Project Smile

Increasing the Patient Base through Enhanced Referrals

Project SMILE is a collaboration between the Cabarrus Health Alliance (CHA) and Guilford County Department of Health and Human Services (GCDHHS) to examine mechanisms and approaches to enhance the efficiency and capacity to provide public health dental services across the jurisdictions of Cabarrus County and Guilford County in North Carolina. This exploration of opportunities for cross-jurisdictional sharing (CJS) is funded by a grant from the Robert Wood Johnson Foundation.

One of the objectives of Project Smile is to Increase the number of underserved clients receiving care. To achieve this objective, the CJS team analyzed the community need for and management and delivery of dental services provided by the public dental clinics administered by CHA and GCDHHS.   Community need for public health safety net dental services was evaluated through dental needs assessment conducted by the GCDHHS epidemiologist on the CJS team. Practice assessment of both programs in relation to Project Smile was completed in August 2013 by chief consultant, Sean Boynes, DMD, MS and lead analyst, Amah Riley, RDH as part of Dental Medicine Consulting (DMC). The practice assessments included an in-depth analysis of dental practice data, followed by site visits.

The dental needs assessment identified substantial unmet need for public health dental services. One of the recommendations that emerged from the dental practice assessment was to increase patient volume through increasing referrals from other public health programs. The CJS teams shared examples of existing referral forms and developed new forms customized for multi-program use. After implementing the new referral process, referrals were tracked and data were pulled for June, 2014, the first full month using the new referral forms, and again in September to assess the effectiveness of the referral process.

The Project Smile cross-jurisdictional team will review the characteristics of dental referrals and the referral process to identify areas where improvements might be made in order to increase referrals and expand the patient base.

Characteristics of Dental Clinic Referral Patients, June and September, 2014

	June	September
	Cabarrus County	
	N = 60	N = 62
Sex		
Male	36.7%	33.9%
Female	63.3%	56.5%
		9.7% (Missing)
Race/Ethnicity		
African-American	15.0%%	11.3%
White	48.3%	43.5%
Other	1.7%	1.6%
Race Not reported	35.0%	43.5%
Hispanic	35%	51.6%
Age		
Ages 0-9	53.3%	46.8%
Ages 10-19	23.3%	29.0%
Ages 20-39	0.0%	14.5%
Ages 40+	23.3%	9.7%
	Guilford County	
	N = 12	**N = 29**
Sex		
Male	8.3%	13.8%
Female	91.7%	86.2%
Race/Ethnicity		
African-American	41.7%	37.9%
White	16.7%	0.0%
Asian	16.7%	13.8%
Not Reported	8.3%	6.9%
Hispanic	16.7%	41.4%
Age		
Ages 0-9	8.3%	6.9%
Ages 10-19	0.0%	24.1%
Ages 20-30	91.7%	69.0%
Ages 40+	0.0%	0.0%

Source: Cabarrus and Guilford clinic records

- *The percentage of female referral patients was higher than male referrals for Cabarrus clinics and was especially high for Guilford clinics, since referrals to Guilford clinics were largely from the Women's Health and WIC programs.*
- *Of referral race reported in Cabarrus, White patients made up near half of all referrals in June and 53.4% in September. Hispanic referrals increased from a third of referrals in June to over half in September.*
- *In Guilford County, African-American patients made up 41.7% of referrals in June, declining slightly in September. Hispanic referrals increased from16.7% in June to over 40% in September.*
- *The majority of Cabarrus referrals were under the age of 20 in both time periods, while referrals in Guilford were largely ages 20-30. Guilford County's clinics serve primarily pediatric patients but do provide services for pregnant women, who comprise most of the referrals.*
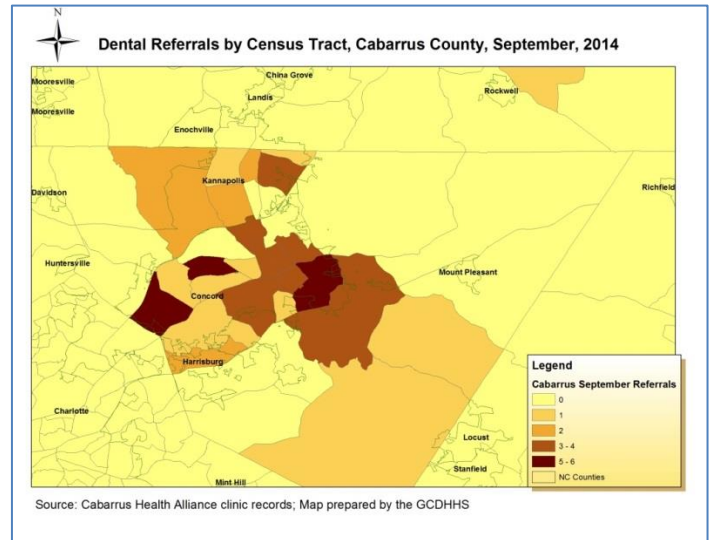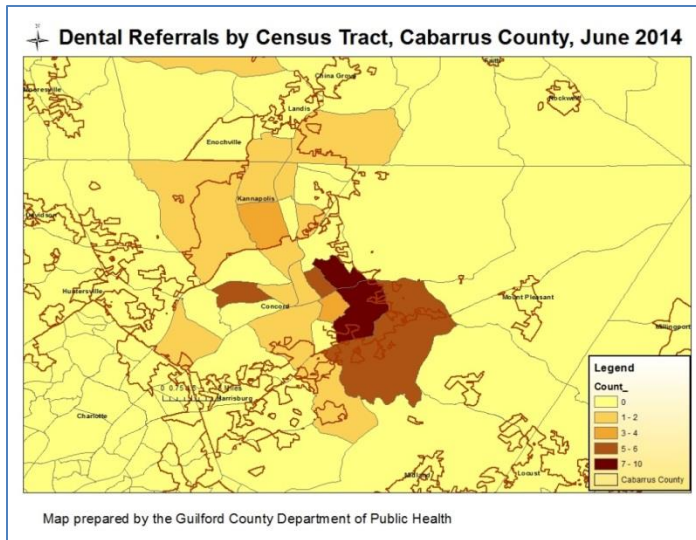
Referral and Payment Source, June and September, 2014

