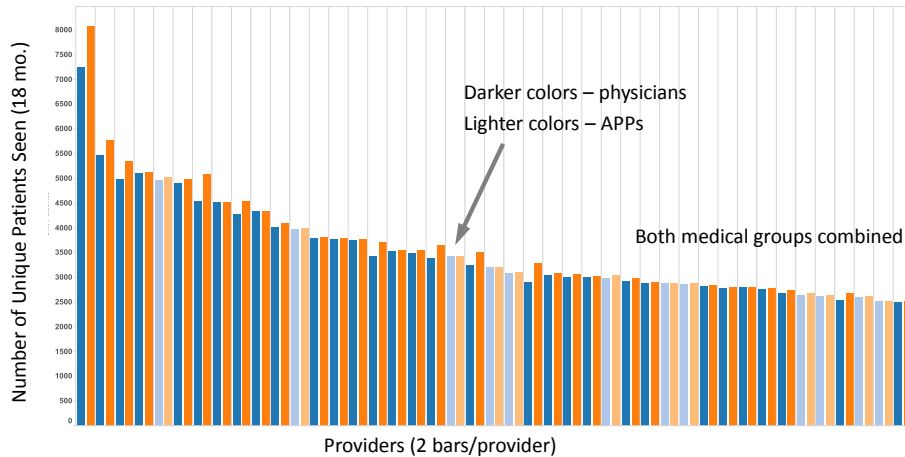
- PCP Attribution Method Considering APPs?
 - Method 1 – Physicians and APPs treated similarly
 - Method 2 – Assigned to physician, if a physician was ever seen (to APP only if physician never seen)
 - “Full-time” status (average encounters/work day ≥ 6)
- Over what period?
 - 18 months
- For each patient, rank PCPs by...
 - BM1 encounters – E&M office visits
 - BMP encounters – All E&M and procedure activity
- What metric?
 - Raw count of encounters/procedures
 - Total work RVUs
- In case of ties
 - Physicians rank ahead of APPs (in Method1; always assigned to physician in Method 2)
 - Total number of other Procedures, Tests, Imaging, DME performed/ordered
- Attribute patient to panel of their highest-ranking provider

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Providers by Number of Unique Patients Seen

- BM1 encounters – E&M office visits ← Use for remainder of analysis
- BMP encounters – All E&M and procedure activity



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PCP Type – Physician vs. APP

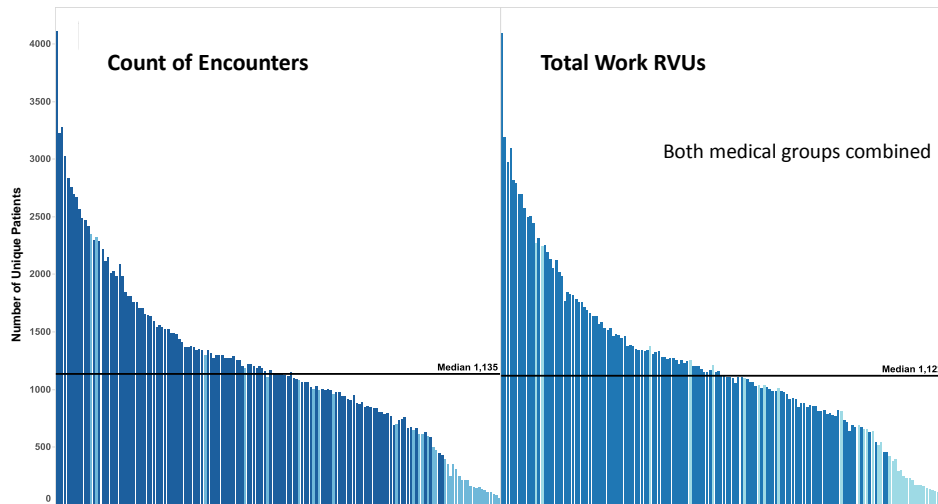
- Attribution Method 2 is used for the remainder of this analysis:
 - If the patient saw a physician during the 18 months, attribute patient to the physician who provided the plurality of E&M services
 - If the patient did not see a physician during the 18 months, attribute patient to the APP who provided the plurality of E&M service

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Count of Encounters vs. Total Work RVUs

