Changing the Conversation: Regional Assessments

Healthcare Challenges and Opportunities Assessment of the Danville Region

Created in 2005, the Danville Regional Foundation (DRF) is a catalyst for innovation and an agent for transformation. Understanding that significant community change takes time, the foundation invests for the long term in efforts that promise sustained positive impact for the Dan River region. The foundation is committed to activities, programs, and organizations that address the health, education, and well-being of residents of Danville, Pittsylvania County, and Caswell County.

In the last two years, DRF has developed its vision, mission, values, and focus (see http://www.danvilleregionalfoundation.org/vision.html), issued guidelines (see http://www.danvilleregionalfoundation.org/drf_GrantProposalGuidlines.pdf), hired staff, and begun awarding grants (see http://www.danvilleregionalfoundation.org/grants.html).

To help the foundation better understand the opportunities and challenges facing its region, DRF retained MDC, Inc. of Chapel Hill, North Carolina, to develop three regional assessments on community health needs, workforce development and related educational challenges, and community and economic development.

Each assessment used a variety of techniques to gain opinions from within the region, quantitative data about the area, and recommendations that the authors believe might be beneficial. Thus, each assessment is a unique picture, reflecting the values and judgments of the authors, based on what they learned about the region. Accuracy of the information included in each report is the responsibility of the organization that conducted each assessment.

DRF believes these assessments are important contributions to critical policy discussions in the region and beyond. The foundation does not endorse the assessments or necessarily totally agree with them. A careful reading of all three assessments will show disagreements about perceptions, priorities, and proposed initiatives. In fact, if DRF were to fully adopt the recommendations contained in the three assessments, it would not have any resources to respond to requests emerging from the region.

DRF is using these three reports to inform its own deliberations. The foundation believes these reports illuminate many of the challenges and opportunities within the region. DRF encourages organizations throughout the region to use these reports in a similar way. There is much in these reports to give all of us encouragement and concern. DRF shares the assessments in the interest of supporting a better informed public discussion about how we use limited resources to transform the region and create a better future for all the region's residents. DRF is using these assessments to inform its consideration; DRF is not limited by the results of these assessments.

Questions and comments about the assessments are always welcome. They should be sent to Karl Stauber, President and CEO of Danville Regional Foundation at kstauber@danvilleregionalfoundation.org . Over time, DRF anticipates producing other assessments and community studies. Ideas for future topics of study are appreciated.

Dan River Region
Health Assessment

October, 2007

Prepared on behalf of MDC, Inc.
Chapel Hill, NC

For the
Danville Regional Foundation

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Dan River Region Community Health Assessment Report
October 2007

Introduction and Overview

Background

A new regional foundation was established in 2005 with proceeds from the sale of the not-for-profit Danville Regional Medical Center to the for-profit hospital corporation, LifePoint. The new foundation board selected three areas for long-term investment: health, education, and economic development. East Tennessee State University health researchers were asked to conduct the community health assessment by MDC, Inc. of Chapel Hill, NC.

Objectives

The foundation established three objectives for the health assessment:

1. Identify key issues, performance gaps, and trends. Data-based fact sheets will be completed on the health status of the Danville/Pittsylvania/Caswell area.
2. Identify regional institutions and key people with significant capability to address the issues and trends.
3. Develop considerations and recommendations for the foundation.

Methods

An Assessment Committee of the foundation's board of directors was consulted at the beginning of the process. The four Assessment Team members, all with public health backgrounds, spent a portion of three months in the community. The assessment design used multiple methods to engage a broad range of participants from Danville, Pittsylvania, and Caswell counties. Their input provided breadth and depth to the health assessment specifics, considerations, and recommendations.

1. Secondary data
   Vital health statistics were collected and presented in the form of data sheets which compared the region to the two states (Virginia and North Carolina) and the US.
2. Leader interviews
   Fifty-three individual interviews were conducted at the convenience of participants. Interview questions were pre-tested and approved by the Foundation Assessment Committee. A snowball sample was used to select interviewees, asking all participants to identify other leaders who were then interviewed.
3. Inter-organizational health-provider focus groups
   Three groups were conducted, including the hospital advisory board, one preexisting health coalition in Pittsylvania County, and health providers in

Caswell County. Focus group questions centered on the history of cooperation and collaboration and perceptions of regional health status.

4. Community meetings
   Six meetings were conducted with a diverse set of organizations— business interests, civic groups, and special interest groups—that invited the Assessment Team to preexisting forums. Meetings provided a means to gain supplemental insights about health concerns and assure a mix of interest groups.

Results

Great interest exists in the community concerning health and the future investments of the foundation. Approximately 300 persons involved in the assessment held an almost unanimous opinion that the health of the region is poorer than the health in surrounding areas. Mortality statistics for the two county-one city region confirm the opinion. Though variation is noted between the Virginia and North Carolina statistical findings, no major differences were found ins regional perceptions about health in both Virginia and North Carolina. Many of the same concerns were found among community leaders, health professionals, and individuals without jobs and insurance.

Participants are aware of the long-term and pervasive nature of personal risks to health status, particularly related to the prevalence of obesity, tobacco use, and under-use of primary healthcare services including screenings. Participants acknowledged the influence of individual awareness, beliefs, and behaviors about the health of the region; but many also expressed concerns, some deeply held, about access to and outcomes of health services. Several recent developments have expanded care for the uninsured, but general awareness of the new capacity is limited. There is a deep-seated concern about the growing prevalence of substance abuse. Perinatal health issues also concern community members. Although there appears to be few multi-organizational plans established to address healthcare issues in the region, those coalition efforts that have been organized have been successful.

Conclusions

General support is present for the foundation to do something in the healthcare sector. Many regional residents understand health as a community as well as a personal issue. Several specific areas for potential intervention were identified across broad segments of the community: perinatal services, chronic diseases among adults, and promotion of collaboration among health providers and with community groups. Regional participants are aware of the depth, pervasiveness, and long-term nature of the region's major health issues. There is also awareness of the dual nature of health issues–outcomes are dependent upon not just available, accessible, and use of health services—but also influenced by individual knowledge, beliefs, and behaviors. The report provides a series of considerations drawn from data collected using the assessment's methods as well as presents general recommendations for future action.

Methods and Process Notes

Method 1: Fact Sheets of Key Health Issues and Trends from Secondary Data Collection and Analysis

The Assessment Team reviewed secondary data, identified indicators for which the jurisdictions in the Dan River Region were significantly different than their states or nation, and prepared nine fact sheets with comparative charts. Vital statistics depicting nine targeted health conditions were collected and presented in the form of *Health Status* sheets. Disease specific morbidity and mortality estimates for the Dan River Region were calculated to investigate similarities and differences at the county, state, and national levels. Risk data was taken from national survey findings, selectively disseminated by state and local health departments. Age-adjusted, all-cause death rates (1979-2000) were organized in place-based tables stratified by gender and race (see Attachment 2). To control for the changing age distribution, the new standard (2000 Census Population) was used in the direct adjustment technique. Data included death rates, morbidity rates, and risk factors. The team discussed findings with representatives from both county health departments (Danville-Pittsylvania and Caswell). The resulting Fact Sheets were subsequently used at the community meetings and focus groups (noted below). Comparative health statistics were relatively unknown to the public. Additional charts based upon review of secondary data for the region can be found on pages 10-12. These additional charts display changes in mortality over time by race and gender. These have been used to compare the regional counties with national and state rates.

Method 2: Community Leaders Survey

Interviews included a sample of 53 community leaders. A sampling repetition method of a snowball convenience sample was used to identify leaders, beginning with foundation board members (each leader was requested to share the names of five other leaders). Using this method, 134 persons were identified, from which the 53 persons were selected, based upon greatest frequency of mention. (Note: leaders were defined as those in positions of leadership in the communities and by their perceived ability to "get things done in and for their communities.") Confidential results of interviews are presented in aggregate format. The interview survey, pretested with foundation board members, included personal and community demographic questions, perceived issues of healthcare utilization and financing, community health issues, and beliefs about the private, not-for-profit, and public sectors in personal and community health. A copy of the survey questions is found in Attachment 5.

Method 3: Community Health Organizations Focus Groups

The intent of the focus groups was to engage a broad representation of health organizations to discuss the health of the Danville, Pittsylvania, and Caswell counties region. Three focus groups were conducted: one with an existing coalition of Danville-Pittsylvania County providers, one with invited Caswell County organizations, and one with the Danville Regional Hospital Advisory Board. Perceptions regarding general health systems issues were explored. Fact sheets about health indicators for the region were presented with focus group discussion leading to selection of a limited number of issues for more intensive discussion.

Method 4: **Community Discussion Meetings**

Six community meetings were conducted throughout the region. Intent of the community meetings was to engage existing non-health affiliated, community-based groups (e.g., churches, schools, civic clubs, etc.) to complement and diversify the assessment input. From leader interviews and foundation board members, suggestions were made to representatives of community groups to extend invitations for Assessment Team members to attend their community meetings. The Assessment Team responded to invitations from a diverse set of community groups.

Meetings were not designed to generate or review proposals for action; instead, the focus was to identify the community's health concerns. Fact sheets about health indicators for the region were presented. Community groups were invited to discuss these indicators and to identify medical and non-medical factors that influence the health of the region. A list of immediate and long-term health issues along with broad strategies that could improve these health concerns were generated. Ideas gathered in each community meeting contributed to the overall regional health assessment and are included in this report.

For each of the focus groups and discussion meetings, one team member facilitated the group and another team member recorded discussion using a portable computer. Team members used meeting notes in a debriefing process that resulted in a list of considerations. Other team members then provided supplemental evidence collected using other assessment methods to support or contradict each consideration. A second combined and rewritten set of considerations was shared among team members prior to development of specific recommendations for the final report. A summary of each focus group and community meeting can be found in Attachment 1.

The mixed methods approach, using quantitative and qualitative information, was designed to identify issues and provide useful community description to help explain each issue.

Description of Community Participation

The mixed methods adopted for the assessment were designed to promote flexibility resulting in invitations to conduct assessment methods with a diversity of persons who are representative of multiple groups in the city and two counties.

Characteristics of the 53 leaders with whom individual interviews were conducted include:

- 80% male, 20% female
- 72% white, 28% African-American
- 40% lifetime residents, 20% less than 10 years residence
- 20% health professionals
- Affiliated home
  - Danville 56%
  - Pittsylvania 32%
  - Caswell 14%

The persons selected to interview and identified using the reputational method demonstrated that they have deep social networks. Leaders described many social connections, memberships, and multiple leadership roles. Each leader was asked to name up to five organizations, clubs, or other affiliations. As noted below, almost half of the leaders noted personal affiliations with five organizations.

One affiliation	100%
Two affiliations	92%
Three affiliations	76%
Four affiliations	60%
Five affiliations	44%

Leaders indicated a willingness to assist the foundation. Organizations that sponsored focus groups and community meetings listed in Table 1 provide additional vehicles to reach into the community. Summaries of the meetings are found in Attachment 1.

Table 1: Inter-organizational Health Focus Groups and Community Meetings

Sponsoring Organization	Participants	Type of attendees
Caswell County Health Department	10	Health providers
Danville-Pittsylvania Community Health Coalition	20	Front line workers in health organizations
Danville Regional Hospital Advisory Board	10	Board members
Danville-Pittsylvania County Chamber of Commerce	13	Board members
Leadership from Rotary clubs	11	Club leaders from four regional groups
Cherrystone Baptist Association	125	African American pastors and church members
Danville Community College	18	Students in displaced worker training programs
Piedmont Community College	22	Community leaders and members of agencies
Latino community	50	Church members

General Findings

1. There is a strong agreement among participants and across the different assessment about findings.
2. Participants believe the Dan River Region is a good place to live. The region and its communities have many assets without many accompanying big city problems.
3. Participants recognize the region is rural, its residents are less affluent and less educated, and the region's health is poorer.
4. Mortality rates for Blacks are higher than for Whites. The region's rates mirror but also exceed most national racial health disparities for multiple health conditions and may reflect historical differences in access and delivery of healthcare for Blacks.
5. Health is seen as a direct outcome of access to (quality) health services. Access is related to health insurance coverage, typically through employment. Sustained employment in jobs with health insurance is increasingly related to level of personal education.
6. Lifestyle change(s) are required of everyone: young and old, rich and poor, White and Black.

7. Services, particularly education and screening, need to be more available throughout the region.
8. Personal apathy about individual health and the under-use of healthcare is a dangerous threat in the region, resulting in patients "showing up at the hospital *toes-up*" in the emergency room.
9. The public perceives that the healthcare system is changing. Hospital leadership can no longer assume it has the full trust of the region's inhabitants. There is also a loss of personal physicians in the region.
10. "The community needs something to be proud of" regarding its health. The foundation could help influence positive change.

