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# *The Cameron Foundation Health Needs Assessment*

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**Central Virginia Health Planning Agency**

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# THE CAMERON FOUNDATION HEALTH NEEDS ASSESSMENT

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## **EXECUTIVE SUMMARY**

At the request of The Cameron Foundation (TCF), area health safety net representatives met in December 2007 to provide guidance on the gaps in health services and the priority health needs of TCF's service area. The meeting was facilitated by the Central Virginia Health Planning Agency (CVHPA). Shortly thereafter, The CVHPA was awarded a grant to update the 2005 health and human services needs assessment of TCF's service area and facilitate development of priorities, utilizing the health safety net providers as an advisory group.

The **purpose of the needs assessment** is to:

- 1) Develop a utilitarian report that objectively portrays the service area's current health status and priorities and can be used as a baseline to track progress or improvements;
- 2) Inform and support resource investment decisions;
- 3) Provide support for grant proposal and other resource development; and
- 4) Assist in community-based planning, health services development, and planning for a future health summit in order to develop sustainable solutions for the service area.

TCF's service area includes Colonial Heights, Dinwiddie, Hopewell, Petersburg, Prince George, Sussex, and the southern portion of Chesterfield (south of Route 10).

The needs assessment process involved reviewing and analyzing quantitative data as well as conducting 24 key informant interviews, completed in April and May 2008, to gain a better understanding of the health-related needs in the service area. In addition to demographic data, a wealth of socio-economic, education-related, health-related, and other indicators have been collected and analyzed by city/county and at census tract or ZIP code level. Each section of data includes a summary that highlights that section's information. Findings are summarized, including information by locality, and recommendations for priority needs and possible next steps are included at the end of the report.

**Demographic data** on age, gender, race, household income, poverty level, and households without vehicles was analyzed. The localities' data were compared to the data for TCF's service area and Virginia. Among the major findings are that the area's total population is increasing at a slower rate than Virginia's population, except for Petersburg and Sussex which are expected to decline in population. The area has a significantly higher percentage of black residents than Virginia but it does not have a high concentration of Hispanics or Asians documented as residing in the area. TCF's service area currently has a slightly higher percentage than Virginia of the 0-17 age group while the percentages of the 45-64 and 65+ age groups are expected to increase. Overall, the area's percentage of single parents is significantly higher than the State, and more than one in three Petersburg households with children are headed by a single adult.

A large disparity between median household **incomes** for the localities within TCF's service area exists, with Chesterfield and Prince George having considerably higher incomes than the others. The service area's percent change of those in poverty has increased for adults and children in all localities, with particular concern about the increase of children in poverty. The area has a high

percentage of households without vehicles relative to the State which can create a barrier to receiving many services and obtaining and/or retaining employment. Five out of seven localities have a higher WIC enrollment rate than the State, reflecting the high child poverty rate. Surprisingly, the area's food stamp program participation is below the State's participation and the percentage of students receiving free or reduced price lunches is lower than Virginia's percentage in 2007 even though the child poverty rate is almost double that of the State's rate.

All of the localities' **educational** systems have either a Head Start program or are participating in the Start Strong program for at risk four year old children (three year olds are also served by Head Start). The disability rate for students in the area is approximately twice the State rate, driven by Chesterfield County's rate which is four times the State rate. The service area has a significantly lower number and percentage of students with limited English proficiency (LEP) and has a lower percentage of residents 25 and older who have graduated from high school or received a GED or have post high school degrees, compared to Virginia's percentages.

The 2006 overall **inpatient** discharge rate for TCF's service area (137.7) is 19.7% higher than Virginia's discharge rate (115.0) but this represents a relative improvement since 2003. Moreover, the area's discharge rates for all age groups, males and females, and both the black and white populations were higher than the corresponding demographic groups for the entire State, pointing to systemic health-related problems that cannot be attributed to just demographic differences.

Mental health diagnoses make up the most significant portion of inpatient discharges for the service area, particularly in Prince George and Petersburg. The service area exhibits a greater number of inpatient admissions through the emergency department (ED) than does Virginia as a whole. Additionally, ED patients with mental health diagnoses make up a significant portion of inpatient admissions from the ED. Inpatient discharges to home health care and skilled nursing facilities are below state levels, indicating a potential need for greater follow-up care.

Almost one in four inpatients from the service area has some form of cardiovascular disease. Petersburg and Hopewell had a high number of age-adjusted deaths due to heart disease, and several counties had high age-adjusted death rates due to stroke for both men and women. Combined with the high number of cardiovascular disease discharges, there may be a need for both interventional and preventative cardiovascular services. Finally, commercial payers are the most prevalent type of insurance among the area's inpatients. However, Hopewell, Sussex, and Petersburg have a high percentage of indigent and self pay patients.

**Births** in TCF's service area in 2006 significantly increased from 2000, with the service area's increase almost double that of Virginia's increase. Six out of seven localities have seen an increase in non-marital births since 2000 with four localities having an increase larger than the State's increase. As expected, all of the area's localities, with the exception of Petersburg, have seen an increase from 2000 in the rate of births to teenagers. However, the large majority of these births are to older teens (18 & 19 years).

There has been a significant increase in low birth weight among white and other race infants in the service area. In fact, the percentage of low birth weight white infants is the only demographic group to exceed the State percentages. Moreover, the majority of low birth weight infants in the

service area are born to mothers over the age of 19 and this percentage is greater than the State's percentage of low birth weight babies to mothers older than 19 years of age.

Five of the area's seven localities have age-adjusted **death rates** that exceed the State rate. It appears that many of the localities which are more rural, less affluent, and/or with larger minority populations generally have higher age-adjusted death rates.

The service area has a significantly higher percentage than Virginia of its residents enrolled in **Medicare** based on age, while having a percentage somewhat higher than the State enrolled in Medicare based on disability. Mental **disabilities** are the most common disability for the 0-20 age group in the service area and represent a significantly higher percentage than the State while employment disabilities are the most common disabilities to those in the 21-64 working age group in the service area, but this percentage is less than the State. Physical disabilities are the most common disabilities for those in the 65+ age group in the service area and this percentage is significantly higher than the State. Both the **elder and child abuse** rates for the area are lower than the State's rates.

The CVHPA conducted a triennial **household-level community needs survey** in 2002/03 and 2005/06 which were age and race adjusted to reflect the demographics of each of the region's 27 localities. Based on data from the most recent survey, at least one in ten people in TCF's service area are uninsured. All the localities in the area experienced an increase in the percentage of people with no health insurance with the exception of Prince George (likely impacted by the growth in military residents) and Chesterfield. The three localities with the most significant increases in the percentage of uninsured residents include Dinwiddie, Hopewell, and Sussex. In addition, more than one out of three people in the service area are without dental insurance.

One in ten of TCF's service area's households reported that they had a family member that needed mental health services while almost half of the residents in TCF's service area leave the area for medical specialists.

More than one in three residents in the area has been diagnosed with high blood pressure while approximately one in three residents have been diagnosed with high cholesterol. Sussex has a high percentage of adults with both high blood pressure and high cholesterol. More than one in six people in the area have been diagnosed with diabetes. Dinwiddie has a particularly high percentage and Hopewell has had a significant increase in diabetes. Opportunities exist in TCF's service area to educate/encourage residents to receive cancer screens.

When asked to rate potential community problems, two community problems that were rated as serious or very serious for all localities in TCF's service area were violence in the media and lack of public transit. The next two prominent community problems were lack of affordable health care and long-term care.

Fifty percent of the 28 **key community informants** interviewed responded that, in the community or communities they serve, the greatest health related need is that the economic level (lack of financial resources) of the population prevents people from addressing healthcare needs.

Almost half indicated that education about the services available in the community would be effective in meeting or assisting to meet this need.

The greatest barrier they faced in improving the lives of their clients is related to a lack of financial resources while ten of the sixteen healthcare issues were rated as having a significant need for intervention. The top four healthcare needs in TCF's service area are: access to affordable dental insurance, pregnancy prevention services for all ages, diet and nutrition, and access to affordable health insurance.

The top three responses to the causes for the community's high inpatient use rates by ranking include: limited preventative healthcare, lack of affordable insurance, and lack of health education on the need for preventative healthcare and maintaining health. About one third of the interviewees felt that emergency services in the community are adequate. Almost half of those interviewed responded that the biggest abuse of the system is using the emergency departments for healthcare needs that a primary care physician could treat.

Almost half of those interviewed thought that the Fort Lee expansion will increase population causing a great burden by increasing the need for expanded healthcare services. In order to attract and retain healthcare professionals to the community, providers should improve pay and become an employer of choice. Finally, a large majority of those interviewed favored providing or expanding school-based healthcare services.

**Five priority areas for health status improvement** emerged when examining TCF's service area, including (in no particular order):

- **Teenage Pregnancy/Pregnancy prevention/prenatal care**
- **Access to Health and Dental Services**
- **Prevention Services/Health Education**
- **Behavioral Health Services**
- **Transportation**

Specific interventions are included in each priority area. When discussion turned to possible interventions that would begin meeting the needs of the area, certain **overarching issues** emerged, including:

- **Need for Partnership Development**
- **“Biggest Bang for your Buck”**
- **Fund Pilots and Adequately Evaluate for Effectiveness**
- **Involve Consumers in Marketing/Advocacy.**

These recommendations are not meant to be all inclusive but rather to establish a starting point for community dialogue and action. Moreover, they are focused on improving the health of the community and do not attempt to address some of the broader issues that can have a significant impact on lifetime health status. **Finally, no one organization can tackle all of the potential initiatives outlined but, rather, it will take organizations and individuals working toward a common goal to improve the health of our communities.**

## **INTRODUCTION AND OVERVIEW**

In the Fall of 2007, The Cameron Foundation (TCF) staff met with staff leadership of the Central Virginia Health Planning Agency (CVHPA), a nonprofit community health planning organization, and the Central Virginia Health Services, a nonprofit community health center which operates several facilities in the area, to discuss how to identify and plan for addressing the current health related needs of the TCF service area. This resulted in a meeting of area health safety net representatives on December 10, 2007 to provide guidance on the gaps in health services and the priority health needs of TCF's service area. Shortly thereafter, the CVHPA was awarded a grant to update its 2005 health and human services needs assessment of TCF's service area and facilitate development of priorities, utilizing the health safety net providers as an advisory group. The following is a list of the health safety net representatives and their organizations, as well as CVHPA and TCF staff, that assisted with this assessment.

- Karen Cameron, Executive Director/CEO, Central Virginia Health Planning Agency
- Angie Lee, Assistant Director, Central Virginia Health Planning Agency
- Rod Manifold, Director, Central Virginia Health Services
- Sheena MacKenzie, Development Director, Central Virginia Health Services
- Brenda Mitchell, Chief Executive Officer, Crater Community Hospice
- Debbie Townsend, Nurse Manager, Crater Health District
- Kay Rankin, MD, MPH, Director, Crater Health District
- Terry Hammer, Crater Health District
- Cheryl Ebersole, Administrator, Horizon Health Services
- Robert Rashti, MD, Executive Director, Planned Parenthood of Southeastern Virginia
- Shawn Hotchkiss, Executive Director, Stony Creek Community Health Center
- Kate Westbrook, Virginia Dental Health Association
- Terry Dickinson, DDS, Executive Director, Virginia Dental Health Association
- Joseph Hubbard, Executive Director, District 19 Community Services Board
- Ginell Ampey, Chesterfield Health District
- William Nelson, MD, MPH, Director, Chesterfield Health District
- Lisa Sharpe, Executive Director, John Randolph Foundation
- Cindy Humphrey, The Cameron Foundation
- Handy Lindsey, President, The Cameron Foundation
- Anne Douglas, Program Officer, The Cameron Foundation

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- 1) Develop a utilitarian report that objectively portrays the service area's current health status and priorities and can be used as a baseline to track progress or improvements;
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- 4) Assist in community-based planning, health services development, and planning for a future health summit in order to develop sustainable solutions for the service area.

TCF's service area includes Colonial Heights, Dinwiddie, Hopewell, Petersburg, Prince George, Sussex, and the southern portion of Chesterfield (south of Route 10). This service area, except for southern Chesterfield County, is located in Planning District (PD) 19, which also includes three other localities – Emporia, Greenville, and Surry. Chesterfield County is located in Planning District 15. To the extent possible and as was done in 2005, the locality specific data will be compared to the data for the entire service area, for PD 19, and for Virginia.

The needs assessment process involved reviewing and analyzing quantitative data as well as conducting 24 key informant interviews, completed in April and May 2008, to gain a better understanding of the health-related needs in the service area. In addition to demographic data, a wealth of socio-economic, education-related, health-related, and other indicators have been collected and analyzed by city/county and at census tract or ZIP code level. For some of the health-related indicators, data is also presented by race/ethnicity to provide information on disparities. Comparative data (e.g. percentages, rates) with the service area and state, as well as some historical data are provided in order to appropriately evaluate data for trends and relativity. Findings of particular concern and/or importance are highlighted, including mapping, where appropriate. *Note that there were no tests of statistical significance conducted as a part of this assessment; therefore, the word "significant" when used in this report is used to describe differences that vary much more from what is normally found in a population.* Detailed data sheets and maps are included in the Attachments.

Each section of data includes a summary that highlights that section's information. Findings are summarized, including information by locality, and recommendations for priority needs and possible next steps are included at the end of the report.

## DEMOGRAPHIC DATA

Demographic data was obtained from the US Census Bureau for 2000 at the census tract level for the study area. Since census tracts are unique to each locality, which is unlike zip codes, the data by census tract better represents a locality's demographics. Of note, thirteen census tracts from Chesterfield County, reviewed by The Cameron Foundation, were used to define southern Chesterfield. In addition, data on age, gender, and race for 2006 and 2011 were purchased from CLARITAS, a national demographic data organization. CLARITAS starts with Census data to develop its Annual Demographic Update. Its demographers analyze current demographic data from many sources, including local governments, consumer databases and postal delivery counts. Local level data are also referred to as small-area or local market data because they reflect demographic characteristics at the smallest geographic levels – the neighborhood, block group and Census tract. Since the U.S. Census Bureau does not develop nationwide sets of data estimates for the tract and block group level, data suppliers must acquire and incorporate local level data into their own small area demographic estimates and projections.

Data on age, gender, race, household income, poverty level, and households without vehicles were analyzed. The localities' data were compared to the data for TCF's service area and Virginia. Maps of TCF's service area and its census tracts are included in **Attachment A**.

The following section summarizes the findings by demographic group. The age categories used for the service area population are as follows: 0-19; 20-44; 45-64; and 65+ years. Unless otherwise noted, the population data provided is for 2006. The tables for the demographic data are included in **Attachment B**. Attachment B includes more detailed age breakdowns than those aggregated for the written report; therefore, the cumulative percentages may differ slightly from the more incremental data in Attachment B due to rounding.

### OVERALL

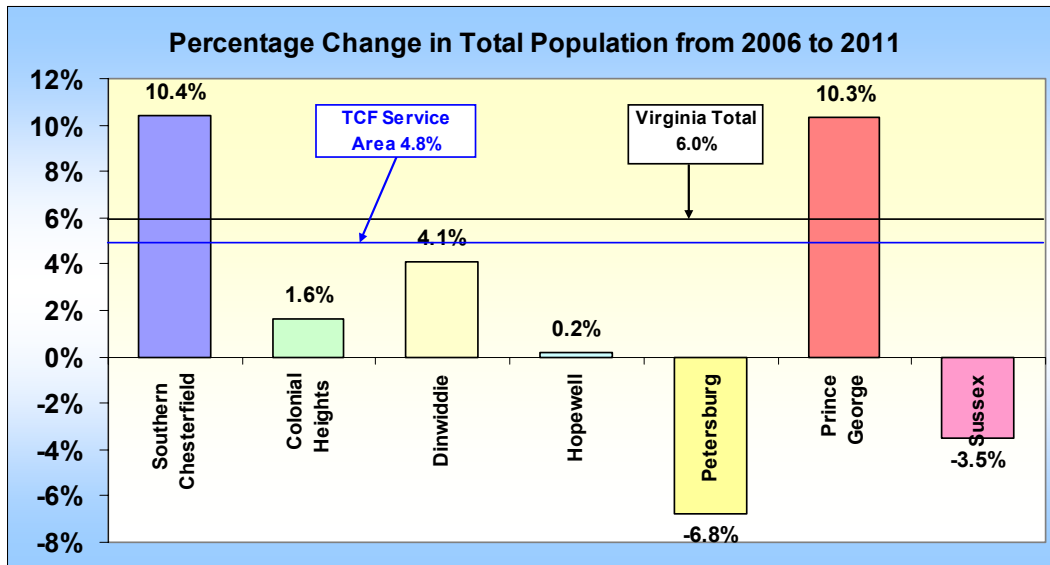
The following table shows the total population of TCF's service area localities and Virginia as well as the percent, the percent actual, or projected changes from 2000 to 2006, 2006 to 2011, and 2000 to 2011. As illustrated, from 2000 to 2006, TCF service area's total population increased but not as much as Virginia's total population. This same trend is expected to continue through 2011. **The increase in TCF's total population is mainly attributable to the population growth in southern Chesterfield.** Announcements have been made indicating that the Fort Lee area should experience significant growth (due to Base Realignment and Closure – BRAC); these projections are not included in this growth.

**Total Population for 2000, 2006, and 2011 with Percent Changes**

Locality	2000	2006	2011	% Change 2000-2006	% Change 2006-2011	% Change 2000-2011
Southern Chesterfield	67,817	77,687	85,754	14.6%	10.4%	26.4%
Colonial Heights	16,897	17,436	17,720	3.2%	1.6%	4.9%
Dinwiddie	24,533	25,635	26,693	4.5%	4.1%	8.8%
Hopewell	22,354	22,304	22,345	-0.2%	0.2%	0.0%
Petersburg	33,740	31,629	29,488	-6.3%	-6.8%	-12.6%
Prince George	33,047	36,272	40,008	9.8%	10.3%	21.1%
Sussex	12,504	11,882	11,465	-5.0%	-3.5%	-8.3%
<b>Service Area Total</b>	<b>210,892</b>	<b>222,845</b>	<b>233,473</b>	<b>5.7%</b>	<b>4.8%</b>	<b>10.7%</b>
<b>VIRGINIA</b>	<b>7,078,515</b>	<b>7,599,244</b>	<b>8,055,381</b>	<b>7.4%</b>	<b>6.0%</b>	<b>13.8%</b>

Sources: US Census 2000, CLARITAS for 2006 and 2011 data

As illustrated in the following chart, for TCF’s service area, Petersburg and Sussex are projected to lose population by 2011 while southern Chesterfield and Prince George are expected to experience the greatest percent growth.



Sources: US Census 2000, CLARITAS for 2006 and 2011 data

**GENDER**

The following chart provides the 2006 population estimates by gender for TCF’s service area and Virginia. As is evidenced, TCF’s service area has a slightly higher percentage of females, similar to Virginia’s percentage.

**Percent of Population by Gender (2006)**

Locality	Male		Female	
	#	%	#	%
Southern Chesterfield	37,986	48.9%	39,701	51.1%
Colonial Heights	8,253	47.3%	9,183	52.7%
Dinwiddie	12,711	49.6%	12,924	50.4%
Hopewell	10,463	46.9%	11,841	53.1%
Petersburg	14,572	46.1%	17,057	53.9%
Prince George	19,396	53.5%	16,876	46.5%
Sussex	6,816	57.4%	5,066	42.6%
<b>Service Area Total</b>	<b>110,197</b>	<b>49.5%</b>	<b>112,648</b>	<b>50.5%</b>
<b>VIRGINIA</b>	<b>3,741,291</b>	<b>49.2%</b>	<b>3,857,953</b>	<b>50.8%</b>

Source: CLARITAS 2006 Population Estimates

Males represent relatively high percentages of the population in Sussex (57.4%) and Prince George (53.5%). These counties also have the highest male projected percentages in 2011, with the same rankings as in 2009 from the previous assessment. The high percentage of males in Sussex County is attributed to the State prison in the county while the high percentage of males in Prince George is related to the presence of Fort Lee, a military base, located in the county.

Females represent relatively high percentages of the population in Petersburg (53.9%), Hopewell (53.1%), and Colonial Heights (52.7%). This ranking is also the same in 2011. There tends to be a higher percentage of females in cities, which generally have lower incomes than counties.

**RACE**

The following table provides the 2006 population estimates by race. TCF's service area's percentage of the black population (36.2%) is almost twice Virginia's percentage (19.6%).

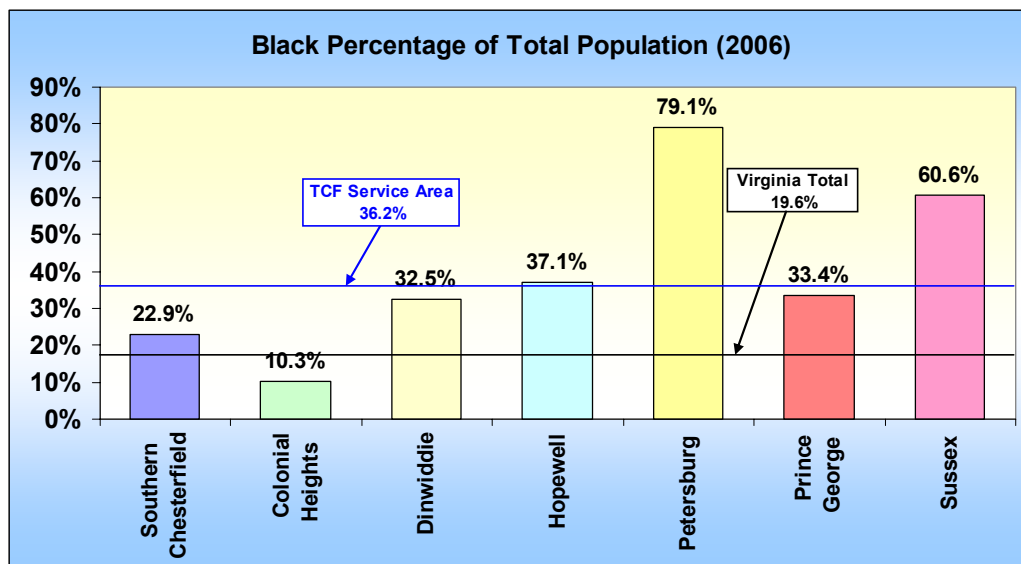
**Percent of Population by Race (2006)**

Locality	White		Black		Other	
	#	%	#	%	#	%
Southern Chesterfield	55,453	71.4%	17,806	22.9%	4,428	5.7%
Colonial Heights	14,680	84.2%	1,799	10.3%	957	5.5%
Dinwiddie	16,746	65.3%	8,332	32.5%	557	2.2%
Hopewell	12,944	58.0%	8,283	37.1%	1,077	4.8%
Petersburg	5,712	18.1%	25,034	79.1%	883	2.8%
Prince George	21,829	60.2%	12,106	33.4%	2,337	6.4%
Sussex	4,482	37.7%	7,199	60.6%	201	1.7%
<b>Service Area Total</b>	<b>131,846</b>	<b>59.2%</b>	<b>80,559</b>	<b>36.2%</b>	<b>10,440</b>	<b>4.7%</b>
<b>VIRGINIA</b>	<b>5,364,399</b>	<b>70.6%</b>	<b>1,486,902</b>	<b>19.6%</b>	<b>747,943</b>	<b>9.8%</b>

Source: CLARITAS 2006 Population Estimates

Colonial Heights, southern Chesterfield and Dinwiddie have the highest percentages of white residents. The percentages of the nonwhite/nonblack population in TCF’s service area are significantly lower than Virginia’s percentage. Prince George, Colonial Heights, and southern Chesterfield have the highest percentages of the nonwhite/nonblack population.

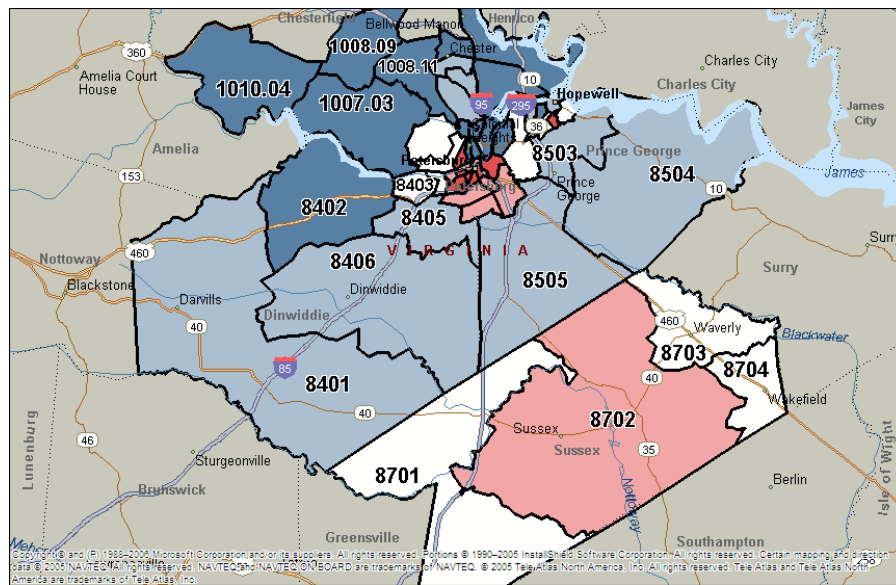
The following chart illustrates the percent of the black population in TCF’s service area. Petersburg (79.1%) and Sussex (60.6%) have the highest percentages of black residents. This ranking is projected to remain the same in 2011.



Source: CLARITAS 2006

The following map illustrates the percentage of the black population in the service area's localities. The red shaded areas denote areas where the black population is between 80 to 100% whereas the middle light red areas denote a black population between 60 to 70%. The white areas denote a black population percentage between 40 to 50%. The light blue shaded areas denote areas where the black population is between 20 to 30% whereas the dark blue areas on the map denote a location with 0 to 10% of black population. The black population is more concentrated in the southern most and middle part of the region of the service area. The northern part of the region has fewer black residents in the service area. **The black population has pretty much remained the same overall for the service area, staying at 36.2% from 2000 to 2006. This percentage is projected to remain stable in 2011 at 36.3%.**

**Percentage of Black Population by Census Tract (2006)**



Source: CLARITAS 2006

The following table provides the 2006 population estimates of Hispanics in the service area and Virginia. None of these areas has a high concentration of Hispanic residents. In fact, this service area's percentages of the Hispanic population are almost half of Virginia's. Prince George (5.4%) and Hopewell (4.2%) have the highest percentages of the Hispanic population.

