May 2010

Broomfield Community Health Assessment

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As part of Colorado Public Health Reauthorization Act, all Colorado health departments are required to develop a public health performance improvement plan. To accomplish this, the Broomfield Health and Human Services Department will utilize the Mobilizing for Action through Partnerships and Planning process over the next 12 to 18 months. Their objectives include identifying and prioritizing public health issues for the City and County of Broomfield; engaging all of the Public Health and Environment Division staff in planning and developing action cycles to address strategic issues; and building relationships, collaboration and partnerships with other city departments and community stakeholders.

Students from the Colorado School of Public Health (CSPH) assisted in the Community Health Assessment in Broomfield. This report explains the methods, findings, discussion, limitations and recommendations of the health assessment.

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ACKNOWLEDGEMENTS

Students of the Colorado School of Public Health would like to acknowledge the Broomfield County Health and Human Services (BHHS) under the direction of Jeff Stoll, for their support in the conduct of this community health assessment. The department supported the students in identifying key informants within the community as potential interviewee and/or focus group subjects, providing space and nourishment for students, faculty, community members, and financing the purchasing of materials needed in the assessment. We greatly appreciated all the support from BHHS staff members.

We also would like to thank Judy Baxter, MA and Erin Seedorf, MPH for their support and help in the development of appropriate data collection tools and advise on the overall methodology of the assessment.

Executive Summary

Project Goals

The goals of this project were to identify strengths and resources within the community, prioritize health challenges and issues, and identify forces of change within the community for the City and County of Broomfield.

Project Partnership

The Broomfield Public Health and Environment Division, students, and faculty from the Colorado School of Public Health (CSPH) have collaborated to assist in a community health assessment.

Methods

Data Collection
The study began with the analysis of Health and Human Services Indicator Study 2009 as compared to the MAPP indicator list. Key informant (KI) interviews and focus groups constituted the primary data collection techniques for this study. Key informants were interviewed by phone as well as in-person. Those who were not available by phone were invited to participate in the Community Event for Public Health Planning. The Community Event was held on April 28th, 2010, at the Broomfield Health and Human Services Department.

Data Analysis
Questions in the Key Informant Interview Guide were grouped by theme for the analysis. Each question in the corresponding group was classified as a "category." The various key informant responses were classified as "concepts."

Participants generated factor scores were totaled and ranked according to score, using an excel data collection and analysis sheet

Key Findings
Most key informants rank Broomfield a “4” out of 5 as being a healthy place to live, a good place to raise children, and good place to grow old.

Access to healthcare is the most important issue pointed out from the primary data analysis. Ameliorating this lack of local health services for the uninsured, underinsured, and mentally ill is an urgent priority (MAPP category 3 & 7). Many residents have to leave Broomfield in order to see a doctor, preventing some people in receiving timely care. Lack of mental health care, substance abuse services, and Medicare/Medicaid facilities were of great concern for participants, alluding that residents are forced to seek for these services elsewhere. In the same token, lack of public transportation does not facilitate access to health services outside Broomfield.

Participants emphasized the need for more public health education about healthy lifestyle choices. Residents reported concern for different groups of people in their unhealthy eating habits, prevalence of obesity, and lack of exercise. Poor lifestyle choices may lead to health issues and chronic disease later in life.

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Introduction

Broomfield Background

Broomfield is located in the north metro area between Denver and Boulder along U.S. Highway 36. Broomfield became Colorado's newest county in November of 2001. The county population is estimated at 53,807 (2008), and the city spans about 33 square miles.

The Broomfield Public Health Division provides health promotion, health clinics, environmental health services, and vital statistics for the City and County of Broomfield. According to the 2009 BHHS Indicators Study, Broomfield is growing at a rate faster than Colorado. This growth is expected to continue until 2015. Fast population growth will bring the challenge of ensuring that all residents have access to healthcare services.

Broomfield has a few advantages that may be suggestive of better health: higher educational attainment (63% of the population has at least some college education), higher household income (the average household income is higher than Colorado), and higher home ownership rates. Broomfield boasts 63 parks and miles of open space, with connecting trails for walking and biking.

As part of Colorado Public Health Reauthorization Act, Senate Bill 194, all local or district public health agencies are required to prepare a public health improvement plan. This local plan will contribute to the statewide planning effort. SB 194 also requires a community health assessment and submission of a local public health plan every five years. To accomplish this, BHHS will utilize the Mobilizing for Action through Partnerships and Planning (MAPP) process over the next 12 to 18 months.

The students' role in this assessment was to analyze the BHHS Indicators Study 2009 for missing health indicators, conduct key informant interviews and focus groups in order to identify strengths and challenges in public health in Broomfield. The role of the Division of Public Health and Environment staff was to initiate contact with key community stakeholders; invite community stakeholders to an interactive event; and to support and learn from the Colorado School of Public Health data collection methods to use for subsequent community health assessment.

Colorado School of Public Health Partnership and Goals

The Broomfield Division of Public Health and Environment, students, and faculty from the CSPH have teamed up to conduct a community health assessment. The goals of this partnership were to identify strengths and resources within the

community, prioritize health challenges and issues, and identify forces of change within the community for the City and County of Broomfield.

Several participants from the community event were grateful for our efforts to understand the community's perspective:

> *"I really appreciate you guys doing this. We are very interested in moving forward… you are saving us a lot of time and money with this project."*

> *"I think you've done a very good job. I'd like to see a report of the big event."*

Methods

This study began with the Health Indicator Analysis. The CSPH students identified the Health indicators missing in the Health and Human Services Indicator Study 2009 as compared to the MAPP indicator list. Key informant (KI) interviews and focus groups constituted the primary data collection techniques for this study. Key informants chosen to participate in the study depicted a clear representation of the community's diverse backgrounds and opinions on the most important issues to be focused by the public health department. Key informants were interviewed by phone as well as in-person. Those who were not available by phone were invited to participate in the Community Event for Public Health Planning held on April 28th, 2010, at the Broomfield Department of Health and Human Services.

Health Indicator Analysis

In 2009, the Broomfield Department of Health and Human Services coordinated with the National Research Center to produce the Health and Human Services Indicator Study. The resulting Health and Human Services Indicator Study was compared to the suggested MAPP indicators measure by measure. CSPH students generated a table of missing indicators from this analysis.

Data Collection

Identification and Initial Contact with Key Informants

The Division of Public Health and Environment identified more than 70 community stakeholders. Contact information (email and/or phone) was listed for each stakeholder. The list was refined to include broad, high-level community members (residents and/or employees). The list was then divided into two groups. The first group consisted of key informants contacted via telephone for key informant interviews between 4/21/10 - 5/6/10. The second group of key informants was invited to participate in the Community Event for Public Health Planning, held at the Division of Public Health and Environment on April 28, 2010.

The Division of Public Health and Environment contacted both key informant groups via email to invite them to participate (see appendix 3). The key informants' participation was voluntary and they were free to choose to answer or to not answer the questions.

Key Informant Phone Interview

The key informants who chose to participate in the interview were contacted by email or telephone to schedule a telephone interview. Interviews were conducted using the key informant interview guide in Appendix 4. Interviews ranged from 20-60 minutes. Twenty-five interviews were conducted.

Community Event for Public Health Planning

The Community Event for Public Health Planning was held on April 28, 2010. Thirteen community members attended the event. Participants signed-in upon arrival and were given a nametag and assigned number (1 or 2). The number (1 or 2) on sign-in sheet dictated which focus group number the participant will be assigned to the focus group number. During the event, two focus groups and a couple key informant interviews were carried out using guidance from scripted focus group guides and the key informant interview guide. During each focus group session, participants were provided the appropriate "Participant Handout" for the corresponding session. Each focus group analyzed the following two questions: "What are the larger forces at work in Broomfield that should be considered in this health planning process?" and "What are the important health or health- related concerns for Broomfield?". Interviews were carried out as described above in the Key Informant Phone Interview section.

Data Analysis

Key Informant Interviews

Questions in the key informant interview guide were grouped by theme for the analysis. The themes included quality of life, overall health assessment, access to services, public health awareness, and environmental health. Each question in the corresponding group was classified as a "category." The various key informant responses were classified as "concepts."

Focus Groups

Participants generated factor scores were totaled and ranked according to score, using an excel data collection and analysis sheet. The baseline score was for each group was calculated.

Findings

Health Indicators

CSPH students compared the Health and Human Services Indicator Study with MAPP indicators. The list of missing indicators can be found in Appendix 2.

Key Informant Findings

CSPH students compiled information gathered from the key informant interviews. Appendix 9 illustrates the concepts that informants reported for quality of life, overall health assessment, access to services, public health awareness, environmental health, and other issues presented by the informants.

Focus Group Findings

The issues brought about by participants for each focus group, were tabulated and the tables can be found in Appendix 10.

Below is an overview of the four focus groups conducted and their top priority issues they yielded: For the question 1, increasing unemployment / under employment received the highest rank in the prioritization process for Group 1. Followed by population growth and planning. The third factor to be considered was the limited and nonexistence of low income housing in the City and County of Broomfield.

For that same question, the other group had three factors that were inherently different from the first group: Problems related to the State budget; stigma attached to mental health; access and availability to services for the uninsured and the underinsured population in the City and County of Broomfield.

However, after comparing and prioritizing answers from the two focus groups, several common themes emerged. Population growth and planning was ranked first. Health issues for the elderly and unemployment/underemployment were tied for the second highest rank. Access to both Medicare/Medicaid and community involvement were also tied for the fourth place. Finally, issues with the increase of multi-national populations recorded the lowest score.

On the other hand, question 2 received answers that were not much different from one group to another. Group 2 had generated 32 concerns as opposed to 31 for group 1. The three top concerns prioritized for Group 2 were: access to

mental health facilities; overall obesity; and coordination in order to provide whole healthcare within the community. As for Group 1, they were more than three distinct top issues as some issues were tied in the score they received. The health concerns that received the highest scores were: language and cultural barriers to health care services; lack of dental and mental health services; lack of low income housing programs; finally lack of providers that accept Medicare and Medicaid.

More common themes (11 as opposed to 6 with question 1) were distinguished when comparing issues across the two groups. Access to healthcare appeared by far to be most important concern for Broomfield residents.