Specific Assessment Outputs

Fact Sheets on Health Issues

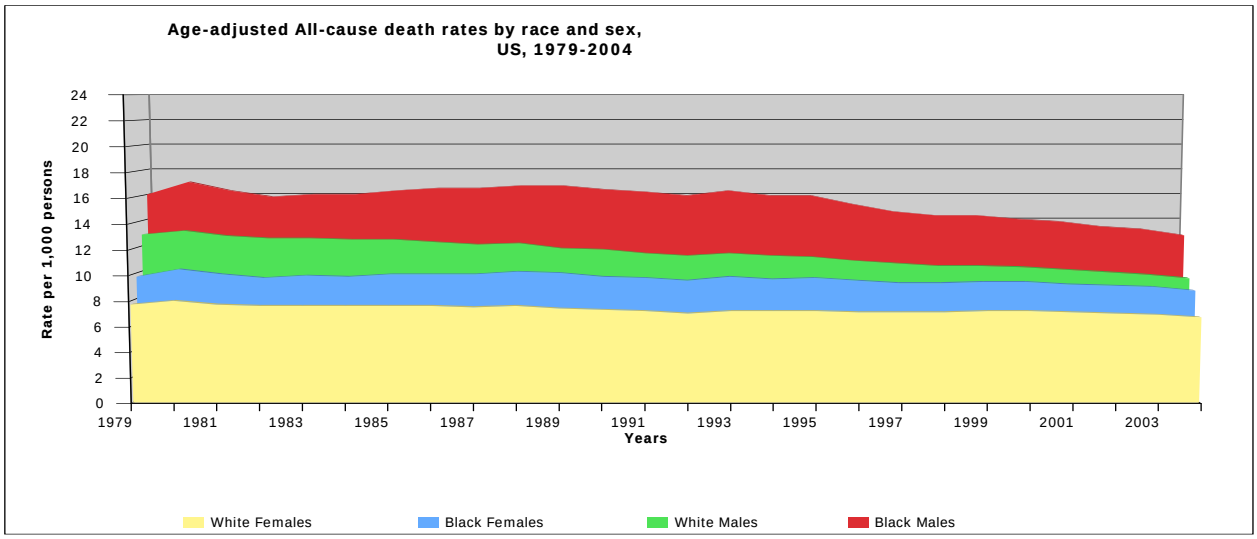
Attachment 2 presents a summation of secondary vital statistics data and other health data that compares the Dan River Region with Virginia, North Carolina, and the United States. A small number of indicators were selected by the team that documented major statistical differences between the region and broader geographic areas. The charts are a visual reference supplemented with qualitative descriptive statements to form a Fact Sheet on each issue.

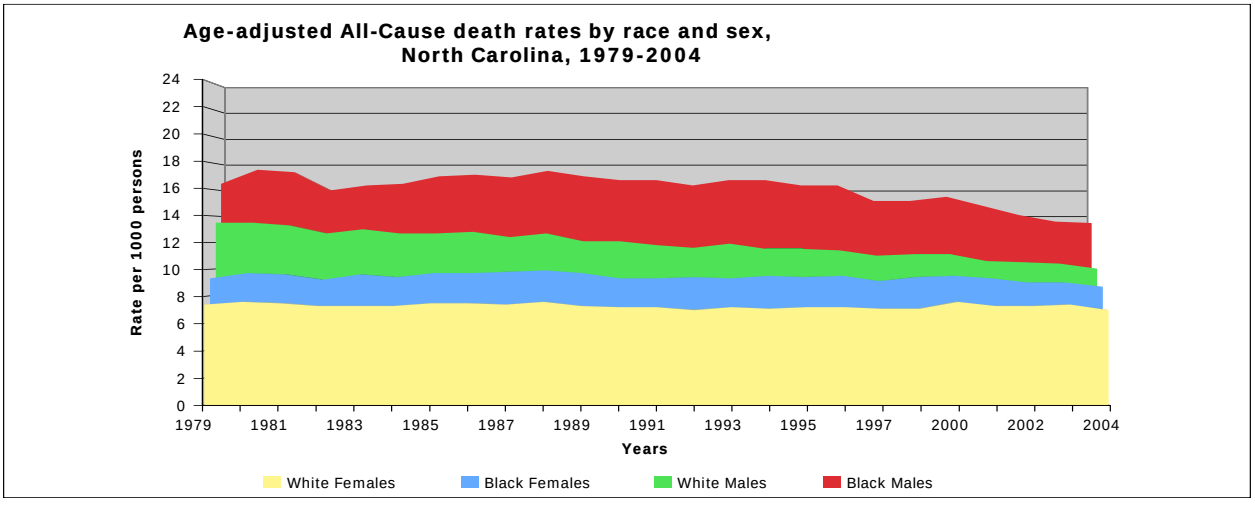
These results are clustered into two broad categories, perinatal (around birth) indicators and adult diseases indicators. The Fact Sheets portray multiple views of clustered aspects of related problems. Four indicators demonstrate a worsening picture of perinatal issues. The high percentage of late or no prenatal care is a risk factor for the high, low-birth weight percentage. This in turn is a risk factor influencing the high rates of infant mortality in the populations assessed. The high percentage of births to unwed mothers was noted by community members and leaders as a concern worthy of further investigation. Taken together, the data identify links that form a causal model explaining why the City of Danville has one of the state's highest infant mortality rates.

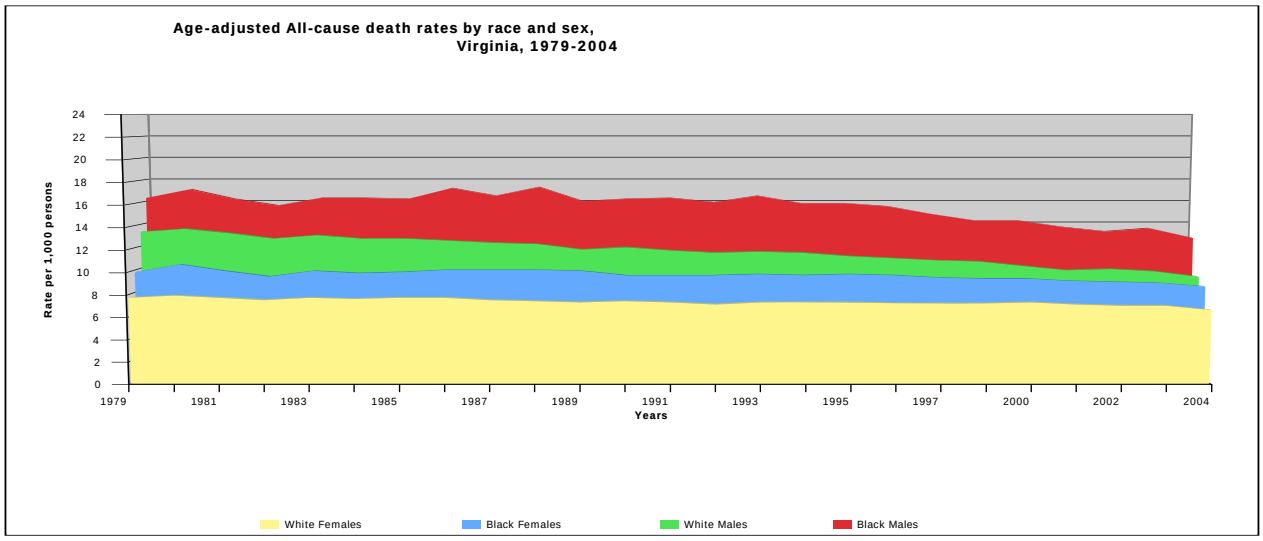
Likewise, coronary disease is linked as a risk factor and a result of stroke and diabetes. Participating health professionals noted the interrelatedness of risk factors (e.g., obesity, use of tobacco, etc.) and a complex of diagnoses that have high prevalence in the Dan River Region. Concerns were also noted about the trend of earlier age of diagnosis. The pattern of incidence (new cases) of lung and breast cancer demonstrates higher rates in the City of Danville, lower in Pittsylvania and Caswell counties. Fewer discussions emerged about the etiology and population characteristics of these cancers.

Below are tables constructed to demonstrate long-term changes in mortality in the United States, Virginia, North Carolina, and Danville, Pittsylvania, and Caswell counties. The extended time frame (1979-2004) allows for a historical comparison. Mortality rates are segmented by gender (male and female) and race (White and Black) to visually display major negative trends in mortality for white males in Pittsylvania County, white females in Caswell County, continuing disparities among black males and increasing rates among black females across the region.

Age-Adjusted All-Cause Mortality by Race and Gender Charts, 1979-2004






Age-adjusted All-cause death rates by race and sex, Virginia, 1979-2004
Rate per 1,000 persons
0
2
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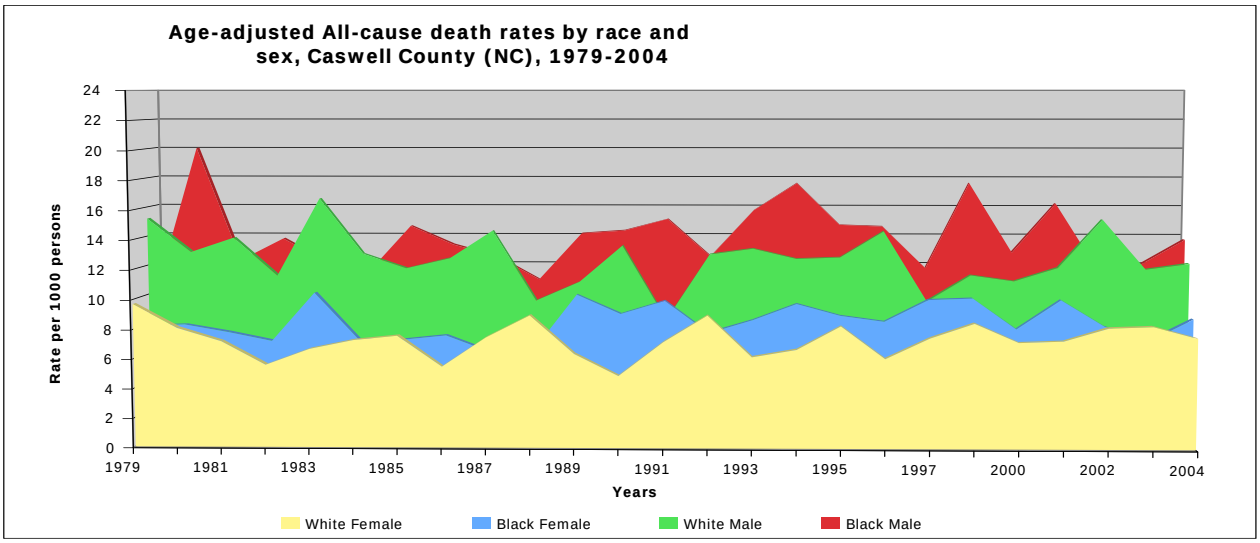
Black Males


Age-adjusted All-cause death rates by race and sex, Caswell County (NC), 1979-2004
Rate per 1000 persons
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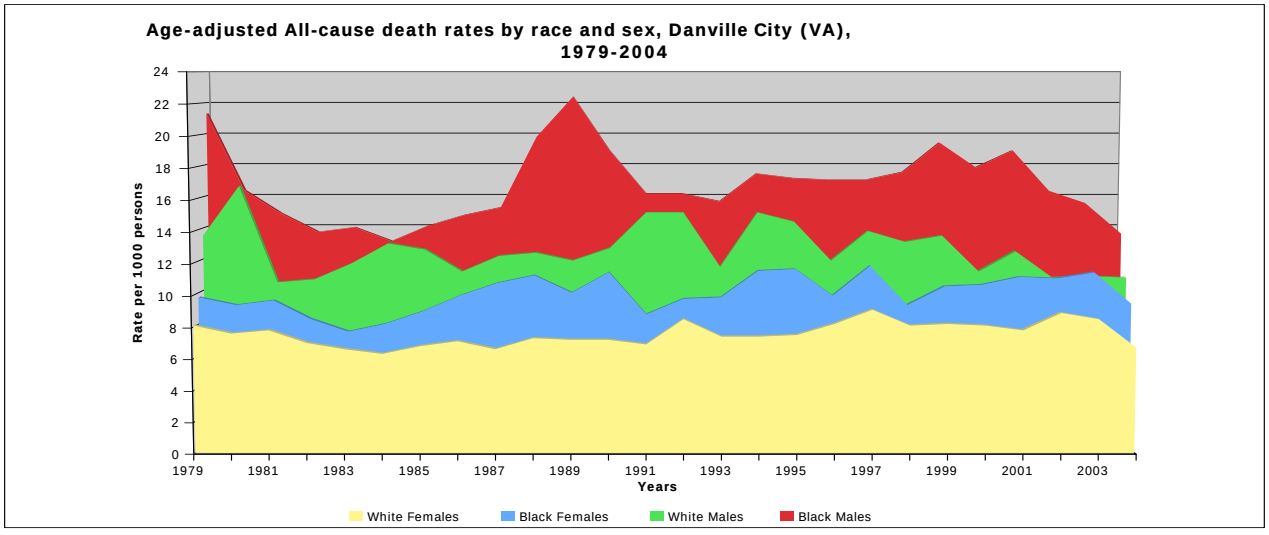
Years
White Female
Black Female
White Male
Black Male


