IDENTIFYING THE BARRIERS TO COLLABORATION

BETWEEN TRANSPORTATION PLANNING

AND PUBLIC HEALTH USING THE

NETWORK MODEL

by

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ABSTRACT

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Transportation Planning and Public Health worked closely together a century ago but drifted apart over the decades. Today, both groups face enormous challenges. Transportation planning needs to replace aging infrastructures while preparing for population growth and the demands that come with it. Resources are already taxed and new ways of doing business are needed. Public Health successfully addressed communicable diseases during the last century only to be confronted with the high cost of treating chronic diseases including obesity in this century. Prevention in the form of increased physical activity as a key strategy led Public Health to the built environment and alternative forms of transportation. A call for both groups to collaborate was issued by national and international leaders and yet far too little collaboration has occurred at the local level. The problem addressed in this study is the disconnect between Transportation Planning and Public Health. The research question is "what are the barriers to collaboration between Transportation Planning and Public Health?" It is expected that local-level government collaboration, organizational incentives and objectives that

encourage collaboration, positive history of collaboration with other organizations, personal and professional contacts with other organizations, and effective leadership will be important factors in support of collaboration. It is also expected that no political will, slower process, lack of trust, lack of funding, different mission, different motivation, different culture, and uneven playing field due to power will be top barriers to collaboration. The theoretical framework used is the Network Model which is compared to the Traditional Model. In addition to a literature review regarding public health, transportation planning, collaboration, and the Network and Traditional Models, this study includes a focus group and a survey. The focus group included twelve senior level participants from public health and transportation planning in the North Central Texas Council of Governments (NCTCOG) Region. The survey included a broader segment of the same group totaling 127 respondents. Findings included information about organization practices internally and externally regarding collaboration and Network Model values. The top three supportive factors for collaboration included local level government cooperation, effective leadership of the collaboration, and personal and professional contacts. The top barriers to collaboration included lack of funding, no political will, slower process, different mission and motivation, and uneven playing field due to power. Almost 80% of the survey participants indicated that collaboration between transportation planning and public health was important. Eight action items were identified to enhance collaboration. The action items included 1.) Make the compelling argument to stakeholders as to the importance of collaboration between transportation planning and public health. 2.) Learn together 3.) Identify/develop/utilize tools 4.) Engage leaders 5.) Provide incentives 6.) Build trust 7.) Include local government and 8.) Work within the Network Model for Action.

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CHAPTER 1

INTRODUCTION

National leaders in transportation planning and public health identified the need for both professions to collaborate over a decade ago. Current estimated costs of maintaining their respective infrastructures, much less expanding or improving them, were in the billions of dollars and overwhelming to both. A new way of doing business was needed but collaboration has been slow to happen at the local and regional level. This study explores the views and knowledge of local leaders in transportation planning and public health regarding collaboration. An overview of the issue, a literature review of public health , transportation planning, and the network model are included in order to identify the theoretical concepts and practices which can then be addressed through the framework of the model. Focus group and a survey results are analyzed, eight recommendations are provided and a Network Model for Action is described in order to address the barriers to transportation planning and public health collaboration.

1.1 Overview

One hundred and twelve years ago large urban health departments or hygiene commissions imposed local land use ordinances on inner cities in order to separate people from disease and pollution. They functioned as influential, independent, bureaucratic rule making organizations. During the next several decades, transportation and urban planning grew into their own strong bureaucratic organizations concerned with vehicle miles traveled and density due to auto dependence and the pursuant need for road connectivity (Frumkin, Frank, and Jackson, 2004). In the second decade of the 21st century, both public health and planning find themselves with seemingly insurmountable challenges which demand solutions. Public health followed the medical model and partnered more with other health related organizations than with planning related organizations. Currently, public health professionals are returning to

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population health or the health of communities, to the need to prevent chronic diseases which are driving the cost of medical care beyond acceptability, and to strategies and partners such as planners to successfully address morbidity and mortality. Transportation planners are also faced with unsustainable infrastructure costs and challenges to address population growth. A different way of approaching these challenges is needed and the call for collaboration has been made by leaders and experts in both fields but with underwhelming results to date. With an information-sharing savvy society, the network model of collaboration lends itself well as the theoretical framework in which the question regarding barriers to collaboration can be asked (Agranoff, 2007). The network model emphasizes:

> the voluntary participation in inter-organizational (horizontal) relationships that involve agreements or understandings concerning the allocation of responsibilities and rewards among the collaborators. Logics of governance that revolve around collaborative or networked arrangements emphasize the centrality of continuing social and political relationships and communications among stakeholders and other actors. These networked actors may be both internal and external to executive agencies and bureaucracies or hybrids that cross agency boundaries. (Ingraham and Lynn, 2004, pp 8-9)

Since the five domains of the network model including management, decision-making, structure, knowledge and performance will serve as the framework for the survey of senior leaders/decision-makers in planning and public health, the results should better inform the body of network literature.

The industrial age was in full throttle in the late 19th and early 20th century. Cities became the home not only for the factories, wealthy employers and shop owners, but also for the overcrowded, dark, disease- ridden tenement housing of the workers and the polluted rivers and swamps used for dumping industrial waste. Public health was called into action to create and enforce some of the first zoning and ordinance-making for the inner cities in order to promote hygiene, safety and environmental protections. Infectious or communicable diseases were rampant in the industrial cities. Light and air circulation, clean air rather than factory-polluted air were needed. Proper sewage systems, vector control, clean water, and personal preventive health care (including maternal and child health) were all required to clean up the

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cities. Public health used zoning to create the needed spaces between people and harmful environments. It used ordinances to protect the public from unhygienic practices (many cities had posted signs well into the 20th century prohibiting spitting on sidewalks, a carryover from the days of rampant tuberculosis cases). During the first half of the 20th century many of the public health practices became institutionalized into local city and county government roles and responsibilities. As expertise increased in the areas of clean air, clean water, and sewage treatment and control, these areas of public health practice became their own areas of specialization with bureaucracies at federal, state and local level of government. Urban planning emerged as another governmental function at the local level. Zoning and land use planning were moved more and more to the local government bureaucracy. Transportation planning became another specialized practice in order to accommodate the fast growing needs of a vehicle–centric society. Public health followed the medical model of practice and the germ theory model in order to continue to address the infectious disease challenges. Communicable diseases remained the biggest challenge to public health until immunizations for childhood illnesses and antibiotics such as penicillin were developed. The very visible effects of these illnesses such as withered limbs, iron lungs, sanitariums, community quarantines and low life expectancy began to disappear during the 1940s and '50s. The average life expectancy increased dramatically over the next decades until the first decade of the 21st century when it started to decrease (CDC, 2011). The primary public health issue became chronic diseases (cardiovascular, some cancers, stroke, diabetes,) and the major underlying causes were overweight and obesity. The cost for treatment of these largely preventable diseases is overwhelming the health care system and has become a national focus in economic discussions and policy decisions.   The primary intervention strategies for overweight and obesity include access to nutritious foods and increased physical activity. Increased walkability for communities and access to nutritious food strategies led to the relationship to the built environment and the need to reestablish a working relationship between public health and

planning (Dannenberg, Jackson, Frumkin, Schieber, Pratt, Kochtitzky, and Tilson, 2003; WHO, 1999). The realization that people had become sedentary in a vehicle-centric world and thus not receiving the day- to- day physical activity necessary to controlling weight became the topic for discussion among public health and planning professionals over half a dozen years ago (APA, 2004; FHA, 2004). Collaboration was called for and yet a model for collaboration was not identified.

Urban sprawl requires a car to get from place to place rather than walking or biking, streets are built for fast vehicular traffic not pedestrian and bike friendly traffic. Transportation planning has focused on vehicle commutes and movement of goods from a speed and distance perspective rather than a human scale perspective which includes health (Convergence Partnership, 2009). Lack of public transit systems or connectivity to neighborhoods disrupts personal desire to commute in a more physically active manner. With the projected growth in population alone, expansion of existing highways will only lead to unbearable congestion. The costs for maintaining the current transportation infrastructure, much less expanding it to try to accommodate growth, is overwhelming. (Convergence Partnership, 2009; APHA, 2011) Alternative solutions are needed just as they are in health planning.

Collaboration is not the only strategy necessary for Transportation planning and public health to become more familiar with one another and work toward common goals. However, the focus of this study is on collaboration between the two groups. There are a growing number of articles, presentations and workshops regarding the importance of local planning and public health working together (APA, 2011; Killingsworth, AmJPrevMed, 2009). However, there is less discussion about the need for transportation planning and health to work together and how they should work together. There is some information about barriers to planning and public health working together. (Hollander, Martin and Vehige, 2008; Morris, 2003) The American Planning Association study, conducted in 2003, provided general categories regarding barriers and very little in the way of specific recommendations or action steps. One specific action step would

include adopting a model of collaboration which would inform the partners as to areas requiring further definition or deliberate action. The Network Model of collaboration will be discussed in detail as the organizational framework for this study.

1.2 Research Question

The identified problem to be addressed in this study is the disconnect between transportation planning and public health. The *research* question to be addressed is the following: *What are the barriers to collaboration between transportation planning and public health?* The answers to the research question will be used to develop recommendations for addressing the barriers.

The literature review, focus group and survey will identify the current status of organizational collaboration between transportation planning and public health professionals. This triangulation of information will serve as the supporting argument for what type of model lends itself to strengthening collaboration, and how to address the barriers to collaboration and with what strategies. The Network Model of organizational collaboration provides a framework for collaboration. Its strengths in comparison to the traditional model will be discussed. The main purpose of the study is to identify the barriers to collaboration. Since several workgroups and articles have identified the need for collaboration yet there still appears to be a lack of collaboration, what are the reasons contributing to the lack? Identifying the benefits to collaboration should assist with the strategies for addressing the barriers. The recommendations for addressing the barriers will provide some guidance for transportation planners and public health professionals to work together more in the future.

1.3 Call for Collaboration between Transportation Planning and Public Health

"Collaboration is a purposive relationship designed to solve a problem by …or discovering a solution within a given set of constraints." (Agranoff and McGuire, 2003). The need for collaboration has become increasingly more compelling with the demand to address complex problems with insufficient resources. Private sector organizations as well as public

government organizations have found it necessary to work together. Corporate cultures have undergone changes over recent years in order to accommodate the need for collaboration. Not only cultures but leadership styles changed. Collaboration has become part of the corporate mission and employees are rewarded for collaborative efforts. (Agranoff, 2007; Linden, 2010) Organizations use collaboration for a variety of reasons. The type of reason dictates whether the organization can operate within a more vertical framework or whether it needs to function in a more horizontal framework for collaboration. The former include information seeking, interpretation of standards and rules, general program guidance, technical assistance, and adjustment seeking. The latter includes policy-making, resource exchange, and project-based work. (Agranoff and McGuire, 2003) Collaboration can also occur in varying degrees from low to high with the highest degree being "closely joined or united" (Koliba, Meek, and Zia, 2011).

It is expected that local-level government collaboration, organizational incentives and objectives that encourage collaboration, positive history of collaboration with other organizations, personal and professional contacts with other organizations, and effective leadership will be important factors in support of collaboration. It is also expected that no political will, slower process, lack of trust, lack of funding, different mission, different motivation, different culture, and uneven playing field due to power will be top barriers to collaboration.