Discussion

DISCUSSION OF IDENTIFIED CONCEPTS & THEMES FROM FOCUS GROUPS AND KEY INFORMANT INTERVIEWS

Discussion of Theme 1 – Quality of Life

Category 1: Healthy Place to Live

Most key informants rank Broomfield a "4" out of 5 as being a healthy place to live (average ranking: 4.02). Both the key informant interviews and the focus group sessions provided insight to the community. The most commonly identified healthy aspects of Broomfield were access to exercise (trails, parks, open spaces, recreational facilities), a culture of healthful living, small town/community feel, community involvement, and accessibility of healthy restaurants and grocers. Negative health issues include over-extended lifestyles of residents, an increasing chronically poor population, and chronic disease. Participants pointed out that health is dependent upon socioeconomic status.

Category 2: Healthy Community Factors

Participants stated fundamental health issues as the most important factors for a healthy community. Factors for a healthy community include open spaces, air quality, clean environment, and coordinated healthcare within the community.

Category 3: Raising Children

Key informants rated Broomfield "4" out of 5 as being a good place to raise children (average ranking: 4.27). Results from the interviews and the focus groups reveal many positive health characteristics. Participants noted the presence of good schools, safe neighborhoods, a sense of community, and access to exercise (children's sports leagues, recreational facilities, open spaces, parks). Concerns in this area include the issue that federally qualifying health clinics are located outside Broomfield, the need to improve food in schools, and the issues associated with the fact that Broomfield is divided into six school districts.

Category 4: Aging

The majority of respondents gave Broomfield a "4" out of 5 as a good place to grow old (average ranking: 4). There was general consensus that the county had a number of available programs that serve and support seniors within the county.

Both the key informant interviews and the focus groups revealed concern for the increasing aging population. Although Broomfield counts on some services for seniors, these services are limited due to lack of funding. There is shared concern as to the aging populations' ability to maintain their socioeconomic level, given their fixed incomes and the lack of doctors who accept Medicare in Broomfield. Seniors are at risk of being socially isolated, due to the inaccessibility of public transportation.

Some suggested solutions to these barriers include re-organizing and increasing service routes of local public transportation in Broomfield. It is also important to examine the funding for senior programs to assess their success and ability to reach all seniors.

Discussion of Theme 2 – Overall Health Assessment

Category 5: Top health concerns

Obesity was the top health concern in Broomfield as identified in individual interviews and in the focus groups. Additionally, community members emphasized the limited access to health care services due to underinsurance and lack of insurance, few Medicare and Medicaid providers, and few if any healthcare facilities within the county of Broomfield.
Forces of change that affect overall health include the limited or nonexistent low-income housing options, increased unemployment/underemployment, and the population growth and planning.

Category 6: Positive Behaviors Impacting Overall Health

Most key informants listed active lifestyle and healthy eating habits as positive behaviors that affect overall health. Informants reported that Broomfield residents practice an active lifestyle at a common to very common rate; however, healthy eating habits were believed to be primarily uncommon. Other positive behaviors that affect overall health include the availability of services such as good schools, substance abuse programs, and open space and recreational facilities. These services or resources were described as common in Broomfield.

Category 7: Negative Behaviors Impacting Overall Health

Both the key informant interview method and the focus group method revealed a dominating concern about lifestyle choices leading to obesity, chronic disease, and stress. Key informants specified these negative behaviors as tobacco use, alcohol/drug abuse, lack of exercise, and poor eating habits. Informants reported that Broomfield residents use tobacco at a common rate, alcohol/drug abuse was believed to be uncommon to common, both the lack of exercise and poor eating habits were described as fairly common among Broomfield community members. Other negative behaviors defined as very common behaviors in Broomfield were the high concentration of fast food restaurants in Broomfield and lack of

community network. Participants felt that the marginalization of mental health issues exacerbates the stigma associated with mental illness, in a community where there is a striking lack in services.

Discussion of Theme 3 – Access to Services

Category 8: Health Concerns for Different Groups

Both the key informant method and the focus group method revealed groups of people with different health concerns. These identified groups were children, teenagers, adults, the elderly, people with mental illness, and the Hispanic or non-English speaking populations. The specific health concerns include obesity, diabetes, sedentary lifestyles, increasing numbers of disease and infection, the expense of living a healthy lifestyle, the lack of low-income housing programs, language/cultural barriers, and lack of adequate services.

Category 9: Barriers to Using Services

Key informant interviews and focus group analyses revealed barriers and lack of healthcare. Barriers were highlighted as poor transportation services, under/uninsured coverage for low-income and minority populations, cost of services, location of providers, cultural competencies, inadequate scheduling, immigration status, and a stigma that surrounds free services offered by the community. Another barrier is the lack of services in the community: participants worry about the lack of mental health services and substance abuse services.

Category 10: Actions to Address Barriers to Services

Participants are concerned about the lack of drug and alcohol support services, mental health services, and healthcare facilities that accept Medicare/Medicaid in Broomfield. Potential ideas to resolve the barriers include increasing funding and awareness for services, universal health care reform, improving transportation to get to services in other communities, and offering culturally competent low-cost services.

Discussion of Theme 4 – Public Health Awareness

Category 11: Role of Public Health Agency

Data from the both qualitative methods revealed that participants agree that public health agencies provide health related services for the whole community. Participants mentioned a wide range of services such as regulation or provision of environmental services, provision of vaccination/immunizations to the population, and services or programs for preventive care. Many participants

emphasized the importance of environmental health as a public health responsibility (as 8 informants mentioned this).
Data review revealed that there is a misunderstanding that public health services are only for the low-income population. Public health services are in fact available to the whole population.

Discussion of Theme 5 – Environmental Health Factors

Category 12: Positive Environmental Health Factors

There is consensus that Broomfield has a large amount of open spaces, trails and parks. However, one respondent pointed out particular areas of the City and County lack these amenities. Respondents agreed that recreational facilities and programs for all ages are available in Broomfield. Accessibility to these amenities has the potential to help health of a population by encouraging people to be active and exercise.

Many participants mentioned the good quality of the water in Broomfield City and County. A couple respondents pointed out being satisfied with the work of the Division of Public Health and Environment with restaurant and childcare inspections.

Category 13: Negative Environmental Health Factors

Both the key informants and the focus groups identified negative health factors in Broomfield. Participants identified air pollution associated with traffic congestion, along with the population growth and how it relates to City and County planning. Focus groups reported much concern regarding the high prevalence of radon found in homes in Broomfield. Other issues identified include the presence of meth labs and their environmental impact, drug contamination in water due to poor disposal practices, and Broomfield's proximity to Rocky Flats.

Recommendations for improving environmental health issues in Broomfield include monitoring the air quality, improving the public transportation system, and investigating the effect of Rocky Flats.

Limitations

The Division of Public Health and Environment contacted both key informant groups via email. Key informants were invited to participate on a voluntary basis. Several of the identified community members chose not to participate; 38 (25 phone and person interviews + 13 event participants) did participate. Some key informants expressed confusion by the initial introductory email.

Selection bias could introduce limitation in that people who chose to participate in the focus groups and/or key informant interviews might represent a population with specific health concerns. Additionally, the key informants represented people who work in public health-related fields. We sampled a wide variety of these professionals (school personnel, pharmacists, nurses, etc); however, this does not represent the population of Broomfield.

The key informant interviews were conducted by seven different people following the key informant guide, with the exception of one interview carried out using a draft of the guide. While guidelines were set for interviewers as to how to conduct the interviews, there is a likelihood of variations in the execution. Most of the key informants were responsive to the questions. A few key informants found the language used in the key informant guide confusing, for example the term “health.” Another key informant chose not to answer a large portion of the questions because he felt ill-equipped to comment on the health of a community of which he is a working professional, not a resident.

Out of the 30 people invited to the event only 13 persons participated, making the response rate 43%.

Regardless of the limitations of this study, we hope that our findings and recommendations be taken into consideration during the planning process by BHHS staff members.

Conclusion

Broomfield has many characteristics that make it a healthy place to live. For instance, access to exercise and profusion of recreational facilities and programs were mentioned by nearly all the participants. Thus, Broomfield boasts a culture of healthy living and community involvement. There are a variety of activities for community members to become involved in, such as children's sports leagues, adult sports teams, community action groups, and health-related organizations. Because Broomfield is a newly established county, there is an opportunity to make noticeable changes in health care delivery and programming.

The community health assessment report provided by the CSPH students should supplement the health indicators table and facilitate the development of a public health performance improvement plan for the county.

Access to healthcare is the most important issue pointed out from the data analysis. Ameliorating this lack of local health services for the uninsured, underinsured, and mentally ill is an urgent priority (MAPP category 3 & 7). Many Broomfield residents have to leave Broomfield in order to see a doctor, preventing some people in receiving timely care. Lack of mental health care, substance abuse services, and Medicare/Medicaid facilities were of great concern for participants, alluding that residents are forced to seek for these services elsewhere. In the same token, lack of public transportation does not facilitate access to health services outside Broomfield.

Participants emphasized the need for more public health education about healthy lifestyle choices. Residents reported concern for different groups of people in their unhealthy eating habits, prevalence of obesity, and lack of exercise. Poor lifestyle choices may lead to health issues and chronic disease later in life.

Appendix 1: Scope of Work

1. Community Information

Broomfield is a thriving city with ~55,000 residents. In comparison to the state of Colorado, the city has wealthier, younger and better-educated residents. These protective factors are matched by the unique challenge of the fastest growing city in Colorado.

2. Team Information

Jeff Stoll, Director of Public Health and Environment, Broomfield

jstoll@ci.broomfield.co.us

Theo Abbey

theophilus.abbey@ucdenver.edu

720-212-4306

I am Theo Abbey, a 2nd year student at the school of public health, pursuing a master's in public health with a concentration in community behavioral health studies (CBHS) and anticipating graduation in august of 2010. I was born in Ghana and spent the latter part of my teenage years in London before moving to the United States 7 years ago. Looking back on my past experiences, dealing with people hands on has been my biggest strength. Fuelling my decision to delve into public health is my passion about the issue of malaria and recently tuberculosis and their health impacts on especially developing nations around the world. My career has mostly been around working with adolescents with developmental, emotional and abuse issues, in different ways, which included providing therapeutic groups about health and basic life skills and supervision.

I am interested in program planning and implementation, which also includes research work and will use some of my strengths to encourage and promote more grass roots participation and involvement. I also love playing soccer, traveling and enjoy dancing to good music.