Age-adjusted All-cause death rates by race and sex, Danville City (VA), 1979-2004
Rate per 1000 persons
0
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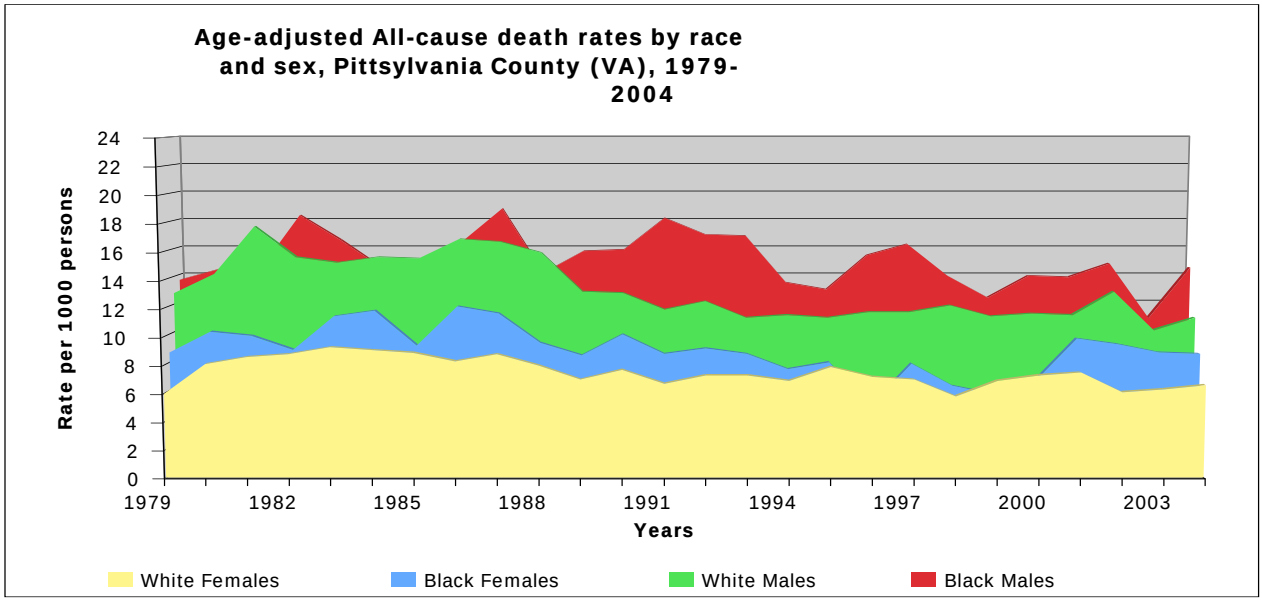
White Females
Black Females
White Males
Black Males



Regional SWOT Analysis

In each leadership interview through use of supplemental input sheets with focus group and community meeting participants, a companion environmental analysis was conducted to identify community and community health assets and issues. The results are described in Attachment 3 and a summary of characteristics found is presented in the table below.

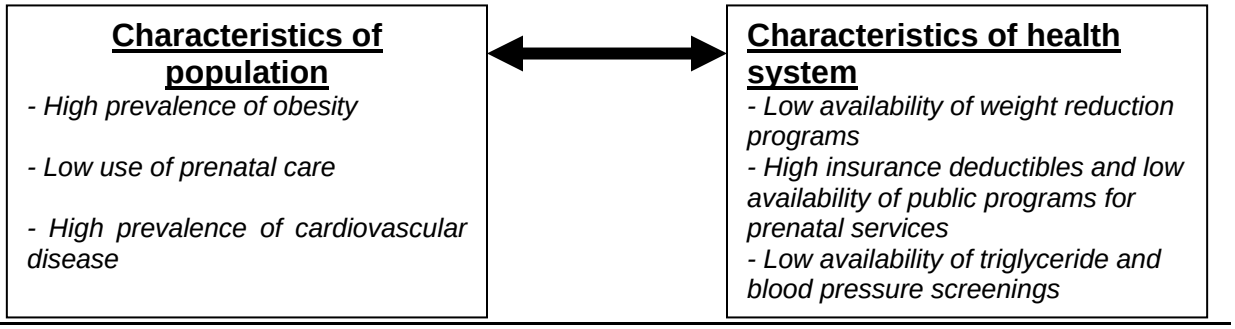
Strengths	**Weaknesses**
Danville Regional Medical Center Recent improvements in access to facilities providing physical activity Resources of foundation available to improve the region's healthcare	Dichotomy of needs. Community members appear to focus on *either* treatment *or* prevention. Lack of access to primary healthcare Lack of employment and associated health insurance benefits Few existing coalitions that have experience addressing health issues
Opportunities	**Threats**
A network of community leaders and organizations that could provide partnership opportunities for the foundation	*Public perception* of Danville Regional Medical Center *Leakage* of patients to other healthcare providers *Apathy* regarding health issues Strong ties to behaviors that put the population at risk for health issues i.e. *rural diet* Perceived increase in crime and drug abuse

This Regional SWOT analysis uses a traditional reporting approach to list perceived strengths, weaknesses, opportunities, and threats. Results were summarized by clustering responses into discrete themes. Strengths and weaknesses represent

perceptions of internal community capabilities. Strengths are perceived inherent characteristics, competencies, resources, and capabilities seen as distinctive to the region. Weaknesses represent inherent characteristics and gaps in individual, group, or community performance toward some ideal state (sense of community health). Opportunities describe favorable situations identified by participants to enhance the region. Threats are unfavorable situations that could damage the region. The Assessment Team purposely provided no specific definitions as part of the methodology, resulting in mixed perceptions of the community, its health, and health system.

List of Community Health Issues

Many health issues were identified through the assessment. A listing can be found in this report as Attachment 4. This list is a summarized compilation of issues identified through the multiple assessment methods from secondary data reviews, leadership interviews, inter-organizational focus groups, and community meetings. The issues are separated into two broad categories, using an adapted understanding of a traditional health policy model (Anderson and Aday, 1978). It recognizes that to address any health issue, attention must be paid to the characteristics of the population at risk and the characteristics of the healthcare system. Interrelationships of these characteristics form the dual focus necessary to impact the community health issue.



Considerations and Recommendations

Consideration Statements

Considerations are general statements drawn from the multiple assessment methods. They are presented to provide the foundation with thoughts for reflection upon which to build future initiatives and investments. Considerations are framed thematically with

support and sometimes contradiction from different sources. Each consideration noted below includes references from data, interviews, and meetings.

- ► Lifestyle
  - Regional leaders believe in early intervention and "getting to the kids" about life-long behaviors such as poor diets and lack of exercise.
  - Bad personal choices including smoking, drug abuse, insufficient exercise, and obesity affect long-term outcomes but are not necessarily recognized as threats to health.
  - Some participants report many stressors in their lives that may be perceived as a sense of apathy toward their health. Health providers report difficulty in engaging those persons for whom health education, health screening, and behavior change would be of greatest benefit.
- ► Employment
  - Loss of employment is recognized as the primary source of insufficient health insurance coverage resulting in a large population of people who either refuse to seek or are denied the healthcare services they need to avoid unnecessary morbidity and mortality.
  - The increase in out-of-area ownership of the community's business assets appears to be adversely affecting local decisions about health insurance plan benefits, provider networks, and use of healthcare.
  - There are people who feel "left behind" in the local community, including racial and ethnic minorities, and adults and children without the economic security, education, and workforce skills necessary to obtain steady employment.
  - There is a reported over-reliance on the hospital emergency room, perhaps related to an equally disquieting shortage of access to regular primary care providers and services.

- ► Use and under-use of healthcare services
  - Many structural issues influence the use of healthcare in the region. Most of the region's population lives in rural areas with insufficient transportation to the distant sources of care.
  - There are incongruities between providers' office hours and patients' work schedules that need to be reconciled or supplemented with viable alternatives.
  - Many groups reported that their members' inabilities to pay for chronic health maintenance prescriptions negatively influenced their overall functioning as productive citizens.
  - Some health services are not adequately distributed. A greater mix of services is desired by residents of Caswell and northern Pittsylvania counties.
  - Navigating the healthcare system is confusing. Delivery of care has become more complex. Understanding where and how to seek care is not always clear. Participants report that communicating with health

professionals about their illnesses is difficult, regardless of educational background.
    - Some are made to feel unwelcome by the healthcare system. This sense of being "pushed away" from sources of care is most common among Hispanics, African-Americans, and those without health insurance. Common awareness of the currently available gateways for health services for the underserved is lacking.
- Leadership
    - The region is entering a "new day," and to be successful, the circle of leaders needs to expand beyond current "power brokers." Many participants understand that greater involvement in community affairs by a larger number of people would strengthen health initiatives.
    - There are limited pathways to identify and develop leaders. Leadership Southside of the Danville-Pittsylvania County Chamber is a good, regionally focused development model. Too few minorities and women are seen to be civic leaders. Commitment to sustain involvement is reported as time consuming and competing with other life priorities.
- Regional scope
    - The state line is not a direct barrier to healthcare delivery, but it does affect use of health insurance plans, provider malpractice and licensure policies, segmented health-planning efforts, and sharing of resources among community outreach programs.
    - Those with the means to do so are sometimes opting to take their healthcare business outside of the region. Specifically, participants reported leaving for some specialty care. A smaller contingency were reported to be leaving for free or low cost care or care that provides interpretation services in Spanish.
- Collaboration
    - There is a sense that collaboration within the region seems to be improving, particularly between Danville City and Pittsylvania County.
    - Few inter-organizational health coalitions exist, but the ones that function are successful. One coalition (Danville-Pittsylvania Community Health Coalition) has managed several successful community-based interventions. Two school related collaborations (Healthy Kids in Caswell and Dr. Chip in Danville) planned and intervened with singular targeted health issues.
    - Faith-based networks appear available and willing to help with community-based health issues. Although not necessarily seen as a traditional part of their mission, many church leaders of different faiths expressed a willingness to engage in community health initiatives. Coalitions of churches are seen to offer another strong avenue for collaboration.
    - Community members recognize the need for regional leadership to help to improve health. Participants identified the need for champions to help organize, i.e. "Someone needs to be the leader to bring this (community health) all together…"

The following considerations were generated to demonstrate the regional understanding of the perceived overlap of health with education and workforce issues:

- Job loss and the poor regional economy are leading to a loss of health insurance;
- Improving education and creating new jobs will lead to a better quality of life for some and leave others behind;
- There is interest in more health education, adult education, and English language education across the region;
- There is community consensus about a growing drug problem impacting the regional employment pool and health and safety of the region; and
- Public infrastructure in the region is mixed. Recreational facilities are good, but difficulties with distance and rural public transportation make accessing facilities difficult for some.

Recommendations

A set of key elements are presented upon which recommendations are framed. The elements are drawn from the regional SWOT Analysis and Consideration statements.

1. Turn community energy into **action** to address issues and reward change that will result in community and health improvement.
2. Promote inter-organizational focused **collaboration** and relationship building.
3. Organize **decentralized** engagement with and in communities.
4. Find, create, and market **pathways** to healthcare for those who feel left behind or without access.
5. Promote **prevention** of health problems, especially with children of the region.

Investment Strategy 1:

To promote development of a regional focus for health improvement

The health of a community is a multi-factorial issue. Eighty percent of the factors related to life expectancy in the United States is traditionally viewed as related to personal behaviors, the environment, and genetics. Twenty percent is affected by health services. The intersection of individual, family, and group knowledge, beliefs and health behaviors, and the availability and efficacy of health services is very different for every community.

Public understanding of the “health care system” grew from the monumental healthcare reform debates of the early 1990s. An understanding emerged that the healthcare system is really a set of independently owned and operated parts only controlled to a limited degree by financing and regulation within a free-market enterprise. No single entity is in charge. Health-planning efforts to promote systems development and reduce duplicative services or expenditures were strongly resisted by provider organizations. Investigation of health insurance plans, benefit packages, and eligibility requirements created an immediate flashpoint as un-American. Though prevailing national opinion still leans toward our free-market approach, arguments regarding accountability for health systems’ gaps, inequities, and poor community health outcomes find adherents at a community level.

A parallel understanding emerged regarding personal health. Few limits are imposed by law on personal behaviors that lead to poor health. People are not prohibited from overeating, smoking, or placing themselves in stressful situations. Minimal legal restrictions have been imposed on personal behaviors: violence and abuse, seat belt use, the purchase and use of tobacco products, and the regulation of narcotics and other harmful substances. Additionally, environmental regulation is another source of constant debate (clean air and water, occupational safety, motor vehicle speed limits, sprinkler systems and smoke detectors in public buildings and housing units) although there has been more success in legislating compromises for

these hazards. In general, Americans seem more willing to accept incentives to do the healthy things rather than be told to do them.