1.4 Benefits of Collaboration

"For an organization to be motivated to participate in a collaborative model, the benefits of the collaboration need to exceed the costs." (Bingham and O'Leary, 2008). As mentioned, transportation and public health face complex problems with huge price tags. The Transportation Research Board (TRB) realized the need for collaboration with other partners in 2003 when it started a series of focus groups with potential partners in order to identify important concepts for a Practitioner's Handbook: From Handshake to Compact: Guidance to Foster Collaborative, multimodal Decision Making. This handbook provides detailed information regarding the importance and benefit of collaboration including the following:

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- Responding to public needs that require multimodal or multijurisdictional strategies
- Utilizing new technologies
- Coordinating organizational actions
- Improving the probability of securing new funding
- Sharing the costs
- Sharing the risks
- Preparing for both planned and unexpected events
- Developing effective strategies to respond to or implement programs required by legislation (TRB, 2004)

Successful collaboration provides "enhanced scientific and technical learning/access to knowledge, learning how to learn with different disciplinary and organizational cultures/ interdisciplinarity, expand public management abilities/improved managerial skills, informal networking opportunities and spin-offs, program awareness/new aspects of the subject, access to policy/program decision makers, and public service opportunities." (Agranoff, 2007). The survey questions developed as part of this study included questions regarding internal and external organization collaboration in an effort to identify the benefits or successes of collaboration. These questions included the following: collaborative activities in which the organization engaged internally and externally, collaborative practices or tools, motivations for collaboration, reasons for engaging in collaboration, influencing forces, supportive factors, and barriers.

<u>1.5 Barriers to Collaboration and Expectations of the Study</u>

Along with the benefits of collaboration come the barriers to collaboration. The purpose of this study is to identify the barriers to collaboration between transportation planners and health professionals. Some barriers like funding, adequate interest or support from leadership, or other more pressing issues may not lend themselves to reduction or elimination based on location, political will, timing or available resources. A location which is small or isolated or experiencing harsh circumstance of some type such as drought, flooding, or economic slow-down may find it difficult to identify enough willing and able partners to collaborate. On the other hand, a large urban area may have too many traditional authoritatively managed organizations to supply the necessary tipping point for collaborative leadership to take root. Similarly, the

political will of the elected officials and their constituency in the area may not embrace the collaborative approach. In an area where resources are few, competition may be too intense to allow for interest in collaboration. Some of the same circumstances that prevent collaboration may also promote collaboration in another setting. Lack of resources or prohibitive costs may force leaders to think differently and look for new ways of addressing an issue regardless of personal preferences for management style. This is certainly a premise of this study as it inquires of planning and health professionals who are struggling to find new ways of doing business.

Barriers to collaboration can be categorized as resource, interpersonal or organizational (TRB, 2005). The problem is usually a lack of resources such as funds, shared information and tools, staff and turnover, best practices, performance measures, incentives, capacity, support or valuing. (TRB, 2005; Wise, 2002; Bingham and O'Leary2008; McKinney and Johnson, 2009 ;)   While an argument can be made for turning to collaboration when there is a lack of funds and pooling resources, the frequent thinking is that there are no identifiable funds to provide mutual learning, shared data, or strategic planning and evaluation. When there is a lack of information sharing then the individual organizations do not know enough about each others' business to recognize opportunities for collaboration. When there are no tools available to support data sharing and mutual learning then the task of trying to collaborate looks too difficult – where do you start? How much longer will it take? How do the partners get what they need out of the process? Staff has job responsibilities that do not include trying to learn to collaborate. There is no incentive for them to do so just as there is no incentive for the organization. The incentive may need to be different for different organizations. Turnover of staff is another issue. Initial collaborative efforts may occur between specific motivated individuals but one or more of these individuals move on and the effort loses momentum. Until the last few years, there have been relatively few reports or studies identifying best practices for public health. Performance indicators have been available within the organization but have not been

widely disseminated outside the profession. Other health organizations have had more experience with indicators but not that connect directly to the community, the environment or transportation. Collaboration takes time and a willingness to share power as well as data and learning. In the short term, it may seem easier to go it alone where control is greater but in the long term, the cost of addressing mounting problems is too staggering and the need for greater ability to collaborate whenever possible increases. The capacity for collaboration depends on the support for and valuing of the concept. How many leaders embrace the collaborative network model within their own organizations and how many are comfortable working "across boundaries"?

Interpersonal barriers to collaboration involve the leadership of organizations, governmental entities and communities. There are reasons for leaders to seek collaboration and to shy away from collaboration. Leaders may see collaboration as a loss of power or control. They may not value the participative management style or the values of the collaborative leader. (Agranoff, 2007) They may not be willing or able to adopt the style based on political pressure. (Wise, 2002) Existing collaborative leaders need to provide more mentoring for staff and other leaders.

There are a number of organizational barriers to collaboration. Organizations can have many differences including mission, culture, standards of practice, levels of complexity, professional skills, language, power, and trust. (Agranoff, 2007; Bingham and O'Leary,2008; Healey, 1997; Jackson and Kotchtitzky, 2009; Mckinney and Johnson, 2009; Mischen and Jackson, 2008; TRB, 2005). Transportation planning and Public Health are two very distinct professions having different missions, cultures (vehicle vs. human scale) standards of practice, different complexities, and certainly different skills and the resultant different languages. Transportation planning speaks of distance and speed of vehicles and public health speaks of preventing disease, promoting health and protecting the community from disease and injury. Educational requirements are vastly different. As noted previously, transportation planning has

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enjoyed a great deal of power as long as society prioritized the vehicle over the human scale. Public health has episodic power when a new threat appears but soon the threat subsides or the responsibilities are reassigned to organizations with specific expertise and society forgets the public health prevented or lessened the problem in the first place. Other health organizations have functioned relatively independently over the years and today there is no real health planning entity in most places. Transportation planning occurs regionally, statewide and federally because of the need for connectivity and the lack of private organizations to provide the same level of service. Silo organizations do not know, understand or trust each other. Misunderstandings can and do occur. Other barriers include hesitancy to give up power (real or perceived), operational, financial, legal and regulatory, and political profile issues such as leadership and accountability. (Wise and Nader, 2002)

The Network Model is a theoretical framework that lends itself to addressing the problems and challenges of the 21st century. Table 1.1 provides a comparison of challenges facing organization today and how the traditional or bureaucratic model views them.

Table 1.1 Human Problems Confronting Organizations   (Shafritz and Hyde,2003)

Problem	Bureaucratic Solutions	New 20th-Century Conditions
Integration. The problem of how to integrate individual needs and organizational goals.	No solution because of no problem. Individual vastly oversimplified, regarded as passive instrument. Tension between "personality" and role disregarded.	Emergence of human sciences and understanding of man's complexity. Rising aspirations. Humanistic-democratic ethos.
Social Influence. The problem of the distribution of power and sources of power and authority.	An explicit reliance on legal-rational power, but implicit usage of coercive power. In any case, a confused, ambiguous, shifting complex of competence, coercion, and legal code.	Separation of management from ownership. Rise of trade unions and general education. Negative and unintended effects of authoritarian rule.

Table 1.1 – *Continued*

Collaboration. The problem of producing mechanisms for the control of conflict.	The "rule of hierarchy" to resolve conflicts between ranks and the "rule of coordination" to resolve conflict between horizontal groups. "Loyalty."	Specialization and professionalization and increased need for interdependence. Leadership too complex for one man rule or omniscience.
Adaptation. The problem of responding appropriately to changes induced by the environment.	Environment stable, simple, and predictable; tasks routine. Adapting to change occurs in haphazard and adventitious ways. Unanticipated consequences abound.	External environment of firm more "turbulent," less predictable. Unprecedented rate of technological change.
"Revitalization." The problem of growth and decay.	Underlying assumption that the future will be certain and basically similar, if not more so, to the past.	Rapid changes in technologies, tasks, manpower, raw materials, norms and values of society, goals of enterprise and society all make constant attention to the process of revision imperative.

      Table 1.1 illustrates five critical problems which have faced public health and transportation over the last few decades: the need for integration, awareness of social influence, the opportunity for collaboration, the unintended consequences of the pressure to adapt to changes, and the daunting challenge of how to revitalize. The bureaucratic solutions correspond closely to the traditional model of management while the 20th century conditions serve as compelling arguments for the Network Model. The Network Model is more inclusive and emphasizes mutual learning. The Model moves away from authoritarian styles to greater participative management. The Model supports interdependence and pools resources to address complex issues. The Model provides a means to share resources and solutions. And

finally, the Network Model provides a way to constantly evaluate the process and thereby keep up with the fast pace of the 21st century.

Barriers to collaboration were reflected in the study questions in both the internal and external organization sections. Questions that sought to identify barriers or disincentives to collaboration included questions on practices, tools, influences, motivators, leadership, organizational encouragement, and barriers.

<u>1.6 Public Health Background</u>

Public health became an important force in urban development during and because of the industrialization of major cities. The problems created by factory pollution impacting the air, water and soil as well as the cramped, disease- ridden tenement houses of the poor working class led civic leaders to advocate for safer and healthier conditions and for elected officials and governmental department heads such as health commissioners to legislate hygiene measures and zoning ordinances. The health commissioner and/or the Board of Health had rule making authority in order to protect the general public from environmental and communicable disease hazards. Zoning was originally an effort to distance people from the source of a public health problem such as mosquitoes in swamps, crowded tenements, and garbage. The traditional management style was the predominant management style as industry relied on lesser educated workers to provide repetitive work skills on assembly lines designed to produce as many widgets as possible. Public health followed the traditional style of management in that it was very prescriptive, top down, and authoritative. Public health was also influenced by the outbreak of wars such as the Spanish-American War, World Wars I and II, the Korean War and the Vietnam War. The earlier wars promoted advances in communicable disease control when great troop losses occurred due to cholera, dysentery and influenza. The later wars advanced trauma care and contributed greater emphasis on medical treatment rather than population health. The Public Health Service, a federal agency, was organized using the military model with the Surgeon General leading the organization. Major construction projects also influenced

public health. The outbreak of yellow fever during the construction of the Panama Canal led to the development of a preventative vaccine and environmental controls. During the early 20th century, governmental bureaucracies grew in size and responsibility as the activities generated by more planning, development and enforcement efforts for the public good required oversight and resources. Following the traditional management style, decision making was still done by a few people at the top of the organization and they could not maintain the level of knowledge or trust to keep the growing specialty services within the department. Knowledge and expertise regarding health and the environment became so specialized that some of the programs originating in public health spun off into separate departments, agencies or practices. Ordinances and zoning went to planning and development. Water went to its own department. Air quality became federally regulated and federal and state agencies to monitor it were created. Germ theory and the advance of treatment of infectious diseases and trauma spurred the separate medical care system with hospitals, clinics, pharmacies, and private providers capturing the bulk of resources for funding, reimbursement and workforce development. The immediate problem took precedence over the more important long term issues. In many cases, public health was left with everything nobody else wanted to do or could do immediately if it was a new issue. With the successful containment of many communicable diseases and a loss of rule making authority to others, public health became a less well-defined or understood department in a large complex local, state or federal bureaucracy. Decision–making changed from a health commissioner and board legislating policy to a department head reporting to a board, administrator or commission. Much of the funding for public health came from grants which dictated the deliverables rather than from local general funds. These grants required a high level of expertise for the employees who staffed the programs. Currently, public health professionals with knowledge and experience are difficult to find thereby presenting a challenge to maintain a competent and motivated workforce. Planning and assessment skills are part of the ten essential services of public health but are often ignored in favor of meeting program

obligations. Public health has lagged behind other professions in implementing a professional accreditation process as well as creating a body of evidence- based practice regarding population health. These issues are currently being addressed by federal, state and local agencies. Many public health issues are complex.