Rosine Angbanzan

rosine.angbanzan@ucdenver.edu

I am originally from the Ivory Coast in West Africa and have been living in the States for 12 years. I have earned a bachelor in Environmental Sciences from Georgia State University, which lead me to pursue a Master in Environmental Health with a concentration in Industrial Hygiene at Colorado State University. I completed the Certificate in Public Health last December and am hopeful to get in the Master of Public Health program at CU-Denver this coming fall. Since August 2009, I have been involved with the Colorado Department of Public Health and the Environment (CDPHE) in their *Clostridium difficile* surveillance program. My professional interests are geared toward Environmental and Public Health issues in Developing countries. More specifically, Health concern trends are shifting in these countries from more traditional communicable and infectious diseases to chronic and cardiovascular diseases. How much environmental health hazards are contributing to this shift?

Catia Chávez

catia.chavez@ucdenver.edu

303-725-6017

Catia Chávez has a BA in Economics from Metro State College and is currently completing a Master's in Public Health at University of Colorado Denver. Ms. Chavez professional experience includes working in Latino communities in education and public health. Her current position is a Bilingual Nutrition Educator for the Integrated Nutrition Education Program at the University of Colorado Denver.

Shauna Goldberg

shauna.goldberg@ucdenver.edu

303-990-0771

My name is Shauna Goldberg and I am in the first year of the MPH program. I have experience in community assessment and project implementation, and my work in the Peace Corps has fueled my passion for working in community health. I am excited to use the skills gained in the MPH program in community health interventions.

Claudia Morales

claudia.morales@ucdenver.edu

720-375-1131

Claudia has a BS in Biological Sciences and a graduate certificate in Biotechnology. She is in her first year of the MPH program. After the MPH program, she hopes to go to medical school to study lifestyle medicine.

Jeremiah Salmon

jeremiah.salmon@ucdenver.edu

719-201-8103

My name is Jeremiah Salmon and I am a second year student in the MPH program. I have a BA in Biology but my background is primarily in substance abuse and mental health. After graduation I plan to join the USAF Public Health Program.

3. Project Description

i. Better understand the health of Broomfield from the perspective community members
   a. Identify and prioritize public health issues for the City and County of Broomfield;
      - Issues and concerns about trends that effect the health of the public;
      - Role of the public health system and specifically Public Health and Environment Division in addressing public health issues;
      - Existing assets in the community that should be maintained or strengthened to address public health issues;
      - Challenges and barriers to addressing public health issues in Broomfield

   b. Conduct qualitative methods to carry-out the following:
      - Engage all Public Health and Environment Division staff in planning and developing action cycles to address strategic issues; and
      - Build relationships, collaboration and partnerships with other city departments and community stakeholders

4. Project Deliverable

i. Broomfield Community Health Assessment Report
   a. Analysis of the Broomfield Health and Human Services Indicator Study 2009
   b. Findings of key informant interviews and focus groups

ii. Electronic version of all tools and reports generated

5. Timeline

March 11: CSPH students provide analysis of Broomfield Health Indicator Report

March 11-April 21: BHHS prioritize key informant list and make initial contact with key informants

March 11-April 21: CSPH students and faculty draft key informant interview guide and make edits according to BHHS feedback

April 22-28: CSPH students and faculty draft focus group guide and make edits according to BHHS feedback

April 21-May 4: CSPH students and BHHS staff perform key informant phone interviews

April 28: CSPH students, faculty and BHHS staff carryout key informant interview and focus group event

May 20: CSPH students present Community Health Assessment Report based on indicator analysis, key informant interviews and focus groups

Appendix 2: Health Indicator Table+Missing Indicators

MAPP Indicator	Present in the BHHS Report	Missing in the BHHS Report	Source for Missing Data
Category 1: Demographic	• Growth trends: growing faster than CO till 2015 than will reflect overall state growth • Description of population by race: white overall, Asian more than blacks • Description of population by age: younger than state of CO • Population under 18 • Low birth rate • Preterm birth	• Population Density data • Data on migration	http://www.dola.state.co.us/
Category 2: Socioeconomic	• Education level: high educational attainment than state of CO • Income level: High income level than CO • Rate of unemployment • Home ownership • Homeless rates: Lower rate than the state of CO	• Ratio of students graduating high school who entered 9th grade 3 years prior. • Information about median household income. • Persons without health insurance • Overall data on families or children percent below poverty level • Data on languages spoken	http://www.census.gov
Category 3: Health resource availability	• Health insurance coverage • CHP+ coverage for kids	• Number of beds. • Number of health care centers	www.cha.com
Category 4: Quality of life		• Proportion of persons satisfied with the quality of life in the community. • Proportion of adults satisfied with the health care system in the community	

MAPP Indicator	Present in the BHHS Report	Missing in the BHHS Report	Source for Missing Data
		• Proportion of parents in the PTA • Number of openings in child care facilities for low income families. • Number of neighborhood crime watch areas • Civic organizations/association member per 1,000 population • Percent of registered voters who vote	
Category 5: Behavioral risk factors	• Current smoking status: Adult smoking status better than State • Healthy weight status and obesity status: Adult healthy weight status and obesity better than state • Overweight children: there is a growing rate of children who are overweight and are enrolled in WIC (younger than age five) • Vigorous physical activity at least 20 minutes/day 3 days/week OR moderate physical activity at least 30 minutes/day 5 days/week- Adults (2005): lower status than state • Condom use: STI (Chlamydia and gonorrhea) rates nearly doubled in the adult population but were not tracked in the teen population	• Illegal drug use. • Binge drinking during past month. • Nutrition (5 Fruits/Veg/day) • Sedentary lifestyle. • Protective factors (safety): seatbelt use, child safety seat use, bicycle helmet use, condom use • Screening: Pap smear, mammography • Obesity rates for children older than 5. • Children and youth data for physical activity	Behavioral Risk Factors http://www.cdc.gov/ http://www.cdphe.state.co.us/ http://www.dot.state.co.us/ Prevention http://www.cdphe.state.co.us/
Category 6:		• Air quality	Environmental Health Indicators

MAPP Indicator	Present in the BHHS Report	Missing in the BHHS Report	Source for Missing Data
Environmental health indicators		• Water quality • Indoor clean air: percent of public facilities designated tobacco-free • Workplace hazards: percent of OSHA violations • Food Safety: foodborne disease, rate per total population • Lead exposure: Percent of children under 5 years of age who are tested and have blood levels exceeding 10mgc/dL • Waterborne disease: rate per total population • Fluoride water: percent total population with fluoridated water supplies • Rabies in animals: number of cases	http://www.cdphe.state.co.us/ TRI (Toxics Release Inventory) http://toxmap.nlm.nih.gov/toxmap/combo/triIdentify.do Superfund facilities close to Broomfield http://toxmap.nlm.nih.gov/toxmap/combo/nixIdentify.do
Category 7: Social and mental health	• General health status • Snapshot of general health status • Suicide rate • Sample: % abuse in elderly pop. • Children abuse #s and rate	• Past 30 days mental health status • Homicide rates • Domestic violence rates • Psych admission • Alcohol/vehicle mortality • Drug-related mortality • Elderly abuse rate • Assault • Burglary • Illegal drug sales • Alcohol-related mortality • Forcible sex • Binge drinking • Mental disorder treatment	Mental Health and Substance Abuse http://www.census.gov/ http://www.drug-rehabs.org/ Crime Rates http://www.ci.broomfield.co.us/police/ http://www.broomfield.org/

MAPP Indicator	Present in the BHHS Report	Missing in the BHHS Report	Source for Missing Data
		• Crime rates	
Category 8: Maternal and child health	• Low birth rate • Preterm birth • Fertility rate • % live births by age • Teen fertility rate • Characteristic WIC children	• No % total entrance into prenatal care • Very low birth weight • Mortality: Infant/child/neonatal/post-neonatal • Mortality due to birth defects • Family planning numbers • C-section rate	Family Planning/Care http://www.cdphe.state.co.us/ http://www.mchb.hrsa.gov/
Category 9: Death, illness, and injury	• General health status • Mortality rates • Cancer diagnosis rates: All cancers, cervical, urinary, prostate, oral, lung, melanoma, breast, colon • Unintentional hospitalization rates • Crude death rates: Cancer, cardiovascular disease, respiratory • Diabetes mellitus	• Average number of sick days within the past month • Years of productive life lost (YPLL) under 75 by race • Hospitalizations for asthma, cellulitis, congenital heart failure, diabetes, gangrene, flu, malignant hypertension, perforated/bleeding ulcer, pneumonia, appendix, stroke • Cancer rates need to be divided by ethnicity	Hospitalizations http://www.cdphe.state.co.us http://www.cdc.gov http://datacenter.coloradohealthinstitute.org/data_results.jsp?c=1&p=2&i=285&rt=3
Category 10: Infectious diseases	• Gonorrhea and Chlamydia rates • HIV and AID rates & mortality	• HIV and AIDS rates divided by race, age, gender • Proportion of 2-year old children who have received all age appropriate vaccines • Proportion of adults aged 65 and older who have ever been immunized to for pneumococcal pneumonia and influenza (last 12 months) • Percent of immunized children/population	HIV http://www.cdc.gov STD Data http://www.cdphe.state.co.us

MAPP Indicator	Present in the BHHS Report	Missing in the BHHS Report	Source for Missing Data
		• Syphilis (primary and secondary) cases: reported incidence by age, race, gender • Tuberculosis: AAM, reported incidence by age, race, gender • Bacterial meningitis cases: reported incidence • Hepatitis A/B/C cases: reported incidence	
Category 11: Sentinel events	No Sentinel event info included	Vaccine preventable disease Number and rate/total population • Measles • Mumps • Rubella • Pertussis • Tetanus Other • Percent late stage diagnosis cancer – cervical and breast • Number of deaths or age-adjusted death rate for work-related injuries • Unsuspected syndromes due to unusual toxins or infectious agents, possibly related to a bioterrorism event	Preventable disease http://www.cdphe.state.co.us Vaccination Data http://www.cdc.gov/ Work-related injury http://www.cdc.gov/

Lead Exposure, Broomfield County

Shauna Goldberg

Lead poisoning occurs when lead builds up in the body, often over a period of months or years. Even small amounts of lead can cause serious health problems. Children under the age of 6 are especially vulnerable to lead poisoning, which can severely affect mental and physical development. At very high levels, lead poisoning can be fatal.