Findings from this assessment point to overwhelming community opinion that the region is now less healthy, there is concern about health services including recent changes at the DRMC, and there are many prevalent, personal unhealthy behaviors. Making progress in community health improvement will require a strategy that acknowledges that "no one is in charge," yet all are responsible. The foundation may discover approaches to incentivize change through (a) bringing health service organizations together to promote cooperative and accountable community-oriented action and (b) engaging residents of the region in making personal health improvements through where and how they live in their natural social networks.

Example 1: Establish a forum for regional stakeholders in the healthcare improvement discussion.
The foundation should consider sponsoring a series of healthcare forums to be co-sponsored by multiple, regional stakeholders (e.g., Chambers of Commerce for a healthy workforce; African-American ministerial association for minority health and disparities; cancer survivors and voluntary agencies to discuss the breast cancer statistics; schools and pediatricians to discuss childhood obesity, etc.). Each forum should be provided a standardized format, with explicit expectations regarding use of health data, expert opinions, and community input. Forums can be linked and be used to monitor and report key indicators of community health. Similar forums in community settings have tapped knowledge of external topic experts and provided input to generating community support and strategy development for regional health improvement.

Example 2: Enhance a local systems view of health care services.
The Dan River Region lacks focus when negotiating with insurance providers for its citizens in both Virginia and North Carolina. As examples, those insured by Blue Cross/Blue Shield of North Carolina do not find Danville providers in their plan's list of preferred providers; and providers in the Danville region are not in the United Healthcare preferred provider network.

The foundation should support the concept of regionalism with regard to the healthcare delivery system. In efforts to strengthen the region's health network, the foundation should encourage healthcare providers and the region's employers to unite in an effort to assure that the local providers are members of the preferred provider networks available to the region's citizens. Conceptually the foundation should encourage an *ecosystems* approach to the long-term evolution of the region's healthcare delivery system. Specifically, the foundation could serve as the catalyst to bring the area's employers and health providers together in an effort to increase access to care.

New businesses that move into the region could opt to buy in to a savings account approach to health coverage where employers create an account with a pre-determined balance for each employee, and preventative services are

redeemed at the local free clinic and PATHS clinic. A similar model was implemented in Sevierville, Tennessee, through a partnership with Mountain Hope Good Shepherd Clinic and the local chamber of commerce. This option would be especially helpful for the growing Hispanic and Asian/Pacific populations in the region, as long as the participants have legal work permits.

Example 3: Support equality through the healthcare discussion.
The issue of underlying racial inequities arose in multiple interviews with persons from both races and at community meetings. What is recognized throughout the region is the reality of differences in health outcomes in the region and nation as documented in the mortality charts (pages 10-12) and Fact Sheets (Attachment 2). Also recognized is a general desire to engage more African-American leaders in health improvement planning and programs. A similar issue was raised about leadership development for women. The visibility and importance of the growing Latino population of the region is also needed. The foundation can employ a variety of strategies to assure that all voices are heard and that there is greater awareness of viewpoints of the many parts of the regional community. Using awareness of different viewpoints as a principle, the foundation could convene healthcare forums for the public to explore, define, and publicly recognize minority health and women's health issues.

Investment Strategy 2:

To support a process that has been successful in health initiatives that builds on existing community coalitions to extend and address regional health issues

There are no legally required health systems planning, operation, or regulation through which the parts and interests of the regional healthcare system act together. There is also no regional sense that one healthcare organization (e.g., hospital, health departments, etc.) is alone responsible for organizing such an effort. Parallel or consecutive operational cooperation among providers and agencies appears to be the accepted norm. Though this approach often leads to gaps or duplication of services, no major community complaints were uncovered. All providers appear to be very busy and willing to cooperate to address issues that may lead to regional strategic initiatives.

Inter-organizational efforts take time, directed effort, and focus to be successful. The Dan River Region has seen limited but successful efforts to promote such collaboration in addressing children's health, venereal diseases, and personal health knowledge. One recommendation is to build upon these existing coalition efforts and broaden their involvement and scope of interests. Funding could be made available to expand existing coalitions in several ways:

- ► Expand the number of participating health organizations,
- ► Extend the frequency of coalitions' events,
- ► Expand the geographic scope and community partners of coalition's events,
- ► Add new health topics, and
- ► Promote self-evaluation of process and impact of inter-organizational efforts.

Experience from two coalition theories may be helpful in framing this foundation strategy. The first explains how health organizations can become increasingly involved in coalition activities. The second describes how coalitions and communities can engage in meaningful, long-term relationships for change.

Collaboration is marked by a continuum of change strategies that provides a useful framework to guide increasing financial incentives from the foundation that could be linked directly to documented improvements in multiple organizations' commitments to working together through coalitions for regional health improvement. A useful description of the stages of collaboration that applies to coalition development by Himmelman includes:

- Networking–exchanging information for mutual organizational benefit;
- Coordinating–exchanging information and altering activities for mutual benefit and a common purpose;
- Cooperating–exchanging information, altering activities, and sharing resources for mutual benefit and a common purpose; and
- Collaborating–exchanging information, altering activities, sharing resources, and enhancing capacity of another for mutual benefit and a common purpose.

The following planning sheet could be used to help a coalition to identify its short-term activities and plan its long-term strategy for any particular regional health issue. Such a table could be produced for each regional health topic that becomes a target of coalition action. Long-term evaluation of this coalition strategy would be represented by "filling the cells" of the grid (i.e., greater documented movement toward inter-organizational collaboration and broadening of coalition approaches for change).

Planning Sheet for Promoting Regional Health Improvement through Collaboration
Regional health topic: Long-term goal (What will change?): Proposed coalition strategy (How will coalition help change to occur?): Identify which coalition collaboration stage would be met with this effort: ___ Networking–exchanging information for mutual organizational benefit ___ Coordinating–exchanging information and altering activities for mutual benefit and a common purpose ___ Cooperating–exchanging information, altering activities, and sharing resources for mutual benefit and a common purpose ___ Collaborating–exchanging information, altering activities, sharing resources, and enhancing capacity of another for mutual benefit and a common purpose For what purpose would funding be used by your coalition for this effort: ___ Expand the number of participating health organizations, ___ Extend the frequency of coalitions' events, ___ Expand the _____ and geographic scope, ___ Expand _____ and community partners of coalition's events, and ___ Add new health topics. Please describe what from of self-evaluation will be used to describe the process and impact of inter-organizational efforts:

A second theory of community partnerships is based upon the Give-Get Model (Behringer, et.al.) used in organizing long-term relationship development between institutions (e.g., universities) and rural communities. To be successful, community health improvement will require addressing the needs and interests of individual residents and their communities while simultaneously addressing health organizations' and health systems' needs. This promotes a theory of mutual benefits: that community health and health systems can gain when working together. Short-term projects often demonstrate this mutuality (e.g., development of fast-track emergency care for primary care problems to reduce hospital costs while reducing waiting time for patients, introducing Spanish translation services to reduce medical mistakes in healthcare and improving patient understanding, community-based screening to identify persons with undiagnosed diabetes, etc.). Long-term changes, however, in communities and their health systems will require a deeper sense of understanding of the community by health organizations and conversely of health organizations by the community. This change includes learning and respecting each other's values, interests, missions, and limitations.

The planning grid below has been used successfully as a tool to bring together community and institutional parties in the development of partnering relationships fundamental to long-term community health improvement activities. Representatives from community and from health coalitions are both asked to identify their contributions and to openly express their expected benefits of participating in a partnership. This approach frames the new relationship as the goal, not just success of a singular project or activity. Successful community partnerships are prone to be long lasting, adaptable, creative means to address broader agendas for change.

Planning Grid for Promoting
Community and Health Systems Engagement
in Regional Health Improvement

	Contributions	Benefits
Individuals/communities		
Inter-organizational health coalitions		

Three examples of this recommended approach can be drawn from findings from the Dan River Regional Health Assessment.

Example 1: Development of a mobile health mall

Two common and interrelated issues emerged from the assessment. First, communities consistently indicated a lack of access to or availability of basic health screening and education services. This was particularly true the further from Danville in the region. Second, many health professionals and organizations expressed a willingness to engage in outreach activities but were frustrated by not being able to successfully recruit community participants to their events. The creation of a multi-organizational "health mall" where residents could seek information, services, and counseling for multiple health issues was mentioned early in the assessment process and explored through leadership interviews. A blending of these thoughts results in the concept of a collaborative, mobile health mall.

1. Identify an existing coalition or form a new inter-organizational coalition to organize health providers to design and sponsor a mobile health mall.
2. Using regional health data, target individual knowledge, behavior, and screening needs amenable to short-term interventions (e.g., improve knowledge of weight and blood pressure as risk factors to diabetes, blood sugar screening, awareness of family history of diabetes, etc.).
3. Advertise regionally for community partners to co-sponsor the location of the mobile health mall in their communities. This could include businesses, sets of community social groups, church associations, school systems, and many others.
4. The coalition and each community sponsor would complete a planning grid to generate short term a list of contributions and benefits. A re-evaluation of the results of the mobile health mall would track actual contributions and benefits to the coalition and community and form the basis for long-term evaluation of new relationships and health outcome changes. Each mobile health mall event would receive a budget managed by the coalition.
5. A professional evaluation consultant would be made available to the coalition to design creative data collection instruments that would begin to profile personal and community health issues and statistics. These

instruments include lifestyle inventories (diet, exercise, tobacco use, etc.), reported prevalence of health conditions, and profiles of patterns of use of healthcare services.

Example 2: Obesity reduction competition

Perhaps the most frequently mentioned long-term health issue in the region is obesity. Comments about childhood obesity were noted in leader interviews and almost all of the focus groups and community meetings. Likewise, adult obesity was recognized as a major risk factor in the prevalence of chronic diseases and excess regional mortality rates. Clues to a regional approach were provided by school personnel, health professionals, and business and church groups. Drawing on the highly visible and popular weight loss competitions, the foundation could encourage development of a regional obesity reduction and prevention initiative.

1. Offer financial assistance for an existing coalition to expand or develop a new regional, multi-state coalition.
2. The coalition would develop its planning sheet to involve multiple health organizations in a public and personal health-education campaign. Funding would be made available to study the design of other community-based obesity initiatives. Participating health organizations in the coalition would be eligible to tap grant resources to improve their own obesity reduction and prevention resources.
3. The coalition would choose from among alternative natural social networks to support a pilot competition. These could include: churches, schools, businesses, and other social groups.
4. Design a competition among like units (e.g., among churches or schools) including the development of a community partnership planning grid. Financial incentives would be made available to engage coalition members and community organization in designing and conducting community-based weight loss related methodologies (e.g., exercise groups, obesity reduction groups, cooking classes, etc.).
5. Identify a community program evaluation team and support its consultation with a professional public health evaluator. Define financial or other awards for community groups that achieve selected outcome measures (total pounds lost, percent of participants who reduce weight, etc.). Note that engaging the coalition in evaluation will enhance its long-term capacity to engage in and be responsible for other future initiatives.
6. Expand the weight loss initiative in succeeding years by expanding the types of community social groups.

Example 3: Addressing risk reduction among the region's children

Strong belief exists that the key to improving the future health of the region lies in programs that target the region's children. The foundation should seek partners that have a common vision for improving children's health. Target areas for partnerships include but are not limited to: exercise, diet, tobacco use prevention,

and drug abuse prevention. Potential partners include school systems, youth sports leagues, 4-H clubs, and faith-based groups.

While partnering with local school systems is a logical technique, partnerships should also target organizations that provide support for improving the health of the child's family unit. As was pointed out in one community meeting, it is not effective to teach a child about making good dietary choices if the parents are not supporting these choices with healthy options at home.

A realistic concern for some leaders in the region is those populations without the economic capital to provide their children with healthy options or the time to be in the home when their children are not in school. In these instances, partnerships with auxiliary organizations prepared to offer children a place to meet after school with healthy snacks, infrastructure, and staff with the training to guide youth to successful academic outcomes are needed; a regionally relevant example is the church-based tutorial program.

Investment Strategy 3:

To improve access and correct use of primary care and preventive services

Every community has issues regarding availability and access to health services. A full range of health services is rarely accessible to all in communities. Multiple segments in the Dan River community indicated different types of barriers: distance for those in the rural parts of counties; lack of transportation among the elderly; limited options and unfriendliness among some providers for those who are uninsured or who have limited English-speaking abilities, confusion about available services, and where and when to use them; and recent loss of personal physicians because of retirement, death, or simply leaving the community. The keystone to any health system is being able to use preventive and primary care services, the departure point for use of other specialized and hospital-based care. The average American uses healthcare services about four times each year, with three of four visits to physicians' offices, and almost 60% of those to primary care providers including physicians and nurse practitioners. There is an average of 119 hospital discharges per year for every 1,000 persons. Increased emphasis on timely and appropriate use of healthcare including preventive services and screenings has been shown to improve population health. Promoting this use of care and reducing the barriers to care is a fundamental approach to be considered by the foundation.