	June	September
	Cabarrus County	
Payment Source:		
	N = 60	**N = 62**
Sliding Fee Scale	8.3%	1.6%
Self-Pay	1.7%	3.2%
Private Insurance	11.7%	3.2%
Medicaid Pregnancy	5.0%	0.0%
Medicaid	70.0%	91.9%
Health Choice	3.3%	
Referral Source:		
CHA Employee/Family	36.7%	
CHA Pediatrics	13.3%	24.2%
Department of Social Services (DSS)	16.7%	19.4%
McGill Community Health Center	3.3%	6.5%
School Nurse	1.7%	1.6%
Walk-in	5.0%	
WIC	23.3%	30.6%
CHA Maternity		1.6%
CHA Women's Health		4.8%
Family member		4.8%
Logan Community Health Center		6.5%
	Guilford County	
Payment Source:		
	N = 12	**N = 29**
Self-Pay	8.3%	24.1%
Medicaid	91.7%	75.9%
Referral Source:		
WIC	8.3%	3.4%
Women's Health	91.7%	65.5%
Other		31.0

Source: Cabarrus Health Alliance and Guilford County DHHS clinic records

- ***In Guilford County patients with Medicaid made up the large majority of referral patients, with self-pay patients increasing from less than 10% of referrals in June to almost a quarter of patients in September.***
- ***Medicaid patients also made up the large majority of referrals in Cabarrus, with a mix of other payment sources.***
- ***Cabarrus county referrals came from numerous programs in June and September.***
- ***The primary referral source in Guilford County was the Women's Health program.***

Geographic Distribution of Referrals, Cabarrus County, June and September, 2014

Dental Referrals by Census Tract, Cabarrus County, June 2014
Map prepared by the Guilford County Department of Public Health

Dental Referrals by Census Tract, Cabarrus County, September, 2014
Source: Cabarrus Health Alliance clinic records; Map prepared by the GCDHHS

- *June referrals in Cabarrus were concentrated in eastern Concord area census tracts.*
- *September referrals were more widely distributed, with more referrals in west Concord and Kannapolis.*
- *Compared to the residential distribution of dental clinic patients in 2012, referrals were less likely to live in the Kannapolis area.*

Cabarrus Health Alliance Dental Clinic Patients by Census Tract, 2012, with Two-Mile Radius from Clinics
Source: Cabarrus Health Alliance, 2013; Map prepared by the Guilford County Department of Public Health
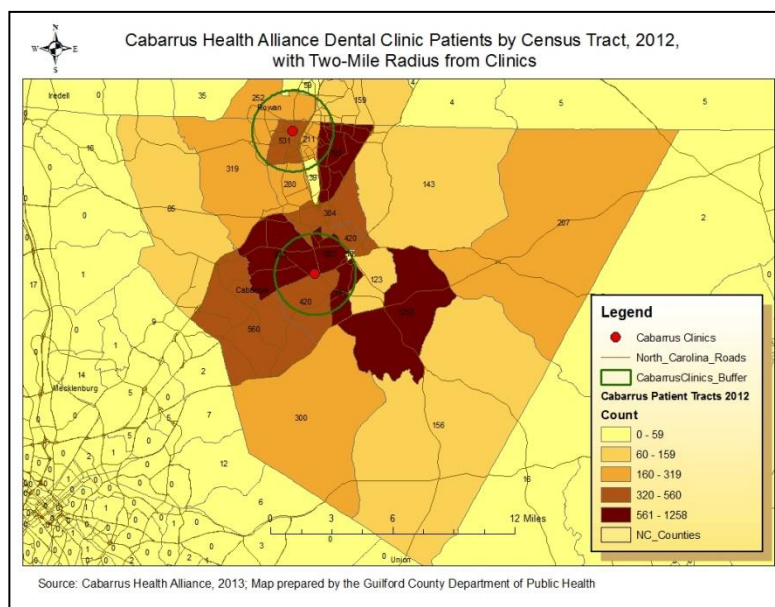
Geographic Distribution of Referrals, Guilford County, June and September, 2014