- Use count of encounters for remainder of analysis

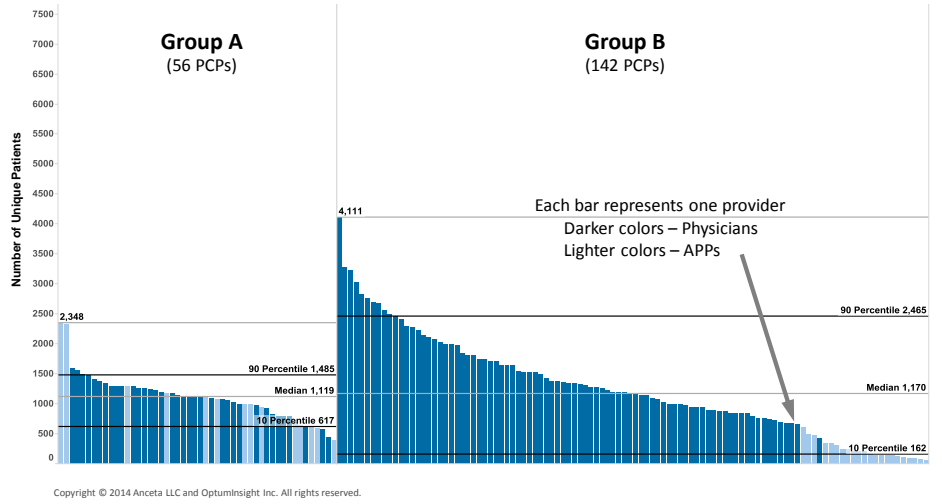


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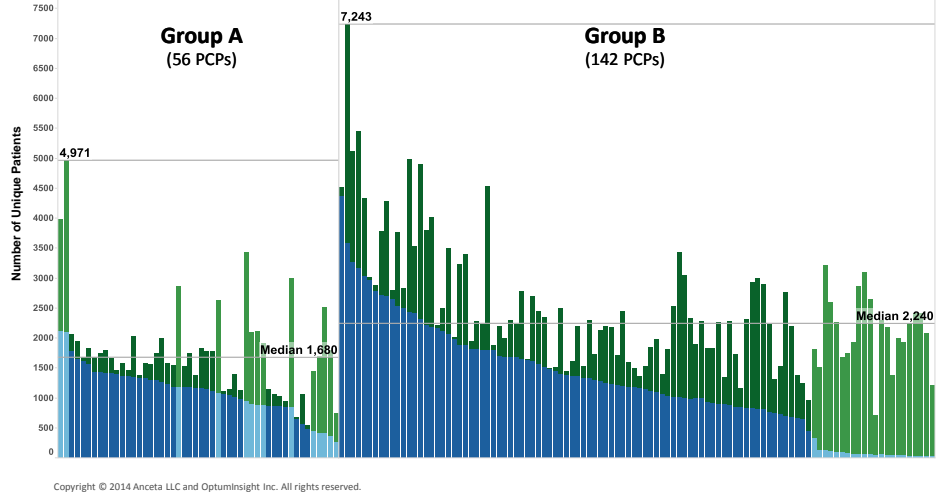
Number of Attributed Patients Seen

- Groups A and B use Advanced Practice Providers differently
- Similar median number of attributed patients seen in Groups A and B—Group B is 4.6% greater



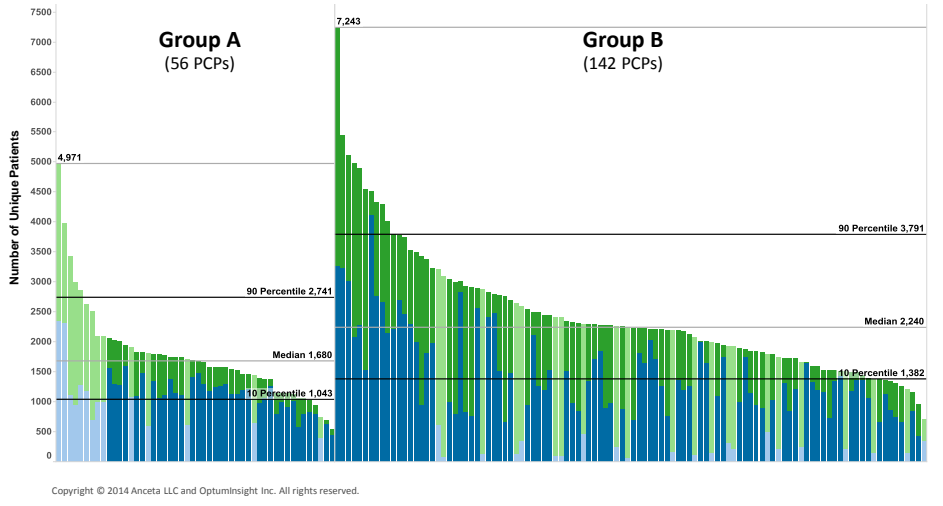
Total Number of Patients Seen

- Providers still ordered by number of attributed patients, adding (green) the number of patients seen who are attributed to other providers
- Note increase in median number of patients seen – Group A: 1,119 → 1,680, B: 1,170 → 2,240
50% increase 91% increase