Currently, at least 17% of the gross national product (GNP) is spent on medical care and 51% of that cost is due to largely preventable chronic diseases such as diabetes, cardiovascular diseases, some cancers, and obesity (Sun Times, 2010). Private businesses and all three levels of government cannot withstand the burden of these ever increasing costs. The critical intervention strategies for preventing or decreasing obesity are access to nutritious foods and increased physical activity. The state of Texas could save $153,600,000 in 1-2 years for a $10 per person investment in prevention. (Trust for America's Health, 2008). With the increase of chronic diseases and their largely preventable nature, comes a greater need to understand the social determinants of health and environmental influences such as the built environment. Medical treatment is still important but this paradigm really pulls public health back to its population health roots and provides an opportunity for public health to provide leadership among a system of partners including transportation planners, hospitals, and governmental decision makers. Currently, public health relies on several tools such as Healthy People 2020, Behavior Risk Factor Surveillance Survey (BRFSS), and GIS mapping to assess and evaluate health system performance. Healthy People 2020 is a federal report setting a goals for decreasing rates of chronic diseases and injuries and increasing healthy lifestyles. Healthy People 2020 report provides a progress report to the nation as well as a new goal for the future (Healthy People, 2011). Some public health oriented organizations such as Robert Wood Johnson Foundation, National Association of County and City Health Officials (NACCHO), American Public Health Association (APHA), Centers for Disease Control and Prevention (CDC) and some state and local public health organizations issue periodic report cards on key health indicators. These reports demand scarce resources in time, money and expertise and are

challenging to implement and track progress due to the nature of the complexity of the issues and the number of stakeholders involved. The public health agency or any one of its partners is part of a health arena which usually functions in a fragmented competitive manner. Partners include schools of public health, nursing, and medicine; non-profits, hospitals, clinics, private physician practices, health insurance companies, governmental health agencies including other local health departments, state health services, CDC, and Health and Human Services (HHS). However, there is often not a health network or system. There are coalitions which include some partners and not others around specific issues. Until recent health care reform legislation, very little formal policy or decision-making dealt with a cohesive, tangible health system. Priorities and decision-making were on an issue by issue basis and often resulted in individual organizations making independent decisions that might duplicate other efforts or leave gaps in strategies to address the issue.

<u>1.7 Public Health and Collaboration</u>

Collaboration offers a method for different existing organizations to work together on a common problem. It offers the opportunity for pooling of resources and ideas and commitment to a set of agreed upon outcomes. Collaboration is not easy. It can be a slow, frustrating process in which one or more partners may not feel equally represented. It requires longer term commitment to problem solving which can cause consternation for short term policy makers who have to face re-election before the solution can be implemented and evaluated. Currently, only a few local health or planning departments are working on collaborative models of practice. San Francisco's ENCHIA project has published a number of reports and developed the health impact assessment (HIA) into a very replicable tool available on their website for use by others (SFDPH, 2003). A number of roundtable discussions have occurred at the national level with many health and planning partners participating. In 1999 the World Health Organization issued a report recommending that health be included in transportation planning (WHO, 1999). Several years later, U.S. governmental agencies met and agreed that there should be integration of

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planning efforts. Public health and transportation were present (APA, 2004; FHA, 2004). Other similar meetings included one but not the other as various groups identified different subsets of players. The American Planning Association (APA) and the National Association of County and City Health Officials (NACCHO) coauthored Integrating Planning and Public Health in 2003 and included six case studies of collaborative efforts in local communities (Morris, 2003). And yet the core services for most local public health agencies still include communicable disease prevention and control and maternal and child health, but not chronic disease prevention or planning and policy (NACCHO, 2008). Much of the federal, state and local public health funding has been categorical funding and geared toward immunizations, HIV/AIDS, TB and other infectious diseases. The most recent funding to reflect the knowledge of the built environment impact on chronic diseases has been scarce, scant and highly competitive (RWJ, CDC, DSHS 2009). So most health departments do not have the staff or budgets to move to the chronic disease prevention implementation needed to promote collaborative planning. Without staff or funds, health department leadership must rely on obtaining the support of others such as elected officials and other key decision makers in the health field or in business. This too takes prioritization of time and preparation of supporting information to build a convincing and informative case for moving forward.

Public health priority issues change over time. Funding to address these issues usually comes from Health and Human Services (HHS) through the Centers for Disease Control and Prevention (CDC) at the federal government level or from the Department of State Health Services (DSHS) at the state government level in the form of block grants or categorical funding which limits their use to specified issues. Training follows funding and staff expertise moves toward the funded priority over time. General funds might be supplied by local city or county governments with some greater flexibility. However, there is usually a local approval process to assure that the funds are being used for desired local purposes.

1.8 Transportation Planning Background

Passenger vehicles accounted for 88.79 % of passenger transport in 2005, buses accounted for 2.96% and rail for 0.46% (BTS, 2005). For most of the last century and the first decade of this century, the United States has been an automobile dominated society. The transit movement of the old industrial cities and the use of railroads for long distances faded quickly with the introduction of the American Dream of moving to the suburbs. During the 20th century cities and their suburbs were designed for vehicle traffic and getting to destinations as quickly as possible. Public transit became less of an investment and sprawl became a greater and greater challenge to pedestrian movement. Super highways built since the 1950s splintered neighborhoods which were often low income, high health risk neighborhoods, thus contributing to growing health disparities (APHA, 2009). The cost of maintaining these highways, much less building for future population growth, is staggering. Just in the North Central Texas region alone there is an estimated $45 billion gap in deferred transportation improvements needed by 2035 (NCTCOG, 2011). Along with the economic woes of the current system comes the increasing dissatisfaction with the resultant quality of life issues.

> The combination of greater distances between destinations as development sprawls outward from city centers and the lack of pedestrian and bicycle infrastructure contributes to eliminating walking and biking as options and to increased driving. One-fifth of all automobile trips in urban areas are on mile or less, and over two-fifths of these trips are less than three miles. (White House Task Force on Childhood Obesity, 2010)

More and more elected officials and planning leaders are hearing from their communities that they are tired of driving everywhere, that they want to be more physically active, that they want their children to enjoy greater mobility as well as their older generations to remain independent and mobile longer. (McCann and Ewing, 2003; RWJ 2000)

At the turn of the 19th to the 20th century, transportation prepared for the huge shift to the automobile through the good roads movement from 1890 to1916. The role of the federal government increased as funds were identified for roads through the Federal Aid Highway Program in 1916 and the Federal Highway Aid Act of 1921. 1932 saw the beginning of a vehicle

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fuel tax. The interstate highway system was built between 1956 and 1987. The cost of maintenance, much less expansion, has surpassed current capacity for funding. "We cannot approach the future with the mindset that we can simply repeat, or re-authorize, what we have done in the past." (OCTA, 2010) Local and state governments have become dependent on the now inadequate fuel tax revenues from the federal government to fund major multi-million dollar road projects. The Department of Transportation (DOT) has become a major funder of road projects. State Departments of Transportation, regional metropolitan planning organizations (MPOs) and local government transportation departments plan and implement roadway construction and maintenance. MPOs such as the North Central Texas Council of Governments (NCTCOG) have played a major role in coordinating priority setting, resource distribution, and advocacy for large urban areas.

<p align="center">1.9 Transportation Planning and Collaboration</p>

In the Guide to Metropolitan Transportation Planning Under ISTEA –How the Pieces Fit Together, the administrators of DOT programs for the Federal Highway Administration and the Federal Transit Administration describe the "nation's transportation [as a] system… with a key strategy to improve the system and investment decision-making." (USDOT, 2010) Transportation was referred to as a network and input from various stakeholders such as businesses, planners, and elected officials were invited. While the use of system and network does not refer to management style in this case it does imply that there is some familiarity within transportation management regarding a concept of system, network and stakeholder. The work of regional MPOs also implies that some type of collaborative planning takes place. Regardless of the opportunity for input to federal legislation, the enacted legislation requires strict adherence to guidelines and expectations for use of funding in order to be eligible for funding. There is a need for an authoritative, top down role by the governmental entities administering funding in order to assure compliance. How much of the planning process and resultant input is truly participative is subject to opinion. The traditional style continues with the limited number of

decision makers framing old issues and identifying old solutions to new problems without the benefit of other perspectives, knowledge and performance indicators. The membership of the NCTCOG Transportation Council is almost all elected officials from cities and counties in the area. These same elected officials are the decision makers for budgets for public health, hospital districts and employee insurance and wellness programs and yet transportation planning and health planning remain in separate silos with no collaborative planning or mutual outcome measurement available. This statement is not meant as a criticism but rather as an observation of a potential missed opportunity for all relevant partners in collaboration between transportation and health.

Transportation planning is largely a public sector function. The federal government provides funding for building and maintenance and the state governments provide funding and actual maintenance as do local governments. Much of the federal funding distribution is decided at the regional level in planning groups such as the NCTCOG Transportation Planning Council. There is some private sector activity in building and maintaining toll roads but toll roads are not well received in many communities. MPOs like NCTCOG have Bicycle and Pedestrian committees established in order to plan and develop bikeways and trails. While these are nice assets to have in a community they do not totally speak to the issue of " linking modes of transportation and the need for destination walking in day to day activity" if people are going to increase physical activity on a daily basis. (Frank, 2003; RWJ, 2007; Besser and Dannenberg, 2005; Rodriguez, Khattik, Everman, 2006).

<u>1.10 Public Health and Transportation Planning Collaboration</u>

Public Health faces one of its most daunting challenges to date which is fighting the long time effects of inactivity and resultant costs of medical care as well as increasing morbidity and mortality. Transportation planning also faces its own daunting challenge of not only maintaining an enormous system but of trying to find resources for accommodating growing populations and social and political pressures to find alternative ways of doing so. A decade

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ago, professionals in both arenas recommended collaboration of effort. Several best practices have emerged including complete streets, Safe Routes to School (SRTS), and the Walking School Bus. Complete Streets is a model transportation concept which embraces multi- modal transportation. The various forms of transportation included in the streetscape include single vehicle, public transit, bicycle, and pedestrian pathways inclusive in one street. By designing all four ways of transportation into the street, people still have a choice but greater opportunity to mix and match, utilize mass transit and better yet choose healthy bicycling or walking. Transportation planning as well as the CDC recognizes this approach as a viable response to current transportation needs and the obesity challenge. (TRB, CDC, 2010) SRTS is a CDC sponsored program which has gained traction in areas receiving competitive prevention funding. It requires community partnering to identify walkable routes to school which may need traffic/pedestrian safety modifications to the streets and sidewalks in order to provide a safe way for children to walk from their homes to their schools. Signage, pedestrian crosswalks, sidewalk maintenance, and traffic calming are all required for a successful program. Participating schools often provide rewards and incentives to participants. Local planning agencies have to be willing to upgrade the walks and streets, and there needs to be a community champion to promote the effort. This might be a health department or it might be a youth- oriented group such as the YMCA or agricultural extension agency. Why are there only a few efforts underway ten years later? What is needed to increase collaboration between health and transportation in order to increase physical activity and help reduce overweight and obesity and implement alternative models of transportation that require less of the same resources and impact the environment and the people in a more healthful manner? "Only 20% of federal transportation funding goes toward public transit or motor vehicle safety programs. The rest goes toward highways and road infrastructure." (APHA, 2010) While these programs are increasing, the rate is slow and best practices are needed to increase the impact of alternative transportation planning and reduction of chronic diseases and obesity.