Lead-based paint and lead-contaminated dust in older buildings are the most common sources of lead poisoning in children. Other sources of lead poisoning include contaminated air, water, soil, and some toys and cosmetics.

Reported Lead by Physician by County 2003-2004

County	pop estimate Ages 0-6 years	Avg elevated Rate per 100,000	<10µg/dL	_>10-14.9µg/dL	>15µg/dL	Total tested
Boulder	24,359	26.7	1,738	10	3	1,751
Broomfield	4,911	0	76	0	0	76
Denver	65,272	150.7	12,906	128	68	13,102
State	457,678	38.0	30,682	231	116	31,029

http://www.cdphe.state.co.us/dc/Lead/survbullet2005.pdf

This data was collected by the Colorado Department of Public Health and Environment. The lead exposure data was collected 2003-2004. Physicians reported these blood lead levels to their county health departments. These health departments then reported these numbers to the state of Colorado. The age of children at test (0-72 months) are counted, and only the number of elevated blood lead levels (greater than or equal to 10µg/dL) are included in the rate calculation. CDPHE compiled county rates using population estimates from the Demography Section of the Colorado Division of Local Government.

This indicator tells us that there is not lead exposure in children in Broomfield, or that the exposures are not being reported for some reason. Perhaps more children need to be tested just in future years to ensure correct data. Broomfield Division of Public Health and Environment should reach out to families and health care providers to remind them of the importance of blood lead level testing and reporting to the county. Schools and child care centers should also be tested for lead exposure. Surveillance is most important in this case.

Assignment 2: Health Indicators **Catia Chávez**

The Broomfield Department of Health and Human Services Health Indicators Report has some missing health indicators, one of them is under Category 5 of MAPP, Behavioral Risk Factor. The report doesn't mention Nutrition. Nevertheless, the Colorado Department of Public Health and Environment, under the Colorado Health Information Dataset, under the Behavioral Risk Factor Statistic, has some of the lifestyle indicators and Nutrition is included. They ask people: "*What is your average frequency of fruit and vegetable consumption per day?"* The data can be found by sex and age:

Colorado Behavioral Risk Factor Surveillance System Statistics
Region: *BROOMFIELD* *Years:* *2007 - 2008*

Question: ***What is your average frequency of fruit and vegetable consumption per day? (2007 only)***

Respondents Sex		*n*	*%*	***StdErr***	*Lower 95% *CL*	*Uper 95% Confidence Limit*
Female	***Eat_fruit_and_veg=5 or More***	*18*	*30.2*	*7.8*	*14.6*	*45.8*
	Eat_fruit_and_veg=Fewer than 5	*36*	*69.8*	*7.8*	*54.2*	*85.4*
Male	***Eat_fruit_and_veg=5 or More***	*9*	*19*	*7.3*	*4.4*	*33.6*
	Eat_fruit_and_veg=5 or More	*36*	*81*	*7.3*	*66.4*	*95.6*

		n	%	StdErr	Lower 95% *CL	Upper 95% *CL
Age group						
18-24 years	**Eat_fruit_and_veg=5 or More**	0	.	.	.	.
	Eat_fruit_and_veg=Fewer than 5	2	100	0	100	100
25-34 years	**Eat_fruit_and_veg=5 or More**	3	31.6	15.9	0.1	63.2
	Eat_fruit_and_veg=Fewer than 5	7	68.4	15.9	36.8	99.9
35-44 years	**Eat_fruit_and_veg=5 or More**	3	13.7	7.7	0	28.9
	Eat_fruit_and_veg=Fewer than 5	15	86.3	7.7	71.1	100
45-54 years	**Eat_fruit_and_veg=5 or More**	5	20.5	8.7	3.2	37.9
	Eat_fruit_and_veg=Fewer than 5	21	79.5	8.7	62.1	96.8
55-64 years	**Eat_fruit_and_veg=5 or More**	3	20.2	11.7	0	43.4
	Eat_fruit_and_veg=Fewer than 5	14	79.8	11.7	56.6	100
65+ years	**Eat_fruit_and_veg=5 or More**	13	48.5	10.5	27.6	69.4
	Eat_fruit_and_veg=Fewer than 5	13	51.5	10.5	30.6	72.4

The data was collected by the Colorado Behavioral Risk Factor Surveillance System (BRFSS) in a statewide telephone survey during 2007. The Survey Research Unit at the Colorado Department of Public Health and Environment conducts the survey and selects respondents using a random digit dialing sampling technique. Even though the observations are low in the data above, we can still see from the data collected, that people in Broomfield is eating less than 5 fruits and vegetables a day, by sex and age, something to take into consideration, especially to implement

more nutrition education in that region in the near future. Reference: http://www.cdphe.state.co.us/cohid/index.htm

Assignment #2 Jeremiah Salmon

In the BHHS Indicator Report produced in 2009 there was mention of a rise in rates of both Chlamydia and Gonorrhea in adults between 2006 and 2007. There was also mention of a high number of transportation injuries in young adults, aged 20-24, with a reported significant rise in 2006. In an attempt to potentially explain these rises or find a possible association between both STD's and transportation related injuries with 'risky' behavior I decided to look at data related to alcohol consumption, to include data on binge drinking.

According to COHID and the BRFSS for 2005-2006, 4 out of 9 respondents, aged 18-24, reported in the past month having 5 or more drinks on an occasion (binge drinking) at least 1 time; 0 out of 8 respondents, aged 18-24, reported exceeding guidelines for low-risk drinking in the past month (2 drinks/day for males, 1drink/day for females); and there were not enough respondents to report the number of times one had driven after having too much to drink. For 2007-2008, 1 out of 4 respondents, aged 18-24, reported binge drinking on at least 1 occasion within the past month; 0 out of 4 respondents reported exceeding low-risk drinking guidelines; and 0 out of 1 respondents reported driving after drinking. The data was also grouped based on race/ethnicity, income, education, and marital status. Typically, those groups with higher number of respondents for increased alcohol consumption where white, had a higher income, higher education, and were married or part of a couple.

Once again, according to COHID the BRFSS is an ongoing telephone survey that was initiated in 1990. Because there is typically a low number of completed surveys in a single year data are usually combined for a two year period in order to create more stable estimates. Data is only included for a given year or set of years if there are at least 50 respondents to a particular survey question. The questions for alcohol consumption were phrased as follows: How many times during the past month did you have 5 or more drinks on an occasion?; Did you exceed guidelines for low-risk drinking in the past month? (male guideline is 2 drinks per day, female guideline is 1 drink per day); During the past 30 days, how many times have you driven when you've had perhaps too much to drink?

There didn't appear to be a lot of variation from 2004-2008. Based on the limited participation in the telephone surveys it is difficult to assess alcohol consumption and its impact on the community of Broomfield. Alcohol consumption, especially in excess, can be considered a deviant or 'risky' behavior and is perhaps underreported despite any possible anonymity. Based on the data collected, at least between the years 2005-2008, it would appear that alcohol consumption has a larger impact on those populations identified as white, with some college education, annual income greater than $50,000, and being married or part of a couple. Public health education efforts surrounding alcohol consumption could be targeted at these populations to reduce the numbers of involvement in such behaviors. Due to low participation it is difficult to determine if alcohol consumption is correlated to an increase rate of STD's and transportation related injuries, although research does support an association between STD rates and 'risky' behavior.

References:

Colorado Department of Public Health and Environment. 2010. Colorado Health Information Dataset: Behavioral Risk Factor Surveillance System, 2005-2008.Accessed at: http://www.cdphe.state.co.us/scripts/htmsql.exe/cohid/brfssfrm1.hsql

National Research Center. 2009. Health and Human Services Indicator Report: Health and Human Services Indicator Study 2009; Accessed at: http://www.broomfield.org/hhs/

ASSIGNMENT #2 **THEOPHILUS ABBEY**

INDICATOTOR- ADULT OVERWEIGHT AND OBESITY IN BROOMFIELD COUNTY

		Overweight	Obesity
AGE	%	0	0
18-24	CI	0	0
	N	0	0
	%	38.0	20.4
25-34	CI	14.9-61.2	2.3-38.6
	n	6	5
	%	33.5	80.6
35-44	CI	18.4-48.5	68.5-92.7
	N	15	37
	%	34.8	31.2
45-54	CI	19.9-49.7	16.9-45.4
	N	16	15
	%	45.6	25.6
55-64	CI	29.1-62.1	60.3-88.4
	N	21	11
	%	51.3	93.4
65+	CI	36.5-66.1	86.6-100.0
	N	26	48
GENDER	%	25.6	14.6
FEMALE	CI	15.4-35.7	7.8-21.4
	N	35	21
	%	47.4	27.1
MALE	CI	34.5-60.3	15.6-38.7
	N	49	24
EDUCATION			
<HIGH SCHOOL	%	45.7	44.5
	CI	7.0-84.5	5.7-83.3
	N	6	4
HIGH SCHOOL	%	41.8	16.9
	CI	22.6-60.9	3.1-30.7
	N	15	7
College or +	%	34.9	19.4
	CI	25.3-44.4	12.2-26.5
	N	34.9	34

% = Percentage, CI = Confidence Interval, N = Cell Size, BMI= Body mass Index
The following questions were asked in collection of data.
I) Based on your BMI, are you overweight?
ii) Based on your BMI, are you obese?

METHODS: The source of the data is the behavioral risk factor surveillance system (BRFSS) datasets for 2007-2008. The percentages and CI estimates are weighted to the total population to reflect age, education, and sex distribution of the County. The rates are adjusted and the survey responses were multiplied by a weighting factor according to age group and gender and the results were generalized to the overall population from which samples were selected.

INTERPRETATION: People with less than high school education had a higher prevalence of both overweight and obesity compared to those with high school or college education. Adults 65+ had the highest prevalence of overweight and obesity whilst those aged 18-24 had no prevalence of overweight or obesity which could be attributed to the few number of observations. It is also alarming that obesity prevalence was about 80.6% within age group 35-44. There was a demonstration that men had a higher prevalence of overweight and obesity than women. According to healthy people 2010 Overweight and obesity substantially raise the risk of illness from high blood pressure, high cholesterol, type 2 diabetes, heart disease and stroke, gallbladder disease, arthritis, sleep disturbances and problems breathing, and certain types of cancers.

Obese individuals also may suffer from social stigmatization, discrimination, and lowered self-esteem. Judging from the above data and potential health effects, the BCPH will have to prioritize this issue and design some interventions aimed at reducing the overall prevalence of overweight and obesity within the county.