Example 1: Help those in need to find and use care correctly.
The Health Assessment uncovered many comments about residents' inabilities to find sources of care, or once seen, to follow complex directions. As indicated by one well educated health professional in a community meeting, even with a healthcare background, sometimes the health system is hard to navigate. This inability to follow directions is costly to the patient. The financing system and the

health system frequently absorb the costs of revisits of more serious nature. One approach being modeled for specific diseases (e.g., cancer) and health conditions (pregnancies) is the use of **patient navigators**. These persons are provided a range of training that enables them to be helpers, educators, advocates, and sometimes counselors in assisting patients with obtaining positive outcomes from their care. Patient navigators have been employed by hospitals, public health departments, churches, insurance companies, and special programs. Since navigators are designed to focus on a positive outcome of the process of care and long-term health improvement and cost savings, external support is frequently required to launch and evaluate the effectiveness of such programs.

Example 2: Enable region-wide attention to health screening.
Communities across the country have used a variety of approaches to promote public attention on health awareness. Health behavior research indicates that personal adoption of new, healthier behaviors can be positively influenced by community, social group, and family attention. Campaigns to "know your numbers" regarding diabetes, promotion of community recreation resources for fitness, and use of health screenings to protect against cancer all find public favor when linked to persistent champions and broad-based organizational support. The foundation could support development of a broadly based theme of use of periodic health and disease screening. Using the health mall idea that emerged from assessment discussion, multiple health providers and community organizations could sponsor and schedule a mobile screening program to offer low cost or no cost screenings to the public throughout different locations in the region. A standard set of measurements could be offered (e.g., blood pressure, blood sugar, body mass index, dietary recalls to calculate caloric intake versus expenditures, etc. These measures could be supplemented by population-specific screenings designed to address identified needs (sickle cell screening in African-American community, balance tests for the elderly, etc.). Repetition, visibility, and reporting and explanation of general findings by known and trusted health professionals would increase public awareness and long-term utilization.

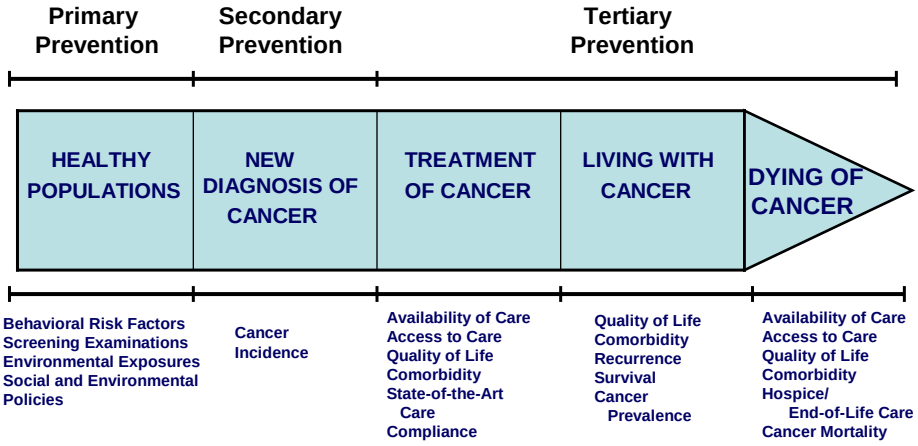
Example 3: Promote public visibility for available free and reduced care.
The region is fortunate to have multiple organizations willing to provide care for the underserved and uninsured. The assessment identified that in addition to a broad array of services available through the public health departments in Pittsylvania (including offices in Danville and Chatham) and Caswell counties, Danville has a well publicized and appreciated free clinic. A community health center presence with accessible primary care services using a sliding fee schedule is in transition. A large, federal grant to support services is now funded for Piedmont Access to Health Services (PATHS), an organization making the transition in its mission from arranging access to specialty medical care services for the uninsured to directly providing primary care services to patients regardless of ability to pay or insurance plan. PATHS has received approval to develop a new practice site in Chatham. Another well established community

health center is located in Yanceyville, the Caswell Family Medical Center. The hospital has also reported that a large portion of the emergency department visits are for primary care purposes. This parallels national findings that report this very expensive and inappropriate avenue of care is used by many uninsured. Members of the region's Latino community report needing to seek services out of the region simply because of a lack of skilled interpreters at existing sources of care. The assessment did not question the service capacity of the sources of care in the region. Despite the availability of free or reduced services for the uninsured and low income of the region, many persons, in the community meetings in particular, were unaware of these sources of care.

The foundation could assist both the providers of care and residents of the region through marketing assistance to the organizations by convening discussions about "systems of care" for the underserved. Continuum-of-care models are commonly used to produce a resource inventory of services. Continua can be used to identify service gaps and capacity issues, clarify access and acceptability issues, and view the "health care system" from the perspective of the region's healthcare providers and/or the residents of the region. Different topics could be selected periodically.

Use a National Framework for Cancer Surveillance

Recognize "upstream factors" in development of cancer and "downstream factors" in health services that may be different for Appalachian populations.



From: Wingo, Phyllis A., Howe, Holly L., *et al.* (2005) A national framework for cancer surveillance in the United States. *Cancer Causes and Control* **16**: 151-170.

Investment Strategy 4:

To develop new opportunities which promote healthcare-related employment and expansion of regionally responsive services

Example 1: Home and community based care services for the homebound elderly

The largest demographic growth age group in the United States is those age 75 and older. This group of persons will require medical care but will also need supplemental services provided in their homes and communities in order to maintain adequate qualities of life. Several leaders explained the preference of regional elders to stay in their homes in their later years rather than use institutional services (nursing homes, assisted living). Organizing, training, and providing personnel for home and community-based services (e.g., chore services, nurses aides, and respite care for caregivers) could be supported as a regional initiative. New workers could be found in the pool of unemployed or newly retired. Supplemental health-related training could be supported through aging service programs and community colleges.

Example 2: Professional translator services

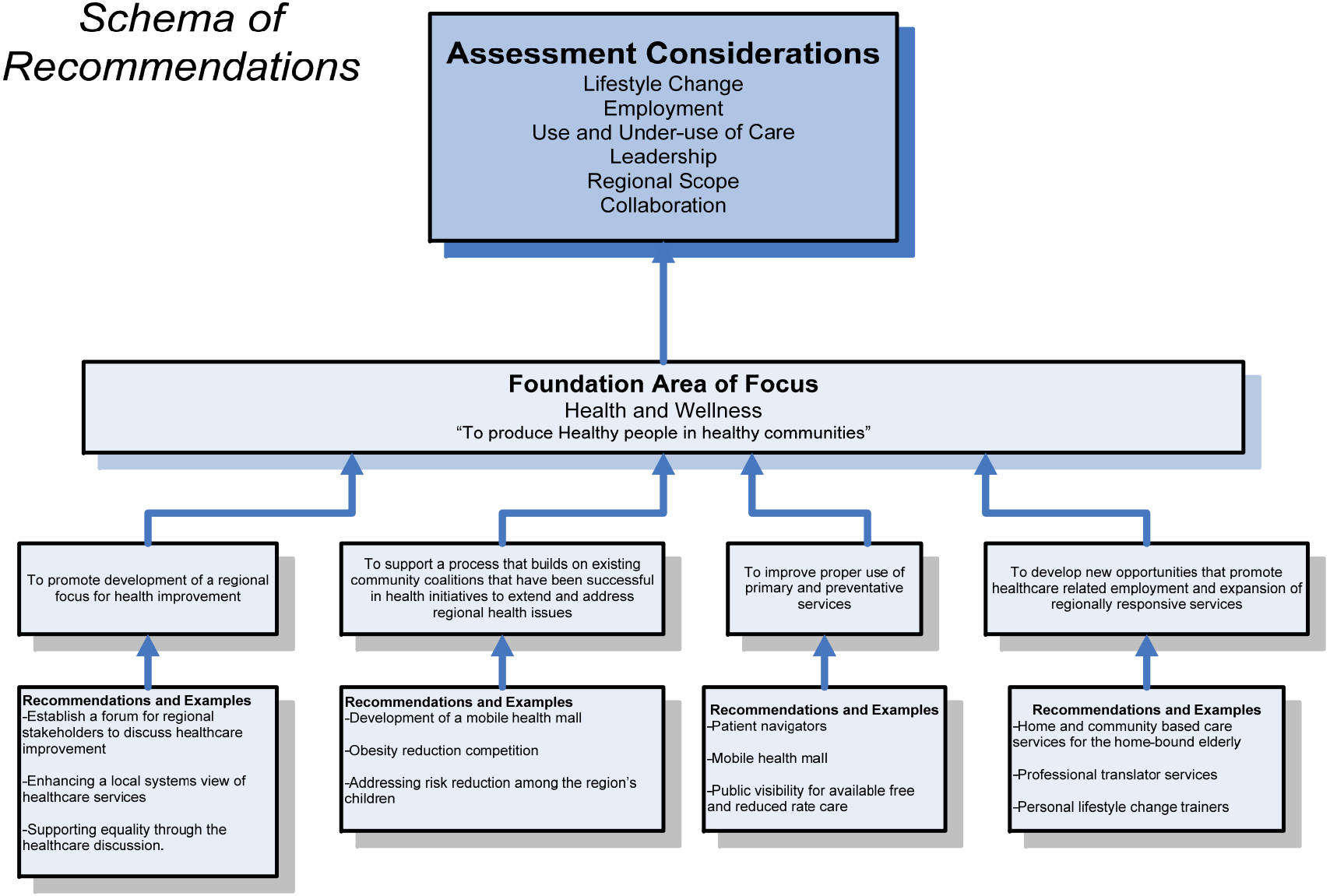
The size of the region's Spanish speaking community is growing. The residents encounter a major barrier to care and potential medical mistakes in situations evolving from health providers that do not speak Spanish with patients. Throughout the United States, communities are adapting by hiring Spanish-speaking employees while the new, resident population improves its English-speaking capabilities. The foundation could support a short-term cohort training program for Spanish-speaking residents who wish to seek employment in the healthcare industry by providing financial incentives to both Latino residents and health-provider organizations for classroom and clinical site training. An alternative is to provide financial support to allow a cadre of prospective interpreters to achieve state and/or national certification. The certified interpreters would become part of a trained and desired labor pool or could be required to repay the foundation's support through reduced price interpretation services for health providers throughout the region.

Example 3: Personal lifestyle change trainers

Strong belief exists that the key to a healthier future in the Dan River Region is through long-term lifestyle change. Many persons in the region were familiar with personal athletic trainers and weight loss clinics. These services typically address only a small portion of the lifestyle changes that are required. A more broadly defined "personal lifestyle change trainer" expands this concept to address a full range of personal lifestyle issues that will impact individuals' and families' future health. Though the assessment found great favor in helping children to not choose unhealthy behaviors (tobacco use, limited personal exercise, poor eating choices, use of dangerous substances), adults throughout the region also noted their needs to change. There are a limited number of

persons in the region truly trained in behavior change. These are persons with both specific content knowledge (diets for diabetes, physical exercise skills) aligned with an awareness of human behaviors and their relationships to family and social groups. The common perception is that these services are now only available in relatively expensive, professional settings. The foundation should seek a set of partners who can develop a broad-based training program for persons who could become skilled and available to begin to address exercise, diet, tobacco, and other substance use prevention in community-based settings. These settings could include school systems, youth sports leagues, 4-H clubs, and faith-based networks. The family should be seen as the critical unit of practice, since only at the family level can long-term behaviors including children's eating habits and families' dietary choices be addressed and reinforced.

Schema of Recommendations



Attachment 1:
Focus Group and Community Meeting Summaries

Inter-organizational Health Focus Groups

Caswell County

The Caswell County group was conducted for 90 minutes at the Caswell County Health Department. Thirteen persons attended including three primary care providers from the local community health center, health department, and a hospital primary care practice. School nurses were also present. Members actively participated in the focus group questions with nearly all returning SWOT analysis and question sheets. Providers feel less associated with Danville, although evidence was continuously presented about medical trade referred to Danville for care. All cited rural locations, lack of community response to health education, and obesity as primary issues. The group discussed the diabetes fact sheet.

Danville-Pittsylvania County Community Health Council

The Danville-Pittsylvania County Community Health Council has existed since 1999 when it formed to provide an effective, community-based educational response to the region's notably high syphilis rate. The coalition is uniquely diverse involving a large number of health provider and health-related organizations including the hospital. Twenty persons attended at the specially called luncheon meeting at Cherrystone Association in Ringgold. Most attendees were direct service providers who daily link those in need to health and related services. Traditional lifestyle issues were identified as risks, and mental and dental healthcare shortages were cited as issues that need to be addressed. During the 75 minute meeting, the council discussed the infant mortality issue.

Danville Regional Medical Center Board of Directors

Ten members of the board of directors of the hospital, now serving as an Advisory Board to the LifePoint owners, met in board session with the Assessment Team. Additionally, a full complement of hospital administration and LifePoint executives from Nashville,Tennessee, attended. The role of the hospital concerning medical care and the community's health was discussed during the 50 minute session. Only a few inter-organizational collaborations were identified. The fact sheet selected to elaborate was coronary disease, reflected in the high mortality rates for cardiovascular disease and diabetes.

