NATIONAL HEALTH INSURANCE 1ST TRIANNUAL REPORT: APRIL 1ST 2019 – JULY 31ST 2010

National Health Insurance

Contents

Introduction

The National Health Insurance Program was initially launched in 2001 as a Pilot Project funded by the Social Security Board. SSB continued to fund the project from 2001-2008 for a total investment of Bze $54 million. This initiative was part and parcel of the Health Sector Reform program and was to address the issue of Financing health care in an efficient, effective and sustainable manner.
In 2008 the Government of Belize began to supplement the funds allocated by the SSB with transfers from the MOH budget and direct Government transfers. Since 2009 to present the program has been financed exclusively by GOB transfers from general revenue to the SSB. Total investment of $158,544,764.00 from 2008 to 2018.
The NHIF was established as a financing mechanism for health care, which would incorporate all the fundamental principles for a system of Universal Health Coverage and Access. The NHI Unit is therefore tasked with purchasing health services from approved providers. It is a fundamental responsibility to ensure that each provider that is contracted delivers services efficiently, effectively, and of good quality, in a timely manner. The present report is an effort at sharing productivity information from all providers so each can measure itself, see how they compare with other providers, and thus make the necessary effort at improvement. It also seeks to share with other stakeholders the quantity and value of services being purchased through the NHI for purposes of transparency and accountability. Being this the first issue with the intent of publishing every quarter, the National Health Insurance Department, a branch of the Social Security Board, is keen on receiving feedback with a view to improve future editions. Any suggestions or questions can be submitted via email to the following:

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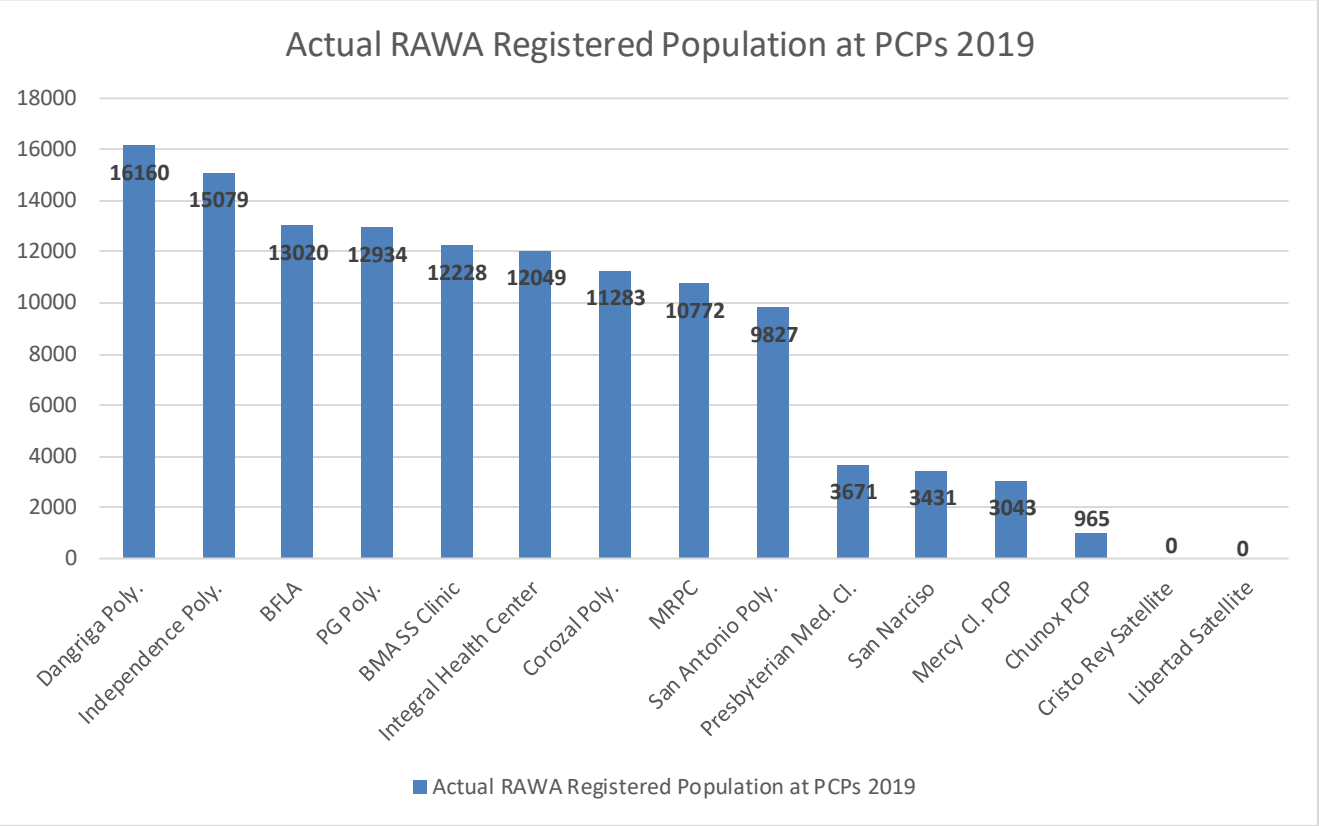
The information being presented reflects data for the 1st quarter of the fiscal year 2019 (April 1st, 2019 to July 31st, 2019) and is based on data extracted from RAWA, the official billing/monitoring software being used by NHI.

Macroscopic view of NHI activity

Graph 1 Primary Care Providers, Active Members by Region

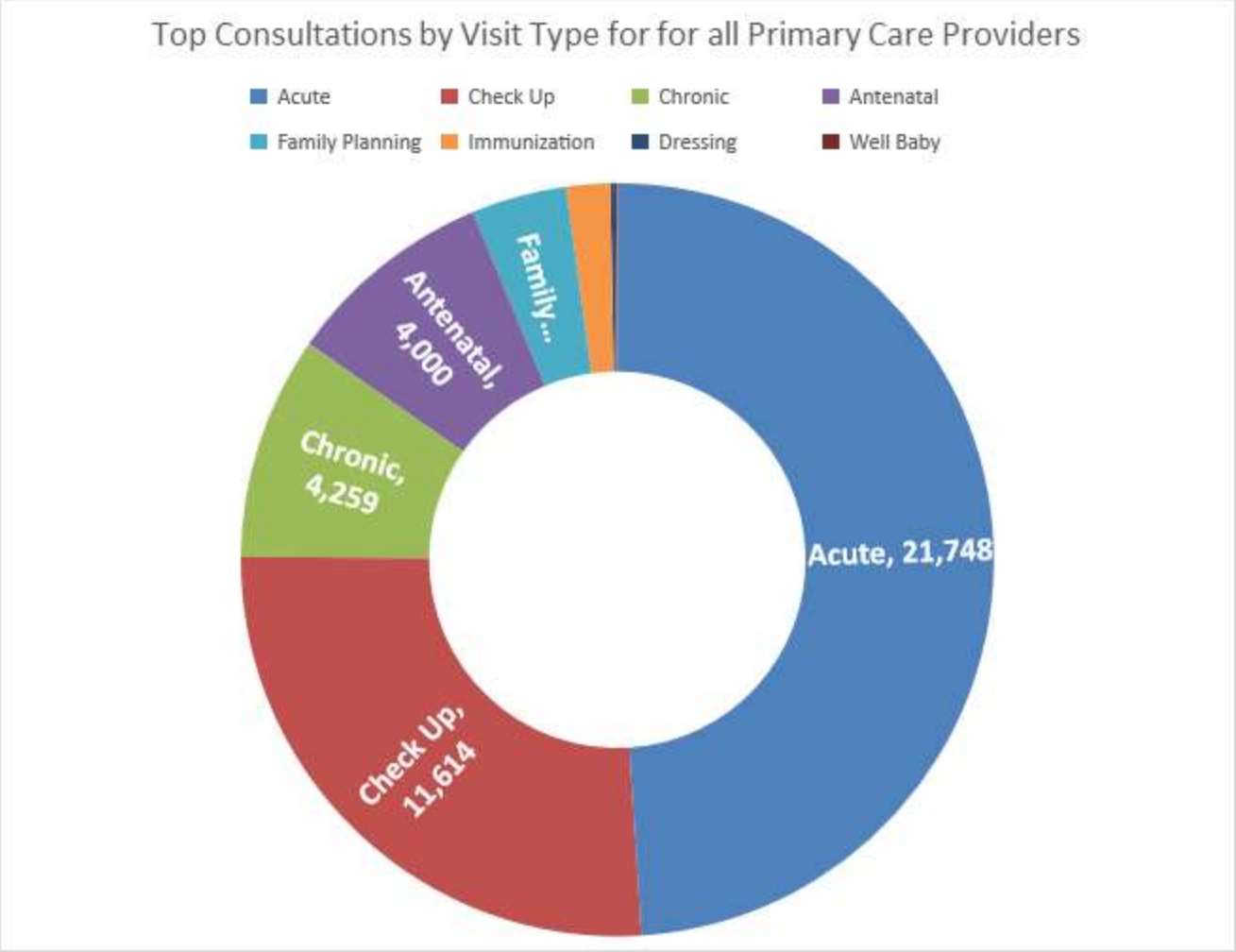
Presently NHI covers three Regions and contracts with Primary Care Providers (PCP) for the provision of services to the population living in these regions. The Southern Region (SR) has 43% of NHI's registered active members, Central Region (CR) has 41% and the Northern Region (NR) has 16%.

Graph 2 Actual RAWA Registered Population at PCPs 2019



This graph shows the actual RAWA registered population at contracted clinics as of April 1st, 2019. It is important to note that Central Region and Southern Region PCPs have maxed out their registration quotas. Unfortunately, the model does not cater to the increase in population size due to financial constraints.

Graph 3 Top Consultations by Visit Type for all Primary Care Providers



In the first quarter of the fiscal year (April 1st to July 31st) the majority of the consults made by patients were classified as Acute (21,748; 49%) followed by Check-ups (11, 614; 26%) and thirdly, Chronic consultations (4,259; 10%). Antenatal care closely follows with 4,000 (9%) of visits.

Table 1 Top Consultations by Visit Type

Top Consultations by visit type

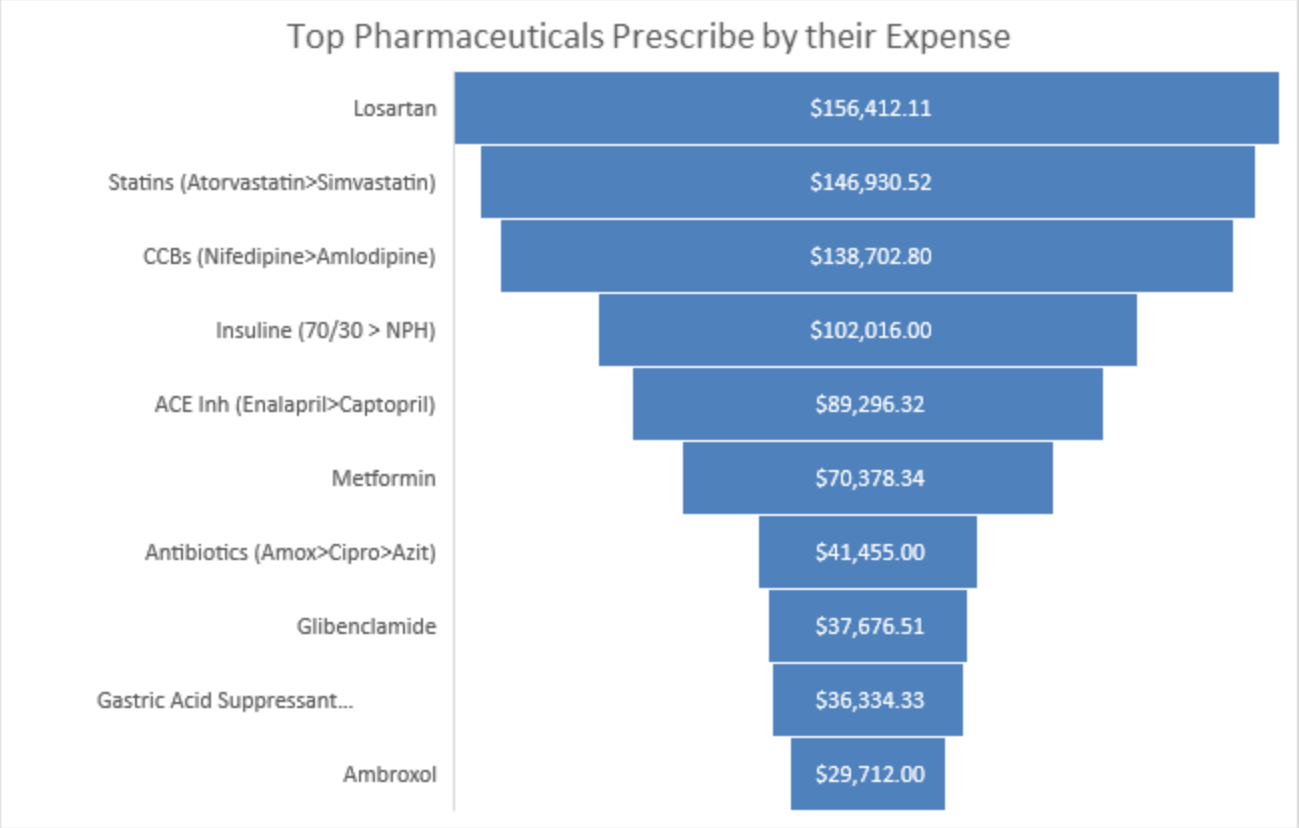
Name	SR	CR	NR	Total	%
Acute	8,290	13,457	1	**21,748**	**49%**
Check Up	1,380	8,574	1660	**11,614**	**26%**
Chronic	2,141	1,806	312	**4,259**	**10%**
Antenatal	1,830	1,994	176	4,000	9%
Family Planning	288	1,456	68	1,812	4%
Immunization	112	655	70	837	2%
Dressing		74	6	80	0%
Well Baby	27	28		55	0%
Trauma	2	1		3	0%
Totals:	14,070	28,045	2,293	44,408	100%

This chart reflects the overall activity of the clinics. The Central Region (CR; 28,045 activities) had the most RAWA logged activity, followed by the Southern Region (SR, 14,070 activities) and the Northern Region (NR; 2.293 activities). Even though presently the Northern Region has the least number of registered members the reporting/productivity still seems excessively low. If we compare the expenditure by Region, NR would be the least cost-effective investment. However, this probably is a consequence of poor use of RAWA for reporting purposes.

