ACCESS MONITORING REVIEW PLAN

JULY 2017

North Carolina

Department of Health and Human Services

Division of Medical Assistance

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Overview

- The Division of Medical Assistance, North Carolina's Medicaid agency, provides health care services for eligible low-income individuals, including children, pregnant women, people with disabilities, elderly, parents and other adults. The North Carolina Department of Health and Human Services (NCDHHS) is the single state agency that administers the Medicaid program within the state. NCDHHS, Division of Medical Assistance (DMA) provides for the day-to-day operation of the Medicaid program. During 2015, North Carolina's Medicaid program provided services to approximately 1.9 million enrolled beneficiaries with total expenditures of approximately 14.0 billion dollars.

- In September 2015, DMA created a Utilization and Quality Review (UQR) Committee. The multidisciplinary UQR committee works collaboratively to monitor the utilization of services for the optimal health benefit of the state's Medicaid beneficiaries, at reasonable costs to both beneficiaries and providers. The Committee has served an integral role in creating the North Carolina Access Monitoring and Review Plan, and remains instrumental in further updates and analysis of data for services monitored in the plan now, and into the future. The Committee is comprised of DMA staff members in the following areas:
    - Chief Medical Officer;
    - Business Information;
    - Pharmacy;
    - Finance;
    - Clinical Policy;
    - Program Integrity;
    - Program Manager; and
    - Other staff and members of the UQR, as needed.

- The UQR is co-chaired by the Program Manager and Medical Director. The UQR core group meets quarterly to review and analyze utilization and quality data regarding the delivery of the state's Medicaid services.

- North Carolina is the 9th largest state in the United States, with a total population of 10 million. With 110 acute care hospitals, approximately 1,800 primary care practices, over 6,000 practitioners, and a large network of rural health clinics and federally qualified health centers located throughout the state, there are numerous options are available for Medicaid beneficiaries to access health care services.

- North Carolina measures and monitors health care indicators to ensure that its Medicaid beneficiaries have access to care that is comparable to that of the general population of the state.

- In accordance with 42 Code of Federal Regulations (CFR) 447.203(b), North Carolina developed an access review monitoring plan for the following service categories provided under a fee-for-service (FFS) arrangement:
    - Primary care (includes medical and dental)
    - Physician specialists
    - Behavioral health
    - Pre-natal and post-natal obstetric services, including labor and delivery
    - Home health

- The plan describes data that will be used to measure access to care for beneficiaries under the FFS arrangement. The plan considers the following: the availability of Medicaid providers; utilization of Medicaid services; and the extent to which the health care needs of Medicaid beneficiaries are fully met.

- The plan was developed during the months of January 2017 – July 2017.

    - Analysis of the data and information contained in this plan show that North Carolina Medicaid beneficiaries have access to health care. Except where otherwise noted, NCTracks, North Carolina's multi-payer Medicaid Management Information System (MMIS), was the source for most data used for analysis in the plan.

Change in Medicaid Rate Methodology

The Centers for Medicare and Medicaid Services (CMS) requires a State Plan Amendment (SPA) for changes in the rate determination methodology. When the SPA language is drafted, DMA seeks input and written comments from the relevant stakeholder groups or associations. Sixty days prior to submission of the SPA to CMS, the Tribal notice is sent, allowing 30 days for review and comments. Prior to the effective date of the SPA, a notice is published in various news publications throughout the state as required by CFR. These publications include The Charlotte Observer, The Fayetteville Observer, The Gaston Gazette, Greensboro News & Record, The Herald Sun (Durham), High Point Enterprise, La Voz, Raleigh News and Observer, Rocky Mount Evening (to Sun Telegram), and the Winston-Salem Journal.

Most of the comments DMA typically receives are from discussions with provider associations, through emails or telephone calls. Once CMS approves the SPA and prior to implementation, a Medicaid Bulletin notice is published on the DMA website advising providers and the public of the impending change. For facility rate adjustments, the DMA Reimbursement Section sends the facility a letter announcing the new rate schedule and appeal rights.

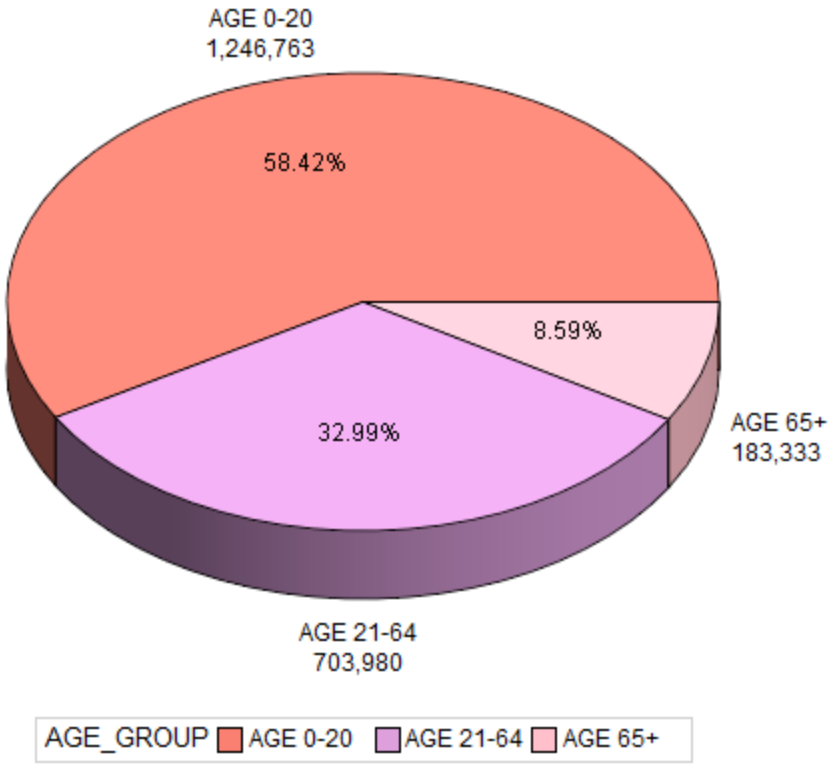
Rate Changes Using Currently Approved Methodologies

For rate changes using currently approved methodologies, CMS does not require the state to submit a SPA. As the Reimbursement Section develops new rates, it is in contact with the provider community through their respective associations, and through multiple methods of contact methods such as phone calls, emails, meetings, etc. Prior to implementing the rates, a Medicaid bulletin article is published, announcing the new rate schedules on the DMA website. DMA's reimbursement State Plan is written with sufficient detail (a requirement of CMS) such that a provider can understand the rate calculations and is knowledgeable about their reimbursement rate at any time. For a facility rate adjustment, DMA's Reimbursement Section sends the facility a letter announcing the new rate schedule and appeal rights.

Beneficiary Population

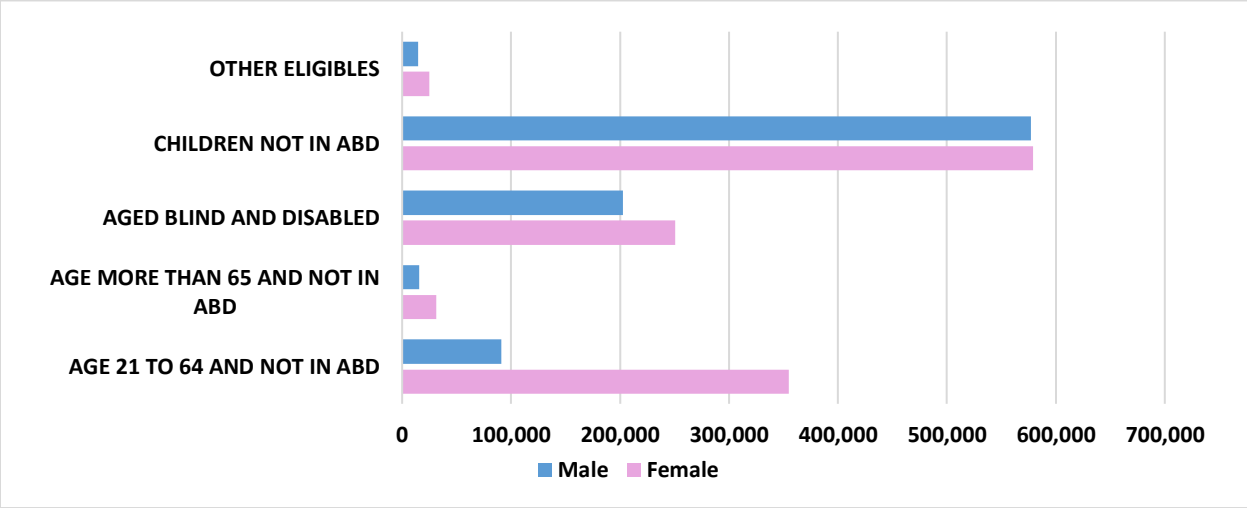
During 2016, the North Carolina Medicaid program provided services to approximately 2.1 million enrolled beneficiaries. Apart from behavioral health services, which are provided through behavioral health managed care entities, PACE program and high tech imaging contract, North Carolina's Medicaid beneficiaries received care through fee-for-service (FFS) arrangements. Figure 1 below provides a breakdown of all North Carolina Medicaid beneficiaries by age and includes those dually eligible for both Medicare and Medicaid (dual eligible) for the 4th quarter of 2016 and Figure 2 provides the Medicaid population by gender and eligibility for the same period. Children (beneficiaries ages 20 years and under) represent almost 58% of the North Carolina Medicaid population. As shown in Figure 1 below, beneficiaries age 21 to 64 represent approximately 33% and the remaining 9% are Medicaid beneficiaries ages 65 and above.

Figure 1
Medicaid Beneficiaries by Age Categories - 4th Quarter of 2016
Includes Medicaid and Beneficiaries dually eligible for Medicare and Medicaid (Duals)



Females account for over half of all Medicaid beneficiaries. As demonstrated in Figure 2 below, gender differences can be seen in all Medicaid eligibility categories, with females as the predominant adults in ages 21-64 years due to the Medicaid for Pregnant Women Program (MPW) for the group not aged, blind or disabled. The number of females exceeds the number of males in the aged, blind and disabled group. Females and males are comparable in numbers in the group for children not blind or disabled. The number of females slightly exceeds the number of males in the 65 and older age group.

Figure 2
Medicaid Beneficiaries by Gender and Eligibility-4th Quarter 2016



Aged, Blind, and Disabled (ABD) consists of elderly individuals or couples, the visually-impaired, and the physically or mentally disabled)

North Carolina Medicaid Beneficiary Enrollment Trends

This section includes a review of trends in average monthly enrollment of North Carolina Medicaid beneficiaries by quarter. Data are presented for the total Medicaid population, broken down by age and eligibility group measured in calendar years (CY). The figures show a gradual increase in enrollment from 2011 until the end of 2013. However, beginning in the first half of 2014, Figures 3, 4 and 5 show an increase in enrollment due to eligibility changes because of the Affordable Care Act (ACA), for the total population, total number of children, foster children, and blind and disabled children populations served, respectively. The increase in enrollment continues for the total population and most age groups through the second half of 2016. As shown in Figure 6, adult enrollment continued to increase through the remainder of 2016.

Figure 3 - NC Medicaid Enrollment, CY 2011-2016, Average Members twice a year: Total Population

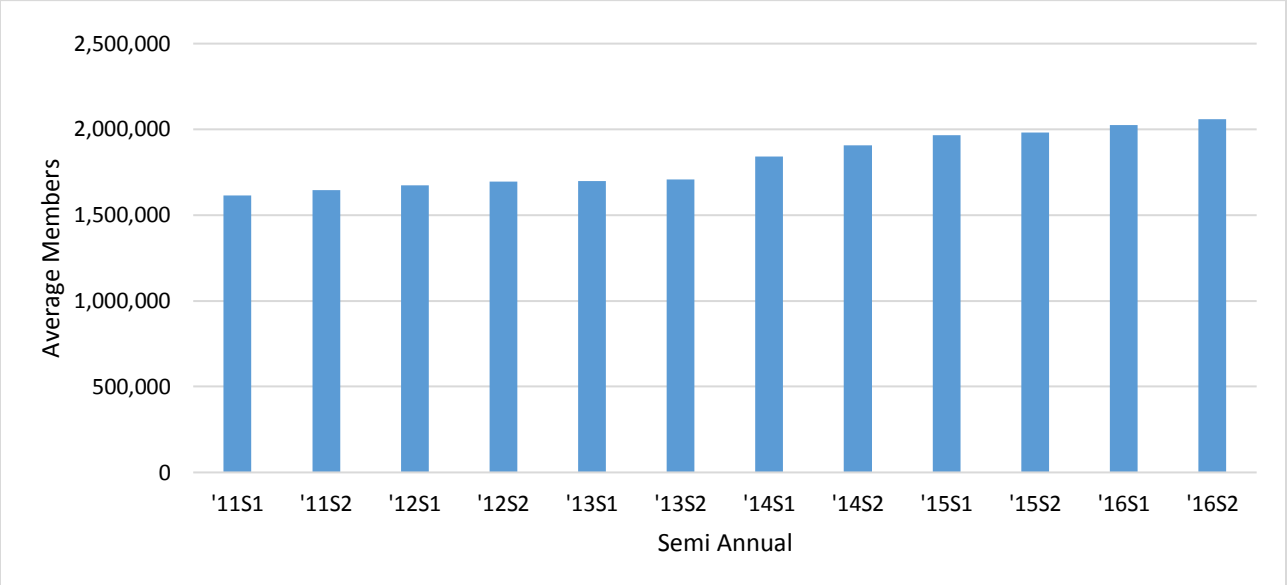


Figure 4
NC Medicaid Enrollment, CY 2011-2016, Average Members twice a year: Child Population

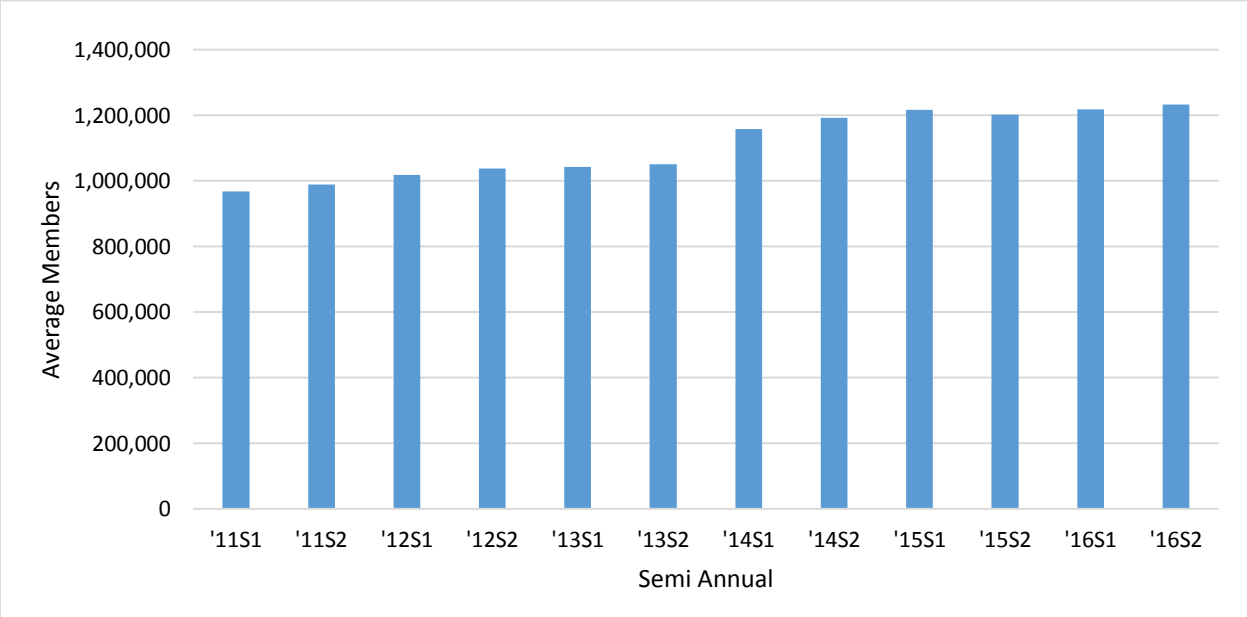


Figure 5

NC Medicaid Enrollment, CY 2011-2016, Average Members twice a year: Child Blind and Disabled Population

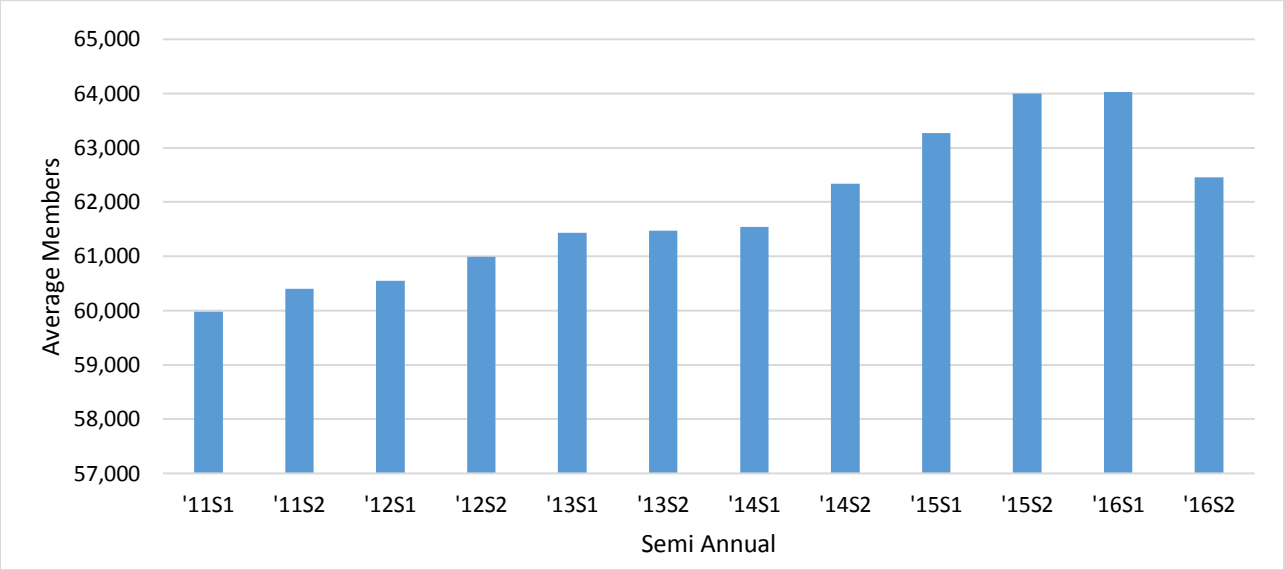
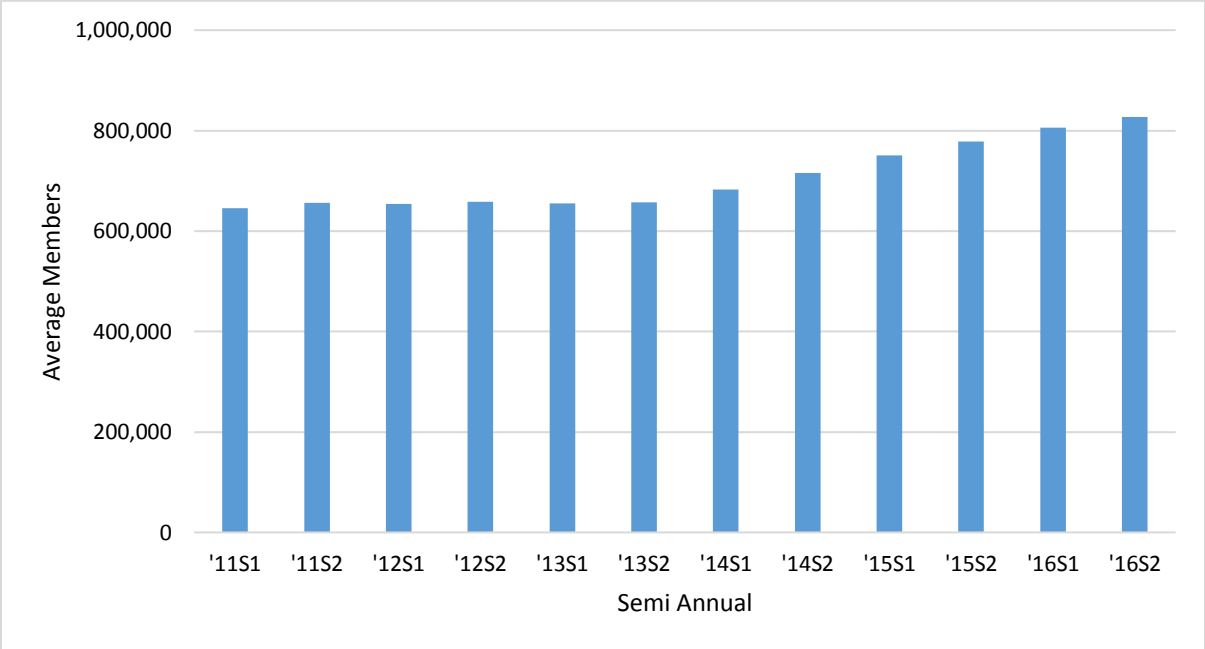


Figure 6

NC Medicaid Enrollment, CY 2011-2016, Average Members twice a year: Adult Population by Eligibility Group



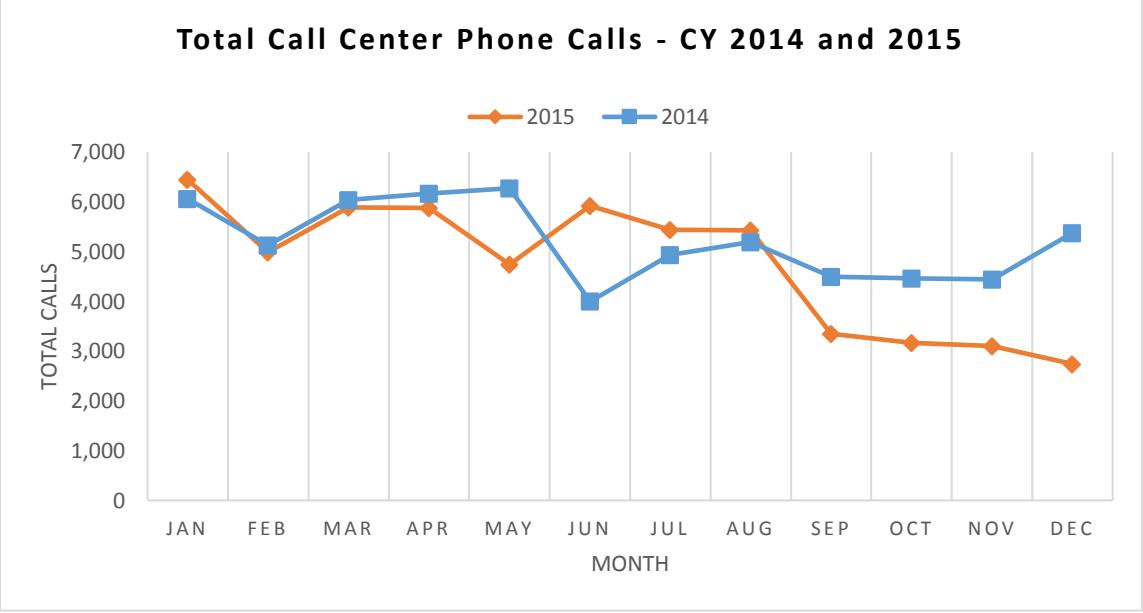
DMA Call Center and Requests from Beneficiaries

North Carolina DMA operates a Call Center as a service to beneficiaries and to engage beneficiaries and assist them in meeting their health care needs. The Call Center has a toll-free number that operates Monday – Friday from 8 a.m. – 5 p.m. EST (except holidays). The Call Center has the capacity to receive and record messages after hours, allowing staff to return phone calls the next business day. Call center call staff log details of all calls from beneficiaries. Monthly, Center staff produce a report detailing the number of calls to the center, types of calls received, resolution of issues, and timeliness of the resolution.

Most calls in which the beneficiary requests assistance with locating a provider are generally resolved immediately by Center staff. Figure 7 shows the total number of calls for CY 2014-2015. Call Center data are also available for specific services in the Plan, such as primary care, surgical services, etc., in the section specific to the service. Currently, Call Center data are not available for all services reviewed in the Plan, but going forward, Call Center staff will be using expanded categories that will include other services in the Plan.

Figure 7

Total number of calls or requests received by DMA Call Center data for each month of 2014 and 2015 for all services



North Carolina experienced a lower than average call volume in the fourth quarter of 2015, as compared to the fourth quarter of 2014 and 2015. The higher call volume in the fourth quarter of 2014 appears to be due to changes in eligibility requirements and increased contacts from newly-enrolled beneficiaries seeking services.

Beneficiary Perceptions of Access to Care

North Carolina collects and analyzes the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys administered by a vendor contracted by the state. The data presented in Figures 8 and 9 below are for calendar years 2014 and 2015 represent beneficiaries consisting of children with chronic conditions (CCC). Children with chronic conditions include "those who have a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that generally required by children." * Since the data are retrospective, they may not demonstrate current access completely, but may indicate whether beneficiaries can access health care services when needed. As represented in Figures 8 and 9 below, North Carolina child beneficiaries could obtain care and access to health care appointments, when needed approximately 90% of the time.

In addition, in 2017, the agency is planning to release a Request for Proposals (RFP) to solicit proposals from vendors that will allow the agency to select a new vendor to conduct further CAHPS surveys that will include both child and adult beneficiaries. Having more complete and comprehensive CAHPS data will better assist the agency in identifying, monitoring and addressing any access to care issues that are identified.

*(CCC – children with chronic conditions: https://www.cahps.ahrq.gov/surveys-guidance/item-sets/children-chronic/index.html and https://cahps.ahrq.gov/surveys-guidance/item-sets/children-chronic/102_Children_with_Chronic_Conditions_Set_2008.pdf

Figure 8

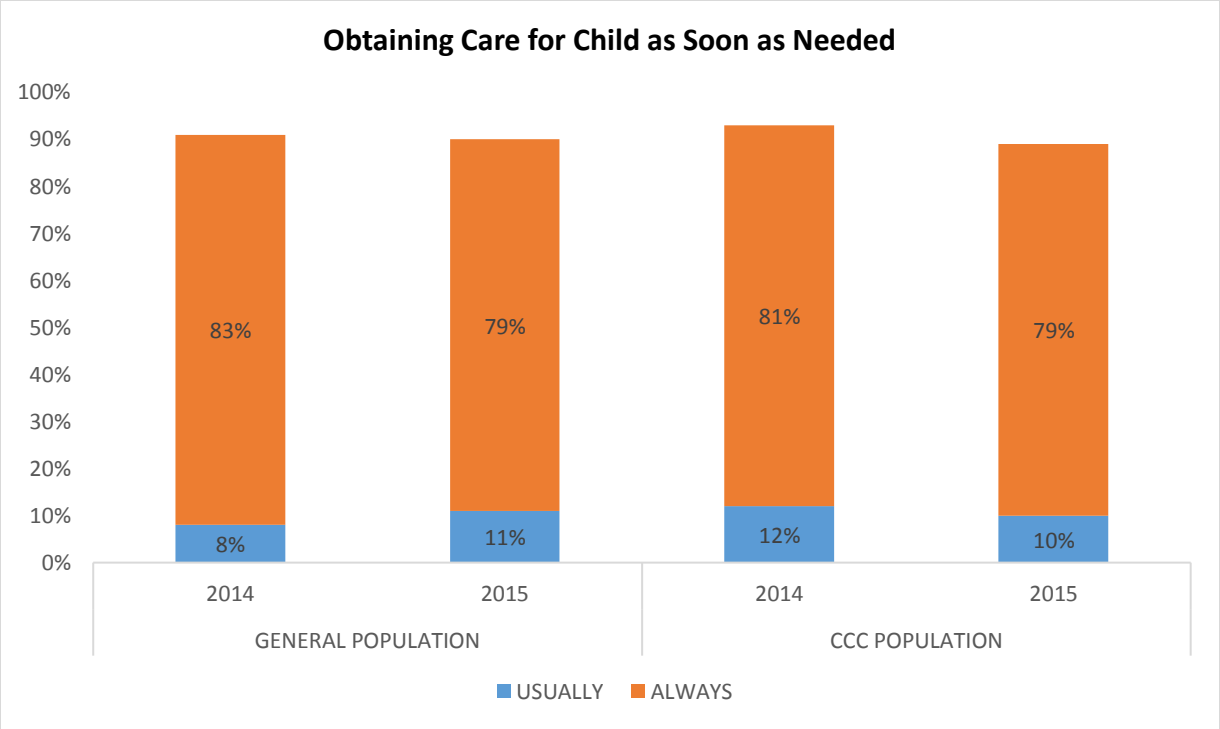
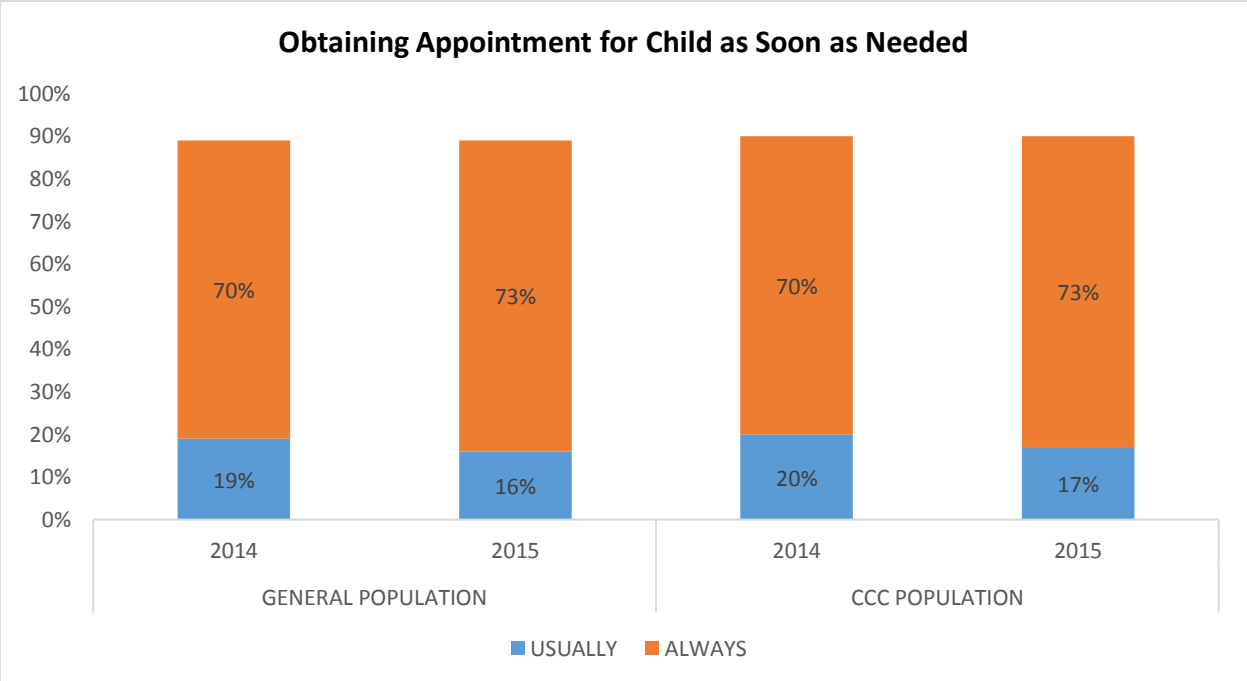


Figure 9



Data Regarding Providers, Utilization of Services and Comparison of Rates

Utilization data contained in the Plan is based on date of service for calendar years and for Medicaid beneficiaries for which Medicaid is the only source of payment. Beneficiaries with Medicare (Duals) or other health care coverage have been excluded from the data because for these beneficiaries, Medicaid is the secondary form of payment and thus, the agency does not have complete claims data. In addition, to provide a consistent basis for comparing reports from one to period to another, such as CY 2014 to CY 2016, the data were generated with a consistent claim run-out of three months beyond each reporting period. For example, for CY 2016, the report will contain all claims paid through March 31, 2017 since most all claims will have been paid by that date.

Due to the state's transition to a new MMIS vendor on July 1, 2013, for most of the data in the Plan, the agency chose to use claims and provider data from the new vendor; however, to gain a better perspective of utilization of services over time, for some services, in some instances the agency reviewed and analyzed data prior to CY 2014. In terms of setting thresholds, the state believes that at least three years of data is needed to accurately determine if there is a decrease in utilization or providers to the extent access problems can be identified. Thresholds for both utilization of services and the numbers of providers available for specific services will be established by using control limits of two standard deviations from the mean based on CY 2014 to CY 2016 data.

Comparative analysis of Medicaid payment rates to Medicare rates and other payer rates

Previously, for the plan submitted October 1, 2016 the NC Medicaid agency did not have access to payment rates for commercial or private insurers; however, the agency secured, through its reporting and analytics vendor Truven, aggregate commercial insurance rates for CY2016. Therefore, except for dental services,* this year's Plan will offer a comparison of Medicaid to Medicare and private insurance payment rates. Generally, North Carolina Medicaid rates are approximately 80% of the Medicare rate for the same service.

*(Since Medicare does not cover dental services, there were no Medicare rates for comparison. Therefore, the 2016 National Dental Advisory Service (NDAS) Comprehensive Fee Report was used as the basis for rate comparisons.)

Review Analysis of Primary Care Services

For purposes of the Plan, primary care services are divided into two parts: traditional primary care services and dental services. Traditional primary care services are services provided by physicians such as general practitioners, pediatricians, internists, and gynecologists, federally qualified health centers (FQHCs), rural health clinics (RHCs) and local health departments (LHDs). In the data below, the agency divided traditional primary care services into two parts delineating those services provided by physicians from services provided by FQHCs, RHCs and LHDs.

For both traditional primary care services and dental services, graphs of both numbers of providers and utilization data are provided from a statewide, rural and urban perspective. For purposes of the Plan, the determination of Urban and Rural counties was made by using the United States Department of Agriculture Economic Research Service's 2013 Rural-Urban Continuum Codes (http://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx), which "form a classification scheme that distinguishes urban counties by the population size of their metro area, and nonmetropolitan counties by degree of urbanization and adjacency to a metro area."

Data sources: NCTracks (MMIS) for provider enrollment, beneficiary enrollment and claims data used for utilization.

Results of CAHPS survey: As previously reported in Figures 8 and 9, North Carolina's child beneficiaries could obtain care and access health care appointments, when needed, approximately 90% of the time. The state does not currently have CAHPS data available regarding access to primary care services by adults. However, North Carolina is planning to release a request for proposals (RFP) to secure a certified CAHPS vendor to assist with providing data for services in the Plan.

Availability of primary care services – primary care physicians

Although primary care services consist of physicians, FQHCs, RHCs and LHDs, the following three graphs and map of the counties focus exclusively on the number of Medicaid primary care physicians trending over time for CY 2014, CY 2015 and CY2016. Figure 10 shows the total number of primary care physicians statewide. During the first quarter of 2014, the total number of primary care physicians per 1000 Enrollees is above two standard deviations from the mean than other quarters of 2014, 2015 and 2016. Figures 11 and 12 show the number of primary care physicians for rural and urban areas, respectively. As expected, the urban areas have greater numbers of primary care physician per 1000 beneficiaries than rural areas. Also, In the first quarter of 2014, urban areas had a greater number of primary care physician per 1000 beneficiaries which is above two standard deviations from the mean when compared to other quarters of CY2014, CY2015 and CY2016. Further analysis showed that this increase of providers located in urban areas. After the 1st quarter of 2014, participation of primary care physicians in

the urban areas fell but was stable for the rest of the 3-year period ending with last quarter of 2016. Figure 13 shows the number and locations of Medicaid primary care physicians by county. If a physician has offices in more than one location, these locations are counted. Except for Camden County in the northeastern part of the state, primary care physicians practice at one or more locations in every county of the state. With respect to Camden County, being adjacent to Pasquotank County, where Elizabeth City is located, affords access to more than half a dozen currently enrolled Medicaid primary care physicians.

Figure 10

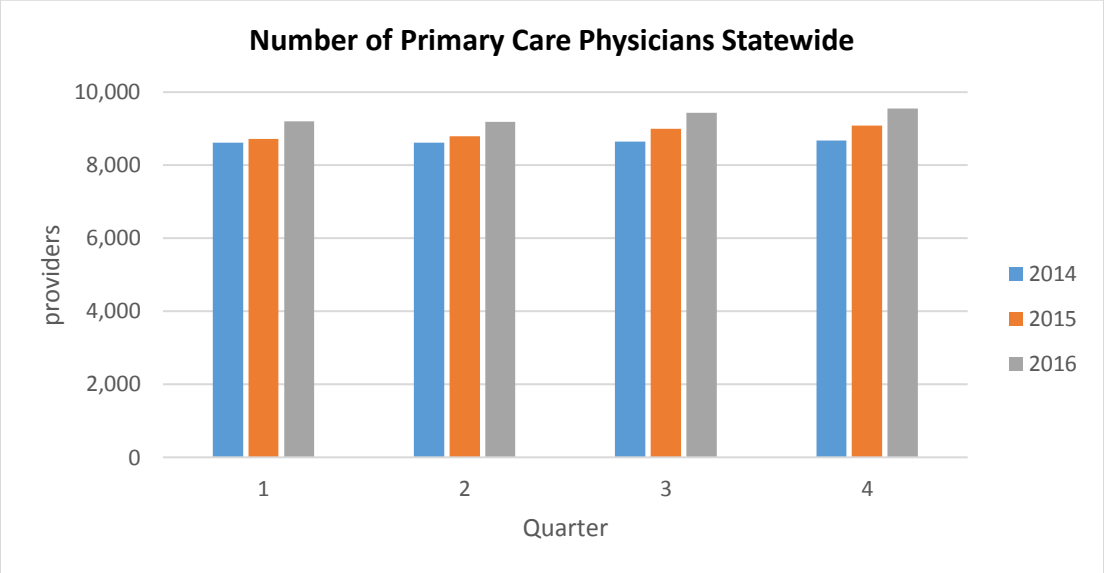


Figure 11

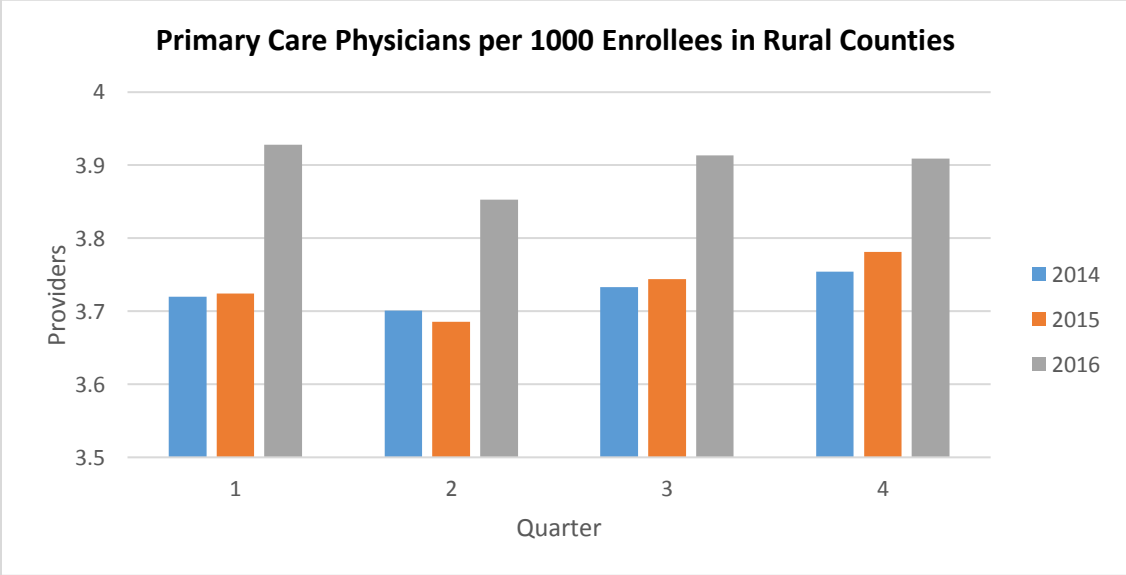


Figure 12

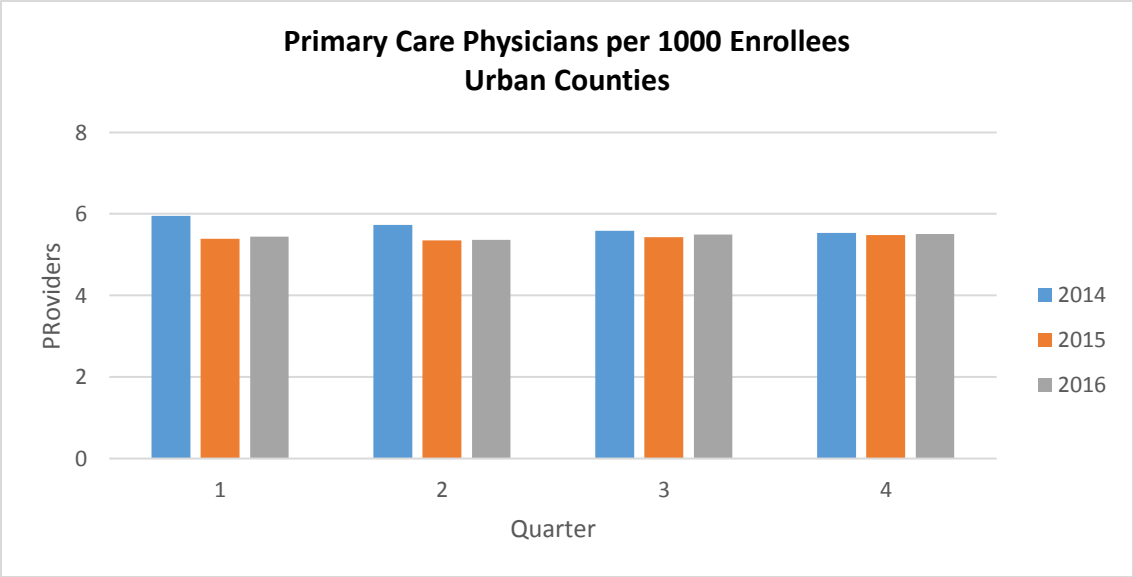
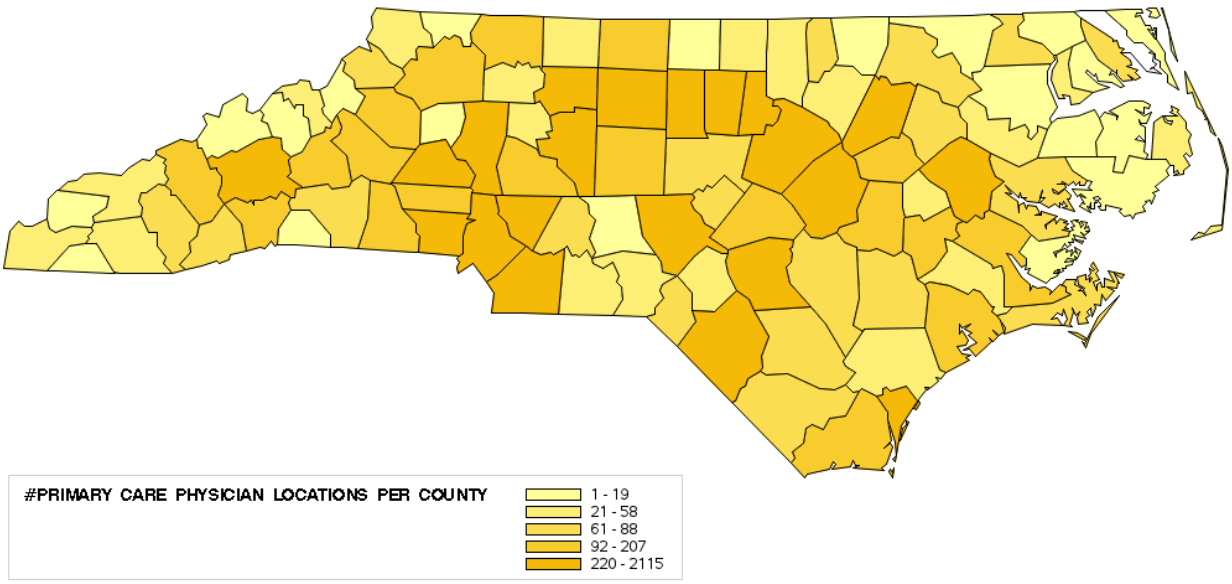


Figure 13

Geographic Distribution and Number of Primary Care Physicians by County
Last Quarter of 2016



Utilization of Services

The following three graphs show primary care physician visits per 1000 enrollees. Figure 14 shows statewide visits for CY 2014, CY 2015 and CY2016 and Figures 15 and 16 break down the visits by Rural and Urban and counties, respectively. As all three graphs show, utilization regarding visits per 1000 enrollees was down for all three areas, statewide, rural and urban, which represent decreases of 6.8%, 6.8% and 6.9%, respectively.