Community Meetings

Caswell County meeting hosted by Piedmont Community College

Representatives from a broad cross section of organizations attended the Caswell County meeting. While the twenty-two attendees represented nine community agencies, the attendees were generally over the age of 50. The group's ethnicity was primarily Caucasian but included four African-American participants. Fifteen attendees

returned SWOT analysis and question sheets. Those attending appeared to be a part of three social networks in the Caswell County area: the community college, the senior center, and the Caswell County Medical Center. The group addressed diabetes during the 65 minute meeting.

Chamber of Commerce Community Meeting
The Chamber of Commerce meeting represented board members and one staff person of the combined Danville-Pittsylvania County Chamber of Commerce. Twelve members attended the 40 minute Assessment Team session added at the end of a regular board meeting. Members represented small business interests, continuously citing both business and broader community perspectives. A county-wide picture emerged with participants acknowledging that the northern part of the county, more rural, causes residents, because of its remoteness, to experience a lack of health services access as well as a lack of transportation for health services. Lifestyle issues of the young and care for the elderly were important group issues while heart disease was the session focus.

Cherrystone Baptist Association
An association created by the African-American community meant the majority of the Cherrystone Baptist Association appeared to be African-American, male and female, predominantly older than 50 years. According to Rev. Delaware Clark, the participants were invited through the use of a well-balanced network extending throughout Danville, Pittsylvania, and Caswell Counties. Targeted community members were known to have knowledge of the health needs of their local congregations. Following a brief introduction, the larger body was split into three smaller groups with a facilitator and an MDC, Inc. appointed documentarian. During the 90 minute meeting, each group was asked four questions; then fact sheets were distributed to facilitate the concluding discussion. Data from the meeting was discussed at MDC, Inc. the following morning with all three facilitators and documentarians present.

Displaced Workers
Displaced workers were hosted by Danville Community College (DCC). The participant sample was self-selected from a larger population of 400 DCC students whose North Atlantic Free Trade Association (NAFTA) benefits included two years of associate-level training. Approximately 60 percent of the participants were African-American and 40 percent Caucasian with gender distribution equally balanced. Most participants attended to seek information about health insurance access. Although there was not enough time in the 60 minute meeting to discuss fact sheets, the group did talk at length about access to healthcare in the displaced worker community. They specifically identified high blood pressure, diabetes, and adolescent AD/Bipolar disorder as conditions for which they have been unable to afford necessary treatment once diagnosed.

Latino Community Meeting
After church services at Sacred Heart Catholic Church in Danville, 50 adults of almost 500 church attendees stayed to participate for 60 minutes. The meeting was organized

by the only Latino health promoter in the region (retired school teacher employed by church). Participants were young families, who predominantly identified Mexico as their country of origin. Issues of access to health services dominated the discussion for this growing population group which numbers an estimated 3,000 persons excluding the migrant farm workers who come annually to the region through the federal labor program.

Rotary Clubs

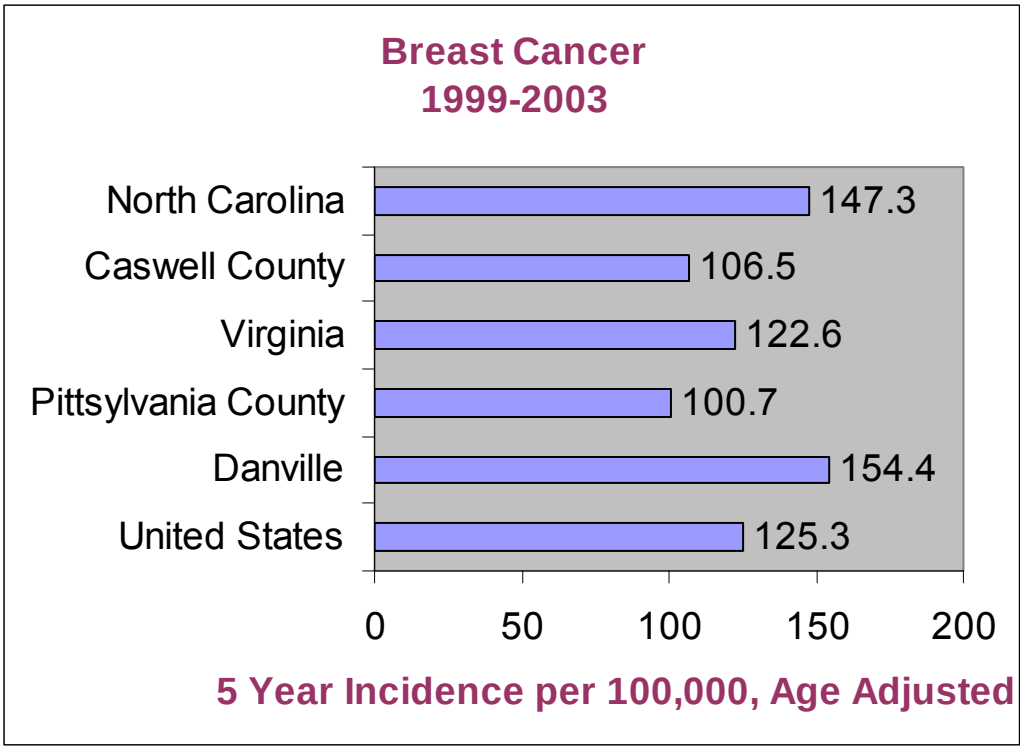
The group was made up of members of two Rotary Clubs from the Danville/Pittsylvania area and one from Caswell County. Nine Rotarians representing diverse business interests in the region attended this dinner meeting held at the Institute for Advanced Learning and Research. This meeting provided more insight into the relationship between Danville/Pittsylvania County and Caswell County. While seven of the eleven attending submitted SWOT analyses, only three indicated a willingness to partner with the foundation to improve the health of the Dan River Region. The Rotarians discussed both coronary disease and births to unwed mothers.

Attachment 2
Fact Sheets on Health Issues

BREAST CANCER

While age-adjusted incidence rates for breast cancer are declining nationally, in Virginia and North Carolina, the rates for Danville and Caswell County are increasing.

Breast cancer incidence rates for new cases in Danville virtually doubled between 1999 and 2003. The rates in Pittsylvania County followed national trends by declining during the same time period.



Risk factors associated with breast cancer include gender, aging, genetics/family history of breast cancer, and race. The following are lifestyle related risk factors:

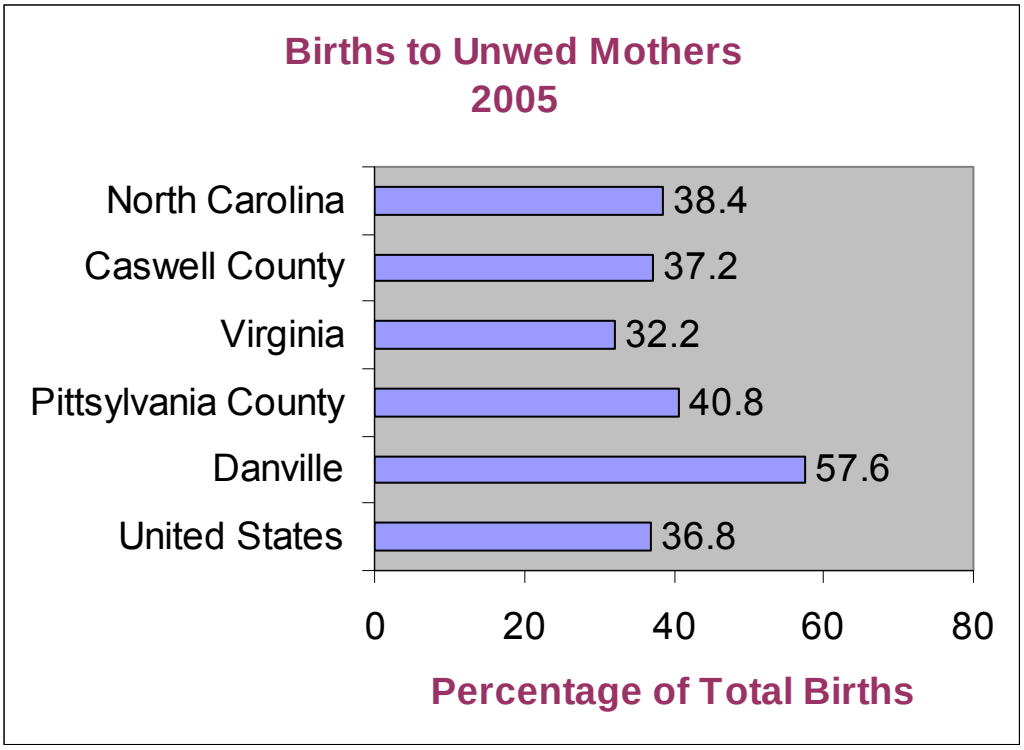
1. not having children,
2. oral contraceptive use,
3. post-menopausal hormone replacement therapy,
4. alcohol use, and
5. high fat diets.

Sources: North Carolina State Data Center, Virginia Cancer Atlas, American Cancer Society

BIRTHS TO UNWED MOTHERS

Births to unwed mothers in the Danville/Pittsylvania region are considerably higher than those of Virginia and the U.S. While still higher than the U.S., Caswell County's rates are slightly lower than those found in North Carolina.

Births to unwed mothers across the U.S. have increased approximately 10 percent; the rates in Pittsylvania and Caswell counties increased approximately 20 percent from 2001 to 2005. Danville's has remained constant but is 78 percent higher than Virginia and 57 percent higher than the U.S.



Risk factors associated with children born to unwed mothers include low birth weight and increased infant mortality.

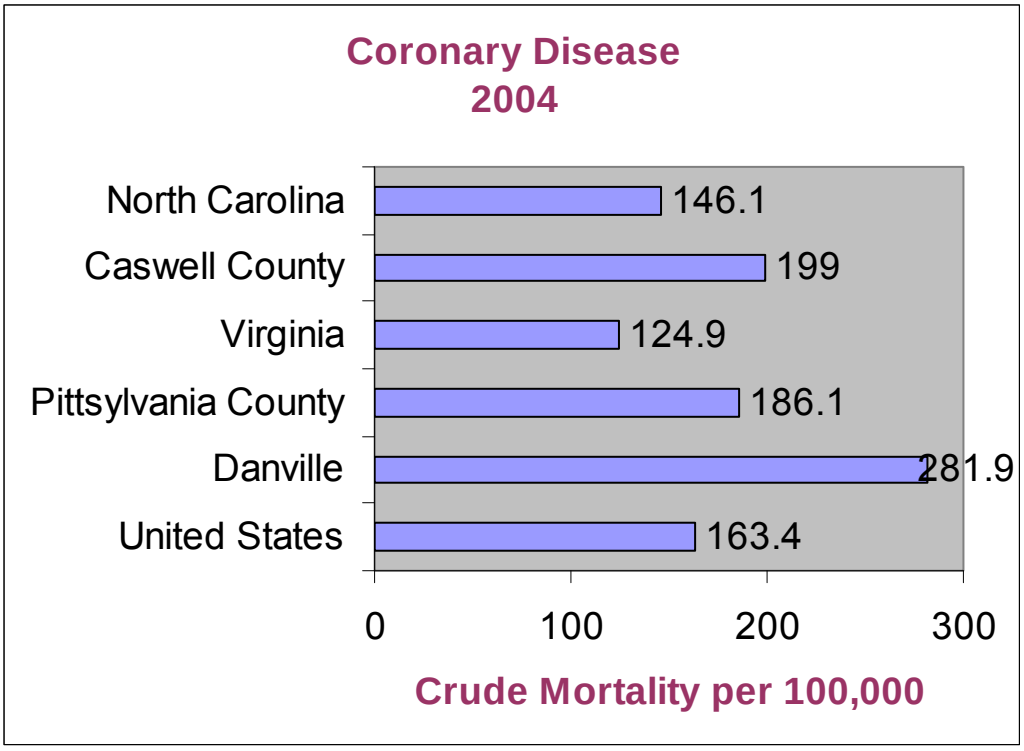
Additional factors: Data indicates unwed mothers do not seek prenatal care until late in their pregnancy, possibly attributable to mothers having financial stresses.

Sources: North Carolina Department of Health, Virginia Department of Health, CDC

CORONARY DISEASE

While mortality rates per 100,000 from coronary disease have declined in the Danville/Pittsylvania/Caswell region, mortality rates exceed those of Virginia, North Carolina, and the U.S.

The mortality rate for coronary disease for Danville declined from 2001 to 2004 to 281.9 deaths per 100,000; it remains above national and state rates. While also declining during the same period, the rate for Pittsylvania County is 186.1 while the rate for Caswell County is 199.



Risk factors associated with coronary disease include:

1. tobacco smoke,
2. low physical activity level,
3. high blood pressure,
4. obesity, and
5. stress.