The American Public Health Association recommends policy changes that

> encourage federal planning, funding practices, and decision-making to include health impacts, costs and benefits; support development of healthy communities, active transport and incentives for transportation investments that support health; and promote measurement and evaluation of health, safety and equity in planning and development processes. (APHA, 2010)

What is required to motivate transportation decision makers to include health indicators in the transportation planning process? The Healthy Community Design Expert Workshop composed of 20 national experts recommended that public health collaborate with transportation planners. (CDC, 2009). The Transportation Research Board states that "given the current state of knowledge and the importance of physical activity for health, the committee urges a continuing and well-supported research effort. Priorities for research include interdisciplinary approaches and international collaboration, more complete conceptual models, better research designs, and more detailed examination and matching of specific characteristics of the built environment with different types of physical activity." (TRB, 2005)   Others recommend collaborating by sharing a collective vision and common knowledge by "applying conceptual frameworks" (Hoehner, Brennan, Brownson, Handy, and Killingsworth,2002) or developing new partnerships such as "mobilizing networks for change". (Giles, Homes-Chavez, and Collins, 2011) The challenges to collaboration include lack of awareness of the benefits, lack of knowledge about each others' areas of expertise, lack of awareness of implementation tools, and institutional barriers (TRB, 2010).

This study will concentrate on the institutional barriers to collaboration. Institutional barriers include professional training and education, a lack of common language or common process for decision-making and funding (Morris, 2005; TRB, 2010). Transportation planning tends to be very automobile oriented rather than human scale oriented. (Morris, 2005) It does not have a health perspective when considering impacts and outcomes and there is a lack of health data or compelling argument. Ironically, there is a lack of zoning and building codes that reflect health impacts.

Health often defines itself or lets itself be too narrowly defined. Public Health often lacks political power. Health relies too much on the medical model rather than the population health/prevention mode. There is non-overlapping governmental authority/regulatory function and funding. Health lacks data and performance criteria or a plan for sharing what is available with planners and decision makers. (NACCHO, 2010).

Barriers to collaboration in general are well documented and some that are specific to transportation and public health have been identified. However, not all of the potential barriers have been linked to the transportation/health lack of collaboration and certainly there has been little documented as to what strategies are called for to enhance collaboration between the two professions.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1 Introduction

In this chapter, two models of organizational theory are identified and compared. The first model is the traditional model which was broadly used by business and government including transportation and public health organizations throughout the last century. The model's strengths and weaknesses in relation to collaboration and the issues facing transportation and public health today are discussed. The second model is the Network Model which has gained popularity with leaders and organizations over the last few decades because of its shared learning/goal orientation to address complex issues. The strengths and weaknesses of this model will also be discussed. Then the two models will be compared and the explanation for choosing the Network Model for collaboration will be described.

2.2 The Traditional Model

The Traditional Model of organization theory was born out of the industrial revolution. Workers lacked education and were tasked with highly repetitive assembly-line labor. Management was authoritarian, decision-making was top down, with one person (or a small group) holding most of the power. Departments were compartmentalized or specialized. Competition was brisk among different organizations. Profit was the major desired outcome.

Traditional management relies on vertical communication which is primarily from the top down. Authority and therefore power rests with the top few in the organization. Control is important rather than input and feedback. POSDCORB or planning, organizing, staffing, directing, coordinating, reporting, and budgeting are the responsibility of management and a strict chain of command is maintained. Decision-making is done at the top level by only a few managers with little to no input from employees or stakeholders or clients. This creates a culture

where the expectation is that only one right answer is expected rather than encouraging exploring alternatives which might provide a better solution. In the Traditional Model, functions are organized into separate, distinct departments or divisions where there may be a high level of expertise in that area but little knowledge sharing outside the department. Decision-making remains singular and observes the chain of command. Levels of trust up and down and across the organization tend to be low largely due to the isolation of each unit from the other. Likewise, individual work units or departments have specific levels of knowledge or skill which are different from other units or departments. Finally, the Traditional Model relies on "record-keeping and compliance" in order to show accountability and evaluate performance (Goldsmith and Eggers, 2004). With the move to a more highly educated workforce and knowledge management based work rather than industrial production, leaders have started embracing different models of management and organization.

2.3 The Network Model

While there have been numerous work groups and task forces over the last decade declaring that public health and transportation should plan together (TRB, 2005), there have been relatively few examples of this actually occurring at the local or regional level. There are a number of possible reasons for this lack of collaboration including lack of knowledge about each others' disciplines, lack of implementation tools, and the presence of institutional barriers. This study concentrates on institutional barriers to collaboration. The theoretical framework for the study is the Network Model since the very essence of the research question is what are the barriers for two distinct systems with various governmental levels of organizations or agencies to work together. The network model emphasizes collaboration at the intra- and inter-governmental levels. The more the organization supports a collaborative internal culture, the more likely it is to be supportive of an external collaborative culture. (Agranoff, 2007; Kolibe,Meek and Zia, 2011; Linden, 2010). The need for collaboration among different agencies and systems continues to grow as issues become more complex, implementation

costs increase, and resources become scarcer. The model allows for the development of a network of interested participants to work together toward a common vision without having to reorganize each institution in its entirety. Benefits of the model include sharing information, building capacity, developing technology, and implementing policy.

The Network Model of Collaboration (Figure 2.1) illustrates the intent of this study which is to identify the barriers that exist to prevent collaboration among public health, transportation and other groups such as urban planners and health-related agencies such as hospitals and insurance. The previous chapter described the historical evolution of public health and transportation planning including their cultures. These cultures and barriers are represented within the three inner circles which work within the realm of policy and regulation. The key to the study is what is required to overcome the barriers and contribute to the sustainability of the collaborative effort so that health indicators will be and continue to be incorporated in transportation planning.
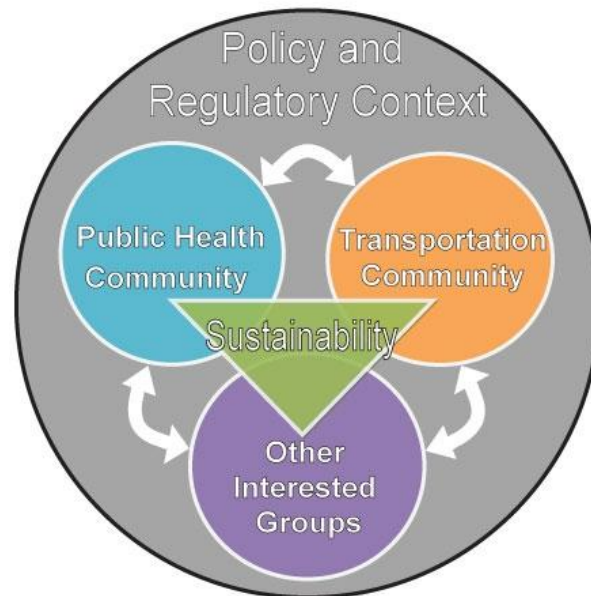

Figure 2.1 Network Model of Collaboration (Li, Casey and Brewer, 2010)

The Network Model identifies values such as trust, mutual learning and decision making by consensus. It identifies skills such as knowledge management, data sharing, and

performance measurement as necessary for organizational managers, elected officials, professional experts, and other collaboration participants to embrace if the collaboration is to be successful (Agranoff, 2007). Network theory principles include mutual learning, shared visioning, systems thinking, empowered workforce, resource pooling, degrees of hierarchy and levels of integration, betweenness or managing the white space, and steering (Goldsmith and Eggers, 2004; Agranoff, 2007). With complex, expensive problems facing leaders and their organizations, different ways of approaching the solutions are necessary. By organizations learning together, sharing a common vision and thinking systems rather than units of work, the organizations can reach new understandings and insights into others' strengths and talents and apply these to new solutions. Managers encourage staff to exercise their expertise and knowledge to the degree that the situation calls for, thus reducing the isolated thinking and action within and across organizations. Leaders become less authoritative and concentrate more on facilitating connections between groups (the white space) and in guiding efforts and resources to come together. The Network Model depends on partners' willingness to work together on the issue. It does not depend on reorganizing existing organizations or on creating a new organization. The critical element is trust. There has to be a high level of trust among the partners in order to maximize the sharing of data, ideas, and strategies for action and evaluation results. Through mutual learning, the partners become familiar with varying cultures, terminologies, standards of practice and other issues which could become barriers to collaboration.

<u>2.4 Differences Between the Traditional and Network Models</u>

The Network Model provides a framework for existing organizations to work with one another without having to restructure the existing organizations. It provides a means to create necessary relationships and actions that can address complex situations by pooling resources to accomplish mutual goals or outcomes which none of the collaborating partners could accomplish individually. While an organization may be more of a traditionally managed

organization than a collaborative organization, the more of a collaborative culture it practices the better understanding of collaborative principles its leaders and employees will have in a network environment. (Linden, 2010) Table 2.1 illustrates five organizational concepts or domains which are critical to the success of a collaborative effort. The table shows some of the differences between the Network based institutional model and the Traditional model.

Table 2.1 Comparison of Network-based Institutional Collaboration to Other Models

Organization Concepts	Management	Decision-Making	Structure	Knowledge	Performance
Network	Network-based, collaborative, communicative, pooled authority	Interactive learning process & continual negotiation;	Trust, mutual dependence, shared belief	Explicit & tacit knowledge, data & information sharing	Subjective self-satisfactory regarding performance based on network actors' goals & objectives
Traditional	Top down, authoritative	Few senior managers, closed	Less trust, compartmentalized	Silos	Competition, win/lose, profit orientation

Adapted from (Li and Casey, 2012; Shafritz and Hyde, 2007)

The first domain concerns management which encompasses the leadership style and use of authority of the senior leader or leaders as well as the expected style throughout the organization. The Network Model embraces a shared approach where collaboration itself is emphasized, input is sought, and communication moves up and down the organization as well as across. The more traditional or hierarchal management in government, the less collaborative whereas the more networked management in government, the greater the Network Model is practiced.