Typically, it is thought when patients do not visit their primary care physicians for whatever reasons, they may seek primary care through emergency departments or emergency rooms. Figure 19 shows statewide emergency room visits for CY 2014, CY 2015 and CY2016 and Figures 19a and 19b break down the visits by Rural and Urban and counties, respectively. During the last quarter of 2014, In the Rural areas the total number of emergency visits per 1000 Enrollees is above two standard deviations from the mean than other quarters of CY2014, CY 2015 and CY2016. As all three graphs show, utilization regarding visits per 1000 enrollees was down for all three areas, statewide, rural and urban, which represent decreases of 4.5%, 4.9% and 4.2%, respectively. To further analyze any potential impact of decreased utilization of primary care visits, the agency reviewed inpatient hospital admissions for the same period of CY 2014, CY 2015 and CY2016. Figures 20, 20a and 20b show inpatient hospital admissions per 1000 enrollees were down for all three areas, statewide, rural and urban, which represent decreases of 5.3%, 7.2% and 5.0%, respectively. * Regarding Inpatient visits, the visits per 1000 Enrollees is within the standard deviation from the mean.

In addition, Figure 21 contains data from the Healthcare Effectiveness Data and Information Set (HEDIS), which is "a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service (See more at: http://www.ncqa.org/hedis-quality-measurement#sthash.r0dWcoZ7.dpuf)." HEDIS has several measures including measures pertaining to access and availability of care. The data in Figure 17c was derived by analyzing claims data from the NCTracks data warehouse and contains data for the prior year for which the measure is labeled, e.g. HEDIS 2012 data is for CY2011, HEDIS 2013 data is for CY2012, etc. Figure 21 contains data through HEDIS 2016 (CY2015) and as the data demonstrates, access and availability of primary care services, for most all age groups, has continued to improve during the 4 years reported. For example, for adults 20-65+ years, Adults' Access to Preventative/Ambulatory Health Services improved from 58.2% from HEDIS 2015 to 66.1% HEDIS 2016. HEDIS 2017 data was not yet available as of the date of the Plan; however, once the data is available it will be analyzed in conjunction with other data related to access of primary care services.

The state believes decrease in rates of visits per 1000 enrollees is due to the increase in enrollees because of the Affordable Care Act and the possibility that new enrollees did not immediately require or seek primary care services within the year or so after they were enrolled. Additional data and analysis are needed to better understand the basis of the decrease. Additional data and further analysis are needed to more fully determine the basis of the decline in the number of physician visits.