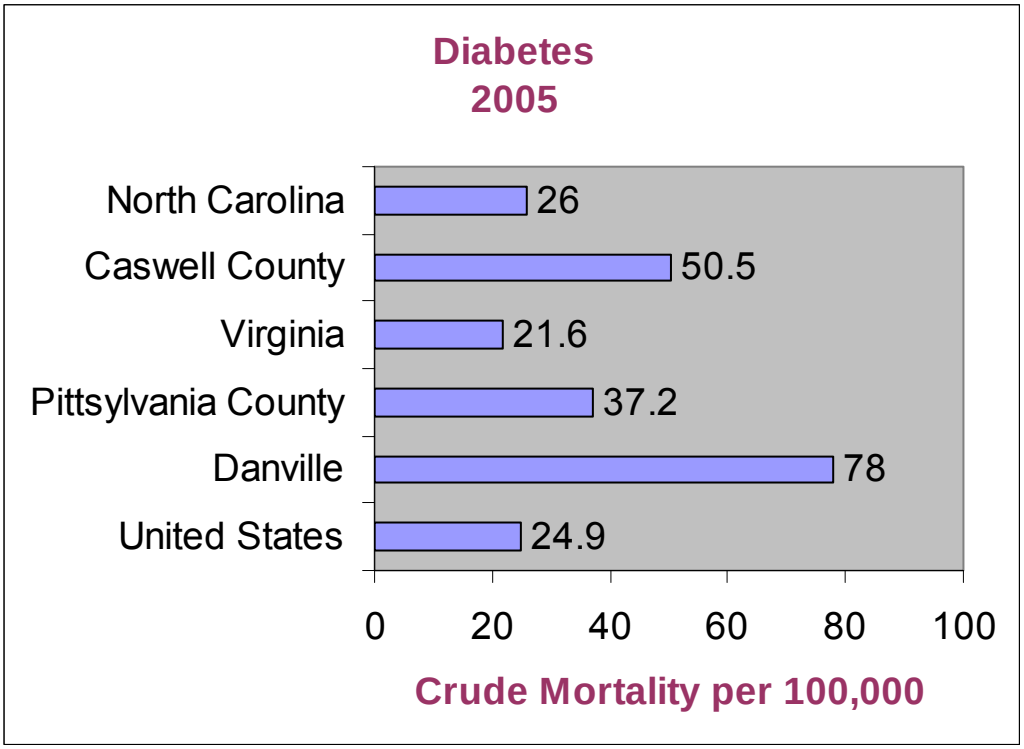
Additional Facts: Because of their increased risk of diabetes, African-Americans, Hispanic Americans, and Native Americans all have higher rates of coronary disease.

Sources: www.wonder.cdc.gov, American Heart Association

DIABETES

While mortality rates per 100,000 from diabetes have remained constant in Virginia, North Carolina, and the U.S since 2001, mortality rates for the Danville/Pittsylvania/Caswell region increased 50 to 100 percent during the same period.

Danville's diabetes mortality rate increased from 39.8 to 78.0 deaths per 100,000 from 2001 to 2005. Pittsylvania County's mortality rate increased from 25.9 to 37.2 during the same period. In Caswell County, the mortality rate increased from 33.7 to 50.5 during the same period. Mortality rates in the region were well above the rate for the U.S., North Carolina, and Virginia (approximately 25).



Risk factors associated with diabetes include:

1. obesity,
2. low physical activity level, and
3. poor diet.

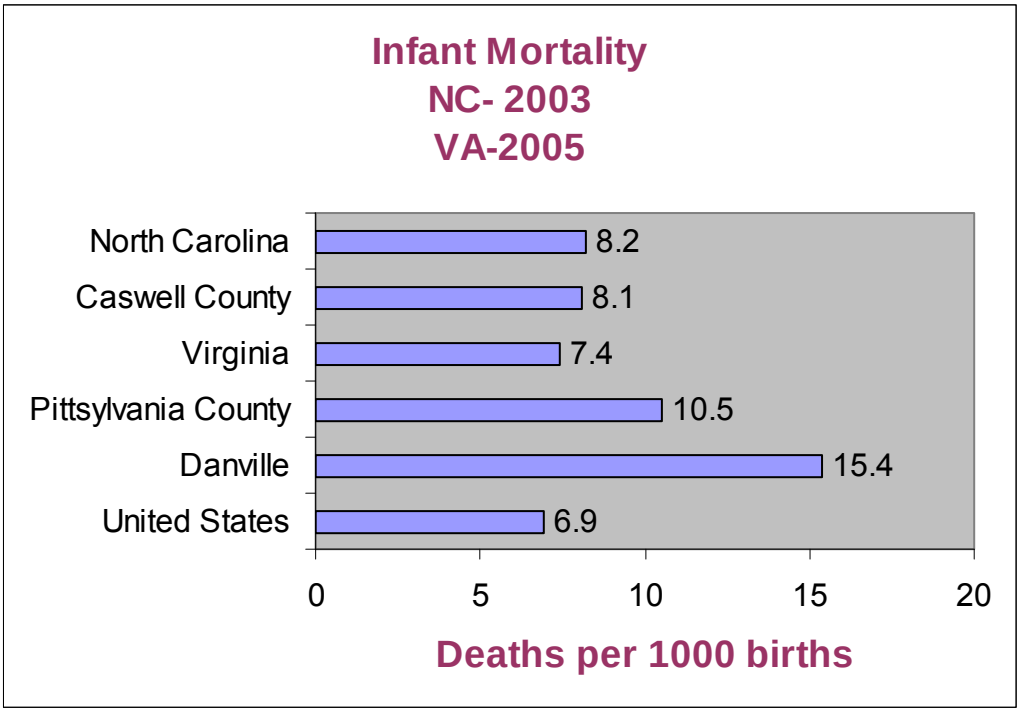
Additional Facts: African-Americans, Hispanic Americans and Native Americans all have higher rates of diabetes.

Sources: http://www.schs.state.nc.us/SCHS/deaths/dms/2001-2005/caswell.pdf http://www.vdh.state.va.us/, http://www.schs.state.nc.us/SCHS/deaths/dms/2005/northcarolina.pdf, Medline Plus

INFANT MORTALITY

The death rate among infants in the Danville/Pittsylvania/Caswell region is higher than that of Virginia or the United States.

Infant mortality in the U.S. has remained constant at approximately 7 deaths per 1,000 births; however, the infant mortality rate during 2005 in Danville was 15.4/1000 births, in Pittsylvania County 10.5/1000 births, and in Caswell County 8.1/1000 births.



Risk factors associated with increased infant mortality rates include:

1. lack of available of prenatal care,
2. failure to use available healthcare resources,
3. late prenatal care, and
4. lack of health insurance.

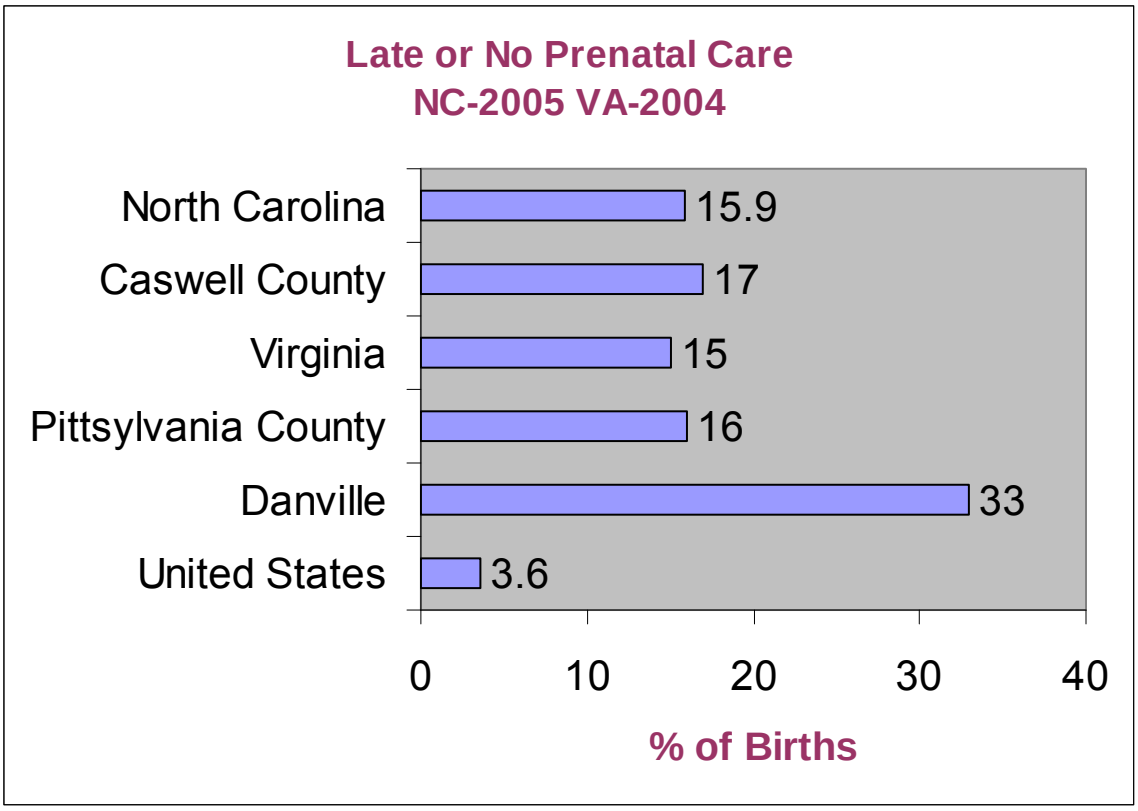
Additional Facts: While infant mortality statistics are not available by ethnicity for the Danville/Pittsylvania/Caswell area, nationally the infant morality rate for African-Americans is double that of the general population (14 deaths per 1,000 births versus 7 deaths per 1,000)

Sources: Danville-Pittsylvania Department of Health, North Carolina State Data Center

LATE OR NO PRENATAL CARE

Late or no prenatal care in the Danville/Pittsylvania/Caswell region is approximately four to ten times higher than that of the U.S. as well as higher than Virginia or North Carolina.

The percentages of mothers who received no prenatal care or no prenatal care before the third trimester has remained constant in the U.S. at 3.6 percent; however, the percentage of mothers who received late or no prenatal care in Danville was nearly ten times the national average. Late or no prenatal care percentages in Pittsylvania and Caswell counties were above the state averages and significantly higher than the national rate.



Risk factors associated with late or no prenatal care include:

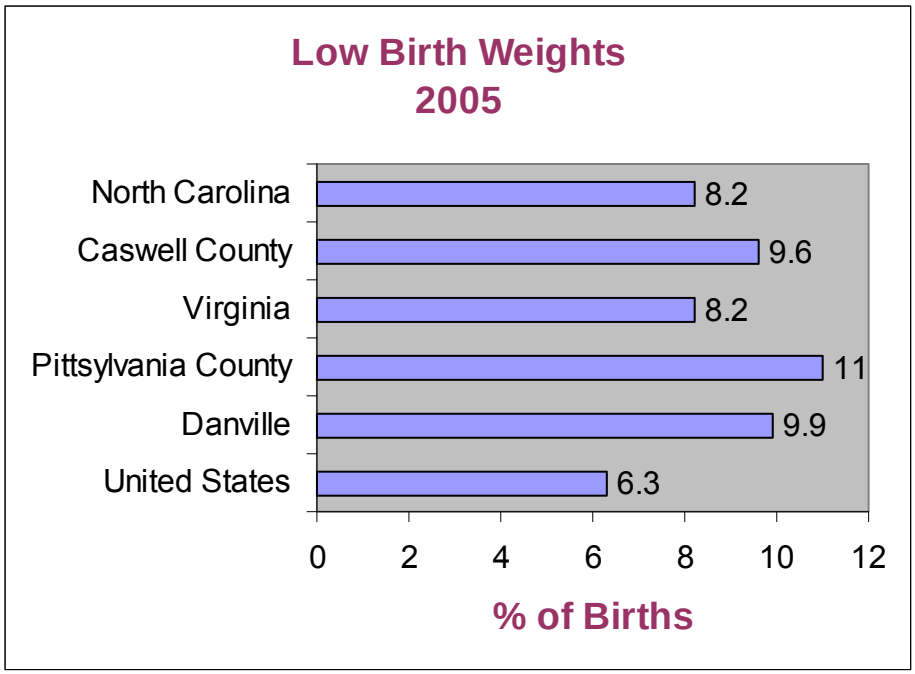
1. lack of available of prenatal care,
2. lack of use of available health resources,
3. age of mother at time of baby's birth, and
4. lack of health insurance.

Sources: Danville-Pittsylvania Department of Health, North Carolina State Data Center, CDC.gov Vital Statistics Reports Vol. 55 No.1

LOW BIRTH WEIGHT

Low birth weight among infants in the Danville/Pittsylvania/Caswell region is higher than that of Virginia, North Carolina, or the United States.

The percentages of births categorized as low birth weight in the U.S. has remained constant at approximately 6 percent; however, the percentage of low-birth-weigh babies in 2005 in Danville was 9.9 percent, in Pittsylvania County, 11 percent; and in Caswell County, 9.6 percent.