REFERENCES AND SOURCES:

http://www.cdphe.state.co.us/scripts/broker.exe?_service=default&_program=colphcde.brfsstest.sas&_debug=0&county=14&countytext=BROOMFIELD&years=3&yearstext=2007%20-%202008&risktext=Nutrition%20and%20Overweight&risks=NO&questionid=Obese&question=Based%20on%20body%20mass%20index,%20are%20you%20obese?%20(obese=BMI%2030.0%20or%20higher)&groupbytext=Age&groupby=Age_group

http://www.cdphe.state.co.us/scripts/broker.exe?_service=default&_program=colphcde.brfsstest.sas&_debug=0&county=14&countytext=BROOMFIELD&years=3&yearstext=2007%20-%202008&risktext=Nutrition%20and%20Overweight&risks=NO&questionid=Overweight&question=Based%20on%20body%20mass%20index,%20are%20you%20overweight?%20(overweight=BMI%2025.0%20to%2029.9)&groupbytext=Age&groupby=Age_group

http://www.cdphe.state.co.us/scripts/htmsql.exe/cohid/brfssfrm1.hsql.

Assignment 2 Claudia Morales

Health Indicator

Broomfield Health and Human Services has showed interest in obtaining information on the number of Mental Health (MH) Providers, specifically those who accept Medicaid patients that are located in the Dity and County of Broomfield. Here, I present the 2010 rate of Licensed Non-Physician (MH) Providers with a subpopulation of those who serve individuals with Medicaid coverage.

Licensed Non-Physician Mental Health (MH) Providers	Rate (per 10,000)
Total MH Providers in Broomfield	230
Total MH Providers Accepting Medicaid	1.5

Methods

Licensed Non-Physician Mental Health Providers

The rate of Licensed Non-Physician MH Providers in Broomfield was found on the Colorado Health Institute[1] (CHI) website, 23 per 1000 (browse Broomfield County/Workforce and view Broomfield: Workforce). CHI collected the number of active licensed non-physician (MH) providers (1349) on January 4, 2010 from Colorado Department of Regulatory Agencies, Division of Registration[2] (DORA). DORA is the licensure registry for the State of Colorado, monitoring all active and inactive licenses. The population forecast (58,629) was collected on February 12, 2010 from Local Affairs, State Demography Office[3]. The county population forecasts are calculated based on historic, current, and anticipated net migration.

Rate Calculation:

(1,349/58,629)*1000 = 23 Licensed Non-Physician MH Providers per 1000

or (1,349/58,629)*10,000 = 230 Licensed Non-Physician MH Providers per 10,000

Licensed Non-Physician Mental Health Providers who Accept Medicaid

I calculated the rate of Licensed Non-Physician MH Providers in Broomfield who accept Medicaid by counting/estimating the number of providers (9) from Medicaid Behavioral Health Organizations. Provider names (7) are listed in two directories[4]. The directories also include two locations for The Mental Health Center (MHC), ie no provider name was listed at the two MHC locations. I estimated at least one MH provider could be found at each location. I used the same population estimate (58,629) from the Local Affairs, State Demography Office[3].

Rate Calculation:

(9/58,629)*10000= 1.5 Licensed Non-Physician MH Providers who Accept Medicaid per 10,000

Brief Interpretation

Here the large difference between providers who accept Medicaid and those who do not can be observed. These indicators tell us that Broomfield residents covered with Medicaid may have difficulty seeing a mental health provider in Broomfield. Patients may need to travel outside the city limits to see a provider. It would be important to understand if traveling to a neighboring city is reasonable for this population in terms of travel-time and cost. It would also be important to understand how Broomfield

[1] Colorado Health Institute
[2] Colorado Department of Regulatory Agencies, Division of Registration
[3] Local Affairs, State Demography Office
[4] Foothills Behavioral Health Partners, Provider Directories

HHS could increase the feasibility for providers to accept Medicaid (eg investigate funding for infrastructure).

Air Quality Rosine Angbanzan

The Colorado Department of Public Health and Environment (CDPHE)'s division of Air Pollution reports air quality conditions to residents of the Denver Metro Area, Colorado Springs and some other Colorado communities.

Continuous monitoring system provides hourly levels of carbon monoxide, Ozone, and PM10 (Particulate Matter 10), the 3 pollutants of greatest concern in Colorado.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards (NAAQS) for six principal pollutants, which are called "criteria" pollutants. They are listed below in Table 1. Units of measure for the standards are parts per million (ppm) by volume, milligrams per cubic meter of air (mg/m^3), and micrograms per cubic meter of air ($\mu g/m^3$). NAAQS which is the maximum level each pollutant can reach before unhealthy conditions may exist.

The division reports air quality using two reporting systems. The Air Quality Index (AQI) and the Visibility Index (VSI). The NAAQS for each pollutant equals 101 on the AQI scale. AQI reports greater than 100 generally indicate exceedances of a pollutant's NAAQS. A High AQI reading indicates a lower air quality. The AQI scale has six air Quality categories (Table 2)

There are several sites throughout the Denver metro which monitor air pollutants levels (Table 3). None of them is particularly located in Broomfield County.

Table 1 National Ambient Air Quality Standards

	Primary Standards		Secondary Standards	
Pollutant	**Level**	**Averaging Time**	**Level**	**Averaging Time**
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour [1]	None	
	35 ppm (40 mg/m^3)	1-hour [1]		
Lead	0.15 $\mu g/m^3$ [2]	Rolling 3-Month Average	Same as Primary	
	1.5 $\mu g/m^3$	Quarterly Average	Same as Primary	
Nitrogen Dioxide	0.053 ppm (100 $\mu g/m^3$)	Annual (Arithmetic Mean)	Same as Primary	
	0.100 ppm	1-hour [3]	None	
Particulate Matter (PM_{10})	150 $\mu g/m^3$	24-hour [4]	Same as Primary	
Particulate Matter ($PM_{2.5}$)	15.0 $\mu g/m^3$	Annual [5] (Arithmetic Mean)	Same as Primary	
	35 $\mu g/m^3$	24-hour [6]	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour [7]	Same as Primary	
	0.08 ppm (1997 std)	8-hour [8]	Same as Primary	
	0.12 ppm	1-hour [9]	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 $\mu g/m^3$)	3-hour [1]

Source:http://www.epa.gov/air/criteria.htm

AQI	Descriptor	Health Messages		
		Ozone (O_3)	**Carbon Monoxide (CO)**	**Particulate Matter (PM)**
0 to 50	**Good**	OZONE: None	CO: None	PM: None
51 to 100	**Moderate**	OZONE: Unusually sensitive individuals may experience respiratory symptoms. Unusually sensitive people should consider limiting prolonged outdoor exertion.	CO: None	PM: None
101 to 150	**Unhealthy for Sensitive Groups**	OZONE: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma. Active children and adults and people with respiratory disease, such as asthma should limit prolonged outdoor exertion.	CO: Increasing likelihood of reduced exercise tolerance due to increased cardiovascular symptoms, such as chest pain, in people with cardiovascular disease. People with cardiovascular disease, such as angina, should limit heavy exertion and avoid sources of carbon monoxide, such as heavy traffic.	PM: Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly. People with respiratory or heart disease, the elderly and children should limit prolonged exertion.
151 to 200	**Unhealthy**	OZONE: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population. Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.	CO: Reduced exercise tolerance due to increased cardiovascular symptoms, such as chest pain, in people with cardiovascular disease. People with cardiovascular disease, such as angina, should limit moderate exertion and avoid sources of carbon monoxide, such as heavy traffic.	PM: Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; increased respiratory effects in general population. People with respiratory or heart disease, the elderly and children should avoid prolonged exertion; everyone else should limit prolonged exertion.
201 to 300	**Very Unhealthy**	OZONE: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population. Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.	CO: Significant aggravation of cardiovascular symptoms, such as chest pain, in people with cardiovascular disease. People with cardiovascular disease, such as angina, should avoid exertion and sources of carbon monoxide, such as heavy traffic.	PM: Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; significant increase in respiratory effects in general population. People with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.
300 to 500	**Hazardous**	OZONE: Severe respiratory effects and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasingly severe respiratory effects in general population. Everyone should avoid all physical activity outdoors.	CO: Serious aggravation of cardiovascular symptoms, such as chest pain, in people with cardiovascular disease; impairment of strenuous activities in general population. People with heart disease, such as angina should avoid exertion and souces of CO, such as heavy traffic. Everyone else should reduce heavy exertion.	PM: Serious aggravation of heart or lung disease and premature mortality in people with cardiopulmonary disease and older adults; serious risk of respiratory effects in general population. People with heart or lung disease, older adults, and children should remain indoors and keep activity levels low. Everyone else should avoid all physical activity outdoors.