Figure 14

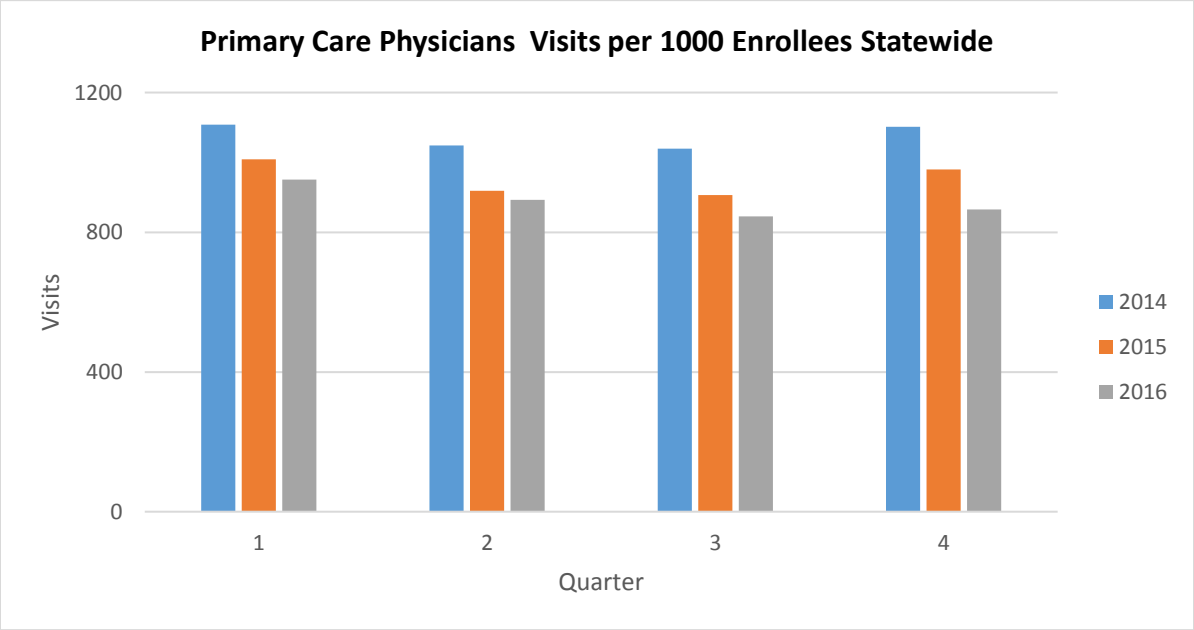


Figure 15

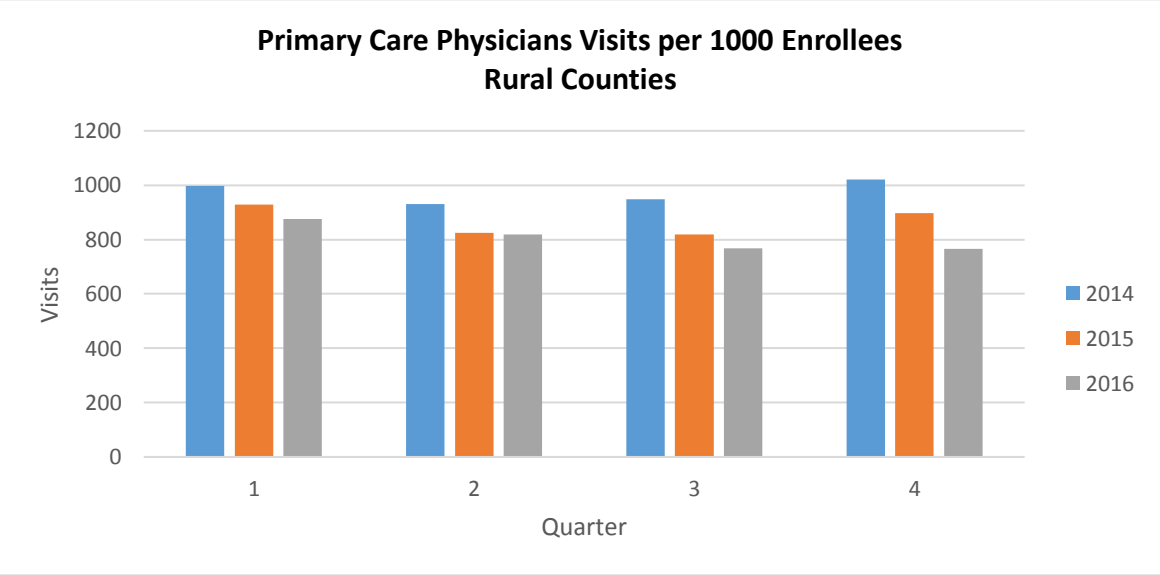


Figure 16

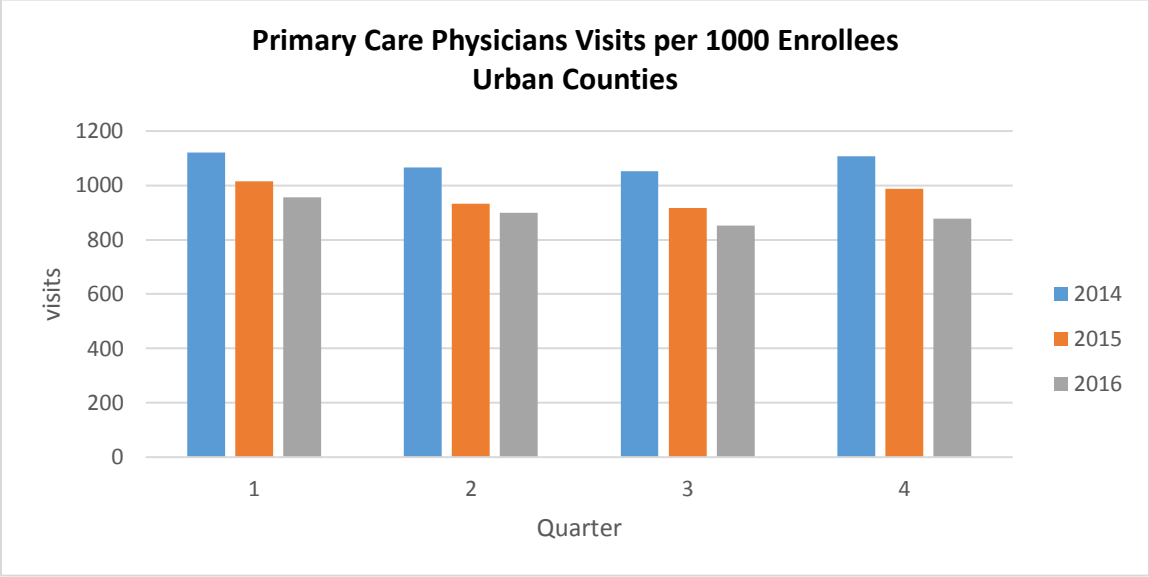


Figure 17

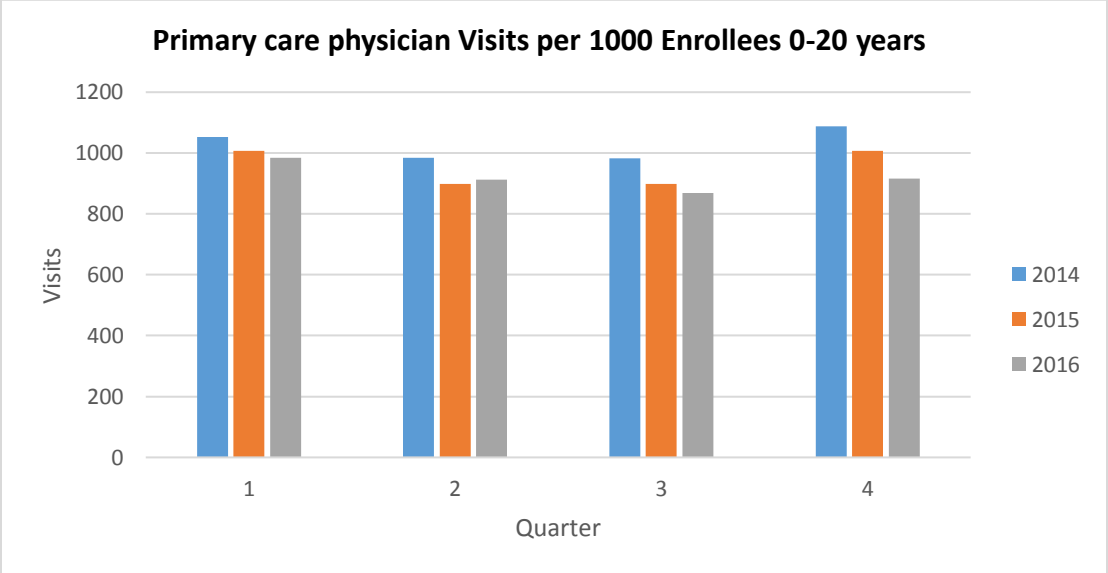


Figure 17a

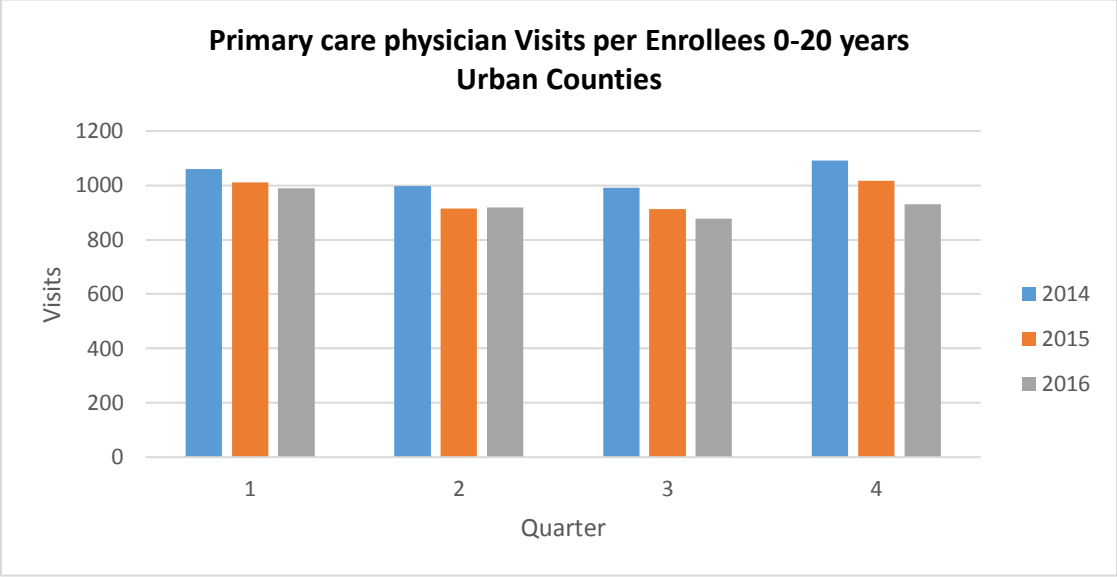


Figure 17b

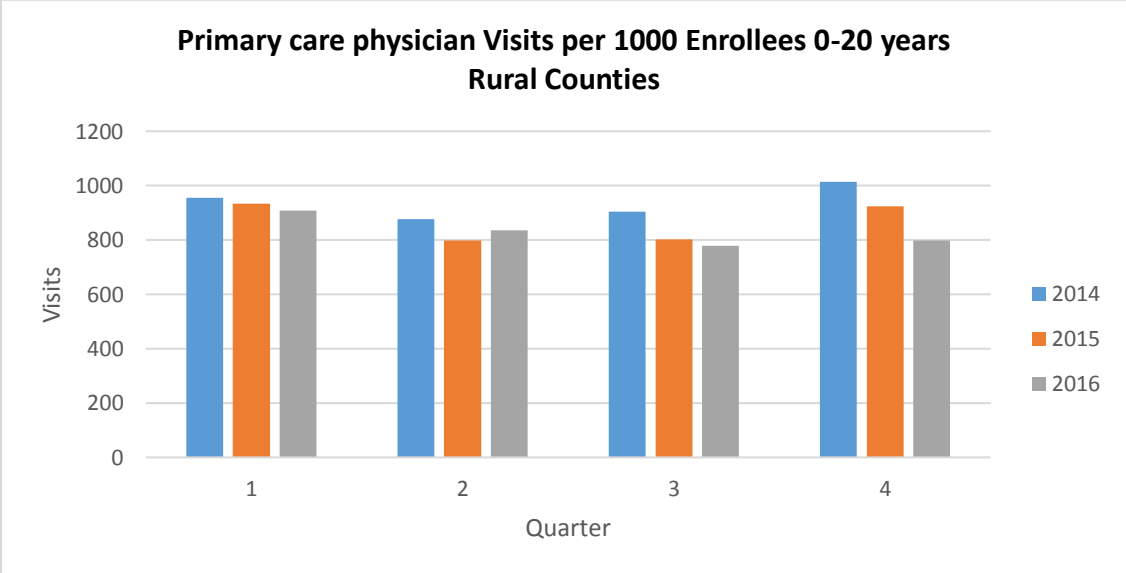


Figure 18

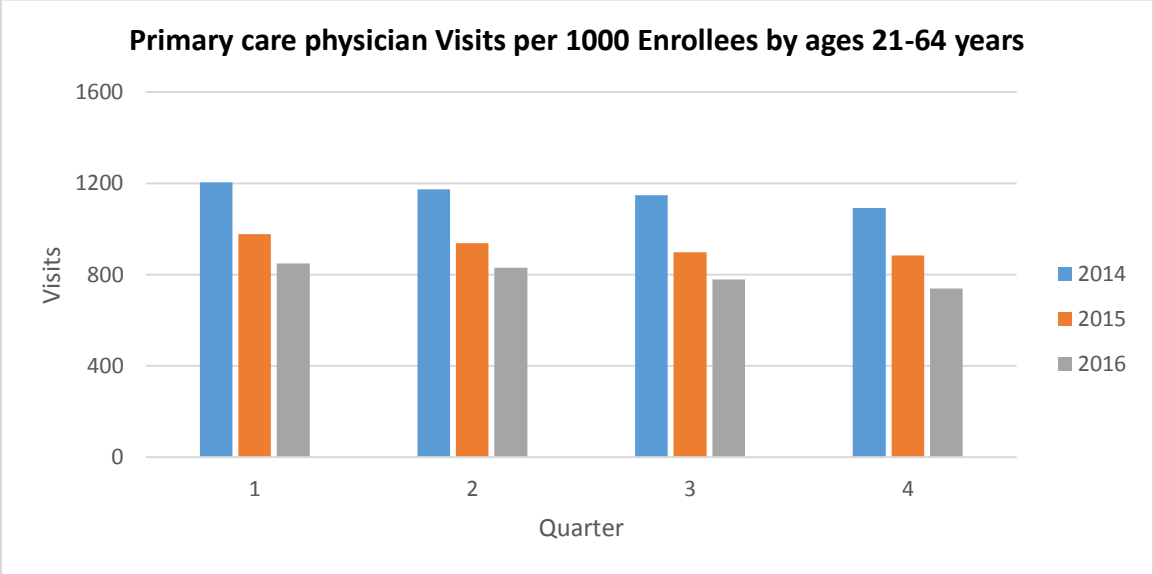


Figure 18a

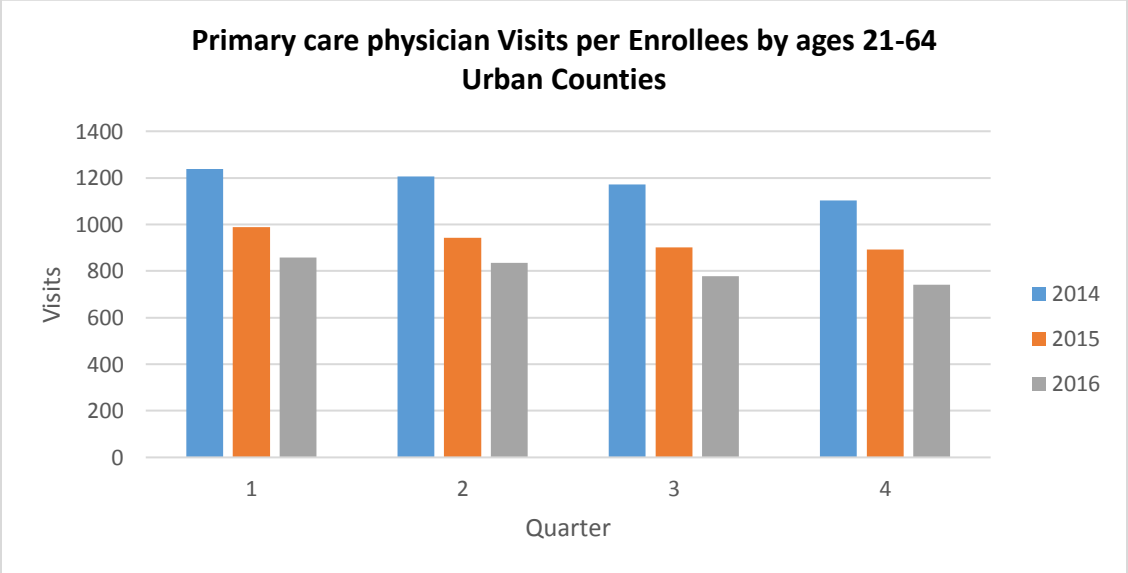


Figure 18b

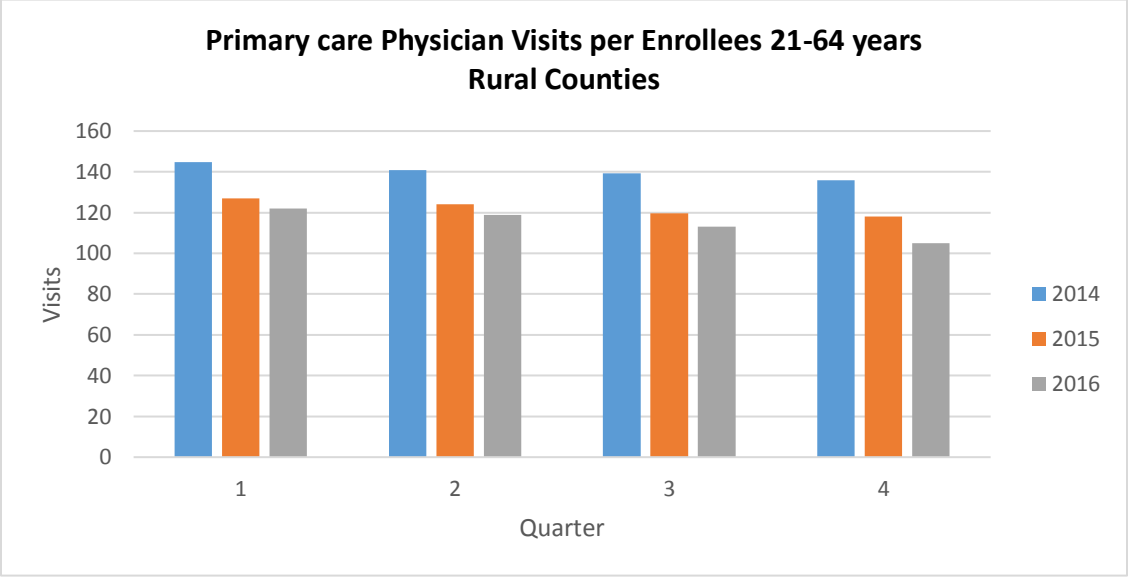


Figure 19

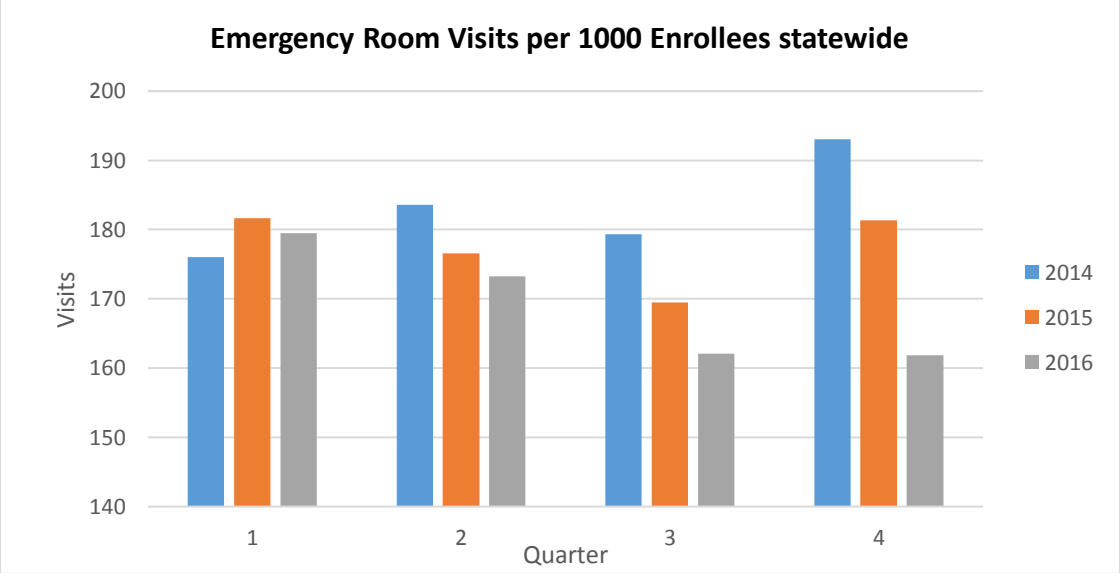


Figure 19a

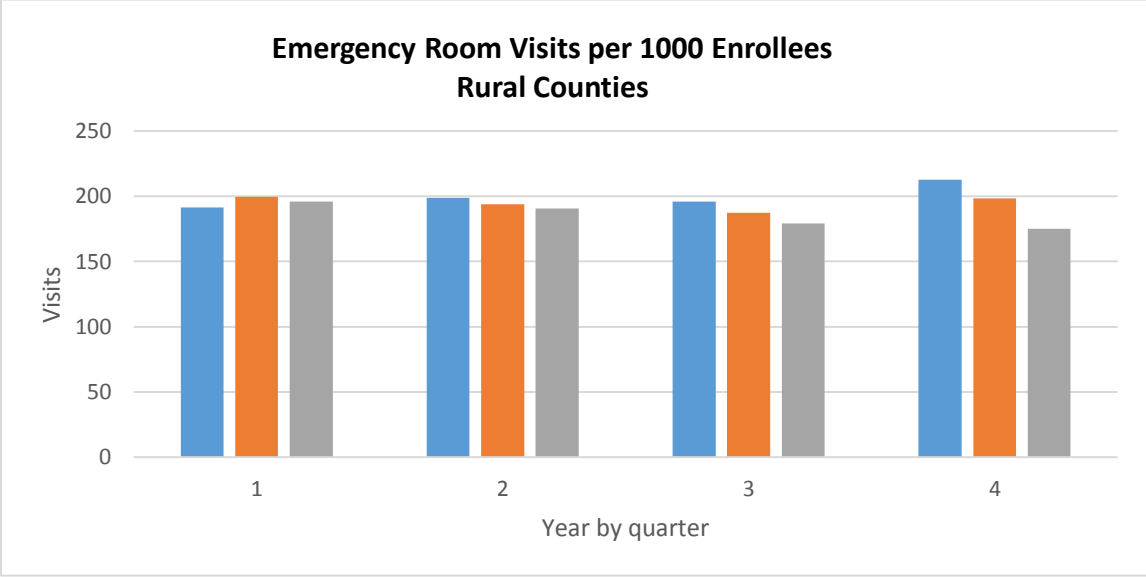


Figure 19 b

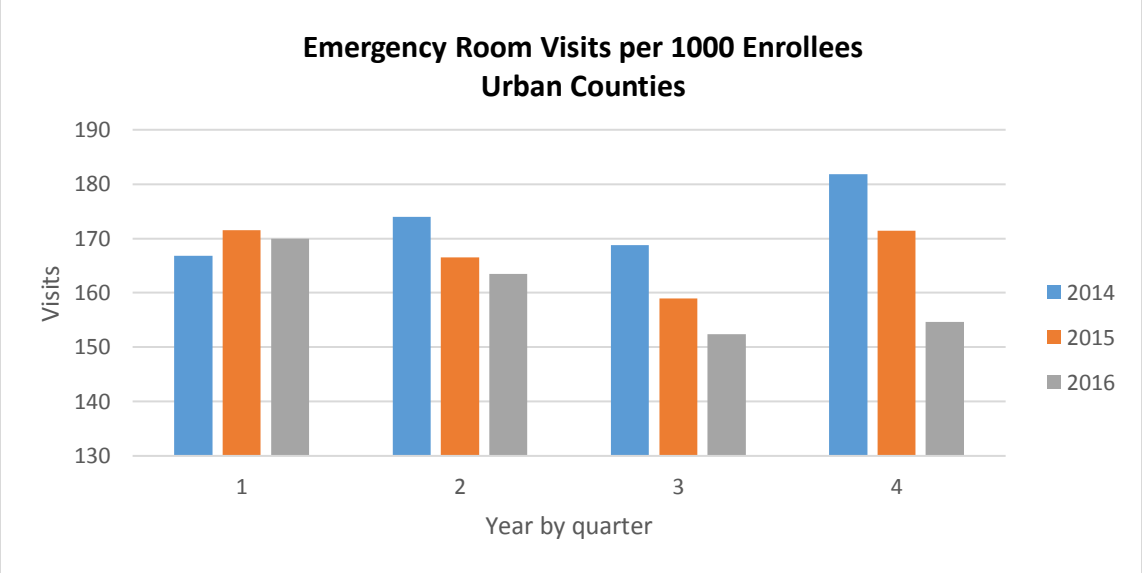


Figure 19c

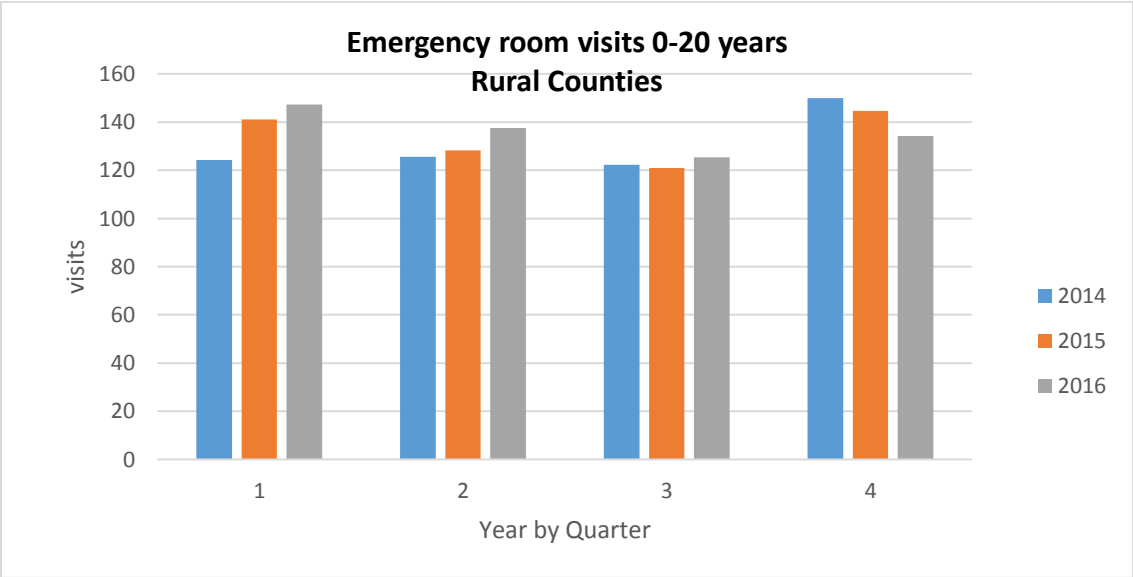


Figure 19d

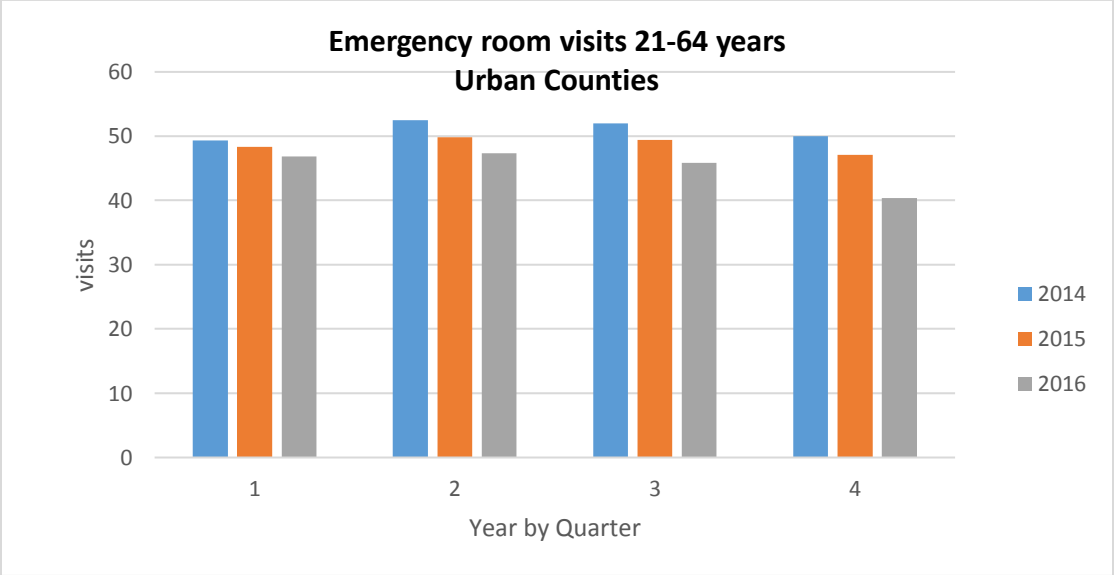


Figure 19 e

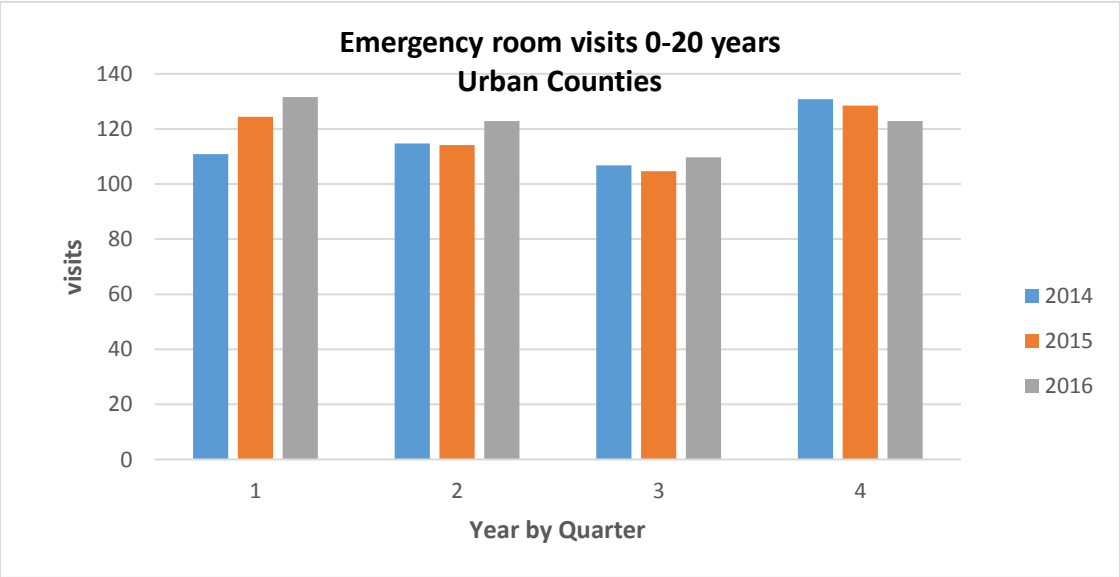


Figure 19f

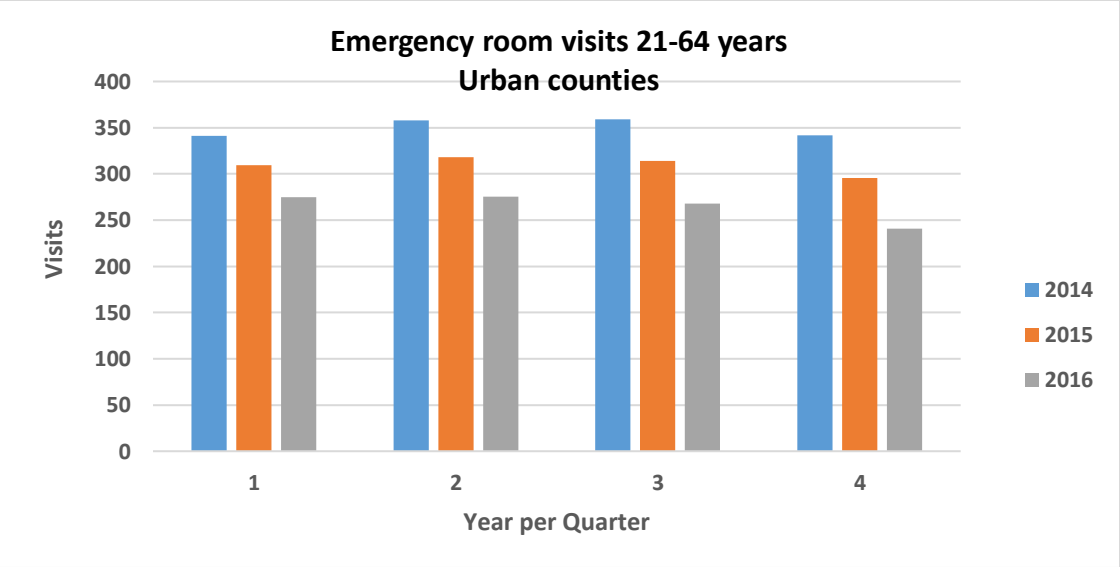


Figure 20

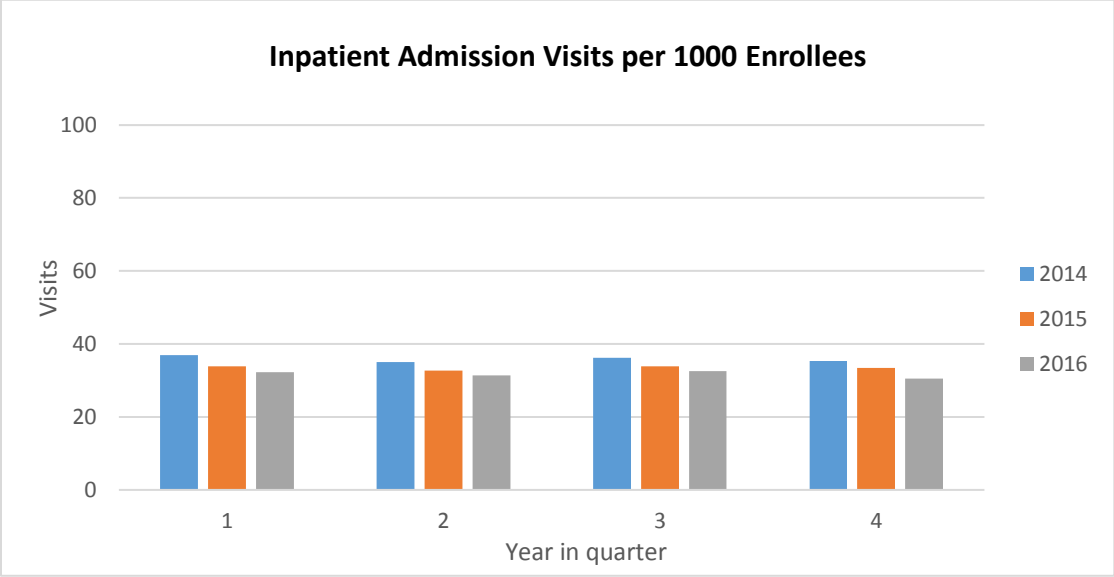


Figure 20a

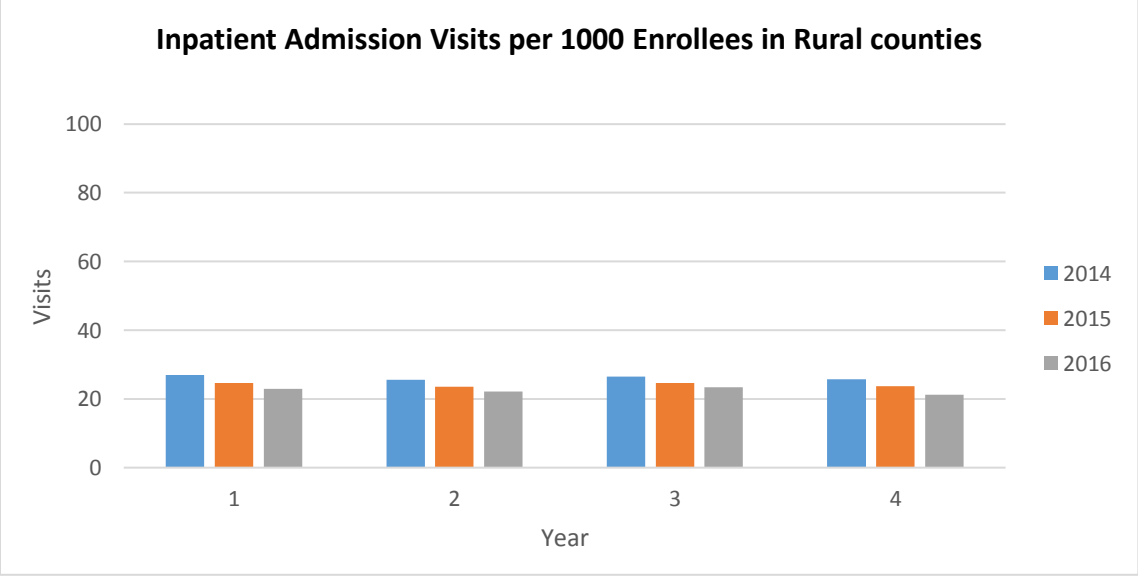


Figure 20b

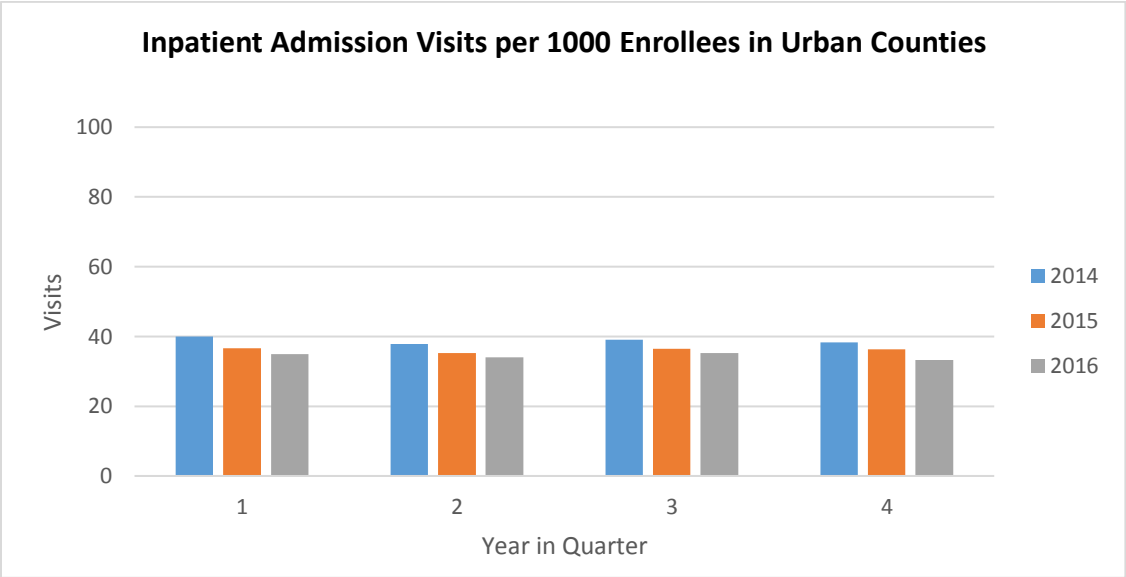


Figure 20c

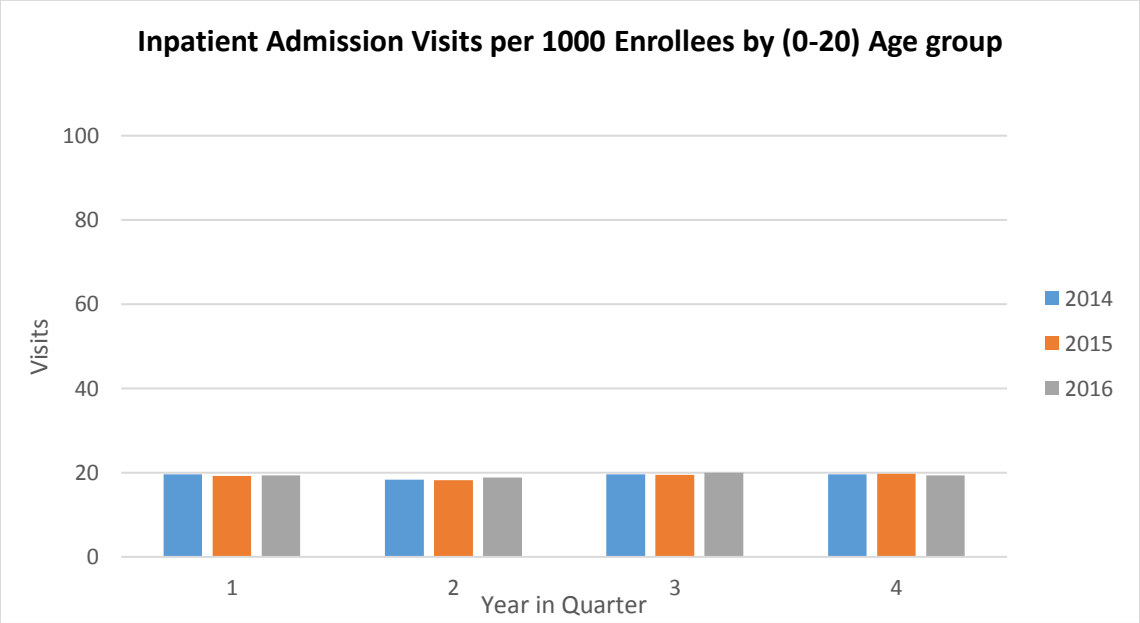


Figure 20d

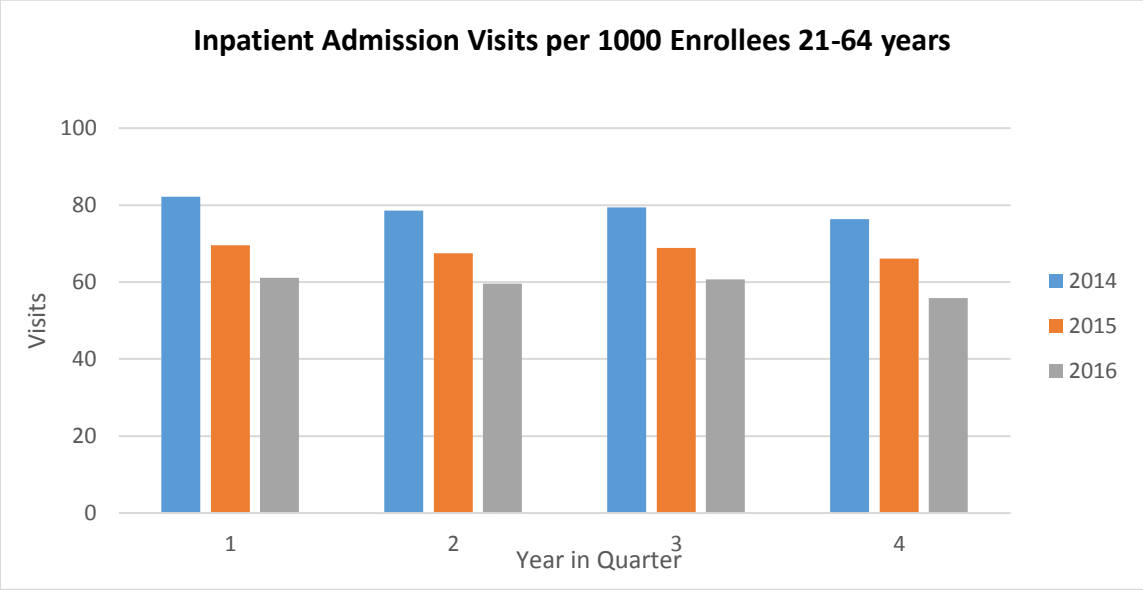


Figure 20e

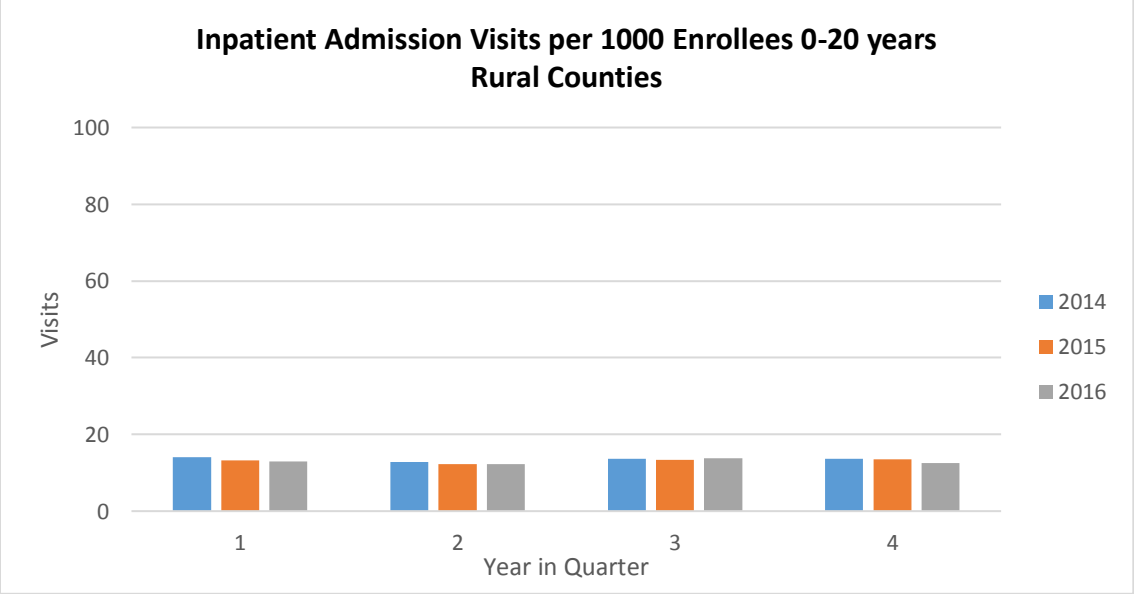


Figure 20f

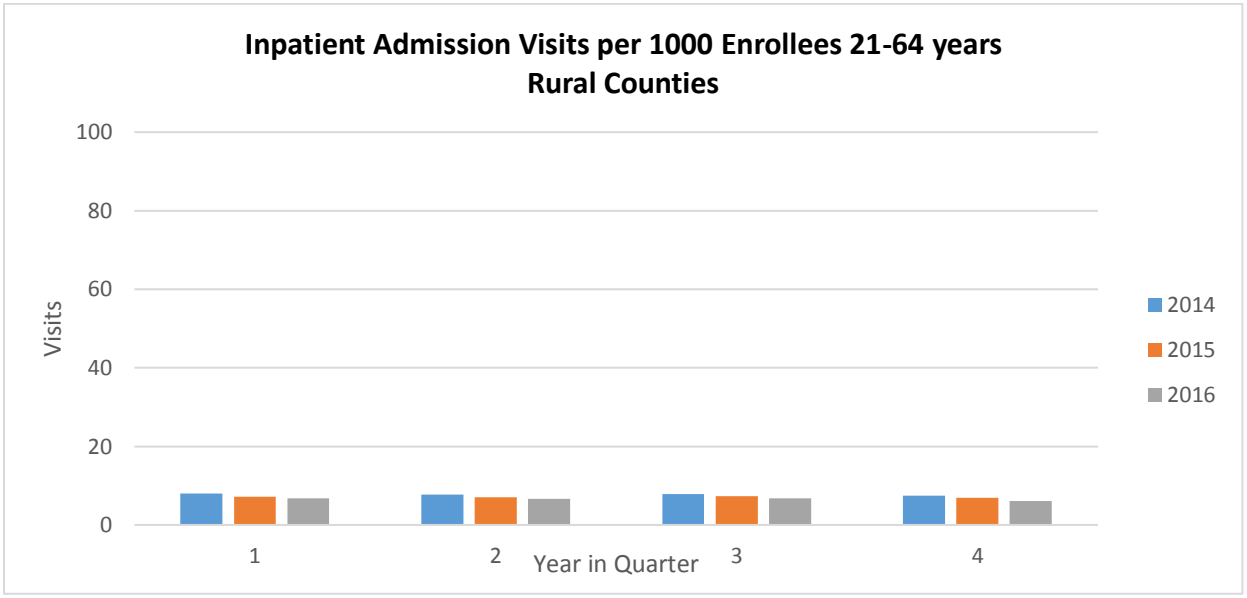


Figure 20g

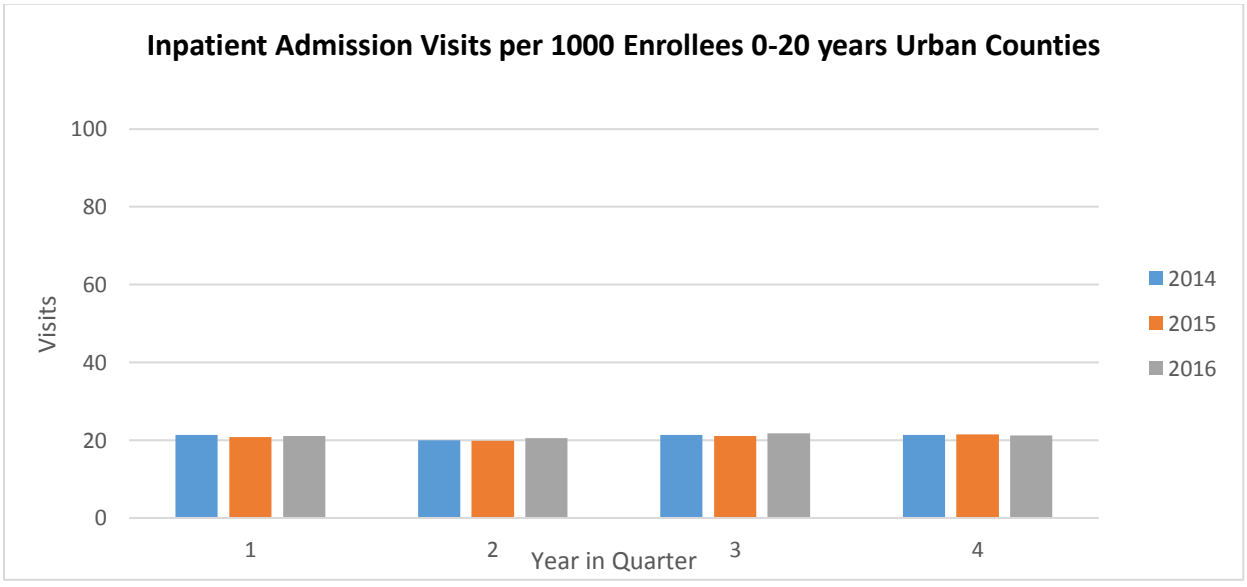


Figure 20h

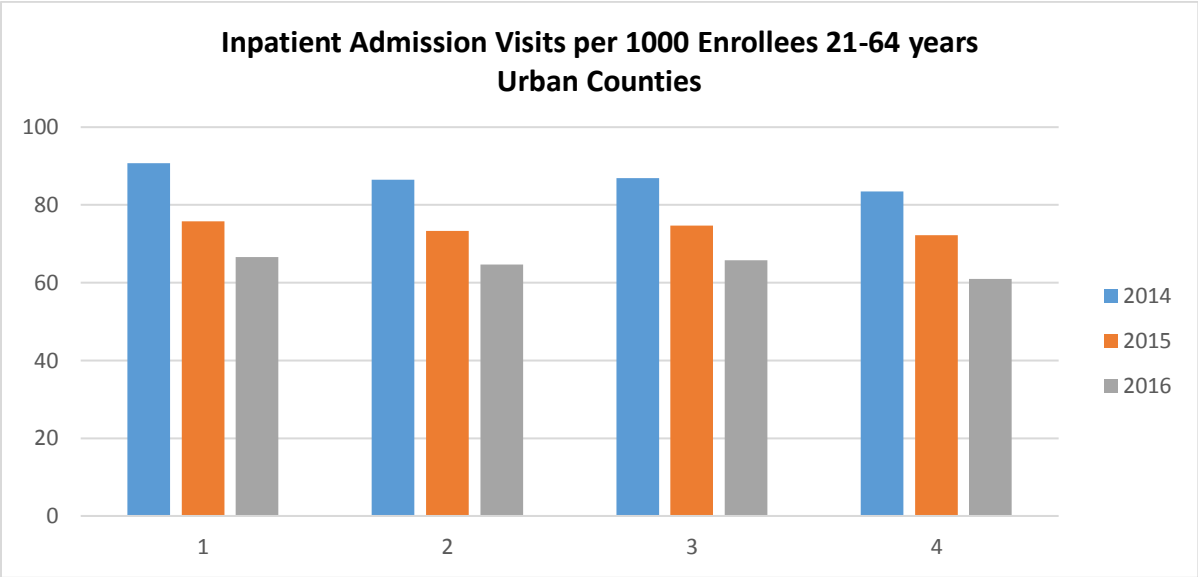


Figure 21
HEDIS Measures for Access and Availability of Care

(Note: HEDIS 2012 is for CY2011, HEDIS 2013 is for CY2012, etc.)

Access/Availability of Care	HEDIS 2012	HEDIS 2013	HEDIS 2014	HEDIS 2015	HEDIS 2016
AAP – Adults' Access to Preventative/Ambulatory Health Services					
Total: 20-65+	51.6%	50.4%	59.7%	58.2%	66.1%
CAP – Children and Adolescents' Access to PCP					
12-24 months	92.4%	92.0%	94.4%	93.9%	94.2%
25 months – 6 years old	85.2%	84.4%	86.0%	86.8%	87.7%
7-11 years old	85.9%	86.1%	87.4%	89.7%	89.3%
12-19 years old	82.2%	82.1%	86.1%	85.7%	84.4%
Average 12 months – 19 years old	**86.4%**	**86.2%**	**88.5%**	**89.0%**	**88.9%**

Availability of primary care services – FQHCs, RHCs and LDHs

The following three graphs and map of the counties focus on the number of FQHC, RHC and LHDs providers trending over time for CY 2014, CY 2015 and CY2016. Figure 22 shows the total number of providers statewide. Figures 23 and 24 show the number of FQHCs, RHCs and LHDs per 1000 beneficiaries for rural and urban areas, respectively. The overall trend appears to show more FQHCs, RHCs and LHDs in 2016 compared to 2014 and 2015. Since these providers, particularly FQHCs and RHCs, are typically focused on providing health care to rural areas, there is a higher concentration per 1000 beneficiaries in Figure 23 as compared to the urban areas in Figure 24. Figure 25 shows the number and locations of FQHCs, RHCs and LHDs by county. In addition, except for Currituck County as mentioned earlier, there are several Medicaid participating primary care primary care physicians available in every other county of the state as demonstrated in Figure 13. (OHCC check with)

Figure 22

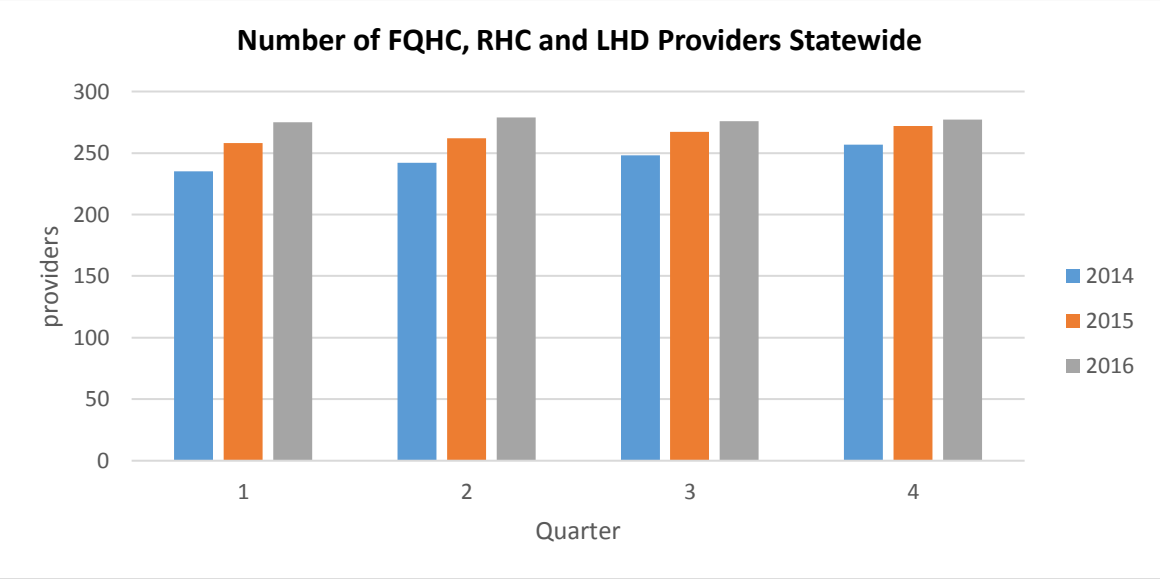


Figure 23

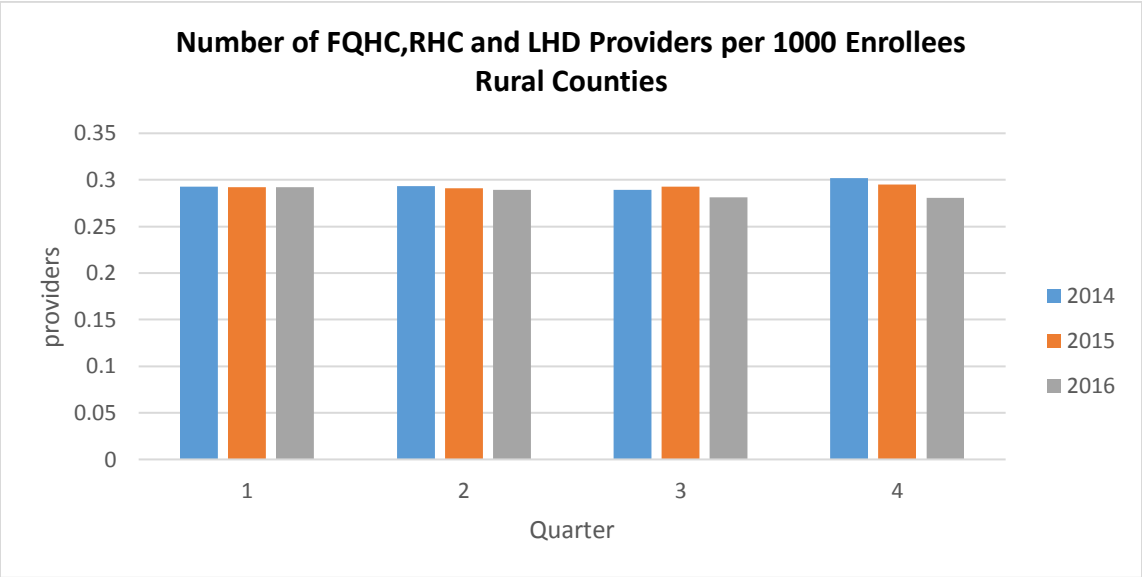


Figure 24

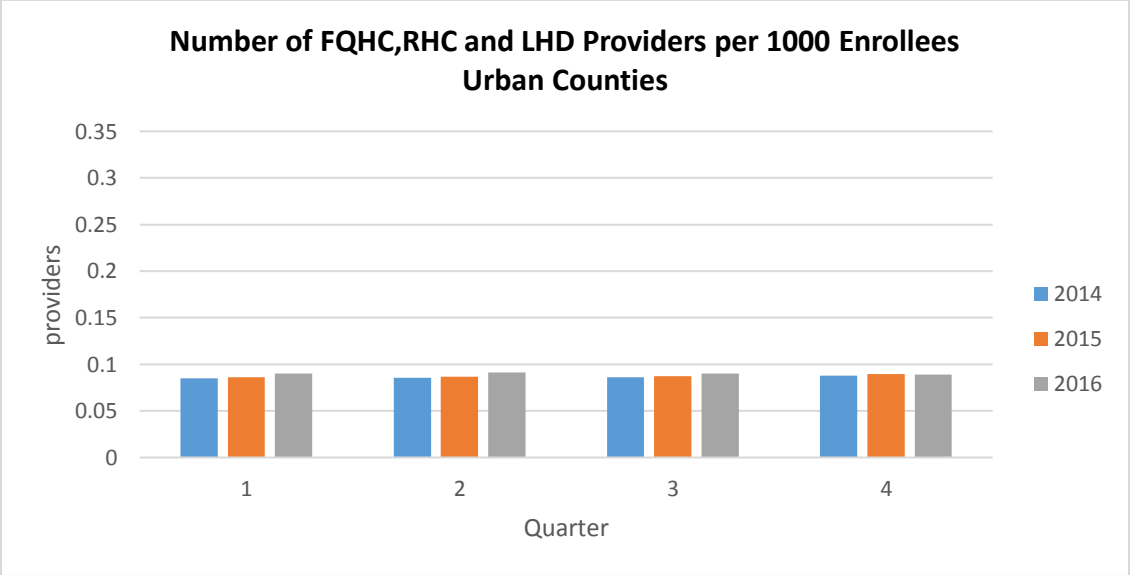
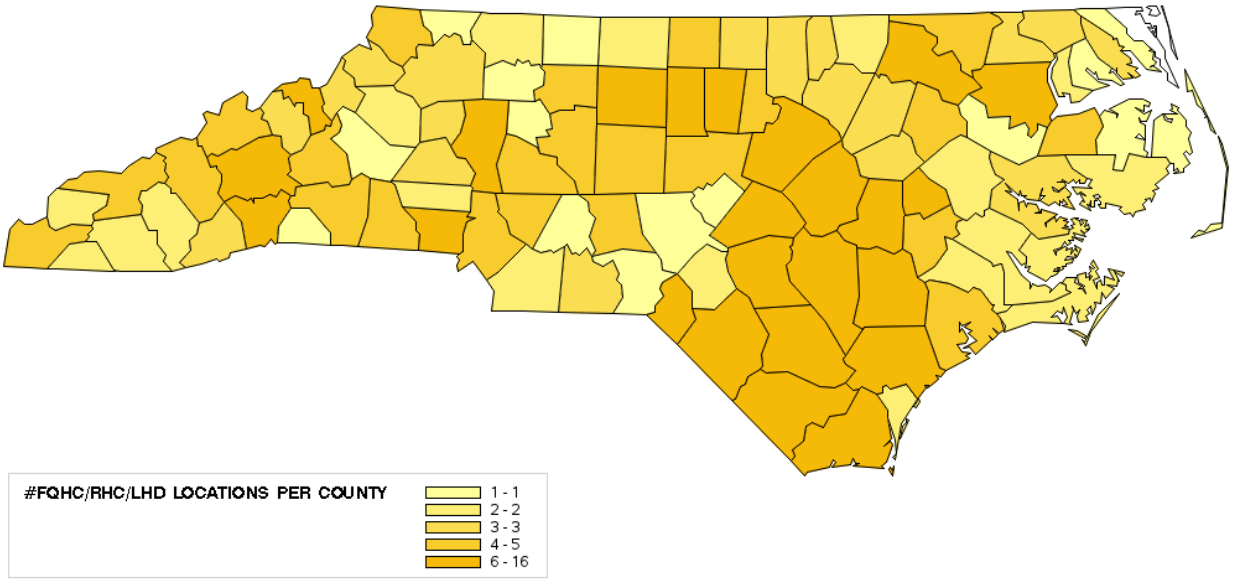


Figure 25

Geographic Distribution and Number of FQHCs, RHCs and LHDs by County



Utilization of services for FQHC, RHC and LDH providers

The following three graphs show visits per 1000 enrollees (beneficiaries) for FQHCs, RHCs and LHDs. Figure 26 shows statewide visits for CY 2014, CY 2015 and CY2016 and Figures 27 and 28 break down visits by Rural and Urban and by county, respectively. During the first quarter of 2014, the total number of visits per 1000 Enrollees is above two standard deviations from the mean than other quarters of 2014, 2015 and 2016. The increase in visits for the first quarter of 2014 was due to an increase in visits in the Urban areas of the state. Similarly, visits per enrollees in urban areas is above standard deviations from mean during the first quarter of 2014. The increase in visits the first quarter of 2014 which is above two standard deviations was due to visits of recently converted Health Choice kids to Medicaid. Since FQHCs and RHCs, by their very nature provide care to medically underserved areas such as rural areas, the data are expected to show that utilization in the rural areas is greater than utilization in the urban areas. For CY2015 to CY2016, all three graphs show a increase in utilization for visits per 1000 enrollees for all three areas, statewide, rural and urban, which represent increase of 4.7%, 9.3% and 2.4%, respectively. In addition, as previously noted, per Figure 17, emergency room visits did not increase in 2016 and in fact, decreased by 0.1%. The agency will continue to monitor emergency room visits and specific reasons for visits to determine if there are correlations with the availability and access of

primary care services. The increase in visits the first quarter of 2014 which is above two standard deviations was due to visits of recently converted Health Choice kids to Medicaid.