**Percent of Hispanic Population (2006)**

	Hispanic
TCF Service Area	3.2%
VIRGINIA	6.1%

Source: CLARITAS 2006 Population Estimates

The following table provides the 2006 population estimates of Asians in the area and state. None of the areas' localities have a high concentration of Asian residents. In fact, these localities' Asian population are less than half that of Virginia's population. Southern Chesterfield (2.2%) and Colonial Heights (3.3%) have the highest percentages of the Asian population.

**Percent of Asian Population (2006)**

	Asian
<b>TCF Service Area</b>	1.6%
<b>VIRGINIA</b>	4.5%

Source: CLARITAS 2006 Population Estimates

**AGE**

The following tables and charts show the percent of the total population by age groups. As illustrated, in 2006, TCF’s service area has: 1) a slightly higher percentage than Virginia of the 0-19 age group; 2) a lower percentage of the 20-44 age group than the Virginia percent; 3) a higher percentage than Virginia of the 45-64 age group; and 4) the same percentage as Virginia of the 65+ age group. Of note, these age breakdowns are influenced by the Chesterfield County residents causing TCF’s service area to generally follow the same percentage breakdowns by age groups as Virginia’s percentages.

The following table shows the percentage of the TCF service area’s 0-19 population for 2006 and 2011. As evidenced, the service area has a slightly higher percentage (27.2%) than Virginia’s percentage (26.8%) in 2006. The percentage of the 0-19 population will decline from 2006 to 2011 for the service area to 25.6%. Hopewell has the highest percent of population age 0-19.

**Number and Percentage of Population Ages 0-19**

Locality	2006		2011	
	#	%	#	%
Southern Chesterfield	21,779	28.0%	21,771	25.4%
Colonial Heights	4,289	24.6%	4,157	23.5%
Dinwiddie	6,392	24.9%	6,061	22.7%
Hopewell	6,610	29.6%	6,585	29.5%
Petersburg	8,913	28.2%	8,319	28.2%
Prince George	10,202	28.1%	10,447	26.1%
Sussex	2,525	21.3%	2,339	20.4%
<b>Service Area Total</b>	<b>60,710</b>	<b>27.2%</b>	<b>59,679</b>	<b>25.6%</b>
<b>VIRGINIA</b>	<b>2,037,025</b>	<b>26.8%</b>	<b>2,079,775</b>	<b>25.8%</b>

Source: CLARITAS 2006 and 2011 data

The following table shows the percentage of the service area’s 20-44 population for 2006 and 2011. As evidenced, the service area has a lower percentage (34.7%) of the 20-44 age group as compared to Virginia’s percentage (35.7%). Sussex, Prince George, and southern Chesterfield have higher percentages of the 20-44 population than both TCF’s service area's and Virginia's percentages. **The percentage of the 20-44 population will decrease from 2006 to 2011 to 33.2%.**

However, the 20-44 age group represents the largest identified population group, both currently and in the next five years.

**Number and Percentage of Population Ages 20-44**

Locality	2006		2011	
	#	%	#	%
Southern Chesterfield	26,951	34.7%	28,166	32.8%
Colonial Heights	5,468	31.4%	5,423	30.6%
Dinwiddie	8,691	33.9%	8,640	32.4%
Hopewell	7,424	33.3%	7,151	32.0%
Petersburg	9,732	30.8%	8,752	29.7%
Prince George	14,521	40.0%	15,192	38.0%
Sussex	4,573	38.5%	4,292	37.4%
<b>Service Area Total</b>	<b>77,361</b>	<b>34.7%</b>	<b>77,615</b>	<b>33.2%</b>
<b>VIRGINIA</b>	<b>2,713,536</b>	<b>35.7%</b>	<b>2,696,147</b>	<b>33.5%</b>

Source: CLARITAS 2006 and 2011 data

The following table shows the percentage of the service area’s 45-64 population for 2006 and 2011. As shown, the service area has a higher percentage (26.4%) of the 45-64 age group as compared to Virginia’s percentage (25.9%). Dinwiddie and southern Chesterfield have the highest percentages of the 45-64 population when compared to the other localities. **The percentage and the number of persons 45-64 years are projected to increase in all parts of the service area from 2006 to 2011.**

**Number and Percentage of Population Ages 45-64**

Locality	2006		2011	
	#	%	#	%
Southern Chesterfield	22,263	28.7%	26,109	30.4%
Colonial Heights	4,395	25.2%	4,595	25.9%
Dinwiddie	7,382	28.8%	8,125	30.4%
Hopewell	5,057	22.7%	5,280	23.6%
Petersburg	7,875	24.9%	7,408	25.1%
Prince George	8,808	24.3%	10,506	26.3%
Sussex	3,101	26.1%	3,066	26.7%
<b>Service Area Total</b>	<b>58,881</b>	<b>26.4%</b>	<b>65,089</b>	<b>27.9%</b>
<b>VIRGINIA</b>	<b>1,964,472</b>	<b>25.9%</b>	<b>2,230,916</b>	<b>27.7%</b>

Source: CLARITAS 2006 and 2011 data

The following table shows the number and percentage of the service area that is 65+ years for 2006 and 2011. As illustrated, the service area has the same percentage of 65+ age group as Virginia's percentage (11.6%). However, as the 45-64 age group ages over the next twenty years, this likely will impact the percentages of the 65+ age group. In fact, this is partly reflective in the percent increase of the 65+ population from 2006 to 2011.

**Number and Percentage of Population Ages 65+**

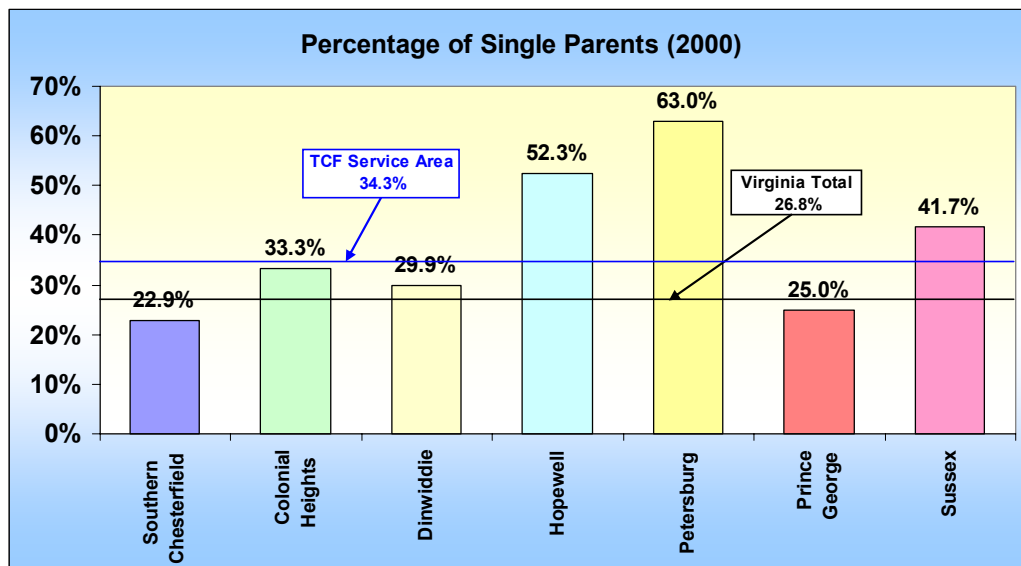
Locality	2006		2011	
	#	%	#	%
Southern Chesterfield	6,694	8.6%	9,708	11.3%
Colonial Heights	3,284	18.8%	3,545	20.0%
Dinwiddie	3,170	12.4%	3,867	14.5%
Hopewell	3,213	14.4%	3,329	14.9%
Petersburg	5,109	16.2%	5,009	17.0%
Prince George	2,741	7.6%	3,863	9.7%
Sussex	1,683	14.2%	1,768	15.4%
<b>Service Area Total</b>	<b>25,894</b>	<b>11.6%</b>	<b>31,089</b>	<b>13.3%</b>
<b>VIRGINIA</b>	<b>884,211</b>	<b>11.6%</b>	<b>1,048,544</b>	<b>13.0%</b>

Source: CLARITAS 2006 and 2011 data

**SINGLE PARENTS**

The 2000 Census provides information about the number of households with single parents including information by census tract about the gender of the parent and the age of their children. Single parent households are defined as households with only one adult present with children residing in the household. Single parent families often have greater economic and child care challenges that can increase stress on parents, their children, and the communities in which they live. Detailed information about these households is included in **Attachment B**.

As shown below, the service area has a higher percentage of single parents than Virginia, 34.3% compared to 26.8%. Petersburg has the highest percentage of single parent households (63.0%) followed by Hopewell (52.3%) where half or more of all households with children have a single adult. Southern Chesterfield (22.9%) has the lowest percentage of single parents.



Source: 2000 U.S. Census Bureau

**SUMMARY**

In summary, **the main findings from the demographic data** are as follows:

1. TCF’s service area’s demographic **statistics are heavily influenced by the inclusion of southern Chesterfield**. The other localities in TCF’s service area more closely resemble PD 19’s overall demographics.
2. The service area’s **total population is increasing at a slower rate** than Virginia’s population, except for Petersburg and Sussex which are expected to decline in population. Nevertheless, these numbers likely do not reflect the BRAC initiative.
3. TCF’s service area has a **significantly higher percentage of black residents** than Virginia.

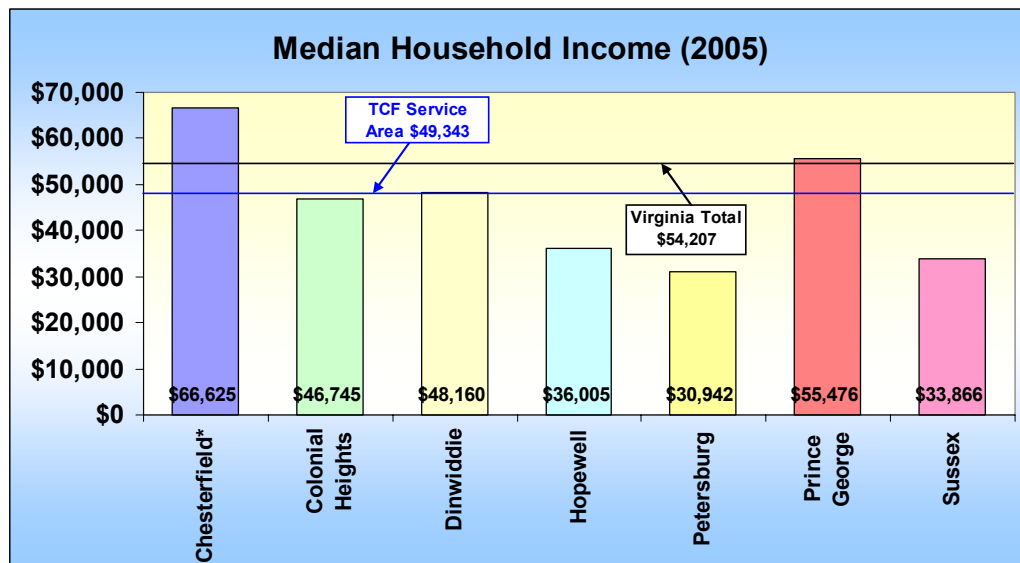
4. TCF's service area **does not have a high concentration of Hispanics or Asians** documented as residing in the area.
5. TCF's service area has a **slightly higher percentage than Virginia of the 0-17 age group**. Having a higher percentage of the 0-17 age group can often reflect teenage parents (children having children), a greater number of children per household, and/or grandparents or other family members caring for children. Moreover, **the higher percentage of young people often indicates a greater need by children for health and human services**.
6. The **percentages of the 45-64 and 65+ age groups are expected to increase**, whereas, the percentages of the 0-19 and 20-44 age groups are expected to decrease over the next five years. Therefore, there may be **greater need for services for older adults and increased demands on the health system** over the next five to ten years.
7. Overall, the area's **percentage of single parents is significantly higher than the State**, and more than one in three Petersburg households with children are headed by a single parent.

## SOCIOECONOMIC INDICATORS

Detailed data of socio-economic indicator data and maps, when available, are included in **Attachment C**.

### HOUSEHOLD INCOME & POVERTY

The following chart illustrates the median household income by locality for 2005. *Please note that the median household income of Chesterfield includes not only southern Chesterfield but all of Chesterfield County.* As illustrated, a wide disparity exists in the median household incomes in TCF’s service area –from \$30,942 in Petersburg to \$66,625 in Chesterfield.



\*Includes all of Chesterfield

Source: US Census

The following table illustrates the median household income by locality for 2005, as well as individuals and children (0-17 years) living in households with incomes up to 100% of the Federal Poverty Level (FPL). As shown, the median income of \$49,343 is below the state median income. *Note that the median income for the service areas were calculated by weighting the incomes by the relative number of households in each locality, as reported in the 2000 Census.* However, most localities in the service area are below the state average income with the exception of two localities. Only Chesterfield and Prince George exceed the statewide median. Chesterfield (\$66,625), Prince George (\$55,476), Dinwiddie (\$48,160) and Colonial Heights (\$46,745) have the highest median household incomes.

**Income and Poverty by Locality in 2005**

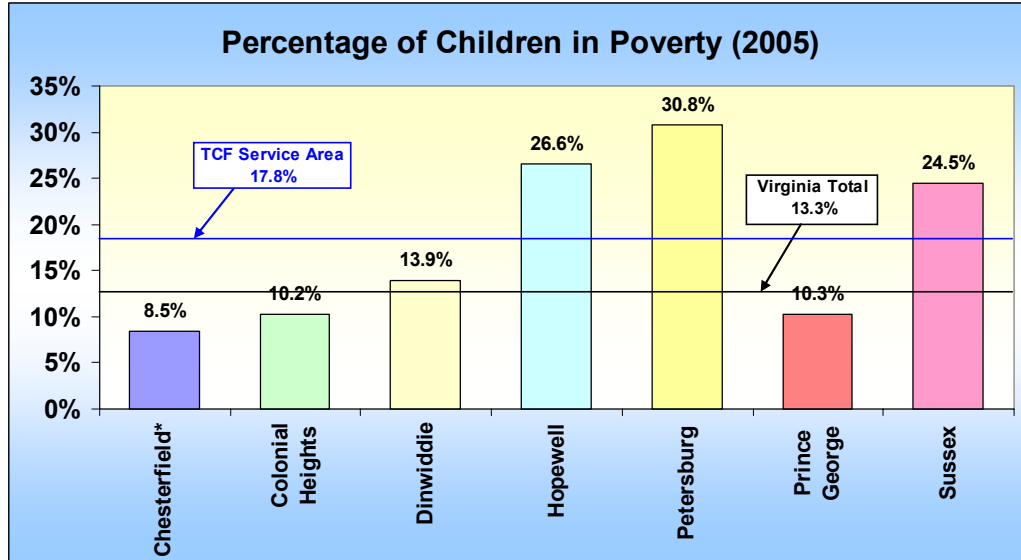
Locality	2005 Median Household Income	Individuals in Poverty	% of Individuals in Poverty	Children in Poverty	% of Children in Poverty
Chesterfield*	\$66,625	18,154	6.3%	6,275	8.5%
Colonial Heights	\$46,745	1,243	7.1%	389	10.2%
Dinwiddie	\$48,160	2,499	9.7%	779	13.9%
Hopewell	\$36,005	3,715	16.7%	1,611	26.6%
Petersburg	\$30,942	6,854	21.7%	2,519	30.8%
Prince George	\$55,476	2,706	7.5%	816	10.3%
Sussex	\$33,866	1,832	15.4%	534	24.5%
<b>Service Area Total</b>	<b>\$49,343</b>	<b>37,003</b>	<b>8.5%</b>	<b>12,923</b>	<b>17.8%</b>
<b>VIRGINIA</b>	<b>\$54,207</b>	<b>728,858</b>	<b>9.6%</b>	<b>237,858</b>	<b>13.3%</b>

**Source:** US Census Bureau Small Area Income and Poverty Estimates 2000 & 2005, Virginia Employment Commission Population Data 2000 & 2005

\*Includes all of Chesterfield

The income disparity among localities is evident in the following graph with almost 22% of Petersburg’s residents living in households at or below **100% of the Federal Poverty Level (FPL)**. Hopewell is not far behind with almost 17% as well as Sussex at about 15%. All of the other localities in the area are similar to or below the State poverty rate, resulting in an area weighted average below the state poverty rate, contrasting with the rate for children.

The following graph indicates the percentage of children living in poverty by locality in 2005. As evidenced, there are four localities with higher percentages of children living in poverty than the State percentage. Hopewell, Petersburg, and Sussex are particularly high percentages as they are either just at double the State’s rate or more than double the State’s rate. Chesterfield shows the lowest rate but again this graph includes all of Chesterfield, not just Southern Chesterfield.



\*Includes all of Chesterfield

**Source:** US Census Bureau Small Area Income and Poverty Estimates 2000 & 2005, Virginia Employment Commission Population Data 2000 & 2005

Of concern is that the service area shows three localities with a significant increase in the percent of individuals in poverty from 2000 to 2005, Chesterfield (includes all of Chesterfield County) (43.4%), Prince George (22.7%), and Colonial Heights (20.1%). Some of this may be due to the overall increase in the number of people and the resulting increase in the number who happen to be low-income, particularly in high growth areas. Nevertheless, the service area as a whole has a significant increase of 28.3%. There are no localities that have shown a decline in the change of the number of individuals in poverty. In addition, the area has had a change in the number of children in poverty almost double that of the state. Chesterfield has seen a significant increase in the number of children in poverty, increasing by 31.7%, whereas Sussex has seen the least percent increase of only 2.6%.

**Income and Poverty Percent Change 2000 – 2005**

<b>Locality</b>	<b>Median Household Income</b>	<b>Individuals in Poverty</b>	<b>Children in Poverty</b>
Chesterfield*	8.5%	43.4%	31.7%
Colonial Heights	6.1%	20.1%	17.2%
Dinwiddie	15.2%	12.4%	5.4%
Hopewell	4.1%	16.3%	19.5%
Petersburg	4.9%	17.6%	17.2%
Prince George	11.5%	22.7%	2.6%
Sussex	8.9%	8.1%	6.0%
<b>Service Area Total</b>	<b>8.6%</b>	<b>28.3%</b>	<b>21.6%</b>
<b>VIRGINIA</b>	<b>16.1%</b>	<b>17.4%</b>	<b>12.3%</b>

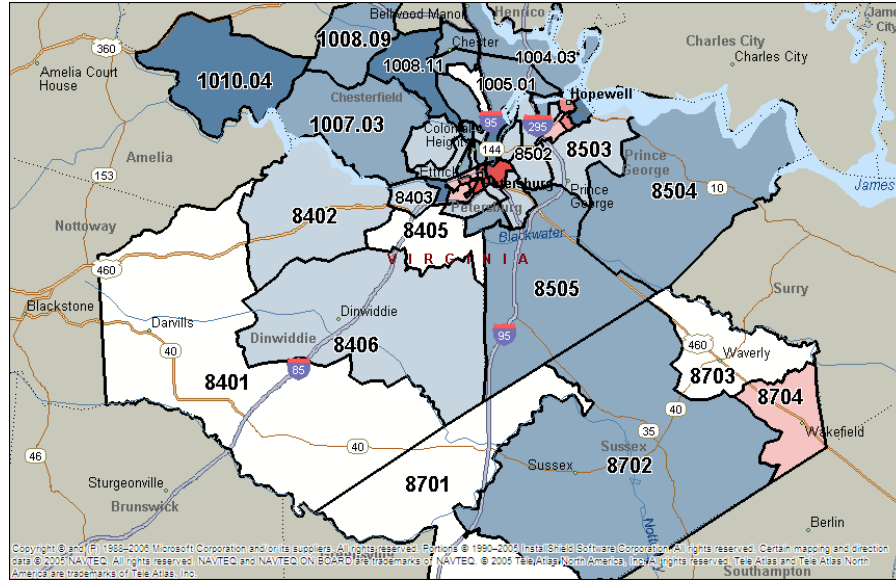
**Source:** US Census Bureau Small Area Income and Poverty Estimates 2000 & 2005, Virginia Employment Commission Population Data 2000 & 2005

\*Includes all of Chesterfield

The following map indicates the percentage of people living at or below 200% of the federal poverty level (FPL) in 2000. *Note that 200% of the FPL in 2008 equates to a household income of \$42,400 for a family of four persons.* The darkest red areas denote those areas that have greater than 60 to 70% of the population living at or below 200% FPL with the middle red shaded areas denoting those families living between 50% and 59% FPL. The light red areas denote those populations living at or below 200% FPL with a percentage between 40 to 49%. The white shaded areas are those families at 30 to 39% FPL. The lightest blue areas denote those areas that have 20 to 29% of the population living at or below 200% FPL with the middle blue shaded areas denoting those families living between 10% and 19% FPL. The dark blue areas denote those populations living at or below 200% FPL with a percentage between 0 to 9%.

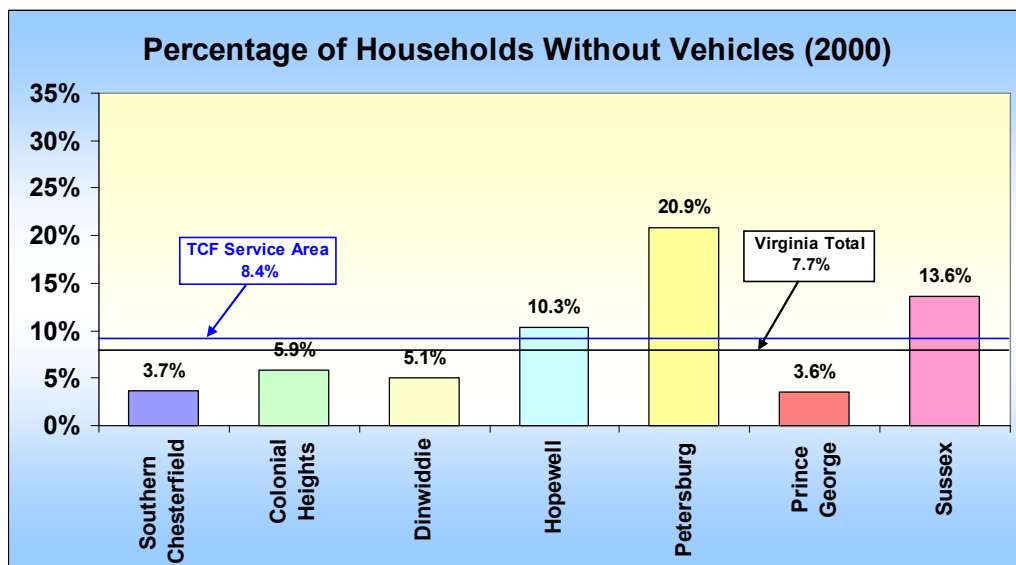
The service area that shows the most people living at or below 200% of the federal poverty level is the center of the service area (the urban core), the southwest portion of the service area, and an area that is southeast of the service area. Otherwise, of the population remaining, 10 to 29% is living at or below 200% FPL.

**Percentage of Individuals Living at or Below 200% of the Federal Poverty Level**



**HOUSEHOLDS WITHOUT VEHICLES (2000 DATA)**

As illustrated in the following chart, TCF’s service area has a higher percentage of households without vehicles when compared to Virginia’s percentage. A wide disparity exists in the number of households without vehicles in the service area – from 3.7% in southern Chesterfield to 20.9% in Petersburg. Petersburg (20.9%), Sussex (13.6%), and Hopewell (10.3%) have the highest percentage of households without vehicles, all above the State’s percentage. In more urban areas with public transportation, such as Petersburg, this may not represent as great a barrier to receiving needed services as in rural areas, such as Sussex, without public transportation and longer distances from services.



Source: 2000 US Census

**UNEMPLOYMENT RATES**

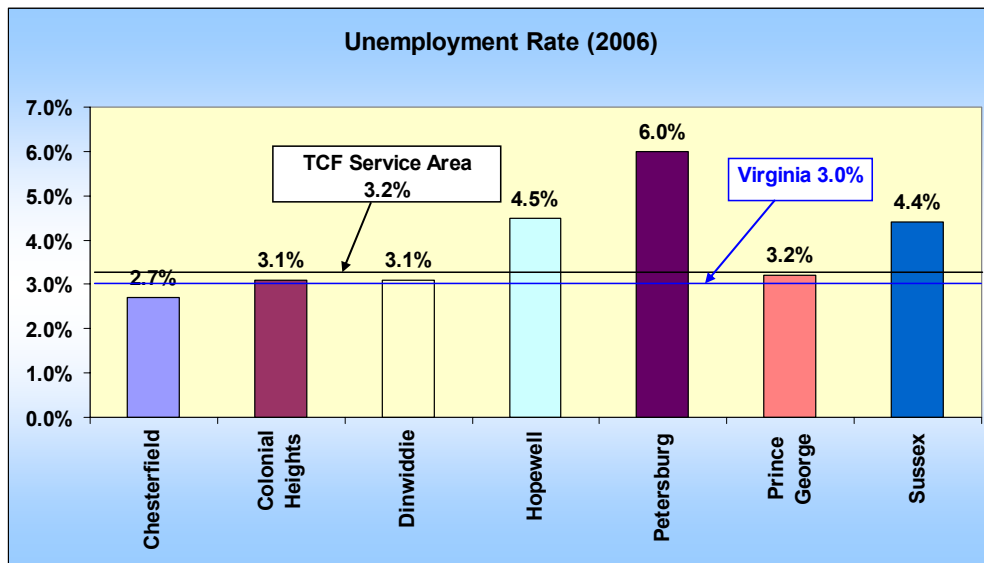
The following table shows the annual non-seasonally adjusted unemployment percentage for the entire service area compared with Virginia. During the seven year time period, the area's unemployment percentage has increased above Virginia's percentage, with the greatest difference in 2003. Note, however, that these are conservative estimates of unemployment since they might not capture those who have stopped searching for work, settled for part-time work, or are underemployed.