Source: http://www.colorado.gov/airquality/brochure.aspx

Table 3

rea	Site	Air Quality	Max AQI	Pollutant	Conc.	Period	Time (MST)
ARV(Arvada)	9101 w 57th st	Moderate	64	Ozone	64 PPB	8-hour	7:00 PM
ASP (aspen Park)	26137 Conifer St.	Moderate	90	Ozone	72 PPB	8-hour	7:00 PM
AURE (Aurora East)	36001 E Quincy Ave	Moderate	58	Ozone	62 PPB	8-hour	7:00 PM
BOU (Boulder West/Athens)	2120 Marine St.	Good	13	Particulate < 2.5 micrometers	4 µg/m^3	24-hour	7:00 PM
CAMP	2105 Broadway	Good	5	Carbon Monoxide	0.4 PPM	8-hour	7:00 PM
CAMP		Good	30	Nitrogen Dioxide	0.032 PPM	1-hour	7:00 PM
CAMP		Good	20	Particulate < 10 micrometers	22 µg/m^3	24-hour	7:00 PM
CAMP		Good	13	Particulate < 2.5 micrometers	4 µg/m^3	24-hour	7:00 PM
CAMP		Good	0	Sulfur Dioxide	0.000 PPM	24-hour	7:00 PM
CHAT(Chatfield Park)	11500 N Roxborough Park rd	Moderate	64	Ozone	64 PPB	8-hour	7:00 PM
COMM (Commerce City/Asup Elmentary	7101 Birch St.	Good	20	Particulate < 2.5 micrometers	6 µg/m^3	24-hour	7:00 PM
CRG (Carriage)	2325 Irving St	Good	49	Ozone	58 PPB	8-hour	7:00 PM
DMAS (Denver Animal Shelter)	678 s Jason st.	Good	2	Carbon Monoxide	0.2 PPM	8-hour	7:00 PM
DMAS		Good	42	Ozone	50 PPB	8-hour	7:00 PM
DMAS		Good	19	Particulate < 10 micrometers	21 µg/m^3	24-hour	7:00 PM
DMAS		Good	20	Particulate < 2.5 micrometers	6 µg/m^3	24-hour	7:00 PM
HLD(Highland)	8100 S University Blvd	Moderate	71	Ozone	66 PPB	8-hour	7:00 PM
LNGM (Longmont Municipal)	350 Kimbark St.	Good	23	Particulate < 2.5 micrometers	7 µg/m^3	24-hour	7:00 PM
NJH (National Jewish Hospital	14th st/ Albion st.	Good	11	Particulate < 2.5 micrometers	4 µg/m^3	24-hour	7:00 PM
NREL (South Table Mountain)	2054 Quaker st.	Moderate	71	Ozone	66 PPB	8-hour	7:00 PM
RFN (Rocky Flat North)	16600 Highway 188	Moderate	87	Ozone	71 PPB	8-hour	7:00 PM
S+A Auraria	1300 Blake St.	Good	0	Carbon Monoxide	0.0 PPM	8-hour	7:00 PM
SBC	1405 ½ S Foothills Highway	Moderate	87	Ozone	71 PPB	8-hour	7:00 PM
WBY (welby)	3174 E 78th Ave	Good	3	Carbon Monoxide	0.3 PPM	8-hour	7:00 PM
WBY		Good	4	Nitrogen Dioxide	0.004 PPM	1-hour	7:00 PM
WBY		Moderate	61	Ozone	63 PPB	8-hour	7:00 PM
WBY		Good	31	Particulate < 10 micrometers	33 µg/m^3	24-hour	7:00 PM
WCH (Welch)	12400 W hIghway 285	Moderate	51	Ozone	60 PPB	8-hour	7:00 PM

Source: http://www.colorado.gov/airquality/report.aspx

Appendix 3: Initial Contact Email

Dear Brandon Lawrence:

I am writing to you because you are a resident and/or leader of an agency, organization or business that is important to the quality of life of this community. Broomfield Public Health and Environment (a division of the Health and Human Services Department of the City and County of Broomfield) is conducting a community health assessment of Broomfield. This process will: 1) assess the status of Broomfield's health; 2) develop a public health improvement plan to prepare for emerging public health issues; and 3) strengthen our community's capacity to address these issues over the coming years. We are fortunate to have the Colorado School of Public Health assisting us in this assessment.

To best inform this process, it is our highest priority to hear from those who have a stake and investment in the future of Broomfield; those who live in and contribute to its quality of life and depend on its success to thrive. To provide this important input, I ask you to participate in a 30-minute interview over the phone. The Division will be conducting interviews through April 28, 2010 with the assistance of student and faculty from the Colorado School of Public Health. A member of our interview team will be contacting you soon to conduct the interview. If you do not wish to participate, please contact me by DATE. You will be asked a series of questions to inform us about the following:

- Issues and concerns about trends that effect the health of the public;
- Role of the public health system and specifically Public Health and Environment Division in addressing public health issues;
- Existing assets in the community that should be maintained or strengthened to address public health issues;
- Challenges and barriers to addressing public health issues in Broomfield.

It is with the spirit of the City's mission that we attempt through this process to "work in partnership with the community, to provide excellent services in an efficient, respectful and courteous manner to enhance and protect the environment and quality of life of Broomfield citizens." Your input in the interview will be confidential and will only be summarized in the final report in the form of key themes and observations coming from the interviews overall. This report will be used to inform and guide the planning phase that will follow the completion of the community assessment. We wish to thank you in advance for your time and important input into this plan.

For more information, contact me at 720-887-2218.

Sincerely,

Jeff Stoll, MPH

Public Health Director

Appendix 4: Key Informant Interview Guide

Key Informant Interview Guide

Hi _____(informant name), my name is _____ and I am a student at the Colorado School of Public Health working with the Public Health and Environment Division of Broomfield County Health and Human Services. We are conducting interviews in order to assess the status of Broomfield's health to plan public health programs in the future. You were identified as a person with an important perspective to offer insight into county-wide public and environmental health planning efforts.

[What you will do with this data?] Your responses and the responses from others will be used to design a community-wide health survey**.**

Introduction

1. Tell me about yourself/your organization.
   Key Informant Name:_____
   Organization(s)/Segment of Community_____
   Position_____
2. Are you a Broomfield resident? Yes or No
   If so, which neighborhood do you live in?

Introduction Continued

3. What would be the best way to reach you to follow-up?
   E-mail_____
   Phone_____
   Other_____

Quality of Life

4. On a scale of 1 to 5, with 1 being not healthy at all and 5 being very healthy, how healthy would you rate Broomfield as a place to live? What would you say makes Broomfield a healthy place to live?

Quality of Life Continued

5. In general, what do you think are important factors for a healthy community)?

   Provide examples from list below ONLY if informant asks.

   Air Quality

   Community Involvement

   Low crime/safe neighborhoods

   Low level of child abuse

   Good schools

   Access to health care

   Parks and recreation

   Clean environment

   Affordable housing

   Good childcare

   Diversity

   Good jobs and healthy economy

   Strong family life

   Safe places to eat

   Safe childcare centers

   Healthy behaviors/lifestyles

   Low death/disease rates

   Religious/spiritual values

   Arts/cultural events

   Other_____

6. On a scale of 1 to 5, where 1 is not a good community to raise children and 5 is a great community to raise children, how would you rank Broomfield as a place to raise children?

7. What is it about Broomfield that makes this a good/not so good place to raise children?

(*Don't give examples unless informant needs them.* Consider quality of school childcare, after school programs, recreation, etc)

Quality of Life Continued

8. On a scale of 1 to 5, where 1 is not a good place to grow old and 5 is a great place to grow old, how would you rank Broomfield as a place to place to grow old?
9. What is it about Broomfield that makes this a good/not so good place to grow old?

   (*Don't give examples unless informant needs them.* Consider elder-friendly housing, transportation to medical services, churches, shopping, elder day care, social support for the elderly living alone, meals on wheels, etc)

Overall Health Assessment

10. What do you see as the biggest health concerns in Broomfield? If more than 3 listed: Which of these would be your top 3 health concerns?

    (Health problems that have the greatest impact on overall health? What is it that you see?)

    Don't list examples—this would cue the informant. List is solely for us to record info given.

    Aging problems (arthritis, hearing/vision loss, unintentional falls, etc)
    Asthma
    Chronic Disease (Cancers, heart disease, stroke, high blood pressure, diabetes)
    Child abuse/neglect
    Dental problems
    Diabetes
    Domestic Violence
    Firearm-related injuries
    HIV/AIDS
    Homicide
    Infant Death
    Infectious Disease
    Mental Health problems
    Motor vehicle crash injuries
    Obesity

Rape/sexual assault
Respiratory/lung disease
Substance Abuse (Tobacco, Drugs, Alcohol)
STDs
Suicide
Teen Pregnancy
Other_____

11. What do you think are healthy behaviors that people do that have a positive impact on overall health? How common do you think these behaviors are in Broomfield?
    Active Lifestyle
    Doctor visits/immunizations
    Healthy eating habits
    Moderate alcohol
    Seatbelts/Child safety seats
    Sleep
    Safe Sex
    Other _____
12. What do you think are behaviors that people do that have a negative impact on overall health? How common do you think these behaviors are in Broomfield?
    Alcohol abuse
    Dropping out of school
    Drug abuse
    Driving under the influence of alcohol
    Lack of exercise
    Poor eating habits
    Not getting shots to prevent disease
    Racism
    Tobacco use
    Not using birth control
    Not using seat belts/child safety seats

Unsafe sex

Other_____

Access to Services Continued

13. Are there health concerns that have a bigger impact affect on different groups of people in Broomfield? (What are they? What groups? Different socioeconomic groups, neighborhoods, age groups, ethnic groups)
14. Given your personal and/or professional experience are there barriers or issues that prevent people in Broomfield from using health services or programs? (For example primary health care, mental, or dental health)
15. What actions would you suggest that might address these issues (eg. primary health care, mental or dental health)?

Public Health Awareness

16. What do you think a Public Health agency does in a community?

Environmental Health Factors

17. What environmental health factors have a positive impact on the health in Broomfield? (eg open space trails, indoor/outdoor air quality, safe places to eat, safe childcare, water quality)
18. What environmental health factors have a negative impact on the health in Broomfield? (eg air and water pollution, no safe places to eat, no safe childcare, no open space trails)

Wrapping Up

19. Are there other concerns you have about the health of Broomfield? Is there anything else you would like to add?
20. Are there other people you think we should talk to?
    (Please get name, phone number, and email)

Appendix 5: Community Event for Public Health Planning Agenda

Community Event for Public Health Planning

April 28, 2010
5:00-9:00 PM
Broomfield Health and Human Services
6 Garden Center
Broomfield, CO 80020

4:45-5:15: Registration

5:00-6:00: Welcome Dinner
Opening Remarks from Jeff
Overview of the Evening from Judy
Questions from Participants

6:00-7:00: Round 1, Focus Group Questions 1 and 2

7:00-7:15: Break

7:15-8:30: Round 2, Focus Group Questions 1 and 2

8:15-9:00: Key Informant Interview

Appendix 6: Community Event Sign-in Sheet

CITY & COUNTY OF Broomfield COLORADO

	Name	Phone Number	Email Address	Organization
1	Anita Rich	303-777-5495	Rich.anita@tchden.org	Colorado Children's Health Care Program CCHAP
2	Elizabeth Simpson	303-466-3007	esimpson@mhcbbc.org	Mental Health
1	Suzanne Villiers	303-404-5202	Suzanne.villiers@frontrange.edu	Front Range C.C. Nursing Program
2	Brian Conley	720-231-5801	brian@balswan.org	Bal Swan
1	Ed Black	303-466-4433	eablackjr@juno.com	Presbyterian Church of Broomfield
2	Marilyn Osbourn	303-466-4856	Marily.osbourn@yahoo.com	Boulder Community Hospital
1	Terry Kiernan	303-460-6817	Terry.kiernan@bromfieldfish.org	FISH

2	Candice Smith	720-341-0603	csmith@foundationscw.com	Mental Health/Community member
1	Teresa Marshall	720-561-8689	Teresa.marshall@bvsd.org	Boulder valley school district
2	Leigh Dye	720-837-6470	leighdye@gmail.com	Broomfield HHS
1	Kirk Oglesby	303-465-2998	Kirko53@comcast.com	Resident
2	Nancy Greer	Office: 303-438-5522 Cell: 720-201-5545	Drdukemom@gmail.com	Broomfield pediatrics
1	Susan Jager	303-650-1810	dsjager@q.com	Bal Swan / Resident
2				
1				
2				

Appendix 7: Focus Group Guides

Focus Group Guide

Introduction

I want to express our appreciation to each of you for effort you have made to attend this event. So Welcome, it is our job to make good use of your time.