Figure 26

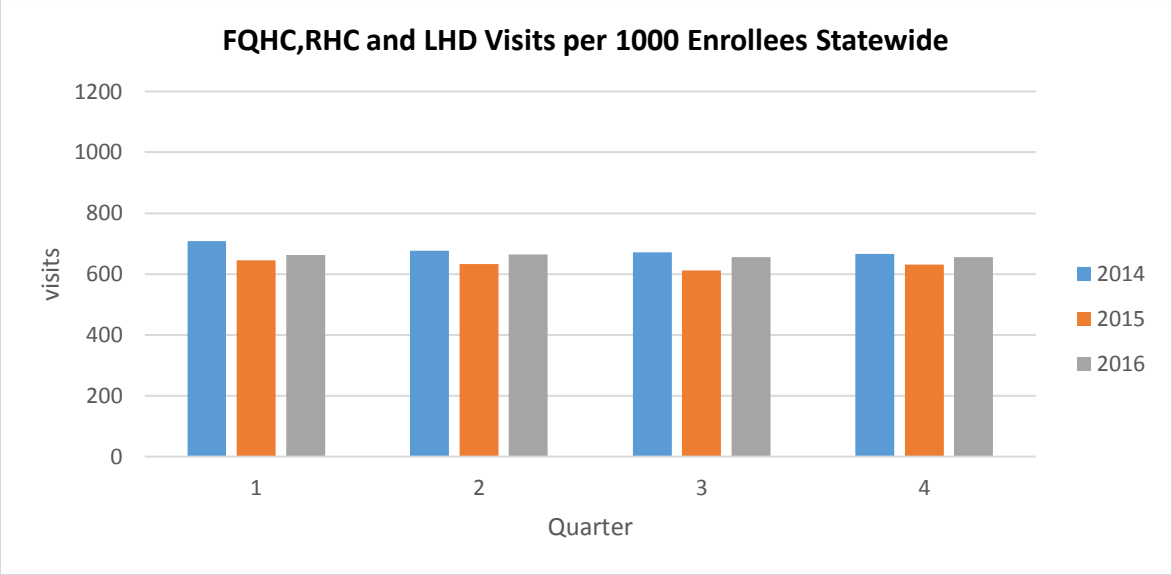


Figure 27

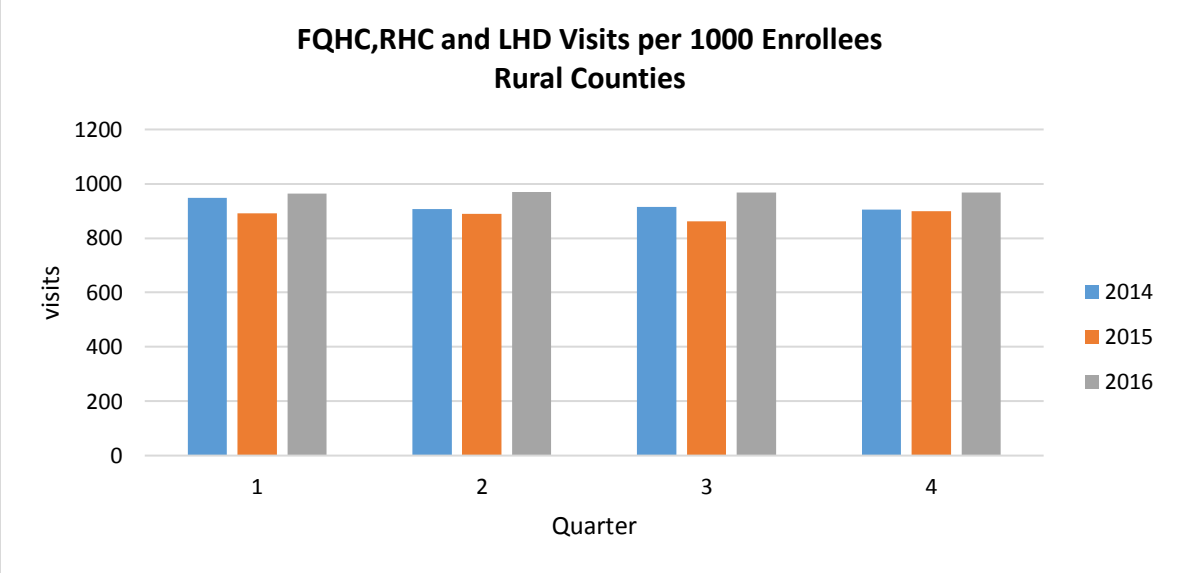


Figure 28

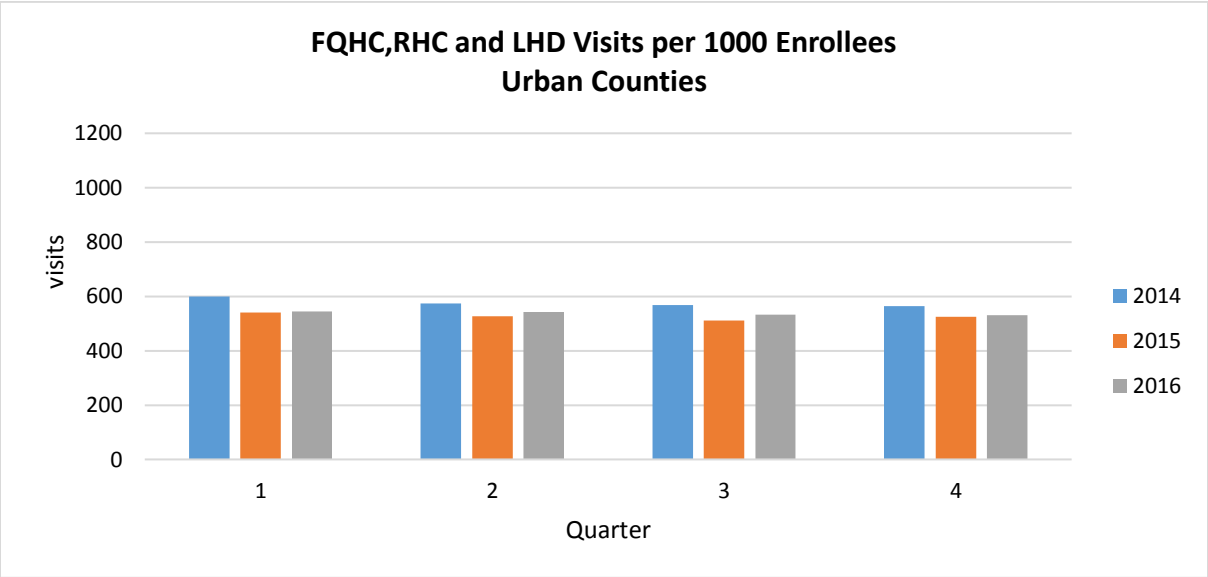


Figure 29

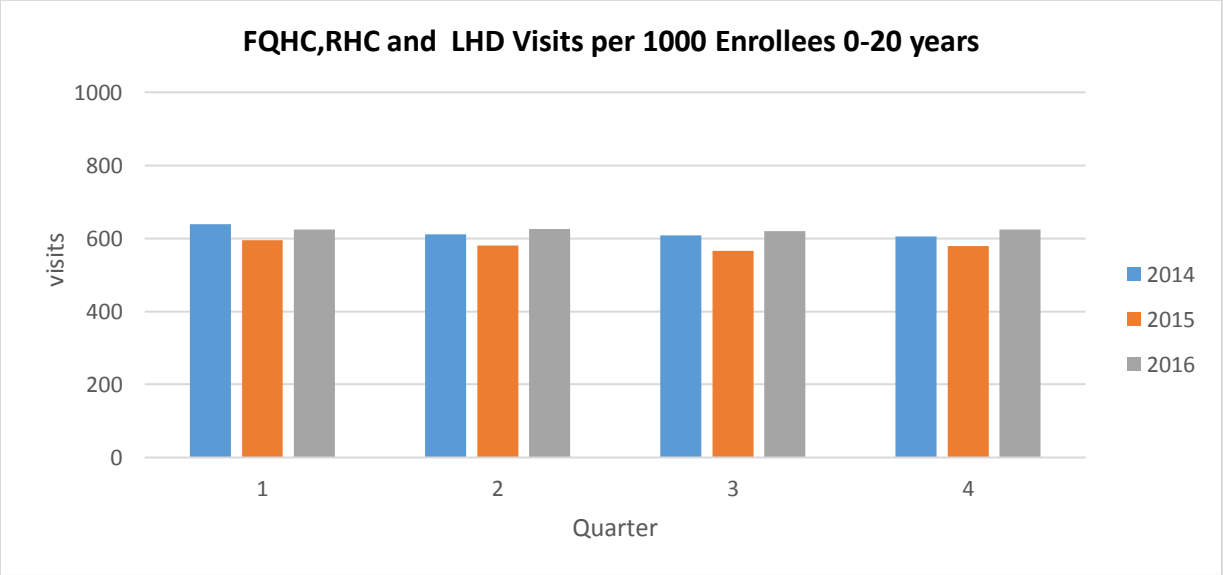


Figure 30

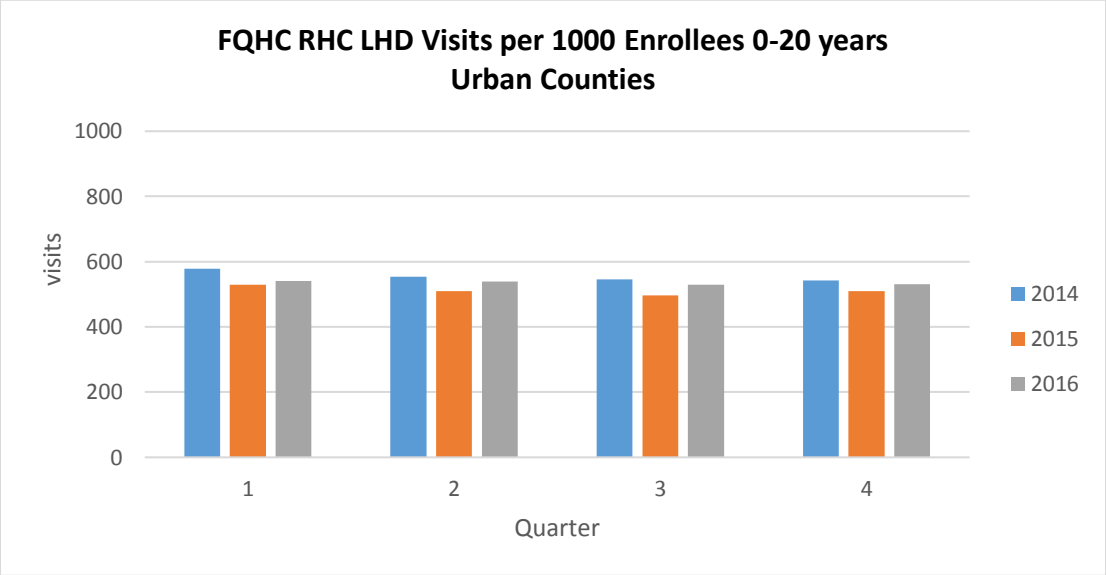


Figure 31

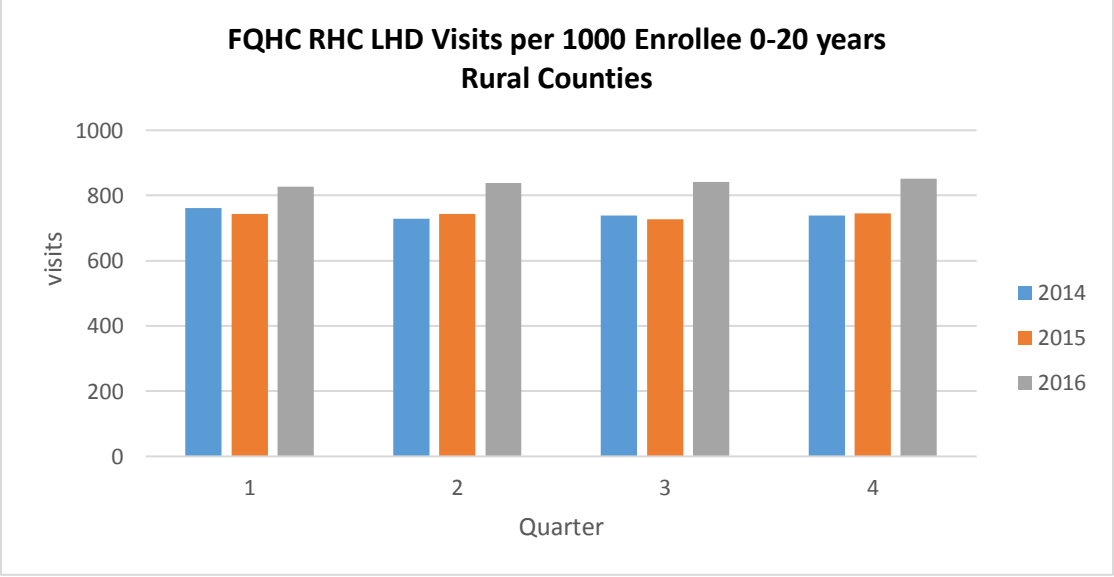


Figure 32

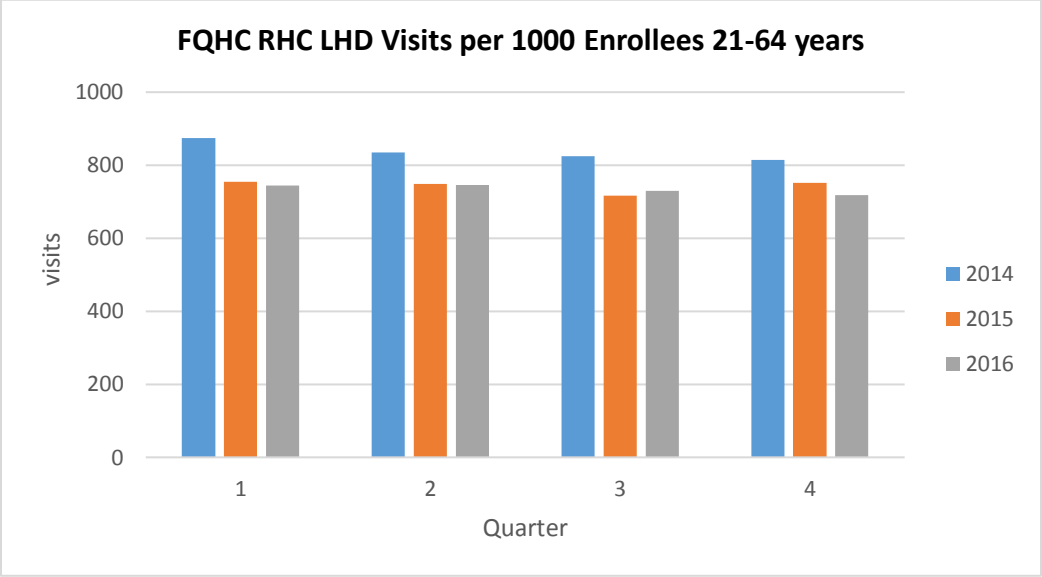


Figure 33

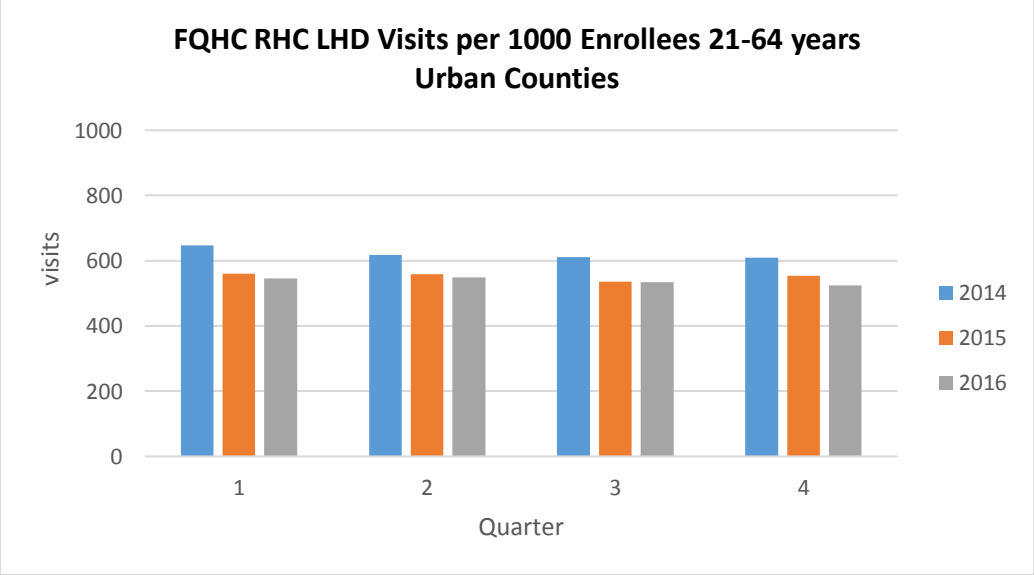
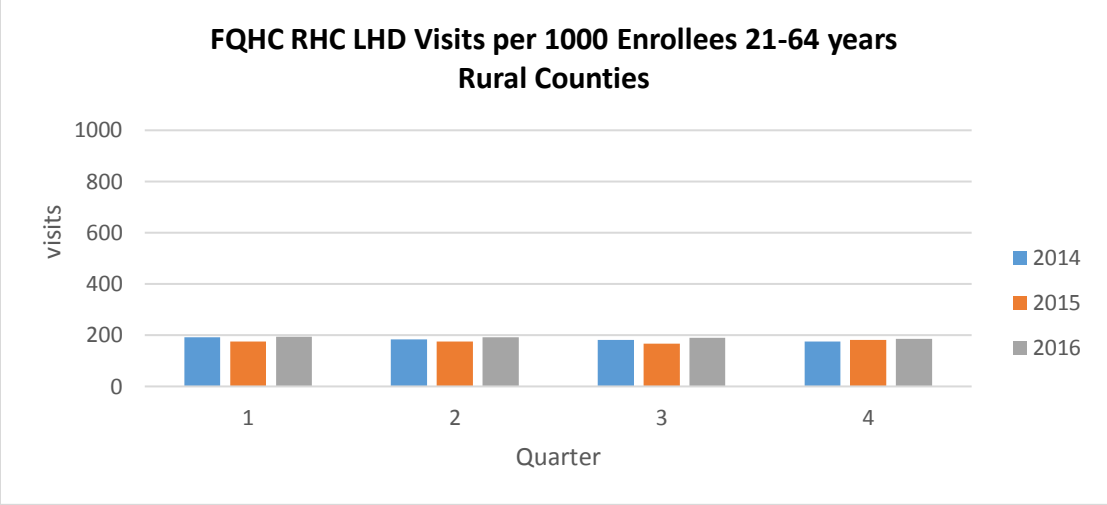


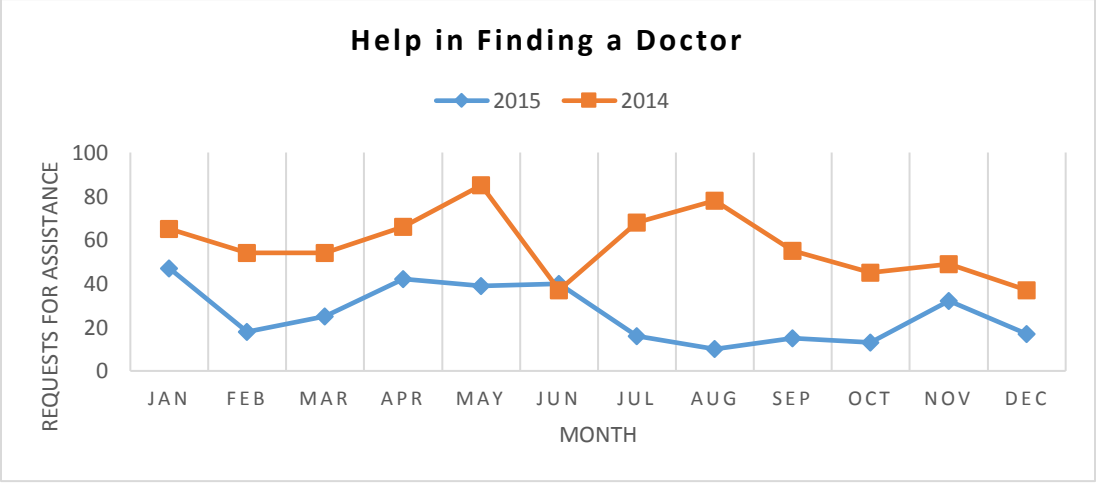
Figure 34



Concerns and issues raised by primary care providers or beneficiaries through provider feedback mechanisms

General feedback mechanisms from providers are from discussion of issues with various physician groups and associations and through public comments during the agency's Medical Care Advisory Committee (MCAC), which meets quarterly. In addition, the DMA Call Center responds to beneficiaries seeking assistance in finding a physician. Figure 35 below graph shows the number of calls received from beneficiaries requesting assistance in finding a physician in CY 2014 and CY 2015. Overall, calls for the year were down 50% in 2015 (average of 26 calls/month) compared to CY 2014 (average of 58 calls/month).

Figure 35



Comparative analysis of Medicaid payment rates to Medicare rates for all primary care

Figure 36 shows data for the top 10 codes for paid claims (in dollars) in which Medicare also covered and paid for the same CPT codes. Some CPT codes for Medicaid that were originally in the top 10 codes for paid claims were not covered by Medicare; therefore, those codes were omitted from the analysis. The rates in Figure 26 are for care provided in a facility, such as a hospital, or a non-facility, such as a physician's office or clinic. As previously stated, NC Medicaid typically pays approximately 80% of the Medicare rate and Figure 36 below shows this pattern is consistent for both facility rates and non-facility rates.

Figure 36

CPT code and Description	*NC Commercial Rural Rate (Dollars)*	*NC DMA Non-facility rate (Dollars)*	*Percentage of NC DMA Non-Facility Rate vs Commercial Rural Rate*	*NC DMA Facility rate (Dollars)*	*Percentage of NC DMA Facility rate vs Commercial Rural rate*	*NC Commercial Urban Rate (Dollars)*	*Percentage of NC DMA Non-Facility Rate vs Commercial Urban Rate*	*Percentage of NC DMA Facility Rate vs Commercial Urban rate*	*Medicare rate*	*Percentage of NC DMA Non facility Rate and Medicare Rates*
90471 -IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE	$22.96	$13.30	57.94%	$13.30	57.94%	$30.36	43.80%	43.80%	$23.19	57.35%
90472 -IM ADM PRQ ID SUBQ/IM NJXS EA VACCINE	$19.29	$13.30	68.94%	$13.30	68.94%	$22.48	59.18%	59.18%	$11.71	113.58%
90837 - PSYCHOTHERAPY W/PATIENT 60 MINUTES	$67.44	$90.91	134.81%	$90.91	134.81%	$62.25	146.04%	146.04%	$119.63	75.99%
99202 -OFFICE OUTPATIENT NEW 20 MINUTES	$40.66	$40.14	98.73%	$40.14	98.73%	$48.44	82.87%	82.87%	$68.62	58.50%
99203 -OFFICE OUTPATIENT NEW 30 MINUTES	$69.30	$80.86	116.68%	$60.58	87.42%	$79.70	101.46%	76.01%	$99.13	81.57%
99204 -OFFICE OUTPATIENT NEW 45 MINUTES	$115.98	$125.3	108.12%	$101.7	87.71%	$129.89	96.54%	78.32%	$151.19	82.94%
99205 -OFFICE OUTPATIENT NEW 60 MINUTES	$158.46	$158.5	100.03%	$132.3	83.54%	$163.77	96.79%	80.83%	$190.54	83.19%
99212 -OFFICE OUTPATIENT VISIT 10 MINUTES	$22.70	$32.50	143.15%	$20.51	90.34%	$30.37	107.01%	67.53%	$39.90	81.45%

99213 -OFFICE OUTPATIENT VISIT 15 MINUTES	$43.47	$54.26	124.83%	$40.13	92.32%	$59.02	91.94%	68.00%	$67.19	80.76%
99214 -OFFICE OUTPATIENT VISIT 25 MINUTES	$73.57	$81.76	111.13%	$62.08	84.38%	$94.58	86.44%	65.64%	$99.03	82.56%
Average rates and Percentages	**$63.38**	**$69.09**	**106.44%**	**$57.51**	**88.61%**	**$72.09**	**91.21%**	**76.82%**	**$87**	**79.79%**

Review Analysis of Primary Care Services – Dental Services

Data sources: NCTracks (MMIS) for provider enrollment, beneficiary enrollment and claims data used for utilization

Results of CAHPS survey: Currently, the state does not have CAHPS data available regarding access to dental services. However, North Carolina has released a request for proposals (RFP) to secure a certified CAHPS vendor to assist with providing data for services in the Plan.

Availability of primary care services – Dental Services

The following three graphs and map of the counties focuses on the number of dentists trending over time for CY 2014, CY 2015 and CY2016. Figure 37 shows the total number of providers statewide and Figures 38 and 39 show the number of dentists per 1000 beneficiaries for rural and urban areas, respectively. However, the overall trend appears to show greater numbers of dentists in the urban areas than in rural areas. Figure 40 shows the number and locations of dentists by county. Except for Gates, Camden, Tyrrell and Hyde counties in the northeastern and eastern part of the state, respectively, dental services are available at one or more locations in every county of the state. With respect to these four counties, each of them border one or more counties where dental services are available within one hour of driving time. In addition, Hyde County schools are serviced by the Dare County Health Department's mobile dental van.

Figure 37

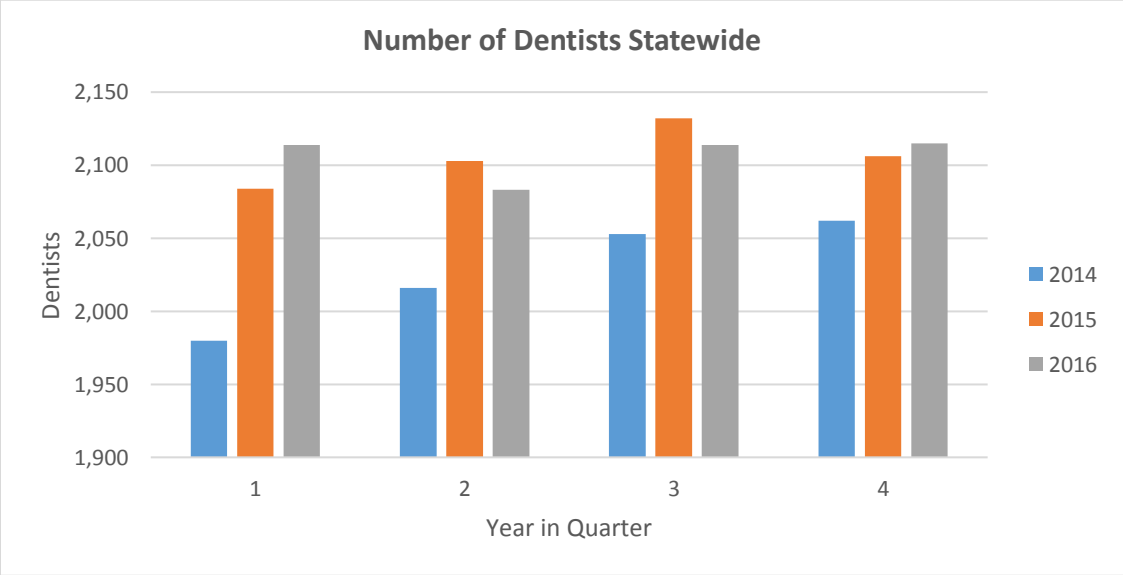


Figure 38

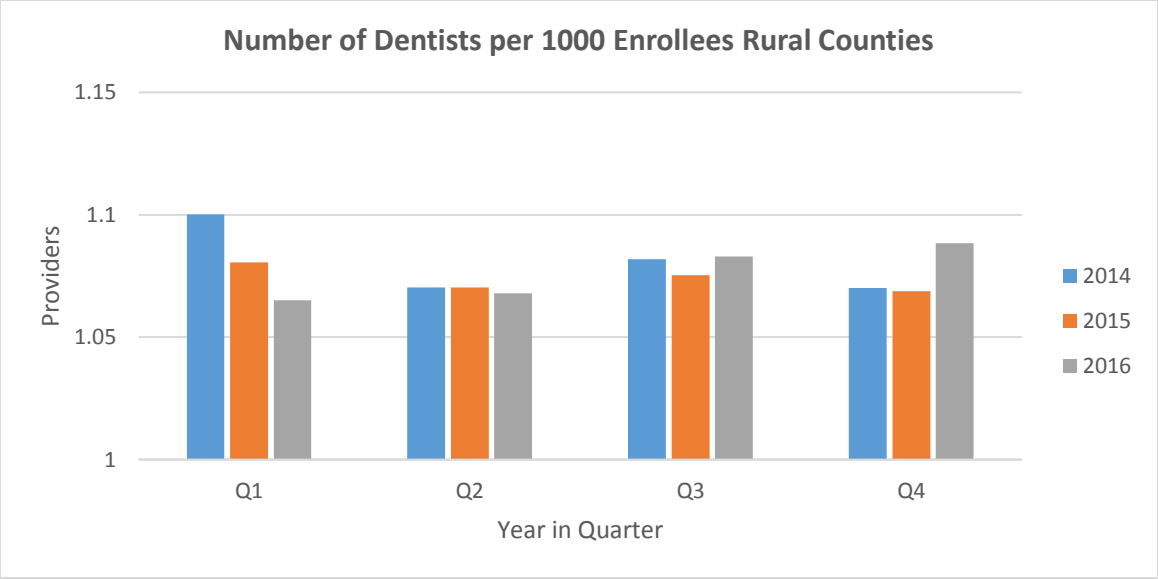

Number of Dentists per 1000 Enrollees Rural Counties
1.15
1.1
1.05
1
Providers
Q1
Q2
Q3
Q4
Year in Quarter
2014
2015
2016

Figure 39

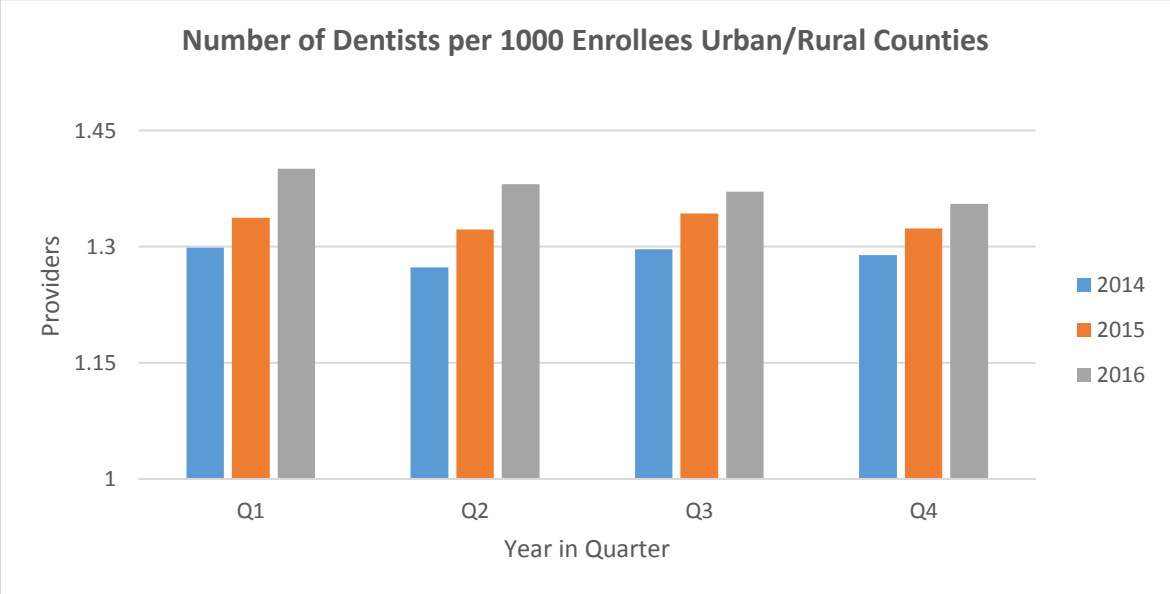
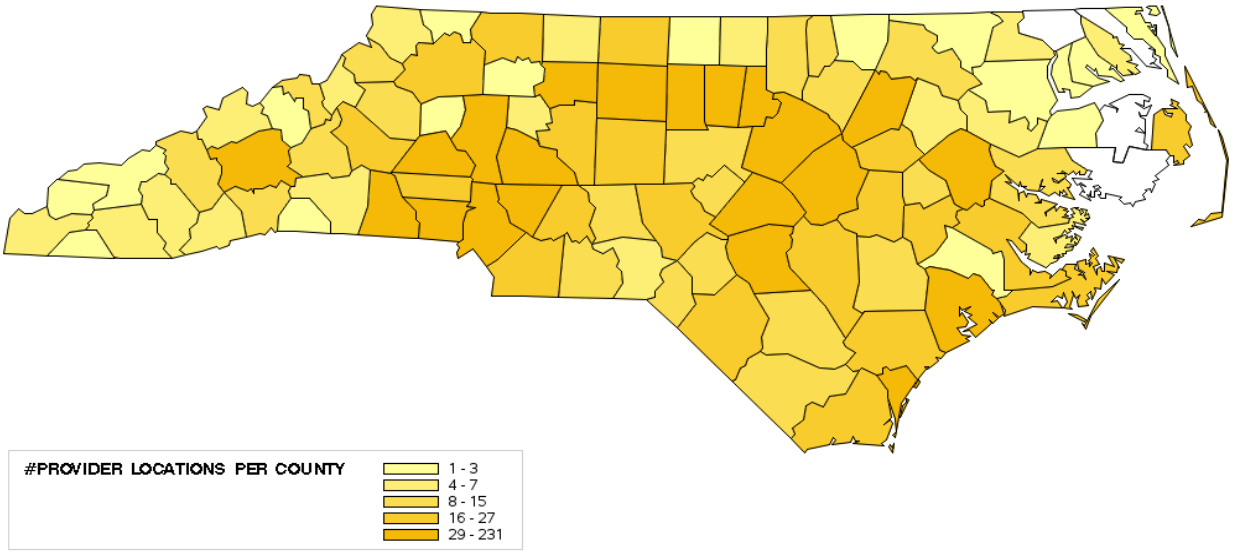

Number of Dentists per 1000 Enrollees Urban/Rural Counties
1.45
1.3
1.15
1
Providers
Q1
Q2
Q3
Q4
Year in Quarter
2014
2015
2016

Figure 40

Geographic Distribution and Number of Dental Providers by County for CY2016



Utilization of services for dental providers

The following three graphs demonstrate visits per 1000 enrollees (beneficiaries) for dental services. Figure 41 shows statewide visits for CY 2014, CY 2015 and CY2016 and Figures 42 and 33 break out the visits by Rural and Urban and counties, respectively. During the last quarter of 2016, the total number of visits per 1000 Enrollees is below two standard deviations from the mean than other quarters of 2014, 2015 and 2016. Similarly, in rural counties the visits per 1000 beneficiaries during the last quarter of 2016 is below standard deviations from mean. Regarding visits/1000 enrollees for all three graphs, CY 2015 has more pronounced "valleys" and fewer "peaks" than CY 2014. This reflects several primary issues:

- The number of eligible beneficiaries continues to increase, due to the impact of the Affordable Care Act (ACA).
- North Carolina's dental reimbursement rates have not been increased since 2008 and continue to fall further behind market-based benchmarks, leading some providers to opt out of participating in NC Medicaid.
- As the economy improves and NC's Medicaid rates remain stagnant, participation of providers may be at risk of declining as they seek to fill vacant appointment slots with private pay patients. Medicaid rate increases should be considered soon, if the state

expects utilization of services to remain sufficiently high or stable and seeks to maintain the optimal oral health status of its' beneficiaries.

- Note the consistent seasonal trends of the number of dental visits—number of visits are lower in the winter months, climb in the spring months and remain fairly level up until the holidays.
- The number of participating Medicaid-enrolled dentists increased slightly from CY 2014 to CY2016.
- Other DMA paid claims reports from 2013-15 demonstrate that the number of billing dental providers has decreased from 1,859 to 1,753 over this time fame.
- At the same time, the number of significant billing providers (paid claims equal or greater than $10,000) has increased to roughly 1300 providers. It appears that as some billing providers choose to drop out of the program, other enrolled dental providers have stepped up to meet the demand for services. This finding would also be consistent with trends that show that more and more NC Medicaid and CHIP beneficiaries receive treatment in large group practices as opposed to solo or small group practices.

Figure 41

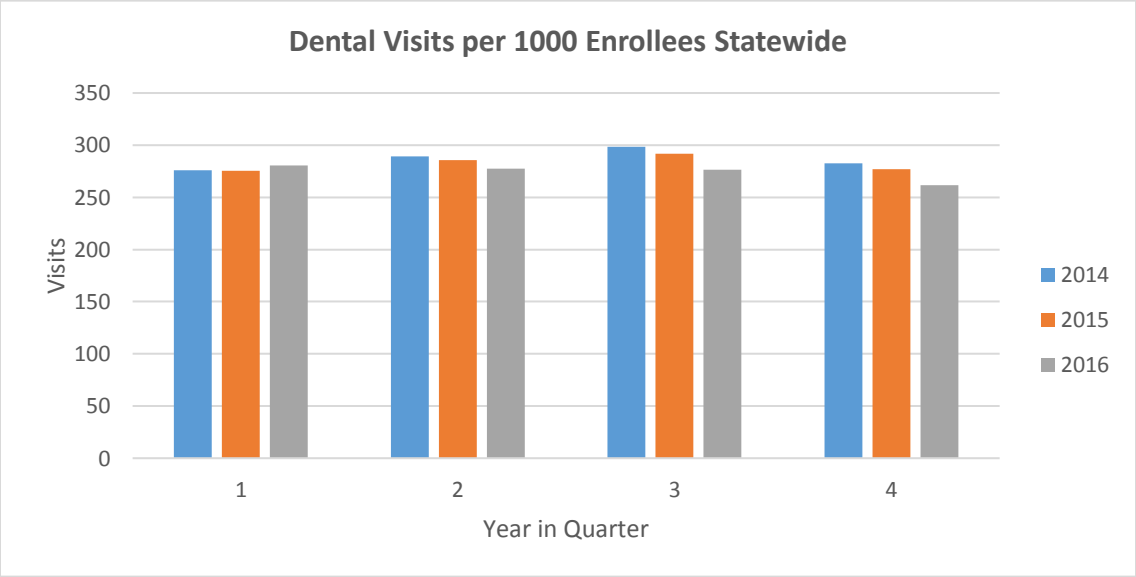


Figure 42

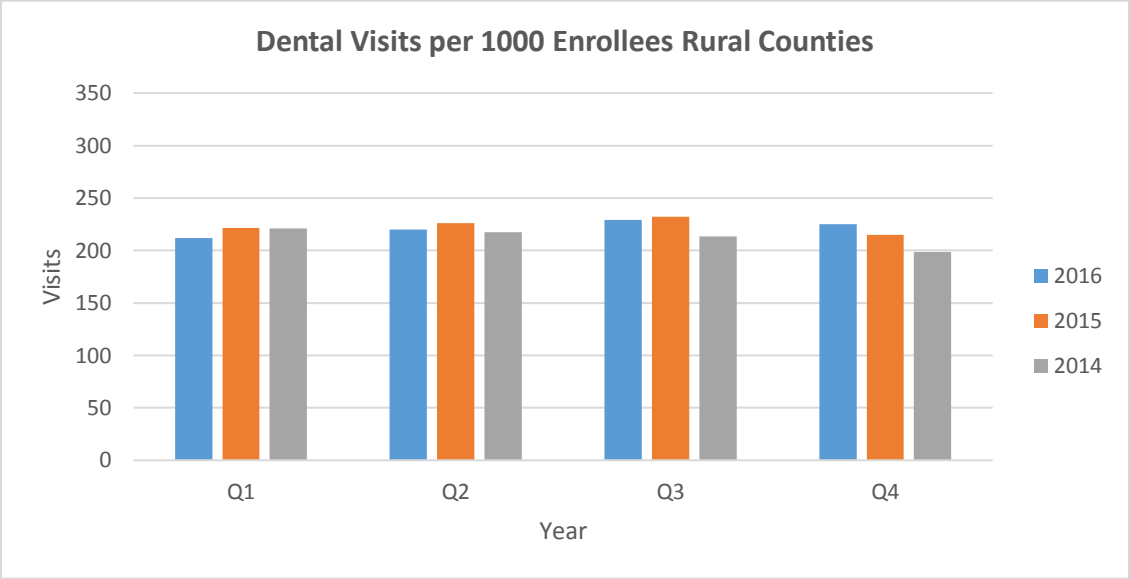


Figure 43

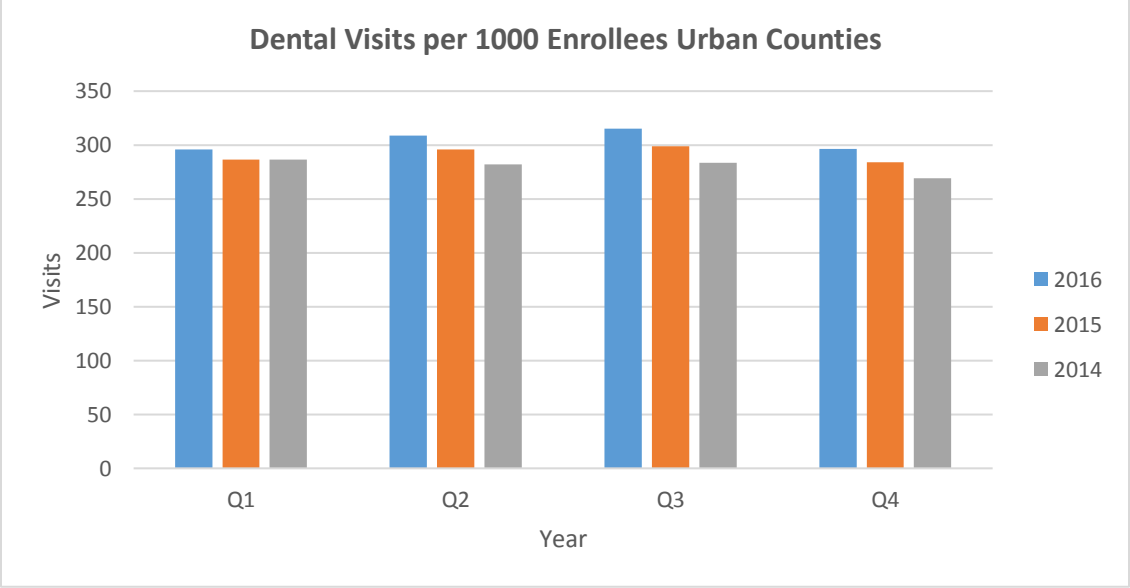


Figure 44

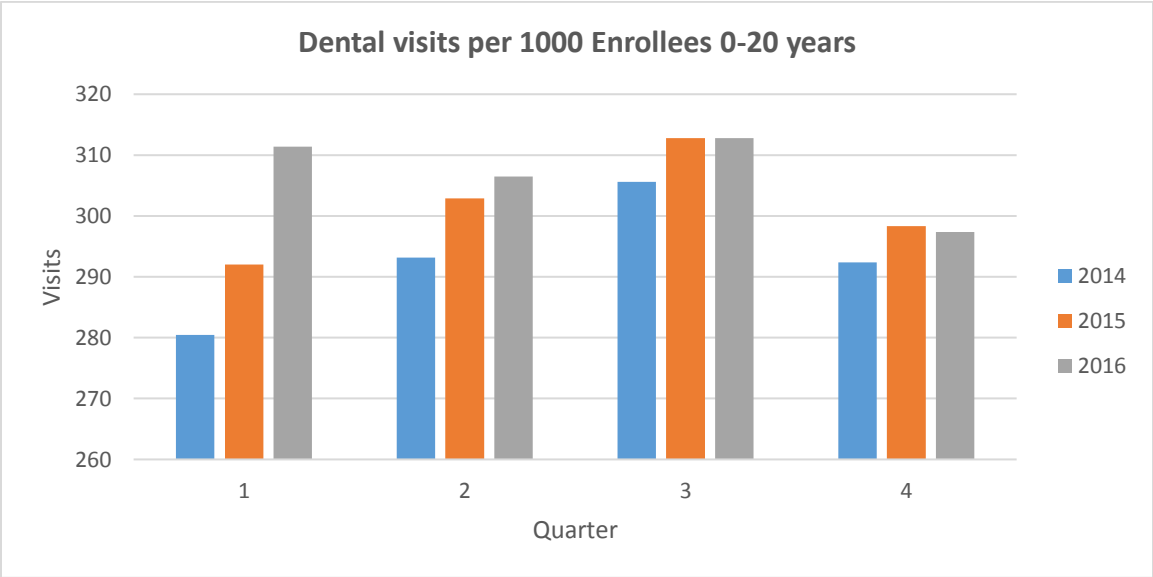


Figure 45

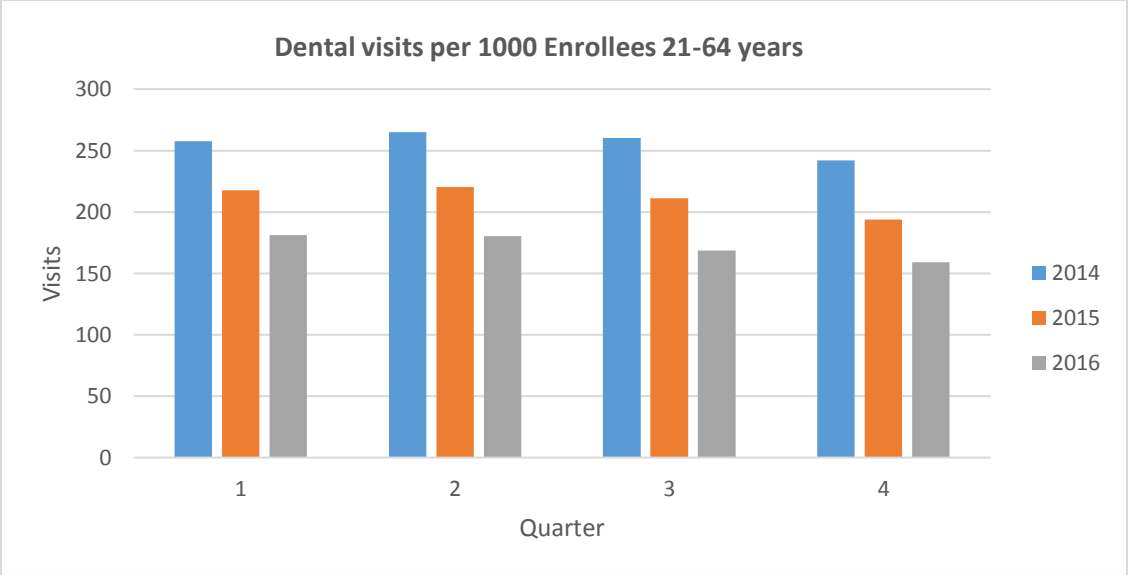


Figure 46

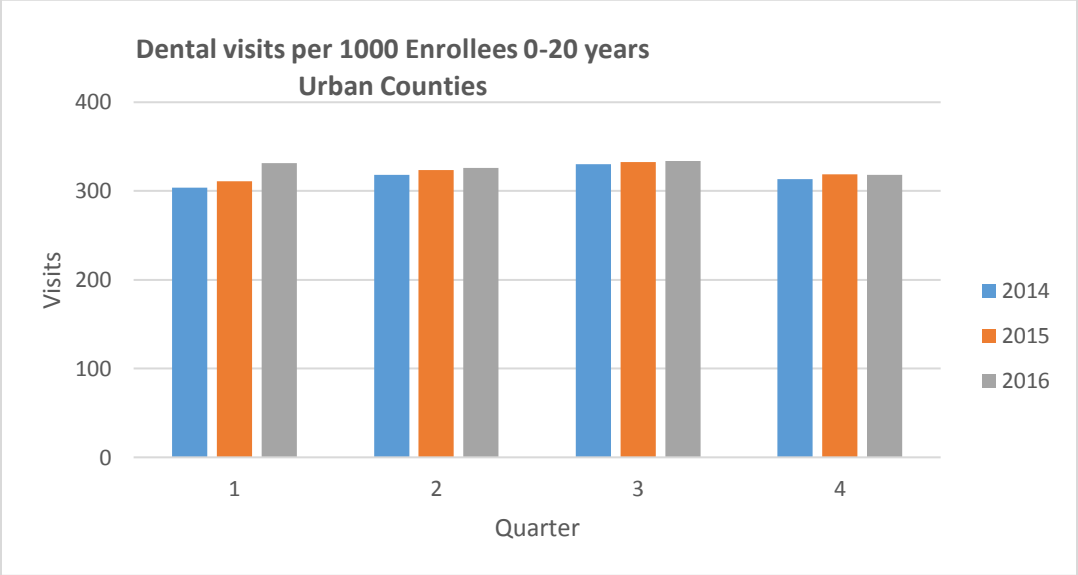


Figure 47

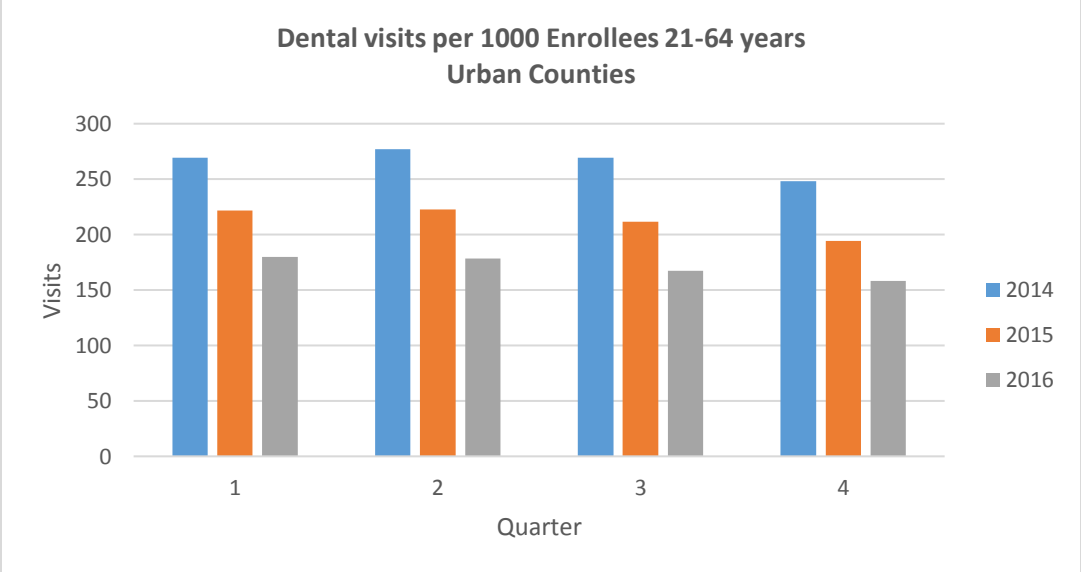


Figure 48

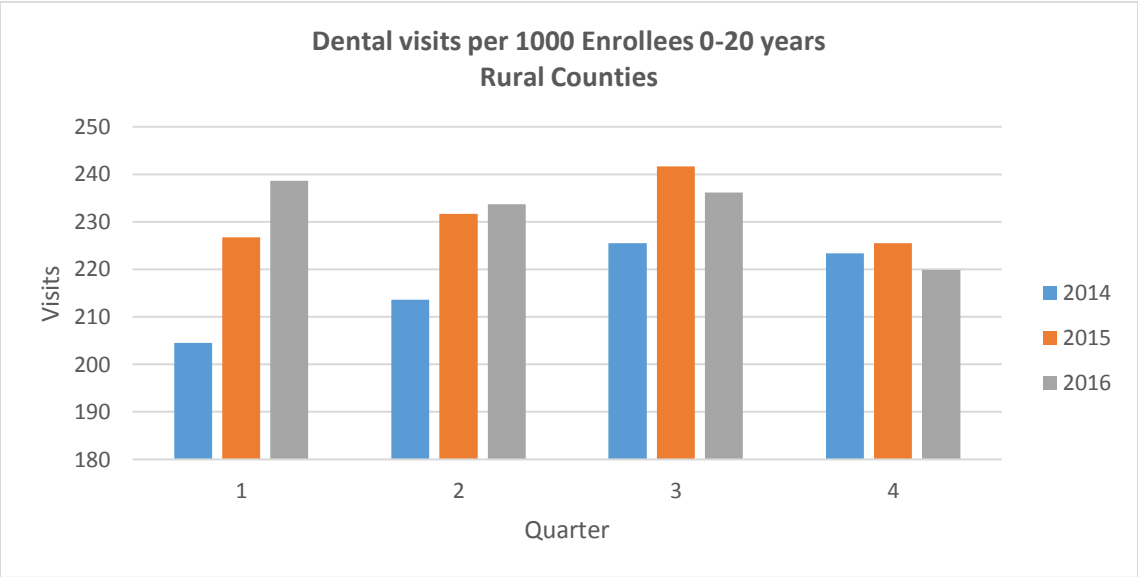
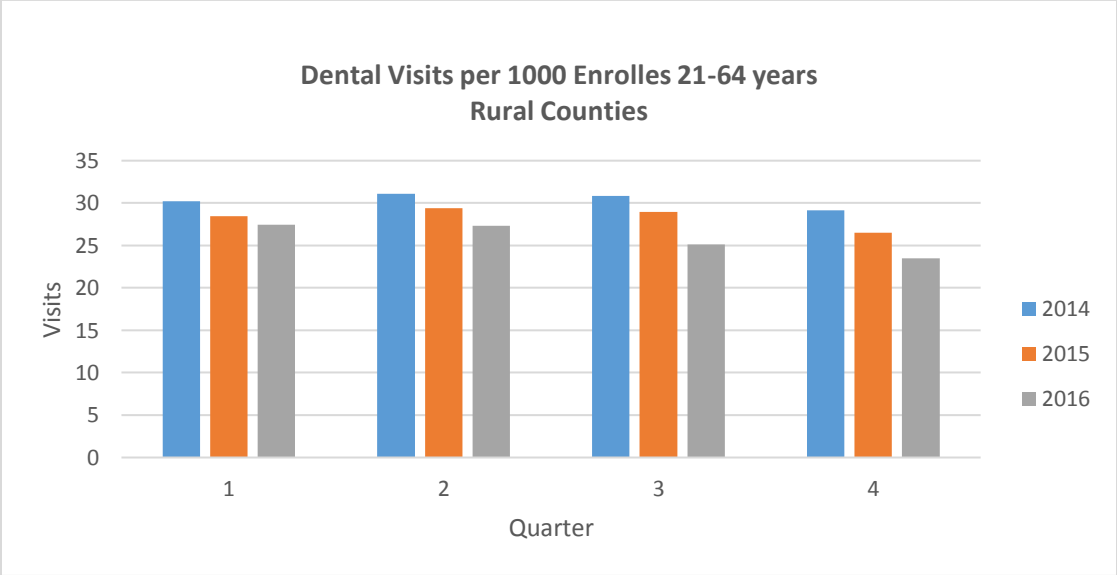