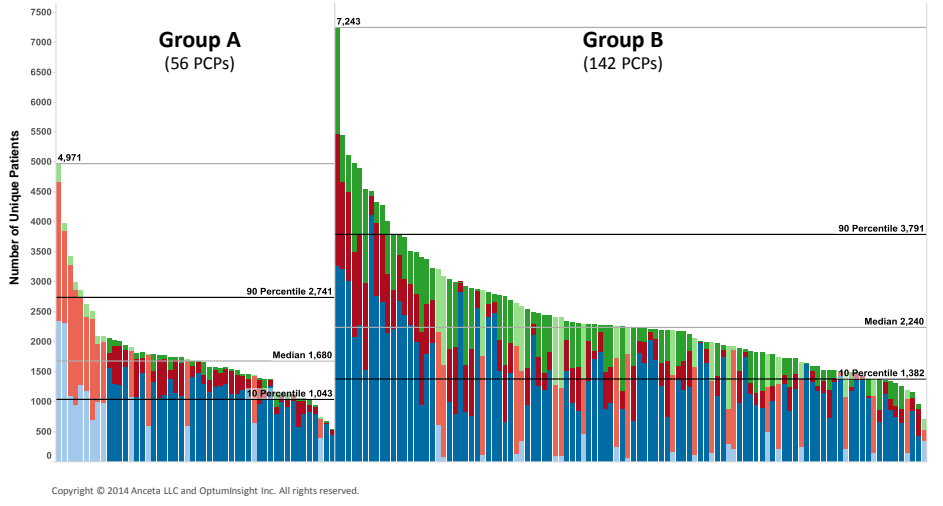
Total Number of Patients Seen

- Providers re-ordered by total number of patients seen, rather than attributed patients
- Providers in Group B, especially APPs, see a larger proportion of patients not their “own”
- Median number of unique patients in Group B is 33% greater than in Group A



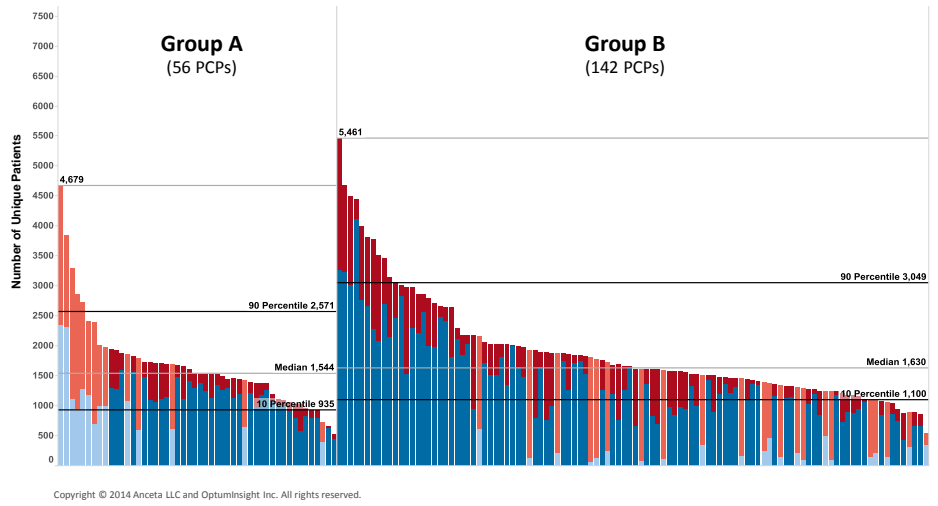
“Other” Patients Seen Often → Secondary Attribution

- Red shows additional patients added to PCP’s primary attributed panel (blue)—patients for whom total work RVUs exceed overall median work RVU for patients attributed to PCP panels