Graph 4 Top 10 Prescribed Pharmaceuticals

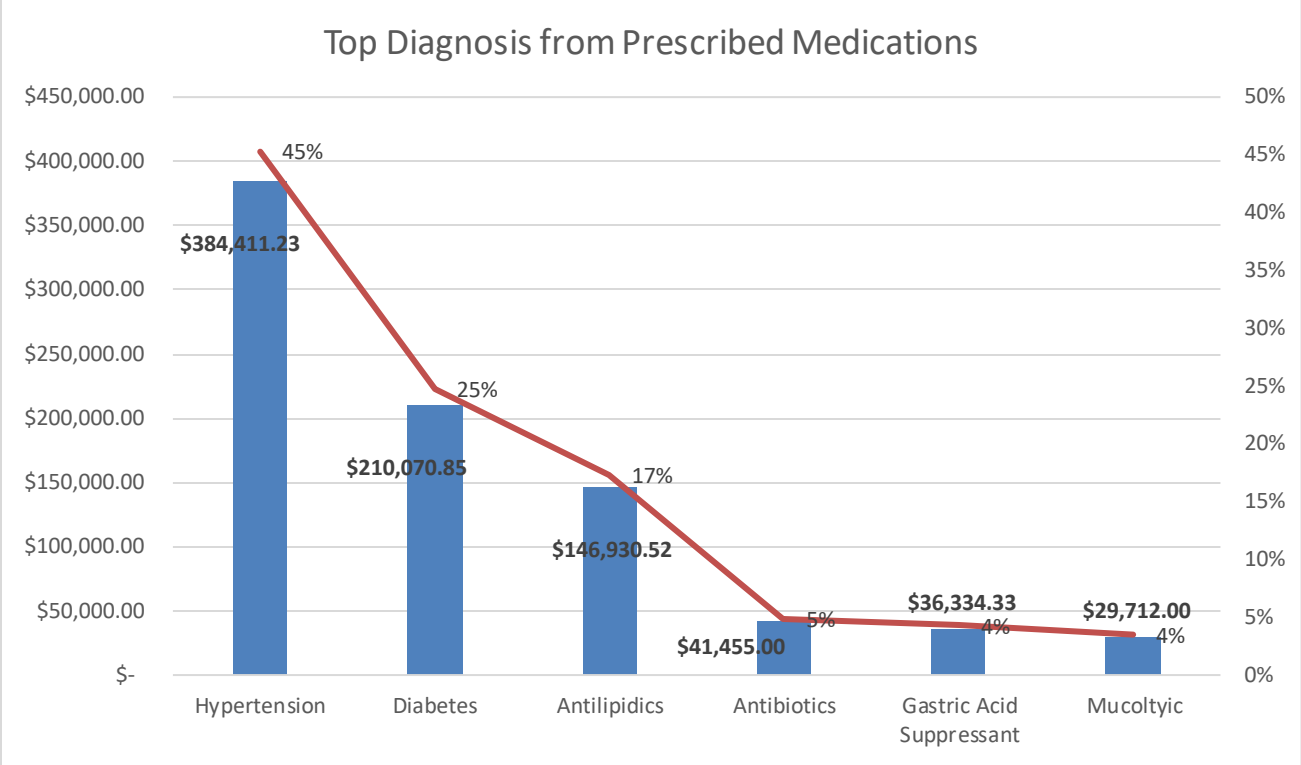
This graph shows the top 10 medications (some being grouped) prescribed by clinicians. The hypertension medications are the most prescribed (total 476,471 items), followed by diabetic medications (total 427,319 items). This is consistent with the epidemiologic profile for Belize, where Chronic Non-Communicable Diseases are responsible for a large Burden of Disease.

Graph 5 Top Pharmaceuticals Prescribe by their Expense



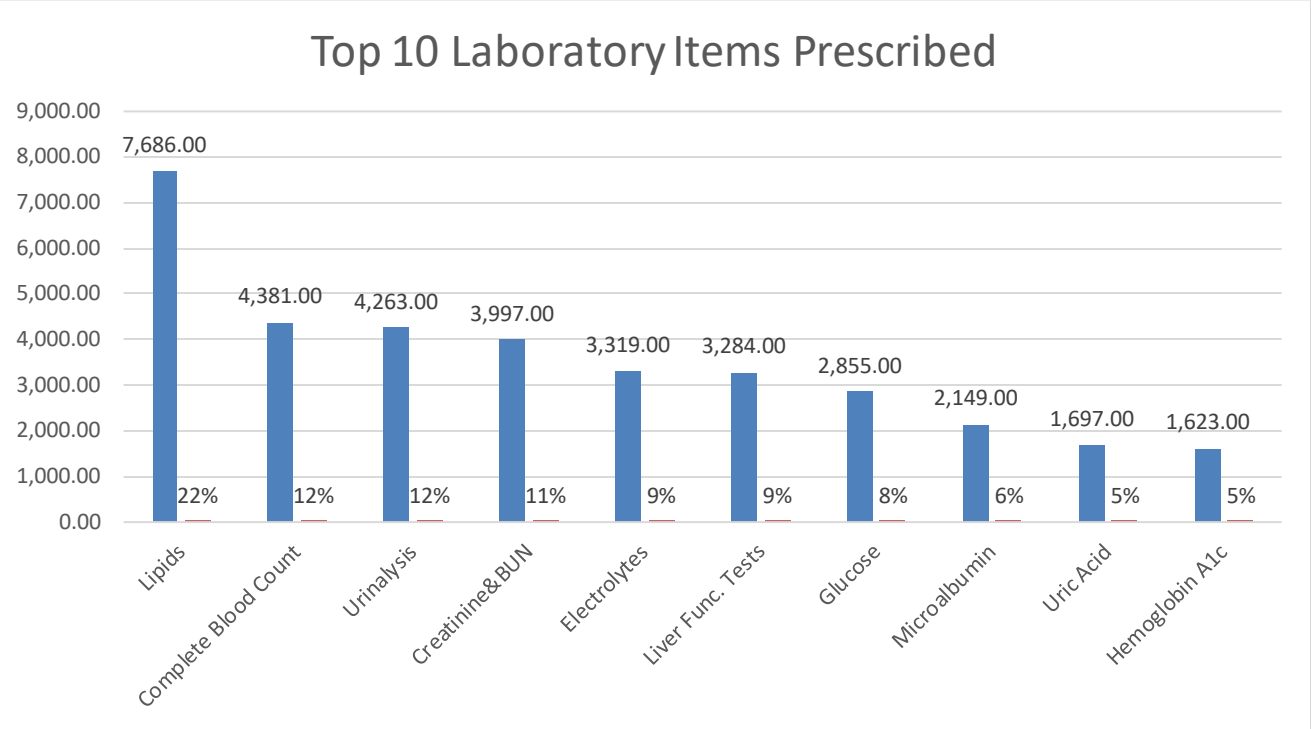
The graph shows the overall cost of the medications prescribed, with the medications grouped into pharmaceutical families.

Graph 6 Top Diagnosis from Prescribed Medications



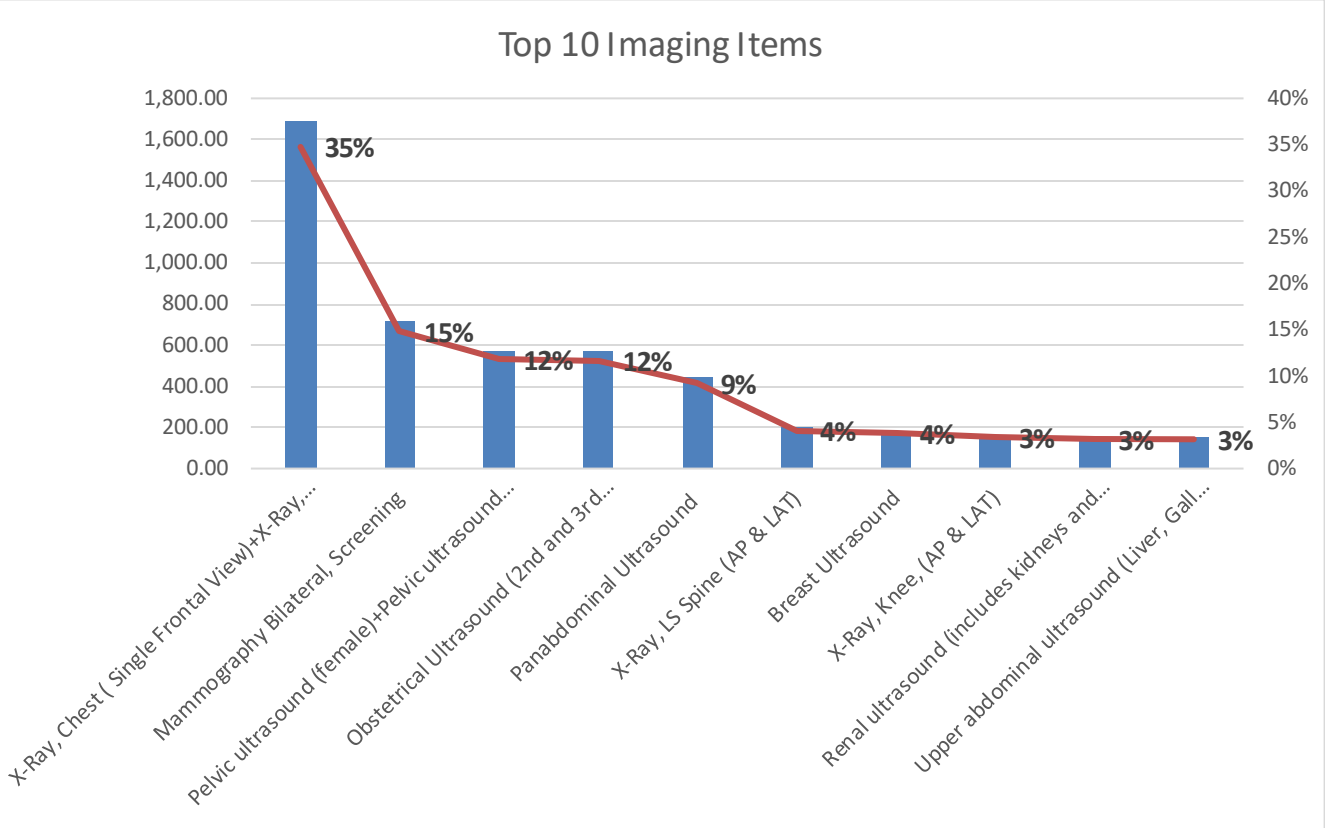
As we further group the medications that we prescribed in terms of the disease processes they are aimed at, we can see that most of our recurrent spending is on chronic illnesses: hypertension, diabetes, and dyslipidemia. Our spending on infectious diseases is only 5% of the top 10 medications used in the first quarter of the fiscal year. This is a significant shift over the last 10 years when initially the most prescribed pharmaceutical product was antibiotics.

