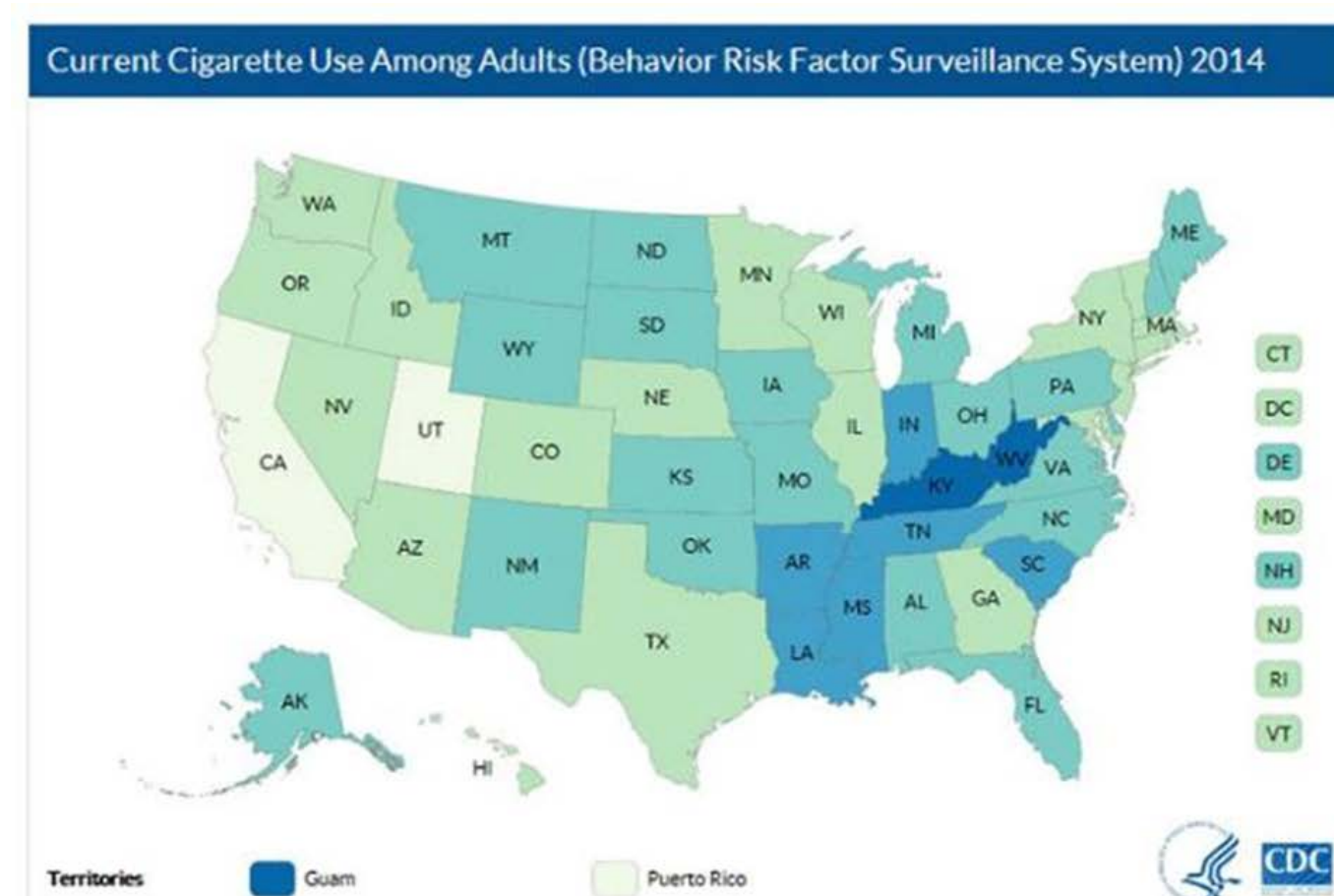


UNDERSTANDING PATTERNS OF TOBACCO ABUSE AND CESSATION COUNSELLING AT A RESIDENTS' CLINIC THROUGH VISUAL INFORMATICS

George Augustine Koromia MD, Joe Pye MD

Background

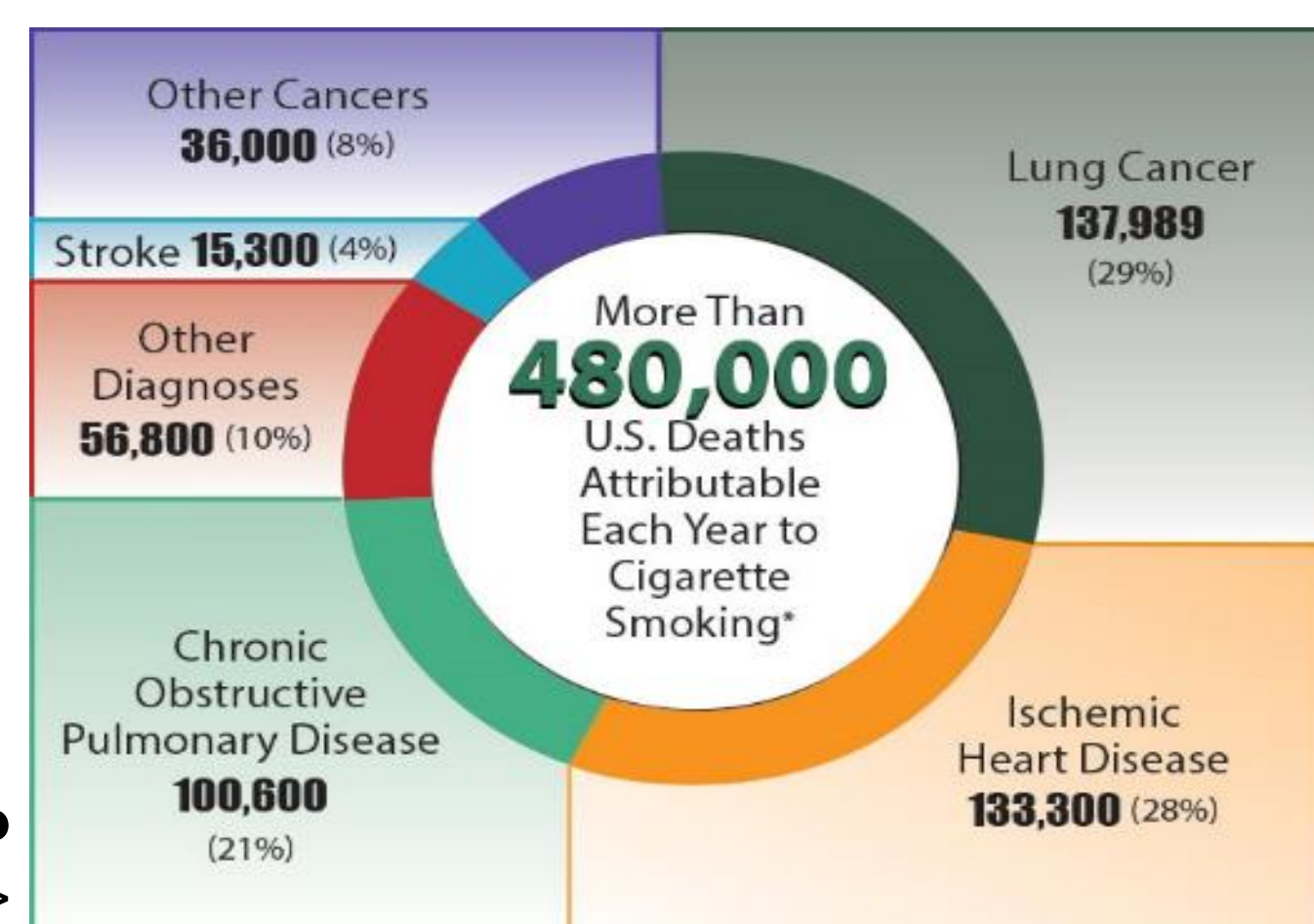
- Tobacco abuse is widespread. Prevalence: 16.8% of all adults (40 million people) - 18.8% of males, 14.8% of females.
- Smoking-related disease affects 16 million Americans (triple the rate of age-related disease).
- Medicaid enrollees have a cigarette smoking prevalence (30.4%) twice as high as that of privately insured Americans (14.7%). Many of the patients seen at the ECU Internal Medicine Resident Clinic are Medicaid beneficiaries.



Current Cigarette Use Among Adults (Behavior Risk Factor Surveillance System) 2014

<< Our study site is located in the Southeastern "tobacco belt".