In our meeting it is important that *each* of us fully participate. Success will depend on our equal and full participation. Each of us is here as an important resource. The way we conduct this session helps insure that everyone is heard. Your insight and perspective is important.

The ideas, which you generate in this workshop, will become the basis for follow-up development of a public health improvement plan to strengthen Broomfield's capacity to address public health issues over the coming years.

For this focused discussion session we want to come up with a list of the forces at work that affect the health of Broomfield. By this we mean those things that are going on locally, statewide, or nationally that affect the health of this community—these are forces that we might not be able to do anything about but which should be considered in health planning. For example, a high unemployment rate is a force that may affect health of a community in a number of ways and therefore public health planning efforts should consider this. We want you to consider both positive and negative forces and then we will prioritize the ones we think are most important out of the total list.

Step 1a: Silent Generation of Ideas in Writing

Would each of you please look carefully at the question at the top of the worksheet, which I am going to handout?

[Leaders: Handout Focus Group Worksheet]

You will notice that there are two questions, one on page 1 and another on page 2. The question, which is the focus of the first half of our meeting, is the following:

What are the larger positive forces at work in Broomfield that should be considered in this health planning process?

I would like each of you to take ten minutes to list your ideas in response to this question, in a brief phrase or in few words, on the worksheet in front of you. Please work independently of other members in identifying forces at work in Broomfield. Any ideas you have are important. During this period of independent thinking, please refrain from talking to other members—there will be time for discussion and clarification later. At the end of ten minutes, I will call time and suggest how we can proceed to share our ideas. Are there any questions? Let's proceed then with our individual effort for the next five minutes.

[Clarification]

Examples: Stimulus package, Healthcare reform, High Unemployment, Active community, tight city or state budgets. Just look at the words on the worksheet and write those ideas that come to your mind when you read the questions.

[Leaders: Model good group behavior by taking notes in silence]

Step 2a: Round-robin Recording of Ideas

During the last five minutes, each of us has used our worksheets to list important forces at work in Broomfield. Now, I would like to have each of you share your ideas with the other members of the group.

This is an important step because our list of ideas will constitute a guide for further discussion, help us understand the richness of ideas we have to work with, and stimulate additional ideas.

In order to accomplish this goal as quickly and efficiently as possible, I am going to go around the table and ask individuals, one at a time, to give me one idea from their worksheet, summarized in a brief phrase or a few words. If someone else in the group lists an idea, which you also had on your worksheet, you can go to another idea on your list. If, however, in your judgment the idea on your worksheet contains a different emphasis or variation, we would welcome the idea.

After everyone's list is on the board, we will have the opportunity to discuss and clarify.

[Turning to the first person]

"___Informant's Name____would you give me one idea from your list?"

*[**Confirm the idea** and write the idea on the flip chart]*

For lengthy statements: Could you think of a slightly shorter way of placing the idea on the flip chart?

1. Idea 1
2. Idea 2
3. Idea 3
4.
5.
6.
7.
8.

Step 3a: Serial Discussion for Clarification

Now that we have listed our ideas on the flip chart I want to take time to go back and briefly discuss each idea and let's assess if this is a positive, negative or neutral force.

The purpose of this discussion is to clarify the meaning of each item on our flip chart. It is also our opportunity to express our understanding of the logic behind the idea, and the relative importance of the item.

We will, however, want to pace ourselves so that each of the items on the chart receives the opportunity for some attention, so I may sometimes ask the group to move on to further items.

Since many items may have been on more than 1 person's list no one person needs to feel obliged to clarify or explain an item. Any member of the group can play that role.

Are there any questions or comments group members would like to make about Item 1?

*[**Pace the Discussion**]* I think we understand both points of view at this point. Perhaps, however, we should move on to the next item in the interest of time.

Step 4a: Preliminary Vote on Item Importance

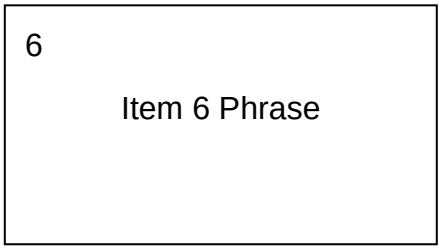
We have now completed our discussion of the entire list of ideas, have clarified the meaning of each idea, and have discussed the area of agreement and disagreement. At this time, I would like to have the judgment of each group member concerning the most important ideas on the list.

To accomplish this step, I wonder if each of you would take five 3 X 5 index cards.

[Leader hands a set of index cards to participants at the table.]

I would like you to select the five most important items from our list of ____ items. This will require careful thought and effort on your part. As you look down the list and find an item which you feel is very important, please record the item on an index card.
[Leader goes to the flip chart and draws an index card]

Sample: Index Card



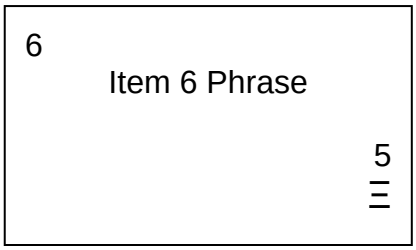
Please place the number of the item in the upper left-hand corner of the card. For example, if you feel item 6 is very important, you would write 6 in the upper left-hand corner.
[Leader writes 6 in the upper left-hand corner of the card]

Then write the identifying words or phrase on the card.
[Leader writes the phrase for Item 6 on the card]

Do this for each of the five most important items from our list of ____ items. When you have completed this task, you should have five cards, each with a separate phrase written on the card, and with identifying numbers using the numbering system from our list of ideas on the flip chart.

Do not rank-order the cards yet. Spend the next few minutes carefully selecting the five cards. We will all rank-order the cards together. Are there any questions?

Please spread out your cards in front of you so you can see all five at once. Looking at your set of five cards, decide which one card is the most important. Which card is more important than the other four cards?
[Leader gives the group an opportunity to study their cards]



Please write a number 5 in the lower right-hand corner of the card and underline the number three times. Turn that card over and look at the remaining four cards. Of the remaining four cards, which is the least important?

[Leader gives the group an opportunity to study their cards]

Write a number 1 in the lower right-hand corner and underline that number three times. Turn that card over and look at the remaining three cards. Of the three cards decide which one card is the most important. Which card is more important than the other three cards?
[Leader gives the group an opportunity to study their cards]

Please write a number 4 in the lower right-hand corner of the card and underline the number three times. Turn that card over and look at the remaining two cards. Of the remaining two cards, which is the least important?
[Leader gives the group an opportunity to study their cards]

Write a number 2 in the lower right-hand corner and underline that number three times. Turn that card over. One your one remaining card, please write a number 3 in the lower right-hand corner of the card and underline the number three times.

[Leader makes a ballot sheet on a flip chart, numbering the left-hand side of the sheet in accordance with the number of items from the round-robin listing]

Please pass the cards around face down. We will tally-up the results.

Step 5a: Tally-up Votes

[Leader makes a ballot sheet on a flip chart, numbering the left-hand side of the sheet in accordance with the number of items from the round-robin listing Has assistant sort cards by item number, then assistant calls out the scores given to that item and a total score for that item is added up.]

Item #	Scores	TL
1.	2-3-2	8
2.	5-3	8
3.	2	2
4.		0
5.	4-4-5	
6.	1	
7.		
8.	1-2-1	

forces at work in Broomfield

# From Flip Chart	Item Phrase	Most Important
		100
6		90
		80
3		70
		60
8		50
		40
1		30
		20
9		10
		0 Least Important

Positive Forces at work in Broomfield

# From Flip Chart	Item Phrase	Most Important
		100
6		90
		80
3		70
		60
8		50
		40
1		30
		20
9		10
		0 Least Important

I want to thank you for your hard work
and willingness to share your ideas during this focus group. We will take the findings from our group to strengthen your community's capacity to address public health issues.

Appendix 8: Focus Group Participant Handout

Focus Group Worksheet

What are the larger forces at work in Broomfield that should be considered in this health planning process?

What are the important healths or health- related concerns for Broomfield?

Appendix 9: Key Informant Themes, Categories, and Concepts

Quality of life			
Category	Concepts		Rank
	Positive factors	Negative factors	
Healthy Place to Live	• Access to exercise (trails, rec facilities, parks) • Culture of healthful living/healthy lifestyle • Accessible health department • Environmental Awareness, recycling • Existence of organizations that promote health • Small town feel, community feel • Local services accessible in community • Small prevalence of smoking • Good city planning • Healthy restaurants, grocers	• Health depends on SES • Fear of complications associated with poor health	4.02
Raising Children	• Access to exercise (parks, rec facilities, sports leagues) • Good schools, in neighborhood • Community feel • Local services (ex: Library) • Quiet, secure, safe • Clean water • Air quality • Affordable housing for all	• Federal health clinic is outside Broomfield • Need to make school foods healthier • Boulder school system is better	4.27
Aging	• Programs that provide services and support for seniors. • Plenty of options for recreational and social activities for seniors	• Aging population left out because of cost and their fixed incomes. No Medicare doctors in Broomfield • Funding limited to expand senior programs • Public transportation not easily accessible, seniors left out.	4

Healthy Community Factors	• Open space, trails and recreational facilities • Air quality • Clean environment		

Overall Health Assessment	
Category	Concepts
Top Three Health Concerns	• Obesity • Limited access to services for poor, Medicare, Medicaid patients including health care and section 8 housing • Underserved populations • Underinsurance (limited coverage) or uninsured • Limited access to health care – Location problem, ie lack of hospital, acute/ER, mental health facilities • Chronic Disease (Cancers, heart disease, stroke, high blood pressure, diabetes) • Lack of public transportation • Access to healthy food • Respiratory/lung disease • Diseases associated with Obesity • "Perception" of the lack of need for services • Lack of interconnected trail/open space system • Aging • Stress of Traffic • Pollution from Traffic • Crime • Lack of culturally sensitive providers • Motor vehicle crashes • No downtown area • Teenage pregnancy