Graph 7 Top 10 Laboratory Items Prescribed



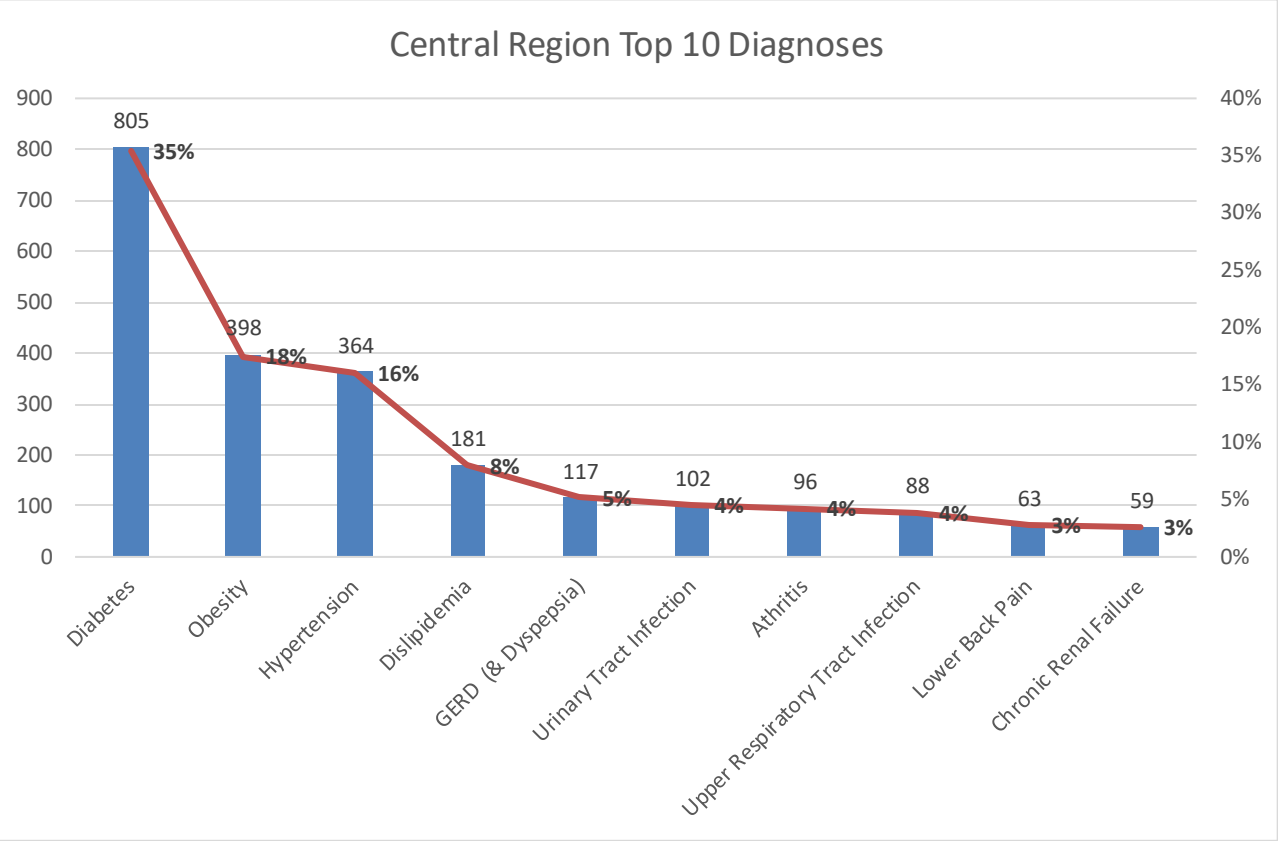
These are the top 10 laboratory studies requested by our clinical teams. This data reflects the established protocols and management guidelines for Chronic Diseases: Lipid profiles (7,686 requests) followed by diabetes laboratory requests (Total 4,478 requests = Glucose 2855 + Hemoglobin A1c 1623).

Graph 8 Top 10 Imaging Items



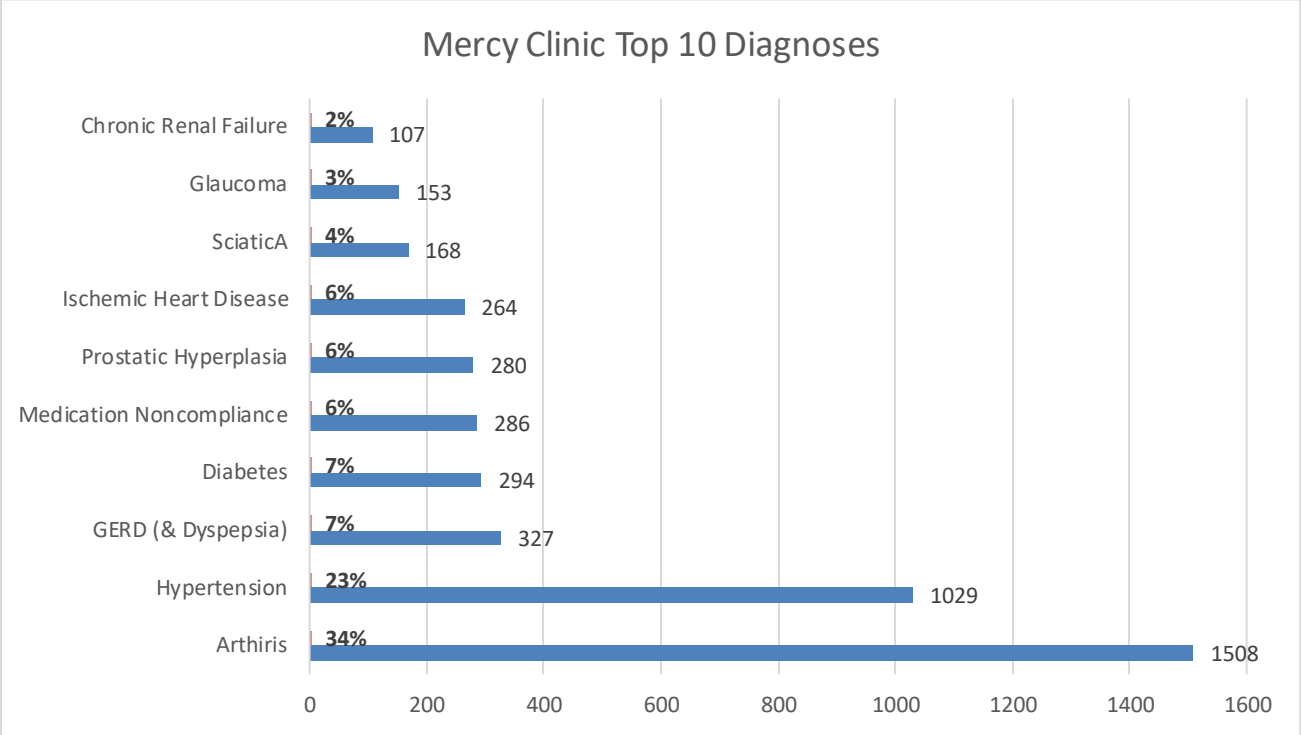
In terms of our top imaging items, Chest X-rays (35%) represents the most frequently requested test followed by the mammogram (15%). If we are to group all ultrasounds, we could see that they are NHI's most requested imaging type (total 43%).

Graph 9 Central Region Top 10 Diagnoses



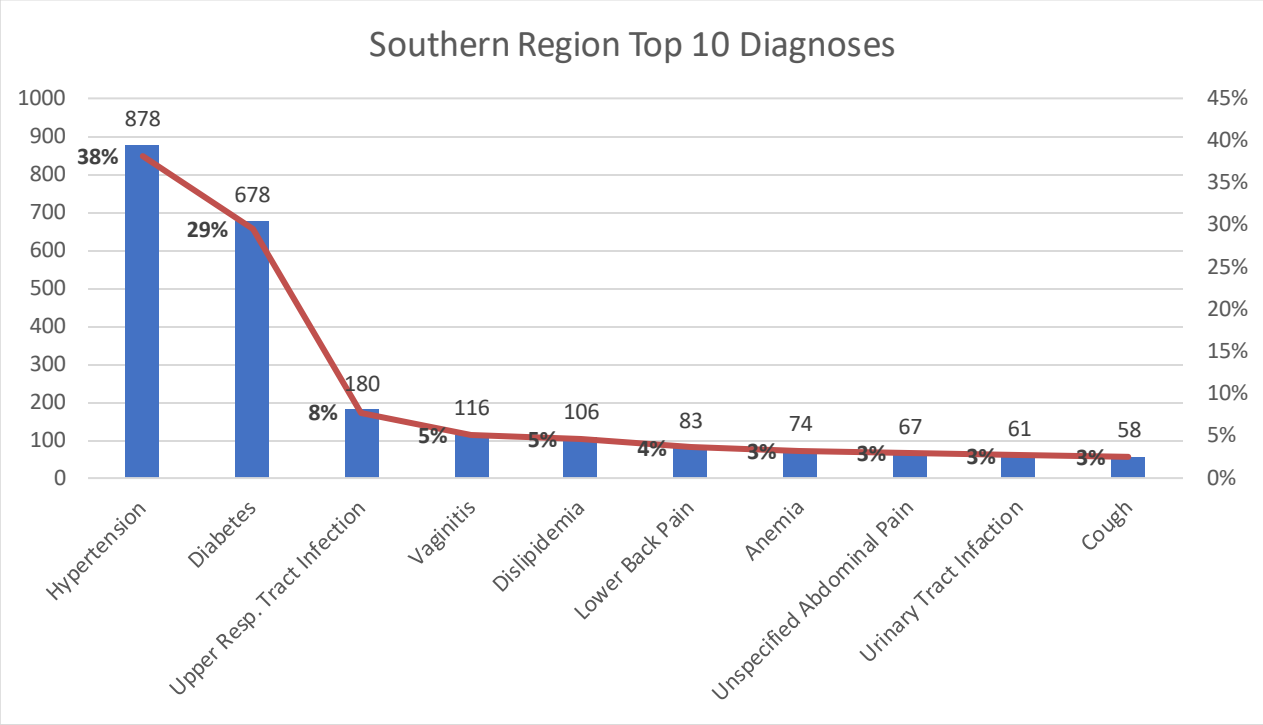
As we look at the top 10 diagnoses registered by our clinicians in this time period, we can see the chronic diseases are the majority: diabetes (35%), obesity (18%), hypertension (16%), and dyslipidemias (8%). We should note that a target organ damage for diabetes and hypertension is the kidney, and we can see patients being registered with varying degrees of chronic renal failure (3%) at the clinics.

Graph 10 Mercy Clinic Top 10 Diagnoses



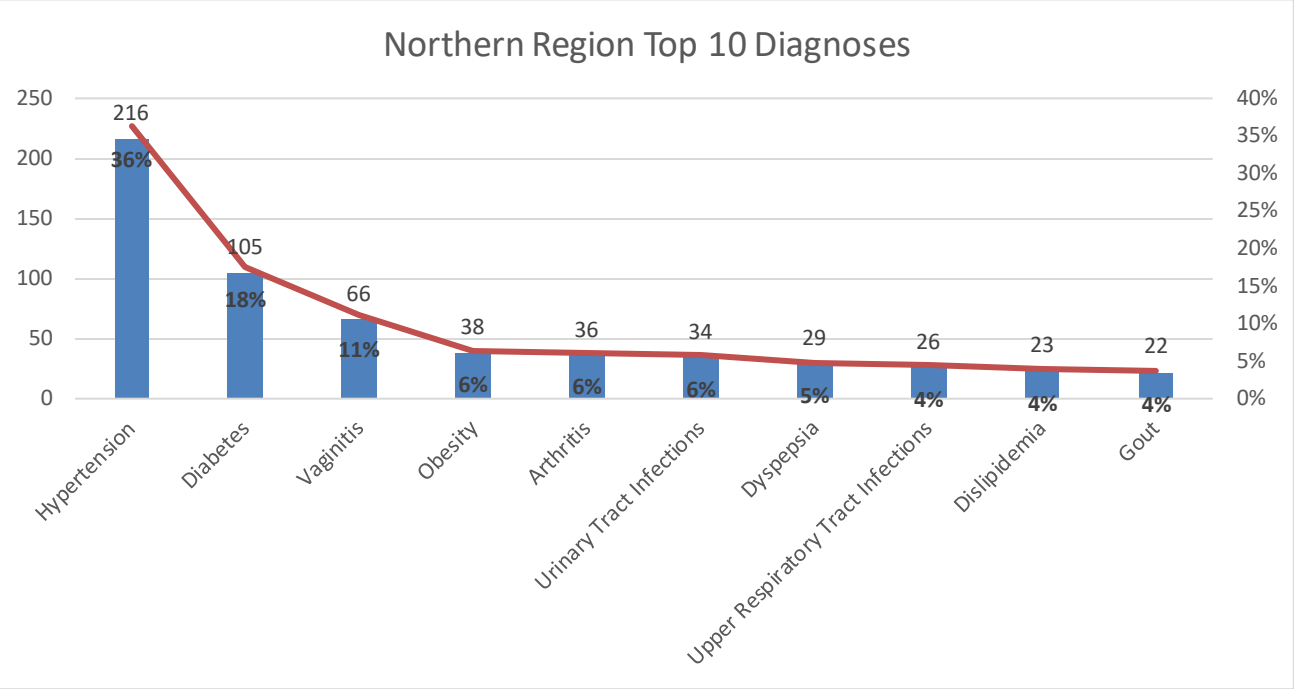
Mercy Clinic is a specialized Primary Care Provider that focuses on the elderly (>60 years old). Their disease processes vary from the general population. We see that arthritic disorders (34%) are at the forefront of our elderly patient's diagnoses, followed by hypertension (23%) and gastric diseases (7%). We note that there is a noted issue with medication noncompliance (6%). This points to the need to increase patient behavioral change to decrease non-compliance. We also note some target organ damage diseases such as ischemic heart disease (6%) and chronic renal failure (2%) being in the top 10 diagnoses.