Mortality attributable to Tobacco Abuse in the US >>



Study Overview

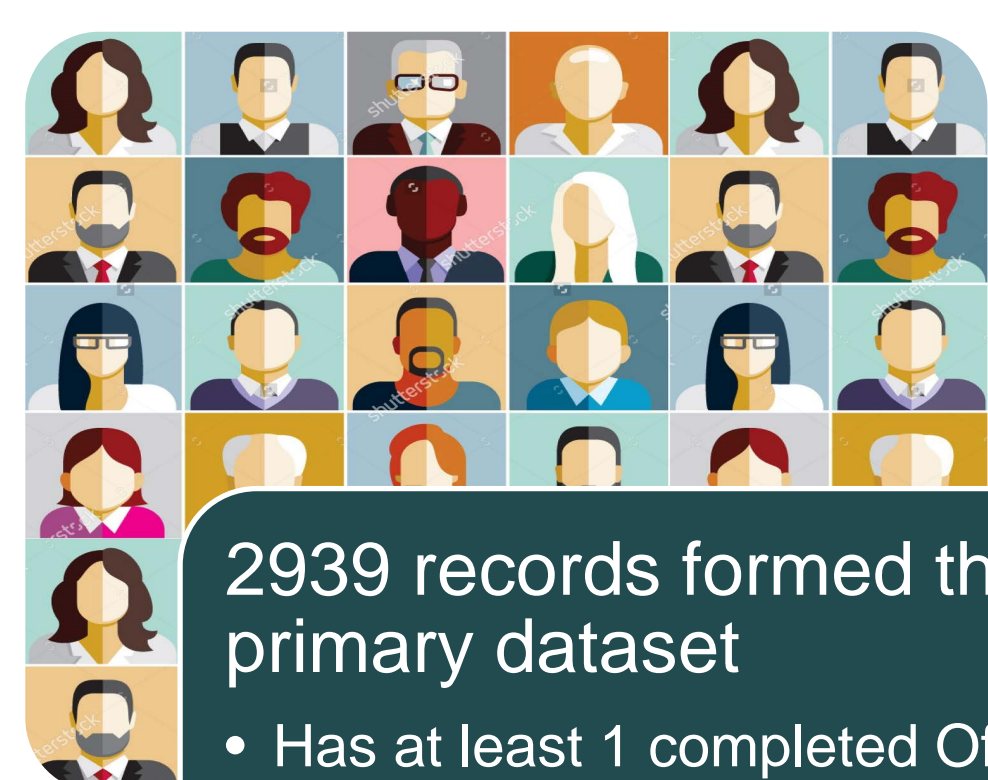
- Description – Describe patterns of tobacco abuse and smoking cessation counselling and documentation at the ECU Internal Medicine Resident's Clinic.
- Goal – Identify gaps in smoking cessation intervention that could inform future interventions and quality improvement. All smokers are expected to receive cessation counselling using the 5 A's (Ask, Advise, Assess, Assist, Arrange).

Methodology



6738 records

- Patient seen at ECU Medicine clinic over the last 2 years
- PCP is a GIM Resident (current or graduated)
- Exclude if pt is deceased
- Exclude if demographic data is incomplete



2939 records formed the primary dataset

- Has at least 1 completed Office visit (excludes Coumadin visit, Telephone encounters, No show, Cancellations, etc)
- Active smoking / tobacco use in their history
- Exclude data mismatches