Figure 49

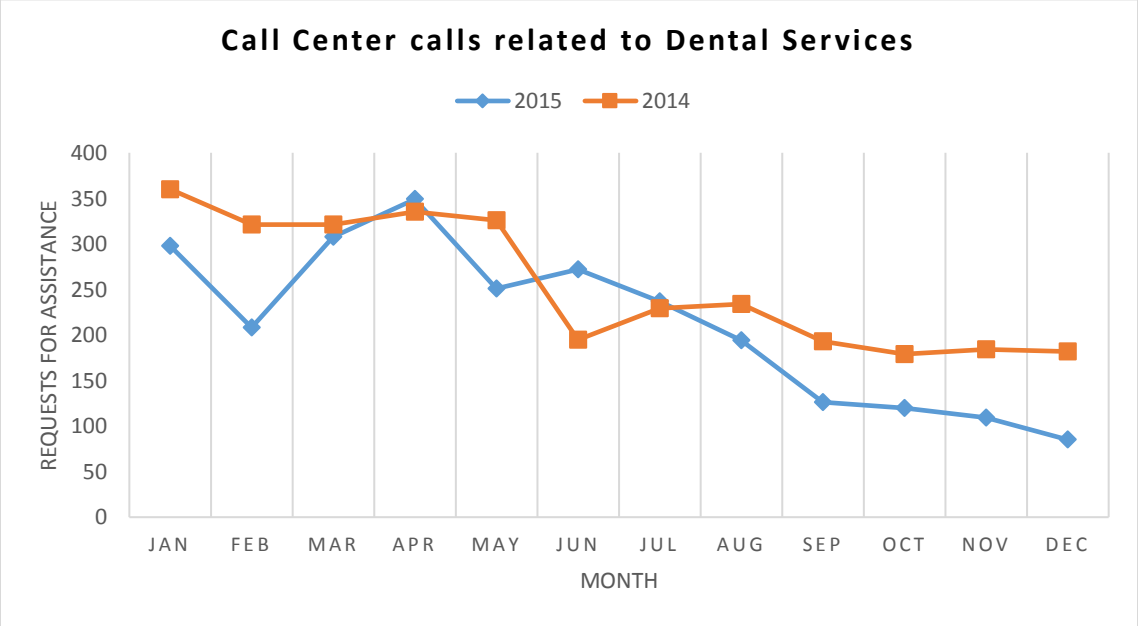


Concerns and issues raised by providers or beneficiaries through feedback mechanisms

General feedback mechanisms from providers are from discussion of issues with various dental groups and associations and also through public comments made during the agency's Medical Care Advisory Committee, which meets quarterly. In addition, the DMA Call Center responds to beneficiaries when calls are received asking for assistance in finding a dental provider. Figure

34 below shows the number of calls received from beneficiaries during CY 2014 and CY 2015. Many of these calls were from beneficiaries seeking help trying to find an enrolled dentist or dental specialist or from those with a question regarding coverage of dental services. Some of the Call Center callers are forwarded over to the agency's dental staff where they are referred to the NC Medicaid dental provider list on the DMA website or just read off names of enrolled providers accepting new patients in their home county and adjoining counties. There was a high volume of calls reported in January – May of 2014, which appear to have been due to the increased enrollment as a result of the ACA where newly enrolled individuals were seeking providers for dental services. Overall calls for the year were down in 2015 (average of 213 calls/month) as compared to 2014 (average of 255 calls/month).

Figure 50



Comparative analysis of Medicaid payment rates to other rates

Figure 51 provides data for the top 10 codes for paid claims (in dollars). Since Medicare does not cover dental services, there were no Medicare rates for comparison. Therefore, the 2015 National Dental Advisory Service (NDAS) Comprehensive Fee Report was used for rate comparison. Per the Report, fee information is collected through direct mail surveys to dentists in private practice. Fees in the report are provided for the 40th percentile by increments of 10 percentage points through the 90th percentile and for the 95th percentile. Per the Report, "A fee percentile is defined as the number in a frequency distribution below which a certain percentage of fees will fall." For purposes of the Plan, the 50th percentile fee was used. For the codes and

comparisons provided, on average Medicaid pays 41.45% of the NDAS 50th percentile rate. However, since all Medicaid rates are not included in the analysis, the 41.25% is not a complete reflection of the percentage of the NDAS rate paid by Medicaid.

Figure 51

Rank	*Dental Code and Description*	*2016 NC DMA rate (Dollars)*	*2016 NC Commercial Rate (Dollars)*	*Percentage of Medicaid rate to Commercial rate*	*2016 NDAS 50th percentile rate (Dollars)*	*Percentage of Medicaid rate to NDAS rate*
1	D0120 -Periodic oral evaluation-established	$24.51	$37.60	34.81%	$52	52.87%
2	D0140 -Limited oral evalulation-problem-focu	$34.94	$49.72	29.73%	$76	54.03%
3	D0150 -Comprehensive oral evaluation-new/est	$42.41	$58.46	27.46%	$90	52.88%
4	D0220 -Intraoral first radiograph-periapical	$14.18	$17.23	17.69%	$31	54.26%
5	D0272 -Bitewings-two radiographic images	$17.59	$34.81	49.47%	$48	63.35%
6	D0274 -Bitewings - four radiographic images	$30.50	$46.93	35.01%	$69	55.80%
7	D0330 -Panoramic radiographic image	$56.32	$78.03	27.82%	$120	53.07%
8	D1110 -Dental prophylaxis-adult	$36.21	$71.00	49.00%	$96	62.28%
9	D1120 -Dental prophylaxis-child	$25.87	$55.09	53.04%	$69	62.51%
10	D1206 -Topical application of fluoride varni	$15.25	$20.60	25.96%	$45	66.11%
	Average Rates and Percentages	**$29.78**	**$46.95**	**35.00%**	**$69.60**	**57.71%**

Review Analysis of Physician Specialists

The agency selected two physician specialist services for review: general surgeons and urologists. The rationale for choosing general surgeons was based on stated concerns by the NCDHHS Office of Rural Health regarding the lack of availability of general surgeons in rural areas of the state. The rationale for choosing urologists is due to North Carolina's projected future growth as a retirement destination and due to an aging population. Urological problems often surface as a part of the aging process, particularly kidney and bladder problems. Therefore, the availability of services to treat urological problems is an area the agency chose to review, particularly focused on the state's rural areas.

General Surgeons

Data sources: NCTracks (MMIS) for provider enrollment, beneficiary enrollment and claims data used for utilization

CAHPS data relevant to meeting beneficiary needs – Currently, the state does not have CAHPS data available regarding surgical services. However, North Carolina has released a request for proposals (RFP) to secure a certified CAHPS vendor to assist the state with providing data for surgical services in the Plan.

Availability of physician specialists - general surgeons

The following three graphs and map of the counties focuses on the number of general surgeons trending over time for CY 2014 -CY2016. Figure 52 shows the total number of general surgeons statewide and Figures 53 and 54 show the number of general surgeons per 1000 beneficiaries for rural and urban areas, respectively. The number of Medicaid participating general surgeons remains virtually unchanged for all areas from 2014 compared to 2015 and 2016. However, the overall trend appears to show greater numbers of surgeons in the urban areas than rural areas. Figure 55 shows the number and locations of general surgeons by county. There are several areas in the state where there are no Medicaid-participating general surgeons. One of the reasons for a lack of surgeons in these areas is the lack of existing inpatient hospitals or ambulatory surgical centers, which are typically where surgeons are required to perform procedures such as cholecystectomies, appendectomies, or other similar procedures. The counties without a general surgeon, however, border counties with general surgeons, which allows beneficiaries access surgical services but may be more difficult due to distance or with difficulties in obtaining transportation. The agency will continue to monitor this service and collaborate with the Office of Rural Health to address improved access to surgical services in the state's rural areas.

Figure 52

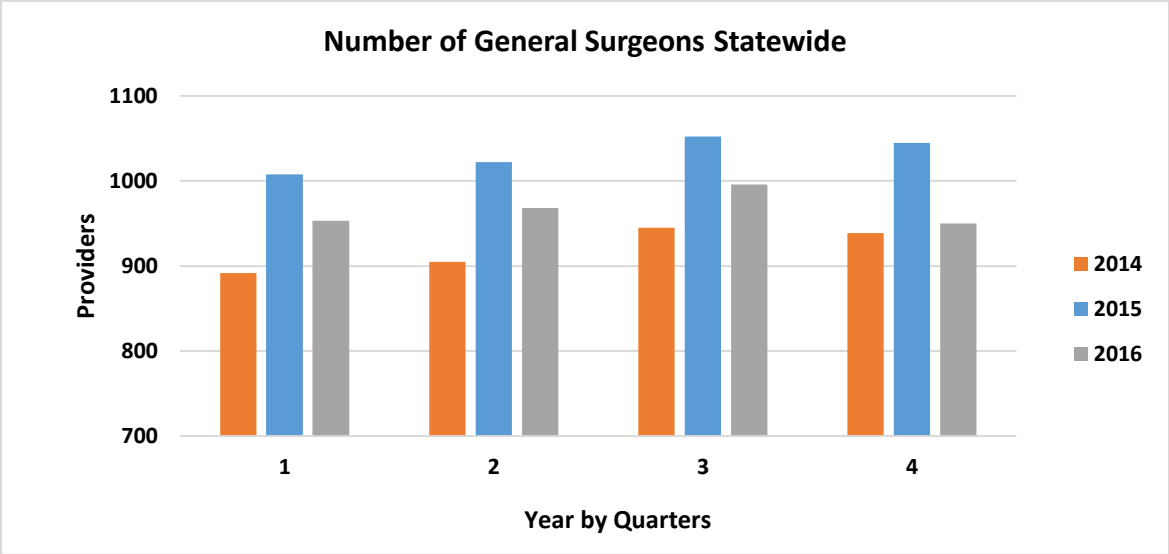


Figure 53

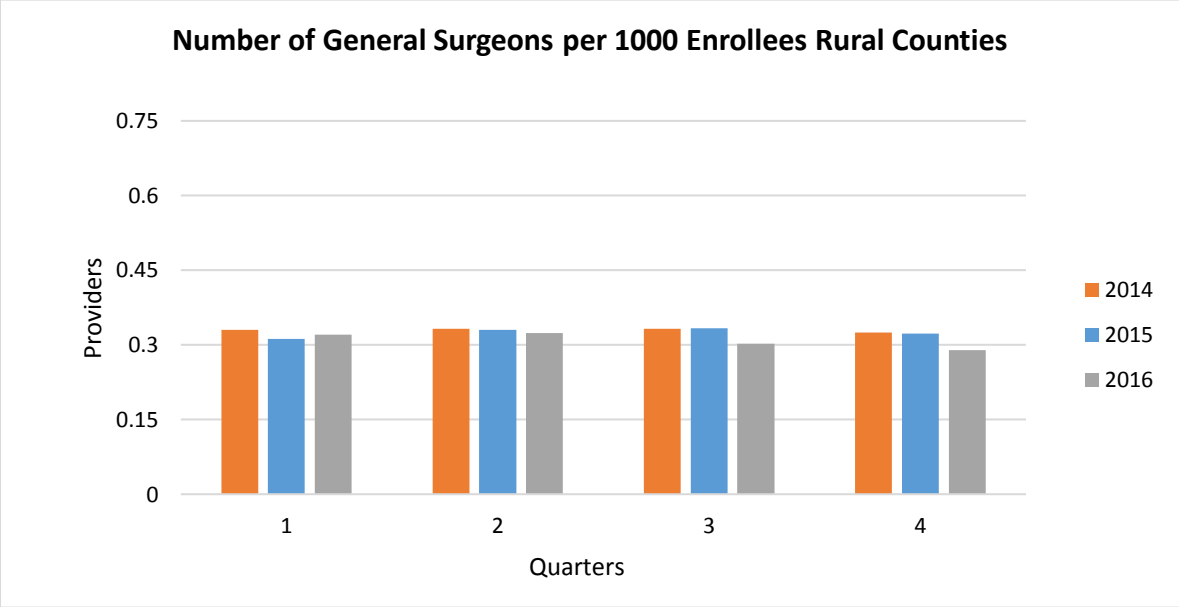


Figure 54

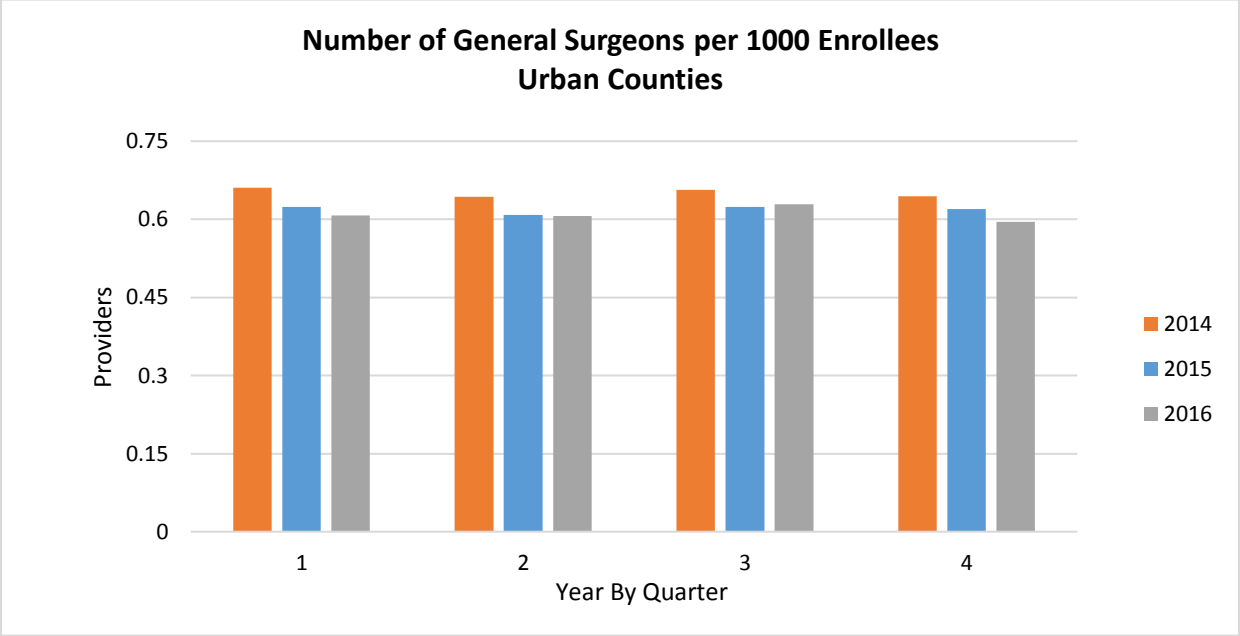
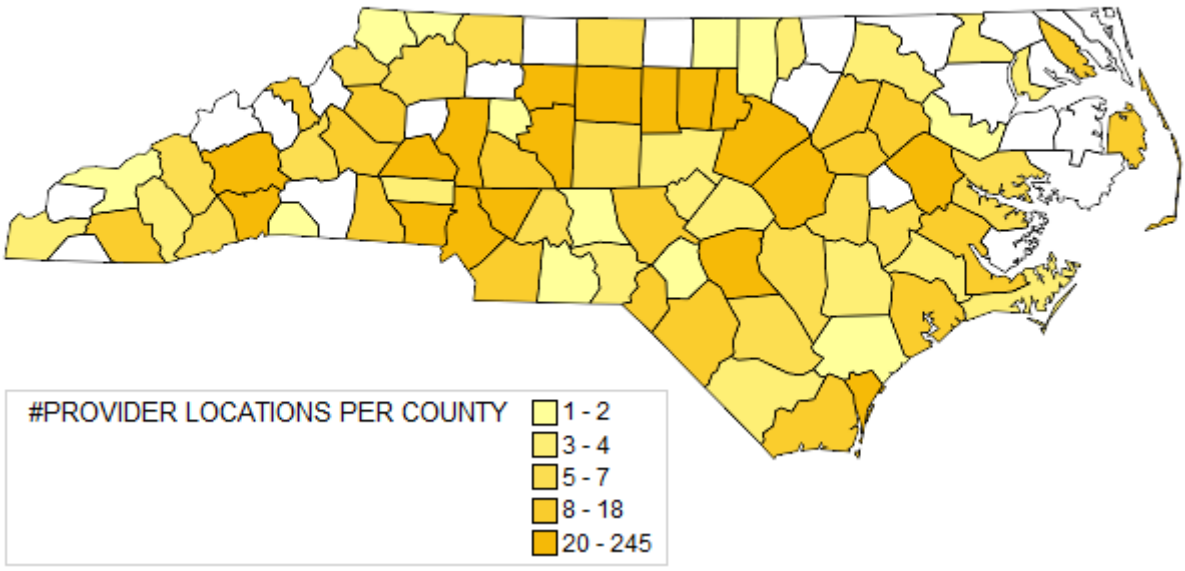


Figure 55

Geographic Distribution and Number of General Surgeons by County



Utilization data

The following three graphs show visits (procedures also included) per 1000 enrollees (beneficiaries) for general surgeons. Figure 40 shows statewide visits for CY 2014, CY 2015 and CY2016. Figures 41 and 42 show a breakdown of visits by Rural and Urban and counties, respectively. During the last quarter of 2014, the total number of visits per 1000 Enrollees is below two standard deviations from the mean than other quarters of 2014, 2015 and 2016. Also, in the urban area the visits per 1000 enrollees is below two standard deviations from the mean during the last quarter of 2016. Since there are several rural areas without general surgeons, as previously shown in Figure 39, Urban areas are more likely to have hospitals and ambulatory surgical centers. This factor affords greater opportunities for surgeons to perform procedures, thus, the state is expected to see fewer surgical visits per 1000 enrollees in rural areas, than in metropolitan areas. In addition, the state notes that there are fewer visits in the last quarter for both years, which may be due to beneficiaries seeking elective surgical procedures opting to delay scheduling these procedures until after the November and December holidays. In Urban and Rural counties, the visits per enrollees is below two standard deviations from the mean during the last quarter of 2016. Breaking down by ages, both the 0-20 years and 21-64 years have visits with below two standard deviations during the last quarter of 2016 which is most likely due to the November and December holidays.

Figure 56

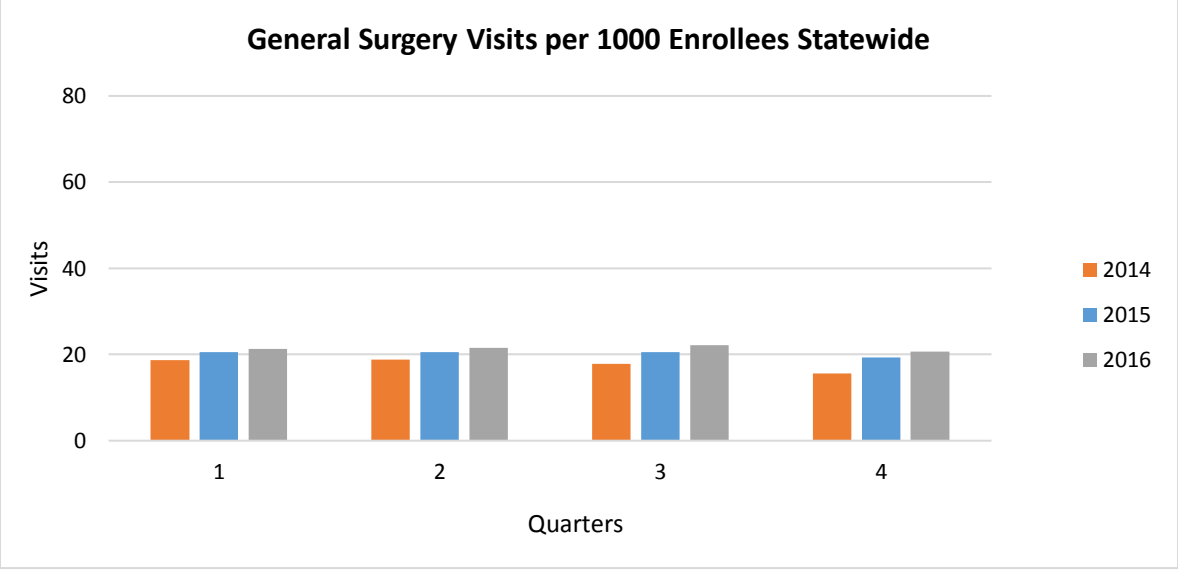


Figure 57

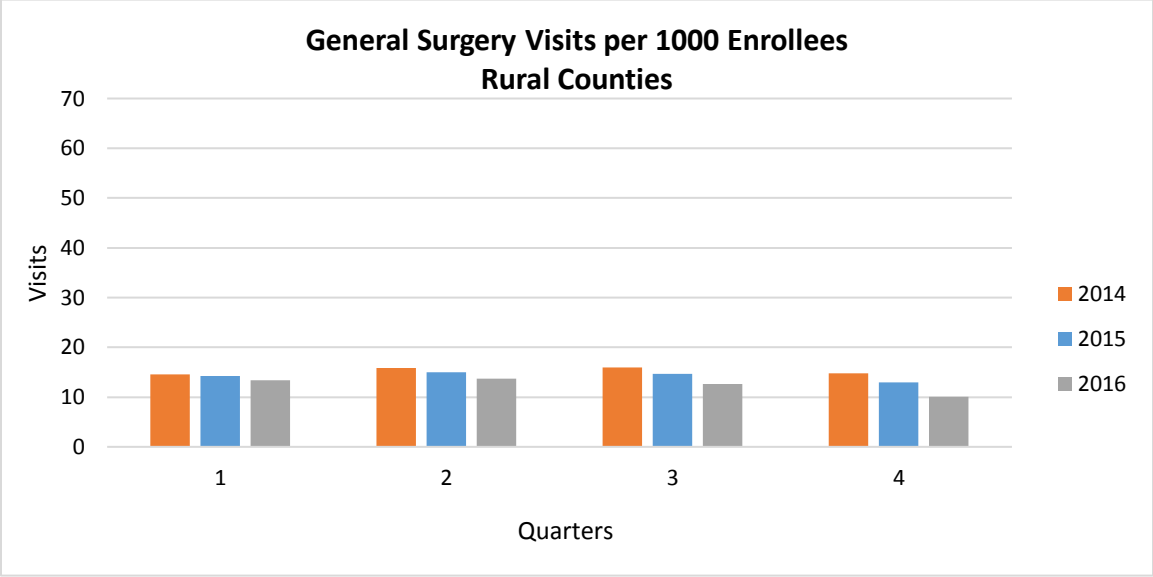


Figure 58

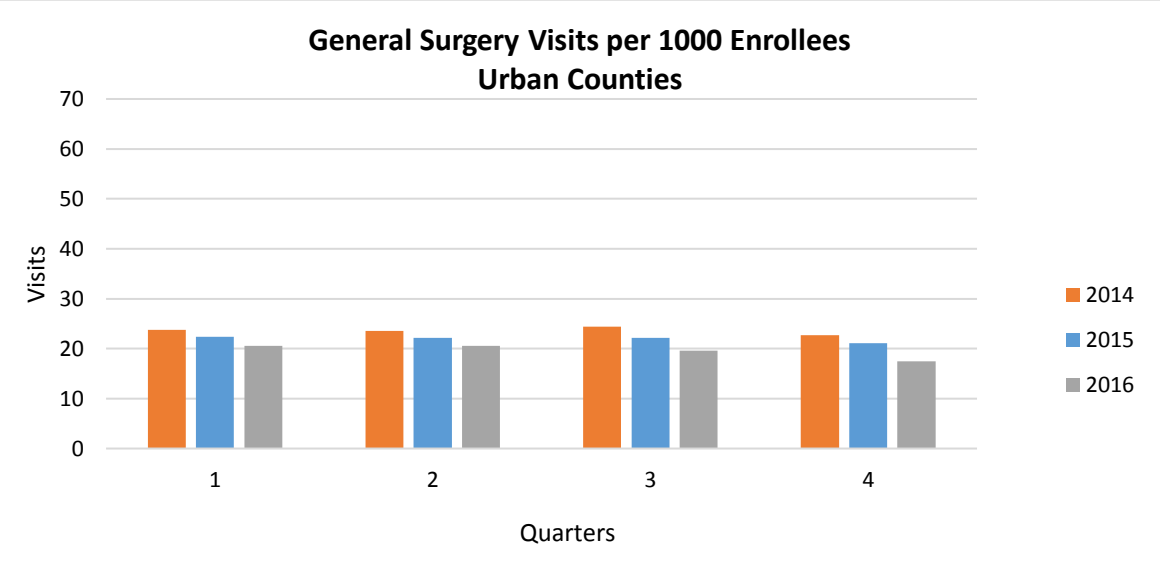


Figure 59

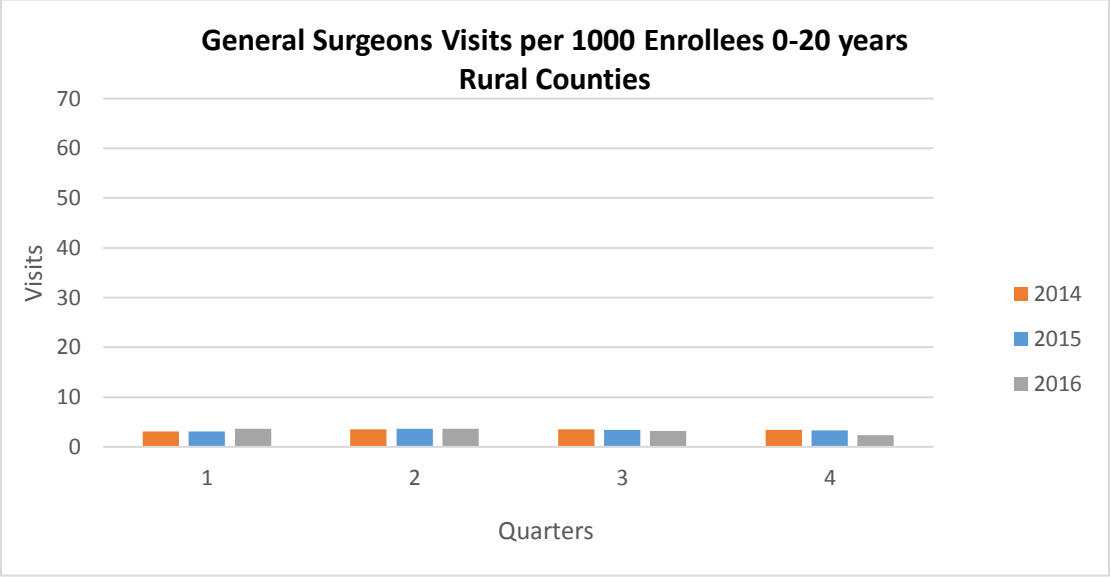

General Surgeons Visits per 1000 Enrollees 0-20 years
Rural Counties
70
60
50
40
30
20
10
0
Visits
1
2
3
4
Quarters
2014
2015
2016

Figure 60

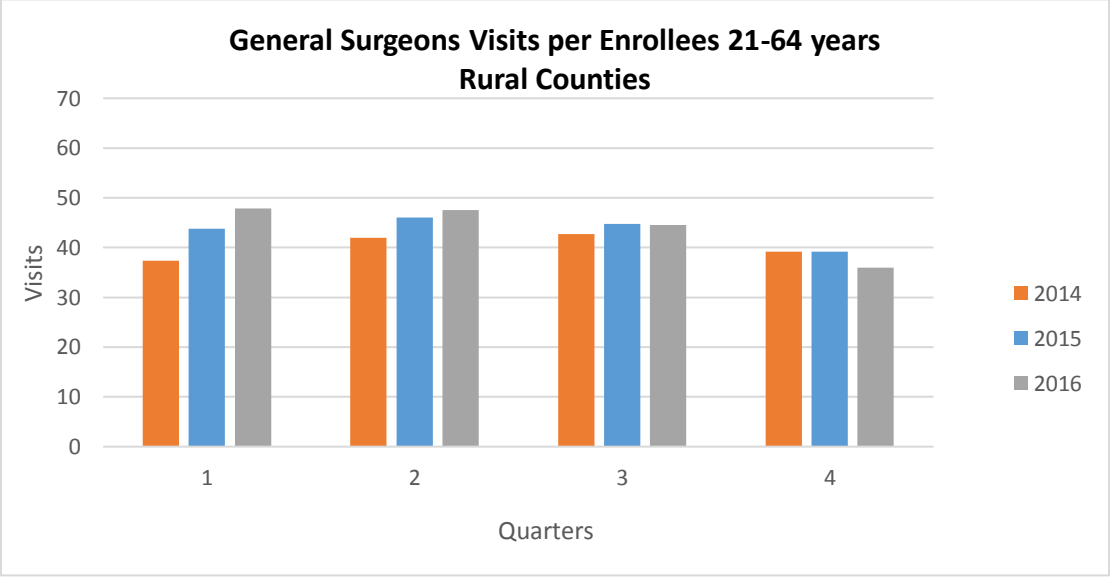

General Surgeons Visits per Enrollees 21-64 years
Rural Counties
70
60
50
40
30
20
10
0
Visits
1
2
3
4
Quarters
2014
2015
2016

Figure 61

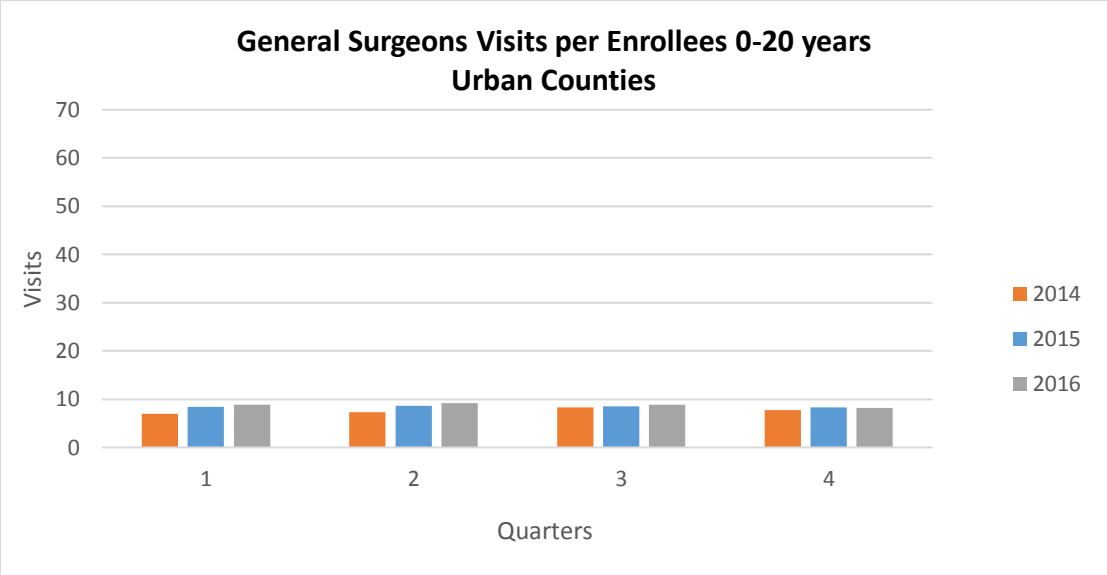
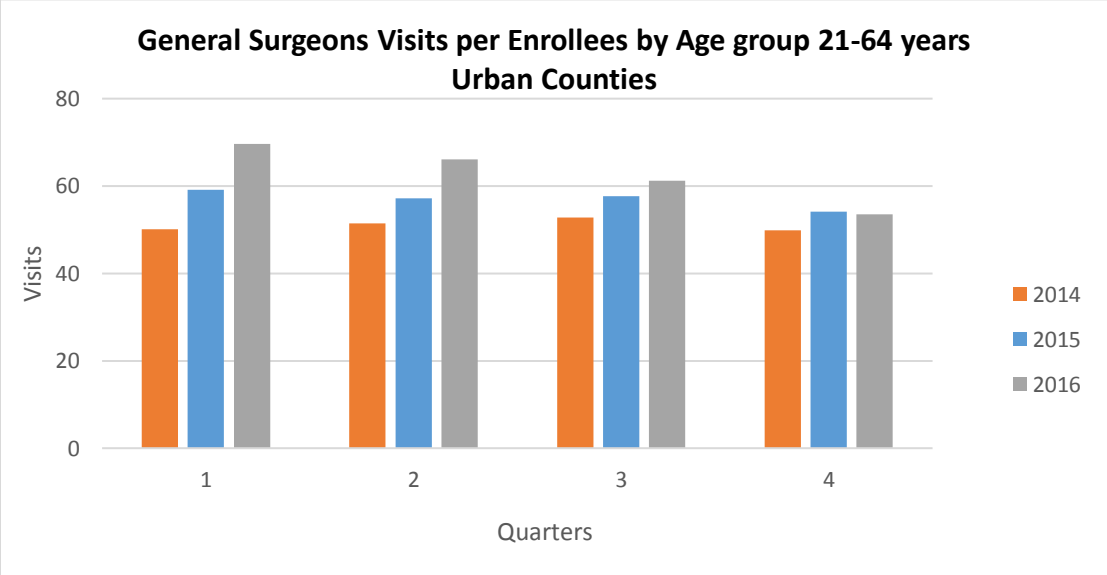


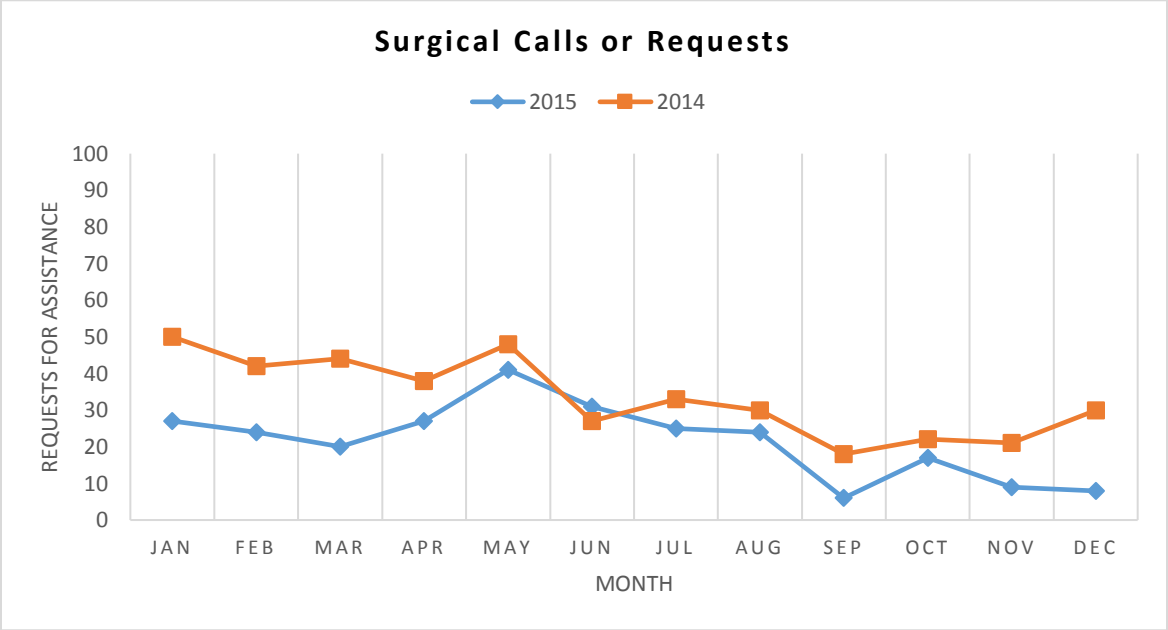
Figure 62



<u>Concerns or issues raised by surgeons or beneficiaries through provider feedback mechanisms</u>
General feedback mechanisms from providers are based on discussions of issues with various physician groups and associations, and through public comments from the agency's quarterly

Medical Care Advisory Committee meetings. In addition, the DMA Call Center staff responds to beneficiary calls seeking assistance in finding a physician. Figure 63 below shows the number of calls received from beneficiaries during CY 2014 and CY 2015. Many of the calls were from beneficiaries seeking help to find an enrolled surgeon or have questions regarding coverage of various surgical services. Although there were fewer calls in 2015, both CY 2014 and CY 2015 appear to follow a similar trend of increased numbers of calls during January to May, and fewer calls from June to December. Typically, beneficiaries seeking elective surgical procedures often delay scheduling these services during the last quarter of the year due to the November and December holidays, which may explain the decrease in calls during these months. Overall, calls for the year were down in 2015 (average of 21 calls/month), as compared to 2014 (average of 33 calls/month).

Figure 63



Comparative analysis of Medicaid payment rates to Medicare rates for Surgeons.

The data in Figure 64 highlight the top 10 codes for paid claims (in dollars) which Medicare also covered and paid, for the same CPT code. Some CPT codes for Medicaid that were originally in the top 10 codes for paid claims, were not covered by Medicare. Therefore, those codes were omitted from the analysis. The rates in Figure 64 are for care provided in a facility, such as a, hospital, or in a non-facility, such as an office or clinic setting. As stated previously, N.C. Medicaid typically pays approximately 80% of the Medicare rate. Figure 64 below shows a similar consistency with Medicaid paying approximately 80% of Medicare rates for both facility rates and non-facility rates. In addition, comparison of Medicaid rates to commercial rates show that Medicaid non-facility and facility rates are 78.64% and 62.23% of the commercial rural non-

facility and facility rates, respectively. When comparing Medicaid non-facility and facility rates to commercial urban rates, they were observed to be are 87.60% and 56.59%, respectively.