**Unemployment Percentages 2000 – 2006**

	2000	2003	2006	% Change from 2000 - 2006
<b>TCF Service Area</b>	2.1%	4.5%	3.2%	51.5%
<b>VIRGINIA</b>	2.2%	4.1%	3.0%	49.8%

Source: Virginia Employment Commission

The following chart illustrates the unemployment rates by locality for 2006. Petersburg (6.0%) has the highest unemployment rate in the area. Two other localities have rates significantly higher than the State's average, Hopewell (4.5%) and Sussex (4.4%). Only one locality has rates below Virginia's unemployment rate, Chesterfield, although, just below the State's average.



Source: 2006 Laus Unit and Bureau of Labor Statistics. Virginia Employment Commission  
 \*Includes all of Chesterfield

**WIC (WOMEN, INFANTS AND CHILDREN PROGRAM) ENROLLMENT**

The women, infants and children nutrition program, funded by the Federal government and administered by the Virginia Department of Health, provides supplemental nutritional support to low-income (up to 185% of the Federal Poverty Level) perinatal women and infants and children up to five years of age. The following table shows the participation rate per 1,000 for women ages 15-44 years and children 0-5 years:

**WIC Enrollment Numbers & Rates per 1,000 (2007)**

Locality	Women		Infants/Children	
	#	Rate	#	Rate
Chesterfield*	1,215	19.3	2,848	157.0
Colonial Heights	93	27.4	214	238.8
Dinwiddie	118	23.4	310	226.8
Hopewell	260	49.0	705	406.6
Petersburg	398	54.7	1,068	493.1
Prince George	154	21.1	473	238.7
Sussex	69	34.7	169	293.4
<b>TCF Service Area</b>	<b>2,306</b>	<b>24.8</b>	<b>5,785</b>	<b>215.5</b>
<b>VIRGINIA</b>	<b>36,099</b>	<b>22.5</b>	<b>102,139</b>	<b>359.7</b>

**Note:** Infants = 0-12 months, Children = 1-5 years, Women = 15-44 Years. 2006 population data applied to 2007 enrollment rates.

**Source:** Virginia Department of Social Services, 2005-2007, Population data from Virginia Employment Commission 2005 and CLARITAS 2006

\*Includes all of Chesterfield

**Note that the WIC participation rates appear to be greatest in areas with higher child poverty rates,** with Hopewell and Petersburg having the highest rates. It also appears that there may be greater opportunities to enroll more perinatal women, infants, and children in WIC since only those two localities have a higher rate than the State rate.

**FOOD STAMP PARTICIPATION**

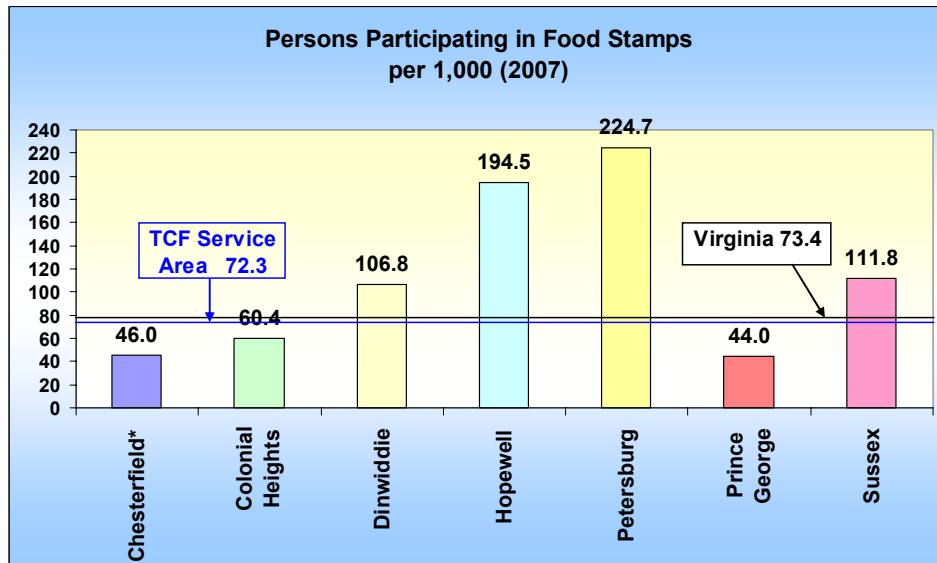
Food stamps is a program funded by the United States Department of Agriculture and administered by the Virginia Department of Social Services to provide nutritional support to people of all ages with incomes of up to 130% of the Federal Poverty Level. The area’s population participating is just below the State rate. Petersburg has the most persons per 1,000 population participating in the food stamp program in the service area.

**Persons Participating in Food Stamp Program**

Locality	Persons	Persons per 1,000 Population Participating
Chesterfield*	13,342	46.0
Colonial Heights	1,054	60.4
Dinwiddie	2,738	106.8
Hopewell	4,339	194.5
Petersburg	7,106	224.7
Prince George	1,597	44.0
Sussex	1,329	111.8
<b>Service Area Total</b>	<b>31,505</b>	<b>72.3</b>
<b>VIRGINIA</b>	<b>519,530</b>	<b>73.4</b>

Source: 2006 Virginia Department of Social Services, 2006 CLARITAS population  
 \*Includes all of Chesterfield

As illustrated by the graph below Petersburg’s participation rate is more than triple that of the State rate with Hopewell following close behind in usage rates. Overall, it appears that the area has opportunity for increased utilization of this important program based on poverty rates for a few localities, such as Sussex.



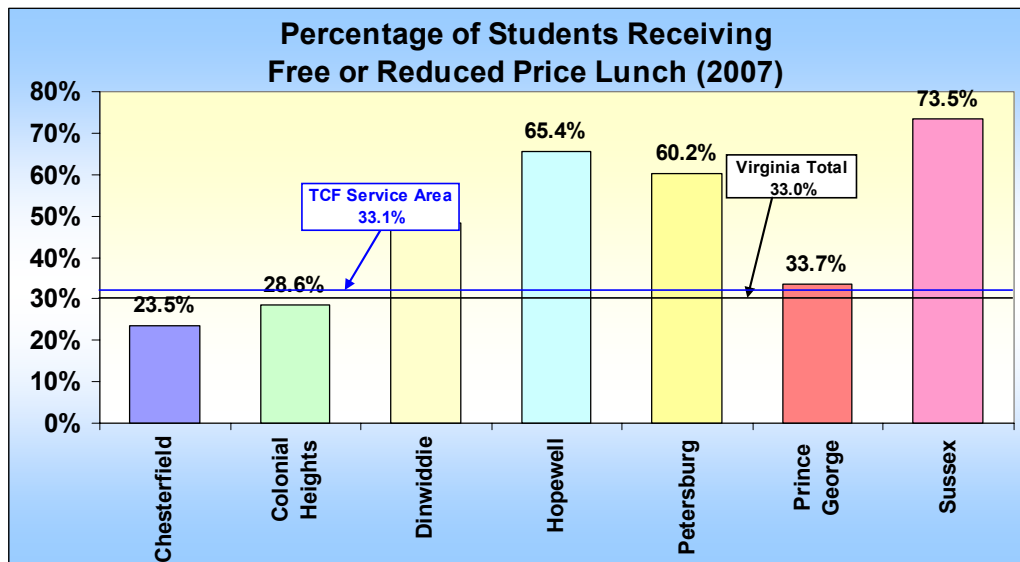
Source: 2006 Virginia Department of Social Services, 2006 CLARITAS population

**NUMBER OF CHILDREN RECEIVING FREE/REDUCED PRICE LUNCHES**

The percentage of students approved for free/reduced price school lunches was assessed for 2000 through 2007 and a chart was prepared by school system showing both the number and percentage of students participating in each year.

The school lunch program is funded by the United States Department of Agriculture and administered by the Virginia Department of Education, providing free meals to children from families with incomes up to 130% of the Federal Poverty Level (FPL) and reduced priced meals to children from families with incomes between 130% and 185% of the FPL. In the 1980’s, the federal reimbursement for free/reduced price lunches declined. Some divisions made a decision to remove high schools from the program at that time. Currently, Chesterfield, Colonial Heights, and Prince George high schools do not participate in the free/reduced price lunch program.

As illustrated in the chart below, **this service area’s 2007 percentage of students approved for free/reduced price school lunches was just about the same as Virginia’s 2007 percentage, even though the area’s child poverty rate is almost double that of the State’s rate.**



Source: 2007 Virginia Department of Education-School Nutrition Program

\*Includes all of Chesterfield

**From 2000 to 2007, this service area’s percentage of students approved for free or reduced price lunches has increased from 29.4% to 33.1% of all students while Virginia’s percentage has increased by 2.4% in 2007.** Over the seven year period, Dinwiddie (going from 32.1% to 48.4% of all students) has seen the largest percentage increase compared to Petersburg (going from 70.9% to 60.2% of all students) showing a significant decrease in the percentage of students receiving free or reduced price school lunches. This is an area of concern when looking at Petersburg’s percentage of children in poverty being the second highest in the service area. Chesterfield (includes all of Chesterfield County) continues to be the locality with the lowest percentage (going from 18.5% to 23.5% of all students) receiving free/reduced price school lunches, reflecting the increased affluent development for families in this county.

**Students Receiving Free or Reduced Price Lunches**

Locality	2000		2007	
	#	%	#	%
Chesterfield*	6,768	18.5%	9,485	23.5%
Colonial Heights	387	19.9%	556	28.6%
Dinwiddie	1,413	32.1%	2,299	48.4%
Hopewell	2,218	53.3%	2,776	65.4%
Petersburg	4,249	70.9%	2,994	60.2%
Prince George	1,311	31.2%	1,648	33.7%
Sussex	953	65.7%	950	73.5%
<b>Service Area Subtotal</b>	<b>17,299</b>	<b>29.4%</b>	<b>20,708</b>	<b>33.1%</b>
<b>VIRGINIA</b>	<b>338,361</b>	<b>30.6%</b>	<b>394,708</b>	<b>33.0%</b>

Source: 2007 Virginia Department of Education-School Nutrition Program

Note: Percent of students is out of total students per school district.

\*Includes all of Chesterfield

**SUMMARY**

In summary, the **main findings from the socioeconomic data** are as follows:

1. A **large disparity between median household incomes for the localities** within TCF’s service area exists. The **influence of Chesterfield’s relatively higher income** is impacting TCF’s service area’s percentage.
2. The service area’s **percent change of those in poverty has increased for adults and children in all localities**. Of particular concern is the percent increase of children in poverty in the service area.
3. **Petersburg has an unemployment rate double that of the state.**
4. TCF’s service area has a **high percentage of households without vehicles**, above the State’s percentage. Lacking transportation creates a barrier to receiving many services, including health and human services. In addition, without adequate transportation, a person may have difficulty obtaining and/or retaining employment, hindering his/her ability to afford services
5. **Petersburg’s percentage of households without vehicles is more than double that of the service area’s and the State’s percentages.** Nevertheless, **Sussex’s high percentage** is perhaps even a greater concern as a rural locality (greater travel distances) with no public transportation.

6. **Five out of seven localities have a higher WIC enrollment rate than the State,** reflecting the high child poverty rate. Only Chesterfield and Prince George have rates below the State enrollment.
7. The TCF service area **food stamp program participation is below the State's** participation. Only **four localities exceed the State's** participation rate.
8. The service area's **percentage of students receiving free or reduced price lunches is lower than Virginia's** percentage in 2007 **even though the child poverty rate is almost double that of the State's rate.**

## EDUCATION RELATED INDICATORS

Detailed data of education related indicators are included in **Attachment D**.

### NUMBER OF CHILDREN IN HEAD START

Head Start is a largely federally funded program that serves primarily low income three and four year old children in order to prepare them for school. As illustrated in the table below, the highest percentage of enrolled three and four year old children are in Sussex and Hopewell. **All localities have children participating in the Head Start program except two, with the areas served all at or above the State average percentage.** Prince George and Colonial Heights do not have a Head Start program available. The Virginia Head Start Association did not find enough eligible children in these two localities when they did there previous expansion years ago. If the data is different in the future for these localities, however, they could receive a Head Start program. While it is likely that there are at risk children in the area who could benefit from Head Start, particularly in Petersburg, the current enrollment percentage is a good indicator for the service area as a whole.

Start Strong is a relatively new initiative proposed by Governor Tim Kaine and established in 2006 to strengthen the early childhood workforce. It created a “coordinated system of training, mentoring, and professional development” and allowed funding for pre-k programs for at risk four year olds in localities with children not being served already by Head Start. In 2008, funding was increased for the Start Strong program, expanding availability to localities statewide. This includes both Prince George and Colonial Heights, two localities without a Head Start program. Prince George has been approved for 103 children and currently has 30 children enrolled. Colonial Heights has been approved for 39 children and currently has 18 children enrolled. Both localities have room to expand their Start Strong enrollees in the future. With this initiative and Head Start, all the area’s localities have a program for low income four year old children.

**Number and Percentage of Children in Head Start by Locality  
2007 – 2008**

Locality	#	%
Chesterfield Public Schools Head Start	197	8.8%
Colonial Heights*	0	0.0%
Dinwiddie Public Schools Head Start	72	11.0%
Hopewell Public Schools Head Start	172	19.8%
Petersburg Public Schools Head Start	136	10.9%
Prince George*	0	0.0%
Improvement Association (Sussex only)	66	22.3%
<b>Service Area Subtotal</b>	<b>643</b>	<b>9.4%</b>
<b>VIRGINIA</b>	<b>16,383</b>	<b>8.5%</b>

**Note:** Percentages out of population from 0-4 years, using estimates of ages 3 and 4.

\*Colonial Heights and Prince George do not have Head Start Programs at this time.

**Sources:** Virginia Head Start Association 2007 – 2008.

**CHILDREN IN SPECIAL EDUCATION BY DISABILITY**

Disability data by type of disability is available by age and census tract from the 2000 Census and is included in Attachment D. As shown in the chart below, the area’s rate of students with disabilities exceeds the State rate, driven by Chesterfield with a rate four times the State rate. Hopewell, Colonial Heights, and Dinwiddie also exceed the State rate but to a much lesser extent. Much of this may be due to Chesterfield’s schools generally widespread reputation of identifying and doing a good job at meeting children with disabilities special needs, therefore, drawing more families with disabilities to the County and more identification of those with needs.

**2006-2007 School Year**

<b>Locality</b>	<b># Students with Disability</b>	<b>Population 5-19</b>	<b>Rate per 1,000</b>
Chesterfield	8,302	18,785	441.9
Colonial Heights	436	3,261	133.7
Dinwiddie	656	5,080	129.1
Hopewell	665	4,877	136.4
Petersburg	598	6,426	93.1
Prince George	747	8,197	91.1
Sussex	205	1,932	106.1
<b>Service Area Total</b>	<b>11,609</b>	<b>48,557</b>	<b>239.1</b>
<b>VIRGINIA</b>	<b>172,160</b>	<b>1,554,162</b>	<b>110.8</b>

**Source:** Virginia Department of Education Special Education Child Count, 2006-07, Prepared and analyzed by the Central Virginia Health Planning Agency

By far, the greatest childhood disability identified is specific learning disability, with speech or language impairment being second, and other health impairment as the third most common. As shown below, the service area percentage is the same as the State percentage. Colonial Heights has the highest percentage identified as specific learning disabilities. Hopewell has a particularly high percentage of speech and language impairment.

2006-2007 School Year

Locality	Specific Learning Disabilities	Speech or Language Impairments	Other Health Impairments	Developmental Delay	Emotional Disturbance	Mental Retardation	Autism	Total
Chesterfield	5.5%	2.6%	2.4%	1.0%	1.0%	0.8%	0.5%	14.2%
Colonial Heights	6.1%	3.7%	1.9%	1.3%	1.0%	0.6%	0.2%	15.1%
Dinwiddie	5.3%	1.6%	2.5%	1.5%	0.7%	2.2%	0.2%	14.1%
Hopewell	5.2%	4.5%	1.9%	1.4%	0.7%	2.1%	0.1%	16.4%
Petersburg	3.3%	1.9%	1.2%	1.2%	1.1%	2.7%	0.2%	12.1%
Prince George	3.3%	2.5%	2.4%	1.1%	1.0%	1.1%	0.4%	12.1%
Sussex	3.8%	2.5%	2.2%	2.1%	0.8%	2.7%	0.4%	14.9%
<b>Service Area Subtotal</b>	<b>5.1%</b>	<b>2.6%</b>	<b>2.3%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>0.4%</b>	<b>14.1%</b>
<b>VIRGINIA</b>	<b>5.2%</b>	<b>2.6%</b>	<b>2.2%</b>	<b>1.3%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.5%</b>	<b>14.1%</b>

Source: Virginia Department of Education Special Education Child Count, 2006-07, Prepared and Analyzed by the Central Virginia Health Planning Agency

**NUMBER OF STUDENTS WITH LIMITED ENGLISH SKILLS**

Children of immigrants, whether documented or undocumented, are allowed to attend public schools in the areas in which they are residents. Many of these children have limited ability to speak and/or read English and; therefore, require special assistance. The number of and growth in students with limited English skills often serves as a proxy for the growth of new immigrants in an area; however, it would not include older teen or other immigrant children that are not enrolled in school.

As shown in the following table, **the percentage of Limited English Proficient (LEP) students in the service area has continued to increase slightly over the last decade; however, this percentage has only grown to 3.0% of the student population in 2007.** While this is less than half of Virginia’s percentage (6.4%), these students often have significant needs and represent a cultural shift in many communities. For example, Chesterfield has the largest number (2,105), while Colonial Heights has the greatest percentage (4.4%), of LEP students.

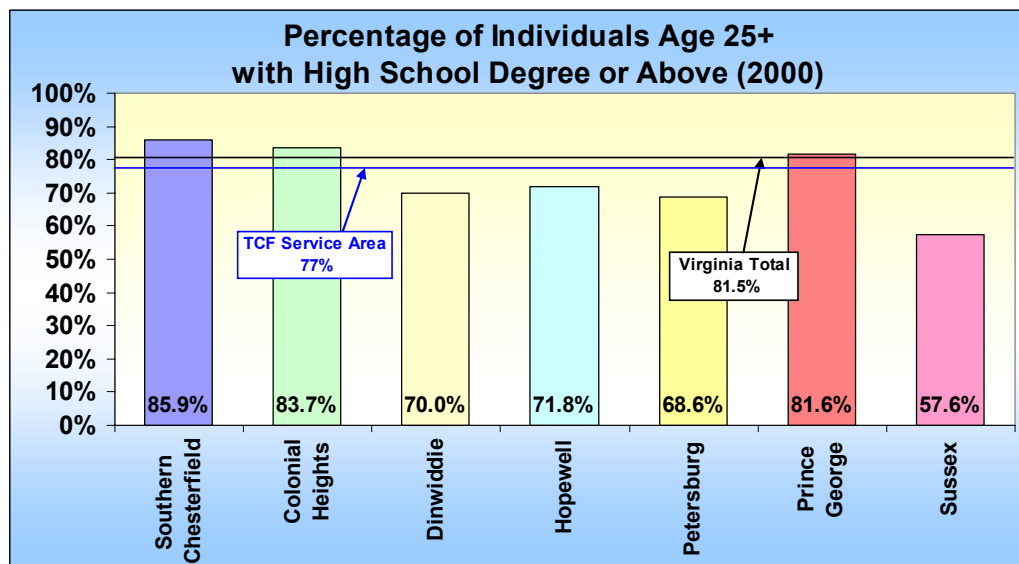
**Students with Limited English Proficiency**

Locality	1998		2001		2004		2007	
	#	%	#	%	#	%	#	%
Chesterfield	396	0.8%	697	1.3%	1,428	2.5%	2,105	3.6%
Colonial Heights	37	1.3%	45	1.6%	148	5.1%	129	4.4%
Dinwiddie	2	0.0%	17	0.4%	35	0.8%	44	0.9%
Hopewell	16	0.4%	45	1.1%	55	1.4%	103	2.4%
Petersburg	8	0.1%	35	0.6%	37	0.7%	44	0.9%
Prince George	8	0.1%	16	0.3%	34	0.5%	45	0.7%
Sussex	-	-	-	-	17	1.3%	9	0.7%
<b>Service Area Subtotal</b>	<b>467</b>	<b>0.6%</b>	<b>855</b>	<b>1.1%</b>	<b>1,754</b>	<b>2.2%</b>	<b>2,479</b>	<b>3.0%</b>
<b>VIRGINIA</b>	<b>26,525</b>	<b>2.4%</b>	<b>43,535</b>	<b>3.7%</b>	<b>66,966</b>	<b>5.6%</b>	<b>84,344</b>	<b>6.4%</b>

Source: Virginia Department of Education, Report of Limited English Proficient (LEP) Students September 30, 2007. Prepared and Analyzed by Central Virginia Health Planning Agency

**HIGHEST EDUCATIONAL LEVEL ATTAINED**

The educational attainment of residents 25 years and older was obtained from the US Census. The following chart shows by locality the total percent of the population 25 years and older with a high school degree/General Educational Development (GED) diploma or above. Approximately 77% of TCF service area residents 25 years and older have at least a high school degree compared to approximately 82% of Virginia residents 25 years and older.



Source: 2000 US Census

Of the localities in TCF's service area, Chesterfield has the highest percentage of its population with at least a high school degree/GED. Sussex has the lowest percentage. Having a lower level of educational attainment impacts a person's lifetime earning potential and access to jobs that provide health insurance.

## **SUMMARY**

In summary, the **main findings from the educational related indicators** are as follows:

1. **Two localities** in the TCF's service area **do not have a Head Start program, Prince George and Colonial Heights**. However, these localities are participants in the new Start Strong program. All other localities have children participating in the Head Start program, with the **percentage participating in all areas above the State average percentage**.
2. The **disability rate for students in the area is approximately twice the State rate**, driven by **Chesterfield County's rate which is four times the State rate**.
3. **Specific learning disabilities (5.1%) are the most common disability** for students in the service area.
4. The service area has a **significantly lower number and percentage of students with limited English proficiency (LEP)**. The service area's percentage of limited English proficiency students is more than half that of the State's percentage.
5. The service area has a **lower percentage of residents 25 and older who have graduated from high school or received a GED or have post high school degrees**, compared to Virginia's percentages.

## **INPATIENT UTILIZATION DATA**

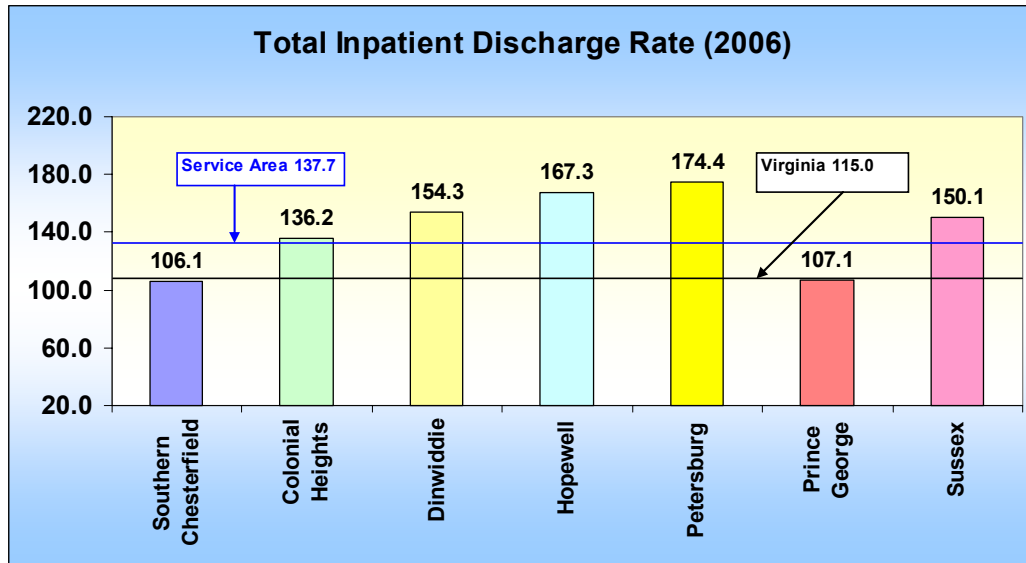
All discharges from Virginia's acute care hospitals are reported to Virginia Health Information (VHI). Numerous types of data, such as the patient's age, ZIP code, and diagnosis, are collected about each patient. The data used for this analysis is from calendar year 2006, the most recent year of the VHI data at the time of this analysis, and is based on the ZIP code given for each patient's residence. Four zip codes, reviewed by The Cameron Foundation, were used to define southern Chesterfield. Please note that some ZIP codes are post office boxes and do not have populations associated with them; therefore, discharge use rates for these specific zip codes could not be calculated. VHI data reviewed and analyzed for this assessment included the patients' age, race, gender, DRG, discharges status, type of admission, existence of co-morbidity, payment source, and facility utilized. Additionally, inpatient cardiology and cardiovascular disease data were analyzed. This data was compared to the corresponding inpatient utilization data for TCF's service area and Virginia.

Although zip codes extend across city/county borders, they are assigned to a specific city/county; therefore, comparison between the inpatient data (based on zip codes) and the demographic data (based on census tracts) should be used cautiously. Moreover, caution should be taken when reviewing data with relatively small numbers of discharges. Nonetheless, the comparison still provides valuable comparative information and should be used with other data and information included in this report to obtain insights about TCF service area's health care needs.

**Attachment E** includes ZIP code area maps for TCF's service area. **Attachment F** includes the inpatient data tables for Calendar Year 2006. Of note, when the discharge rate is given, the rate is per 1,000 population. The following summarizes some of the major findings from the 2006 inpatient data:

- The 2006 overall inpatient discharge rate for TCF's service area (137.7), representing discharges, is 19.7% higher than Virginia's discharge rate (115.0). Both the service area and Virginia saw an increase in their discharge rates from 2003 (129.9 and 97.5, respectively) but the service area experienced only a 6% increase in its rate compared to 18% statewide.
- Of the seven localities in TCF's service area, Petersburg continues to have the highest inpatient discharge rate (174.4). Petersburg's inpatient discharge rate is 51.7% higher than Virginia's inpatient discharge rate, a decline from 87% higher in 2003 (182.2).
- Both of the changes noted above, may indicate some positive changes as a result of efforts in the area to increase access to primary care.