Risk factors associated with low birth weights include:

1. lack of available prenatal care,
2. lack of use of available health resources,
3. late prenatal care,
4. cigarette smoking among expectant mothers,
5. alcohol use among expectant mothers,
6. age of mother at time of baby's birth, and
7. lack of health insurance.

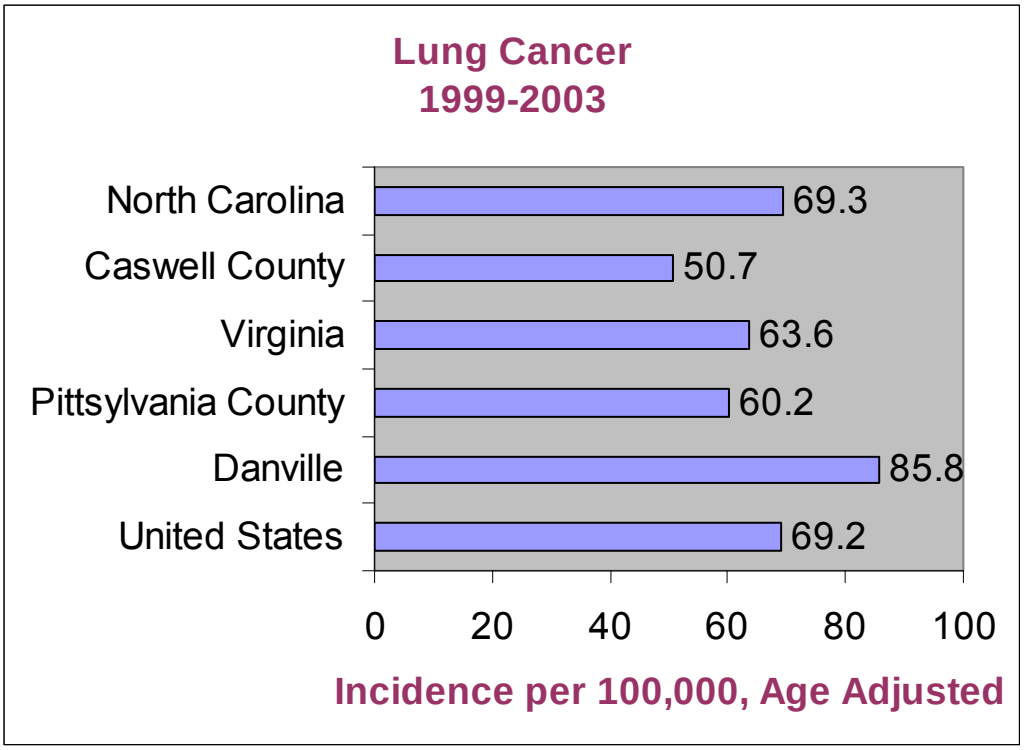
Additional Facts: From 2001 to 2005, the percentage of births categorized as low birth weight in Pittsylvania County has increased from 7.4 percent to 11 percent.

Sources: Danville-Pittsylvania Department of Health, North Carolina State Data Center, CDC.gov Vital Statistics Reports Vol. 55 No.1

LUNG CANCER

Despite smoking rates that are similar to those found in Virginia, the incidence rates for lung cancer in the Danville region are considerably higher. Smoking rates are declining nationally, in Virginia, and in North Carolina, but the rates for Danville are increasing. Rates for Pittsylvania and Caswell Counties have remained essentially constant from 1999 to 2003.

Lung cancer rates for Danville increased 20 percent from 1999 to 2003 (71.5-85.8 incidences per 100,000).



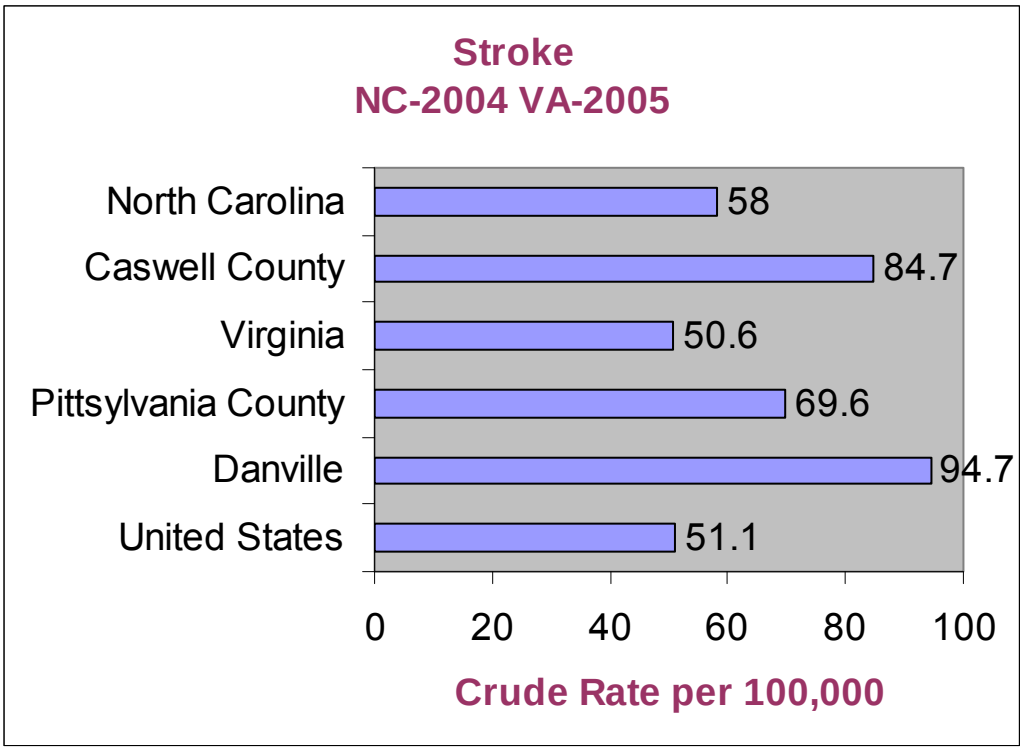
Risk factors associated with lung cancer include genetics and a family history of lung cancer. The following are lifestyle related risk factors: tobacco smoking, asbestos, radon, cancer causing agents in the workplace, marijuana, recurrent inflammation, occupational exposure to certain minerals, Vitamin A deficiency or excess, and air pollution.

Sources: Behavioral Risk Factor Surveillance System, Virginia Cancer Registry, Health-Alliance.com, North Carolina Department of Health

STROKE

While incidence of strokes is declining in Virginia, North Carolina, and the United States, the incidence is increasing in the Danville/Pittsylvania/Caswell region where incidence rates exceed those of Virginia, North Carolina, and the U.S.

The stroke rate for Danville increased from 84.7 to 94.6 from 2000 to 2005, remaining above national and state rates. Pittsylvania County's rate also increased during the same period (58.3-69.6). While still above state and national rates, Caswell County's stroke rate declined from 110.6 to 84.7 during the 2000-2004 period.



Risk factors associated with strokes include: tobacco smoke, low physical activity level, high blood pressure, obesity, and excessive alcohol intake.

Additional Facts: Because of their increased risk of high blood pressure, African-Americans and Hispanic Americans have higher rates of stroke.

Sources: www.wonder.cdc.gov, StrokeCenter

Attachment 3

Danville/Pittsylvania/Caswell Region Health Needs Assessment SWOT Analysis

Strengths

While the community's perception of Danville Regional Medical Center is certainly a threat, the medical center is an asset and strength for the Dan River Region. DRMC has been a fine facility in the past; there is no reason to believe it can not continue to be in the future. Along with the hospital's strengths, community members were both aware of and appreciative of the efforts of community leaders regarding improving access to opportunities for physical activity, specifically the River Trail. Along with the trail, local community centers were mentioned often. These three present resources are community strengths the foundation can effectively use as building blocks.

Weaknesses

The foundation faces the difficult task of balancing the community's current healthcare needs with needs that will improve the healthcare of the region for future generations. Community residents are concentrated around two centers of need: those who are desperate for current access to healthcare (best exemplified by a woman who said her hypertension had gone untreated for nearly two years, because she could not afford the medication) and those who currently have access/gateway to treatment options and are focused on improving their long-term health status.

Members of the three communities within the Dan River Region have limited experience working together to focus on improving a specific health issue. The community coalition addressing the recent STD outbreak is one very good example of a successful community response to an identified health problem.

Opportunities

Community members offered suggestions for specific projects indicating that opportunities exist for the foundation to partner with existing networks of community leaders and community organizations to improve regional health. There are several faith-based coalitions/networks in the region that appear to work well when addressing common goals.

Threats

Several long-term threats to the health of the Dan River Region's residents exist. While DRMC is a community asset, the reputation of the hospital in the community has suffered. DRMC is experiencing *leakage* of patients for several reasons. Community members believe that DRMC and its network of physicians are neither a part of the preferred provider network for Blue Cross/Blue Shield of North Carolina nor a part of the preferred provider network for United Healthcare. Additionally, community members elect to leave the immediate Danville/Pittsylvania/Caswell region for care because of

personal choice/preference. Attendees at community/focus group used terms such as "pushed away and unwelcome" to describe their interactions with providers. Members of the Latino community prefer to seek care where interpreters are available.

Community members identified several behavioral factors they believe are threats to the long-term health of their community. Among these factors are behaviors that are steeped in the community's heritage (rural diet, smoking) and emerging behavioral factors such as drug abuse.

Attachment 4
List of Community Health Issues

Personal health status issues	**Community services and health systems issues**
Rural diet	Lack of affordable health insurance
Tobacco use	Incorrect diagnosis
Obesity, both childhood and adult	Lack of access to primary care/specialty medical care
Lack of risk reduction behaviors	Personal and public transportation
Decline in prevalence in traditional family	Cost of healthcare and prescriptions
Results of textile and tobacco cultures	Lack of education about good health, good diets, and appropriate exercise
Environmental factors	Lack of economic incentives or payments for care-coordination services.
Choosing not to use heath services or not knowing when to seek help	Insufficient health-screening opportunities
Stress and economic factors can contribute to poor health	Perceived quality of care issues and turnover of personnel at hospital
Racial differences in mortality for certain causes of death	Lack of targeted efforts to address healthcare disparities and medical availability
Perinatal issues such as high/low birth weight babies and infant mortality	Care for younger persons
Diabetes Mellitus	Insufficient civic and social organizations and leaders in the region
Lack of awareness of value of health screenings	Pronounced shortage of mental health providers and services
Self-medication issues	Large geographic span of Pittsylvania County with limited public transit system
Health illiteracy as a symptom of overall high rates of functional illiteracy	Recent loss of physicians and new referral patterns for inpatient care for local patients
Low economic status leads to underuse of healthcare services and delayed diagnosis and care.	Philanthropic history of faith-based and “giving” community
High prevalence of births to unwed and teen mothers and related social and family rearing issues	Skin color, economic depression, and low self-esteem intensely interconnected
Unemployment and low disposable income leads to depression and psychological and physical health issues.	Increasing attention of regional churches to health issues
Health providers perceive apathy regarding use of healthcare and	Unsuccessful efforts to involve and educate regional population about

awareness of health-care issues throughout region	personal health issues
Chronic sinus problems depending on the season--Northern and Southern pollen overlap in Danville	Shortages (waiting times) for services such as renal dialysis care
Inability of displaced workers to find sources of healthcare or affordable health insurance	High cost of medications compared to regional disposable incomes
Seemingly high rates of cancers (e.g., breast)	Inability of residents to find and access general nutrition counseling

Attachment 5
Leadership Interview Questions
Community Health Assessment

1. Where do you live? How long have you lived in the region? Have you also lived and worked elsewhere? What type of work did/do you do?

2. What civic and social organizations do you belong to? Have you ever represented Danville/Pittsylvania/Caswell counties outside of the region?

3. When compared with Lynchburg/Greensboro/Raleigh-Durham, would you say that your community's health is poorer, the same, or better here in Danville/Pittsylvania/Caswell counties? Why?

4. The Danville Regional Foundation was established from the proceeds of the sale of the hospital. There appears to be a great deal of controversy in the community about this foundation's creation. Would you like to briefly share any thoughts?

5. What do you consider the most significant personal health issue(s) faced by the citizens of Danville/Pittsylvania/Caswell counties?

6. How would you rate the quality of life *(the overall health, welfare, and education)* for residents of Danville/Pittsylvania/Caswell counties or your community? What are the most important factors that influence quality of life in your community? *(What factors influence the health of the community and its residents?)*

7. For example, some have suggested that a health mall would improve the quality of life in the community; could you comment on this concept

8. Are there people in your community for whom the quality of life is different? Please explain.

   What do you consider to be the positive attributes of Danville/Pittsylvania/Caswell counties?10.

9. What are some health problems that could be improved in Danville/Pittsylvania/Caswell counties?

10. What organizations and groups should be included in the Foundation's efforts to promote healthy people, healthy communities? Why?

11. What is the biggest health threat to the people in Danville/Pittsylvania/Caswell counties?

12. Please identify the names of five other persons you consider to be leaders who we might contact to interview? These can be people who hold formal positions of leadership or people who are known for “getting things done in and for their communities.”