Figure 64

CPT code and Description	*NC Commercial Rural Rate (Dollars)*	*NC DMA Facility rate (Dollars)*	*NC DMA Non-facility rate (Dollars)*	*Percentage of NC DMA Non-Facility Rate vs Commercial Rural rate*	*Percentage of NC DMA Facility vs Commercial Rural rate*	*NC Commercial Urban Rate (Dollars)*	*Percent of NC DMA Non-Facility Rate vs Commercial Urban Rate*	*Percentage of NC DMA Facility rate vs Commercial Urban Rate*	*Medicare Rates*	*Percentage of NC DMA Non Facility Rate vs Medicare Rates*	*Percentage of NC DMA Facility Rate vs Medicare rates*
33533 -CABG W/ARTERIAL GRAFT SINGLE ARTERIAL GRAFT	$1,541.84	$1,503.79	$1,503.79	97.53%	97.53%	$2,195.38	68.50%	68.50%	$1,749.01	85.98%	85.98%
36475 - ENDOVEN ABLTJ INCMPTNT VEIN XTR RF 1ST VEIN	$1,931.49	$271.88	$1,329.66	68.84%	14.08%	$2,131.63	62.38%	12.75%	$1,372.26	96.90%	19.81%
36561 -INSJ TUNNELED CTR VAD W/SUBQ PORT AGE 5 YR/>	$921.07	$271.59	$860.20	93.39%	29.49%	$993.25	86.60%	27.34%	$988.67	87.01%	27.47%
37225 -REVSC OPN/PRQ FEM/POP W/ATHRC/ANGIOP SM VSL		$510.80	$8,607.23	0.00%	0.00%	$5,187.64	165.92%	9.85%	$9,795.13	87.87%	5.21%
44120 -ENTRC RESCJ SMALL INTESTINE 1 RESCJ & ANAST	$901.17	$877.43	$877.43	97.37%	97.37%	$1,396.26	62.84%	62.84%	$1,142.18	76.82%	76.82%
44970 - LAPAROSCOPIC APPENDECTOMY	$526.69	$424.10	$424.10	80.52%	80.52%	$564.67	75.11%	75.11%	$558.90	75.88%	75.88%
47562 - LAPAROSCOPY SURG CHOLECYSTECTOMY	$785.33	$528.57	$528.57	67.31%	67.31%	$681.76	77.53%	77.53%	$611.99	86.37%	86.37%
47563 -LAPS SURG CHOLECYSTECTOMY W/CHOLANGIOGRAPHY	$702.16	$541.29	$541.29	77.09%	77.09%	$745.17	72.64%	72.64%	$664.70	81.43%	81.43%
99203 -OFFICE OUTPATIENT NEW 30 MINUTES	$73.25	$60.58	$80.86	110.39%	82.70%	$76.48	105.73%	79.21%	$99.13	81.57%	61.11%
99204 -OFFICE OUTPATIENT NEW 45 MINUTES	$133.38	$101.72	$125.39	94.01%	76.26%	$126.92	98.79%	80.14%	$151.19	82.94%	67.28%
Average Rates and Percentages	**$835**	**$509**	**$1,487**	**78.64%**	**62.23%**	**$1,409**	**87.60%**	**56.59%**	**$1,713**	**84.28%**	**70.28%**

Review Analysis of Physician Specialists - Urologists

Data sources: NCTracks (MMIS) for provider enrollment, beneficiary enrollment and claims data used for utilization

CAHPS data relevant to meeting beneficiary needs – The state does not currently have available CAHPS data for urological services. However, North Carolina has released a request for proposals (RFP) to secure a certified CAHPS vendor to assist with providing CAHPS data for services in the Plan.

Availability of physician specialists – urologists

The following three graphs and map of the counties focus on the number of urologists trending over time for CY 2014, CY 2015 and CY2016. Figure 65 shows the total number of urologists statewide. During the first quarter of 2014, the total number of Urologists per 1000 Enrollees is above two standard deviations from the mean than other quarters of 2014, 2015 and 2016. Figures 66 and 67 show the number of urologists per 1000 beneficiaries for rural and Urban areas, respectively. In addition, during the first quarter of 2014, the total number of urologists per 1000 Enrollees in Urban counties is above two standard deviations from the mean than other quarters of 2014, 2015 and 2016 which means the increase in total urologists during this time-period was attributable to urologists in the Urban Counties. The number of Medicaid-participating urologists remains virtually unchanged for all areas from 2014, as compared to 2015 and 2016. However, the overall trend appears to show greater numbers of urologists in the Urban areas than in rural areas. Figure 48 shows the number and locations of urologists, by county. There are several areas in the state where there are no Medicaid-participating urologists. One reason for the lack of urologists in these areas is that there are no existing hospitals or ambulatory surgical centers, which are typically needed for urologists to perform procedures such as lithotripsy or cystoscopies, or other procedures where an inpatient or ambulatory surgical facility are required. The counties without a urologist, however, border counties with urologists, which allows beneficiaries access these services but may be more difficult due to distance or with difficulties in obtaining transportation. The agency will continue to monitor this service by analyzing provider data to improve accessibility of urological services, particularly in the state's rural areas.

Figure 65

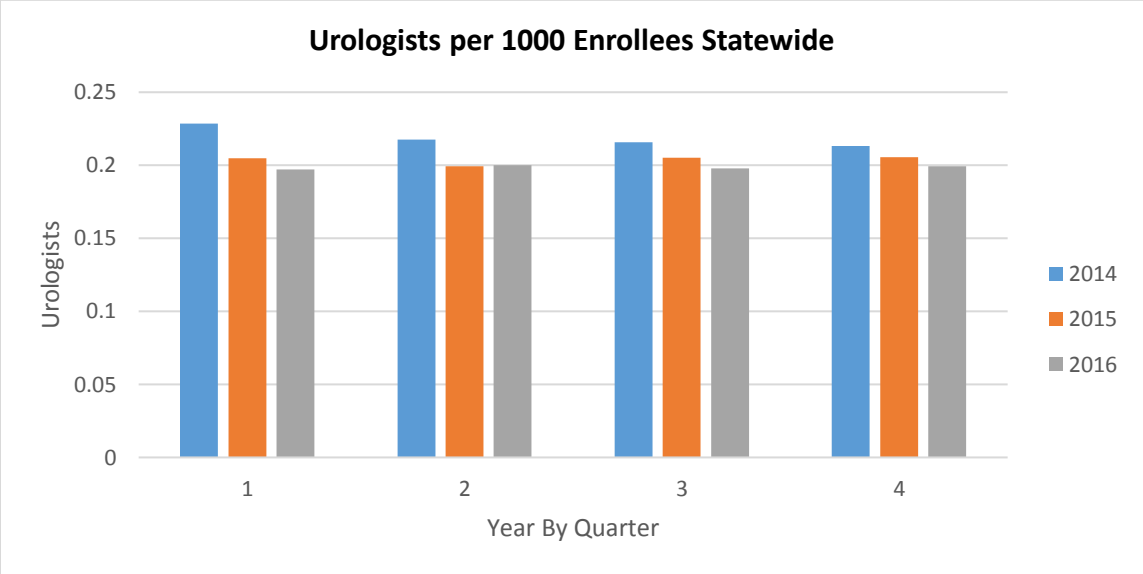


Figure 66

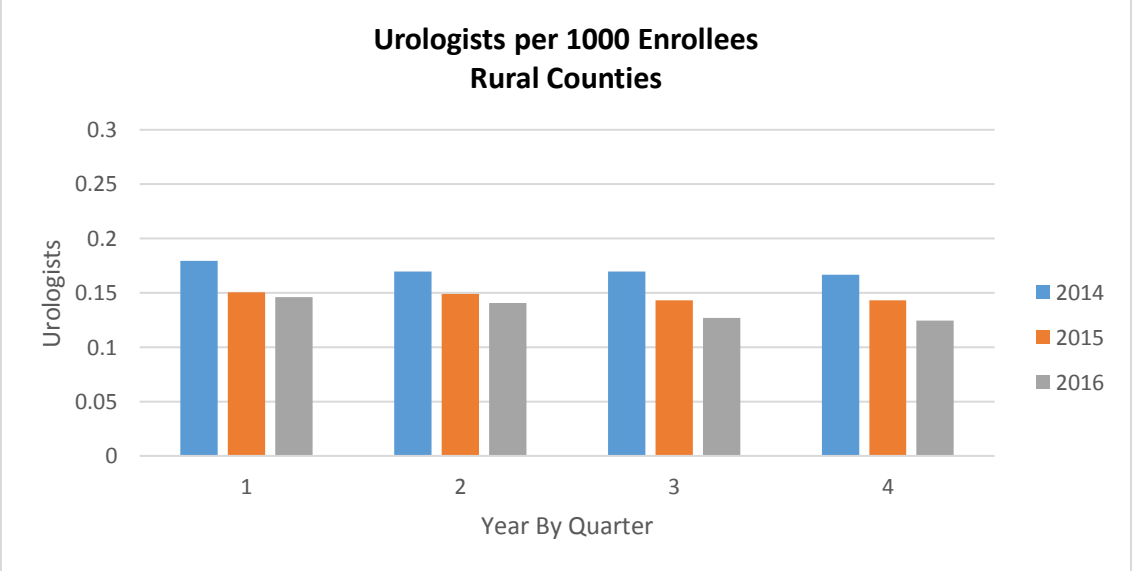


Figure 67

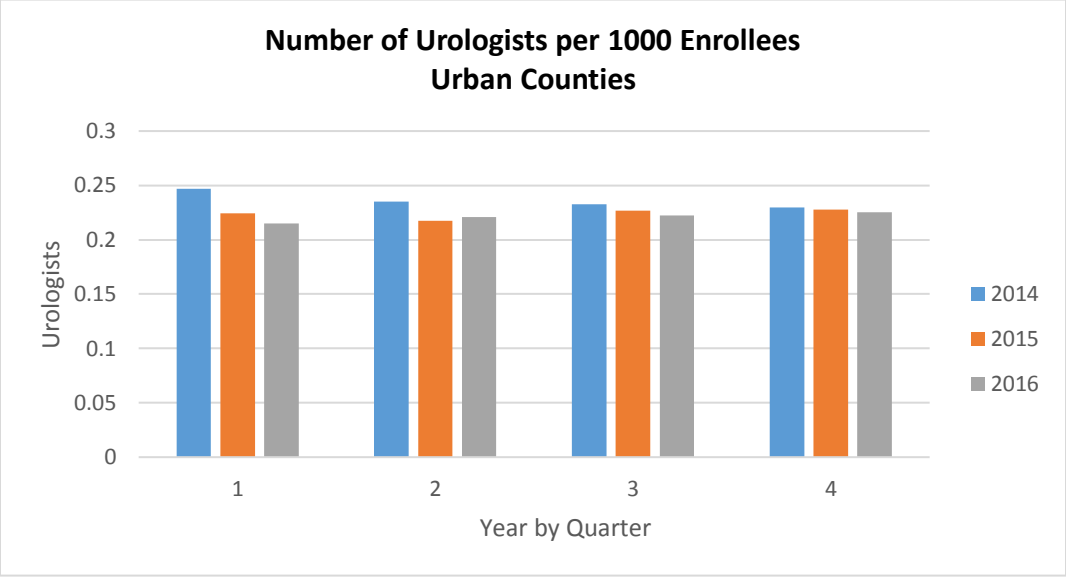
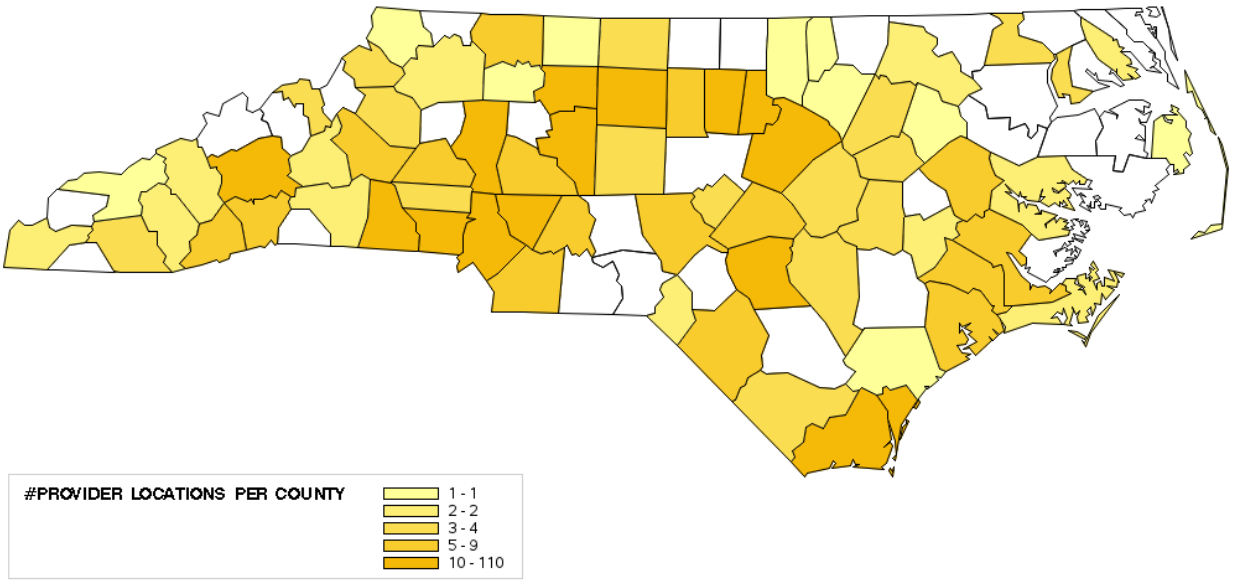


Figure 68

Geographic Distribution and Number of Urologists by County



Utilization data

The following three graphs demonstrate visits (procedures also included) per 1000 enrollees (beneficiaries) for urologists. Figure 69 shows statewide visits for CY 2014, CY 2015 and CY2016. Figures 70 and 71 break down visits by Rural and Urban and counties, respectively. Since there are several rural areas without urologists, as previously shown in Figure 48, and Urban areas are more likely to have existing hospitals, ambulatory surgical centers, etc. that afford greater opportunities for urologists to perform procedures, the state expects fewer urology visits per 1000 enrollees in rural areas than in metropolitan areas. In addition, there were slightly fewer urology visits in the last quarter of CY2014, CY2015 and CY2016. This may have been due to beneficiaries seeking elective urological procedures choosing to delay scheduling these procedures until after the November and December holidays. Following a similar trend as primary care services, there were generally fewer visits or procedures to urologists in 2016, as compared to 2014 and 2015. However, the decrease in utilization was not sufficient to be below two standard deviations from the mean for the three-year period.

Figure 69

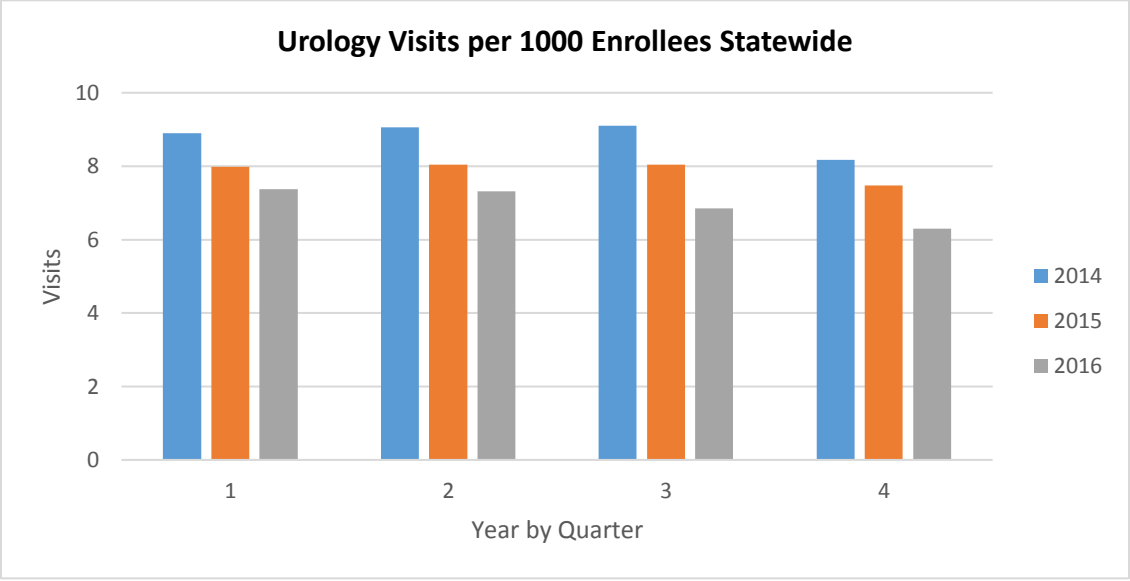


Figure 70

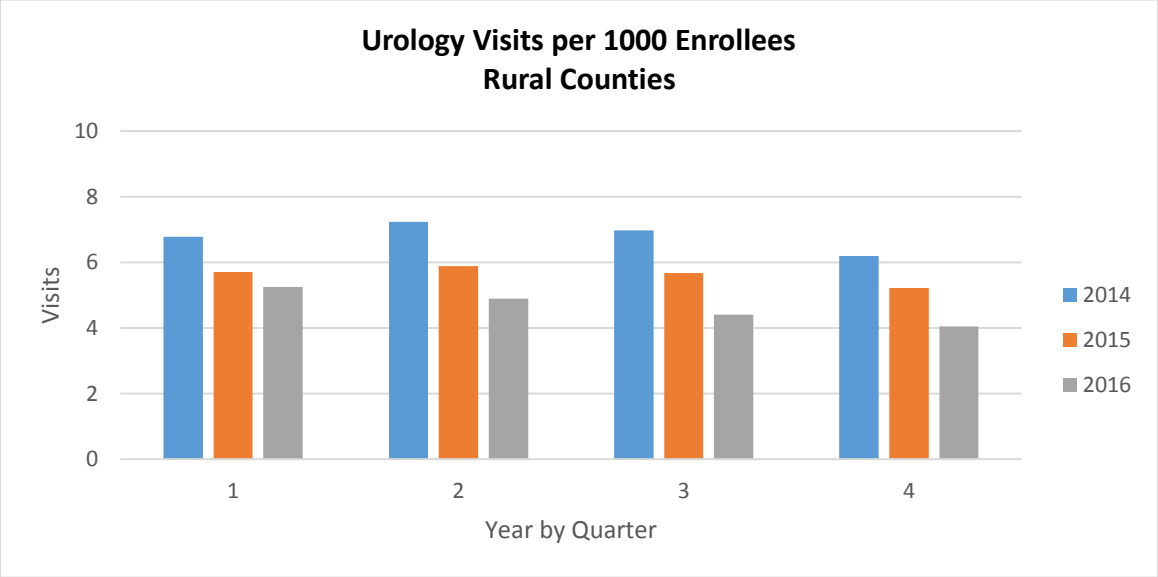


Figure 71

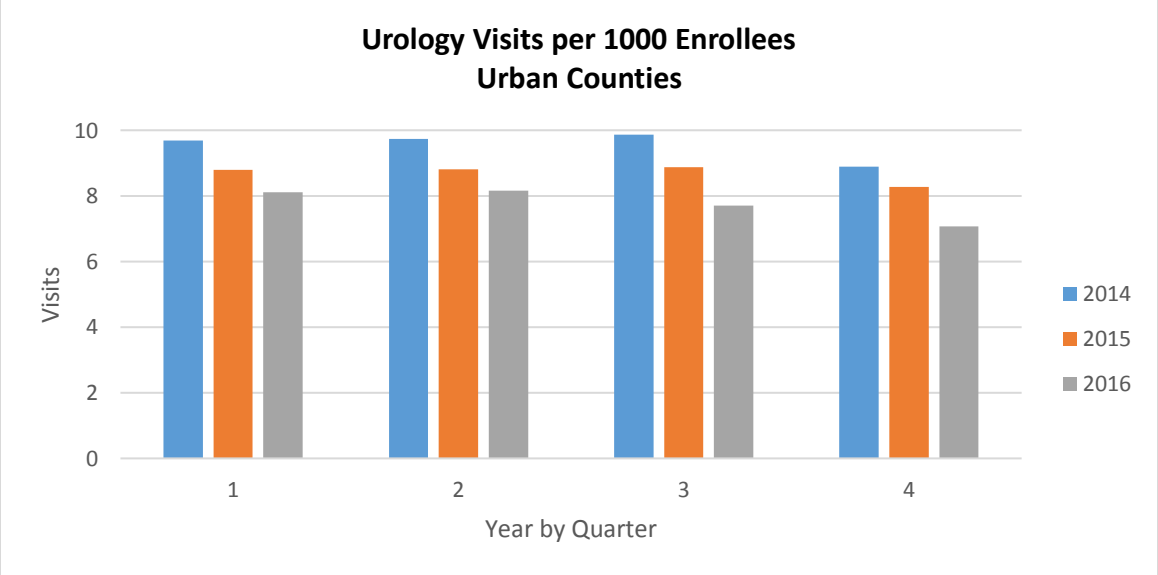


Figure 72

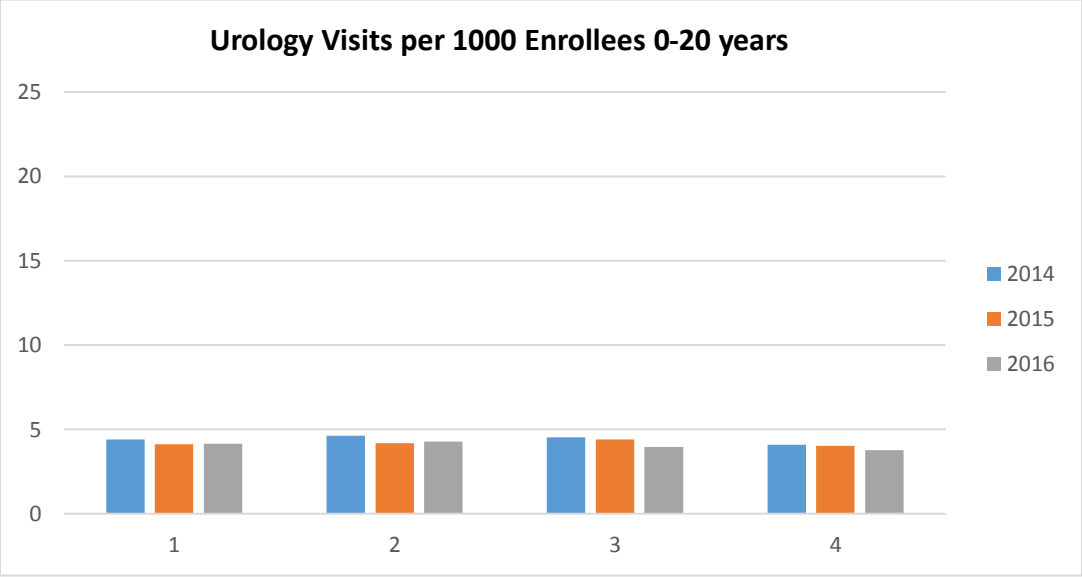


Figure 73

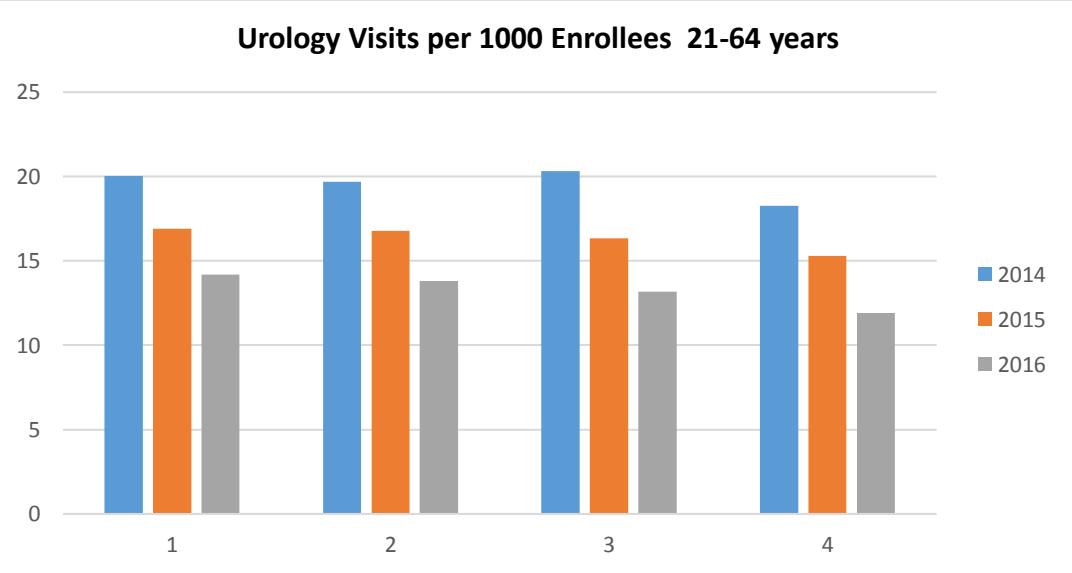


Figure 74

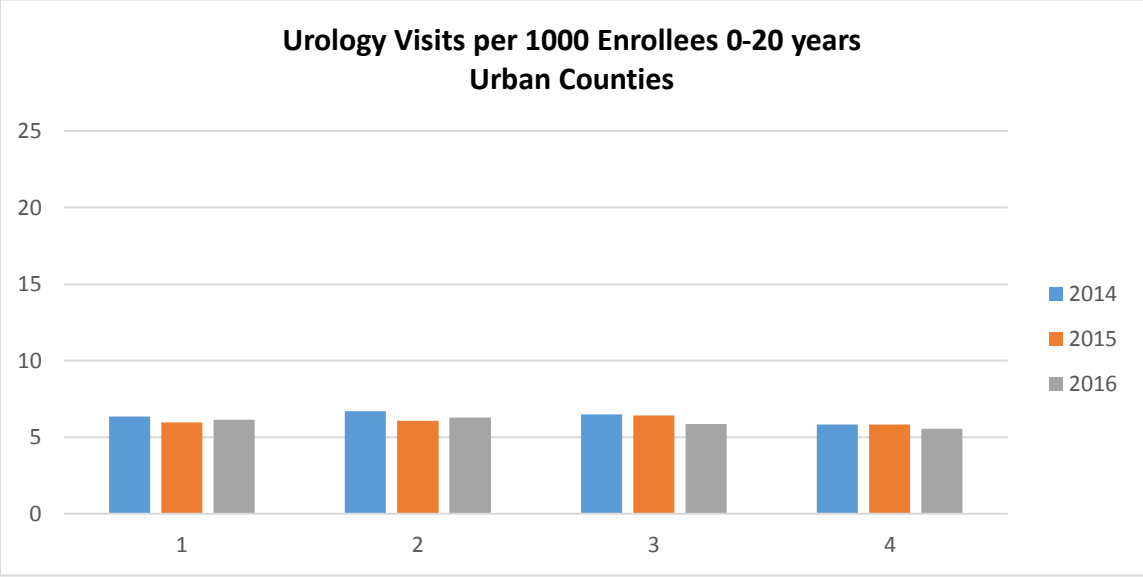


Figure 75

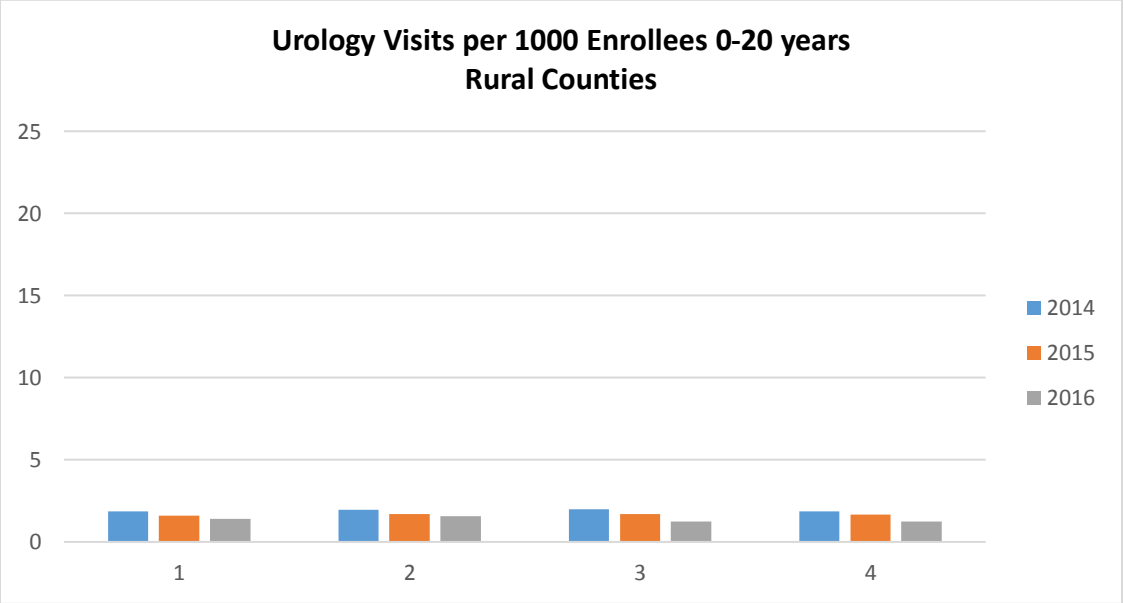
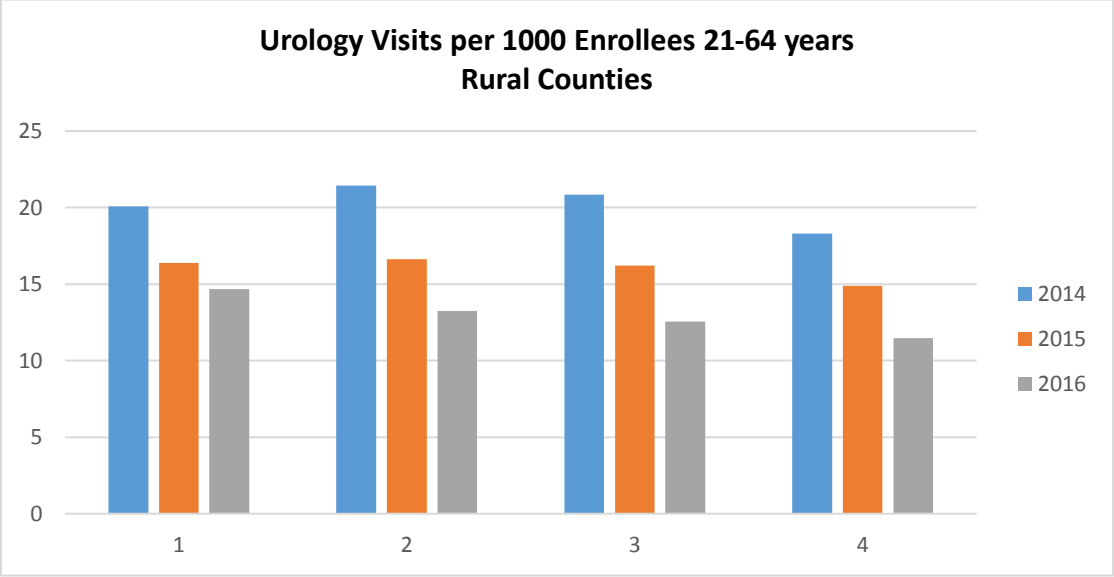


Figure 76



CAHPS data relevant to meeting beneficiary needs– The state does not currently have CAHPS data available for use of urological services by Medicaid beneficiaries. However, North Carolina has released a request for proposals (RFP) to secure a certified CAHPS vendor to assist the state with providing CAHPS data for utilization of urology services in the Plan.

Concerns or issues raised by urologists and beneficiaries through feedback mechanisms

Currently there is no Call Center data or other feedback mechanisms for tracking urological services. However, the Call Center staff proposes to expand categories of service that will track use of urology services by the Medicaid population by the end of CY2016.

Comparative analysis of Medicaid payment rates to Medicare rates for Urologists

The data in Figure 77 highlight the top 10 codes for paid claims (in dollars) for which Medicare also covered and paid using the same CPT codes. Some CPT codes for Medicaid that were originally in the top 10 codes for paid claims were not covered by Medicare. Therefore, those codes were omitted from the analysis. The rates in Figure 77 reflect care provided in a facility, such as a hospital, and in a non-facility, such as an office or clinic. As previously stated, N.C. Medicaid typically pays approximately 80% of the Medicare rate. However, the aggregate for the 10 codes provided in Figure 52 shows the Medicaid rate to be actually higher than 80% of the Medicare rate for both non-facility and facility rates, at 87.77% and 82.62%, respectively. However, since all Medicaid rates were not included in the analysis, the higher percentages are not a complete reflection of the percentage of the Medicare rate paid by Medicaid.

Figure 77

CPT code and Description	*NC Commercial Rural Rate (Dollars)*	*NC DMA Facility rate (Dollars)*	*NC DMA Non-facility rate (Dollars)*	*Percent of NC DMA Non Facility Rate vs Commercial Rural rate*	*Percentage Differnce(NC DMA Facility Rate vs Commercial Rural rate*	*NC Commercial Urban Rate (Dollars)*	*Percent of NC DMA Non Facility Rate vs Urban*	*Percentage of NC DMA Facility rate vs Commercial urban rate*	*Medicare Rates*	*Percentage of NC DMA Non Facility Rate and Medicare Rates*	*Percentage of NC DMA Facility Rate and Medicare rates*
14040 -ADJT TIS TRNS/REARGMT F/C/C/M/N/A/G/H/F 10SQCM/<	$831.03	$468.02	$544.67	65.54%	56.32%	$623.64	87.34%	75.05%	$699.96	77.8%	66.8%
50081 -PRQ NEPHROSTOLITHOTOMY/ PYELOSTOLITHOTOMY > 2 CM	$1,703.31	$1,068.02	$1,068.02	62.70%	62.70%	$1,504.65	70.98%	70.98%	$1,208.34	88.39%	88.4%
50590 -LITHOTRIPSY XTRCORP SHOCK WAVE	$783.57	$467.69	$751.07	95.85%	59.69%	$730.98	102.75%	63.98%	$671.13	111.91%	69.7%
51798 -MEAS POST-VOIDING RESIDUAL URINE&/BLADDER CAP	$16.79	$16.08	$16.08	95.77%	95.77%	$19.49	82.50%	82.50%	$17.32	92.84%	92.8%
52000 - CYSTOURETHROSCOPY	$210.62	$104.54	$170.56	80.98%	49.63%	$233.20	73.14%	44.83%	$150.99	112.96%	69.2%
52310 -CYSTO W/SIMPLE REMOVAL STONE & STENT	$335.64	$127.99	$206.60	61.55%	38.13%	$371.21	55.66%	34.48%	$225.05	91.80%	56.9%
52332 -CYSTO W/INSERT URETERAL STENT	$296.60	$131.58	$387.55	130.66%	44.36%	$328.45	117.99%	40.06%	$446.31	86.83%	29.5%
52352 -CYSTO W/URETEROSCOPY W/RMVL/MANJ STONES	$301.18	$312.29	$312.29	103.69%	103.69%	$381.47	81.86%	81.86%	$336.21	92.89%	92.9%
52356 -CYSTO/URETERO W/LITHOTRIPSY &INDWELL STENT INSRT	$575.11	$345.42	$345.42	60.06%	60.06%	$533.87	64.70%	64.70%	$395.02	87.44%	87.4%
54300 -PENIS STRAIGHTENING CHORDEE	$0.00	$538.78	$538.78	0.00%	0.00%	$539.50	99.87%	99.87%	$606.99	88.76%	88.76%
Average Rates and Percentage	**$505**	**$358**	**$434**	**75.7%**	**57.04%**	**$526**	**83.7%**	**65.8%**	**$475**	**93.2%**	**74.2%**

Review Analysis of Behavioral Health Services

The clear majority of behavioral health services provided by North Carolina's Medicaid agency are not provided by a FFS model. Rather, the state's behavioral health services are provided through public managed care organizations that provide a comprehensive behavioral health services plan under the NC 1915(b)(c) Waiver for the state's Medicaid beneficiaries in need of mental health, developmental disability or substance use services. The organizations are Prepaid inpatient health plans as defined in 42 CFR § 438.2. For state, fiscal year (SFY) 2015 (July 1, 2014 – June 30, 2015), the number of funds expended for behavioral health waiver services was approximately $2.4 billion. However, pursuant to the Waiver, several services are exempt and provided through the FFS model including:

- Retroactive eligibility – Medicaid beneficiaries for the period of retroactive eligibility;
- Qualified Medicare beneficiary groups (MQ-B, E, and Q);
- Children 0 to 3 years of age, except that all age groups may participate in the Home and Community Based Services (HCBS) waiver, "NC Innovations;" and
- Non-qualified aliens or qualified aliens during the five-year ban.

For the same State fiscal year noted above, the amount of expenditures for behavioral health services that were exempt from the Waiver was $16 million (0.67%) of the total amount expended for behavioral health services within the Medicaid program. For the populations that were exempt from the Waiver, for the 0-3-year population, the amount spent for SFY 2015 was $11 million, which comprised 69% of the behavioral health FFS spending, and for this population, developmental screening constituted most this spending. In addition, the remaining $5 million or 31% of behavioral health FFS spending consisted primarily of development screening for children ages 37 months to 18 years (provided by primary care providers as a part of pediatric care) and psychotherapy for adults

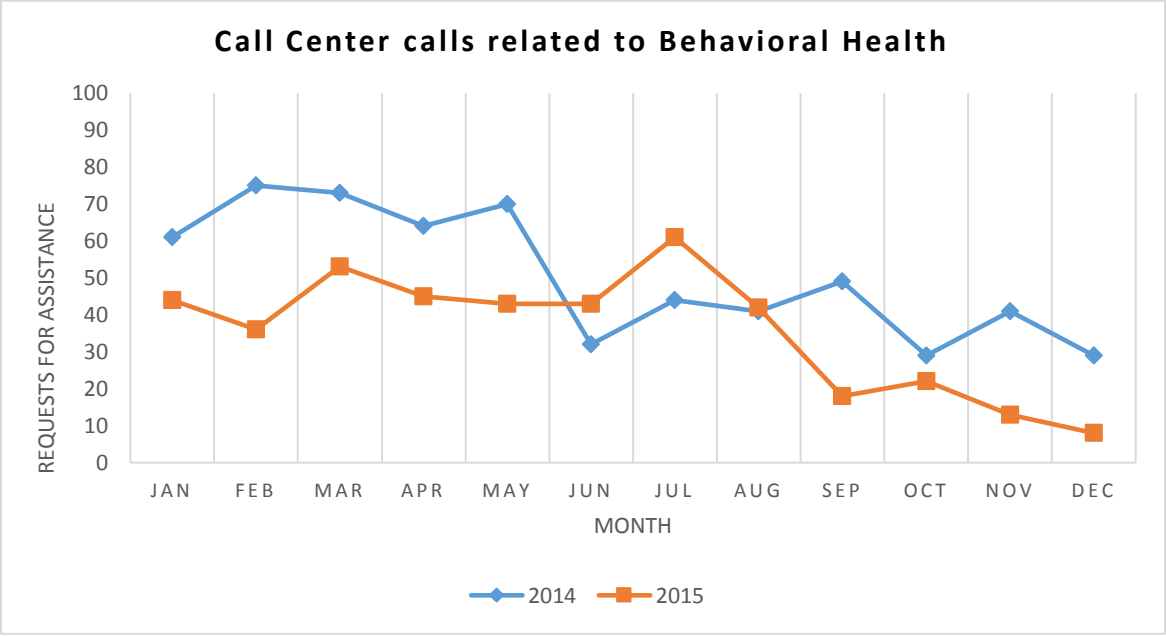
As shown above, compared to the provision of behavioral health services via the managed care organizations, the number of funds expended on behavioral health care services through the FFS model is minimal. Currently, the state does not have evidence the FFS model is not working well for beneficiaries. Since the managed care organizations are required to complete annual gap analysis reports, the same access issues they identify and address, directly affect FFS behavioral health services since many of the FFS providers also participate as network providers for the managed care organizations.

<u>Concerns and issues raised by providers or beneficiaries through feedback mechanisms</u>

General feedback mechanisms from providers are from discussion of issues with various behavioral health advocacy groups and associations and through public comments made during

the agency's Medical Care Advisory Committee, which meets quarterly. In addition, the DMA Call Center responds to beneficiaries when calls are received asking for assistance in finding a provider. Figure 78 below shows the number of calls received from beneficiaries and providers during CY 2014 and CY 2015. Many of these calls were from beneficiaries seeking help in contacting the behavioral health managed care organization serving their area. There was a high volume of calls reported in January – May of 2014, which appear to have been due to the increased enrollment because of the ACA where newly enrolled individuals were seeking providers for behavioral health services. Calls were lower the last three months of the year for both CY 2014 and CY 2015, which is similar to the trends observed with primary care services, including dental services, and pre-and post-natal services. Overall calls for the year were down in 2015 (average of 38 calls/month) as compared to 2014 (average of 51 calls/month).