Graph 11 Southern Region Top 10 Diagnoses



The morbidity profile of the Southern Region shows hypertension and diabetes as the top 2 diagnoses. Interesting to note Vaginitis as one of the top diagnoses reported. Overall, the profile is consistent with other regions. One caveat, there needs to be some training in coding as can be noted with "cough" being reported as a diagnosis (could easily be a symptom of URTI).

Graph 12 Northern Region Top 10 Diagnoses



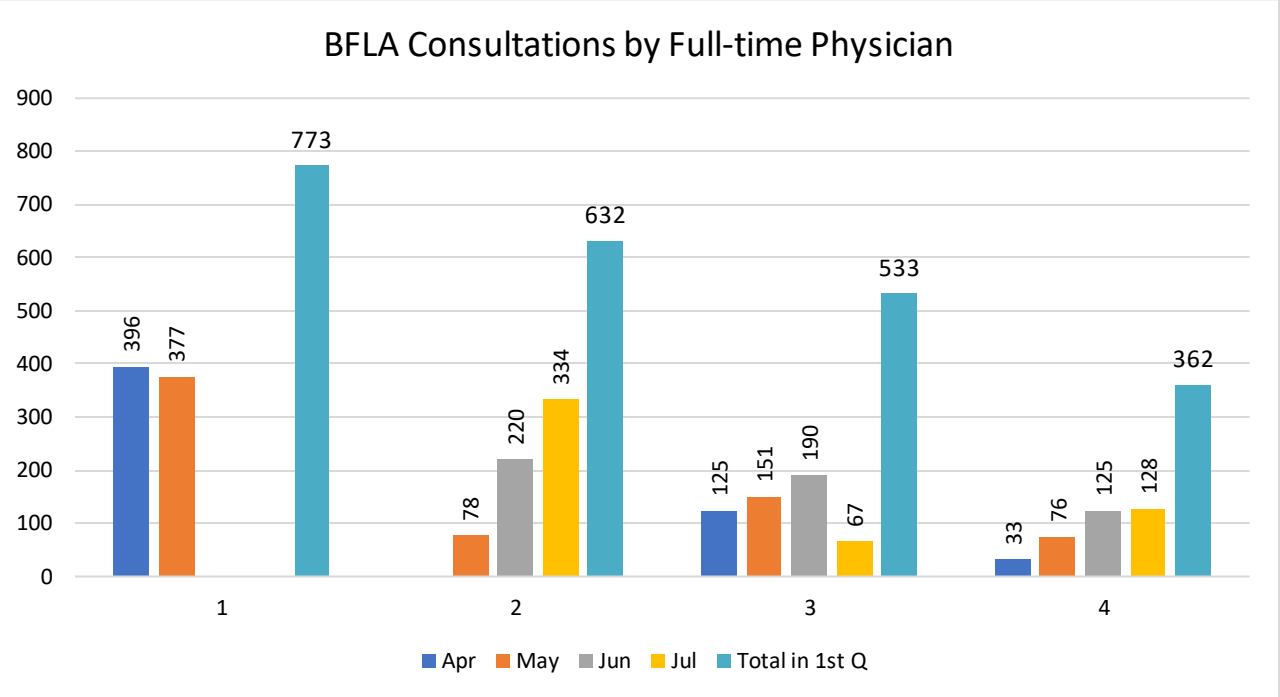
As noted in table 1, the Northern Region has a minimal number of reported data on RAWA. However, the morbidity profile is consistent with other Regions again showing chronic diseases in the top 2 diagnoses. Of concern is the diagnosis ranked 3rd, vaginitis. This is consistent with reports of increased STD's in the region.

Productivity Reports of Full-Time Physician per Primary Care Provider (PCP)

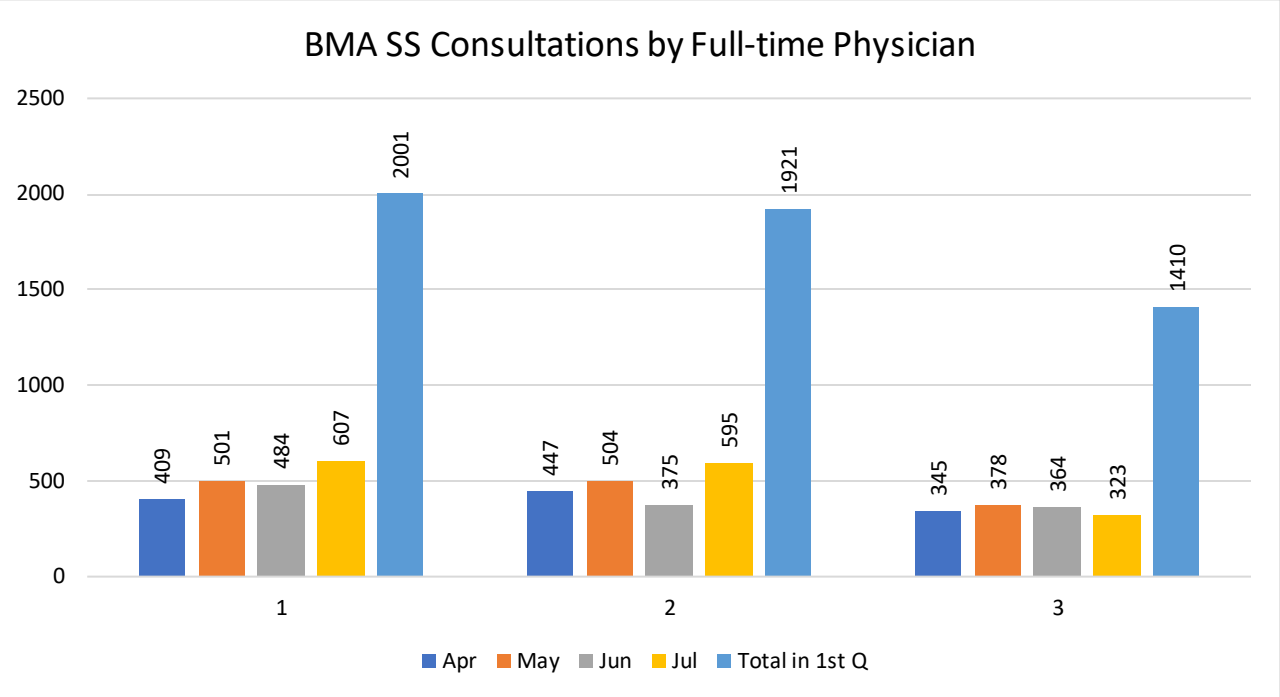
The following graphs show the productivity of full-time (FT) medical officers/clinicians (MO) at their respective clinics. We can see the monthly number of patients that they are seeing, as well as the total number of patients seen by the individual clinician in the first quarter of the fiscal year. It is interesting to note the different number of physicians on the roster by clinics. This is important as it may have an impact on the quality of care that can be delivered (quality time spent with each patient)

Central Region Full-time Physician Consultation Data

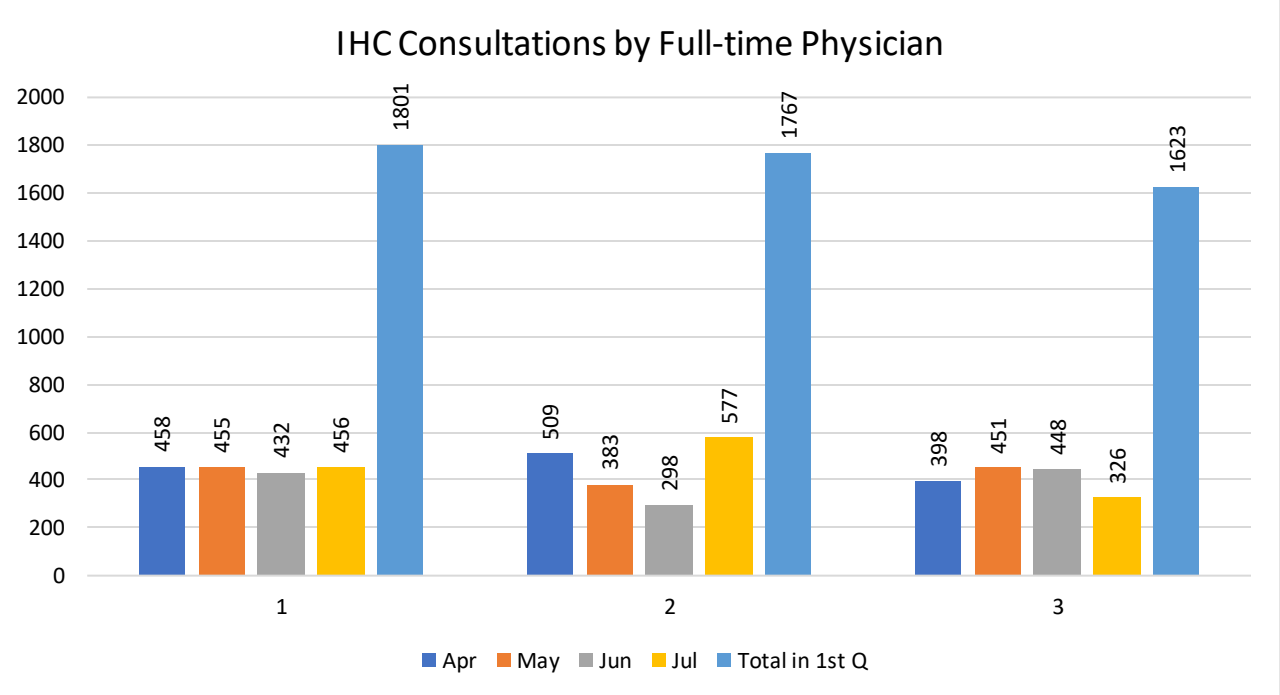
Graph 13 BFLA Consultations by Full-time Physician



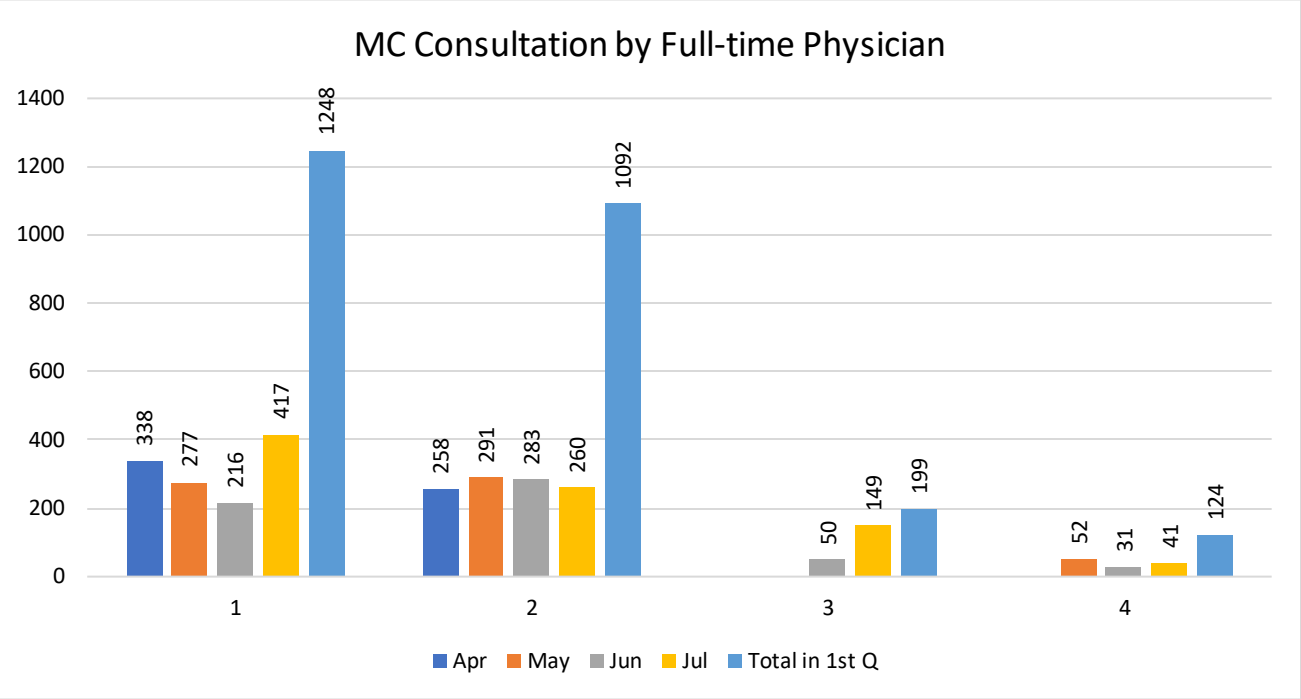
Graph 14 BMA SS Consultations by Full-time Physician