**2006 Inpatient Discharge Rate per 1000 Population**



Source: Virginia Health Information 2006

**AGE**

The discharge data was grouped into eight age categories (0-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75+). Discharge rates for these groups are shown below:

**2006 Inpatient Discharge Rates per 1,000 Population by Age Group**

County/Zip Code	Ages 0-17	Ages 18-24	Ages 25-34	Ages 35-44	Ages 45-54	Ages 55-64	Ages 65-74	Ages 75+
Southern Chesterfield	85.6	61.9	121.8	76.5	111.8	152.9	238.4	676.8
Colonial Heights	83.9	85.3	107.2	91.5	98.8	132.2	240.0	473.5
Dinwiddie	97.7	98.1	110.2	117.9	118.9	198.0	313.8	411.3
Hopewell	105.6	149.0	138.6	107.4	127.4	204.1	292.7	506.4
Petersburg	87.5	100.1	131.2	168.3	174.6	215.6	294.5	485.9
Prince George	70.2	80.6	98.6	74.8	87.7	155.4	302.0	575.9
Sussex	80.1	83.9	75.5	110.8	160.9	187.6	301.3	435.9
<b>Service Area Total</b>	<b>87.1</b>	<b>87.7</b>	<b>118.0</b>	<b>105.4</b>	<b>129.6</b>	<b>179.2</b>	<b>275.0</b>	<b>510.9</b>
<b>VIRGINIA</b>	<b>82.3</b>	<b>69.7</b>	<b>92.2</b>	<b>75.0</b>	<b>87.7</b>	<b>126.5</b>	<b>230.6</b>	<b>363.0</b>

Source: Virginia Health Information 2006

According to the 2003 data, both younger and older populations exhibited the highest discharge rates. In 2006, the higher discharge rates for those aged 75+ were more pronounced. Additionally, TCF’s service area’s discharge rates for all age groups were higher than the corresponding age group for the entire State. Specific age groups within localities with potential concerns include:

- Southern Chesterfield for those aged 75+
- Dinwiddie for those aged 55+
- Hopewell for those aged 0-34 and 75+
- Petersburg for those aged 18-75+
- Prince George for those aged 65+

**RACE**

The racial composition of the TCF’s service area’s discharges is 58% white and 37% black. The representation of discharges of the white population is only slightly lower than the white representation in the demographic data (59.9%) while the representation of discharges of the black population is only slightly higher than black representation in the demographic data (36.2%). The representations of the discharges of the white and black populations follow the service area trend of slightly higher representation of black discharges, and slightly lower representation of white discharges compared to demographic data.

The following table shows the inpatient discharge rate by race. Because of the relatively small number of discharges from patients whose race was neither black nor white, use rates for the “other” group can vary widely. “Other” discharges represent only 4.9% of the total service area discharges.

**2006 Inpatient Discharge Rate per 1000 Population by Race**

County/Zip Code	White	Black	Other
Southern Chesterfield	105.9	97.9	134.0
Colonial Heights	136.8	138.4	120.6
Dinwiddie	145.3	176.3	162.2
Hopewell	173.7	156.8	164.7
Petersburg	172.5	174.8	190.3
Prince George	119.7	87.4	101.9
Sussex	154.1	143.9	80.8
<b>Service Area Total</b>	<b>132.5</b>	<b>146.0</b>	<b>136.6</b>
<b>VIRGINIA</b>	<b>108.2</b>	<b>131.7</b>	<b>128.7</b>

Source: Virginia Health Information 2006

TCF service area's discharge rates for the white and black population have risen since 2003 but to a lesser degree than the State's increase. TCF service area's discharge rates in 2006 were 22.5% and 10.9% higher, respectively, than Virginia's discharge rates for the corresponding populations while they were 33.5% higher for whites and 24.0% higher for blacks in 2003. Petersburg continues to have one of the highest discharge rates for both black and white populations. This data appears to indicate that the differences from State rates are not primarily due to racial disparities but are primarily due to systematic differences of the area impacting people of all racial groups.

**GENDER**

Nationally, women use hospital inpatient services more than men. As expected, all localities in TCF's service area have a higher female discharge rate than males. This may be attributable to maternity hospitalization and longer lifespan (older people use more healthcare services) of women. Females represent 58.5% of all discharges from the service area, which is slightly less than the State's percentage of female discharges (59.4%). This is not surprising since the service area's percentage of female population is slightly lower than the State's.

**2006 Inpatient Discharge Rate per 1000 Population by Gender**

County/Zip Code	Male	Female
Southern Chesterfield	84.1	127.7
Colonial Heights	110.3	159.8
Dinwiddie	138.7	169.7
Hopewell	141.3	190.6
Petersburg	155.3	186.7
Prince George	82.3	134.2
Sussex	132.5	172.0
<b>Service Area Total</b>	<b>115.2</b>	<b>158.2</b>
<b>VIRGINIA</b>	<b>94.8</b>	<b>134.5</b>

Source: Virginia Health Information 2006

**UTILIZATION BY DIAGNOSTIC RELATED GROUP (DRG)**

All inpatient discharges are grouped into a diagnostic related group (DRG) based on the patient's primary and secondary diagnosis, age, sex, and ultimate disposition. The 2006 inpatient data used 579 DRGs. As of October 1, 2007, there are 745 MSDRGs, a new classification system to be used by Medicare and data organizations.

As shown in the table below, Psychoses, which includes a range of mental health conditions, is the most prevalent DRG and represents almost double the percentage of discharges for the service area compared to the State percentage. Normal newborn and vaginal delivery without complications are the service area's second and third DRG with the highest percentage, although both percentages are low compared to the rest of the State. The next top four DRGs make up a percentage of the

service area’s DRGs that are at or below the State level, indicating discharges in the service area are spread over more diagnoses instead of exhibiting a large number of discharges over only a few diagnoses. The top DRGs have remained relatively similar since the previous analysis of 2003 data. Note that these are DRG’s (billing codes). “W/O CC” indicates a diagnosis without complicating diagnoses.

**2006 Inpatient Discharges by Diagnosis Related Group**

Locality	Psychoses	Normal Newborn	Vaginal Delivery W/O CC	Heart Failure & Shock	Cesarean Section W/O CC	Esophagitis, Gastroent & Misc Digest Disord	Chronic Obstructive Pulmonary Disease
Southern Chesterfield	5.5%	9.0%	7.2%	0.9%	3.5%	N/A	N/A
Colonial Heights	6.6%	6.0%	4.8%	3.5%	2.5%	1.8%	2.2%
Dinwiddie	9.6%	3.6%	3.3%	2.5%	1.9%	1.1%	N/A
Hopewell	7.6%	6.3%	4.8%	2.8%	2.8%	2.1%	2.0%
Petersburg	10.8%	4.2%	3.9%	3.5%	0.5%	1.9%	2.2%
Prince George	11.6%	6.7%	4.4%	2.3%	3.0%	1.4%	0.9%
Sussex	5.2%	3.2%	2.7%	3.5%	0.8%	0.4%	N/A
<b>Service Area Total</b>	<b>8.2%</b>	<b>6.0%</b>	<b>4.9%</b>	<b>2.6%</b>	<b>2.1%</b>	<b>1.3%</b>	<b>1.2%</b>
<b>VIRGINIA</b>	<b>4.2%</b>	<b>8.1%</b>	<b>6.2%</b>	<b>2.6%</b>	<b>2.9%</b>	<b>1.7%</b>	<b>1.7%</b>

Source: Virginia Health Information 2006

\*Note: W/O CC indicates without complicating diagnosis

Concerns regarding specific DRGs by locality include the high percentage of discharges for:

- Heart Failure and Shock in Colonial Heights, Petersburg, and Sussex
- Digestive Disorders in Hopewell
- Chronic Obstructive Pulmonary Disease in Colonial Heights, Hopewell, and Petersburg

**BEHAVIORAL HEALTH**

The unusually high rate of psychoses in the service area is primarily driven by Petersburg and Prince George. In the last couple of years, the Fort Lee zip code has seen a significant increase in the number of psychoses diagnoses, more than tripling from 2004/2005 to 2006/2007. This utilization may reflect the build up for and the impact of Middle East deployments on military personnel and their families.

**Prince George Psychoses Discharges**

<b>Psychoses ICD-9 Diagnoses</b>				
<b>Locality</b>	<b>2004/2005</b>	<b>2005/2006</b>	<b>2006/2007</b>	<b>% Change</b>
23875 - Prince George	116	130	95	-18.1%
23801 - Fort Lee	56	115	188	235.7%
23842 - Disputanta	39	29	34	-12.8%
<b>Total</b>	<b>211</b>	<b>274</b>	<b>317</b>	<b>50.2%</b>

Of particular concern is the number of behavioral health related diagnoses in the TCF service area. The percentage of inpatient discharges for the psychoses DRG was almost double the State's, and is the leading DRG for the service area. The table below shows the total behavioral health discharges (includes all discharges with a behavioral health primary diagnosis, including all under the psychoses DRG) and the percentage of these discharges for the most common disorders during the last two quarters of 2006 and the first two quarters of 2007.

**2006/2007 Behavioral Health Diagnoses**

<b>County/Zip Code</b>	<b>Total DC</b>	<b>Episodic Mood Disorders</b>	<b>Schizophrenic Disorders</b>	<b>Syncope and Collapse</b>	<b>Depressive Disorder NEC</b>	<b>Other</b>
Southern Chesterfield	743	52.9%	13.5%	4.8%	6.6%	22.2%
Colonial Heights	286	60.8%	11.2%	6.6%	3.5%	17.8%
Dinwiddie	268	40.3%	34.3%	7.5%	3.0%	14.9%
Hopewell	420	57.6%	12.4%	6.2%	6.2%	17.6%
Petersburg	1,286	50.1%	28.7%	4.3%	3.7%	13.3%
Prince George	413	69.7%	6.5%	2.9%	5.8%	15.0%
Sussex	143	58.7%	19.6%	8.4%	2.1%	11.2%
<b>Service Area Total</b>	<b>3,559</b>	<b>54.3%</b>	<b>19.7%</b>	<b>5.1%</b>	<b>4.7%</b>	<b>16.3%</b>

Source: Virginia Health Information 2006/2007

The most frequent type of behavioral health diagnosis in the service area, particularly in Prince George, is episodic mood disorders, or episodes of extreme mania or depression. The other major diagnosis is schizophrenic disorders, particularly in Dinwiddie and Petersburg, making up 19.7% of discharges. Syncope and Collapse (dizziness) and Depressive Disorder Not Elsewhere Classified (NEC), together with about 20 other diagnoses, make up the rest of the discharges.

**UTILIZATION BY ADMIT SOURCE & DISCHARGE STATUS**

As illustrated below, the service area has a higher percentage of admittance from the emergency department than does the State. Emergency Room admissions are further broken down to reflect the high number of psychoses patients that were admitted through the emergency room. ER Psychoses admissions as a percentage of all ER admissions are 147% higher than the State's

percentage, driven by the high rate of psychoses patients in Prince George and Petersburg. The service area's overall ER admissions as a percentage of total admissions are greater than the State. However, physician referrals are comparable and transfers and other admissions are slightly lower than the State.

**Percentage of Discharges by Admit Source - 2006**

Locality	Emergency Room			Physician Referral %	Transfer %	Other %
	Psychoses % of ER	Other % of ER	Total %			
Southern Chesterfield	8.0%	92.0%	39.3%	53.6%	4.0%	3.1%
Colonial Heights	7.0%	93.0%	47.4%	46.2%	3.6%	2.8%
Dinwiddie	9.9%	90.1%	50.8%	42.2%	3.3%	3.7%
Hopewell	7.7%	92.3%	43.8%	49.1%	4.0%	3.1%
Petersburg	11.3%	88.7%	54.6%	39.4%	3.2%	2.8%
Prince George	14.6%	85.4%	44.0%	48.9%	3.3%	3.7%
Sussex	5.2%	94.8%	51.7%	41.8%	3.8%	2.8%
<b>Service Area Total</b>	<b>9.4%</b>	<b>90.6%</b>	<b>47.2%</b>	<b>46.1%</b>	<b>3.6%</b>	<b>3.0%</b>
<b>VIRGINIA</b>	<b>3.8%</b>	<b>96.2%</b>	<b>44.8%</b>	<b>46.3%</b>	<b>3.8%</b>	<b>4.9%</b>

Source: Virginia Health Information 2006

The table below shows three quarters of all patients from the service area and Virginia are discharged back to their homes from hospitals. The service area has a somewhat higher percentage. Furthermore, the service area has a lower percentage of inpatients receiving home health services or being transferred to a skilled nursing facility.

Percentage Utilization by Discharge Status - 2006

Locality	Another Acute General Hospital	Expired	Home Health Services	Home/Self Care	Skilled Nursing Facility	Other
Southern Chesterfield	1.1%	2.2%	10.0%	78.8%	3.6%	4.3%
Colonial Heights	2.1%	2.3%	9.6%	72.5%	8.5%	5.1%
Dinwiddie	2.2%	2.1%	8.5%	77.9%	5.3%	4.2%
Hopewell	2.9%	2.3%	9.3%	73.6%	6.1%	5.8%
Petersburg	2.3%	2.5%	8.7%	75.3%	6.2%	5.0%
Prince George	2.1%	1.7%	7.9%	80.8%	2.6%	4.9%
Sussex	3.0%	2.8%	9.6%	72.8%	7.4%	4.4%
<b>Service Area Total</b>	<b>2.1%</b>	<b>2.3%</b>	<b>9.2%</b>	<b>76.1%</b>	<b>5.5%</b>	<b>4.8%</b>
<b>VIRGINIA</b>	<b>2.0%</b>	<b>2.3%</b>	<b>9.6%</b>	<b>74.4%</b>	<b>7.2%</b>	<b>4.4%</b>

Source: Virginia Health Information 2006

COMORBIDITIES

Many patients admitted to hospitals have chronic conditions that add to their health risk but may or may not be a contributing factor to their hospitalization. A single patient can have no or several comorbidities, but on average, there was a ratio of less than one comorbidity per discharge in both the service area and Virginia. However, the service area’s patients were slightly more likely to have a comorbidity than the State.

The following table shows the ratio of comorbidities to discharges and the percentage of discharges in each locality that have various types of comorbidities. As shown, **almost one in four inpatient discharges statewide had cardiovascular disease (CVD). The service area had only a slightly lower percentage of discharges with a CVD morbidity than the State. Aside from CVD and liver disease, all of the other comorbidities were relatively more present when compared to the State.** Percentages for areas with relatively small numbers of discharges, such as Dinwiddie and Sussex should be used with caution since a relatively small number of patients with multiple comorbidities and discharges in a year could skew the percentages and/or ratio.

**Percentage of 2006 Inpatient Discharges with Comorbidities by Type**

Locality	Cancer	CVD	Liver Disease	Renal Disease	Diabetes	Pulmonary Disease	Cerebro. Degen.	Total Comorbidities per Discharge
Southern Chesterfield	5.4%	19.7%	1.3%	6.4%	2.4%	11.9%	5.1%	0.52
Colonial Heights	4.6%	27.9%	1.4%	6.7%	3.2%	15.0%	7.9%	0.67
Dinwiddie	6.0%	25.8%	1.6%	8.1%	4.3%	15.5%	7.2%	0.68
Hopewell	5.1%	24.8%	2.3%	7.2%	4.1%	15.3%	7.7%	0.67
Petersburg	4.8%	25.3%	1.5%	11.1%	5.3%	16.3%	8.5%	0.73
Prince George	4.8%	18.5%	2.1%	6.1%	2.4%	13.1%	5.6%	0.53
Sussex	6.1%	29.1%	1.9%	12.5%	3.7%	16.8%	6.8%	0.77
<b>Service Area Total</b>	<b>5.1%</b>	<b>23.8%</b>	<b>1.6%</b>	<b>8.4%</b>	<b>3.8%</b>	<b>14.6%</b>	<b>7.0%</b>	<b>0.64</b>
<b>VIRGINIA</b>	<b>4.8%</b>	<b>24.2%</b>	<b>1.6%</b>	<b>8.0%</b>	<b>3.2%</b>	<b>13.4%</b>	<b>6.2%</b>	<b>0.61</b>

Source: Virginia Health Information 2006

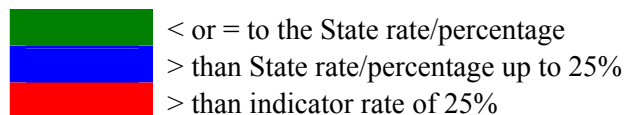
**CARDIOVASCULAR DISEASE**

In 2007, the Central Virginia Health Planning Agency completed a comprehensive analysis of statewide cardiology data for the Virginia Department of Health’s Office of Chronic Disease Prevention and Control (OCDPC), including an analysis of 2005 mortality and inpatient cardiovascular data, as well as an analysis of the trends in inpatient usage from 2001 to 2005. The following includes the locally specific data for TCF’s service area which shows the age adjusted death rates due to heart disease and stroke:

**CVD Age-Adjusted Death Rates – 2005**

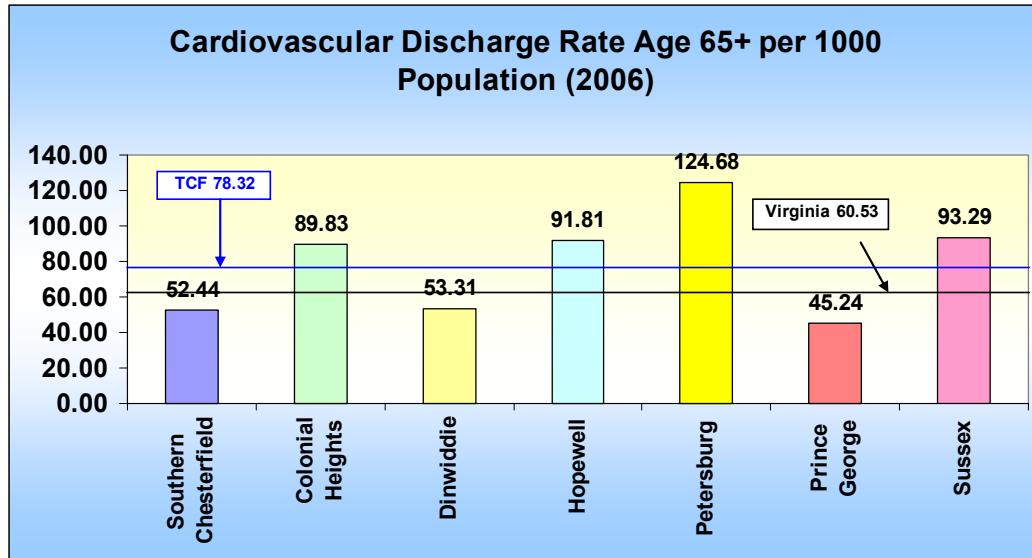
City/County Level Data Geographic Area	Age Adjusted Heart Disease Death Rate		Age Adjusted Cerebrovascular Disease Death Rate	
	Male	Female	Male	Female
Chesterfield	264.5	188.6	82.7	64.0
Colonial Heights	314.8	183.6	42.3	33.5
Dinwiddie	285.9	229.4	54.5	56.9
Hopewell	308.5	240.9	48.9	78.7
Petersburg	405.3	271.6	85.1	58.5
Prince George	166.2	124.0	60.4	69.6
Sussex	222.5	250.8	73.0	39.1
<b>VIRGINIA</b>	<b>242.5</b>	<b>161.9</b>	<b>50.4</b>	<b>52.2</b>

Source: Virginia Health Information 2005  
 Prepared by the Central Virginia Health Planning Agency



Petersburg and Hopewell had high age-adjusted deaths due to heart disease, as well as Colonial Heights among men. Dinwiddie and Sussex had particularly high rates among women. Men in Chesterfield, Petersburg, and Sussex had high age-adjusted death rates due to stroke, as did women in Hopewell and Prince George.

The service area’s CVD discharge rate is 29% greater than the State rate. As illustrated in the chart below, of those aged 65 and older, Petersburg had the highest overall cardiovascular disease inpatient discharge rate (124.68) in the TCF service area, more than double Virginia’s rate. These high rate levels have remained consistent since the previous 2005 study. High rates can reflect less access to primary and preventative services. The cities, Colonial Heights, Hopewell, and Petersburg, had higher CVD inpatient rates than the counties, which could be related to the demographics and socioeconomic composition of the cities in the service area.



Source: Virginia Health Information 2006

## PAYER

Based on the CVHPA’s experience, the VHI inpatient data by payment source is the most unreliable component of the database. Nevertheless, it can provide some important information if used cautiously. As illustrated below, the majority of inpatient discharges of the service area’s and Virginia’s residents are paid for by commercial insurers (driven by Southern Chesterfield’s discharges), followed closely by Medicare. However, compared to the State the service area has a:

- Slightly higher percentage of Commercial discharges
- Slightly lower percentage of Medicare discharges;
- Slightly lower percentage of Medicaid discharges; and
- Higher percentage of “other” discharges.

While Medicaid enrollment has increased since 2003, perhaps due to growth in the children’s health insurance program FAMIS, it is likely that some of the indigent/self pay discharges may qualify for Medicaid with enrollment assistance. Hopewell, Sussex, and Petersburg, in particular, have a high percentage of indigent/self pay discharges as well as the highest percentage of Medicaid discharges in the service area. The “other” category makes up a significant portion of Prince George’s discharges, which is primarily driven by TRICARE, a payer for civilian dependants of military servicemen and women.

**Percent of Discharges by Payer**

Locality	Commercial	Medicare	Medicaid	Self Pay/Indigent	Other
Southern Chesterfield	52.0%	27.6%	8.5%	4.2%	7.7%
Colonial Heights	35.3%	43.3%	9.7%	3.8%	7.9%
Dinwiddie	42.1%	41.1%	9.9%	3.1%	3.7%
Hopewell	29.3%	39.7%	17.0%	6.8%	7.3%
Petersburg	33.7%	41.3%	14.0%	5.7%	5.3%
Prince George	31.6%	29.5%	8.0%	3.1%	27.8%
Sussex	38.3%	40.1%	12.5%	5.9%	3.3%
<b>Service Area Total</b>	<b>38.7%</b>	<b>36.8%</b>	<b>11.7%</b>	<b>4.9%</b>	<b>7.9%</b>
<b>VIRGINIA</b>	<b>36.8%</b>	<b>39.8%</b>	<b>12.9%</b>	<b>5.2%</b>	<b>5.3%</b>

Source: Virginia Health Information 2006

**FACILITY**

The following table shows the top 90% of hospitals by discharge percentage of the service area's number of total discharges. Southside Regional Medical Center is the facility with the most discharges, followed by CJW, John Randolph Medical Center, and MCV Hospital. Taken together, these four facilities account for over 80% of the service area's total discharges.

**Percent of Total Service Area Discharges by Facility**

Facility	% of Service Area Discharges
Southside Regional Medical Center	33.4%
CJW Medical Center - Chippenham Campus	20.9%
John Randolph Medical Center	17.4%
MCV Hospital	10.5%
Saint Francis Medical Center	5.0%
Saint Mary's Hospital	3.6%
Henrico Doctors Hospital	2.4%
Poplar Springs Hospital	2.0%
Southern Virginia Regional Medical Center	1.2%
Sentara Obici Hospital	0.6%
Memorial Regional Medical Center	0.4%
<b>Total</b>	<b>90.7%</b>
<b>Total Service Area Discharges</b>	<b>34,134</b>

Source: Virginia Health Information 2006

Although Southside Regional Medical Center is the highest utilized facility based on percent of discharges for the entire service area, most patients will utilize the facility that allows for the greatest amount of geographic accessibility. CJW Medical Center is the most utilized facility for Southern Chesterfield. Similarly, John Randolph is the most utilized facility for Hopewell and Prince George. Since Saint Francis Medical Center opened in September 2005, it is likely that its current percentage of discharges from the service area is higher than that shown.

## **SUMMARY**

In summary, the **main findings from the inpatient utilization indicators** are as follows:

1. The 2006 **overall inpatient discharge rate for TCF's service area (137.7) is 19.7% higher than Virginia's discharge rate (115.0)** but this represents a relative improvement since 2003.
2. As expected, the **female population utilized inpatient care more frequently** than the male population.
3. TCF's service area's **discharge rates for all age groups were higher** than the corresponding age group for the entire State.
4. Both the **white and black populations** residing in TCF service area are **utilizing health services at a rate that is higher than the State's**, pointing to systemic health-related problems that cannot be attributed to just racial disparities.
5. **Mental health diagnoses make up the most significant portion of inpatient discharges** for the service area. This may indicate a need for mental and behavioral health services, particularly in Prince George and Petersburg, where mental health diagnoses were most prevalent.
6. The service area exhibits a **greater number of inpatient admissions through the emergency department (ED) than does Virginia as a whole**. Additionally, **psychosis ED patients make up a significant portion of inpatient admissions from the ED**. This could correlate with the inability of some patients in the service area to obtain preventive or community-based services, either because of lack of insurance, lack of access to primary care physicians, or lack of access to psychiatric care.
7. **Inpatient discharges to home health care and skilled nursing facilities are below state levels**, which could possibly indicate the lack of access to home health care services or skilled nursing facilities within the service area or deficiencies in discharge planning.
8. The service area exhibited a **cardiovascular disease co-morbidity rate that was only slightly lower than the State**, with almost **one in four patients being discharged having some form of cardiovascular disease**.

9. Petersburg and Hopewell had a high number of age-adjusted deaths due to heart disease, and several counties had high age-adjusted death rates due to stroke for both men and women. Combined with the high number of cardiovascular disease discharges, it is evident that **there may be a need for both interventional and preventative cardiovascular services.**
  
10. **Commercial payers are the most prevalent type of insurance** in TCF service area. However, **Hopewell, Sussex, and Petersburg have a high percentage of indigent and self pay patients.** These patients may be eligible to enroll in Medicaid, which is most prevalent in the service area in these three localities.
  
11. The **majority of hospital patients are seen by a small number of hospitals** in the area, with Southside Regional and CJW being the most frequented and the **majority of people receiving care at the closest facility** to their residence.

## VITAL STATISTICS

The Virginia Department of Health, Office of Health Statistics, collects detailed birth and mortality data annually on every birth or death that occurs in Virginia. **Attachment G** includes birth data for the years 2000, 2003, and 2006. Mortality data are shown for 2006 only since it usually does not change significantly over a relatively short period of time. There are no rates for the service areas because VDH only calculates rates for planning districts and health districts.