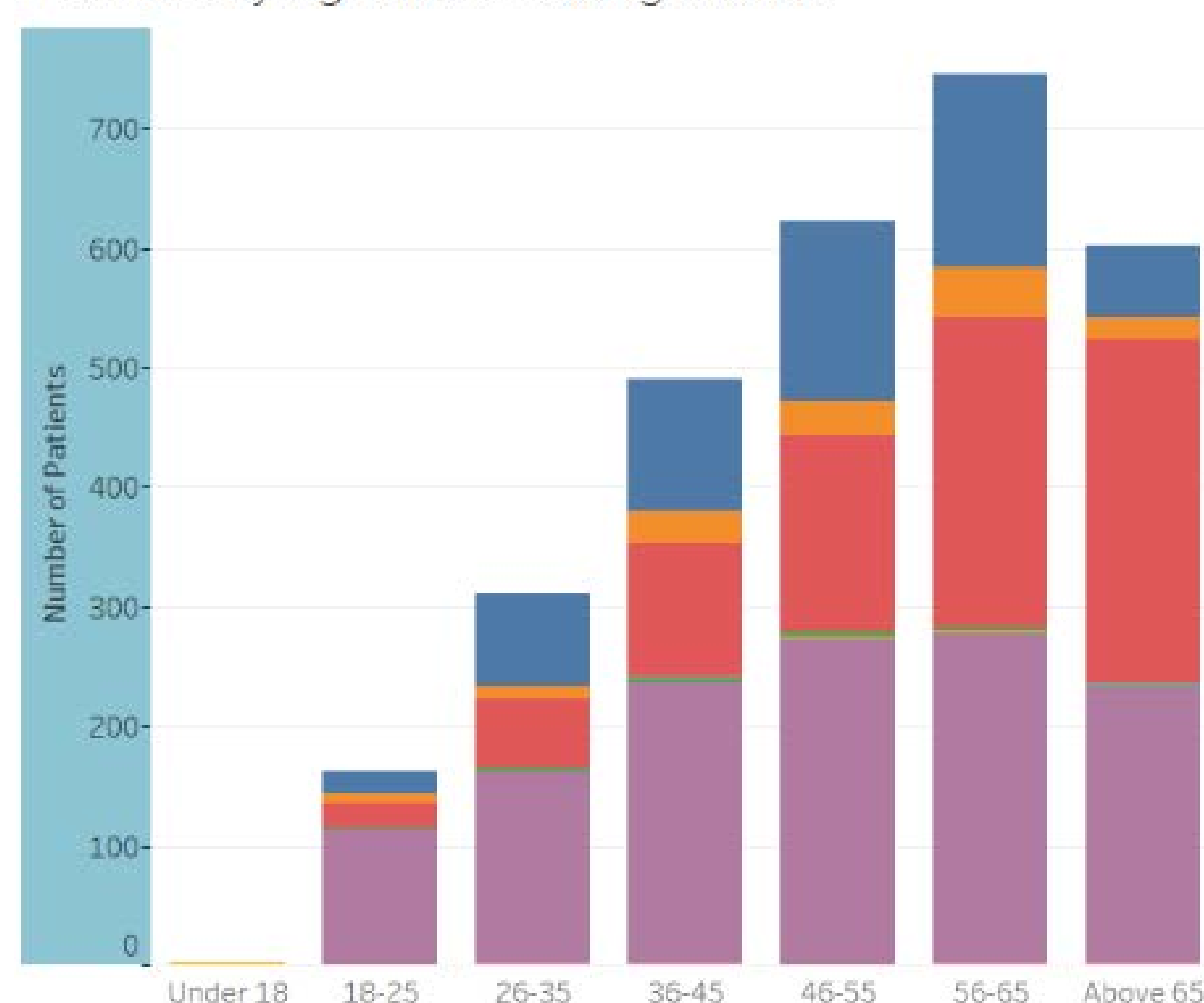


1925 records for subgroup analysis

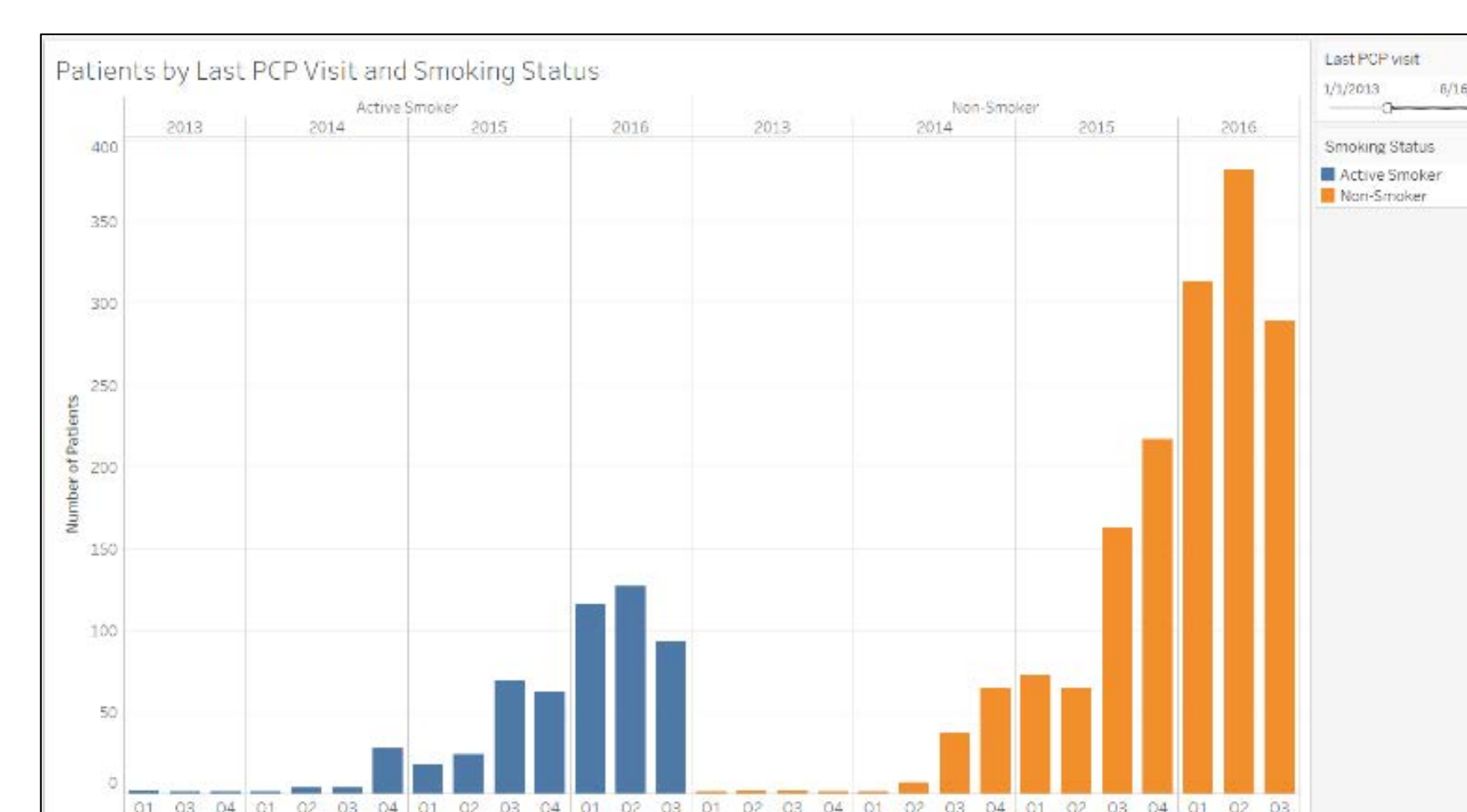