Graph 15 IHC Consultations by Full-time Physician

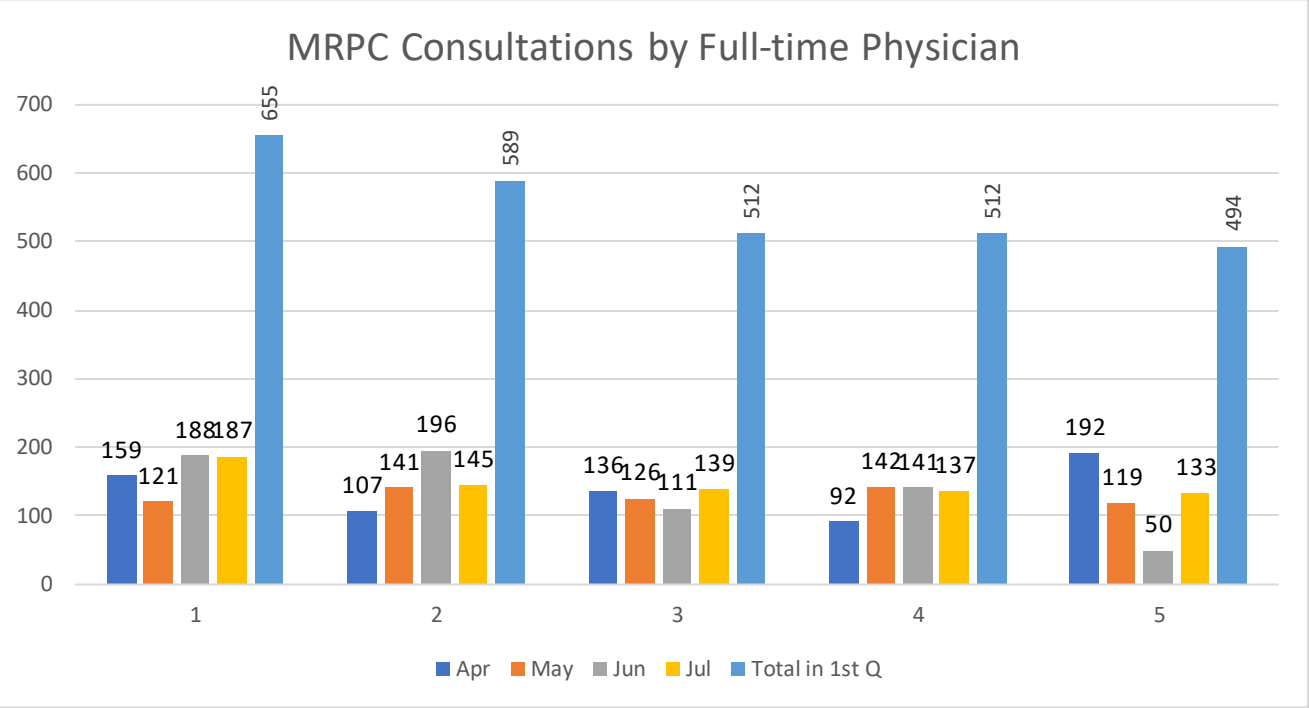


Graph 16 MC Consultation by Full-time Physician



Patient care of the elderly is a totally different circumstance. More time and patience are needed, and output is expected to be less particularly because most have a combination of diseases. However, it is glaring to note the difference in productivity between the four MDs. One explanation relevant to one of the MD's is that the responsibility is for home care thus going house to house to visit the patient is time-consuming and reduces numbers of patients that can be seen over time

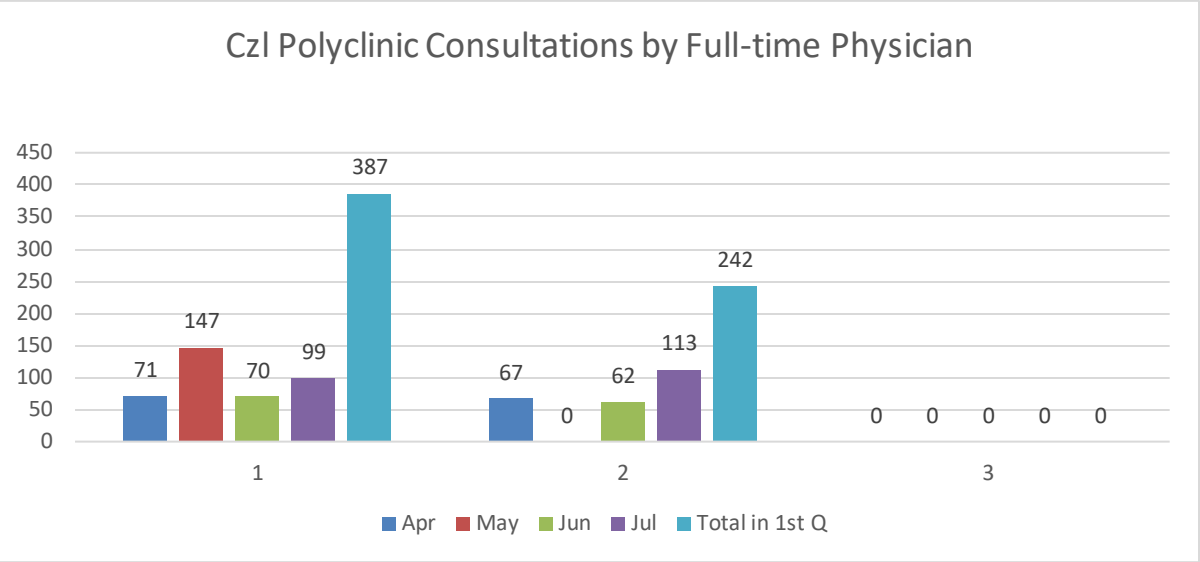
Graph 17 MRPC Consultations by Full-time Physician



MR PCP is both an NHI provider and also a Public Clinic that must cater to the population not registered. This is the reason they must have additional personnel. While the present information reflects reporting on the registered population through RAWA, they also see same amount of patients that are not registered through NHI and reported on the BHIS.

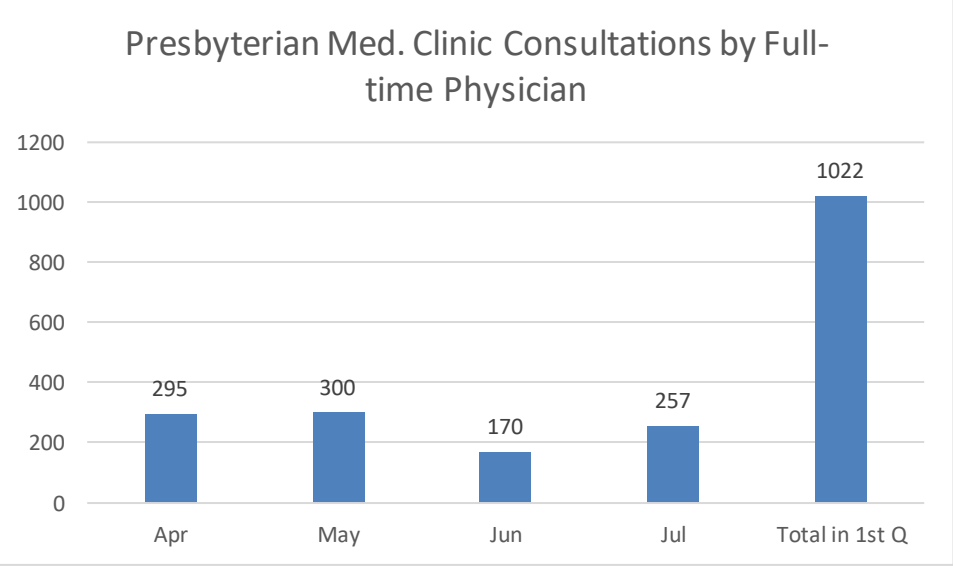
Northern Region Full-time Physician Consultation Data

Graph 18 Corozal Polyclinic Consultations by Full-time Physician



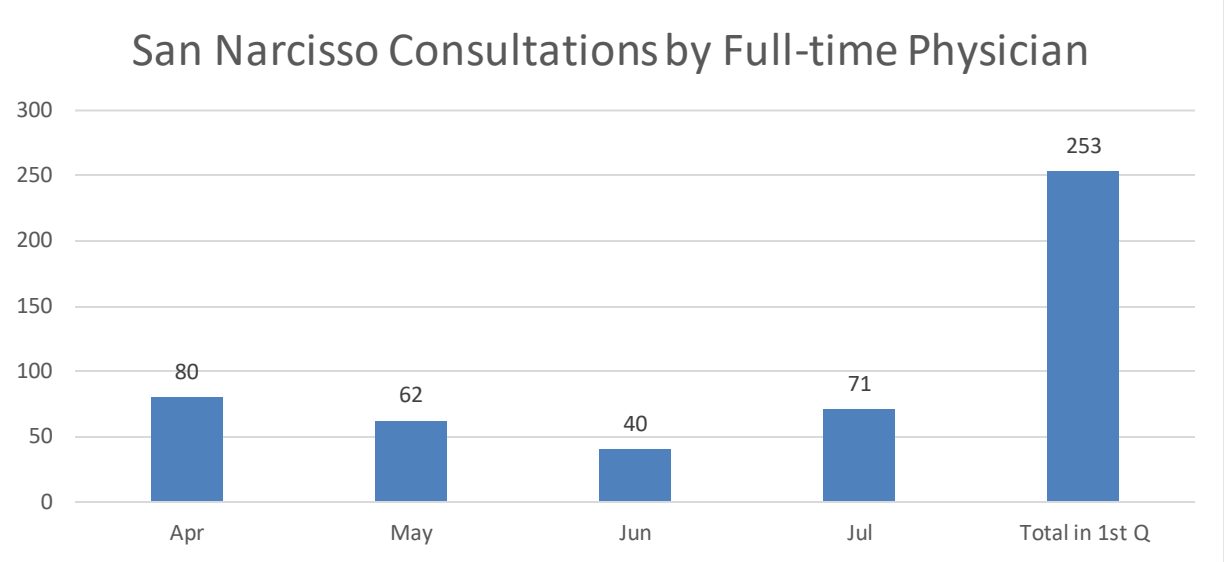
Corozal PCP: At first glance, it would seem that productivity at the Corozal PCP is extremely low. However, this probably reflects the lack of use of RAWA as a reporting tool, which seems to be supported by the different picture painted by the next graph which shows productivity of an NGO clinic in the same zone. The second thing to note is that the PCP is required to have 4 physicians and the report indicates only 3 on staff, with one showing no production in RAWA.

Graph 19 Presbyterian Med. Clinic Consultations by Full-time Physician



The fulltime clinician at Presbyterian medical clinic registered 1022 patient encounters in the first quarter of the fiscal year. This is comparable to the individual MDs production in Central Region clinics.