### BIRTH RATES

There were 5,921 births in TCF's service area in 2006 which represents an 11.9% increase from 2000, significantly above the State increase of 7.7%. The largest percent increases in the number of births were in Colonial Heights (18.7%), Chesterfield (16.7%), and Dinwiddie (13.8%). White births increased most (by 14.9%) of all other racial groups in the area. Comparatively, the percentage of black births increased by only 7% and other (Hispanic, Asian, American Indian, etc) births increased by only 2.1% of all births.

#### Number and Rate of Births (2006)

Locality	Total Live Births				Birth Rate			
	Total	White	Black	Other	Total	White	Black	Other
Chesterfield	3,978	2,981	805	192	13.4	13.4	12.6	18.2
Colonial Heights	229	170	51	8	13.0	11.2	25.9	13.7
Dinwiddie	280	201	76	3	10.9	11.7	9.1	12.1
Hopewell	404	213	179	12	17.8	15.5	20.8	30.2
Petersburg	568	131	424	13	17.5	20.2	16.6	29.1
Prince George	356	228	113	15	9.8	10.4	8.6	13.7
Sussex	106	44	60	2	8.7	9.3	8.1	25.3
<b>Service Area Total</b>	<b>5,921</b>	<b>3,968</b>	<b>1,708</b>	<b>245</b>				
<b>VIRGINIA</b>	<b>106,474</b>	<b>72,808</b>	<b>23,171</b>	<b>10,495</b>	<b>13.9</b>	<b>12.9</b>	<b>14.9</b>	<b>25.0</b>

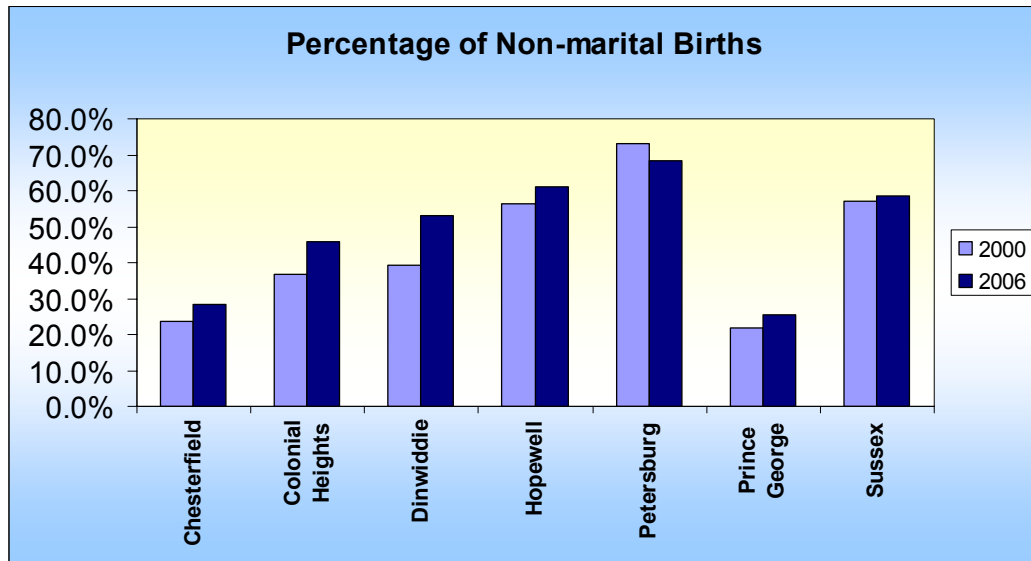
Source: Virginia Department of Health 2006

All of the localities had an increasing birth rate between 2000 and 2006, but all but two fell below the State change of -0.7%. The two localities that had birth rates above the State rate include Hopewell and Petersburg.

### NON-MARITAL BIRTHS

The following chart shows by locality the percentage of non-marital births both in 2000 and in 2006. As evidenced, the percentage of non-marital births in 2006 are highest in Petersburg (68.3%), followed by Hopewell (61.1%) and Sussex (58.5%). Chesterfield and Prince George are the only localities in 2006 with a percentage lower than the state (34.1%) Dinwiddie experienced the largest percentage increase (34.8%) followed by Colonial Heights (24.7%) and Chesterfield (19.7%).

In fact, Petersburg is the only locality to decrease its percentage of non-marital births from 2000 to 2006.



Source: Virginia Department of Health 2000 and 2006

### TEENAGE BIRTHS

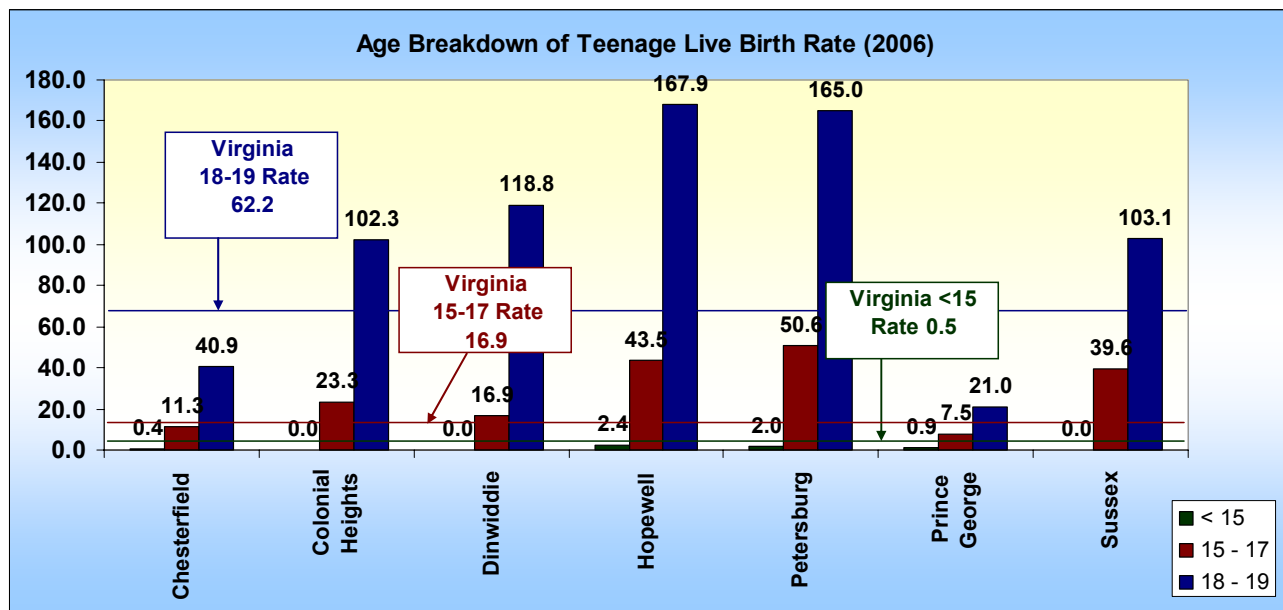
As illustrated in the table below, most teen births occur to women who are 18 or 19 years of age, with only Chesterfield and Petersburg having a significant number and percentage of births to teenagers 15-17 years. Chesterfield, Hopewell, Petersburg, and Prince George are the only localities to have births to girls under the age of 15. **However, the rate of births to teenagers overall appears to be a significant issue in the service area.** Having a high teen birth rate negatively impacts a locality's overall health because of the effects of a teenager's economic and emotional status in caring for a child and the lifelong influence this can have on the child.

Number and Rate of Teenage Births (2006)

Locality	# of Teenage Live Births				Birth Rate			
	Total	< 15	15 - 17	18 - 19	Total	< 15	15 - 17	18 - 19
Chesterfield	255	4	82	169	11.5	0.4	11.3	40.9
Colonial Heights	29	0	12	17	27.2	0	23.3	102.3
Dinwiddie	41	0	10	31	24.3	0	16.9	118.8
Hopewell	67	2	21	44	42.4	2.4	43.5	167.9
Petersburg	104	2	36	66	48.8	2	50.6	165
Prince George	21	1	6	14	8.2	0.9	7.5	21
Sussex	18	0	8	10	30.1	0	39.6	103.1
<b>Service Area Total</b>	<b>535</b>	<b>9</b>	<b>175</b>	<b>351</b>				
<b>VIRGINIA</b>	<b>9,196</b>	<b>129</b>	<b>2,617</b>	<b>6,450</b>	<b>18.3</b>	<b>0.5</b>	<b>16.9</b>	<b>62.2</b>

Source: Virginia Department of Health 2006

The following graph compares TCF service area's teenage birth rates to the State's rates. Petersburg and Hopewell have the highest birth rate for all three ages. Each rate for the service area has declined since 2000. However, teenage birth rates are still higher than the State's rates overall.



Source: Virginia Department of Health 2006

**LOW BIRTH-WEIGHT INFANTS**

**The percentage of low birth weight infants in the area remains higher than Virginia’s percentage.** Currently, 9.0% of all infants in the service area are low birth weight. Low birth weight can result in significant health, educational, and other problems for a child and significant financial costs to society and the child’s family. Early and appropriate prenatal care and social supports, particularly if focused on high risk groups such as black women, can often reduce the number of low birth weight infants.

**Percentage of Low Birth Weight Infants by Race**

Locality	2006 % with Low Birth Weight				2000-2006 % Change in LBW Births			
	Total	White	Black	Other	Total	White	Black	Other
Chesterfield	7.7%	6.8%	11.1%	6.8%	31.3%	29.1%	27.1%	160.0%
Colonial Heights	8.3%	7.1%	9.8%	25.0%	-13.6%	-36.8%	66.7%	N/A
Dinwiddie	10.0%	8.5%	13.2%	33.3%	12.0%	30.8%	-16.7%	N/A
Hopewell	13.6%	11.7%	16.8%	0.0%	41.0%	92.3%	15.4%	N/A
Petersburg	13.9%	9.2%	15.8%	0.0%	23.4%	100.0%	17.5%	-100.0%
Prince George	9.3%	7.5%	12.4%	13.3%	6.5%	21.4%	-6.7%	0.0%
Sussex	14.2%	13.6%	15.0%	0.0%	-11.8%	500.0%	-40.0%	-100.0%
<b>Service Area Subtotal</b>	<b>9.0%</b>	<b>7.4%</b>	<b>13.1%</b>	<b>7.3%</b>	<b>24.1%</b>	<b>30.8%</b>	<b>13.1%</b>	<b>100.0%</b>
<b>VIRGINIA</b>	<b>8.3%</b>	<b>7.0%</b>	<b>12.9%</b>	<b>7.3%</b>	<b>12.6%</b>	<b>14.3%</b>	<b>5.7%</b>	<b>63.1%</b>

Source: 2000 and 2006 Virginia Department of Health, Vital Statistics

Low birth weight is defined as less than 2,500 grams. Very low birth weight is defined as less than 1,500 grams and is a subset of the low weight births shown below. Petersburg, Hopewell, and Sussex drive the service area’s high percentage of total low birth weight infants. However, the service area’s percentage of very low weight births is comparable to the state percentage of 1.7%. Sussex and Hopewell have a significant percentage of very low birth weight infants.

**Low Birth Weight Infant Percentages and Very Low Birth Weight Infant Percentages**

	Low Weight Live Births Under 2,500 grams				Very Low Weight Live Births Under 1,500 grams			
	% of Total Births				% of Total Births			
	Total	White	Black	Other	Total	White	Black	Other
Chesterfield	7.7%	6.8%	11.1%	6.8%	1.5%	1.0%	3.7%	0.0%
Colonial Heights	8.3%	7.1%	9.8%	25.0%	1.7%	1.2%	2.0%	12.5%
Dinwiddie	10.0%	8.5%	13.2%	33.3%	1.8%	1.0%	3.9%	0.0%
Hopewell	13.6%	11.7%	16.8%	0.0%	2.5%	2.3%	2.8%	0.0%
Petersburg	13.9%	9.2%	15.8%	0.0%	1.9%	0.0%	2.6%	0.0%
Prince George	9.3%	7.5%	12.4%	13.3%	1.4%	1.3%	1.8%	0.0%
Sussex	14.2%	13.6%	15.0%	0.0%	2.8%	0.0%	5.0%	0.0%
<b>Service Area Subtotal</b>	<b>9.0%</b>	<b>7.4%</b>	<b>13.1%</b>	<b>7.3%</b>	<b>1.7%</b>	<b>1.1%</b>	<b>3.2%</b>	<b>0.4%</b>
<b>VIRGINIA</b>	<b>8.3%</b>	<b>7.0%</b>	<b>12.9%</b>	<b>7.3%</b>	<b>1.7%</b>	<b>1.4%</b>	<b>3.2%</b>	<b>1.3%</b>

Source: 2000 and 2006 Virginia Department of Health, Vital Statistics

The following table provides insight into whether the service area’s teenage pregnancy issue is causing low birth weight infants. As evidenced, overall, the majority of low birth weight infants in the service area are born to mothers over the age of 19. While Virginia as a whole sees a greater percentage of low birth weight infants among younger mothers relative to the number of births in those age groups, the impact in the service area is not seen to the same extent. Nevertheless, Hopewell and Petersburg younger teens appear to be particularly at risk for low weight babies. In conclusion, it is evident that teenage expectant mothers are not the only target audience for low birth weight risks education and appropriate prenatal care. In fact, expectant moms of all ages should be receiving prenatal education and care as well.

**Low Birth Weight Infants by Age of the Mother**

Locality	Total	% of All LBW Infants			% LBW Infants by Age Group			
		17 and Under	18-19	Over 19	All Ages	17 and Under	18-19	Over 19
Chesterfield	306	2.6%	3.6%	93.8%	7.7%	9.3%	6.5%	7.7%
Colonial Heights	19	0.0%	5.3%	94.7%	8.3%	0.0%	5.9%	9.0%
Dinwiddie	28	0.0%	3.6%	96.4%	10.0%	0.0%	3.2%	11.3%
Hopewell	55	7.3%	10.9%	81.8%	13.6%	17.4%	13.6%	13.4%
Petersburg	79	7.6%	16.5%	75.9%	13.9%	15.8%	19.7%	12.9%
Prince George	33	0.0%	9.1%	90.9%	9.3%	0.0%	21.4%	9.0%
Sussex	15	0.0%	13.3%	86.7%	14.2%	0.0%	20.0%	14.8%
<b>Service Area Total</b>	<b>535</b>	<b>3.4%</b>	<b>6.9%</b>	<b>89.7%</b>	<b>9.0%</b>	<b>9.8%</b>	<b>10.5%</b>	<b>8.9%</b>
<b>VIRGINIA</b>	<b>8,923</b>	<b>3.7%</b>	<b>7.1%</b>	<b>89.2%</b>	<b>8.4%</b>	<b>12.1%</b>	<b>9.9%</b>	<b>8.2%</b>

Source: 2000 and 2006 Virginia Department of Health, Vital Statistics

Hopewell and Petersburg have a high percentage of low birth weight babies (7.3% and 7.6% respectively) of mothers age 17 and under compared to the service area’s rate of 3.4% and the State’s rate of 3.7%. Hopewell, Petersburg, Prince George, and Sussex have a higher percentage of low birth weight babies from 18 to 19 year old mothers compared to the rest of the service area.

**INFANT MORTALITY**

The table below provides the number of infant deaths and the infant death rate per 1,000 live births by locality for 2006. With only 32 infant deaths (a decrease from 40 in 2003), **the service area had only one infant death for every 185 live births, compared to a State ratio of one death to 140 live births.**

Because of the relatively small number of infant deaths in any locality in one year, infant mortality rates can vary widely from year to year. However, based on the number of infant deaths and the mortality rates in 2006, it appears that Chesterfield may need additional focus relative to infant mortality.

**Number of Infant Deaths and Rate per 1,000**

Locality	Total Infant Mortalities (2006)				Infant Mortality Rate (2006)			
	Total	White	Black	Other	Total	White	Black	Other
Chesterfield	16	12	4	0	4.0	4.0	5.0	0.0
Colonial Heights	2	2	0	0	8.7	11.8	0.0	0.0
Dinwiddie	2	1	1	0	7.1	5.0	13.2	0.0
Hopewell	4	2	2	0	9.9	9.4	11.2	0.0
Petersburg	4	0	4	0	7.0	0.0	9.4	0.0
Prince George	4	2	2	0	11.2	8.8	17.7	0.0
Sussex	0	0	0	0	0.0	0.0	0.0	0.0
<b>Service Area Total</b>	<b>32</b>	<b>19</b>	<b>13</b>	<b>0</b>				
<b>VIRGINIA</b>	<b>760</b>	<b>402</b>	<b>319</b>	<b>39</b>				

Source: Virginia Department of Health Vital Statistics 2006

**DEATHS BY CAUSE**

The following table provides a comparison of the age adjusted death rates for some of the major causes of death in TCF’s service area. As illustrated, all of the localities except Chesterfield and Prince George exceeded the State rate.

**Age Adjusted Death Rates for Selected Causes of Death per 100,000 Population (2006)**

Locality	Heart Disease	Cancer	Cerebrovascular Disease	Chronic Lower Respiratory Disease	Unintentional Injury	Diabetes	All Causes
Chesterfield	135.5	150.6	38.4	32	29.3	13.5	591.5
Colonial Heights	260.2	328.1	22.6	45.3	67.9	28.3	1,199.4
Dinwiddie	233.5	256.9	31.1	31.1	38.9	46.7	910.7
Hopewell	307.9	246.4	61.6	57.2	26.4	26.4	1,020.6
Petersburg	311.3	292.8	98.6	43.1	46.2	49.3	1,325.3
Prince George	91.2	149.2	22.1	30.4	38.7	22.1	514.0
Sussex	253.1	261.2	49	40.8	24.5	32.7	1,004.2
<b>VIRGINIA</b>	<b>182.2</b>	<b>179.9</b>	<b>46</b>	<b>35.1</b>	<b>34.9</b>	<b>21.3</b>	<b>751.1</b>

Source: Virginia Department of Health Vital Statistics 2006

It is evident that **many of the localities which are less affluent, and/or with larger minority populations generally have greater age-adjusted death rates.** Particular rates by cause of death that might raise concern include:

- Heart disease in all localities except Prince George;
- Cancer in Prince George and Chesterfield;
- Cerebrovascular disease (stroke) in Sussex, Petersburg, and Hopewell;
- Respiratory disease in Colonial Heights, Sussex, Petersburg, and Hopewell;
- Unintentional injury most significantly in Colonial Heights, but also in Petersburg, Dinwiddie, and Prince George;
- Diabetes in all localities except Chesterfield.

**SUMMARY**

In summary, the **main findings from the vital statistics indicators** are as follows:

1. **Births** in TCF’s service area in 2006 **significantly increased from 2000**, the service area’s increase was **almost double that of Virginia’s increase.**
2. **Six out of seven localities have seen an increase in non-marital births since 2000. Four of these localities have an increase larger than the State’s increase from 2000 to 2006.**
3. **Most of the area’s localities have seen an increase from 2000 in the rate of births to teenagers.** However, the **large majority of births are to older teens (18 & 19 years).**

4. There has been a **significant increase in low birth weight among white and other race infants** in the service area. In fact, the percentage of low birth weight **white infants** is the **only demographic group to exceed the State percentages**.
5. The **majority of low birth weight infants in the service area are born to mothers over the age of 19** and this **percentage is greater than the State's percentage** of low birth weight babies to mothers older than 19 years of age.
6. **Five localities have age-adjusted death rates that exceed the State rate**. It appears that many of the localities which are more rural, less affluent, and/or with larger minority populations generally have higher age-adjusted death rates.

## OTHER HEALTH INDICATORS

### MEDICARE ENROLLEES

As shown in the following table, **the service area has a higher percentage of aged and disabled Medicare enrollees compared to the State.** Colonial Heights has a particularly high percentage of aged enrollees whereas Petersburg has the highest percentage of disabled enrollees. Prince George has a particularly low percentage of aged and disabled enrollees. Chesterfield also has a significantly lower percentage of disabled Medicare enrollees.

**Aged & Disabled Medicare Enrollees (2005)**

Locality	Aged		Disabled	
	#	%	#	%
Chesterfield	22,670	7.8%	3,809	1.3%
Colonial Heights	3,550	20.4%	506	2.9%
Dinwiddie	2,382	9.3%	820	3.2%
Hopewell	3,383	15.2%	775	3.5%
Petersburg	5,792	18.3%	1,629	5.2%
Prince George	2,128	5.9%	448	1.2%
Sussex	1,837	15.5%	452	3.8%
<b>Service Area Total</b>	<b>41,742</b>	<b>13.2%</b>	<b>8,439</b>	<b>3.0%</b>
<b>VIRGINIA</b>	<b>791,978</b>	<b>10.4%</b>	<b>152,108</b>	<b>2.0%</b>

Source: Center for Medicare/Medicaid Service 2005

### DISABILITY

The 2000 Census provides disability data, by census tract, by type of disability and age (data are included in **Attachment H**). The sensory and self-care disabilities have been combined in the following tables. *Note that the numbers are unduplicated and assignment is made to the primary disability.* The numbers of disabled individuals generally increase with age.

By far, **the greatest disability for the child/early teen population (5-15 years) is mental disabilities, with the service area's percentage being higher than Virginia's.** As shown below for the 5-15 population, Petersburg has the highest percentage of physical and sensory and self-care disabilities, and Southern Chesterfield has the highest percentages of mental disabilities.

**Number & Percentage of Population Aged 5-15 Years by Disability**

Locality	Physical		Mental		Sensory & Self-Care		Total
	#	%	#	%	#	%	
Southern Chesterfield	5	0.7%	678	94.8%	32	4.5%	715
Colonial Heights	16	7.7%	191	92.3%	0	0.0%	207
Dinwiddie	2	0.9%	207	92.8%	14	6.3%	223
Hopewell	31	12.9%	199	82.6%	11	4.6%	241
Petersburg	26	13.8%	118	62.8%	44	23.4%	188
Prince George	0	0.0%	118	80.8%	28	19.2%	146
Sussex	5	6.2%	68	84.0%	8	9.9%	81
<b>Service Area Total</b>	<b>85</b>	<b>4.7%</b>	<b>1,579</b>	<b>87.7%</b>	<b>137</b>	<b>7.6%</b>	<b>1,801</b>
<b>VIRGINIA</b>	<b>3,482</b>	<b>6.2%</b>	<b>46,191</b>	<b>82.4%</b>	<b>6,356</b>	<b>11.3%</b>	<b>56,029</b>

Source: 2000 Census

By far, the greatest disability for the teenage/young adult population (16-20 years) is mental disabilities, followed physical disabilities. As shown below for the 16-20 population, Dinwiddie has the highest percentage of physical disabilities, Petersburg and Prince George have the highest percentages of mental disabilities, and Colonial Heights has the highest percentage of sensory and self-care disabilities. In addition, the service area has a lower percentage of its population with mental disabilities than Virginia but a higher percentage of its population with physical disabilities than Virginia in the 16-20 year old age category.

**Number & Percentage of Population Aged 16-20 Years by Disability**

Locality	Physical		Mental		Sensory & Self-Care		Total
	#	%	#	%	#	%	
Southern Chesterfield	39	19.9%	127	64.8%	30	15.3%	196
Colonial Heights	8	16.7%	28	58.3%	12	25.0%	48
Dinwiddie	14	29.8%	23	48.9%	10	21.3%	47
Hopewell	21	27.6%	55	72.4%	0	0.0%	76
Petersburg	18	20.0%	72	80.0%	0	0.0%	90
Prince George	0	0.0%	25	80.6%	6	19.4%	31
Sussex	6	30.0%	12	60.0%	2	10.0%	20
<b>Service Area Total</b>	<b>106</b>	<b>20.9%</b>	<b>342</b>	<b>67.3%</b>	<b>60</b>	<b>11.8%</b>	<b>508</b>
<b>VIRGINIA</b>	<b>2,139</b>	<b>12.5%</b>	<b>12,127</b>	<b>70.8%</b>	<b>2,858</b>	<b>16.7%</b>	<b>17,124</b>

Source: 2000 Census

By far, **the greatest disability for the working population (21-64 years) is employment disabilities, followed by physical disabilities.** The percentages of sensory and self-care disabilities exceeds mental disabilities, similar to the State. As shown below for the 21-64 population, Southern Chesterfield has the highest percentage of physical disabilities, Hopewell has the highest percentage of mental disabilities, Prince George has the highest percentage of sensory and self-care disabilities, and Petersburg has the highest percentage of employment disabilities. In addition, **the service area has a higher percentage of its population with physical disabilities than Virginia in this age group.**

**Number & Percentage of Population Aged 21-64 Years by Disability**

Locality	Physical		Mental		Sensory & Self-Care		Employment		Total
	#	%	#	%	#	%	#	%	#
Southern Chesterfield	910	29.1%	190	6.1%	334	10.7%	1,691	54.1%	3,125
Colonial Heights	243	24.3%	60	6.0%	85	8.5%	610	61.1%	998
Dinwiddie	304	19.5%	106	6.8%	126	8.1%	1,026	65.7%	1,562
Hopewell	376	21.3%	175	9.9%	159	9.0%	1,055	59.8%	1,765
Petersburg	455	20.1%	77	3.4%	207	9.1%	1,525	67.4%	2,264
Prince George	357	27.2%	65	4.9%	176	13.4%	716	54.5%	1,314
Sussex	173	26.4%	35	5.3%	53	8.1%	395	60.2%	656
<b>Service Area Total</b>	<b>2,818</b>	<b>24.1%</b>	<b>708</b>	<b>6.1%</b>	<b>1,140</b>	<b>9.8%</b>	<b>7,018</b>	<b>60.1%</b>	<b>11,684</b>
<b>VIRGINIA</b>	<b>53,311</b>	<b>16.4%</b>	<b>29,815</b>	<b>9.2%</b>	<b>42,126</b>	<b>12.9%</b>	<b>200,110</b>	<b>61.5%</b>	<b>325,362</b>

Source: 2000 Census

**In the 65+ age group, physical disabilities become the primary disability, followed by sensory and self-care disabilities.** The percentage of mental disabilities is relatively low. As shown below for the 65+ population, Southern Chesterfield has the highest percentage of physical disabilities, Sussex has the highest percentage of mental disabilities and Prince George has the highest percentage of sensory and self-care disabilities. In addition, the service area has a higher percentage of its population with physical disabilities than Virginia does.