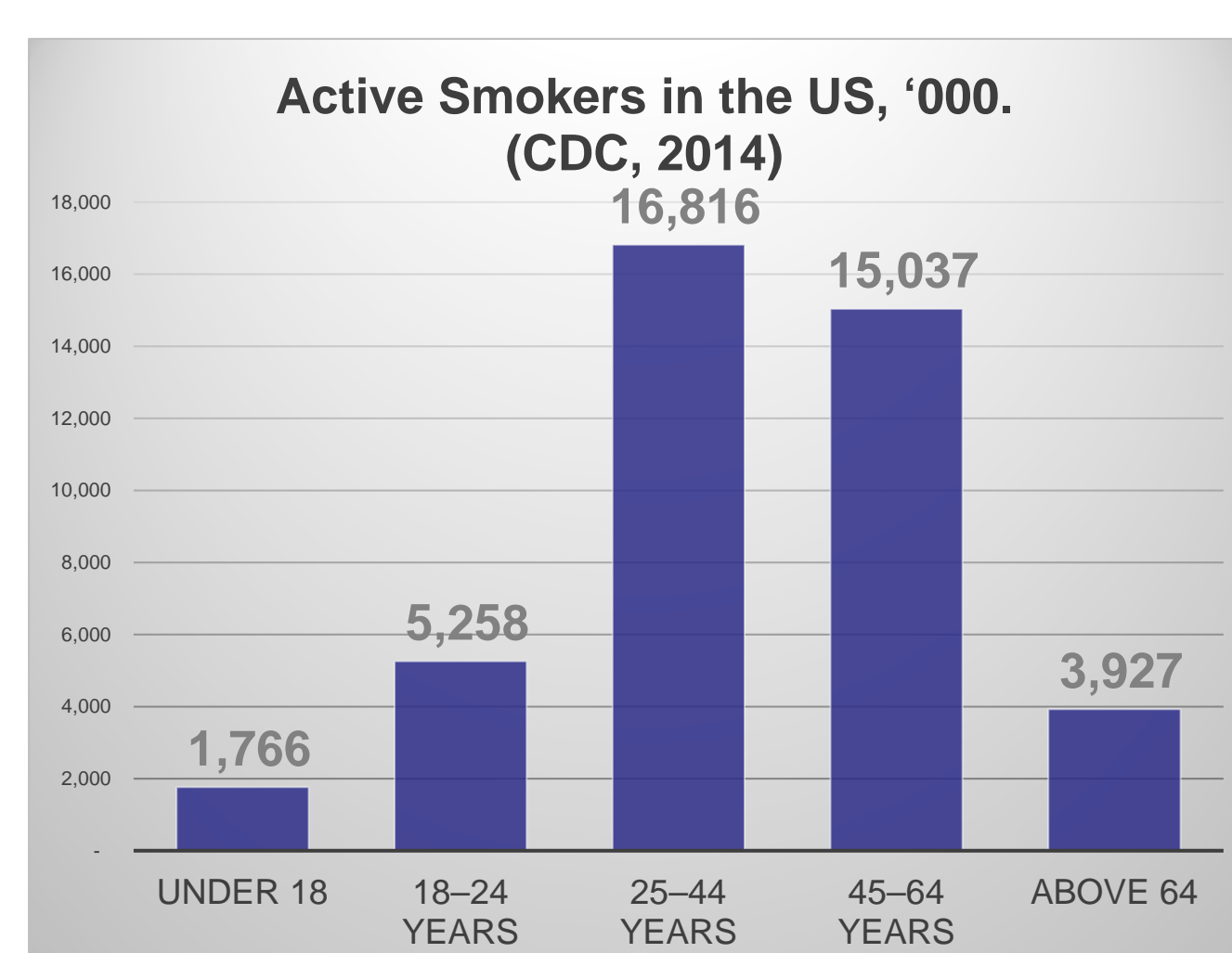
- Patients included in the system quality measure
- Contains atomic data for comparative analysis