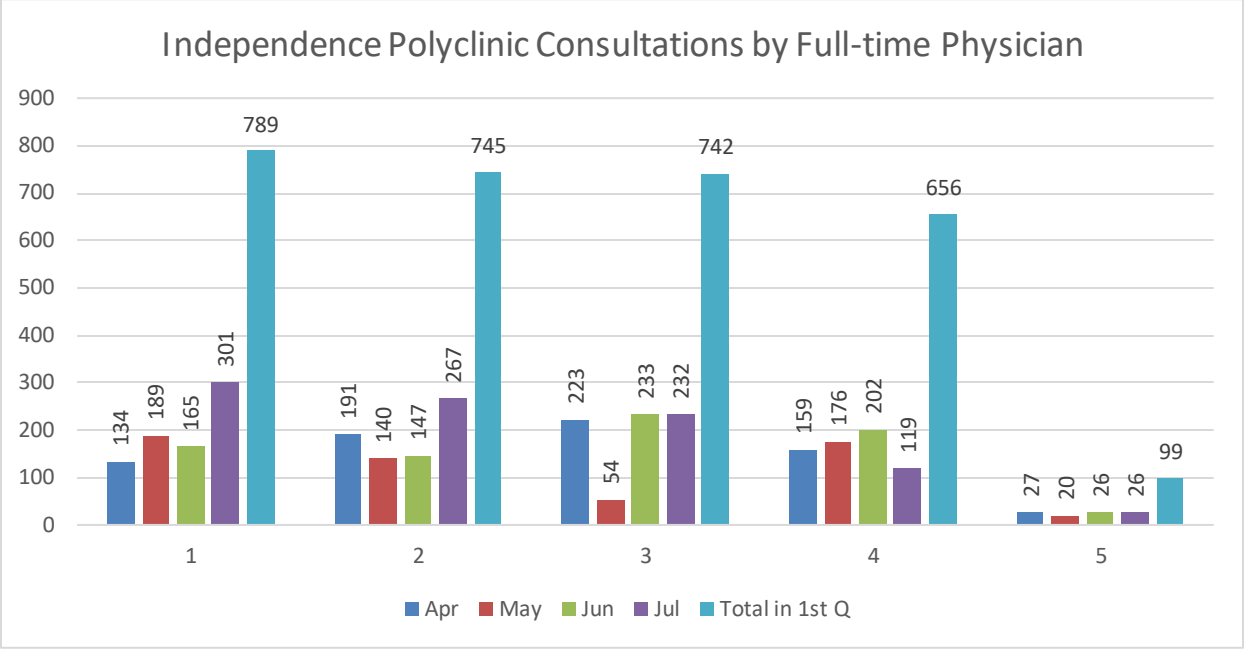
Graph 20 San Narcisso Consultations by Full-time Physician



We note that the body of work being registered in RAWA at the San Narcisso clinic only 253 patients in the first quarter of the fiscal year.

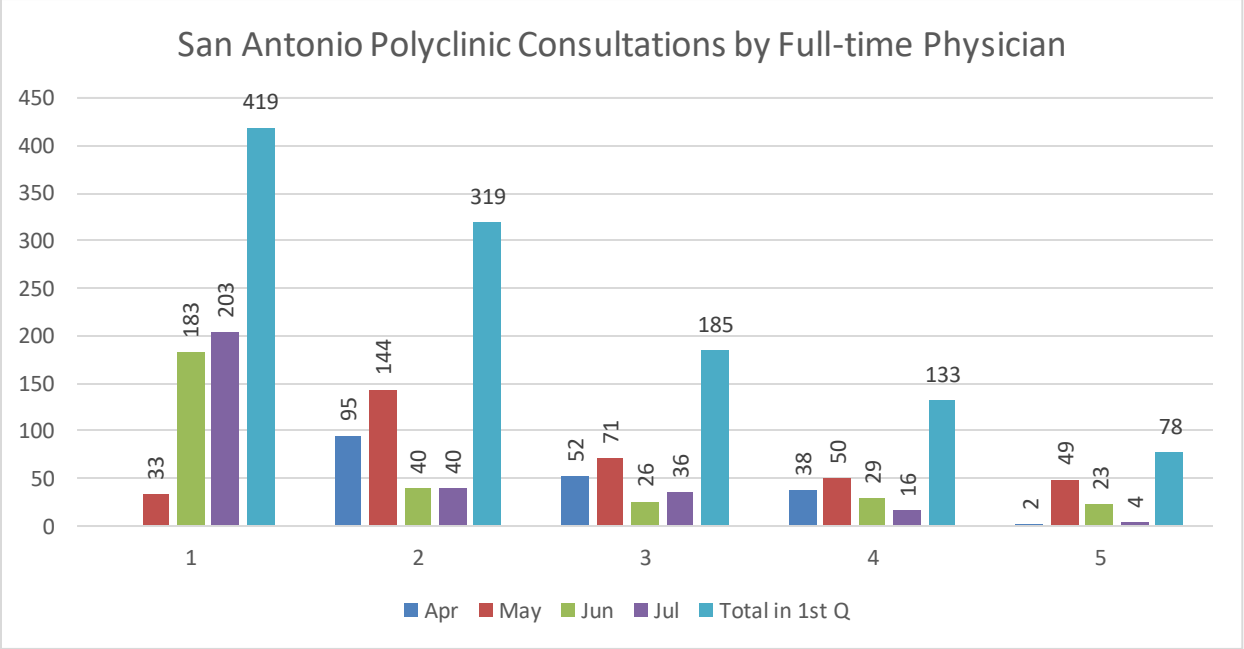
Southern Region Full-time Physician Consultation Data

Graph 21 Independence Polyclinic Consultations by Full-time Physician



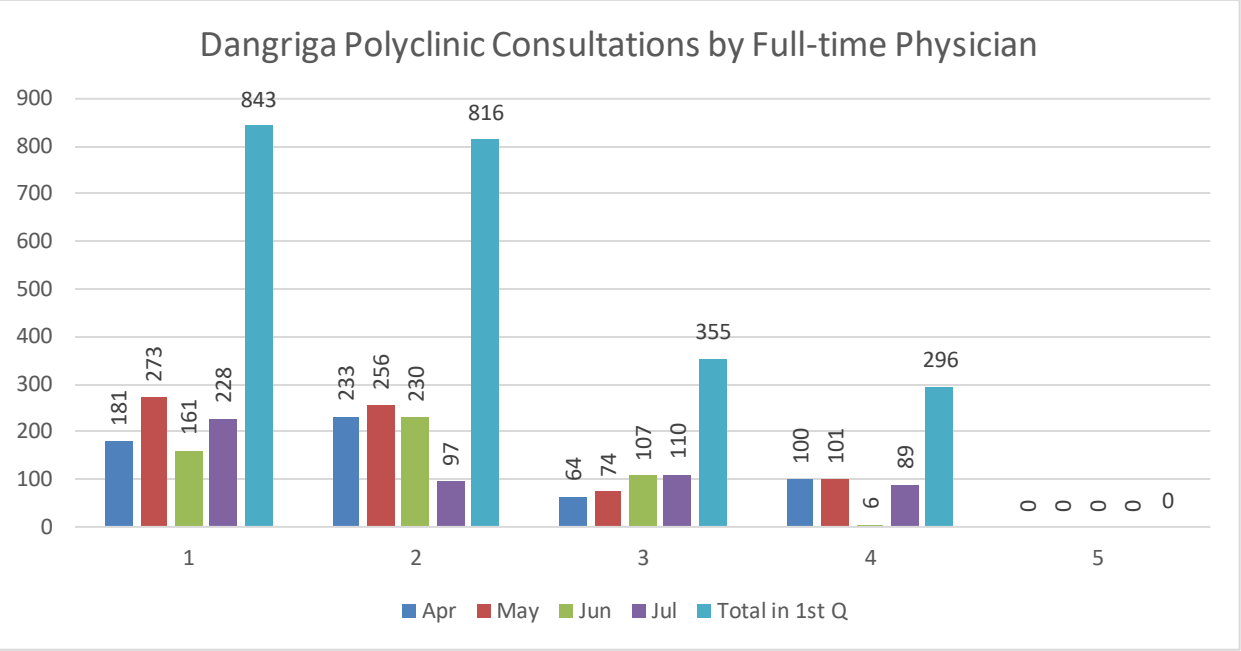
There is notable overall productivity noted in RAWA registered activities.

Graph 22 San Antonio Polyclinic Consultations by Full-time Physician

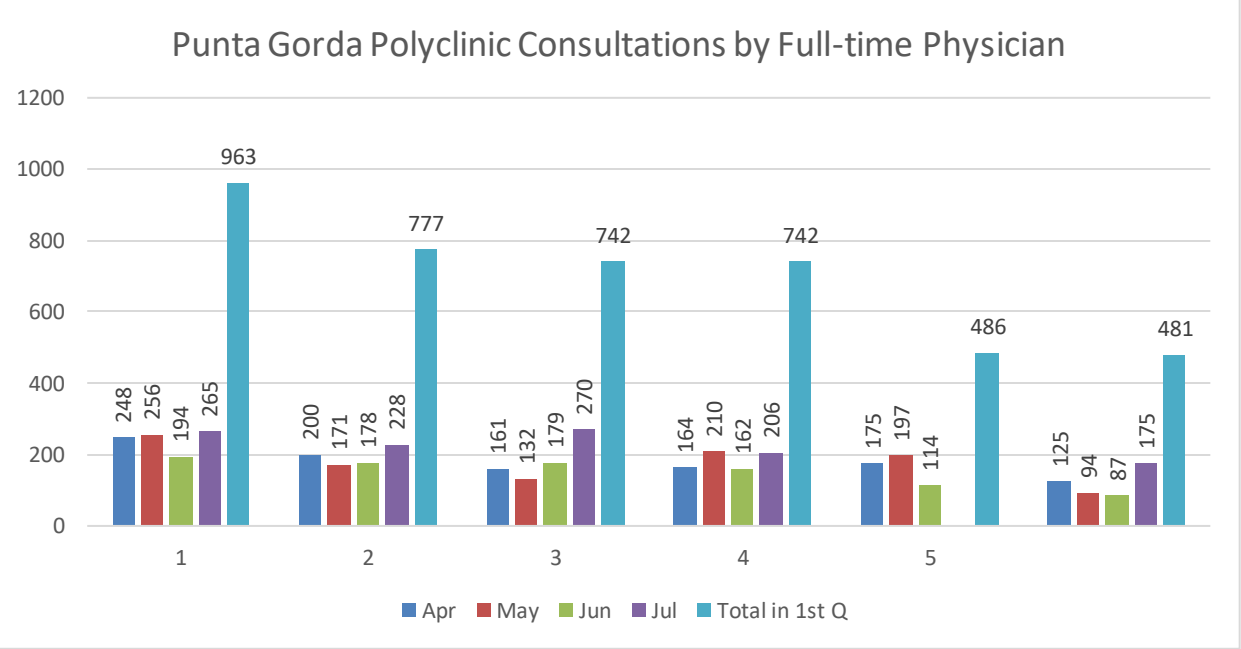


The San Antonio Polyclinic has documented internet capability issues, that have hampered their data entry into RAWA.