Access to Services	
Category	Concepts
Positive Behaviors	• Active lifestyle, exercise – Common to Very common • Health eating habits – Uncommon • Engaging/volunteering in community – Common • Overall fitness – Uncommon to Common • Doctor/Dentist visits/immunizations/tests – Common • Local substance abuse services facilities – Common • Good school/educational programs facilities – Common • Presence of open space & recreational facilities – Common • Low violence – Common • Unhealthy relationships – Don't know • Smoking cessation – Common

Negative Behaviors	• Tobacco use – Common • Alcohol/drug abuse – Uncommon to Common • Lack of exercise – Fairly common • Poor eating habits – Fairly common • Limited education on smoking cessation – Don't know • Fast-paced Lifestyle – Common • Presence of high numbers of fast food restaurants – Very Common • Lack of community network/involvement, self-isolation – Very Common • Lack of helmet use when bike riding – Don't know • Lack of immunizations – Don't know • Lack of car seat use – Don't know • Lack of sleep – Common • Level of affluence – Common • Low education – Don't know • Lack of access to health insurance – Very Common • Harassment/assault – Common • Obesity in children, adult, or Hispanic populations • Access for low-income, under/uninsured, non-English speaking populations • Lack of resources for single parents • Diabetes in elderly and Hispanic populations • Growing ethnic and elderly populations • Increasing numbers of disease/illness among child, adult and elderly populations • Transportation for youth to organized activities • Substance abuse among teens and alcohol consumption among parents • Sedentary lifestyles among child and Hispanic populations • Certain neighborhoods don't have access to parks/facilities or proper crosswalks • Lack of educational resources for those in need
Barriers to Using Services	• Poor transportation system • Not enough Medicare/Medicaid providers • Lack of low income housing • Stigma surrounding free services • Mental health and dental coverage • Location • Immigration status • Awareness and scheduling • Poor utilization or low community involvement • Regulations that restrict treatment • - Inadequate services for middle class
Actions to Address Barriers to Services	• Increase funding • Improve transportation services • Increase awareness/improve marketing techniques • Resolve immigration issues • Make access to care a community priority • Develop creative timing to allow for more convenient scheduling • Increase knowledge and decrease bias around immunizations • Bring back physical education programs in schools

	• Offer culturally competent services • Offer low cost services • Appoint active leadership to various community organizations • Universal reform that allows for increased coverage and decreased cost • Public health agencies provide health related services/programs to the community(general answer)
	Public Health Awareness
Category	Concepts
Role of Public Health Agency	• Regulate or provide environmental services such as pollution monitoring, water quality, air quality, and food safety. • Provide vaccination/immunizations to the population (some mentioned those services are targeted for low income people only) • Provide health education and awareness. • Provide prevention services. • Provide physical activity education or programs. • Provide screening services, such as pregnancy tests, colon screenings, breast screenings, etc. • Provide or should provide mental health services. • Provide nutrition programs. • Provide emergency preparedness services. • Provide trends and epidemiology studies to prevent outbreaks.
Environmental Health	
Category	Concepts
Positive Environmental Health Factors	• Availability of open spaces, Parks, and trails • Availability of recreational facilities and programs for all ages • Good water quality • Satisfaction with restaurants and childcare inspections
Negative Environmental Health Factors	• Air pollution associated with traffic congestions • Lack of Low-income Housing and adequate Public transportation • Risk posed by toxic pollutants or proximity of superfund site • Congested Housing in some areas of Broomfield • Radon is common issue in Broomfield homes
Other Concerns: Wrapping up* *All other comments with no relation to others	
Category	Concepts

Positive Environmental Health Factors	• Not all schools in Broomfield are offered equal services. (i.e. not all breakfast services in Broomfield are equal) • Adequate services for all ages, particularly for girls. Like basketball, for both genders, a wide ranges of things for all kinds of people • Questions were poorly designed; because of the wording of most of the questions. The answers will lack reliability • Less talk and more action • There is a dominant provider that is over burdened. Health care access is a concern • The growth of Broomfield; how will the 'Broomfield Way' interact with the increasing population? • Wish mental health center would have more bilingual therapists • She wants to see the report of the big event. Going last night was an eye opening experience • I think we are progressing but need better transportation

Appendix 10: Focus Group Analysis Worksheet

Broomfield County Forces of Change Focus Group Results

Group 1

Baseline Score: 15*8 (N=size of group)

27

4

Item #	Factor Description	Factor Scores					Total of Scores	Top Ranked
1	Jobs supply as it relates to insurance access						0	
2	Health care reform	4	3				7	
3	Population growth & planning	5	4	3			12	#2
4	Multinational pop: schools, healthcare, housing	5	1	1			7	
5	Food sources; local and multinationa	2					2	
6	Community garden growth						0	
7	Division into 6 school districts	4					4	
8	Access to doctors who accept Medicare & Medicaid	1	1	5			7	
9	Use of services outside Broomfield	2	2	4	1	1	10	#4
10	Limited/nonexistent low income housing options	1	5	3	2		11	#3
11	Long timers vs. new comers; different perceptions	2					2	
12	Affordability for retired/aging services						0	
13	What bug is next? Response & Preparedness	2					2	
14	Health concerns of the aging population	3	3	1	2		9	#5
15	Pollution: AIR (cloud), WATER (drugs)	3	3				6	
16	Pioneering spirit of community	5					5	
17	Spirit of Community and Volunteerism						0	
18	Increasing unemployment and underemployment	3	5	5			13	#1
19	Violence – resources to address, shelters	4					4	
20	Substance Abuse	1	5				6	
21	Diversity in technology availability and use						0	
22	Lifestyle factors that lead to obesity and chronic disease, stress	3	4	2			9	
23	Flatiron Crossing – tax base						0	
24	Consumerism, Sustainability						0	

25	Demand for health support								
26	Increased population of chronic poverty	4							
27	Conservative viewpoint – impact +/- services	4	4	2				10	
Total of all scores								126	
Size of Group (Total of all scores divided by 15)								8.4	

Broomfield County Forces of Change Focus Group Results

Group 2

Baseline Score: 15*N (N=size of group)

5

24

Item #	Factor Description	Factor Scores							Total of Scores	Top Ranked
1	State budget problem	5	5	5	4	2	5	4	30	#1
2	uninsured and underinsured and how they assess services	1	3	5					9	#3
3	The stigma attached to mental health/ illnesses	3	5	2					10	#2
4	Medicaid/ Medicare- Abuse of the system								0	
5	Increasing cost for Medicare patients/ clients	2							2	
6	Independence- a sense of pride and uniqueness of the community	4							4	
7	A sense of stratification between those who have and have not’s								0	
8	Sense of community	1	4						5	
9	Increase in ESL populations								0	
10	Decrease in funding for health programs within the school districts	4							4	
11	Over-extended lifestyles for most residents hence their inability to participate in programs	3	4						7	#5
12	Lots of personal complacency surrounding community health								0	
13	More selfishness and a sense of “me, me” that tends to limit community interaction and participation	2							2	
14	Difficulties faced by residents in accessing more bus routes within the county	1	3	1	1				6	
15									0	
16	Use of technology to access positive and negative through the web and media	5	1						6	
17	Lack of Medicare primary care access in Broomfield	2							2	
18	Pharm / donut Medicare								0	
19	Abundance of health organizations and the need for partnerships	4							4	
20	Media Influence both negative and positive	5							5	
21	Expensive to practice healthy life styles	4	1						5	

22	Unemployment/ underemployment and its impact on health	3			3	
23	Increasing older population	2	3	3	8	#4
24	Lack of charities / donor agencies				0	
					0	

Total of all scores 112
Size of Group (Total of all scores divided by 15) 7.4667

Correct baseline formula for the size of group, default is 8

After data is all in Sort on Total score for each Group

Which items have scores higher than baseline score for that group?

SUMMARY

Assess for common themes in factor descriptions across groups and combine in table below.
For factors that were mentioned in more than one group put on single line and total group score.

New Item #	Factor Description	Total Score by each Group: Grp 1	Grp 2	Average Total Score	
1	Issues with access to Medicare/Medicaid	7	4	6	#4
2	Issues related to the elderly	9	8	8	#2
3	community involvement	5	7	6	#4
4	population growth and planning	12	10	11	#1
5	issues with multinaltional population	7	0	4	#6
6	unemployment/underemployment	13	3	8	#2

Appendix 11: Key Informant Contact Information

Best way to reach them for follow up

	Name	Last name	Phone	Phone	email	Broomfield resident
1	Kirk	Oglesky	303-438-6303			yes
2	Lynn	Merwin	303- 438-6381			no
3	Norma	Linderholm	303-466-4386			yes
4	Suzanne	Villiers			Suzanne.villiers@frontrange.edu	yes
5	Tammy	Linton	303-444-5253		Tammy@rdsenvironmental.com	no
6	Tom	Parsons			tparsons1000@aol.com	yes
7	Howard	Kierston			Kierstonh@gmail.com	yes
8	Joan	Holtz	303-665-7789			no
9	Leigh	Dye	720-837-6470		Leighdye@gmail.com	no
10	Pete	Liebig	303-665-2599			no
11	Adalberto	Castro	303-410-4942		castroadal@yahoo.com	no
12	Hal	Lunka	303-410-4942		castroadal@yahoo.com	no
13	Steve	Cobb	303-513-7839		CobbS@exempla.org	no
14	Betty	Calvin	303-466-9166		bjcalvin@juno.com	yes
15	Brian	Conley	303-466-6308		brian@balswan.org	yes
16	Anita	Roberts			anita.roberts@centura.org	yes
17	Marilyn	Osbourn	303-466-4856	303-229-2397	mosbourn@bch.org	yes
18	Theresa	Marshal	720-561-8689			no
19	Wendy	Fiedler	720-271-0714			yes
20	Bob	Davis				yes
21	Anita	Rich	303-777-5495		Rich.anita@tchden.org	yes
22	Pat	Springer	303-438-9133			yes
23	Sheryl	Jager				yes
24	Steve	Cuss				yes
25	Felix	Flechas	303-556-6749			yes

9 not residents
16 residents