Results

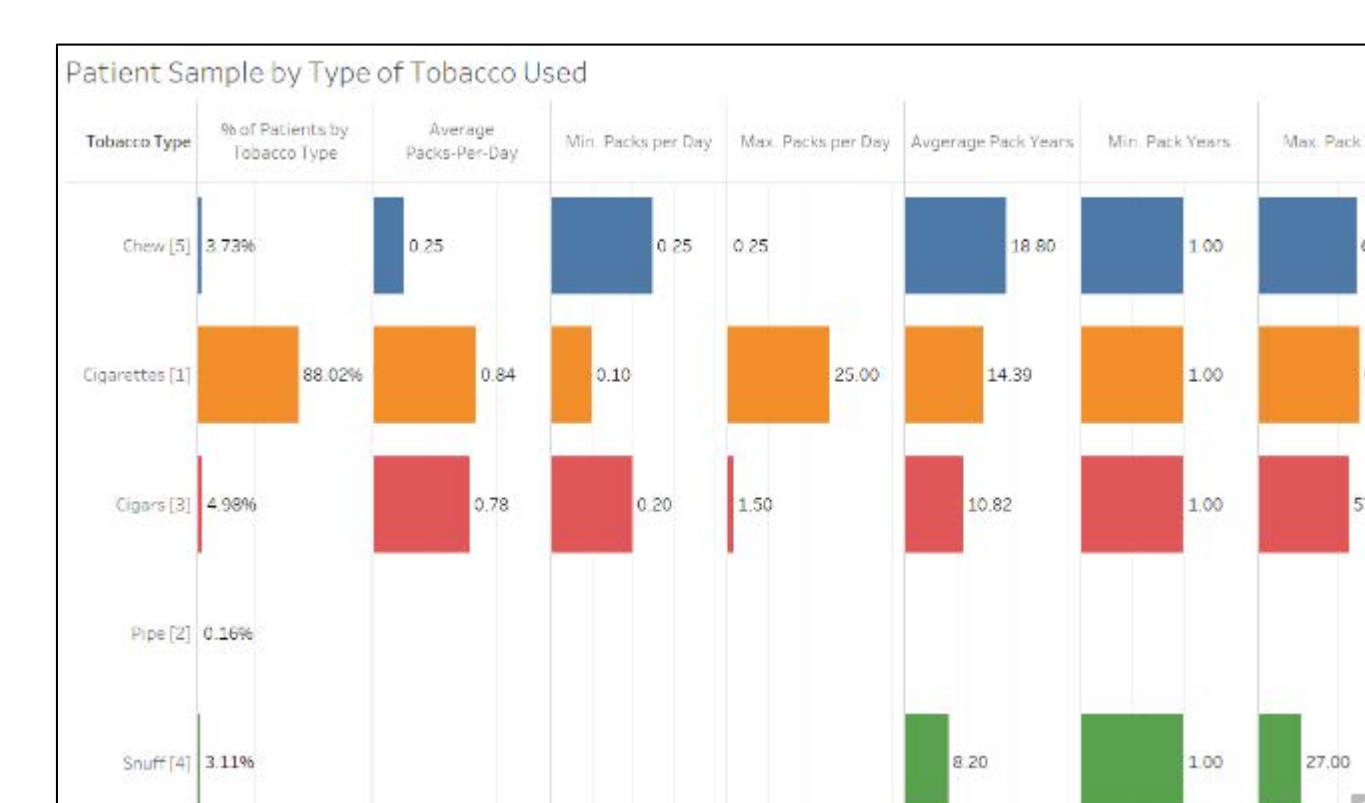
Patients by Age and Smoking Status



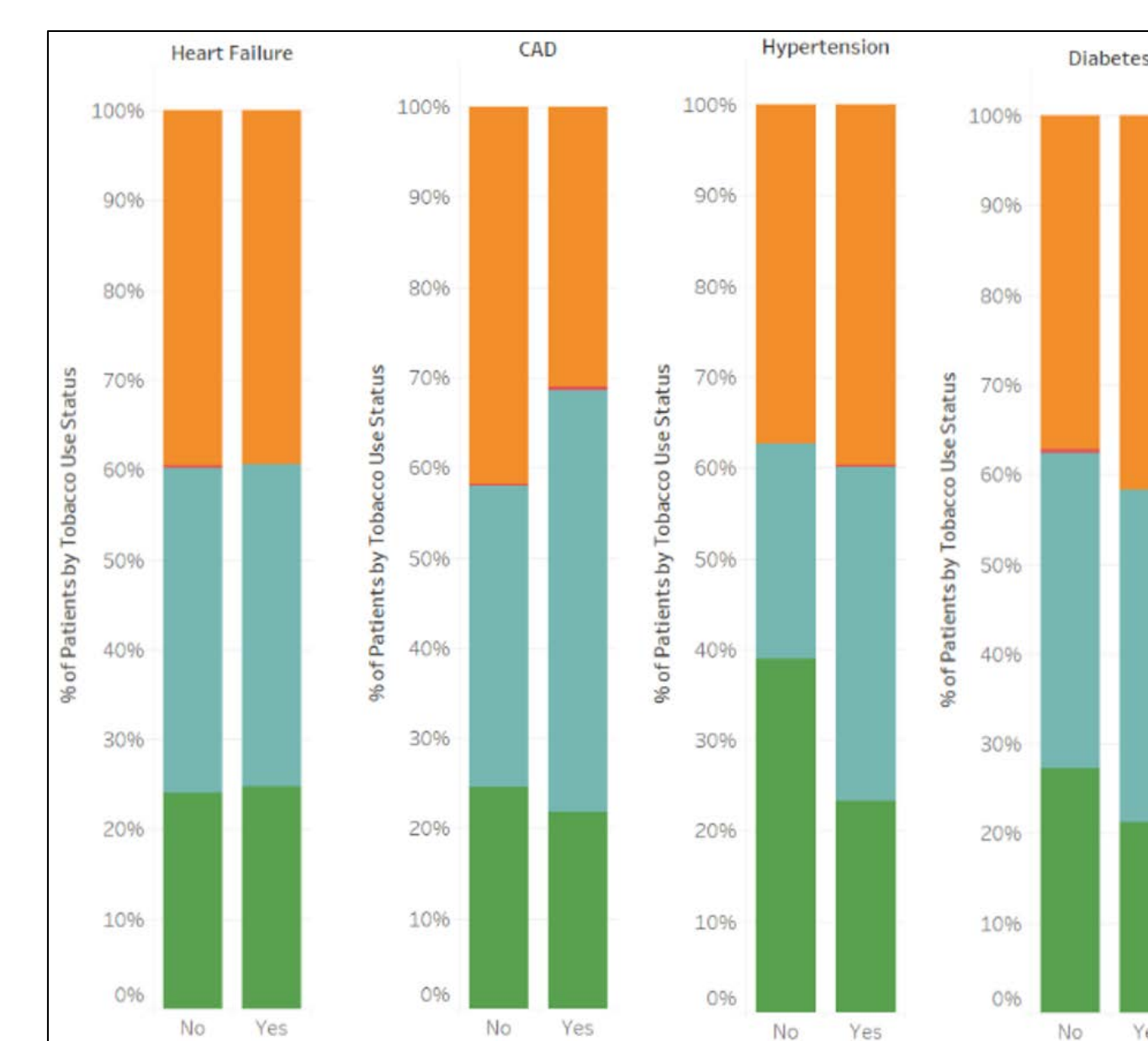
<< Demographics of patients in the primary dataset are similar to national data. Smoking is prevalent in lower age groups, however, a selection bias exists due to GIM clinic serving patients later in life.



^^ Rates of follow up are similar among smokers vs non-smokers (n = 2,939), provides primary physicians with adequate "touch points" to address smoking cessation.



^^ Cigarettes: Are most commonly abused (88.02%) Average PPD = 0.84 Average Pack Years = 14.39



<< Lower gross smoking rate in patients with HTN & DM (p < 0.05) and CAD on their active problem list. However higher rates of smoking in those with CHF (p > 0.05).