**Number & Percentage of Population Aged 65+ Years by Disability**

Locality	Physical		Mental		Sensory & Self-Care		Total
	#	%	#	%	#	%	#
Southern Chesterfield	613	75.6%	39	4.8%	159	19.6%	811
Colonial Heights	286	64.9%	23	5.2%	132	29.9%	441
Dinwiddie	369	75.0%	28	5.7%	95	19.3%	492
Hopewell	337	71.2%	22	4.7%	114	24.1%	473
Petersburg	561	69.1%	82	10.1%	169	20.8%	812
Prince George	140	65.1%	7	3.3%	68	31.6%	215
Sussex	94	53.1%	40	22.6%	43	24.3%	177
<b>Service Area Total</b>	<b>2,400</b>	<b>70.2%</b>	<b>241</b>	<b>7.0%</b>	<b>780</b>	<b>22.8%</b>	<b>3,421</b>
<b>VIRGINIA</b>	<b>74,102</b>	<b>66.4%</b>	<b>8,779</b>	<b>7.9%</b>	<b>28,737</b>	<b>25.7%</b>	<b>111,618</b>

Source: 2000 Census

**FOUNDED ELDER AND CHILD ABUSE OR NEGLECT**

Mistreatment and abuse of older people has been documented as risk factors for injury, disability, and suicide. Researchers have conceptualized elder abuse to include physical abuse, sexual abuse, emotional abuse, psychological abuse, financial abuse, neglect, and abandonment. The first national study on elder abuse, The National Elder Abuse Incidence Study (NEAIS), estimated that in 1996, nearly a half million people aged 60 and older were abused or neglected in a domestic setting (National Center on Elder Abuse, 1998). This report also supported earlier studies that suggested that elder abuse is widely underreported, and that for every reported case of elder abuse, approximately five cases remained unreported.

Founded elder abuse or neglect (those 60+ years of age and incapacitated adults 18+ years) was reviewed from July 2006 to July 2007. Earlier data is not considered reliable. The following chart illustrates the annual substantiated elder abuse or neglect rate and the percentage of the population abused. It should be noted that these rates are dependent on various factors, such as the accuracy of the data reporting to the localities and/or Virginia and the willingness of individuals to report elder abuse and neglect. Therefore, higher founded rates do not necessarily mean that a locality has greater elder abuse and neglect; however, they can serve as a conservative indicator of actual abuse and neglect.

In 2007, **the service area's percentage of the elderly population abused was slightly lower than Virginia's rate.** Petersburg has the highest percentage of the population abused, whereas, Chesterfield has the highest number of substantiated cases of elder abuse reported. Colonial Heights has only two substantiated cases reported.

**Substantiated Elder Abuse  
July 2006 to June 2007**

<b>Locality</b>	<b># Substantiated</b>	<b>Population 60+</b>	<b>% of Population Abused</b>
Chesterfield	143	38,151	0.4%
Colonial Heights	2	4,194	0.0%
Dinwiddie	16	4,675	0.3%
Hopewell	25	4,243	0.6%
Petersburg	98	6,742	1.5%
Prince George	5	4,308	0.1%
Sussex	20	2,262	0.9%
<b>Service Area Total</b>	<b>309</b>	<b>64,575</b>	<b>0.5%</b>
<b>VIRGINIA</b>	<b>7,642</b>	<b>1,247,939</b>	<b>0.6%</b>

Note: # denotes the number of substantiated claims

Note: Elder abuse includes both adults over the age of 60 and adults 18 and older who are incapacitated

Note: Southern Chesterfield cannot be separated out from Chesterfield County

**Source:** Virginia Department of Social Services 2007

The rates of founded child abuse or neglect per 1,000 children were reviewed for 2000, 2003, and 2006. The following chart illustrates the 2006 child abuse or neglect rate per 1,000 population under 18 and the percentage change from 2000 to 2006. Note that rates can vary widely in localities with relatively few children because the number of founded cases is not extraordinarily large. It should be noted that these rates are dependent on various factors, such as the accuracy of the data reporting to the localities and/or Virginia, the willingness of individuals to report child abuse and neglect, and the level of follow-up by Social Services Departments. Therefore, higher founded rates do not necessarily mean that a locality has more child abuse and neglect; however, they can serve as a conservative indicator of actual abuse and neglect.

**Child Abuse or Neglect Rate per 1,000 Population (2006)**

Locality	2006		% Change 2000 - 2006	
	Children	Rate	Children	Rate
Chesterfield	123	1.5	-68.4%	-71.7%
Colonial Heights	7	1.7	-66.7%	-69.1%
Dinwiddie	12	1.9	-33.3%	-38.7%
Hopewell	18	2.9	-86.2%	-86.7%
Petersburg	33	4.1	-21.4%	-18.0%
Prince George	33	4.0	43.5%	42.9%
Sussex	14	6.0	40.0%	46.3%
<b>Service Area Total</b>	<b>240</b>	<b>2.1</b>	<b>-62.1%</b>	<b>-64.4%</b>
<b>VIRGINIA</b>	<b>4,741</b>	<b>2.5</b>	<b>-47.3%</b>	<b>-51.9%</b>

Source: Virginia Department of Social Services 2006

In 2006, the **service area’s rate was lower than Virginia’s rate**. The percentage change in the service area’s child abuse or neglect rate per 1,000 children from 2000 to 2006 has been declining at a much faster rate than Virginia’s percentage change, while the number of substantiated cases has actually significantly decreased by over 62%.

Five localities in the service area have experienced a decline in the child abuse or neglect rate, with Petersburg showing the least decline and Hopewell showing the greatest decline between 2000 and 2006. Prince George and Sussex all saw an increase in the number and rate of child abuse and neglect. Over the last several years, a concerted effort has been made to increase awareness of child abuse and institute family support programs (such as Healthy Families and Resource Mothers) in the service area to reduce its occurrence. The data reviewed appears to indicate that this effort has been successful

**SUMMARY**

In summary, the **main findings from the other health related indicators** are as follows:

1. The service area has a **significantly higher percentage than Virginia of its residents enrolled in Medicare based on age**, while having a percentage somewhat higher than the State enrolled in Medicare based on disability.
2. **Mental disabilities are the most common disability for the 0-20 age group** in the service area and represent a **significantly higher percentage than the State**.
3. **Employment disabilities are the most common disabilities to those in the 21-64 working age group** in the service area, but this **percentage is less than the State**.
4. **Physical disabilities are the most common disabilities for those in the 65+ age group** in the service area and this percentage is **significantly higher than the State**.

5. In 2007, **the service area's percentage of the elderly population abused was slightly lower than Virginia's rate.**
6. **The child abuse rate in the service area has decreased substantially from 2000 and the rate is now lower than the State's rate.**

## QUALITATIVE INFORMATION

### COMMUNITY NEEDS ASSESSMENT

In 2005, the CVHPA commissioned The Wessex Group, Ltd. (TWG) to repeat a community-based health needs study that was conducted for CVHPA in 2002 and 1999. All of these surveys included sampling done at the end of the calendar year shown and January of the following year with the report produced in 2006, 2003, and 2000, respectively. The objectives of the study were to identify health needs in each of central Virginia's localities, determine access to healthcare, examine the health status of individuals and learn how individuals perceive the seriousness of various community issues. TWG surveyed a total of 3,000 households in Health Planning Region IV, which includes Planning District 19. Each locality had 100 households surveyed, with the exception of Chesterfield, Henrico, and Richmond, which each had 200 households surveyed. So that the data may be compared with that of previous years, the majority of the questions in the survey have remained consistent for each of the study years. A variety of questions, covering such topics as health coverage, health access, health conditions, and community needs, were asked.

The respondent for each survey is the adult in the household who makes most of the healthcare decisions for the household, which resulted in a sample that was approximately two thirds female and one third male. Data was weighted for each locality according to race and age, resulting in a sample that was approximately 71% Caucasian, 21% African American, and 5% minorities other than African American. The remaining 3% of those surveyed chose not to disclose their race or origin. The responses to various questions were analyzed for The Cameron Foundation service area.

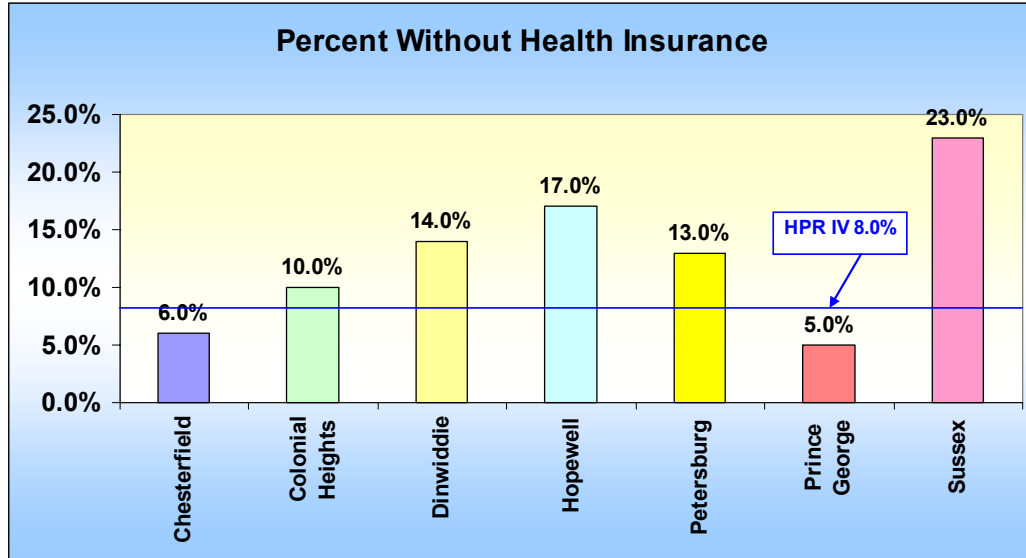
This section is divided into five topic areas – insurance coverage and access to care; chronic health conditions; preventive screenings; lifestyle issues; and rating of community problems. The detailed analysis of the responses is included in **Attachment I**. At the end of this section, a table shows the percent change in responses from the 2002/03 survey.

#### *Insurance Coverage and Access to Care*

This section covers responses to questions involving insurance coverage for health and dental and access to health, dental, and medical services as well as medical specialists.

#### Health Care Coverage

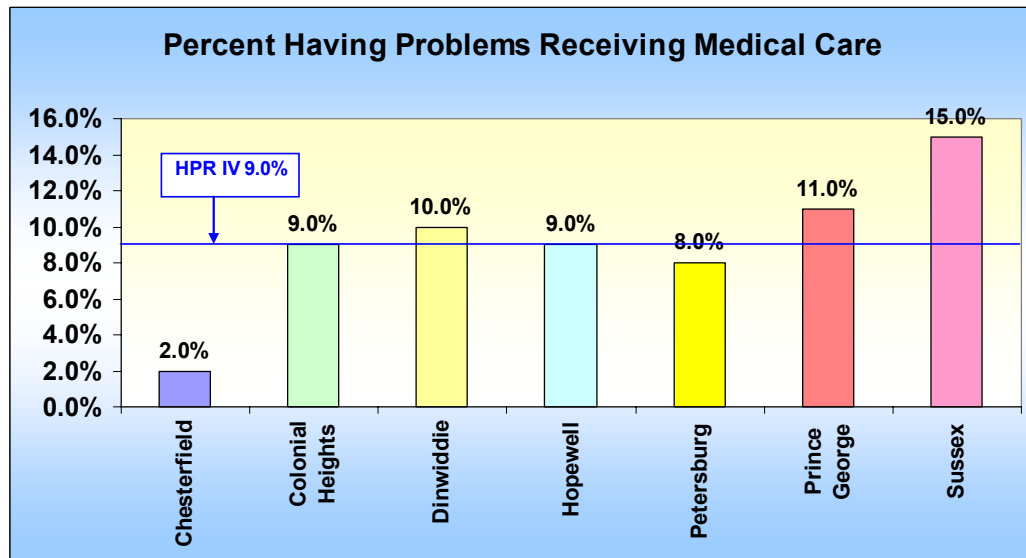
Of the seven localities in TCF's service area, Sussex County has the highest percentage of residents (23.0%) without health insurance, followed by Hopewell (17.0%). This is a marked increase for both localities from 2002; with Sussex at 12.0% and Hopewell at 10.0% in 2002. Note that these are a conservative estimate since it represents those uninsured at a single point in time and many people have periods of being uninsured throughout a year.



Source: 2005 CVHPA's Community Needs Assessment

Access to Health Care

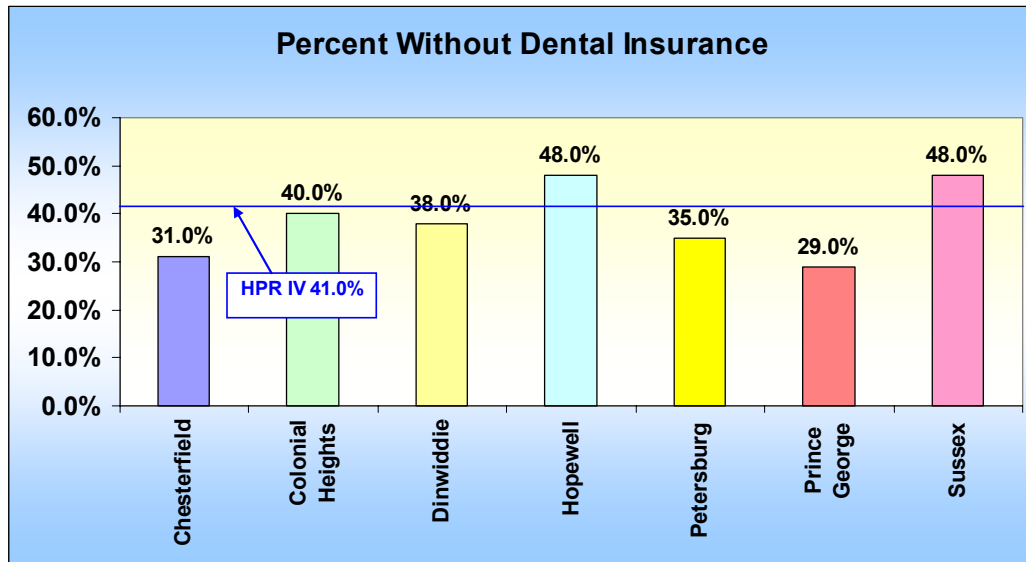
As illustrated in the following chart, of the seven localities in TCF's service area, Sussex has the highest percentage of residents (15.0%) indicating that they have problems receiving health care when needed, followed by Prince George (11.0%) and Dinwiddie (10.0%). Sussex is the locality which had the highest percentage of the population without health insurance and this correlates with not having sufficient access to health care. Other reasons that can impact access include the availability of providers or transportation.



Source: 2005 CVHPA's Community Needs Assessment

Dental Care Coverage

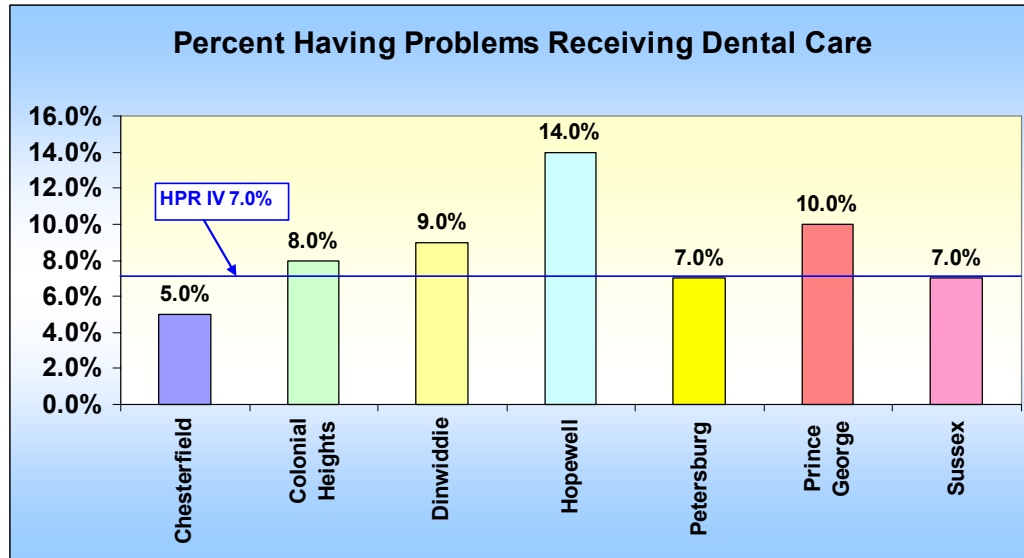
Of the seven localities in TCF’s service area, Sussex and Hopewell have the highest percentage of residents (both 48.0%) without dental insurance, followed by Colonial Heights (40.0%). The percentages of TCF’s service area’s residents without dental insurance are significantly higher than those without health insurance. Approximately 43.0% lack dental insurance while approximately 12.0% lack health insurance.



Source: 2005 CVHPA’s Community Needs Assessment

Access to Dental Care

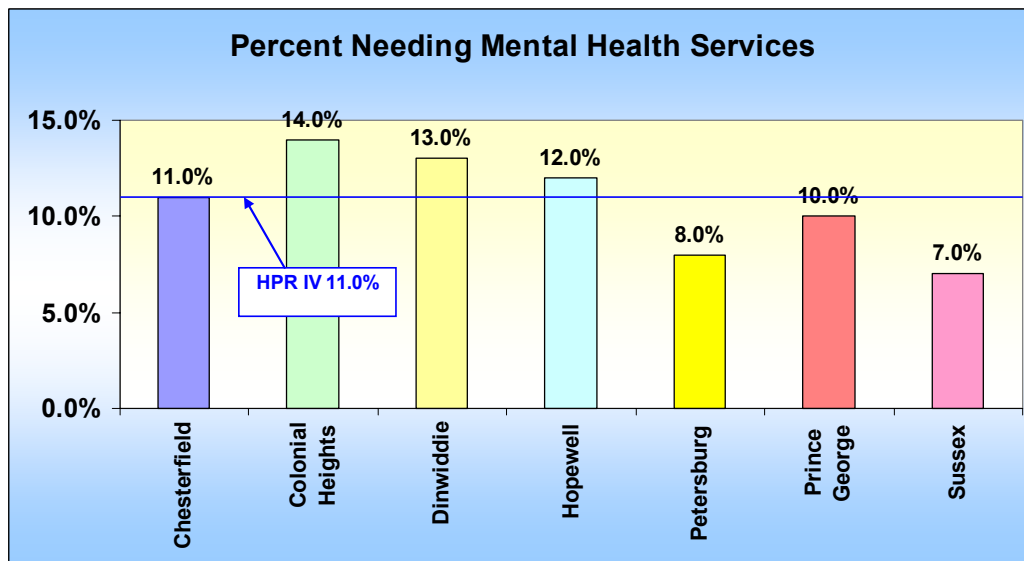
Of the seven localities in TCF’s service area, Hopewell has the highest percentage of residents (14.0%) indicating that they have problems receiving dental care when needed, followed by Prince George (10.0%). Hopewell is also one of the localities with the highest percentage of residents without dental insurance in the service area.



Source: 2005 CVHPA's Community Needs Assessment

Mental Health Services Needed

Of the seven localities in TCF's service area, Colonial Heights has the highest percentage of residents (14.0%) indicating that a household member needed mental health services within the past year, followed by Dinwiddie (13.0%). Because of the stigma sometimes associated with mental health needs, this is often underreported, particularly by minority groups.

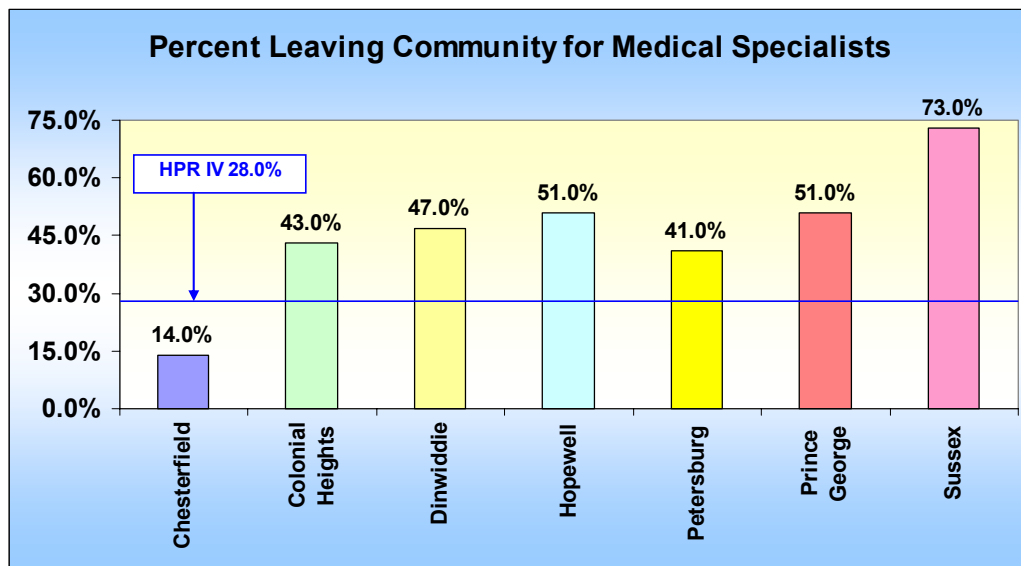


Source: 2005 CVHPA's Community Needs Assessment

Leaving Community for Medical Specialists

Of the seven localities in TCF’s service area, Sussex has the highest percentage of residents (73.0%) indicating that they left their community to seek care from a medical specialist, followed by Prince George and Hopewell at 51.0% each.

Various reasons exist for leaving a community to seek medical specialists, such as a lack of specialists in the community; referral patterns of primary care physicians; lack of insurance coverage/resources (for example, being referred to VCU Health System or other specialists that provide financial assistance); or a lack of confidence in the area specialists. Sometimes people are not referred to specialists or do not leave when referred which can result in lower percentages in areas with few specialists.



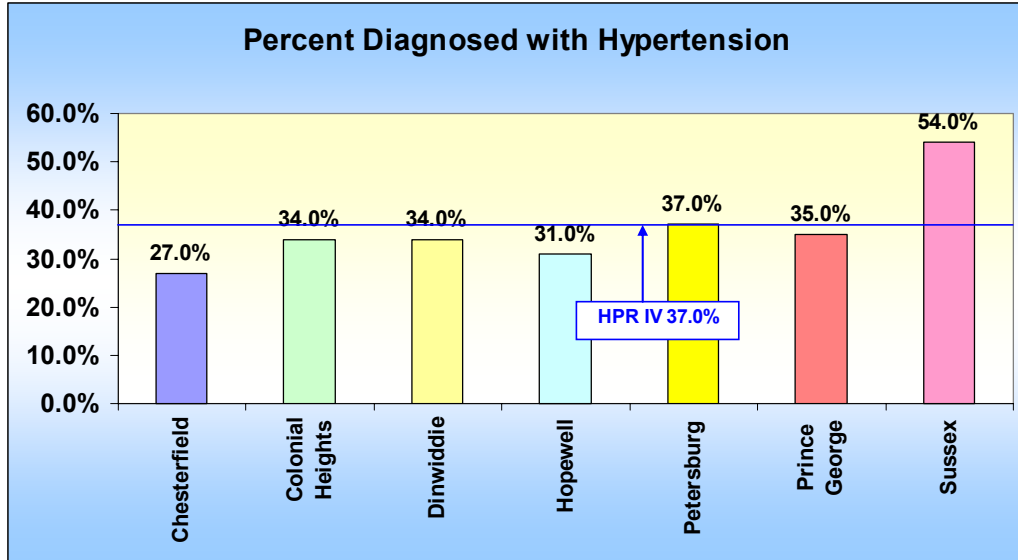
Source: 2005 CVHPA’s Community Needs Assessment

**Chronic Health Conditions**

This section covers responses to various chronic health conditions – hypertension (high blood pressure), high cholesterol, diabetes, and asthma. Note that the prevalence of chronic conditions, with the exception of asthma, often increases with age which may be reflected in a locality’s relative percentage.

High Blood Pressure

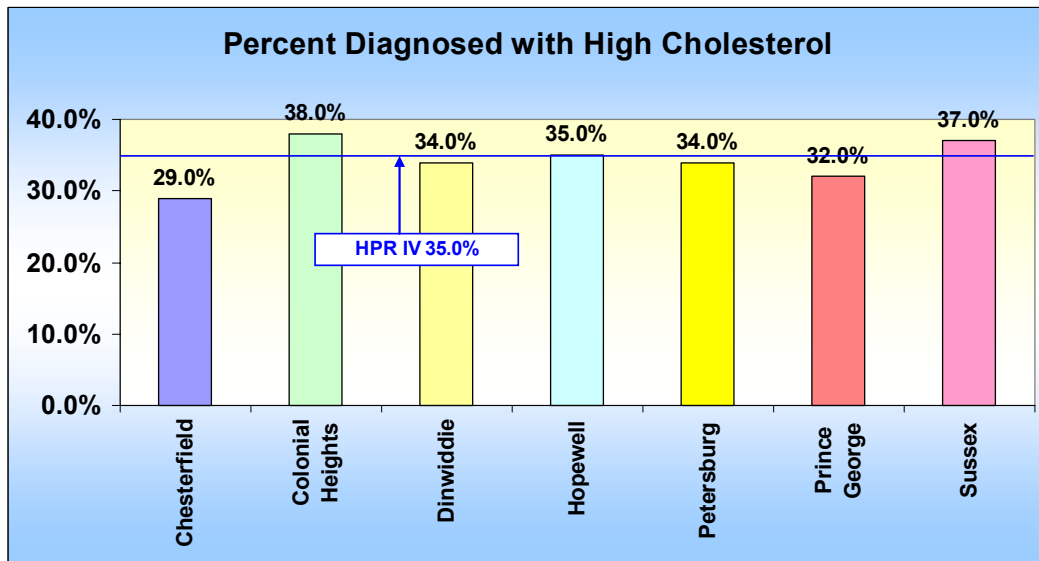
Of the seven localities in TCF’s service area, Sussex County has the highest percentage of adults (54.0%) with high blood pressure, followed by Petersburg (37.0%). Both Sussex and Prince George saw a significant increase from the 2002/03 survey. Overall, almost one in three residents in the TCF service area has been diagnosed with high blood pressure.