Graph 23 Dangriga Polyclinic Consultations by Full-time Physician

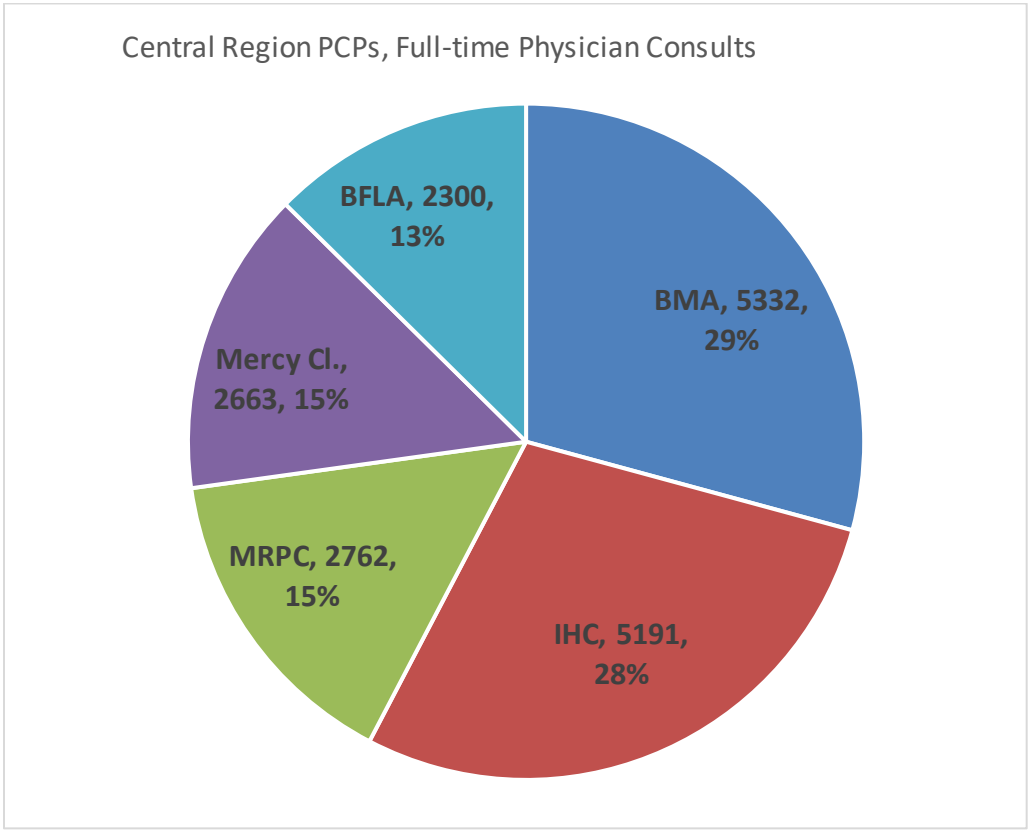


Graph 24 Punta Gorda Polyclinic Consultations by Full-time Physician

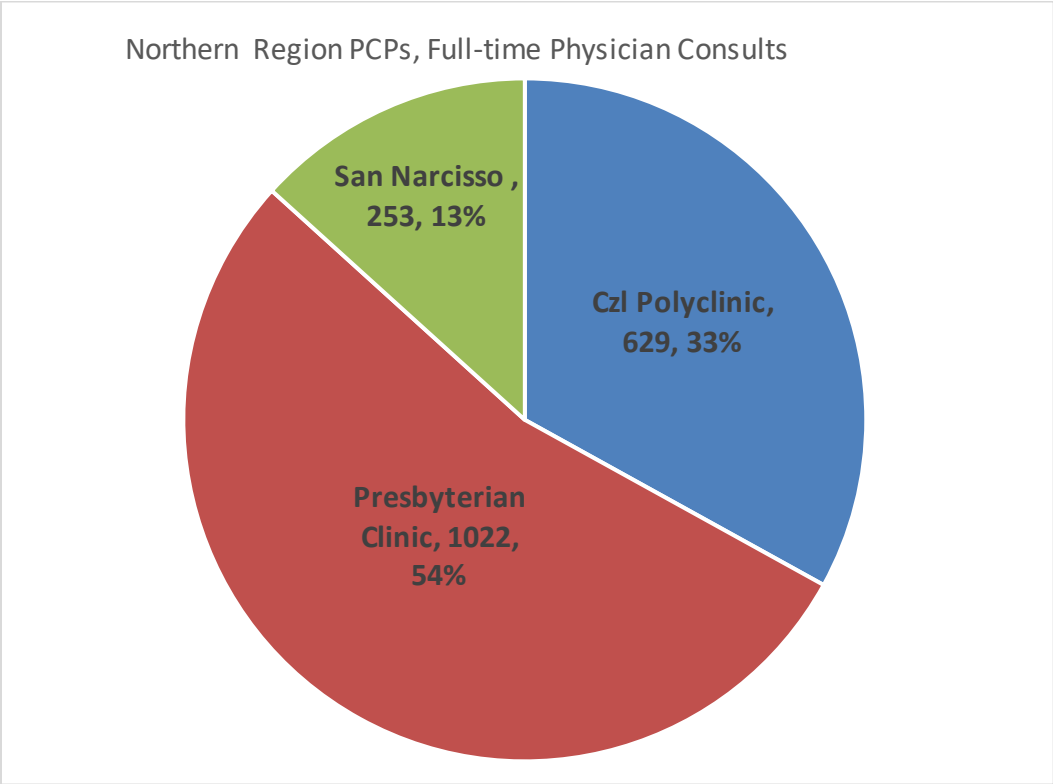


Comparison of Primary Care Providers Full-time Physician Consultations

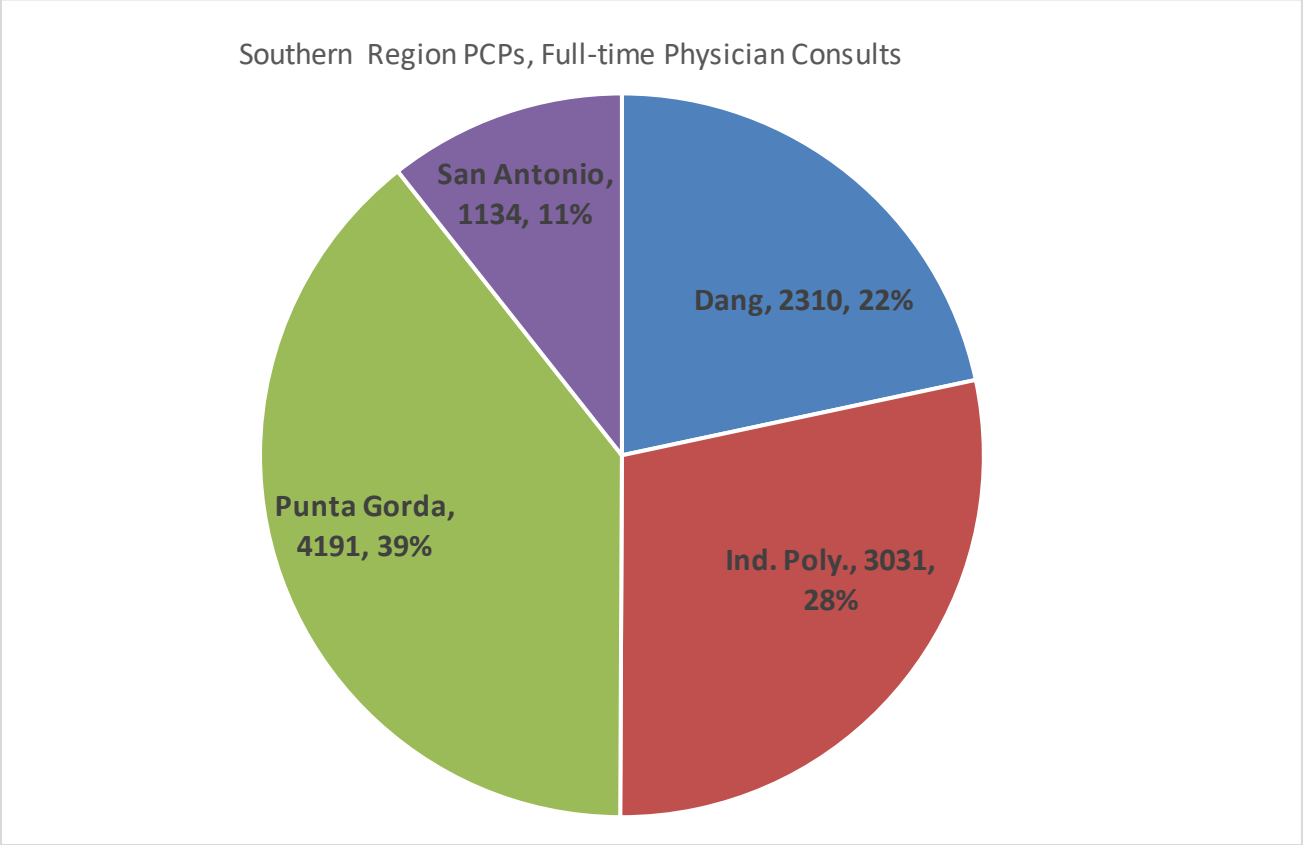
Graph 25 Central Region PCPs, Full-time Physician Consults



Graph 26 Northern Region PCPs, Full-time Physician Consults

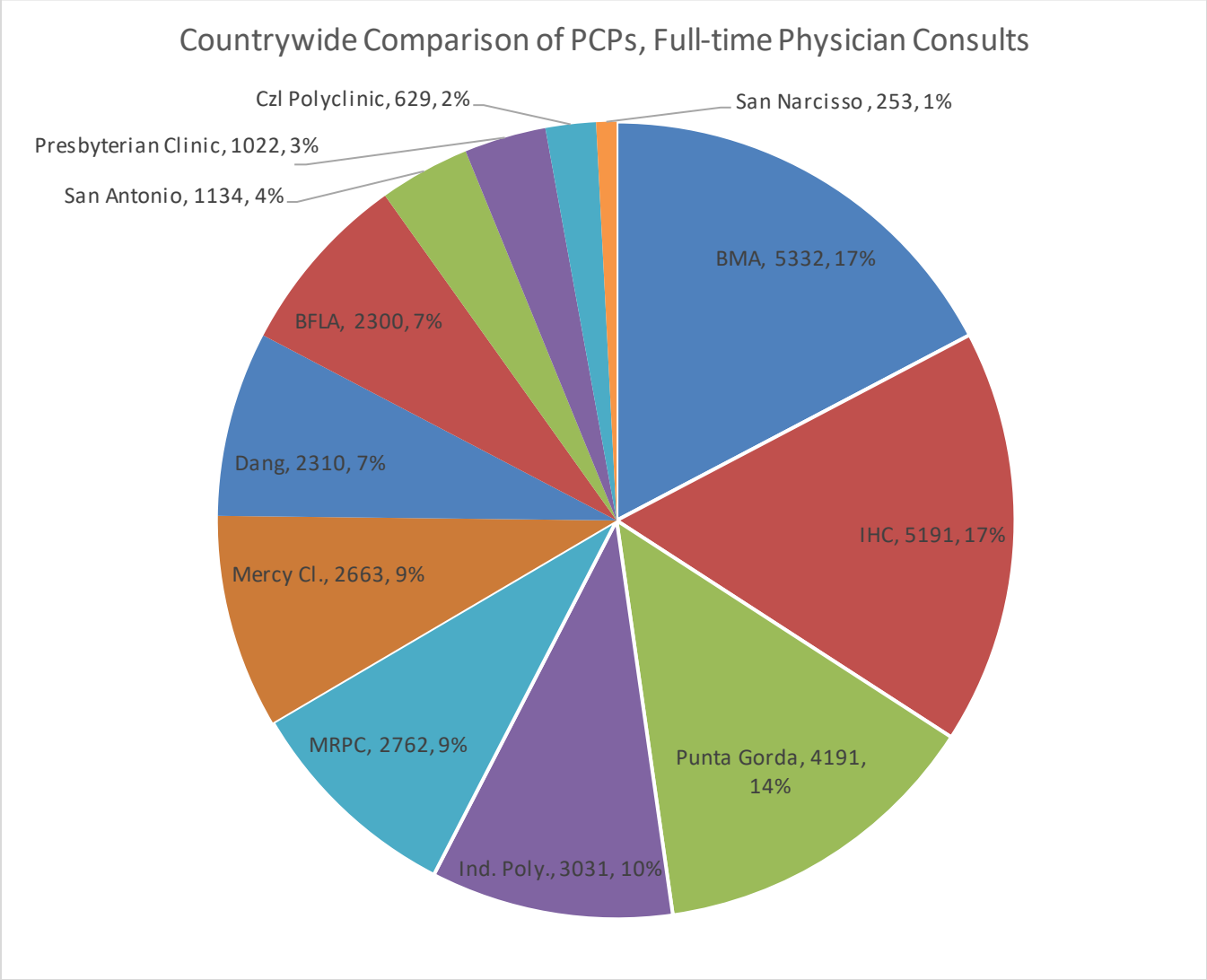


Graph 27 Southern Region PCPs, Full-time Physician Consults

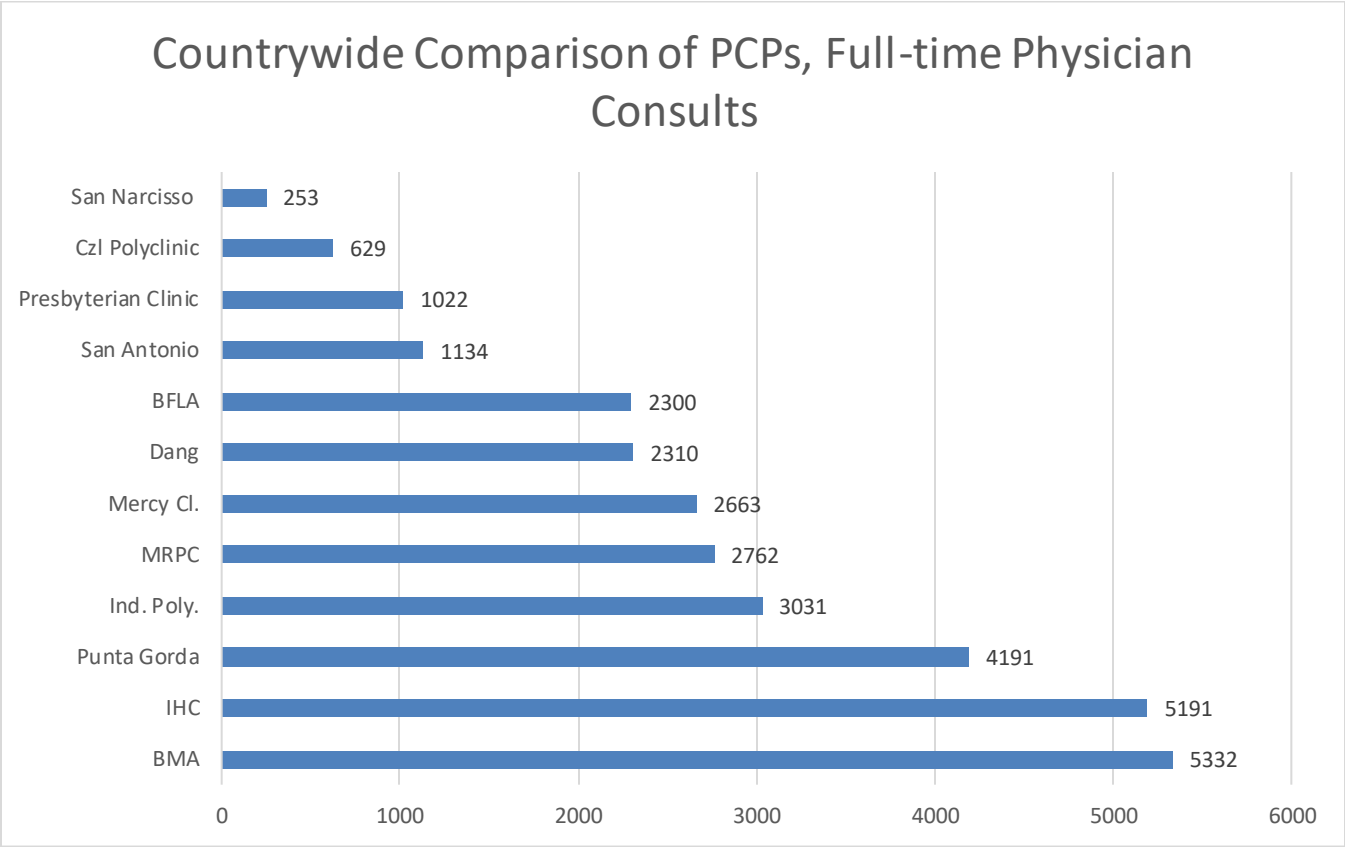


Note: San Antonio has a backlog of reports due to the lack of internet connectivity.