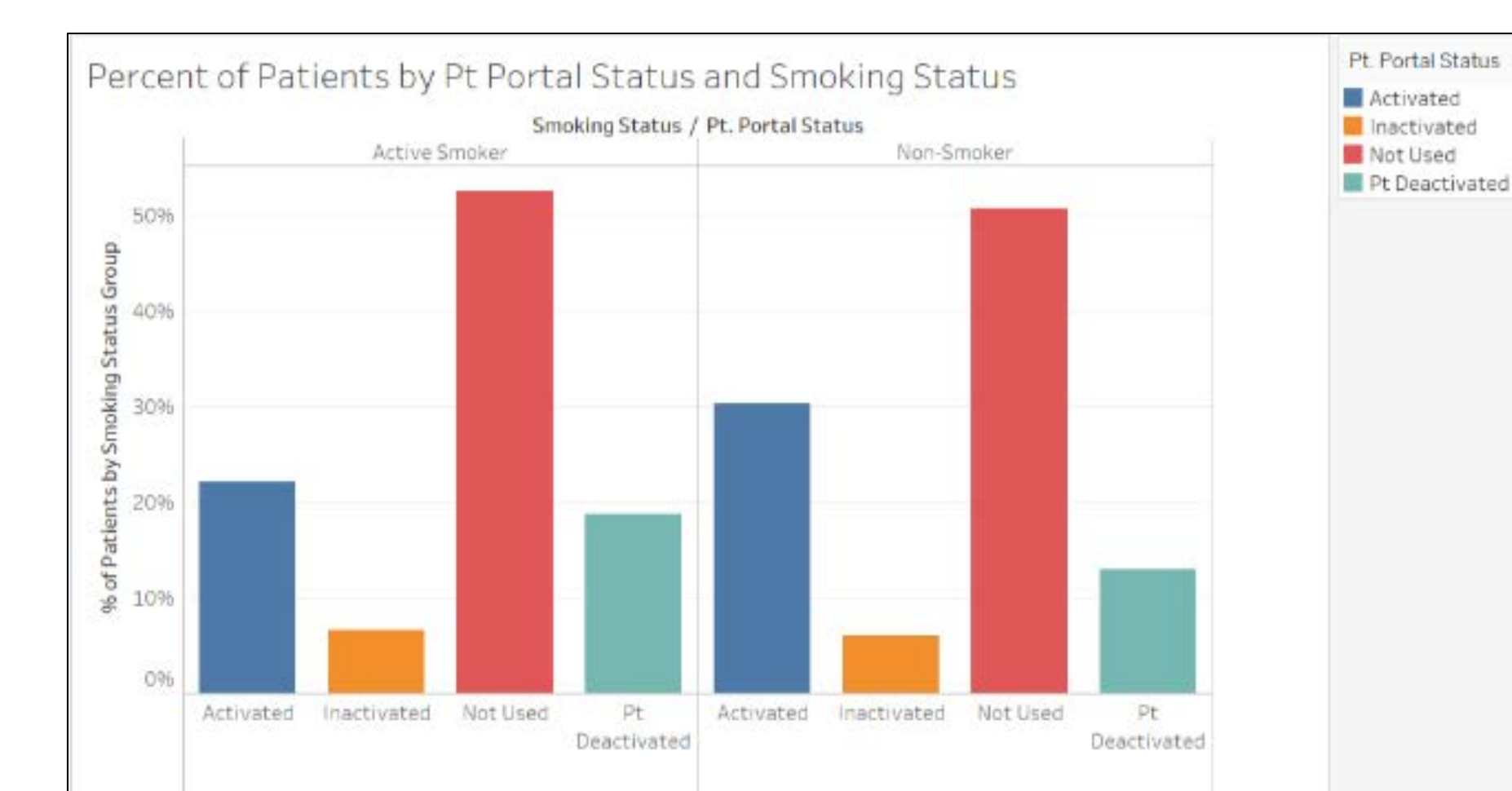
No statistical difference in SBP or DBP between active smokers vs non-smokers. (n = 1925) >>

Discussion

- Visual Informatics afford an effective set of tools to represent complex multifaceted datasets for rapid interpretation.
- Tobacco abuse is a prominent health problem in the US and in similar proportions among patients at the ECU GIM clinic
- Tobacco use interrogation and Cessation Counseling is poorly coded and documented. This may represent a missed opportunity for high yield intervention with our patients.
- The current coding practices at the Study Site does not include appropriate fields to extrapolate data on cessation counselling.
- National data shows that 86% of physicians will ASK for tobacco use, only 13% will REFER for treatment, and only 17% will ARRANGE for follow-up visits to address smoking.
- Further education, study and encouragement needed to improve smoking cessation counselling and documentation.

References

- Behavioral Risk Factor Surveillance System Prevalence and Trends Data, CDC (2013)
- United States National Health Interview Survey, NIH (2014)
- Health Effects of Cigarette Smoking, CDC (2014). www.cdc.gov/tobacco/data_statistics.



^^ Patient Portal use is lower among smokers vs non-smokers (p > 0.05). This lower utilization of patient portals has been used in studies as a proxy for poorer patient engagement.

No geographic clustering of smokers vs non-smokers. Jaccard coefficient = 0.76. >>

Use of Smokeless Tobacco Among Patients

| xxSimple Smoking Status | xxSmokeless Tobacco Use | Female | Male |
|-------------------------|-------------------------|--------|--------|
| Active Smoker | Current User [1] | 5.26% | 5.26% |
| | Former User [2] | 4.90% | 6.43% |
| | Never Used [3] | 95.10% | 88.30% |
| Non-Smoker | Current User [1] | 3.02% | 2.86% |
| | Former User [2] | 6.51% | 7.62% |
| | Never Used [3] | 90.48% | 89.52% |

<< 9.36% of study patients report any use of smokeless tobacco (n = 1925). Most cigarette smokers have never used smokeless tobacco. Among non-smokers, 2.96% currently use smokeless tobacco with F > M.