The second domain addresses decision making. Since the need for collaboration is often motivated by the need to address problems or issues that are too overwhelming for individual organizations, the need for participative decision-making is acute. This situation requires a process that is interactive, where all partners have a chance to contribute and learn

from each other. Mutual learning assists in building trust through familiarity and common points of reference. Group decision making can occur in several different ways including "consensus, voting, subset of group, or group input to single decision-maker" (Koliba, Meek, and Zia, 2011).

The third domain is structure. Structure refers to how an organization or network is set up to function. In the Network Model since the structure is based on mutual dependence and a shared belief (as a result of mutual learning) then the trust level increases. There are three variations to the structure of network collaboration. One variation is self-government which means that all the partners share the responsibilities of management/leadership and decision-making. This variation provides the highest level of trust and offers the most opportunity for collaboration accomplishment of goals. A second variation is lead organization in which one organization provides most of the leadership and decision making but works with the other organizations. The lead organization has more authority and power than the other organizations, so there is less trust and less chance of accomplishing goals. A third variation is network administration where one organization provides the support function to the other organizations. There is moderate trust and accomplishment of goals with this variation (Koliba, Meek and Zia, 2011).

The fourth domain is about knowledge. In order to address issues or solve complex problems, there is a need for information and data. The Network model provides the forum for sharing information and data among the partners. This helps prevent duplicating efforts to obtain or create missing pieces, contributes to mutual learning, identifying alternative solutions, and achieving outcomes. Time does not need to be spent creating data when it already exists but rather time can be spent evaluating the data to look for solutions that might not have been identified in isolated individual activities.

The fifth and final domain is performance. The organizational participants are usually accountable to themselves and the degree of accountability may depend on how strong the relationship ties are among the organizations. Performance measures can be identified through

written agreements or established procedures for decision-making and implementation (Koliba, Meek, and Zia, 2011).

The traditional model does not lend itself as well to collaboration since it provides a top-down, authoritarian approach to management. Only a few senior level managers contribute to the decision making. Employees are usually organized into specialty silos and the organization itself is usually a silo among other corporate silos which are all competing with one another for profit rather than outcomes. There is a win-lose approach to corporate goals and objectives. Trust levels are low within the organization and among organizations which provides a poor climate for mutual learning and collaboration.

Since the Network Model does not require a formal organization, it lends itself to addressing a rapidly emerging or escalating issue that may have consequences to all of the partners. The motivation is high to share information, form strategies and get results quickly. The emergence of a new technology may also promote collaboration particularly if the partners have the combination of skills, knowledge, and other resources to pool together to develop or purchase the technology together. With a number and variety of partners collaborating, the issue can be addressed to the level of action and resource dedication necessary to obtain results. Funders expect collaborative efforts and evidence of significant and meaningful partnerships to accomplish the goals set out in what is usually highly competitive funding. If the collaborative effort has no longevity or list of accomplishments then the funder may doubt the ability of the collaboration to function effectively meeting the grant deliverable if funded. While the collaborative effort itself does require time and resources, it still enables the partners to participate at a lower cost than if each one tried to accomplish the task independently. Thus the cost benefit rule can usually be realized. Not only are the costs shared but also any risk of failure or criticism from the public or other competitors who are now collaborators. The Collaborative Network Model lends itself to episodic issues which require huge planning and resource allocations but only once in a while therefore not requiring a permanent formal

structure to maintain it. Some mandated program activities may also benefit from the Network model. Additional benefits include the opportunity to concentrate on enhancing relationships among partners, sharing information as well as training, and de-emphasizing the bureaucratic aspects of problem solving. (McKinney and Johnson, 2009)

The Network Model of Collaboration provides the framework for studying the barriers to implementation of health indicators in transportation planning. The specific incentives and the concerns lend themselves to further discussion during the focus group and the later expanded survey of potential network participants. The existence of the NCTCOG provides experience in network collaboration to many of the partners who would participate in a health/transportation collaboration. The questions could build on that experience in order to ascertain what has worked so far and what needs improvement with the addition of health to the agenda. The literature on network collaboration assists in informing the health strategic planning for inclusion as well. The incentives and barriers to success are well defined and therefore can be further explored during the interactive process of data collection.

Network Collaboration is not meant to replace the traditional organization with its hierarchal management (Agranoff, 2007) but rather to complement it. The entire organization does not have to change although there are many cultural aspects that might need to do so. Institutions and organizations are complex, entities set in their ways which means they take time to change and usually do so incrementally (Agranoff, 2007). The strengths of Networks include requiring less time and money, responsiveness to urgent needs, minimal administrative and bureaucratic hurdles, built on existing relationships that can be readily scaled. Weaknesses include difficult to sustain, lack of formal agreement on roles, trust can be strained, susceptible to change, equitable cost sharing, issue fickleness in terms of longevity. (McKinney and Johnson, 2009)

CHAPTER 3

RESEARCH DESIGN

3.1 Introduction

This study includes a focus group and a survey of senior leaders in planning and health in the North Central Texas region. The survey was designed to capture information about internal organization practices as well as external organization practices regarding collaboration. The survey also captured information regarding the leadership style and experience of the organization, barriers and benefits to collaboration, and experience with various planning tools. The Agranoff perspective as previously discussed regarding the five key domains of the Network paradigm were reflected in the question structure.

3.2 Approach/Methods

Most of the population growth in the U.S. will be in metropolitan areas over the next 30 years. The North Central Texas Council of Governments (NCTCOG) is the fastest growing MPO in the U.S. and the Metroplex (Collin, Dallas, Denton, and Tarrant Counties) is already the fourth largest metro area (Census Bureau, 2010) in the nation. The NCTCOG serves a 16-county region. Tarrant County is the second largest county with a population of 1.8 million and includes Fort Worth and Arlington and borders Dallas County which includes the cities of Dallas, Irving, and Garland. TCPH is the convener for the NCTCOG Vision North Texas (VNT) Health Research Team (HRT) which crafted a health guiding principle and several priority action steps for the recently released VNT 2050 Report. The NCTCOG Transportation division also convened a task force to produce the 2035 Mobility Report which summarizes the needs for transportation in the region. Representative groups of elected officials, planners and bicycle and pedestrian advocacy groups provided input into this report. These two regional efforts demonstrate that some of the regional stakeholders in planning and health have contributed to a

discussion on visioning but that little focus has been given to how to collaborate and with whom. This is particularly true in the health area where there are fewer public health organizations.

In order to address the research problem and the research question regarding collaboration including barriers to collaboration and recommendations to address the barriers, several data collection methods were utilized. Following a literature review which included transportation, health, government and organizational development materials, a set of open ended questions was developed for a focus group of transportation and health planners and decision makers from across the Metroplex. The questions provided the researcher the opportunity to learn more about specific areas to include in a survey to a larger group of transportation and health planners. The survey was conducted electronically using Survey Monkey. It included several hundred additional participants. Participants were identified from a list of regional decision makers. The health participants included senior leaders from the four local health departments (Collin, Dallas, Denton, and Tarrant Counties) and the regional office, senior hospital officials, health insurance, private practice, and other community health venues such as school and occupational health. The transportation participants included senior leadership from North Central Texas Council of Governments (NCTCOG), Texas Department of Transportation (TexDOT), the Dallas Area Rapid Transit (DART), The T and members of the Transportation Committee of NCTCOG. Some of the latter participants were also elected officials and were identified in their dual roles. Other elected officials were included such as county commissioners/judges, city council members/mayors, state and federal legislators. City planners were also included as participants. The Network Model for Institutional Collaboration was used as the theoretical framework to explain the results.

<div align="center">3.3 Focus Group</div>

Since the Network Model for Collaboration has been identified as the theoretical framework for this study, two areas requiring more information have been identified. These two areas include identifying the barriers to collaboration among transportation planning and public

health communities and understanding the reasons behind the jurisdictional and institutional barriers. One of the tasks in obtaining more insight into the barriers was to conduct a focus group. The four objectives of the focus group were:

1. To explore the hypothesized organizational barriers

2. To obtain input on additional organizational barriers

3. To gain information regarding potential causes of the barriers

4. To learn the ways and lessons of institutional collaborations in which the focus group participants have engaged, as well as the tools used in the collaborations.

The focus group was also used to inform the larger in scope survey which was done after completion of the focus group and included many more participants.

The process for identifying the focus group participants included a list of senior transportation planners in the region provided by the supporting partner, North Central Texas Council of Governments (NCTCOG) and a list of senior public health professionals in the region provided by Tarrant County Public Health (TCPH). Everyone on both lists was sent an email explaining the purpose of the focus group and they were asked to indicate which times and days from a list of times and days they were available to meet. The letter is included in the appendix. The time and date that the most people could attend was chosen. Notices were sent to those who indicated that they could not attend at that time thanking them for their interest. Participants were asked to review the required consent form and return the signed form by email or bring it with them to the meeting. Transportation planning participants included representation from the state department of transportation, a regional transit authority, two bicycle and pedestrian advocacy groups, regional planner, and a municipal transit authority. Participants from public health included hospital, governmental local public health, school of public health, two health planner advocates, and environmental health. Participants came from the eastern and western "sides" of the region. Local, regional and state level governments were represented as well as non-profit, academic, private nonprofit, and community advocacy.

The focus group was held in a conference room at the NCTCOG which was a central location in the region. Participants included six planners and six public health professionals. A complete list of participant organizations is included in the appendix. Individual names were kept confidential. The number of participants was limited to 12 in order to keep the group manageable. Fourteen people confirmed for the meeting but one was a no show and the other agreed to observe rather than participate when the maximum number of participants was reached; that person was a TCPH employee. The group facilitator was the doctoral student/health director. There were seven observers – four from the UTA research team, two from NCTCOG, and one from TCPH. One participant brought their child who sat quietly in a far corner of the room watching a video the entire time. There were nine questions asked of the focus group, the first one being a means of introduction and an ice-breaker. The questions are included in the appendix. Three tape recorders were placed in different locations but only the digital one picked up enough of the discussion to prove useful in the transcription process. In addition one of the graduate students took notes and the research faculty chair also took notes. All of these were used to analyze the focus group proceedings. The facilitator explained the process and emphasized that the participants were expected to discuss each question among themselves and that the facilitator would only interrupt if the conversation strayed away from the question, if participation was uneven, or if time demanded the need to proceed to the next question. The group members all participated in the discussion and only required occasional facilitation to stay on subject or to transition to the next question. One participant left the focus group approximately 30 minutes into the discussion. There was no indication of a problem with the focus group.