Figure 78



Review Analysis of Pre-Natal and Post-Natal Obstetric Services

Data sources: NC Tracks (MMIS) for provider enrollment, beneficiary enrollment and claims data

CAHPS data relevant to meeting beneficiary needs – The state does not currently have CAHPS data available regarding prenatal and post-natal services. However, North Carolina has released a request for proposals (RFP) to secure a certified CAHPS vendor to assist the state with providing CAHPS data for prenatal and post-natal services in the Plan.

Availability of prenatal and post-natal obstetric providers

The following three graphs and map of the counties focus on the number and availability of prenatal and post-natal obstetric providers. Figure 79 compares the number of obstetric providers from CY 2014 to CY 2016. There was an 3.1% increase in the number of prenatal and post-natal providers from CY 2015 to CY 2016. A portion of this increase was due to growing numbers of physician assistants and nurse practitioners enrolled in Medicaid in 2015, who function as rendering providers. The number of rendering providers is expected to increase in 2016, with the agency requiring all such providers to be enrolled in Medicaid, no later than November 1, 2016.

Figure 80 shows the number and locations of prenatal and post-natal providers by county. There are several areas in the state with no Medicaid-participating obstetric providers. One reason for the lack of providers in these areas is that there are no existing hospitals in the county or the hospitals may not offer maternity services. All Medicare-participating hospitals (all of which also participate in N.C. Medicaid) are required to comply with the Emergency Medical Treatment and Labor Act (EMTALA). This may involve a provider delivering a beneficiary's baby, in a hospital that may not offer maternity services, which is not routine or common. Thus, these providers are not reflected in Figure 80. Figure 81 shows the average distance in miles travelled by mothers to hospital for Medicaid deliveries during CY 2016. The data are based on all Medicaid deliveries in CY 2016, with availability of beneficiary home addresses and/or zip codes, with about 15% of the distances based only on residence zip codes. Due to the lack of availability of hospitals that offer maternity services, there are 21 counties in the state in which a beneficiary must travel more than 40 miles for her delivery.

Figure 79

Number of Pre-and Post-Natal Providers for CY 2014 CY 2015 and CY 2016

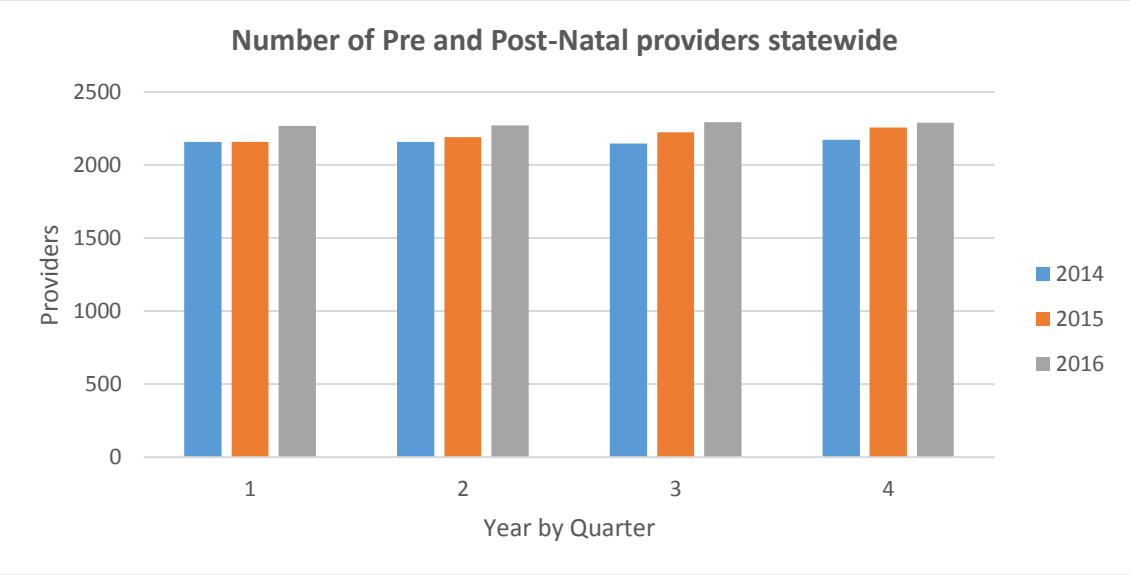


Figure 80

Geographic Distribution and Number of Pre-and Post-Natal Provider Locations by County

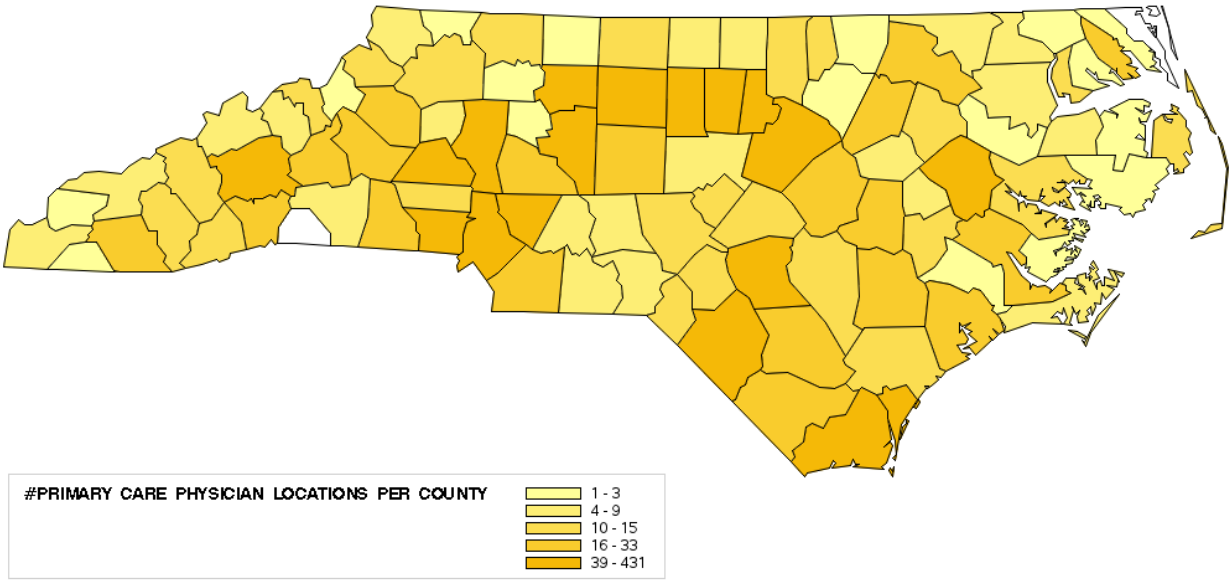
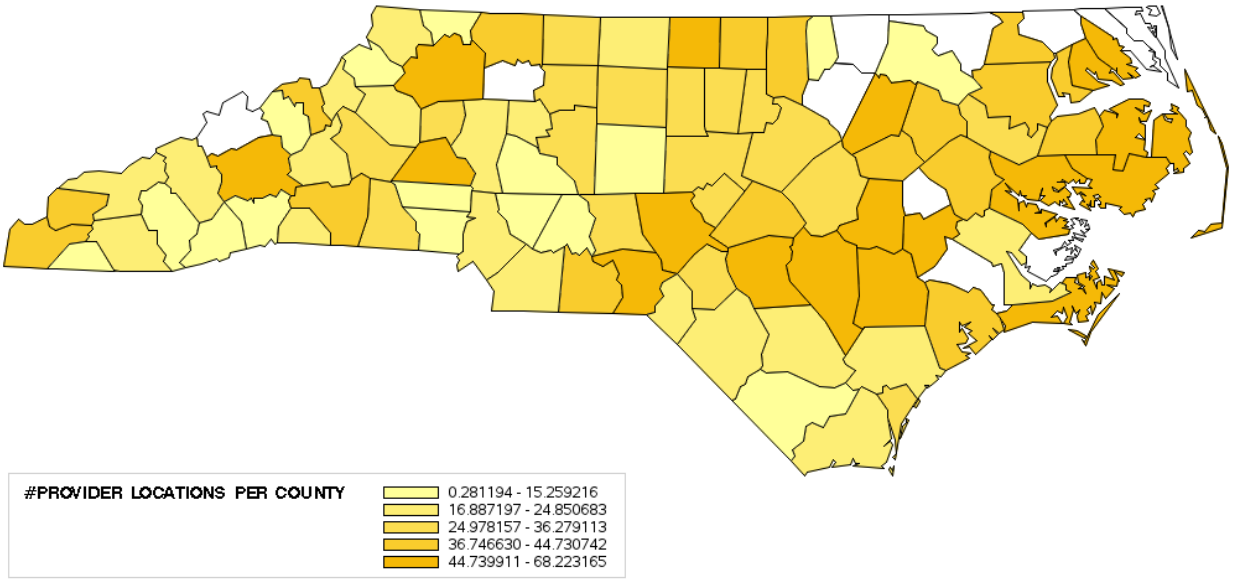


Figure 81

Average Distance in Miles between Home and Hospital for Medicaid Deliveries for CY 2016



Utilization data

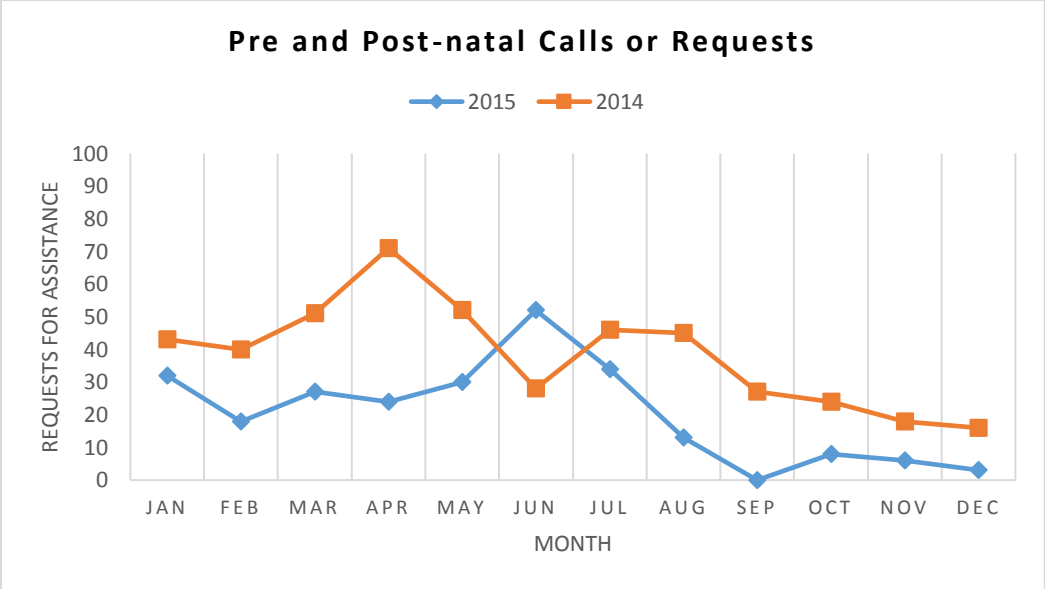
With prenatal and post-natal services often provided and billed as bundled services, it is difficult to accurately obtain the number of visits per 1000 enrollees. However, the agency is continuing to review and analyze data to establish utilization trends statewide, and for Urban and rural areas.

Concerns or issues raised by providers or beneficiaries through provider feedback mechanisms

General feedback mechanisms from providers were from discussion of issues with various physician groups and associations, and through public comments received during the agency's quarterly Medical Care Advisory Committee meetings. In addition, the DMA Call Center staff compiled results of responses to beneficiaries from calls regarding prenatal and post-natal services. Figure 57 below shows the number of calls received from beneficiaries for CY 2014 and CY 2015. Many calls were from beneficiaries seeking help with finding a provider or were from beneficiaries with questions regarding coverage of prenatal and post-natal services. Although there were fewer of these types of calls in 2015 than in 2014, both years appear to follow the same trend of fewer calls towards the last quarter of the year from October to December. Typically, beneficiaries seeking often delay scheduling these services during the last quarter of the year due to the November and December holidays, which may explain the decrease in calls

for these months. Overall, calls for the year were down in 2015 (average of 20 calls/month) as compared to 2014 (average of 38 calls/month).

Figure 82



Comparative analysis of Medicaid payment rates to Medicare payment rates for Pre-Natal and Post-Natal Obstetric Services

The data in Figure 83 highlight the top 10 codes for paid claims (in dollars) which Medicare also covered and paid, for the same CPT code. Some CPT codes for Medicaid that were originally in the top 10 codes for paid claims, were not covered by Medicare. Therefore, those codes were omitted from the analysis. The rates in Figure 57 show care provided in a facility, such as hospital, and a non-facility, such as an office or clinic. As previously stated, N.C. Medicaid typically pays approximately 80% of the Medicare rate. Figure 57 below shows this consistent pattern for both facility rates and non-facility rates. However, the aggregate for the 10 codes provided in Figure 58 shows the Medicaid rate for prenatal and post-natal obstetric services to be lower than 80% of the Medicare rate for both non-facility and facility rates at 69.82% and 69.81%, respectively.

Figure 83

CPT code and Description	*NC DMA rate (Dollars)*	*NC Commercial Rural Rate (Dollars)*	*Percentage of NC DMA vs Commercial Rural rate*	*Medicare rate (Dollars)*	*Percentage of NC DMA Rate vs Medicare Rate*	*NC Commercial Urban Rate (Dollars)*	*Percentage of NC DMA Rate vs Commercial Urban rate*
59025 -FETAL NONSTRESS TEST	$35.13	$35.10	100.09%	$44.17	79.53%	$53.09	66.17%
59400 -OB CARE ANTEPARTUM VAG DLVR & POSTPARTUM	$1,327.53	$1,499.66	88.52%	$1,936.88	68.54%	$1,873.55	70.86%
59409 -VAGINAL DELIVERY ONLY	$589.45	$766.15	76.94%	$759.21	77.64%	$805.76	73.15%
59410 -VAGINAL DELIVERY ONLY W/POSTPARTUM CARE	$683.52	$997.05	68.55%	$968.55	70.57%	$932.60	73.29%
59426 - ANTEPARTUM CARE ONLY 7/> VISITS	$461.66	$754.21	61.21%	$752.41	78.46%	$1,085.69	54.38%
59510 -OB ANTEPARTUM CARE CESAREAN DLVR & POSTPARTUM	$1,503.26	$1,863.70	80.66%	$2,146.35	70.04%	$2,232.23	67.34%
59514 -CESAREAN DELIVERY ONLY	$697.93	$495.10	140.97%	$854.71	81.66%	$300.03	232.62%
59515 -CESAREAN DELIVERY ONLY W/POSTPARTUM CARE	$822.81	$1,053.22	78.12%	$1,175.17	70.02%	$1,228.60	66.97%
76801 -US PREGNANT UTERUS 14 WK TRANSABDL 1/1ST GESTAT	$102.11	$84.31	121.11%	$113.58	89.90%	$121.23	84.23%
76805 -US PREG UTERUS AFTER 1ST TRIMEST 1/1ST GESTATION	$113.58	$101.40	112.01%	$130.65	86.93%	$127.20	89.29%
Average rates and Percentages	**$633.70**	**$764.99**	**92.82%**	**$888.17**	**77.33%**	**$876.00**	**87.83%**

Review Analysis of Home Health Services

For the review of home health services, it should be noted that the data do not include Medicaid waiver services or home and community based services, such as personal care services. In North Carolina, Medicaid home health services are like Medicare home health services. To be enrolled, a Medicaid home health provider must first be certified as a Medicare home health provider. Medicare home health providers are governed by the state's Certificate of Need law (CON), pursuant to N.C. General Statute § 131E, Article 9. Medicare home health providers can provide services up to one hour driving time from their offices. Therefore, the CON and health planning process used to determine the need for home health agencies typically does not show a need for additional home health agencies in the state. If a need is identified, it is generally for a minimum of one home health agency. In 2013, there was a projected need for only two additional home health agencies in the entire state, and in 2014 and 2015, no additional home health agencies were projected to be needed; However, there was a need determination for a new home health agency in Mecklenburg county in 2016.
(See https://www2.ncdhhs.gov/dhsr/ncsmfp/index.html).

Data sources: NCTracks (MMIS) for provider enrollment, beneficiary enrollment and claims data used for utilization

CAHPS data relevant to meeting beneficiary needs – The state does not currently have CAHPS data available for home health services. However, North Carolina has released a request for proposals (RFP) to secure a certified CAHPS vendor to assist the state with providing CAHPS data for home health services in the Plan.

Availability of home health providers

The following three graphs and map of the counties focus on the number of home health providers trending over time for CY 2014, CY 2015 and CY2016. Figure 84 shows the total number of home health services statewide. Figures 85 and 86 show the number of home health providers per 1000 beneficiaries for rural and Urban areas, respectively. The number of Medicaid-participating home health providers has remained virtually unchanged from 2014, as compared to 2015 and 2016. In addition, the number of home health providers for the rural and Urban areas are similar. Figure 87 shows the number and locations of home health providers by county. There are several areas in the state with no Medicaid-participating home health agencies. However, as previously noted, Medicare home health agencies can provide services within one hour of driving time from their offices.

Figure 84

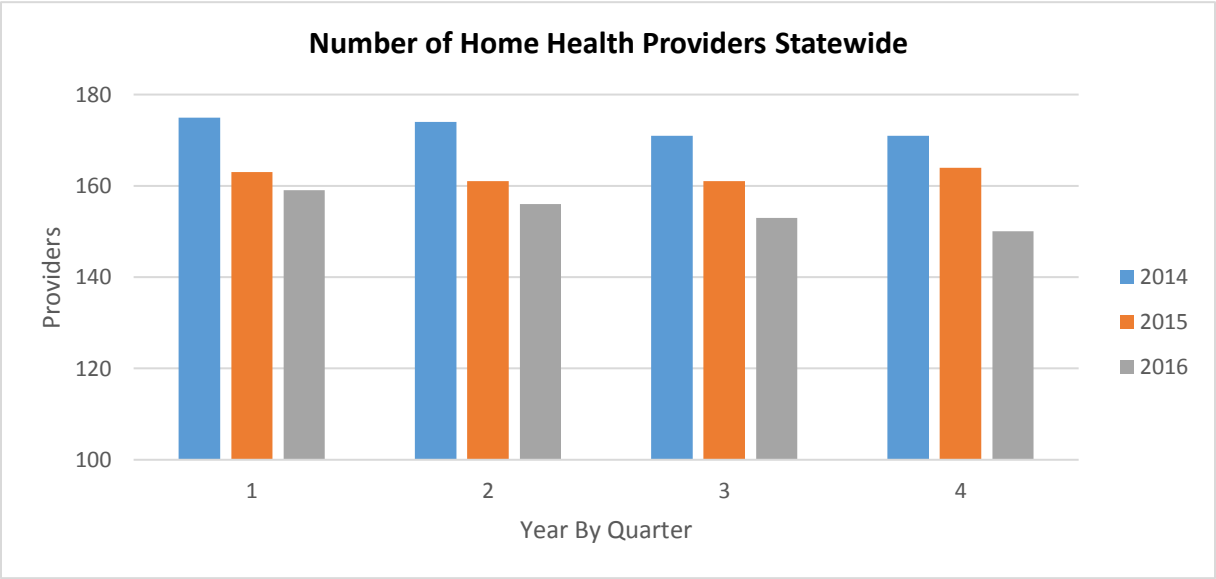


Figure 85

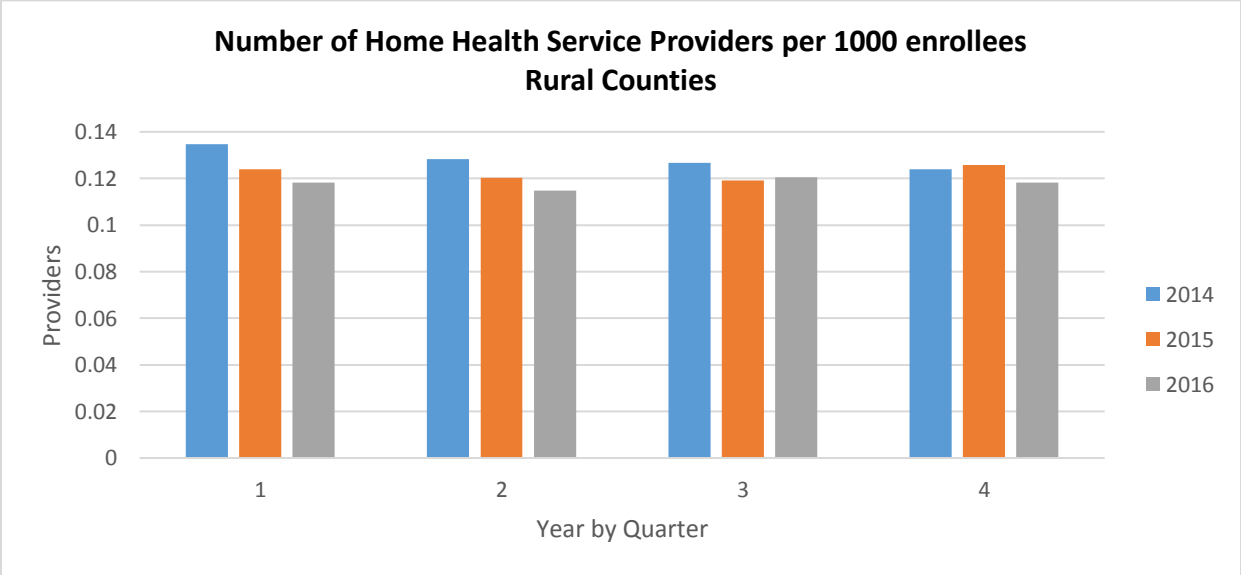


Figure 86

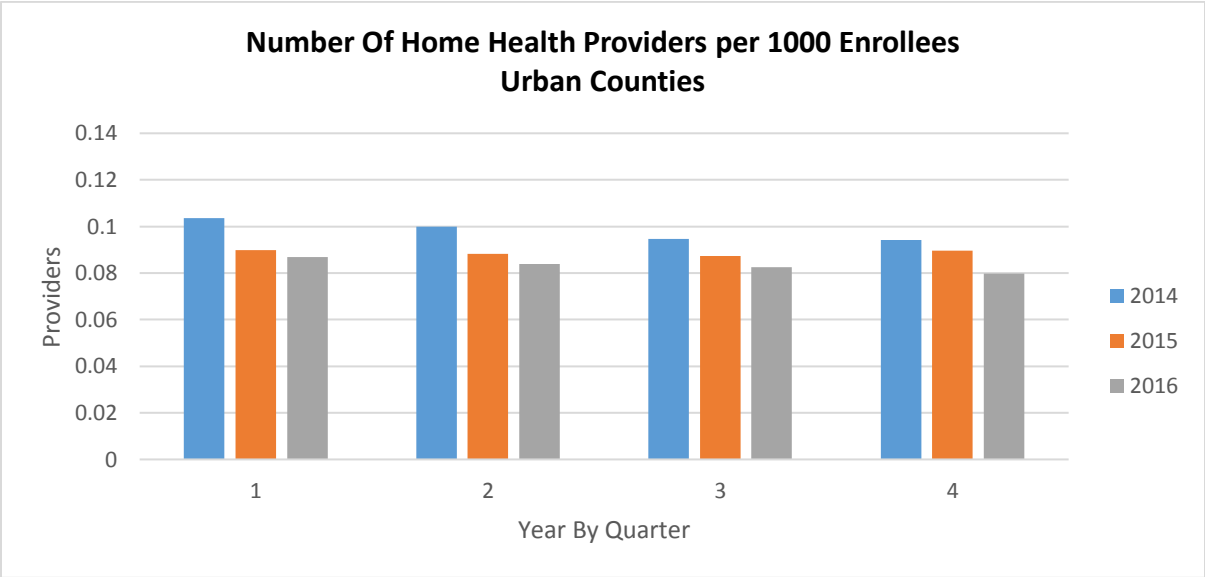
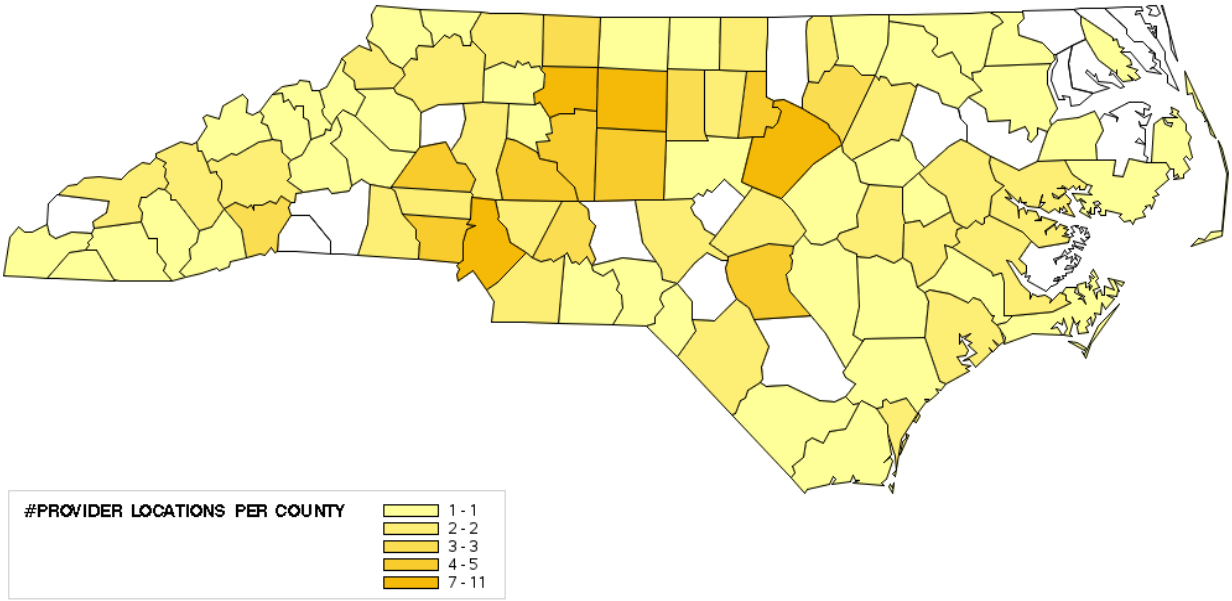


Figure 87

Geographic Distribution and Number of Medicaid Home Health Provider Locations by County



Utilization data for home health services

Note: Data include the number of unduplicated in-home visits to Medicaid beneficiaries and do not include Medicare crossover claims or dually eligible beneficiaries since Medicare home health is the primary service for Medicare beneficiaries.

The following three graphs demonstrate visits per 1000 enrollees (beneficiaries) for Medicaid home health providers. Figure 88 shows statewide visits for CY 2014, CY 2015 and CY 2016. during the last quarter of 2016, the total number of Home health visits per 1000 Enrollees is below two standard deviations from the mean than other quarters of 2014, 2015 and 2016. Figures 89 and 90 break down visits by Rural and Urban and counties, respectively. Since home health providers can travel to beneficiaries' homes or places of residence to provide services, the location of the provider is not as significant as with other providers, which require an office or health care facility. Like other services reviewed in the Plan, all three graphs show utilization in visits per 1000 enrollees was down for all three areas, statewide (10.8%), rural (14.2%) and Urban (10.4%). Breaking down by ages, the total visits for the (0-20) age group in the last quarter of 2016 is below two standard deviations from the mean. Similarly, in the urban areas the visits per 1000 enrollees for the age group 0-20 years is below two standard deviations from the mean.

To further analyze why there was a decrease in home health services, an analysis was conducted to review other services provided in the home, which may not be provided by home health agencies, but are similar in acuity level; therefore, the agency reviewed private duty nursing (PDN) and home infusion therapy services. Figure 97 shows statewide utilization of home health services, home infusion therapy, private duty nursing (PDN), and therapy services based on dollars paid in millions for CY 2011 through CY 2015. The increase in dollars paid beginning in 7/2013 is attributed to how services are billed and paid under the new claims payment system, NCTracks. As the graph demonstrates, utilization of home health services has been steadily declining for the entire period being reviewed. In addition, as utilization of home health services has declined over the years, there has been an increase in PDN and therapy services whereas home infusion therapy remained steady.

It is unlikely home health patients are being shifted to PDN since PDN is a highly specialized level of care compared to home health and according to Medicaid Clinical Coverage Policy No. 3G, *"is substantial, complex, and continuous skilled nursing service that require more individual and continuous care than is available from a visiting nurse or is routinely provided by the nursing staff of a hospital or skilled nursing facility. PDN must be medically necessary for the beneficiary to be covered by NC Medicaid (Medicaid)."*

Whereas PDN is highly specialized, home health services are more varied and according to Medicaid Clinical Coverage Policy No. 3A *"include medically necessary skilled nursing services, specialized therapies (physical therapy, speech- language pathology, and occupational therapy), home health aide services, and medical supplies provided to beneficiaries who live in primary private residences. Skilled nursing, specialized therapies, and medical supplies can also be provided if the beneficiary resides in an adult care home (such as a rest home or family care home)."* One possible explanation for the decline in home health utilization may be that

providers are providing more therapy services via licensed home care agencies that are not certified by Medicare or Medicaid and do not require a CON as described at the beginning of this section. Providing therapy services via non-certified home care agencies may provide providers more since the agency would not be required to comply with Medicare home health regulations in addition to N.C. home care licensure regulations and Medicaid Clinical Coverage Policies. That said, more data will need to be reviewed and analyzed to make any definite conclusions and the agency will continue review utilization trends for home health services, particularly how they are affected by similar services and how these services are utilized based on geographic area. In addition, further work is needed to review trends by age group and eligibility type such as aged, blind, disabled and other conditions.