Dental Referrals by Census Tract, Guilford County, June 2014

Legend
Number of Referrals
0
1
2

Map prepared by the Guilford County Department of Public Health

Dental Referrals by Census Tract, September, 2014

Legend
September Referrals
Number
0
1
2
NC Counties

Source: GCHSS clinic records; Map prepared by the GCDHHS
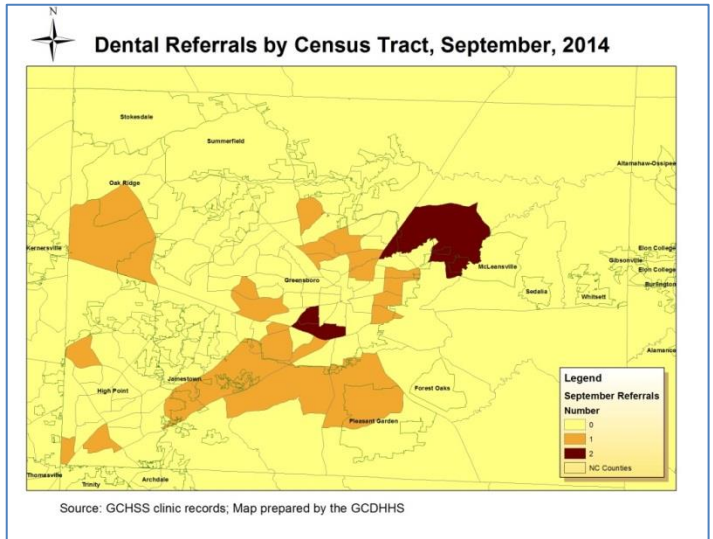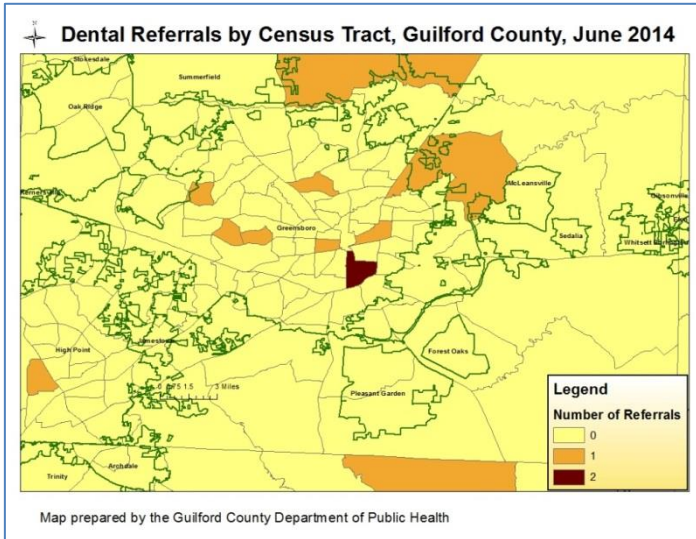
- *Guilford dental clinic referrals were widely distributed in June, with the largest number in SE Greenaboro.*
- *September saw a greater geographic spread of referrals, building on core areas of referrals.*
- *In general, geographic referral patterns were similar to the geographic distribution of 2012 Chandler clinic patients in Greensboro; however, fewer referrals were from residents of the High Point area.*

High Point Children's Clinic Patients by Census Tract, with Two-Mile Buffer

Legend
High Point Dental Clinic Patient Tracts
Count
0 - 22
23 - 68
69 - 117
118 - 211
212 - 401
★ Clinic Locations
GC_Major_Roads
GuilfordClinicsTwoMileBuffer

Note: Dental Clinic Patients seen between 01/01/2011 and 02/26/2013

Chandler Patients by Census Tract, with Two-Mile Buffer

Legend
Chandler Patients Tracts
Count
0 - 6
7 - 22
23 - 48
49 - 87
88 - 170
★ Clinic Locations
GC_Major_Roads
GuilfordClinicsTwoMileBuffer

Note: Dental Clinic Patients seen between 01/01/2011 and 02/26/2013