3.4 Survey

The survey is another method for obtaining information regarding organizational network collaboration. It allows for a greater number of participants to be included and therefore

a larger data set for analysis. Based on the literature review and the focus group experience, over 50 questions were developed regarding organizational demographics, experience with internal collaboration, experience with external collaboration, and leadership experience (see Appendices for survey and additional materials). There were four sections of the survey reflecting these categories. Questions were developed with the five domains of the Network Model in mind. The five domains included management, decision-making, structure, knowledge and performance (see Table 1). Section I included questions regarding the organizational profile and Section IV included questions regarding individual profile. The questions included organizational type, organizational mission, number of employees, population served, total organizational budget, primary source of funding, dedicated position for external collaboration, staff involvement in external collaboration, key stakeholders in external collaboration, most likely with which to collaborate, job title, age range, gender, and years of experience in current position. The questions were revised a number of times in order to give clarity to the question, streamline the survey, modify the question to fit the Survey Monkey format, and to remain true to the intent of the question in seeking a response regarding one of the five domains or other key questions such as barriers and benefits questions. The participant list included senior leaders from public health, hospitals, health and transportation-related non-profits, federal/state/local planners and planning groups, schools, businesses and elected officials. After receiving Internal Review Board approval, a draft of the survey was given to several employees of Tarrant County Public Health and NCTCOG for testing and feedback purposes. Several questions were edited for clarity and the entire survey was further streamlined as the Survey Monkey formatting issues were resolved. Since the survey would be sent via email, there was concern regarding the danger of the survey going into SPAM mail which indeed happened to all of the public health test cases. To decrease the chances of this happening on a large scale, a "heads up" email was developed and sent to participants. Approximately 100 out of 600 plus bounced back as undeliverable so more work on the mailing list addresses

occurred. The fact that the survey was ready to be sent the week before Thanksgiving when people usually take time off influenced the decision to wait until the week after the holiday to send the survey. This also provided the time to work on the mailing list. The survey was sent out the week after Thanksgiving on November 29th well before the next holiday. Once the survey was sent, participants were sent follow up emails December 9 and January 25.

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CHAPTER 4

RESULTS AND FINDINGS

4.1 Introduction

This chapter includes a discussion of the results from the focus group as well as the results of the survey. The results are discussed separately and then the findings are summarized together. The Network Theory and the five domains are the critical factors to which the responses in both the focus group and the survey are compared.

4.2 Findings from Focus Group

This section identifies themes and ideas emanating from the group as well as a detailed account of the critical questions and responses. Participants had an average of 11 years experience working with collaborations. The range went from 2 years to 40 years. Eight of twelve participants reported that they collaborated with the "same cast of characters on the same issues" meaning that they tended to work with the same stakeholders over and over again rather than with different stakeholders. Further discussion revealed that these collaborations were siloed with transportation collaborating with transportation or health with health. Transportation participants mentioned regional, municipal, transportation-related organizations, and state Department of Transportation as partners. Health participants mentioned public health and other health-related partners. Several participants did mention a growing awareness of potential areas for collaboration including the health impact assessment and bicycle and pedestrian planning. It was mentioned that transportation had more mandated or regulatory requirements for collaboration within a network of transportation organizations. The question was raised as to whether mandated collaboration was really collaborative or just a requirement to meet with certain other organizations. If organizations just meet together in order to satisfy a requirement then the activities may not be truly collaborative nor the outcomes as beneficial. It

was also noted more than once by health representatives that public health needed to be more proactive in getting to the transportation planning table. No similar comment was made about transportation needing to be more proactive in getting to the health planning table. In addition to the 8 who said "same people same issues," one participant said that "the agency might be the same named agency but the people changed over time so it was not really the same agency" which impacts the dynamics of collaboration. Another participant opined that the people may stay the same but that there may be a "dramatic evolution to a different outlook." An example given of this impact on collaboration was a comprehensive plan in which multi-modal transportation grew from a concept to a chapter with an implementation plan due to the changing environment of interest in the topic. When this occurs, the perspectives of the planners writing the plan, the commission members and the elected officials voting approval change. The emphasis of the plan changes from a vehicle-centric plan to one that includes pedestrian, bicycle and mass transit. Toward the end of the discussion on collaborative experience comments included the identification of two types of collaboration: required and dedicated/passionate. In addition, participants mentioned that they were now thinking about including the other discipline in their planning efforts, that they saw a paradigm shift beginning to occur, or that "maybe they didn't collaborate enough."

Focus group participants identified a number of benefits of collaboration. Collaboration provides a means to look for "alternatives and gotchas." "The alternatives might not have otherwise been identified and they might assist in avoiding some of the pitfalls or potentials for failure" as one participant stated. It promotes a shared vision as well as shared resources. It provides opportunity for bottom-up community input, or as one participant phrased it, "you don't piss off as many people" when you get more input. Collaboration provides the opportunity for an open agenda, allows self to grow, and a richer process which allows each member to bring experience and ideas. It provides economies of scale and coordination of services across agencies. It provides the means to "find out what people want which may not be what we

thought it would be." Collaboration increases the likelihood of success with more resources brought to bear. It can serve as the voice of the community and empower the participants. It can allow one voice on an issue and can thus affect policy. Pressure from community participants can affect change. It provides a holistic view of the issue and a wider range of solutions rather than just the silo or isolated view.

Since data-sharing was not specifically mentioned, the facilitator asked about shared databases. It was then mentioned that sharing data saves time and money, provides a more transparent process and informs policy making and strategy development.

Barriers to collaboration prompted another in-depth discussion by the group. "Everybody is on their own island." The time continuum was identified as a barrier in relationship to demand for an issue resolution. That is to say, where in time is the issue and how relevant or well defined it is will impact the urgency to collaborate in addressing it. If it is not the right time, if the issue is not ripe then it is more difficult to address and the impetus to collaborate is not as compelling. Regulatory top-driven collaborations are difficult to control and often result in minimal collaboration and having to proceed in a proscribed manner. There is a lack of shared data repositories for evidence-based policies and strategies. Technology is often incompatible to communication and data sharing. Information is power, so often not willing to share. Agency differences such as funding sources and deliverables, clientele, and regulations serve as barriers. Sometimes there is a lack of trust among potential partners. Collaboration takes time and there may not be enough. Dissimilar goals such as vehicle miles may not be well known. This may be true for transportation and health because there is a lack of knowledge about each other and a lack of awareness about how to collaborate. Once again public health was encouraged to get to the transportation planning table. Silos and paradigm shifts in thinking were mentioned again as well. The lack of a common language or the existence of different professional languages can serve as barriers as well.

Participants in the focus group identified several things that leaders can do to encourage transportation and health collaborations. "Transportation leaders need to realize that there are human scale impacts to their planning and there are health outcomes, indicators, and tools which can assist them. Planners should invite public health to participate in zoning commission and planning efforts. Short distance issues should be addressed as well as long distance issues in transportation planning so that walkability and multi-modal transportation can be emphasized. Leaders should strive to make the transportation/health connection for the public since both areas influence the way we live. Leaders should be more available for collaborative discussions, more accepting, convene groups, and in general be more proactive."

The focus group identified a few tools or policies to assist with collaboration. This was one of the last questions at the end of a two- hour session, and while there was enough time for discussion the points made seemed fewer than earlier questions elicited. Two participants suggested the use of mandates to create collaboration. Health impact assessments are other tools. The previously mentioned data repository was again mentioned. Greater knowledge and skill regarding collaboration and coalitions was identified. Contracts and memorandum of understanding are additional tools. Environmental impact studies can also be a constructive tool if viewed as such.

While some of the participants' organizations might be more traditionally oriented, they seemed to have experience with collaboration so there had to be some horizontal work across departments and organizations. While decision-making itself was not discussed, the need to pool resources and solve difficult issues was. Structure remained very close-knit with organizations collaborating with like organizations over time. Mutual learning seemed to be within the boundaries of similar missions, visions, and professional cultures. There was some effort to use new tools by both transportation planning and public health. Common goals and objectives were not identified but a few "aha" moments seemed to occur among a few of the participants: "We should start working together." It was expected that the two groups would not

know much about each other and that they had not given much thought to common goals. It was unexpected that the group would talk so freely about their collaboration experience including the supportive factors and the barriers.

<u>4.3 Findings from Survey</u>

Over 600 surveys were sent out and almost 300 were completed or partially completed for a 50% response rate. After several attempts to increase the number of complete surveys, the research team identified 127 or 21% of the surveys that completed the critical questions regarding supportive factors, barriers, and importance of collaboration between transportation planning and public health. The 127 were used for the study analysis. There were more urban planning and local government respondents than any others, followed by transportation planning. There are more of these groups in the region being surveyed as well. There are not many public health professionals and so the response was small. However, there were more hospital and non-profit groups that did not respond to the survey making these groups underrepresented in comparison to the regional numbers.

There were 38 questions in the survey which were analyzed. Various types of questions were used including forced-choice, ranking, Likert Scale, and open-ended. The questions were organized into four sections. The first section contained questions regarding the organizational profile. The profile included type of organization, mission of the organization, number of employees, size of population served, budget, and sources of funding. The second section contained questions regarding internal organization collaboration. The questions included: stakeholders in collaboration and the sectors they represent, whether there is a dedicated position for external collaboration or is external collaboration an expectation throughout divisions, and descriptions of degrees of collaboration. The section also included questions regarding how much employees are encouraged to collaborate, which activities and practices promoting collaboration are encouraged, what collaboration factors are important, and the degree of satisfaction with internal collaboration. The third section contained questions

regarding external collaboration. The questions included whether the organization has been involved in regional transportation planning and if not why not, in what other types of collaboration the organization has been involved, who are the stakeholders and what sectors do they represent, how frequently the organization meets for collaboration, activities of the collaboration, roles in collaboration, organizational and stakeholder leadership, number of years experience with collaboration, reasons for collaboration, level of satisfaction with the collaboration, description of collaboration, forces that influence collaboration, decision-making style of collaboration, tools used, supportive factors of collaboration, satisfaction with outcomes, obstacles or barriers to collaboration, and importance of transportation planning to consider public health. The fourth and final section contained questions regarding the individual survey participant profile. The profile included job title, age range, gender, and years experience in current position. The questions in Section I and IV are presented first since they are all descriptive qualities of the organization or the individual respondent. The results are given in the narrative discussion as well as in graphs, charts or tables. The meanings or implications of the results are discussed as well. The chapter concludes with a summary of the implications.