Source: 2005 CVHPA's Community Needs Assessment

High Cholesterol

Of the seven localities in TCF's service area, Colonial Heights has the highest percentage of residents (38.0%) indicating that they have been diagnosed with high cholesterol, followed by Sussex (37.0%). Thus, at least one in three adults in every locality, except Chesterfield, has high cholesterol.

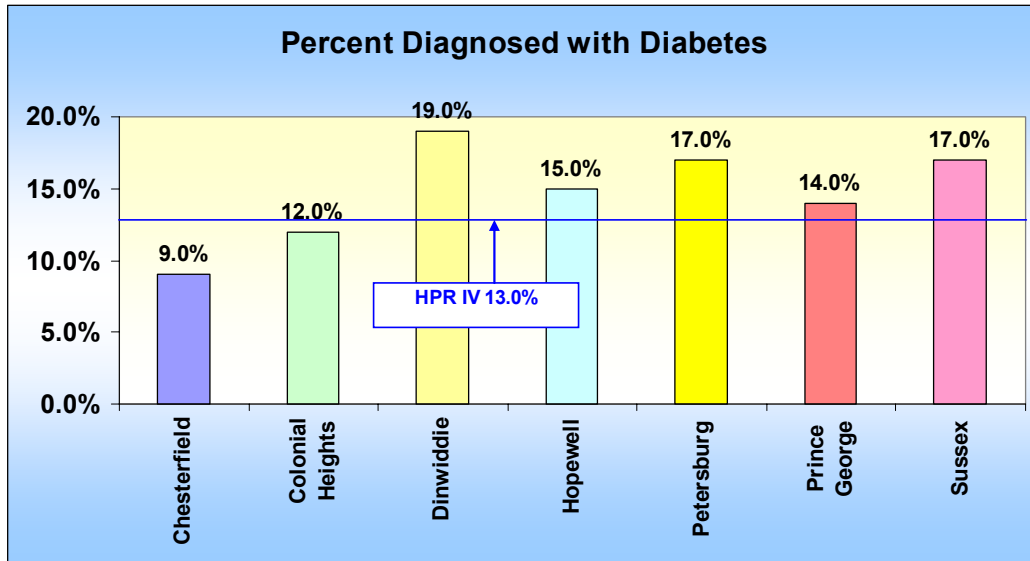


Source: 2005 CVHPA's Community Needs Assessment

Diabetes

Of the seven localities in TCF's service area, Dinwiddie County has the highest percentage of residents (19.0%) reporting that they have been diagnosed with diabetes, followed by both

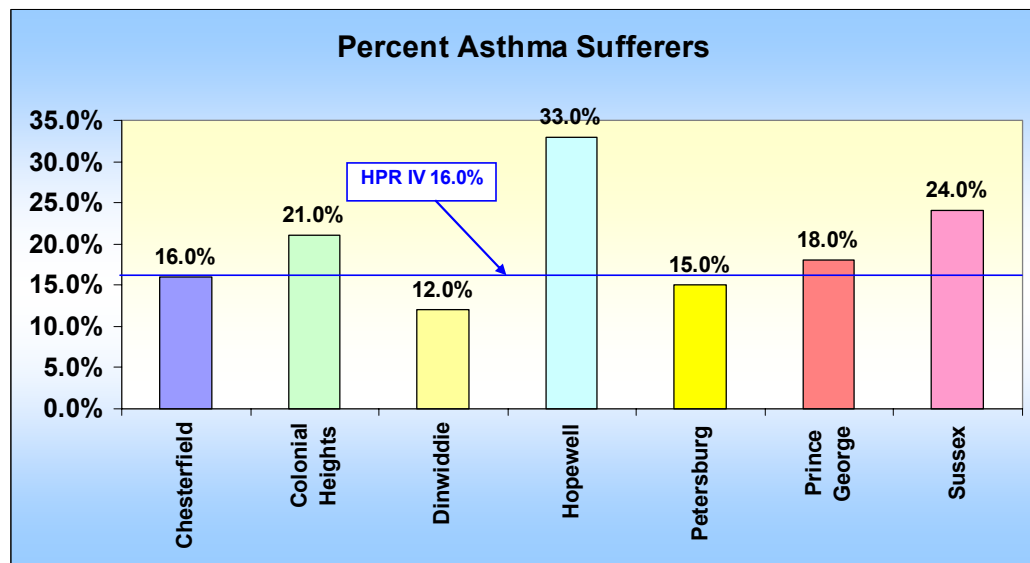
Petersburg (17.0%) and Sussex (17.0%). While Hopewell was the only locality to see a substantial increase since 2002, with five of the localities having relatively high percentages of diabetes, this may represent an area to address.



Source: 2005 CVHPA's Community Needs Assessment

### Asthma

Of the seven localities in TCF's service area, Hopewell has the highest percentage of residents (33.0%) indicating they have an asthma sufferer in their household, followed by Sussex (24.0%). Hopewell was the only locality to report a significant increase since the 2002 survey.



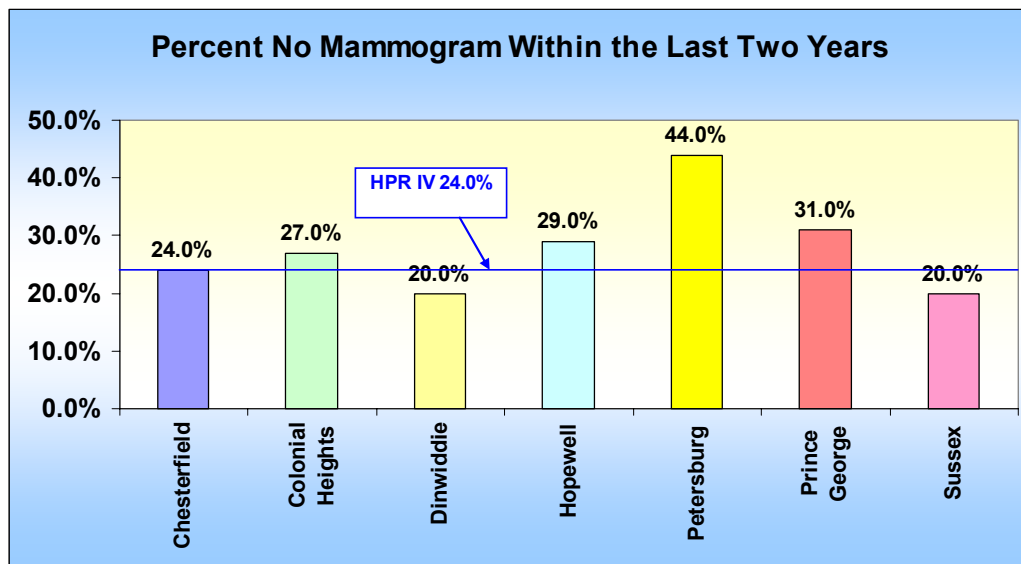
Source: 2005 CVHPA's Community Needs Assessment

### Preventive Screening

The following section provides information on various cancer prevention screening/exams (mammography, PAP, colon, and prostate). Note that questions were only asked of survey participants who would fall, based on age and/or gender, within the recommended prevention guidelines.

#### Mammography

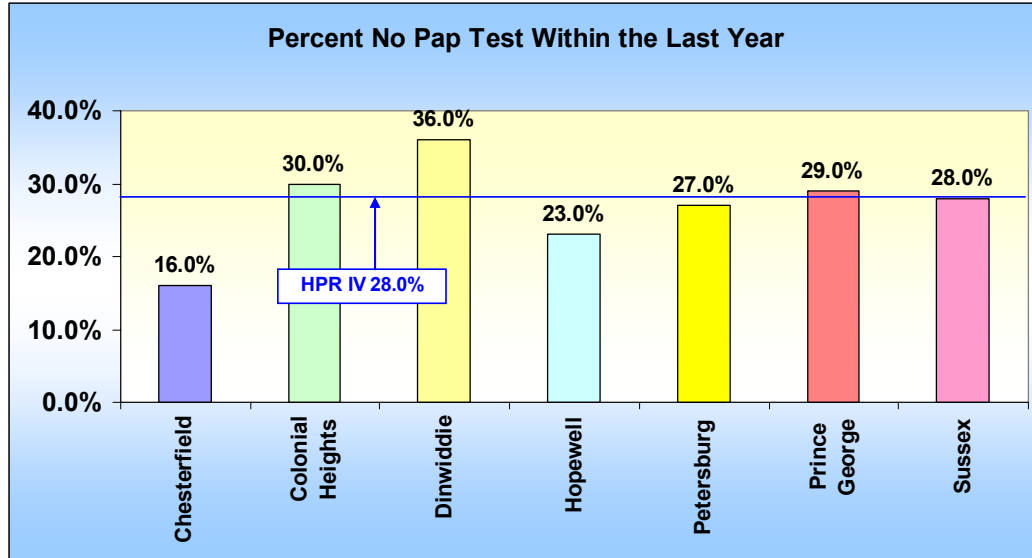
Of the seven localities in TCF’s service area, Petersburg has the highest percentage of female residents (44.0%) reporting that they have not had a mammogram within the past two years, followed by Prince George (31.0%).



Source: 2005 CVHPA’s Community Needs Assessment

#### Pap Test

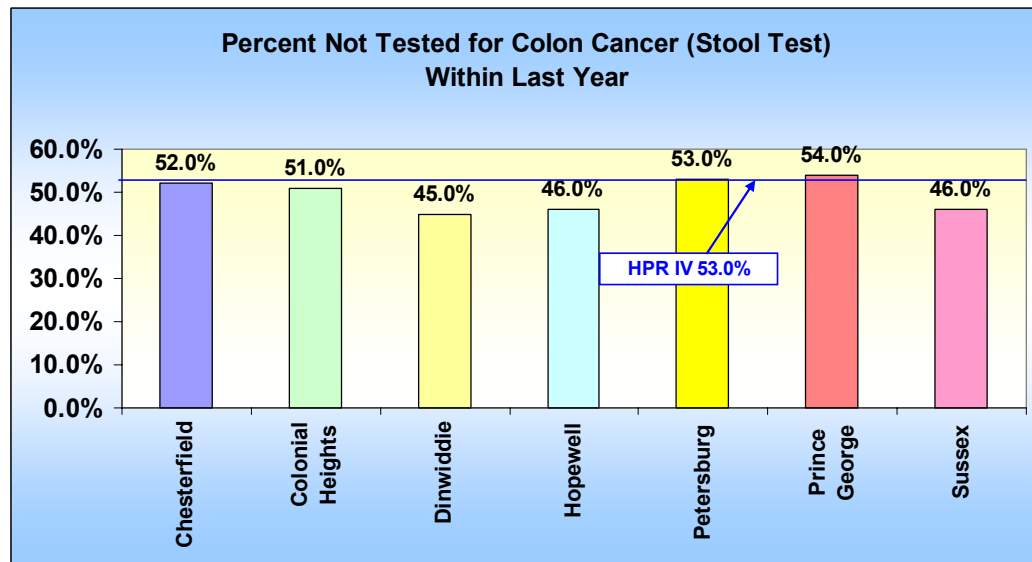
Of the seven localities in TCF’s service area, Dinwiddie has the highest percentage of female residents (36.0%) reporting they have not had a PAP test within the last year, followed by Colonial Heights (30.0%).



Source: 2005 CVHPA's Community Needs Assessment

Colon Screen with a Stool Test

Of the seven localities in TCF's service area, Prince George has the highest percentage of residents (54.0%) reporting they have not been tested with a stool test for colon cancer within the last year, followed closely by Petersburg (53.0%) and Chesterfield (52.0%).

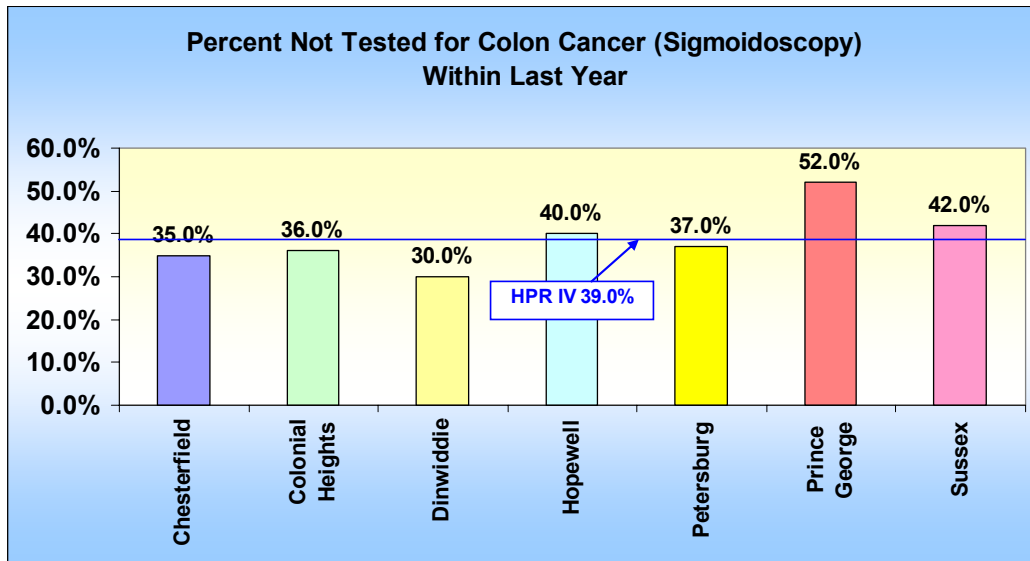


Source: 2005 CVHPA's Community Needs Assessment

Colon Screen with a Sigmoidoscopy

Of the seven localities in TCF's service area, Prince George has the highest percentage of residents (52.0%) reporting they have not been tested with a sigmoidoscopy for colon cancer within

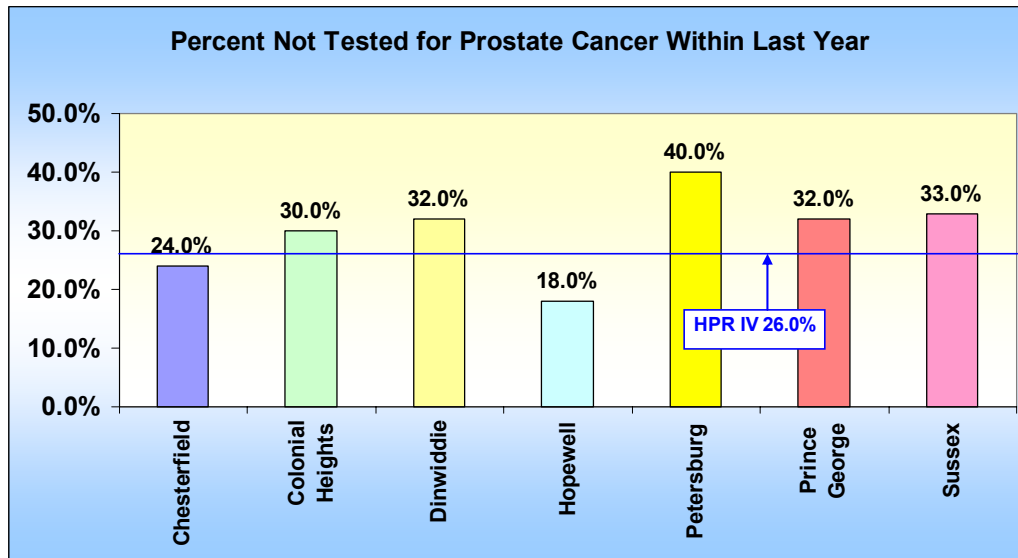
the last year, followed by Sussex (42.0%). All localities saw an improvement, some significant, in the percentage of appropriate age adults receiving this test.



Source: 2005 CVHPA's Community Needs Assessment

Prostate Screen

Of the seven localities in TCF's service area, Petersburg has the highest percentage (40.0%) of male residents 50 years and older reporting they have not had a prostate screen within the last year, followed by Sussex (33.0%).



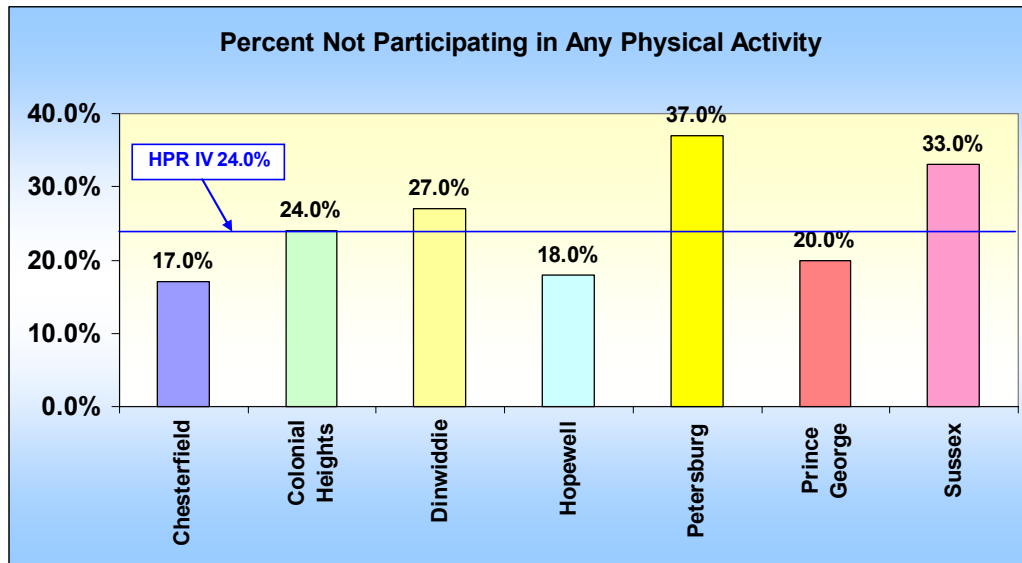
Source: 2005 CVHPA's Community Needs Assessment

### Physical Activity and Weight Management

The following section covers responses to participation in physical activity and the community's weight management outlook.

#### Physical Activity

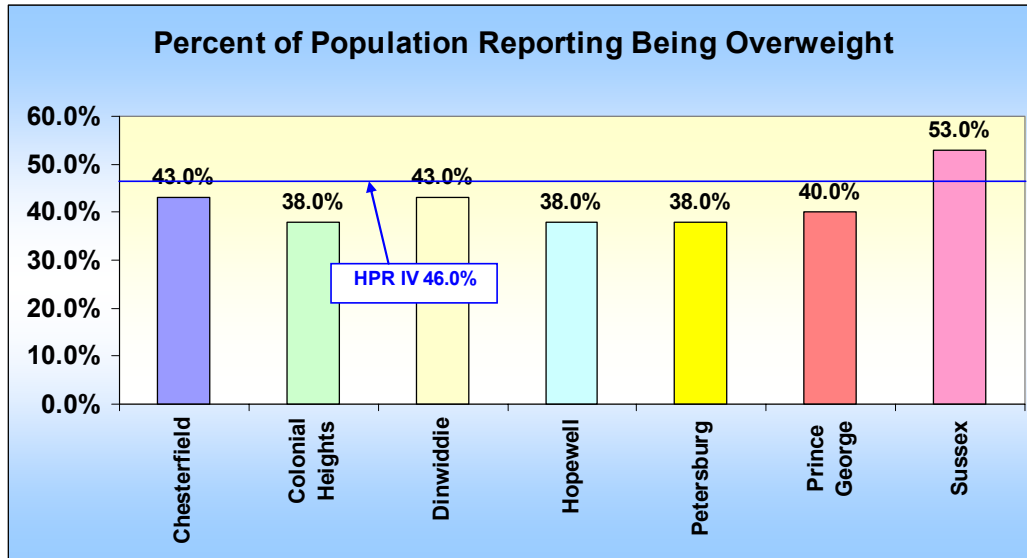
Of the seven localities in TCF's service area, Petersburg has the highest percentage (37.0%) of residents reporting they have participated in physical activity other than their regular job within the last month, followed by Sussex (33.0%).



Source: 2005 CVHPA's Community Needs Assessment

#### Body Weight

When asked to describe themselves as under or under the expected normal weight for their age, height, and build, Sussex has the highest percentage (53.0%) of residents reporting they are overweight, followed by both Chesterfield (43.0%) and Dinwiddie (43.0%).



Source: 2005 CVHPA's Community Needs Assessment

The TCF service area has seen both improvements and deteriorations in the community needs assessment since the previous year 2002. The two tables below show the percentage change from the 2002 assessment to the 2005 assessment for all indicators, with positive changes shown in green and negative changes in red. Note that the physical activity and overweight indicators are not applicable below as they were new for the 2005 assessment.

**Percentage Change for Community Assessment Indicators from 2002 to 2005**  
Table I

	No Health Insurance	Problems Receiving Healthcare	No Dental Insurance	Problems Receiving Dental Care	Hypertension	High Cholesterol	Diabetes	Asthma
Percentage Change from 2002 to 2005								
Chesterfield	0.0%	-71.4%	-11.4%	-58.3%	12.5%	-17.1%	-10.0%	-23.8%
Colonial Heights	11.1%	-10.0%	42.9%	0.0%	3.0%	35.7%	33.3%	-12.5%
Dinwiddie	75.0%	42.9%	-13.6%	28.6%	-2.9%	-2.9%	-5.0%	0.0%
Hopewell	70.0%	-10.0%	37.1%	55.6%	3.3%	-14.6%	87.5%	43.5%
Petersburg	30.0%	-11.1%	-10.3%	-46.2%	-24.5%	25.9%	6.3%	25.0%
Prince George	-28.6%	57.1%	0.0%	42.9%	40.0%	10.3%	0.0%	-5.3%
Sussex	91.7%	66.7%	6.7%	-65.0%	12.5%	5.7%	6.3%	0.0%

Source: 2005 CVHPA's Community Needs Assessment

**Percentage Change for Community Assessment Indicators from 2002 to 2005**  
**Table II**

	Leaving Area for Med Spec	Needed Mental Health Svcs.	No Mammogram	No Pap	No Colon Cancer Screening - Stool	No Colon Cancer Screening - Sig	Prostate Cancer Screening
Percentage Change from 2002 to 2005							
Chesterfield	40.0%	-35.3%	-25.0%	-27.3%	-17.5%	-39.7%	-38.5%
Colonial Heights	7.5%	75.0%	-3.6%	7.1%	4.1%	-30.8%	-23.1%
Dinwiddie	23.7%	-13.3%	0.0%	16.1%	-13.5%	-38.8%	23.1%
Hopewell	10.9%	20.0%	3.6%	-30.3%	-9.8%	-25.9%	-45.5%
Petersburg	-2.4%	14.3%	100.0%	0.0%	6.0%	-2.6%	263.6%
Prince George	10.9%	-9.1%	0.0%	26.1%	-11.5%	-5.5%	-13.5%
Sussex	10.6%	-12.5%	-41.2%	33.3%	-19.3%	-14.3%	43.5%

Source: 2005 CVHPA's Community Needs Assessment

- **All the localities in the area experienced an increase in the percentage of people with no health insurance with the exception of Prince George** (likely impacted by the growth in military residents) **and Chesterfield**. Sussex experienced a significant increase.
- Perhaps because of more community health centers in the area, **the impact on receiving care was not as significant as the percentage of uninsured**. Sussex, Prince George, and Dinwiddie, the most rural localities, all saw an increase in problems receiving care.
- **The lack of dental insurance is a major reason that people have problems receiving dental care**; they simply cannot afford dental services. Hopewell and Colonial Heights are showing an increase in the percentage of residents without dental insurance. Petersburg and Chesterfield both saw a decrease in those without dental insurance and those residents with problems receiving dental care.
- **High blood pressure (hypertension)** is a diagnosis that can lead to a variety of other comorbidities if left untreated. **Prince George and Sussex have seen a significant increase**. Petersburg has seen a significant decrease.
- **High cholesterol** is a leading cause of heart disease and stroke. The diagnosis of high cholesterol increased in Colonial Heights, Petersburg, Prince George, and Sussex. **The most notable increase was in Colonial Heights**.
- Once seen only in adults, type 2 diabetes has been rising steadily in children and teens, according to government reports. The longer a person has diabetes, the greater the

chances of developing serious damage to the eyes, nerves, heart, kidneys, and blood vessels. **Five of the localities have relatively high percentages of diabetes** but only Hopewell has had a significant increase in the percentage of adults with diagnosed diabetes.

- **Asthma** does not seem to be a major issue for the residents of this service area. **The only localities that did not see a decrease or did not stay the same were Petersburg and Hopewell**, which saw a major increase in the percent of households reporting having a member with asthma .
- **All localities except for Petersburg reported an increase in residents leaving their community to receive care from medical specialists.** Sussex residents reported a particularly high percentage leaving their community for specialty care.
- As presented earlier, mental health services appeared to be the number one or number two inpatient diagnoses for many localities. **Colonial Heights, Hopewell, and Petersburg are the only localities that report an increase in the percentage of residents needing mental health services.**
- Lack of **preventative screenings and care** often leads to more serious illness and more costly treatment. Petersburg has the most significant increase in residents not receiving a mammogram screening, a screening for colon cancer by stool test, and a prostate cancer screening. Sussex has the most significant increase in residents not receiving an annual pap smear. In contrast, all localities saw a decrease in those residents not screened for colon cancer by sigmoidoscopy.

### ***Rating of Community Problems***

Respondents were asked to rate various community problems on a scale of 1 to 5, with 1 indicating not a problem and 5 indicating a serious problem. The percentage of people who responded to a community problem as either serious or very serious was calculated (this worksheet titled serious/very serious problems is located in **Attachment I**). Percentages that were 30.0% or greater were shaded in red and percentages that were between 25.0% and 29.9% were shaded in yellow.

Two community problems that were shaded in red for all localities in TCF's service area were **violence in the media** and **lack of public transit**. The next two prominent community problems were **lack of affordable health care** and **long-term care** – all but one of the localities in TCF's service area were shaded red, with the other locality being shaded yellow.