Figure 88

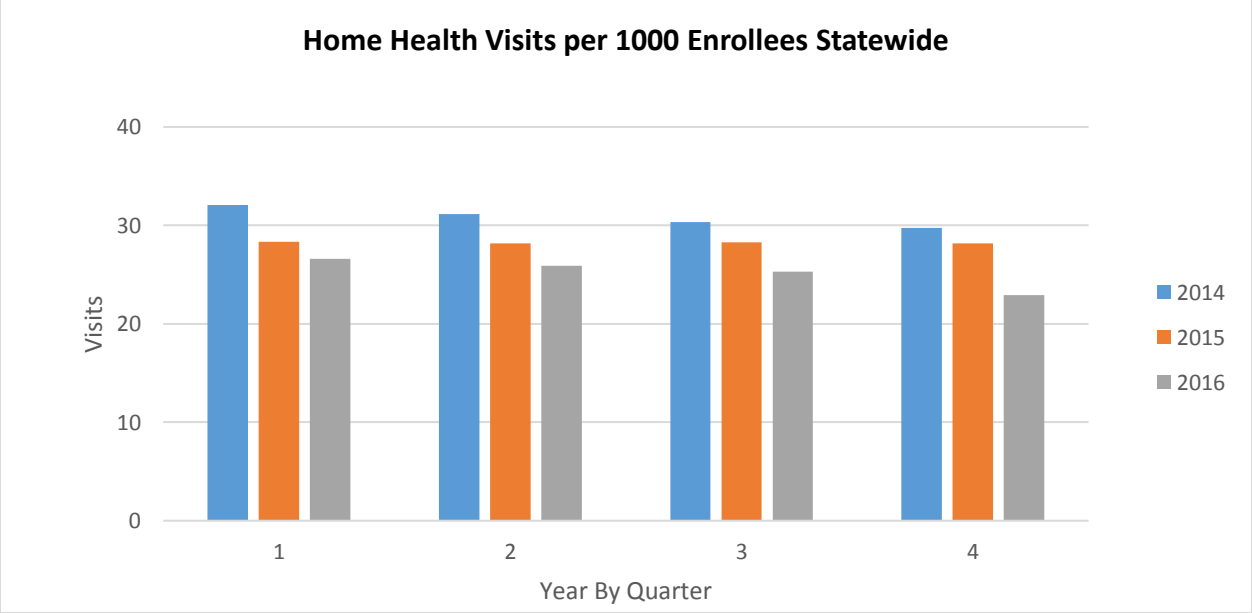


Figure 89

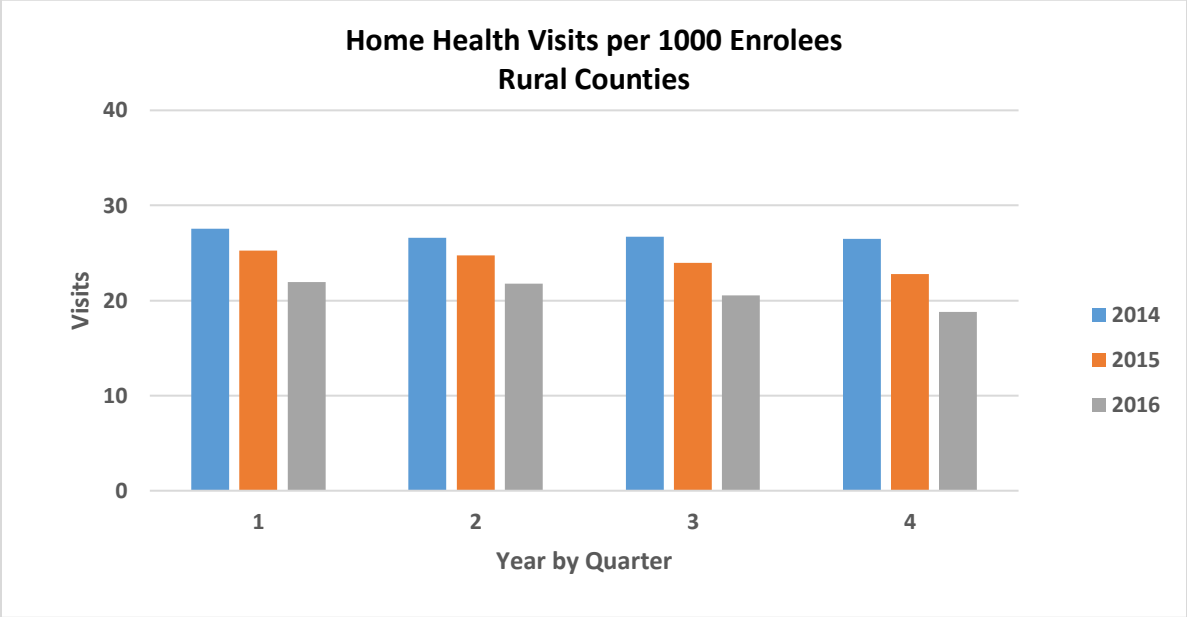


Figure 90

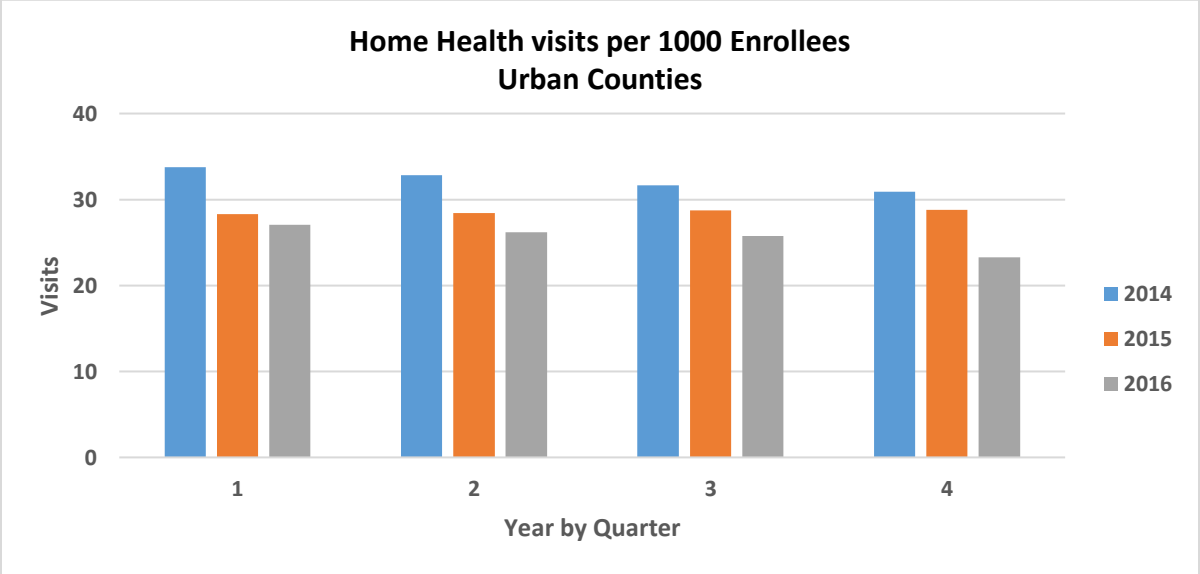


Figure 91

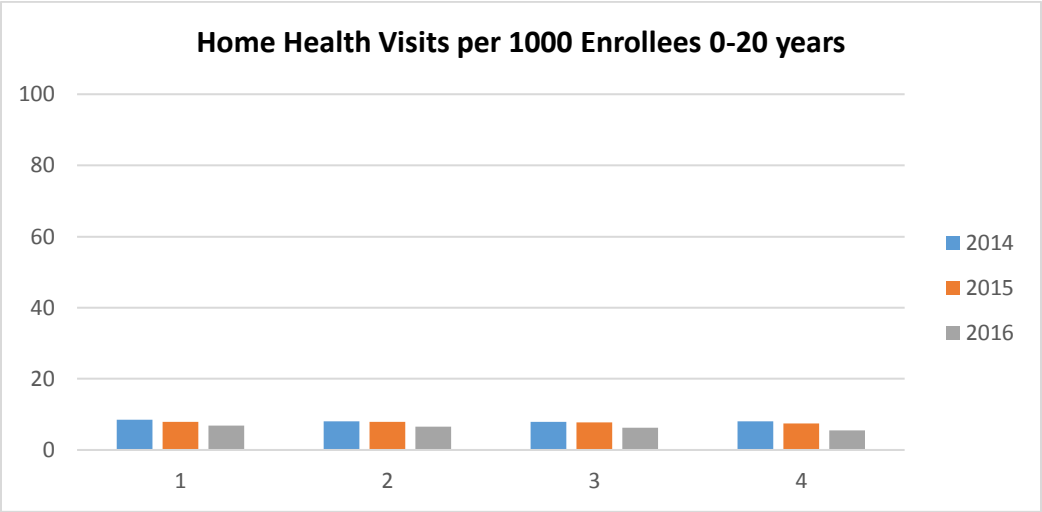


Figure 92

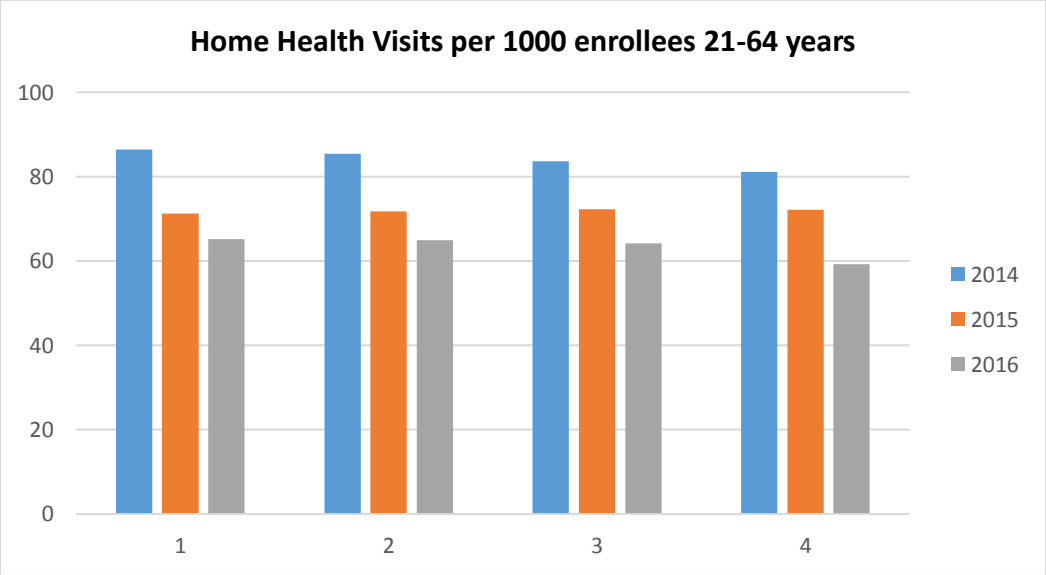


Figure 93

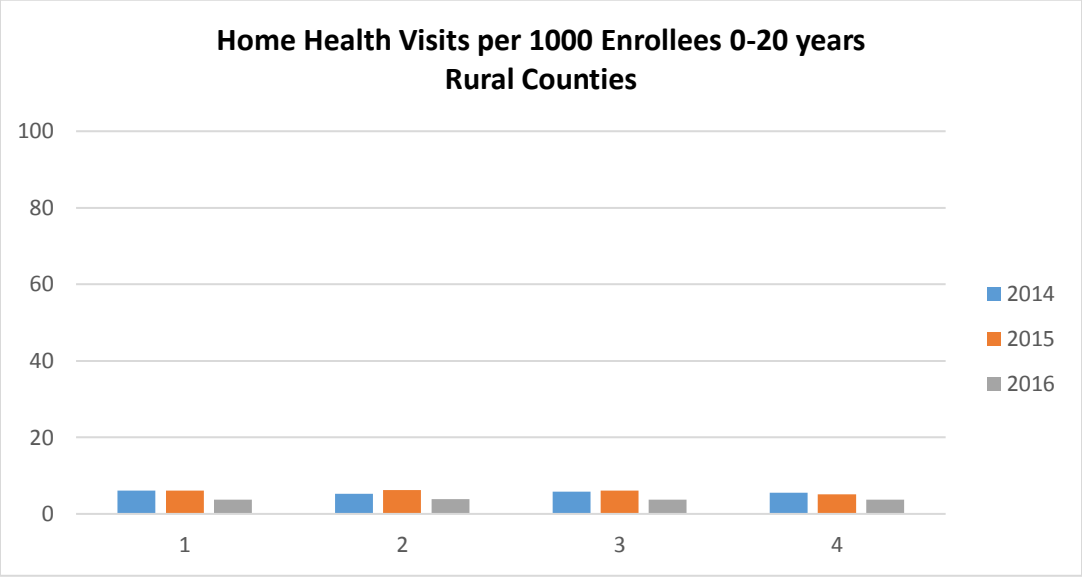


Figure 94

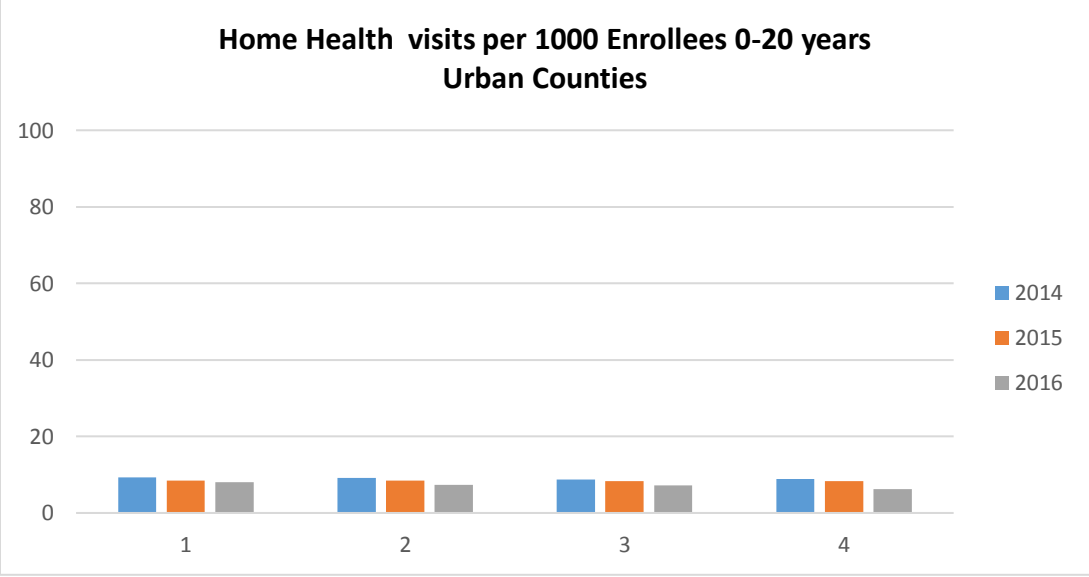


Figure 95

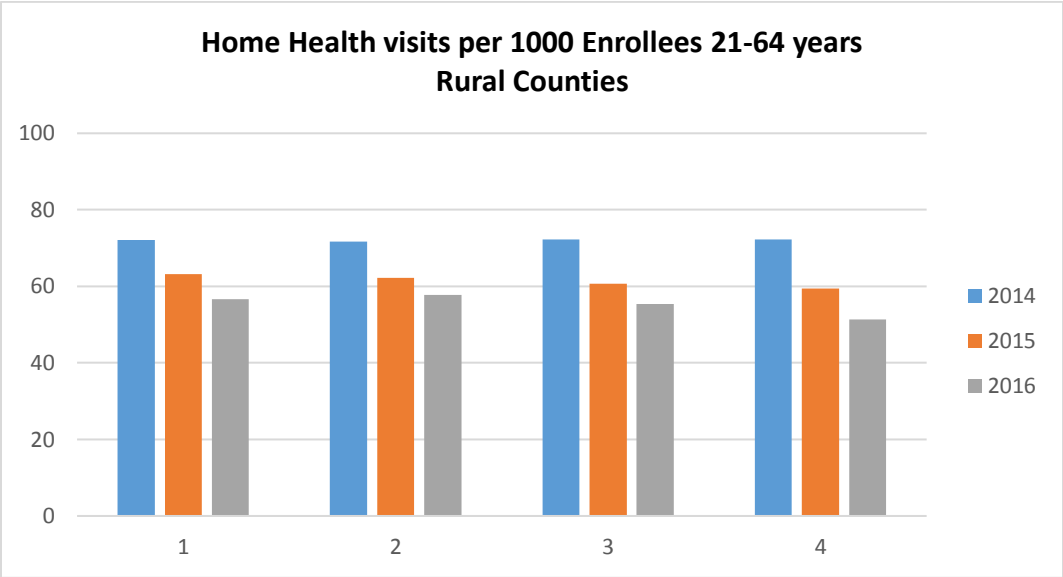


Figure 96

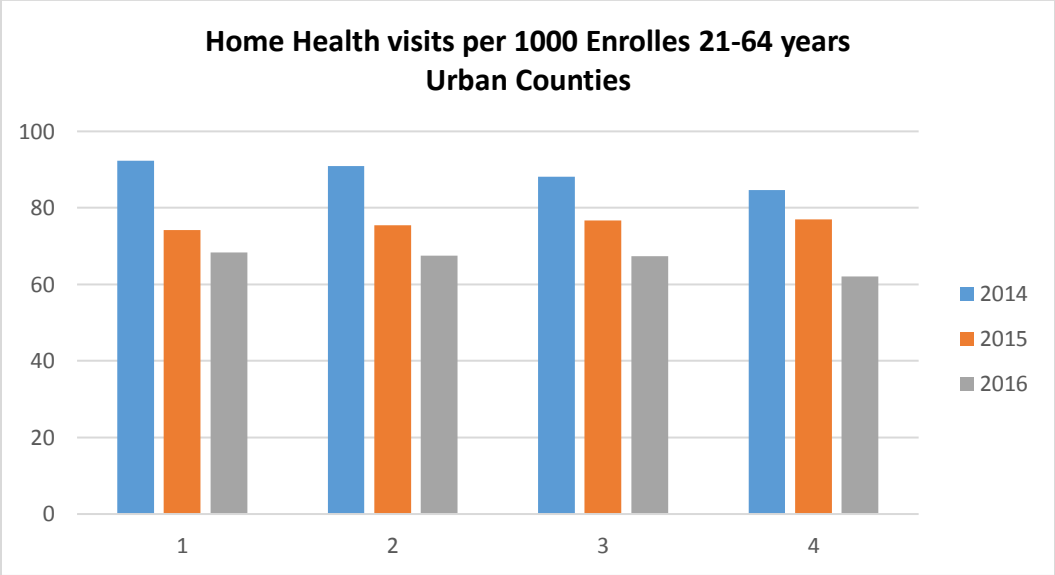
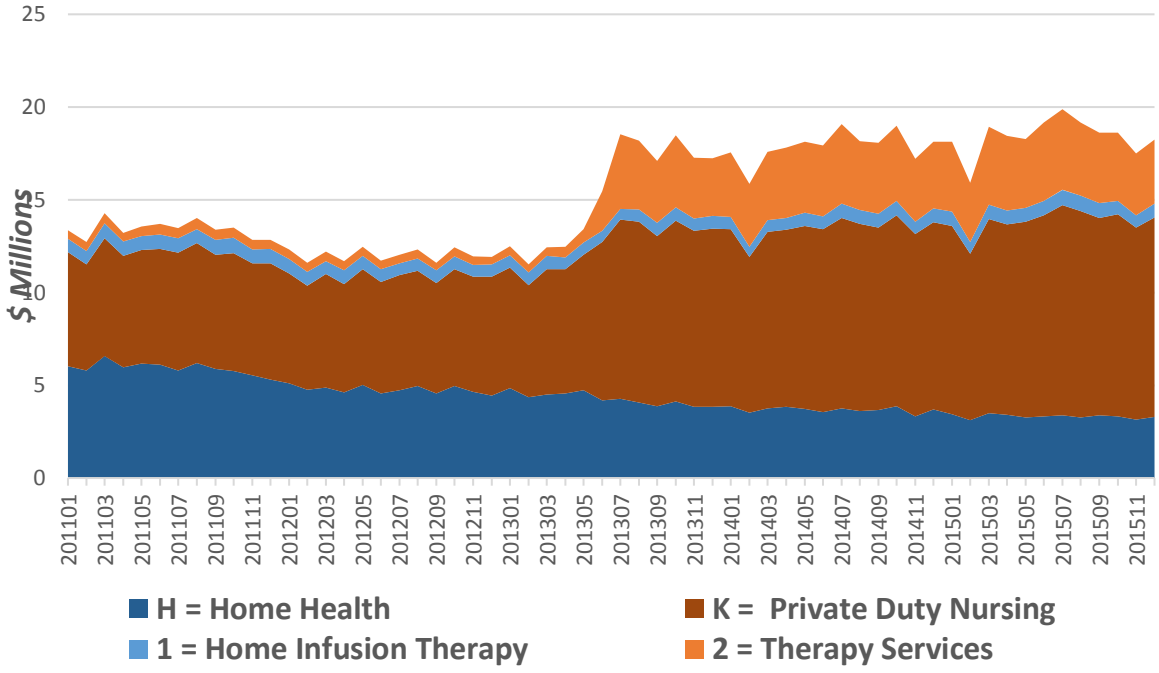


Figure 97

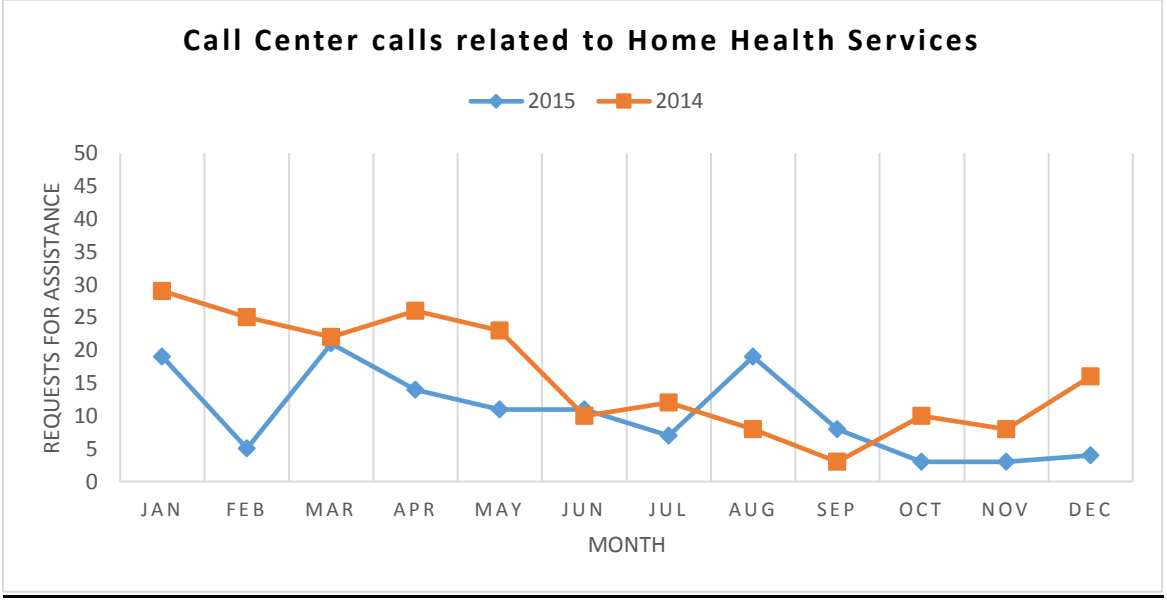
Services delivered into the Home by Claim Type,
(excluding Personal Care Services (PCS) and Hospice)



Concerns and issues raised by providers or beneficiaries through feedback mechanisms

General feedback mechanisms from providers are based on discussion of issues with various home health providers and associations. North Carolina also received public comments during the agency's quarterly Medical Care Advisory Committee meetings. In addition, the DMA Call Center receives feedback from responding to calls from beneficiaries requesting assistance in finding a home health provider or from questions about home health services. Of note for CY 2014 and CY 2015 were data collected on Call Center calls. Presented in Figure 98 are not only home health calls, but calls for personal care services and private duty nursing services. Many of these calls from beneficiaries were questions about the services they were currently receiving. Although there were fewer calls in 2015, both CY 2014 and CY 2015 appear to follow the same trend of more calls during January through June, and fewer calls from July to December. Overall, calls in 2015 were down (average of 10 calls/month), compared to calls in 2014 (average of 16 calls/month).

Figure 98



Comparative analysis of Medicaid payment rates to Medicare rates and other payer rates for home health services

The data shown in Figure 99 are for the top nine CPT codes for paid claims (in dollars) in which Medicare also covered and paid for the same CPT code. Many of the CPT codes for Medicaid that were originally in the top 10 codes for paid claims were not covered by Medicare. Therefore, those codes were omitted from the analysis. The rates in Figure 66 are for care not provided in a facility, since home health services by their very nature, are provided in a beneficiary's home or place of residence. As stated previously, N.C. Medicaid typically pays approximately 80% of the Medicare rate. However, the aggregate for the nine codes provided in Figure 67 shows the Medicaid rate to be higher than 80% of the Medicare rate at 92.72%. However, since all Medicaid rates are not included in the analysis, the 92.72% rate is not a complete reflection of the percentage of the Medicare rate paid by Medicaid.

Figure 99

CPT code and Description	*NC Commercial Rural Rate (Dollars)*	*NC DMA rate (Dollars)*	*NC Commercial Urban Rate (Dollars)*	*Percentage of NC DMA Rate vs Commercial Rural rate*	*Percentage of NC DMA Rate and Commercial Urban rate*	*Medicare rates*
A4216 -Sterile water/saline/dextrose diluent/flush 10ml	$10.76	$0.41	$12.02	3.81%	3.41%	N/A
A4314 -Insertion tray, Foley cath w bag, 2-way latex	$20.36	$26.02	$5.77	127.80%	451.19%	N/A
A4349 -Male external catheter, each	$27.90	$2.08	$64.35	7.46%	3.23%	N/A
A4351 -Intermittent urinary catheter; straight tip, ea	$60.38	$1.59	$117.03	2.63%	1.36%	N/A
A4352 -Intermittent urinary cath; coude (curved) tip,ea	$335.61	$6.12	$392.43	1.82%	1.56%	N/A
A4353 -Intermittent urinary cath w insertion supplies	$256.72	$7.20	$528.78	2.80%	1.36%	N/A
A4357 -Bedside drainage bag, day or night, each	$69.35	$9.99	$24.37	14.41%	41.00%	N/A
A4554 -Disposable underpads, all sizes	$2.75	$0.43	$15.44	15.64%	2.78%	N/A
A4927 -Gloves, non-sterile, per 100	$2.95	$11.29	$6.30	382.32%	179.09%	N/A
A5063 -Ostomy pouch, drainable for use barrier w flange	$48.88	$3.01	$37.53	6.16%	8.02%	N/A
Average rates and Percentages	**$83.57**	**$6.81**	**$120.40**	**56%**	**69.30%**	**N/A**

Review Analysis of Hemophilia Drug Services

The specialty pharmacy program implementation for hemophilia drugs was mandated by the North Carolina General Assembly [Session Law 2012-142, Section 10.48. (a2)]. Based on that mandate, pharmacy providers furnishing hemophilia drugs or services to Medicaid beneficiaries with a diagnosis of hemophilia or blood clotting factor related diseases are required to follow all clinically appropriate standards of care. The Hemophilia Specialty Pharmacy Program Clinical Coverage Policy can be found here: https://ncdma.s3.amazonaws.com/s3fs-public/documents/files/9B.pdf and a list of current hemophilia products covered under the State Plan can be found here: https://ncdma.s3.amazonaws.com/s3fs-public/NC_Hemophilia_Specialty_2016_07_05.pdf.

To comply with CMS 2345-FC and due to cost considerations, the North Carolina Medicaid agency, with approval from CMS, is planning to change the reimbursement methodology for hemophilia drugs which will result in a reduction in the rates paid for these drugs effective April 1, 2017. The impact of the rate reduction will result in $2,613,195 savings for the remainder (3 months) of State Fiscal Year 2017 (April 1 - June 30, 2017) and $10,452,779 in savings for (12 months) State Fiscal Year 2018 (July 1, 2017 – June 30, 2018). Due to reduced reimbursement, some pharmacy providers may no longer be interested in participating in the hemophilia program; however, other existing or new providers may be willing to increase their volume of providing needed medication to Medicaid beneficiaries with hemophilia or blood clotting factor related diseases. Baseline data included in this Access Monitoring Review Plan (AMRP) will be used to determine over the next 3 years if the reduced rate paid to pharmacy providers who supply hemophilia drugs to Medicaid beneficiaries affects access to care for these drugs. For purposes of the Plan, the determination of Urban and Rural counties was made by using the United States Department of Agriculture Economic Research Service's 2013 Rural-Urban Continuum Codes (http://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx), which "form a classification scheme that distinguishes metropolitan counties by the population size of their metro area, and nonmetropolitan counties by degree of urbanization and adjacency to a metro area."

Data sources: NC Tracks (MMIS) for provider enrollment, beneficiary enrollment and claims data used for utilization

CAHPS data relevant to meeting beneficiary needs – The state does not currently have CAHPS data available for hemophilia drug services. Any issues involving payment of claims for hemophilia drugs are first addressed by representatives from CSRA, the State's Fiscal Agent and if there are issues that cannot be revolved, the Pharmacy Section at NC Medicaid is contacted.

Availability of pharmacy providers furnishing hemophilia drugs

The chart in **Figure 100** shows the current distribution of Medicaid enrollees receiving hemophilia drugs. All hemophilia services are currently provided via a fee-for-service model. The majority (83%) of the enrollees are in the 0 – 20-year age range with approximately 17% age 21-64 years. Enrollees age 65 years or older, who are Medicare eligible, were not included since Medicare typically pays for hemophilia drugs in this population.

Figure 100

Medicaid beneficiaries receiving hemophilia drugs – distribution by age group

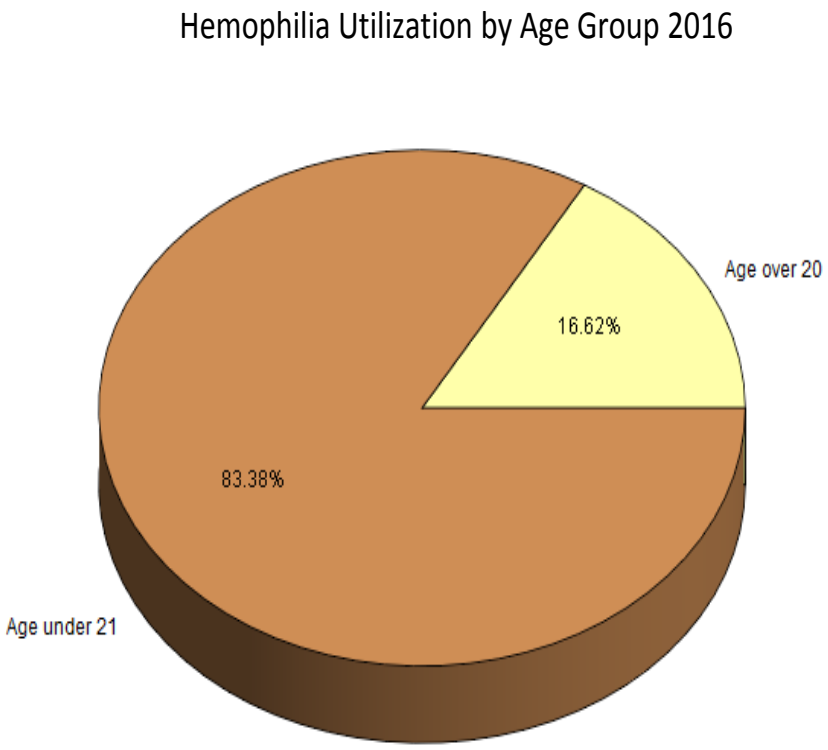


Figure 101 shows the number of Medicaid enrollees receiving hemophilia drugs and number of pharmacies providing hemophilia drugs for CY2015 and CY2016. For the past two calendar years, the number of enrollees has averaged approximately 108 with the number of pharmacy providers averaging approximately 14.

Figure 101

Number of Medicaid enrollees receiving hemophilia drugs and number of pharmacies providing hemophilia drugs for CY2015 and CY2016

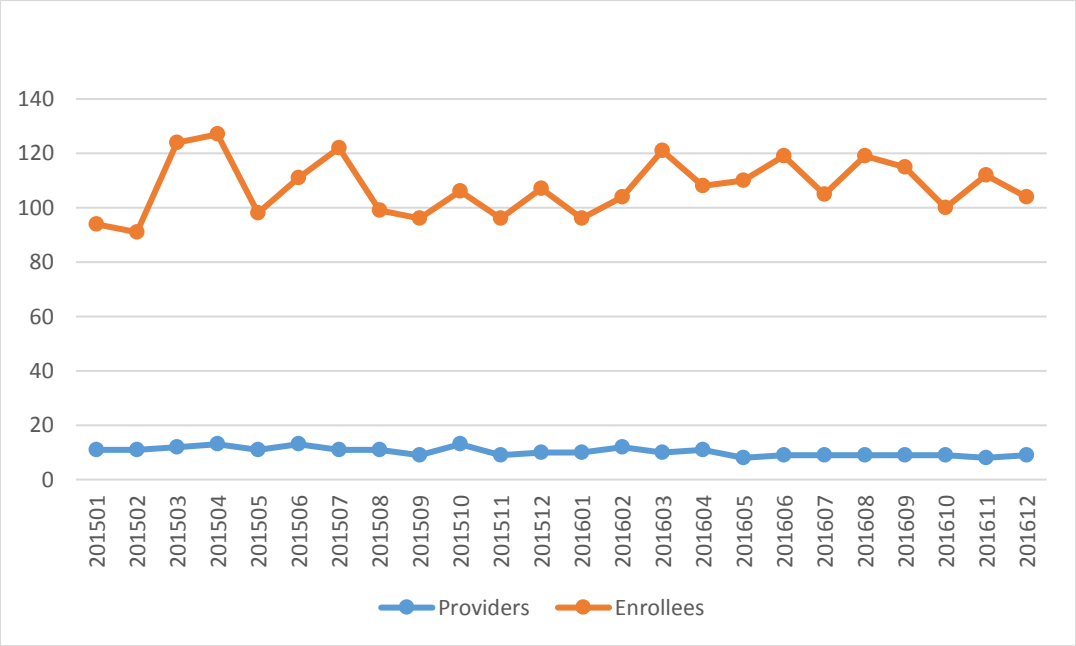


Figure 102 shows the number and location of enrollees in different counties of the state who were receiving hemophilia drugs as of December 2016 and the location of pharmacy providers (designated by red dots). Counties shaded in blue are designated as rural and those shaded in yellow are designated as urban. It should be noted that pharmacies participating in the hemophilia program provide hemophilia drugs to Medicaid beneficiaries via mail or courier; therefore, the location of the pharmacy with regards to the location of the beneficiary is not as important as most drugs can be delivered within two days.

Figure 102

Location of Hemophilia providers and Medicaid beneficiaries receiving hemophilia drugs

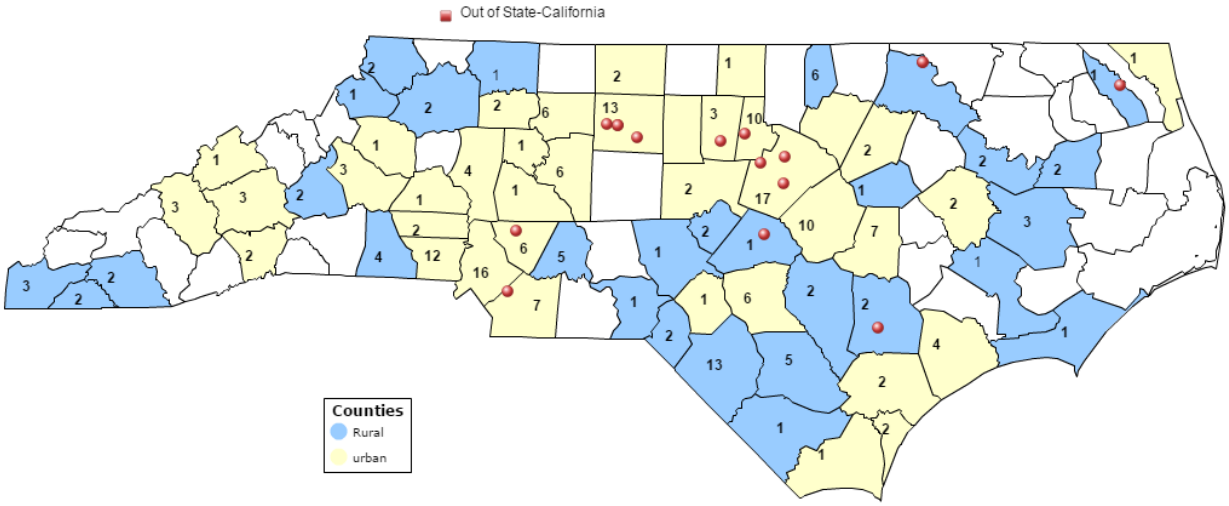


Figure 103 shows the number of pharmacy providers per beneficiary for calendar years 2015 and 2016. Even though the number of providers/beneficiary decreased from 2015 to 2016, this change is not due to a decrease in the number of providers but rather a slight increase in the number of beneficiaries. On average, each pharmacy provider serves approximately 9 beneficiaries.

Figure 103

Number of pharmacy providers to enrollees for CY2015 and CY2016

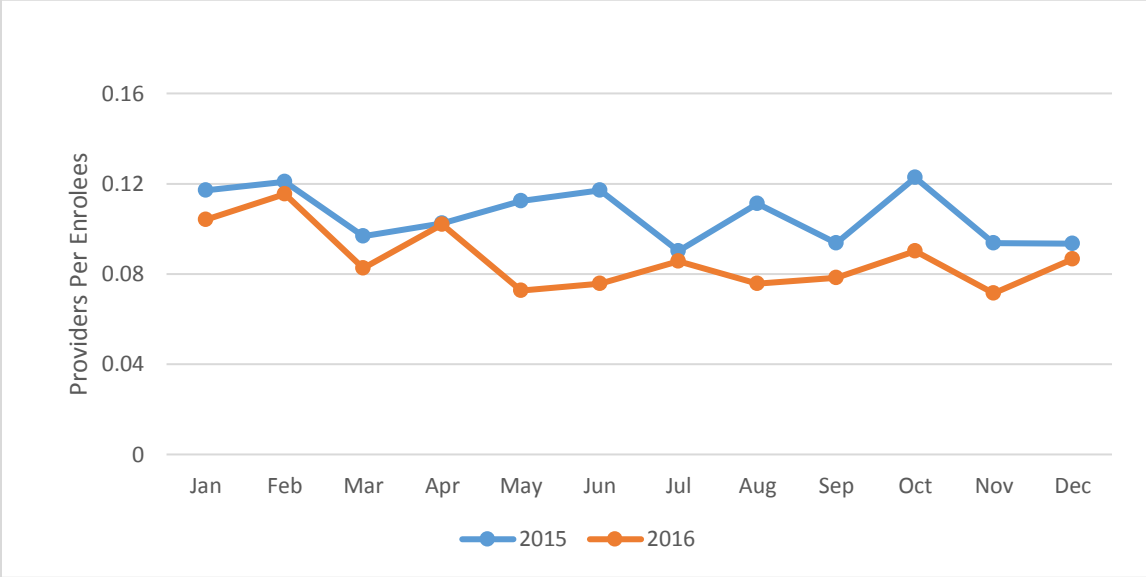
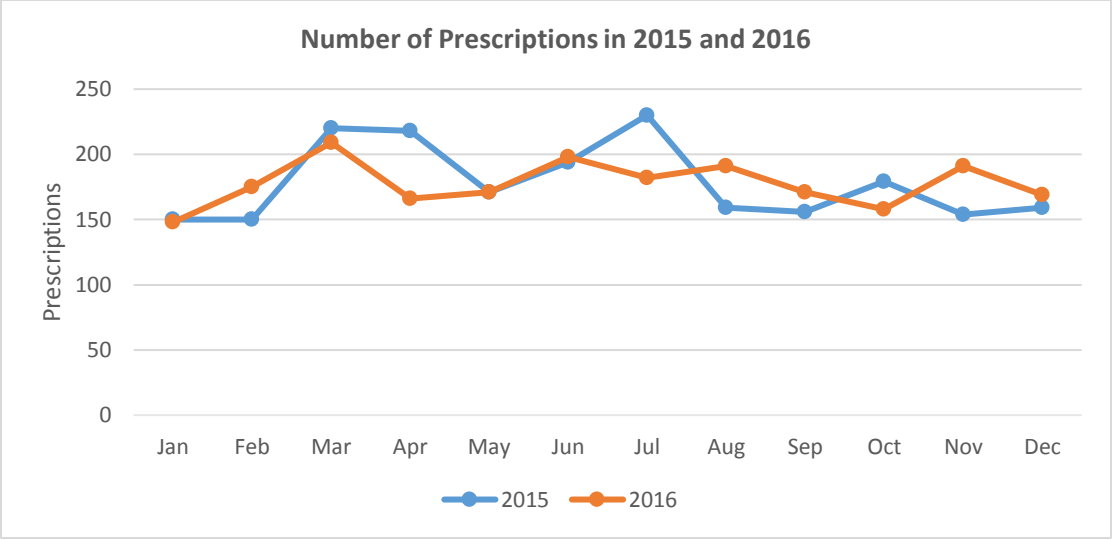


Figure 104 below shows the number of hemophilia drug prescription claims paid for CY2015 and CY2016. The average for the two-year period was approximately 178 paid claims/month. Given there are an average of 108 beneficiaries/month (from Figure 2), there is an average of 1.6 paid claims/month for each Medicaid beneficiary receiving hemophilia services.

Figure 104
Number of hemophilia drug prescription claims paid for CY2015 and CY2016



Once the rate reductions are fully implemented, claims data will be analyzed every 6 months to monitor any fluctuations. Any decreases in utilization (i.e. number of prescriptions), or decreases in providers (i.e. number of providers and number of pharmacy providers/enrollees) that are greater than two standard deviations from the mean (using confidence interval methodology) will be further analyzed to determine reasons for the decreases and any potential remedies the state may deem necessary to maintain and sustain adequate access to care.

<u>Concerns and issues raised by providers or beneficiaries through feedback mechanisms</u>
General feedback mechanisms from providers are based on discussion of issues with various pharmacy providers who provide hemophilia drugs. In addition, North Carolina also receives public comments during the agency's quarterly Medical Care Advisory Committee meetings. Specifically, for the hemophilia drug (clotting factor) rate reduction process, the following events occurred to address concerns and issues raised by providers or beneficiaries:

September 14, 2016 – NC Medicaid staff and staff from the agency's clinical/actuary vendor, Myers and Stauffer, met with the CMS pharmacy team onsite to present the agency's ideas and seek their input and guidance regarding an Actual Acquisition Cost (AAC) approach to clotting factor reimbursement.

October 19, 2016 – NC Medicaid held a stakeholder call to discuss and respond to questions regarding the clotting factor cost of dispensing survey tool/process. Stakeholders included small and large specialty pharmacy providers (Accredo, Diplomat and DrugCo), University of North Carolina Hemophilia Treatment Center, as well as hemophilia patient advocacy groups (Hemophilia of North Carolina, Hemophilia Alliance, National Hemophilia Association and Plasma Protein Association).

February 7, 2017 – NC Medicaid held a stakeholder call to present the proposed approach to clotting factor reimbursement methodology, which included the professional dispensing fee determined by the cost of dispensing survey and AAC rates determined by a survey of provider invoices. All stakeholder comments indicated that our process was very open and professional and the hemophilia advocacy groups were very appreciative that they were included as stakeholders to represent the needs of hemophilia patients. Concerns were expressed over the professional dispensing fee, the frequency that actual acquisition cost rates would be updated and the Medication Therapy Management (MTM) billing process. Many of the pharmacy providers commented that they may be forced, for business reasons, to stop serving their hemophilia patients due to the decreased reimbursement because of the proposed methodology. Pharmacy providers choosing to no longer serve patients may present an access risk since there are only 13 pharmacy providers providing clotting factor to NC Medicaid beneficiaries. For this reason, NC Medicaid offered to set up calls with individual pharmacy providers to discuss their reimbursement and business concerns. The following calls were scheduled as requested by the pharmacy providers:

- February 14, 2017 – University of North Carolina Hemophilia Treatment Center
- February 20, 2017 – DrugCo
- February 21, 2017 – BioRx/Diplomat

Based on these meetings and feedback received from pharmacy providers and one beneficiary regarding concerns over access to a small specialty pharmacy that may better meet the unique needs of certain patients for hemophilia services, NC Medicaid proposed an additional amount to be added to the professional dispensing fee determined by the survey. NC Medicaid submitted this proposed reimbursement methodology for clotting factor to CMS in draft form for technical assistance and guidance.

NC Medicaid participated in calls with CMS on March 17, 2017 and again on March 30, 2017, and per CMS technical guidance, revised the proposed reimbursement methodology to a state maximum allowed cost using AAC plus the professional dispensing fee determined by the cost of dispensing survey. The AAC will be adjusted per a survey of pharmacy provider invoices every six months and on an ad-hoc basis per calls to the agency's vendor helpdesk. A survey on the cost

of dispensing hemophilia drugs will be completed no less than every five (5) years to determine the need for an adjustment to the professional dispensing fee.

Comparative analysis of Medicaid payment rates to Medicare rates and other payer rates for hemophilia drugs

It should be noted that Medicaid is the primary payor for hemophilia drugs in North Carolina and that reimbursement from commercial insurance carriers or private pay is rare. Therefore, the only comparison below is between Medicaid and Medicare drug costs.

Figure 105 below shows the top 11 billed hemophilia drugs in 2016 with corresponding Healthcare Common Procedure Coding System or "HCPCS" codes. Although 11 drugs are listed, one (Adynovate) is not covered by Medicare so the comparison is for 10 drugs that are covered by Medicare. The current Hemophilia State Maximum Allowable Cost (HSMAC) and proposed Average Acquisition Costs (AAC) are compared with the Medicare reimbursement rate per Unit as of 4/2017. Whereas the current HSMAC per Unit rate is 104.3% of the Medicare rate, the proposed AAC rate is 79.6% of the Medicare rate. In addition, the proposed professional dispensing fee of $0.0250/Unit when compared with the Medicare furnishing (dispensing) fee of $0.209 for CY 2017 represents 12.0% of the Medicare fee.

Figure 105

HCPCS code and Description	Current HSMAC per Unit in dollars	Medicare reimburse-ment rate per Unit as of 1/2017 in dollars (for CY 2017, the provider is also reimbursed a $0.209 furnishing or dispensing fee/Unit)	% of Medicare rate	Proposed AAC Rate (provider is also reimburse d a $0.0250 dispensing fee/Unit) in dollars	Medicare reimburse-ment rate per Unit as of 1/2017 in dollars (for CY 2017, the provider is also reimbursed a $0.209 furnishing or dispensing fee/Unit)	% of Medicare rate
J7192 Advate	1.360	1.199	113.4%	1.023	1.199	85.3%
J7189 Novoseven	1.820	1.925	94.5%	1.587	1.925	82.5%
J7192 Recombinate	1.360	1.199	113.4%	1.020	1.199	85.1%
J7192 Kogenate	1.310	1.199	109.3%	0.882	1.199	73.6%
J7205 Eloctate	1.970	1.977	99.6%	1.568	1.977	79.3%
J7190 Hemofil	1.170	1.012	115.6%	0.830	1.012	82.0%
J7186 Alphanate	1.000	0.986	101.4%	0.735	0.986	74.5%
J7199 Adynovate	*1.780*	*Not covered*	*N/A*	*1.47*	*Not covered*	*N/A*
J7187 Humate	1.040	1.086	95.8%	0.820	1.086	75.5%
J7192 Helixate	1.320	1.199	110.1%	0.884	1.199	73.7%
J7195 Benefix	1.350	1.506	89.6%	1.274	1.506	84.6%
Average % of Medicare rates and *% of dispensing fee (0.0250 / 0.209)*			**104.3%**			**79.6%** ***12.0%***

Figure 106 below shows the top 10 billed hemophilia drugs (with corresponding HCPCS codes) in 2016 for one of the four hemophilia treatment centers in North Carolina, which participates in the 340B drug rebate program. The current and proposed NC DMA 340B rates per Unit in dollars are compared with the Medicare reimbursement rate per Unit as of 1/2017. Whereas the current NC DMA 340B per Unit rate is 78.9 % of the Medicare rate, the proposed 340B rate is 61.6 % of the Medicare rate. In addition, the proposed professional dispensing fee of $0.040/Unit when compared with the Medicare furnishing (dispensing) fee of $0.209 for CY 2017 represents 19.1% of the Medicare fee.

Figure 106

HCPCS code and Description	**Current NC DMA 340B rate per Unit in dollars**	**Medicare reimburse-ment rate per Unit as of 1/2017 in dollars (for CY 2017, the provider is also reimbursed a $0.209 furnishing or dispensing fee/Unit)**	**% of Medicare rate**	**Proposed 340B Ceiling Price (provider is also reimbursed a $0.040 dispensing fee/Unit) in dollars**	**Medicare reimburse-ment rate per Unit as of 1/2017 in dollars (for CY 2017, the provider is also reimbursed a $0.209 furnishing or dispensing fee/Unit)**	**% of Medicare rate**
J7192 Advate	1.024	1.199	85.4%	0.810	1.199	67.6%
J7192 Recombinate	1.020	1.199	85.1%	0.838	1.199	69.9%
J7195 Benefix	0.927	1.506	61.6%	0.790	1.506	52.4%
J7189 Novoseven	1.089	1.925	56.6%	0.870	1.925	45.2%
J7201 Alprolix	2.357	2.926	80.5%	2.070	2.926	70.7%
J7205 Eloctate	1.735	1.977	87.8%	1.292	1.977	65.4%
J7186 Alphanate	0.865	0.986	87.7%	0.610	0.986	61.9%
J7187 Humate	0.865	1.086	79.7%	0.638	1.086	58.7%
J7192 Kogenate	0.970	1.199	80.9%	0.727	1.199	60.6%
J7182 NovoEight	1.080	1.287	83.9%	0.813	1.287	63.2%
Average % of Medicare rates and *% of dispensing fee (0.040 / 0.209)*			**78.9%** ***19.1%***			**61.6%** ***19.1%***

Conclusion and Future Plans

Overall, utilization was down for many of the services reviewed in the Plan including primary care. The decrease in the utilization of primary care, measured by visits per 1000 beneficiaries was down from CY 2014 to CY 2016 by an average of 7% across all three areas, statewide, rural and Urban, which represent decreases of 6.8%, 6.8% and 6.9%, respectively. This decrease did not result in a commensurate increase in outpatient emergency room visits, which is where beneficiaries often seek care when they experience difficulties in accessing primary care. In addition, inpatient hospital admissions also decreased during the same time-period, which may indicate patients, possibly those were newly enrolled as a result of the Affordable Care Act, did not require primary care. Further study and analysis of primary care, emergency department use, and any correlation between access availability of services will be required. In addition, for all services contained in the Plan, the agency will be reviewing provider data, utilization data, call center data and other data as available, on a quarterly basis as we continually monitor access to services. Monitoring will also include reviewing and analyzing data on the statewide level, rural and urban areas.

With the exception of home health providers, who provide care in beneficiary's home(s) or place of residence, and FQHCs, RHCs and LHDs, there is a greater availability of service providers in urban areas compared to rural areas. For some providers, choosing a location to provide services in an urban area affords a better payer mix for reimbursement so they are not reliant on one or two sources of payment, i.e. Medicare and Medicaid. A varied payer mix includes patients who have commercial and other types of insurance. In addition, relying on a heavy payer mix of Medicaid beneficiaries usually means receiving fewer dollars (80% of the average Medicare rate) for providing services. Therefore, there also can be financial incentives to provide services in areas where there is a more varied payer mix. That said, the Department's Office of Rural Health is continuously engaged in recruiting primary care physicians, nurse practitioners, physician assistants, dentists, dental hygienists, and psychiatrist to the practices that service rural and underserved populations across the state (http://www.ncdhhs.gov/divisions/orh).

The agency, through its call center data, input from stakeholder groups, meetings of the MCAC, direct contacts with health care providers and beneficiaries, and CAHPS surveys, will continue and strive to receive feedback and regarding availability and access to care. This feedback, in conjunction with data review and analysis, will be used by the Utilization and Quality Review Committee and agency as a whole, to detect and identify issues involving access to care and strategies to improve access.