<u>4.4 Organization Profile</u>

Type of Organization

While there is a wide range of organizations represented, only a few organizations have significant representation in the survey responses. The greatest percentage of respondents was from city government followed by county government with 63% and 10.2% respectively for a total of 73.2% local government. This percentage includes local public health and planning departments. Advocacy organization (grass-root, faith-based, community organization) comprised 6.3%. Regional/metro/special district/quasi-government comprised 7.9%. State agency comprised 4.7%. University/college comprised 2.4%. Federal agency and hospital/health facility each comprised 1.6%. No answer was .8%. Other comprised 1.6% and included consultant, and non-profit. There were 127 respondents to this question. (Table 4.1)

Table 4.1 Type of Organization

Type of Organization	Percentage	Cumulative %
Advocacy, Community	6.30%	6.30%
City Government	63.00%	69.30%
County Government	10.20%	79.50%
Federal Agency	1.60%	81.10%
Hospital/Health	1.60%	82.70%
Regional/Metro	7.90%	90.60%
State Agency	4.70%	95.30%
University/College	2.40%	97.70%
N/A	0.80%	98.50%
Other	1.50%	100.00%

Mission of Organization

Regarding the mission of the organization, of the 127 respondents 28% responded other than health or planning and the majority of them were local government, 23% were health/public health, and 43% were urban/transportation planning. It is interesting to note that 55 respondents identified 55 varying missions even though some appeared to be health/public health related or urban/transportation planning related or might have had one or more of these included in a broader mission. Reasons for this could include a limited interpretation of the relationship to the broader field, a strong focus on a more specific goal, or a lack of awareness regarding similar goals or missions of other organizations by respondents. (Figure 4.1)
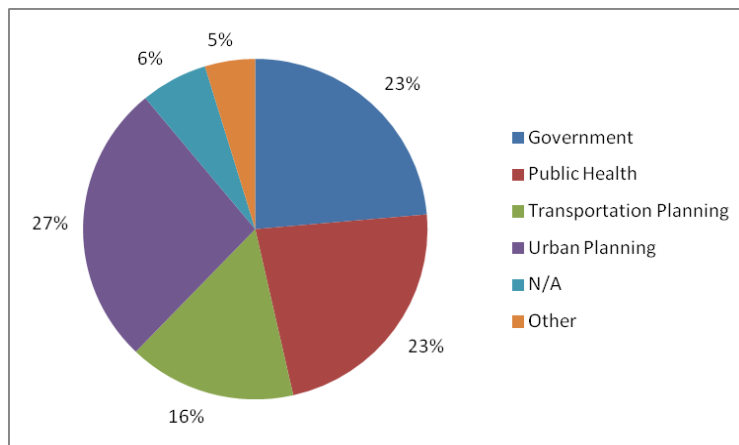
Figure 4.1 Organization Mission

Number of Full Time Employees, Size Population Served, Total Budget, and Primary Source of

Funding

According to the 2010 National Profile of Local Health Departments, a small department is considered to serve a population under 50,000; a medium department serves a population between 50,000 and 499,999; and a large department serves a population of 500,000 or more (NACCHO, 2010). Another common measure of organization size is the number of employees. Less than 50 employees is considered small and 500 or more is considered large, with medium between 50 and 499. Based on these rough standards, this study represents small, medium, and large organizations. Usually the larger the population served, the larger the budget and the greater the number of employees according to the NACCHO profile. However, other variables may come into play based on mission and scope of work as is the case with survey participants. The number of employees ranged from less than 100 or 34.5% to 1000 to 5000 or 20.4%. The population served ranged from under 25,000 or 39.9% to 1 million or more or 20.5 %. Survey participants indicated that 10.2% had a budget under $500,000 and 51.2% had a budget of 10 million plus. The primary source of funding was local at 62.2 %. Other sources included dues, corporate sponsorship, and grants. The 127 respondents and their organizations represent a wide range of small to large organizations, populations served, and budgets which is typical of a large metropolitan area. Local funding as the primary source of funding raises the question of political will in identifying priority issues and steering funding toward the priorities. (Figure 4.2 and Table 4.2)
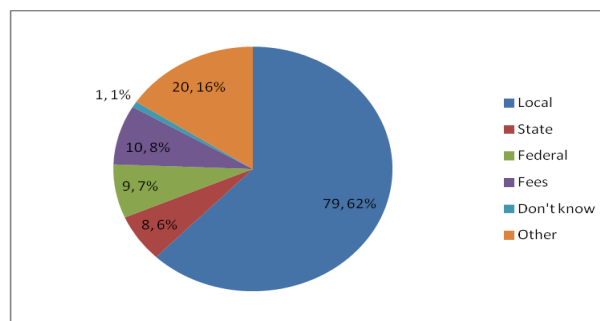
Figure 4.2 Primary Source of Funding

Table 4.2 Organization Profile: Employees, Population, Budget

Number of full time employees	%
Less than 100	34.7
100-999	43.2
1000-4999	13.3
5000 or more	7.1
Don't know	1.6
Size of population served	
Less than 50,000	47.2
50,000 to 199,999	17.2
200,000 to 999,999	13.4
1 million or more	20..5
Don't know	1.6
Organization total budget	
Less than $500,000	10.2
$500,000 to $4,999,999	18.1
$5,000,000 to $9,999,999	12.6
$10 million or more	51.2
Prefer not to answer	7.9

Job Title, Age Range, Gender, and Years of Experience in Current Position

The profile includes job title, age range, gender, and years of experience in current position respectively. Of the 96 individual job titles provided, 89.5% had a senior level title such as assistant or associate vice president, city manager, director or professor, chief planner, city councilman, commissioner, county judge, director, deputy manager, health authority, mayor, administrator.   10.5% of the responders had staff level titles such as planner, engineer, coordinator, health educator. Thirty-one did not respond to this question. Other results included all 127 respondents of which 40.2% were between 50-59 years of age with 35.4% younger and 22% older. The majority were male.   Forty-nine percent had between 6 and 20 years of experience. (Table 4.3)

Table 4.3 Characteristics of Survey Respondents

Characteristics	%
Job Title n=96	
Senior level	89.50%
Staff	10.50%
Age range	
Under 40 years	11.00%
40 to 49 years	24.40%
50 to 59 years	40.20%
60 and over	22.00%
Prefer not to answer	2.40%
Gender	
Female	24.40%
Male	72.40%
Prefer not to answer	3.10%
Years of experience	
5 years or less	40.90%
6 to 20 years	49.00%
More than 20 years	10.10%

<u>4.6 Internal Collaboration</u>

This set of questions was designed to gain more information regarding the participants' perspective about the importance and practice of collaborative approaches within their own organizations. As noted in Chapter II, organizations are more likely to collaborate externally if they espouse collaboration internally.

Dedicated Position or Department Responsible for External Collaboration

The majority of the 127 respondents or 63.8% stated that they did not have a dedicated position or department responsible for external collaboration. But 85.8% did have multiple divisions or people in the organization responsible for engaging in external collaboration. Key stakeholders targeted the most during external collaboration were local politicians 85% while the least targeted were health 40.9% and environmental 40.2%. And yet respondents were most likely to collaborate with the public sector (93.7%) and least likely to collaborate with the non-profit sector (11%). (Figure 4.3)
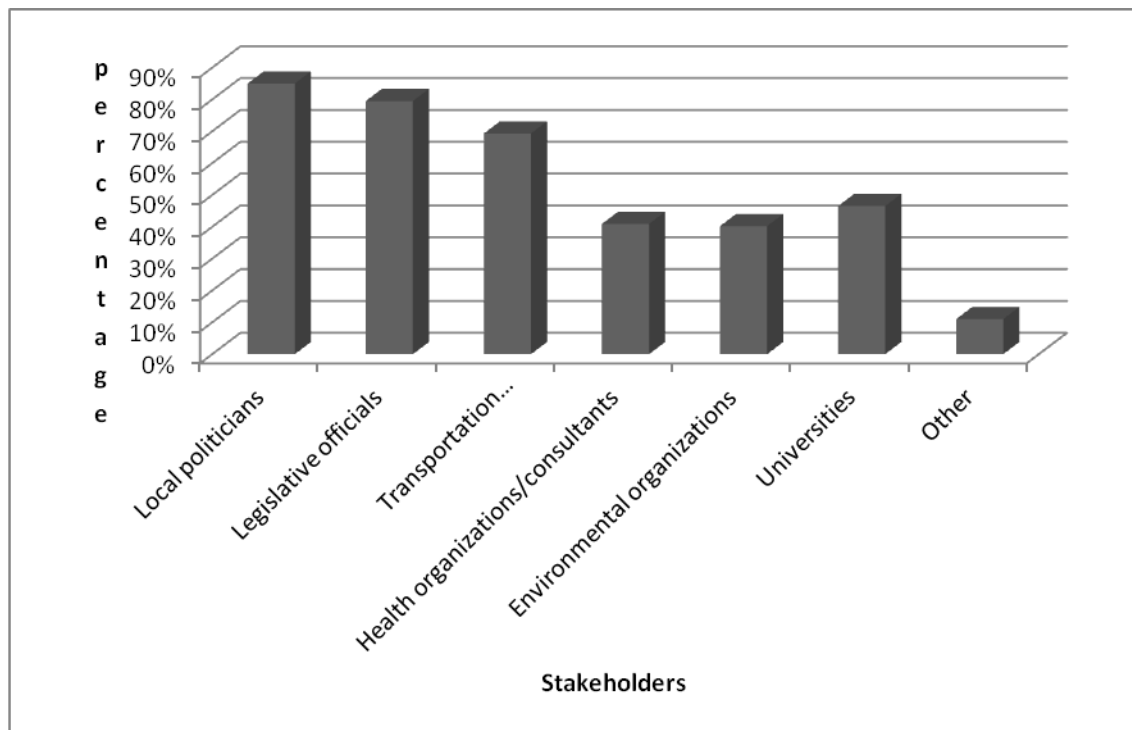
Figure 4.3 Sectors Targeted for Collaboration

Given statements about organizational collaboration, 77.9% of the 127 respondents agreed that their organization was a system of interconnected divisions and departments. Only 33.1% agreed that their organization was one part of a larger network/array of groups and organizations. However, 23.6% disagreed and 27.6% neither agreed nor disagreed. This could signify a problem with the meaning of the question or it could mean that this level of involvement is not as well defined in practice, which could have significance to participation in external collaboration via networks. Sixty percent disagreed that their organization was a patchwork of independent programs or an accumulation of silos. One participant commented that collaboration varies depending on the type of issue. (Table 4.4)

Table 4.4 Organization Statements

Statements About Organization	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Interconnected divisions	7.90%	7.90%	6.30%	34.60%	43.30%
Part of larger network	15.70%	23.60%	27.60%	27.60%	5.50%
Patchwork of programs	22.80%	37.80%	18.90%	18.10%	2.40%
Accumulation of silos	26.80%	33.90%	22.00%	15%	2.40%
Other n=24	13%	20%	58%	4.00%	4%

Perception on Organizational Culture for Collaboration

The majority of the 127 organizations encouraged or strongly encouraged employees to collaborate internally. They also encouraged or strongly encouraged employees to collaborate externally, at 89.8% and 85.8% respectively. (Table 4.5)

Table 4.5 Perception on Organizational Culture for Collaboration

Perception	Strongly Discouraged	Discouraged	Neither	Encouraged	Strongly Encouraged	Don't Know
Collaborate with other department within the organization	4.7%	0%	3.9%	25.2%	64.6%	1.6%
Collaborate with external organization	4.7%	0%	7.9%	38.6%	47.2%	1.6%

Engagement in Collaborative Activities

Activities include data and information sharing, visioning exercises, utilization/creation of shared databases, scenario planning, workshops, employee training, conferences, mentoring/apprenticeships, organization strategic planning, and research and development. The 127 participants indicated that their organizations engaged in some activities more than others. Those that were most often identified as engaged in moderately, frequently, or always included data exchange 90.5%, workshops 74.8%, employee training 79.5%, and conferences 73.6%. Those that were most often identified as never or occasionally were mentoring/apprenticeships 39.7% and research and development 47.3%. Visioning, shared database, scenario planning, and organization strategic planning were also mentioned. This finding has implications for the need for greater awareness and education regarding the various skills and practices which can promote collaboration. (Table 4.6)

Table 4.6 Engagement in Collaborative Activities

Collaborative Activities	Never	Occasionally	Moderately	Frequently	Always	Don't know
Data and information exchange	1.6%	7.1%	11.8%	47.2%	31.5%	.8%
Visioning exercises	13.4%	23.6%	25.2%	29.1%	7.1%	1.6%
Utilization/creation of shared databases	6.3%	22.8%	21.3%	31.5%	15.0%	3.1%
Scenario planning	11.0%	32.3%	23.6%	25.2%	6.3%	1.6%
Workshops	3.1%	21.3%	31.5%	37.0%	6.3%	.8%