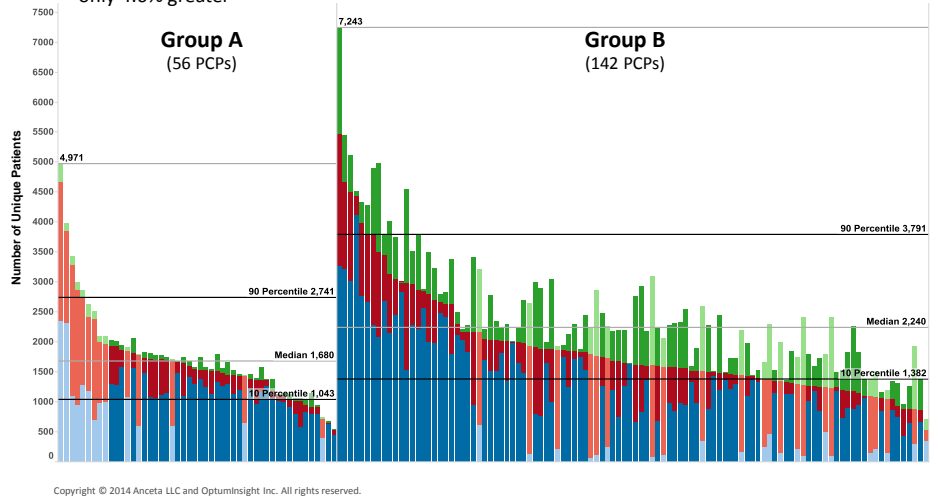
Number of 1° + 2° Attributed Patients Seen

- Medians more similar across groups—Group B is 5.6% greater



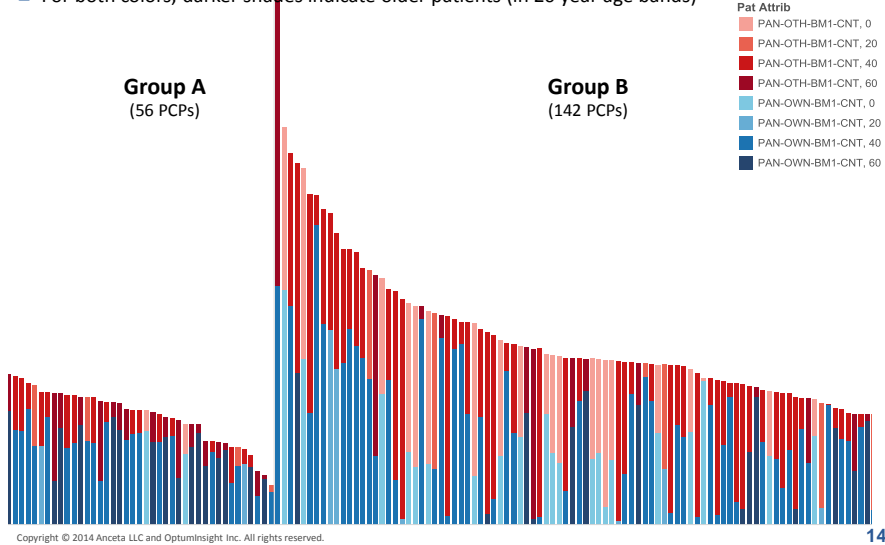
Number of 1° + 2° Attributed + Other Patients Seen

- Red shows additional patients added PCP's primary attributed panel (blue), where total patient work RVU exceeds overall median work RVU for patients attributed to PCP panels
- Median number of patients seen is 33% greater at Group B, but number attributed (1° + 2°) is only 4.6% greater



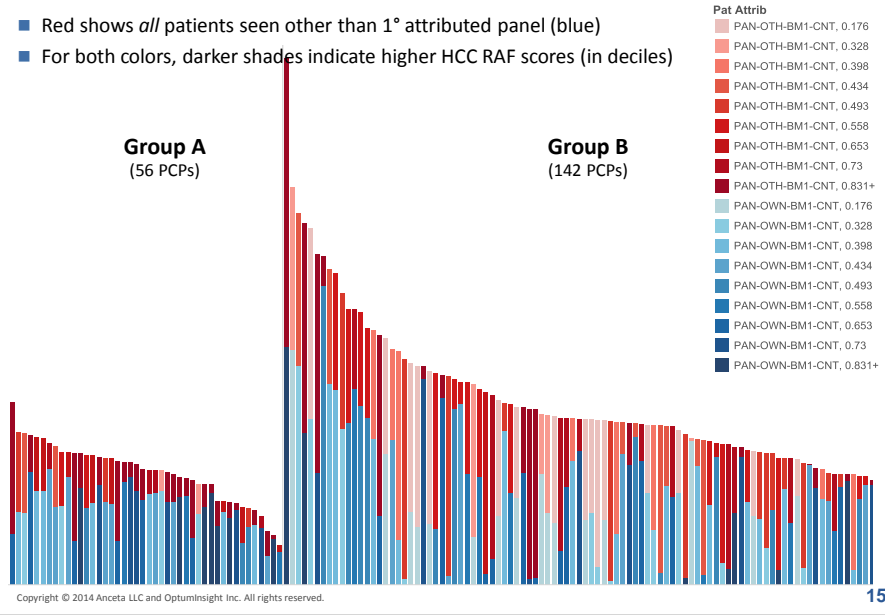
Patients by Age

- In contrast to previous slide, red shows *all* patients seen other than 1° attributed panel (blue)
- For both colors, darker shades indicate older patients (in 20 year age bands)