Graph 28 Countrywide Comparison of PCPs, Full-time Physician Consults

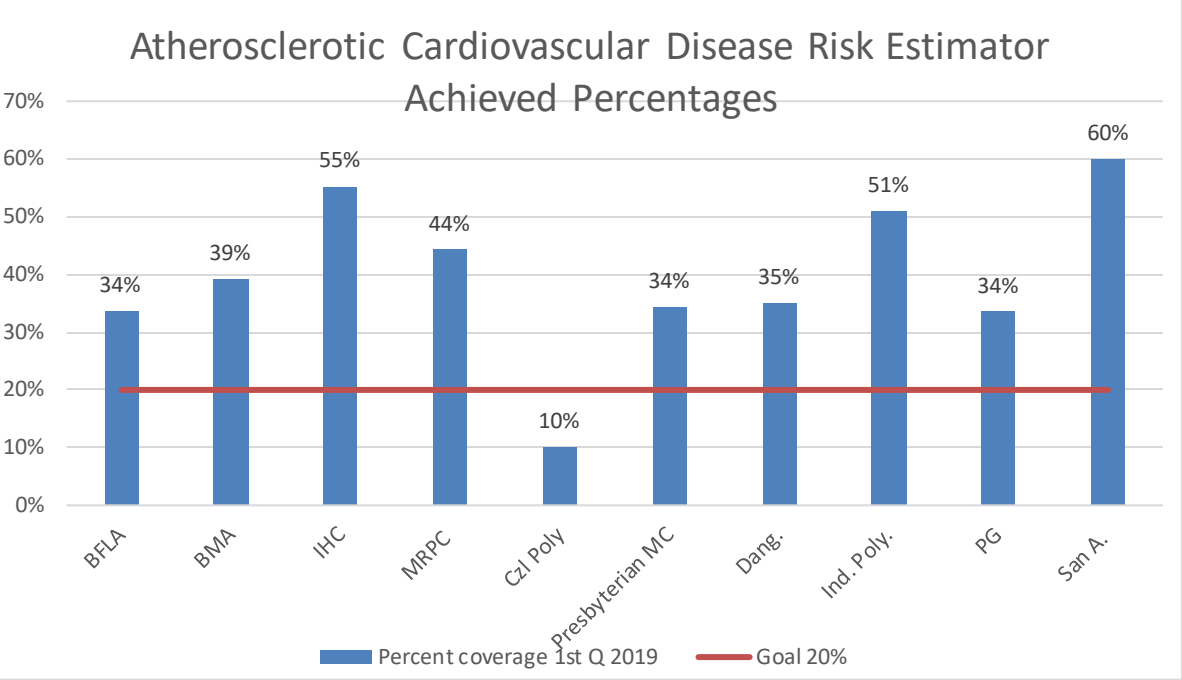


Graph 29 Countrywide Comparison of PCPs, Full-time Physician Consults



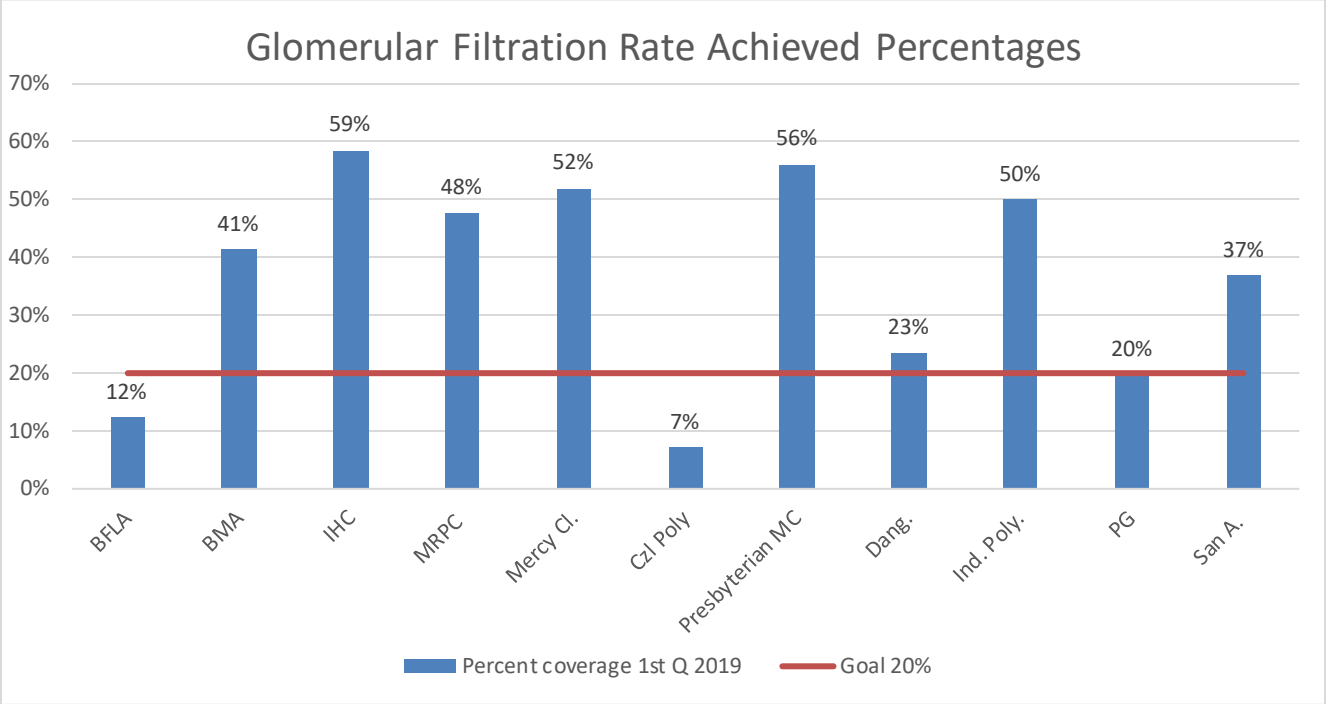
Key Performance Indicator Current Status Updates:

Graph 30 Atherosclerotic Cardiovascular Disease Risk Estimator Achieved Percentages



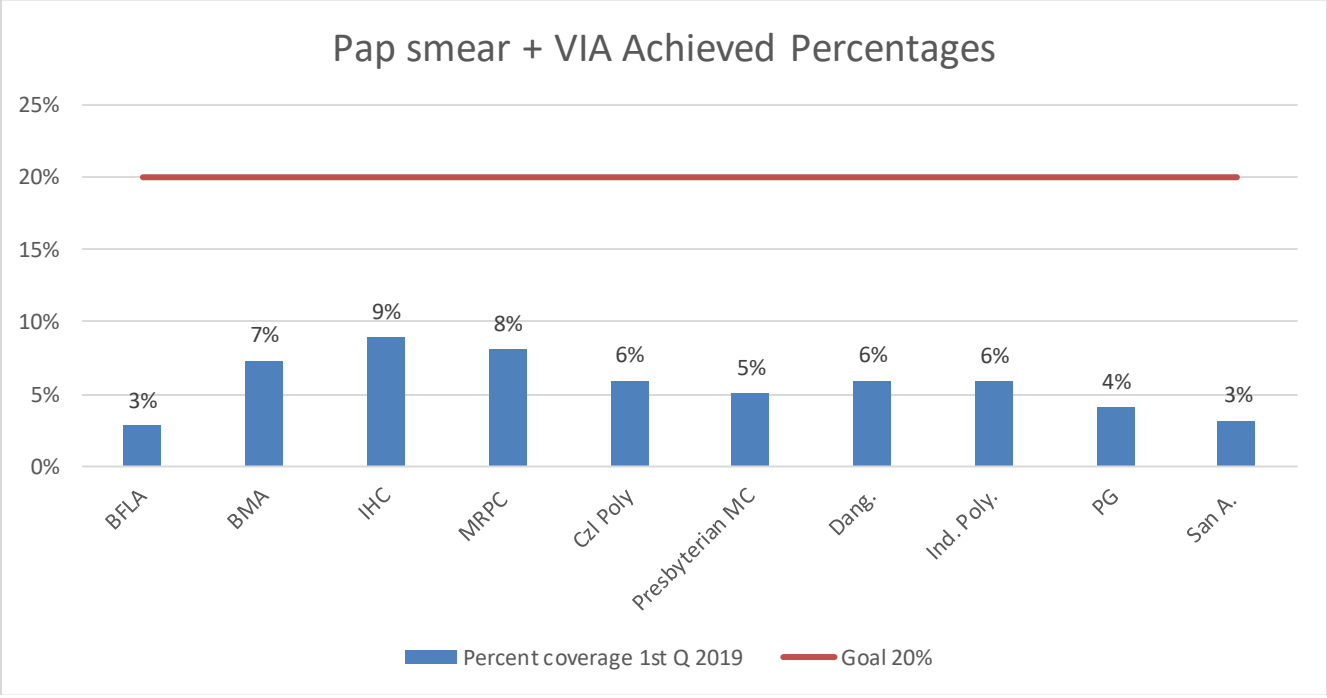
The Atherosclerotic Cardiovascular Disease (ASCVD)[1] Risk Estimator assesses a person's 10-yr risk developing ASCVD and acts to establish an initial reference point. NHI has endeavored to apply it to our diabetic and/or hypertensive patients that are between 40 to 59 yrs. old. The primary care providers have agreed to screen 20% or more of the eligible population.

Graph 31 Glomerular Filtration Rate Achieved Percentages



The glomerular filtration rate acts to establish an initial reference for kidney disease in out NHI's diabetic was hypertensive patients of any age. The primary care providers have agreed to screen 20% or more of the eligible population.

Graph 31 Pap smear + VIA Achieved Percentages



The KPI goal for the combination of Pap smears and VIAs is 20% of women 25-49 years who have never had a Pap Smear or VIA. The overall average achieved thus far, for the first quarter of the 2019s fiscal year is 6%.

Conclusions

1. There are gaps in data entry into RAWA, which is NHI's monitoring and evaluation tool to measure PCP productivity.
2. Morbidity reports are consistent across all clinics: Chronic Non Communicable Diseases predominate.
3. Pharmacological dispensation and laboratory tests mirror the morbidity profile consistently.
4. Corozal Polyclinic and San Narciso overall productivity in RAWA seems low compared to the other PCPs.
5. Mercy Clinic's (elderly) top morbidity are: arthritis, hypertension and gastric disease (GERD, Dyspepsia), and diabetes.
6. Unstable and sometimes unavailable internet connectivity continues to be a detriment to San Antonio's clinic data entry.
7. The ASCVD and GFR KPI's are being well covered by our PCPs.
8. The Pap smear and VIA KPI is historically a very challenging KPI. The current overall PCP average is 6%, with an end of year goal of 20%. Integral Health Centre (9%), Matron Roberts Polyclinic (8%) and BMA Southside (7%) are currently in the top percentage gain.
9. Important to note, is the number of consults seen by full time physicians in comparison to non-full time physicians and other types of consults at each PCP.

Recommendations

1. The PCPs, particularly governmental facilities, need to improve on the use of RAWA as that is the official system for billing and monitoring of service contracts.
2. Continued communication with the NHI administration for reporting challenges PCPs are facing.
3. There is an urgent need for a consistent, sustained, and coordinated effort at prevention of NCDs
4. NHI and PCPs should share best practices at PCP meetings for improved outcomes for population.
5. Incorporate BHIS information on productivity for those clinics that need to cater to Non-registered populations in order for better assessment of coverage.
6. Address the challenge of internet connection in the South, particularly for San Antonio PCP.