## SUMMARY

In summary, the **main findings from the community needs assessment survey** are as follows:

1. At least **one in ten people** in TCF's service area are **uninsured at any point in time**. The three localities with the **most significant increases in the percentage** of uninsured residents include **Dinwiddie, Hopewell, and Sussex**.
2. **More than one out of three people** in the service area are **without dental insurance**.
3. **One in ten** of TCF's service area's households reported that they had a family member that **needed mental health services**.
4. **Almost half** of the residents in TCF's service area **leave the area for medical specialists**.
5. **More than one in three** residents in TCF's service area **has been diagnosed with high blood pressure**. In **Sussex, one out of every two people has high blood pressure**.
6. Approximately **one in three residents** in TCF's service area has been **diagnosed with high cholesterol**. **Colonial Heights and Sussex** have the **highest percentage** of residents diagnosed.
7. More than **one in six people** in TCF's service area have been **diagnosed with diabetes**. **Dinwiddie** has a particularly **high percentage** and **Hopewell** has had a **significant increase in diabetes**.
8. **Opportunities exist** in both TCF's service area **to educate/encourage residents to receive cancer screens**.

## **KEY INFORMANT INTERVIEWS**

The CVHPA interviewed twenty-eight people (23 interviews) from TCF's service area, representing government, health departments, social services, education, and nonprofit organizations. Those to be interviewed were selected by TCF's Steering Committee to ensure a sample that represents community leadership on health-related issues and the localities within TCF's service area. **Attachment J** includes a list of the organizations contacted, the individual(s) interviewed, his/her title, and the person's length of service with the organization. Most of the people interviewed in TCF's service area have been in their current position for a significant length of time. On average each person has been working with their organizations for about 16 years and in their current position for about 9 years. Therefore, it can be assumed that the findings from the interviews provide a good representation of the organizations' clients' needs as well as TCF's service area needs overall.

**Attachment K** includes the interview protocol. Questions asked included such topics as the most pressing healthcare needs of localities served; ways of meeting these needs; stakeholders in meeting these needs; the greatest barriers; the probable impact of the Fort Lee expansion; and several specific issues raised by the stakeholder group relative to the TCF service area.

### **Those selected by the advisory group for the key informant interviews include:**

- Richard Anzolut, City Manager, Colonial Heights
- Max Bornstein, Director/Emergency Management Coordinator, Prince George Fire, EMS, & Emergency Management
- David Canada, City Manager, City of Petersburg
- Richard Clark, CEO, Poplar Springs Hospital
- Patsy Coghill, CNO, John Randolph Medical Center, Ed Littlejohn, COO, John Randolph Medical Center, and Frank Royal, MD, Physician Administrator, John Randolph Medical Center
- Donna Cyriax, CJM, Chief of Medical Services, Riverside Regional Jail and Gohar Abbasi, MD
- Ed Daley, City Manager, City of Hopewell
- Cynthia Devereaux, President & CEO, Petersburg Chamber of Commerce
- Shel Bolyard-Douglas, LCSW, Director, Social Services, Dinwiddie County
- David Fikse, CEO, Southside Regional Medical Center
- William Gandel, Director, Social Services, Prince George County
- Charles Harris, III, Ed.D., Division Superintendent, Sussex County Public Schools
- Tramall Holmes, Social Worker Supervisor, Sussex County
- Anne Holsinger, Director of Assessment and Student Services, Dinwiddie County Public Services
- Mary Jones, County Administrator, Sussex County
- Kevin Massengil, County Administrator, Dinwiddie County
- Dennis Morris, Executive Director, Crater Planning District Commission and Martha Burton, Assistant to the Executive Director, Crater Planning District Commission
- Bill Nelson, MD, MPH, Health Director, Chesterfield Health Department

- Winston Odom, Ed.D., Superintendent, Hopewell Public Schools
- Dr. Patricia Radcliffe, Director of Special Education/Pupil Personnel, Petersburg City Public Schools
- David Sadowski, Executive Director, Crater District Area Agency on Aging
- Daphne Turner, Accreditation Manager/Grant Writer, Office of the Sheriff, City of Petersburg
- Kimberly Willis, MSW, ACSW, Director, Department of Social Services, Petersburg and Libby Vinsh, Chief of Services, Department of Social Services, Petersburg

The following provides a summary of the responses for the interview questions. The number and percentage of times the response was given is noted.

The top three responses regarding what is the **greatest health related need** in your community or the communities you serve were:

- Economic level of population prevents people from addressing health needs – 12 responses (50%)
- Teenage pregnancy – 8 responses (33%)
- Transportation – 6 responses (25%)

The most frequently mentioned responses to **what would be effective in meeting or assisting in meeting the above healthcare need in the community** include the following:

- Education about healthcare resources that are available – 11 responses (52%)
- Community transportation system – 5 responses (24%)
- “Don’t know” – 4 responses (19%)

The most common responses to **what initiatives are underway** that you may know about to help included:

- No initiatives underway that I know of – 10 responses (45%)
- Department of Parks & Recreation, 4H Camp, Recreation facilities in the area – 2 responses (9%)
- Public assistance programs for elderly and children (i.e. Triad Crime, Awareness for Seniors, Project Lifesavers, alarm bracelets for Alzheimer’s and Autism) – 1 response (5%)

The **top three partners and stakeholders envisioned to partner with** to solve healthcare issues were:

- Local and Federal government – 13 responses (57%)
- Community Organizations (i.e. Cameron Foundation, John Randolph Foundation, Crater District Agency on Aging, Titmus Foundation, and Regional Chapter 10 Agency) – 9 responses (39%)

- Local hospitals, particularly Emergency Departments, Mental Health Professionals, and Administrators – 7 responses (30%)

The **three greatest barriers organizations faced in improving the lives of people served** in the community included:

- Financial constraints – 12 responses (52%)
- Lack of health education – 4 responses (17%)
- Lack of transportation – 4 responses (17%)

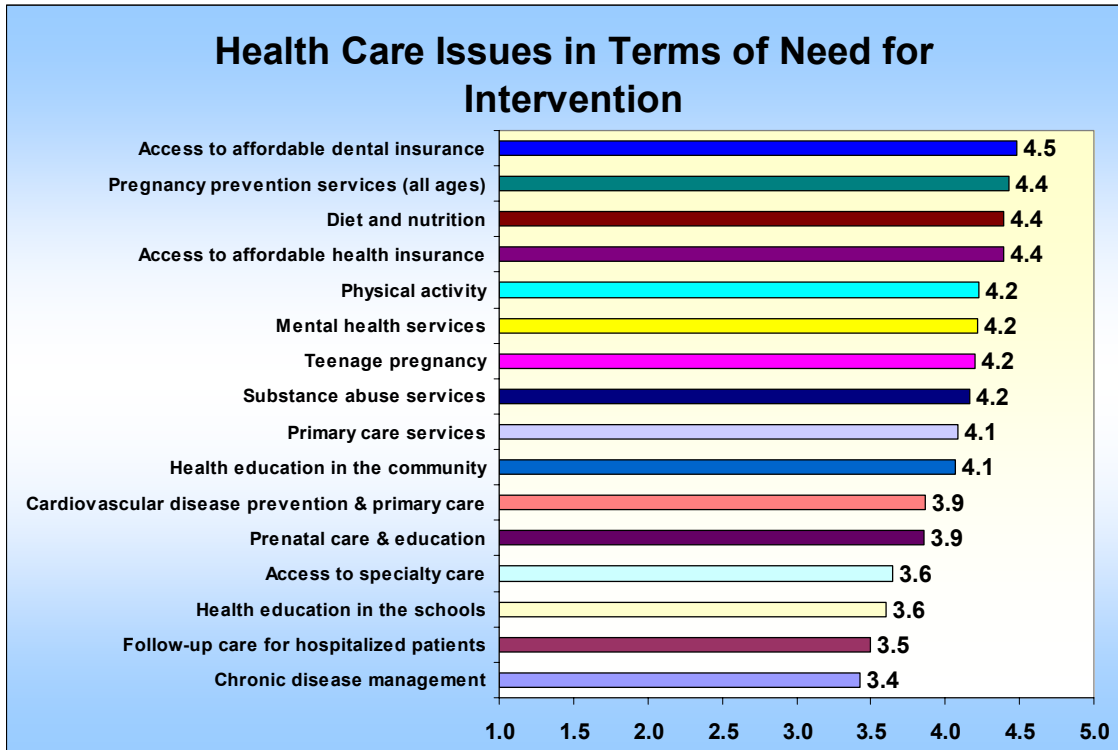
The **administrative and legal barriers and requirements** impacting healthcare resources included:

- “Don’t know” – 6 responses (32%)
- No barriers of this nature – 5 responses (26%)
- Government standards and regulations i.e. HIPAA – 4 responses (21%)

The **proposed changes to the above administrative/legal requirements** proposed included the following:

- Change economic status of population – 1 response (17%)
- Link therapist positions created to school programs – 1 response (17%)
- Create a standard reporting format from organization to organization – 1 response (17%)

The interviewees were asked to rank various healthcare needs on a scale of one to five, with **1 being relatively little need for intervention and 5 indicating major need for intervention** in the community. The following chart shows the average rankings for each community need. **Based on the averages of the responses by locality for each community need, the top four community needs in TCF’s service area are access to affordable dental insurance, pregnancy prevention for all ages, diet and nutrition, and access to affordable health insurance.** However, it is noteworthy that all of the health needs were ranked at a 3.4 or above showing great need in the community overall.



The **top three reasons for the high inpatient use rates** in the service area were listed as follows:

- Lack of preventative care – 13 responses (62%)
- Lack of affordable insurance – 11 responses (52%)
- Lack of education on need for preventative medicine and maintenance of health – 8 responses (38%)

The **adequacy of the emergency medical system** for individual healthcare needs was determined below:

- Adequate services available – 9 responses (50%)
- Not adequate due to response times of volunteer providers, also far distances to hospitals – 6 responses (33%)
- Will be adequate with new hospital in south of service area opening in July – 2 responses (11%)

The **biggest abuses of the emergency medical system** are provided:

- Utilizing the Emergency Department for primary care physician needs – 10 responses (45%)
- Going to the Emergency Department because residents can use the ambulance as a source of transportation – 6 responses (27%)
- Seniors wanting company or daily living needs met or transportation to the hospital – 4 responses (18%)

The strategies used and/or proposed for **improving and/or eliminating hospital diversion** in the community included:

- Better communication between hospitals – 3 responses (20%)
- Improved staffing – improve nursing shortage, increase mid-level physicians, more staff during high occupancy times – 3 responses (20%)

The **Fort Lee expansion is expected to affect healthcare in the area** in the following ways:

- Increase the population = increased need and expansion of healthcare services – 10 responses (42%)
- Create strain on local resources – 7 responses (29%)
- Increase the need for mental health services – 4 responses (17%)

The top three **ways to recruit and retain healthcare professionals** to the community included:

- Better pay – 8 responses (35%)
- Become employer of choice (good leadership, competitive salaries, benefits, day care access) – 6 responses (26%)
- Better housing options – 5 responses (22%)

The large majority of interviewees (21) were in favor of **providing or expanding school-based health services for the following reasons:**

- Children need early intervention
- School is the ideal forum to teach young people about healthcare
- Healthy, educated children spread their knowledge to their families
- Could expand services to the faculty and staff as well
- Would decrease absenteeism and children would excel
- Could include the use of contraceptives
- Could start children managing their own healthcare in the high schools
- Sparks kids interest in healthcare careers
- Could provide more comprehensive services

Interviewees offered the following **additional thoughts and information:**

- 39% of Informants did not comment
- Need mental health services that are accessible and promoted to the public
- Need more mental health beds
- Need early intervention for mental health services and to overcome the cultural bias to mental health
- Need sick child care in the area
- Need prevention services for child abuse
- Need testing for lead in infant's blood

- Need better transportation services to all healthcare providers specifically PCP's
- Need transportation services for the elderly
- Health literacy should be examined
- No good resources available to public about hospital capabilities

## SUMMARY

In summary, the main findings from TCF's service area's interviews are as follows:

1. Fifty percent (50%) of interviewees responded that the **greatest health related need** in the community or communities they serve is that the **economic level (lack of financial resources) of the population prevents people from addressing healthcare needs.**
2. Almost 50% of interviewees indicated that **education about the services available in the community would be effective in meeting or assisting to meet this need.**
3. **Potential partners are** (in order): local and federal government, community organizations, hospitals, schools, businesses, and faith-based organizations.
4. The **greatest barrier** these organizations face in improving the lives of their clients is related to a **lack of financial resources** (half of the interviewees).
5. **Ten of the 16 healthcare issues were rated at a 4 or higher (significant need for intervention).** The top four healthcare needs in TCF's service area are: access to affordable dental insurance, pregnancy prevention services for all ages, diet and nutrition, and access to affordable health insurance.
6. The top three responses to the **causes for the community's high inpatient use rates** by ranking include: limited preventative healthcare, lack of affordable insurance, and lack of health education on the need for preventative healthcare and maintaining health.
7. **About one third of the interviewees felt that emergency services in the community are adequate.** Almost half of those interviewed responded that the **biggest abuse of the system is using the emergency departments for healthcare needs that a primary care physician could treat.**
8. Almost half of those interviewed thought that the **Fort Lee expansion will increase population causing a great burden by increasing the need for expanded healthcare services.**
9. The top two responses for how to **attract and retain healthcare professionals** to the community include **improving pay and becoming an employer of choice.**
10. **21 of 24 interviewees responded in favor of providing or expanding school-based healthcare services.**

## **FINDINGS AND CONCLUSIONS**

In summary, the following were the major findings from the CVHPA's assessment of TCF's service area:

1. TCF's service area's demographic statistics are heavily influenced by the inclusion of southern Chesterfield. The other localities in TCF's service area more closely resemble PD 19's overall demographics, which includes **a greater representation of black and older persons when compared to Virginia** overall.
2. **All localities in the area have had an increase since 2000 in the number of people and children in poverty.** There has been a 70% increase in the number of unemployment claimants since 2000, compared to a 50% increase statewide. The socioeconomic indicators point to the greatest needs in Petersburg, Hopewell, and Sussex.
3. **In almost all of the health indicators reviewed, TCF service area's percentages or rates are worse** (particularly if southern Chesterfield is removed) than Virginia's percentages or rates. The socioeconomics and demographics of the area play a large part in this occurrence.
4. **TCF's service area's 2006 overall inpatient discharge rates are significantly higher than Virginia's discharge rate, but their relative difference from State rates has declined.** These differences probably reflect the area's generally lower socioeconomic status and lower access to appropriate outpatient care and support services, which often results in more inpatient care for preventable conditions. Similarly, the declining difference may reflect improvements in access to health care services.
5. The service area's **relatively high percentage of admissions through the emergency department** can indicate access problems relative to medical homes.
6. Almost 25% of the service area's discharges as **cardiovascular disease as a comorbidity**, similar to the State's percentage but the **number of comorbidities per discharge is higher.**
7. The **relatively large percentage of mental health related discharges** from TCF's service area indicates a potential need for additional community-based behavioral health services. Additional follow-up care in the community for all inpatients may be needed in the service area.
8. The **teenage birth rate is higher than the State in all localities except the two most affluent ones** (Chesterfield & Prince George). The rate is particularly high in both Hopewell and Petersburg.
9. The Community Needs Assessment Survey indicated a **significantly greater percentage of adults without health insurance and without dental insurance.** One in ten

households needed mental health services. One out of three adults had been diagnosed with high blood pressure and high cholesterol.

10. The key informant interviews had common themes throughout. These include: **a) the greatest healthcare need was that the economic level of the population prevents people from addressing their health needs; b) transportation ranked high as a barrier to obtaining health and human services; and c) the most frequently mentioned responses for what would have the greatest impact on improving the future health status of the residents were reducing financial constraints.**
  
11. Based on the data reviewed, opportunities exist in TCF's service area to target certain demographic groups in the area, such as **lower income households and young people**, and develop programs for their specific needs. Particular localities, including **Petersburg, Sussex, and Hopewell, appear to have greater health and human services needs.** In addition, certain community needs, such as **transportation and behavioral health services, transverse the entire area.**

The following table provides a summary of the key indicators by locality with the locality having the highest rate or percentage identified. **Localities are shaded yellow if their rate or percentage is above Virginia's corresponding rate or percentage. If the locality rate or percentage is the same as the State, it will be shaded grey.** Based on the quantitative and qualitative data/information analyzed for this assessment, the following list provides areas of need/concern by locality. **Attachment K** provides a summary of various key indicators by locality in TCF's service area.

### Summary of Key Indicators by Locality

Indicator	So.Chesterfield/Ches.*	Colonial Heights	Dinwiddie	Hopewell	Petersburg	Prince George	Sussex
Population Growth	Highest						
Gender							
Male (%)							Highest
Female (%)					Highest		
Race							
White (%)		Highest					
Black (%)					Highest		
Asian (%)		Highest					
Other (%)						Highest	
Hispanic (%)						Highest	
Age Groups							
0-19 (%)				Highest			
20-44 (%)						Highest	

Indicator	So.Chesterfield/Ches.*	Colonial Heights	Dinwiddie	Hopewell	Petersburg	Prince George	Sussex
45-64 (%)			Highest				
65+		Highest					
Single Parent Households (%)					Highest		
Household Income (actual)	Highest						
Poverty - individuals (%)					Highest		
Poverty - children (%)					Highest		
Households without Vehicles (%)					Highest		
Unemployment Rate (%)					Highest		
WIC Program - women (rate)		Highest					
WIC Program – infants and children (rate)					Highest		
Food Stamps (rate)					Highest		
Children in Head Start (%)				Highest			
Students with LEP (%)		Highest					
Special Ed by Disability							
Specific Learning (%)		Highest					
Speech or Language (%)				Highest			
Other Health Impairments (%)			Highest				
Developmental Delay (%)							Highest
Emotional Disturbance (%)					Highest		

Indicator	So.Chesterfield/Ches.*	Colonial Heights	Dinwiddie	Hopewell	Petersburg	Prince George	Sussex
Mental Retardation (%)					Highest		Highest
Autism	Highest						
Total (%)				Highest			
Educational Attainment (%)	Highest						Lowest
Free/Reduced Price Lunch (%)				Highest			
Inpatient Discharge Rate							
Overall (rate)					Highest		
Male (rate)					Highest		
Female (rate)				Highest			
White (rate)				Highest			
Black (rate)			Highest				
Other (rate)	Highest						
0-17 (rate)				Highest			
18-24 (rate)				Highest			
25-34 (rate)				Highest			
35-44 (rate)					Highest		
45-64 (rate)					Highest		
65-74 (rate)			Highest				
75+ (rate)	Highest						
Cardiovascular Disease Inpatient (rate)							Highest
Births							
Total (Rate)				Highest			
Teenage Births (Rate)				Highest			
Non-marital Births (%)				Highest White & Black	Highest Total		Highest Other
Low Weight Births (%)		Highest Other		Highest White	Highest Black		
Infant Mortality (rate)		Highest White				Highest Black	

Indicator	So.Chesterfield/Ches.*	Colonial Heights	Dinwiddie	Hopewell	Petersburg	Prince George	Sussex
Total Age Adjusted Death Rate					Highest		
Heart Disease Age Adjusted Death Rate				Second highest	Highest		
Stroke Age Adjusted Death Rate					Highest		
Cancer Age Adjusted Death Rate		Highest					
Diabetes Disease Age Adjusted Death Rate			Second highest		Highest		
Medicare Enrollees							
Aged (%)		Highest					
Disabled (%)					Highest		
Child Abuse or Neglect (rate)							Highest
Elder Abuse (%)					Highest		
No Health Insurance (%)							Highest
Unable to Receive Health Care When Needed (%)							Highest
No Dental Insurance (%)				Highest			Highest
Unable to Receive Dental Care When Needed (%)				Highest			
Mental Health Services Needed (%)		Highest					

Indicator	So.Chester- field/Ches.*	Colonial Heights	Dinwiddie	Hopewell	Petersburg	Prince George	Sussex
Leaving Community for Medical Specialists (%)						<b>Highest</b>	
High Blood Pressure (%)							<b>Highest</b>
High Cholesterol (%)		<b>Highest</b>					
Diabetes (%)			<b>Highest</b>				
Asthma Sufferer in Household (%)							<b>Highest</b>
Mammography Not Received (%)					<b>Highest</b>		
Pap Test Not Received (%)			<b>Highest</b>				
Colon Cancer Stool Screen - Not Tested (%)					<b>Highest</b>		
Colon Cancer Sigmoid Screen - Not Tested (%)					<b>Highest</b>		
Prostate Screen - Not Tested (%)					<b>Highest</b>		
Not Participating in Physical Activity (%)					<b>Highest</b>		
Reports being Overweight (%)							<b>Highest</b>

## RECOMMENDATIONS

Based upon the previous findings, **five priority areas for health status improvement** emerged when examining TCF's service area, including (in no particular order):

- **Teenage Pregnancy/Pregnancy prevention/prenatal care**
- **Access to Health and Dental Services**
- **Prevention Services/Health Education**
- **Behavioral Health Services**
- **Transportation**

When discussion turned to possible interventions that would begin meeting the needs of the area, certain overarching issues emerged, including:

- **Need for Partnership Development** – *Area organizations should be actively seeking partners both inside and outside the communities they serve to bring specific expertise to the initiative, reduce duplication of efforts, and improve coordination of services. Funders should actively promote and provide incentives for these partnerships.*
- **“Biggest Bang for your Buck”** – *Initially, interventions should be focused on those efforts which will have the greatest impact on improving the health status of the community and/or curbing unnecessary expenditures in the shortest amount of time and/or with the lowest cost. Once the “low hanging fruit” has been addressed, other more complicated issues with much longer term outcomes can be addressed.*
- **Fund Pilots and Adequately Evaluate for Effectiveness** – *New interventions should be framed around specific objectives and outcome measures and the evaluation component should be specific and planned prior to pilot initiation. Outcome measures should be used to determine whether to expand the pilot or use other options.*
- **Involve Consumers in Marketing/Advocacy** – *“Social marketing,” actively involving and customizing outreach efforts to the specific culture/values/ networks of the population(s) to be served should be addressed by initiatives to address that population's needs. Actively engaging consumers in advocating for their and their communities' needs is an important component in long-term health status improvement.*

The following includes suggestions for intervention under each priority (some of which are already in development or service in the area):

### **Teenage Pregnancy/Pregnancy prevention/prenatal care**

- Engage community members and stakeholders in dialogue regarding the social and economic cost of teenage pregnancy.
- Develop teen resource center(s), including after school and evening hours, transportation, school and career assistance, mentoring, and other appropriate services.
- Provide training and support to teen parents re-entering the school setting

- Continue to provide and expand evidence-based pregnancy prevention programs to young people in the schools and the community, with a renewed emphasis that includes young men.
- Expand school based career services to older teens and twenty year olds through the community colleges and other job training sites.
- Enhance workforce development programs; such as “Learn to Earn,” outreach and capacity.
- Evaluate opportunities to coordinate, integrate, and/or expand programs for young mothers and children, such as Healthy Families, Resource Mothers, CHIP, and Healthy Start, to encourage prenatal care and pregnancy prevention. The evaluation should determine who these services are serving, if there are gaps, and level of expansion needed to bridge those gaps.

### **Access to Health and Dental Services**

- Develop a resource directory of health-related services currently available in the area, including a mechanism to keep the information current and the community aware of its availability.
- Market existing and new services using appropriate methods and venues.
- Add dental capacity at community health centers and other appropriate locations.
- Develop/enhance case management at hospital discharge (from hospital stay or Emergency Department visit) including follow up calls to patients and their families and coordination with District 19 (if appropriate) and other community services.
- Encourage the development and/or expansion (including hours of operation) of community health centers, school-based health clinics and/or physicians, specifically those that target underserved communities.
- Encourage the addition of needed specialty care and support services in underserved parts of the service area.
- Educate the community on how to use the community’s health resources most appropriately.

### **Prevention Services/Health Education**

- Support community based wellness initiatives built on evidence-based practice.
- Develop a community marketing and communications plan including: articles, press releases, handouts in paychecks, radio spots, testimonials from consumers, computer terminals in public places with homepages of healthcare information and specific links, cable TV network shows, and public service announcements.
- Make computer terminals available at safety net providers, emergency departments, libraries, senior living facilities, school meeting places, and other appropriate locations.

- Staff sites with volunteer/low-cost workers assisting at terminals with training and information searches.
- Enhance prevention services provided through safety net health care providers through addition of staff and support of lay health promoter and peer to peer programs to provide health education and case management.
  - Develop and/or enhance community-based, comprehensive, and sustainable prevention programs, which target high need populations, such as seniors, the faith community, mothers of children in Head Start, public housing, safety net provider clients, and lower-income people of all ages. Some of the services could include:
    - Nutrition education and support
    - Health screenings and prevention education
    - Dental health and education
    - Smoking cessation and substance abuse prevention
    - Exercise programs/clubs

### **Behavioral Health Services**

- Develop a comprehensive behavioral health plan for the service area with a steering group made up of key stakeholders.
- Add behavioral health services in community health centers and other appropriate venues to serve the needs of their patient populations.
- Develop and enhance initiatives that will help youth understand the accountability associated with individual goal development. (eg. Teen Resource Center)
- Provide professional staff specifically trained to treat young people's mental health and substance abuse issues.
- Enhance prescription access for those with a mental health illness.
- Develop coordinated systems of care and case management, particularly to help patients who are not taking their medications as prescribed and/or have a serious mental illness.
- Partner with mobile health care services for behavioral health needs, such as providing screenings for depression.

### **Transportation**

- Convene a Transportation Work Group to assess what is currently available in the area, the unmet needs, and plan appropriate initiatives to improve the area's transportation system. Include representatives from the Virginia Departments of Health & Transportation, public transportation, planning district commission, emergency medical transportation providers and various organizations already providing transportation. Include an assessment of the needs of:
  - the elderly and disabled with the assistance of the Crater Area Agency on Aging;
  - rural residents, including consideration of services such as Bay Transit (small buses that provide door to door service on a scheduled basis);

- urban residents, including consideration of expanding hours and/or routes for the Petersburg/Hopewell/Colonial Heights area; and
- non-urgent medical patients, including Medicaid transport.

## **SUMMARY**

These recommendations are not meant to be all inclusive but rather to establish a starting point for community dialogue and action. Moreover, they are focused on improving the health of the community and do not attempt to address some of the broader issues that can have a significant impact on lifetime health status, such as the quality and level of education attainment, development of work skills, and economic opportunities. Finally, no one organization can tackle all of the potential initiatives outlined above but, rather, it will take organizations and individuals working toward a common goal to improve the health of our communities.