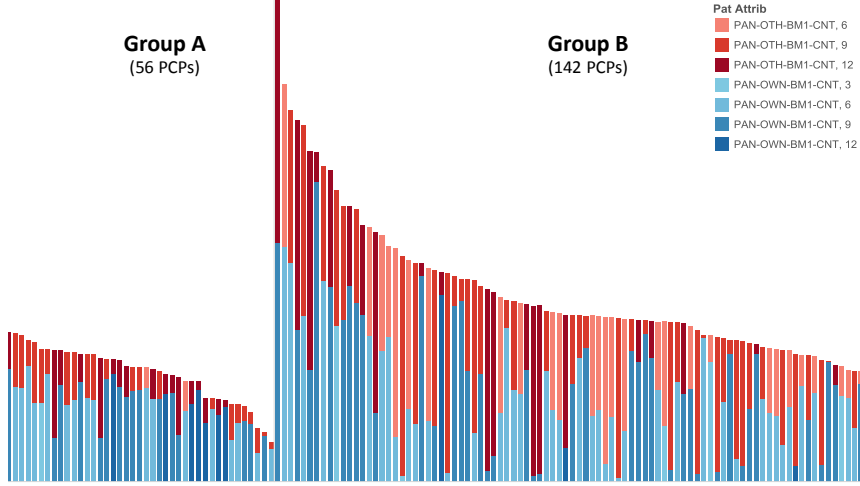
Patients by HCC RAF Score

- Red shows *all* patients seen other than 1° attributed panel (blue)
- For both colors, darker shades indicate higher HCC RAF scores (in deciles)



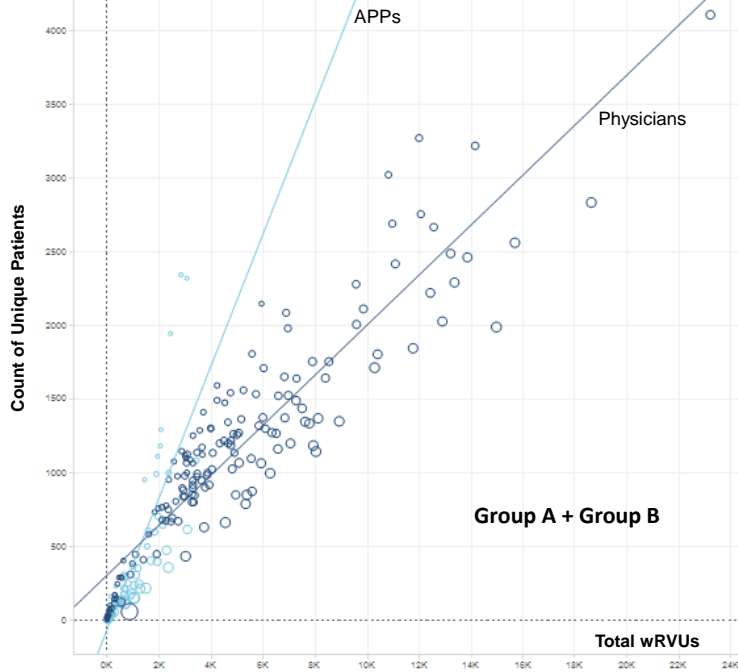
Patients by Count of CCS Level 1 Categories

- Red shows *all* patients seen other than 1° attributed panel (blue)
- For both colors, darker shades indicate a larger number of CCS Level 1 categories (rough count of "body systems" coded)



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Challenges/Questions

- Full-time vs. part-time providers
- Length of time – 18 months or 36 months?
- Attribution method – to whom? based on what clinical activity?
 - Minimum amount of clinical activity for a patient to be assigned to a panel?
- Differences between groups in use of APPs – what’s group-specific? what’s common?
 - Equal or preferential attribution to physician vs. APP?
 - Some patients see only an APP
- Account for proportion of provider’s workload due to non-attributed patients
 - Allow a patient to be counted toward multiple providers’ panels?
 - Empirical “social network” analysis → groups of providers with many shared patients
 - Simulation studies have shown this model to have certain efficiencies
 - How do the providers and patients feel about this model?
- Account for differences in days worked during time period
- Then... compute severity adjustment
 - Combination of factors that best accounts for variation in panel size among similar providers
 - Empirical combination of measures → simplify, for clear understanding by providers