Table 4.6 - Continued

	Never	Occasionally	Moderately	Frequently	Always	Don't Know
Employee training	3.1%	17.3%	23.6%	40.9%	15.0%	0.0%
Conferences	2.4%	21.3%	31.5%	35.4%	8.7%	.8%
Mentoring/apprentice n=126	15.8%	38.0%	22.2%	17.4%	4.8%	1.6%
Organization strategic planning	4.7%	26.0%	26.8%	29.1%	11.8%	1.6%
Research and development activities	19.7%	27.6%	26.8%	17.3%	7.1%	1.6%
Other n=12	25.0%	8.3%	16.6%	0	0	50%

Practices, Actions, and Behaviors Promoting Collaboration

Of the 127 respondents, the most frequently indicated practices, actions, or behaviors included consensus-building 85.9%, mutual problem-solving 85.1%, ongoing interaction 88.9%, sharing information and resources 88.2%, and expression of multiple viewpoints 84.2%. The least frequently indicated items included development of cooperative goals 20.4%, trust-building 22%, goal formulation for long-term payoffs 29.1%, and goal formation for gains rather than losses 33%. These results could signify for future recommendations regarding skill building for more and stronger network collaborations. (Table 4.7)

Table 4.7 Organization Practices, Actions, and Behaviors

Practices, Actions, Behaviors	Never	Occasionally	Moderately	Frequently	Always	Don't Know
Consensus-building	3.9%	9.4%	21.3%	43.3%	21.3%	.8%
Mutual problem-solving	3.9%	10.2%	20.5%	46.5%	18.1%	.8%
Development of Cooperative Goals	3.1%	17.3%	16.5%	38.6%	23.6%	.8%
Trust-building	10.2%	11.8%	32.3%	24.4%	19.7%	1.6%
Ongoing interaction	1.6%	8.7%	23.6%	36.2%	29.1%	.8%
Goals formulation based on long-term payoffs	7.1%	22.0%	23.6%	29.9%	16.5%	.8%
Goal formulation focused on gains rather than losses	9.4%	23.6%	19.7%	33.1%	11.8%	2.4%
Sharing information and resources	2.4%	9.4%	19.7%	42.5%	26.0%	0
The expression of multiple viewpoints n=126	3.9%	11.0%	23.6%	36.2%	24.4%	0
Other	20%	0	20%	0	0	60%

Motivations for Collaboration

Motivation for collaboration is an important ingredient in promoting more frequent and more in- depth collaborations. Funders and leaders need to understand what motivates organizations to come together. The majority of the 127 participants most frequently identified overall organizational goals and objectives as being important for the organization 90.6%. Competition was the least frequently identified at 13.4%. Since so many participants were from local government, it is not surprising to see that 64.6% identified public service opportunity as important. While a majority of 52.8% identified enhanced networking as being important, this motivation did not rank as high as others and leaves room for increased valuing by participants. This finding could relate back to the focus group comments about collaborating with the same groups over and over and the growing realization that seeking additional partners might be advantageous. (Figure 4.4)
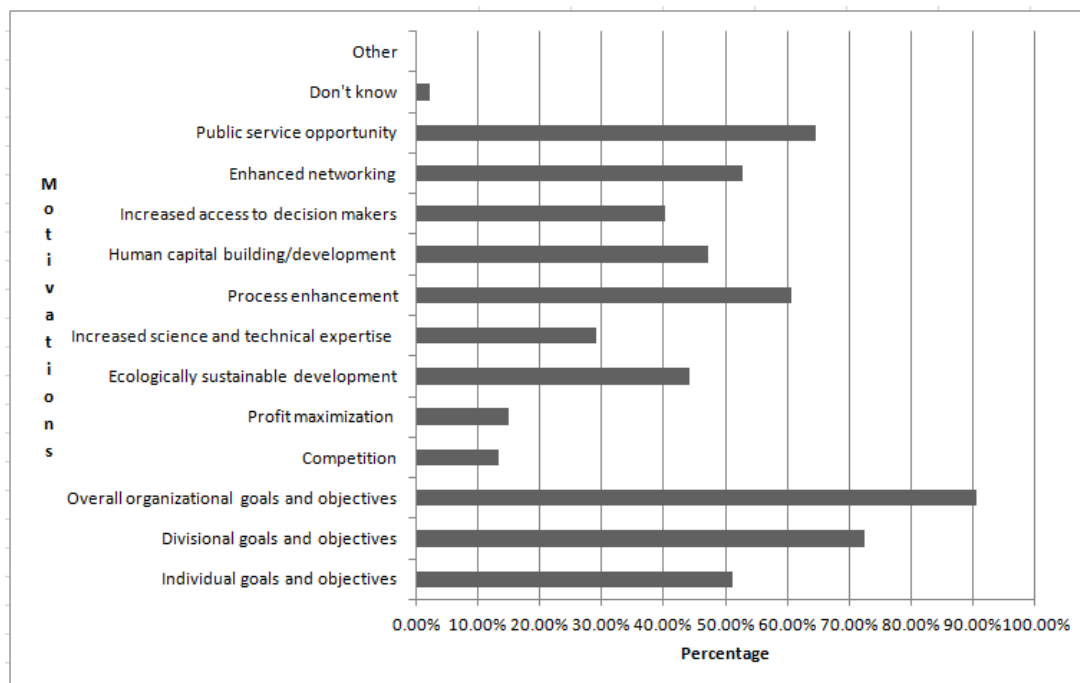
Figure 4.4 Organization Motivations to Collaborate

Satisfaction with Internal Collaboration

Overall, the 127 participants were satisfied or very satisfied with the level of collaboration within their organization as the total of 75.6% indicates. Additional results included 4.7% neutral, 18.1% somewhat unsatisfied or not satisfied, and 1.6% prefer not to answer. (Figure 4.5)
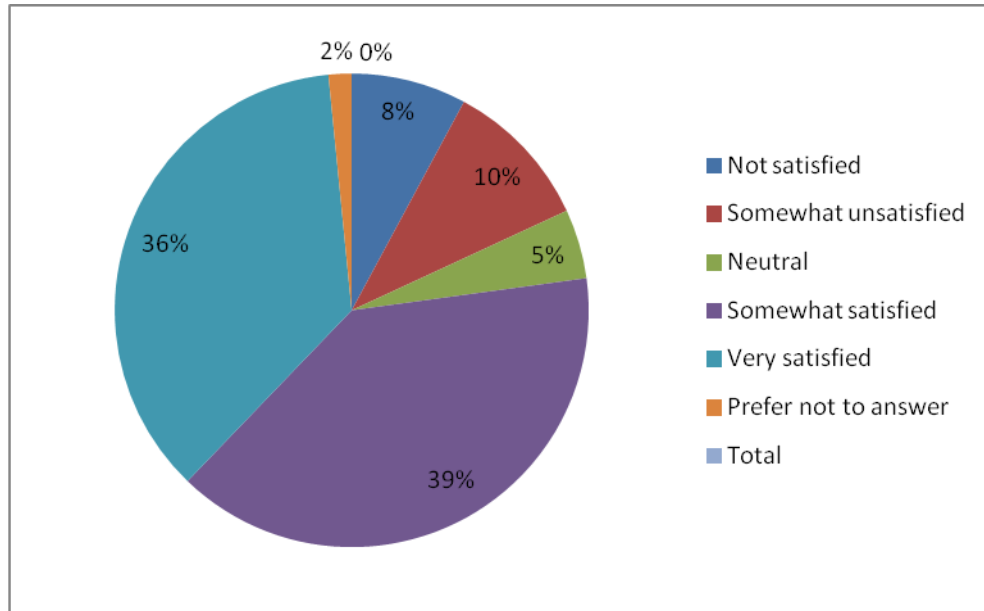
Figure 4.5 Level of Satisfaction within organization

<u>4.7 External Organization Collaboration</u>

The next section of the survey dealt with external collaboration. The first two questions regarding regional transportation planning had acceptable responses (later questions were eliminated as indicated previously).

Involvement in Regional Transportation Planning Collaboration

Regional transportation planning collaboration includes planning activities such as the North Central Texas Council of Governments, the Metropolitan Planning Organization or other regional efforts. 81.9% of the respondents reported that their organization had been involved in regional transportation planning. Among the 18.1% who did not participate in regional transportation planning, 9 reported that they had not been invited. Other responses included not

relevant, nothing to contribute, unfamiliar with regional transportation planning, relevant but low priority, reluctance of elected officials, working through other entities, and no opinion.

Collaboration with Specific Groups

The 127 organizations' experience collaborating with specific groups is important in order to learn if transportation planning and public health collaborate together or with other groups. The groups include municipal transportation planning 71.6%, other planning at the municipal level 73.2%, public health planning 35.4%, community outreach for active transportation 36.2%, and community outreach for public health 0, don't know 5.5% and other .7% which was water related. (Figure 4.6)
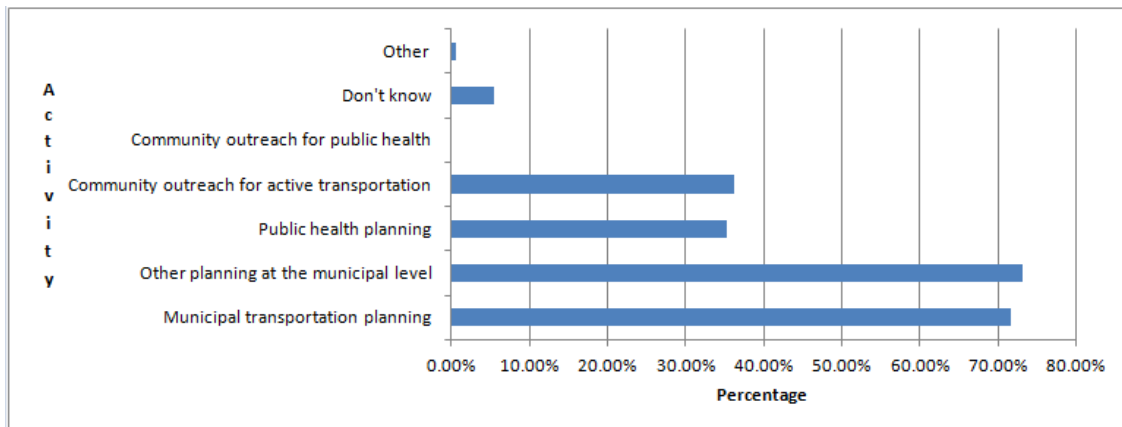
Figure 4.6 Collaboration with Specific Groups

Stakeholders

Among the 127 who reported their organizations had been involved in regional transportation planning, 86% identified local politicians as stakeholders and 56.7% identified legislative officials. Transportation organizations and community-based organizations received 58.3% and 55.9% respectively. Health and environmental received only 29.1% and 29.9%, respectively. Other stakeholders included citizens, local municipalities, staff, and state/federal agencies. This may be reflective of the composition of the survey participants given that there were more government and transportation participants.

A cross tabulation of the results above with the survey participants' discipline shows that public health professionals are more likely to collaborate with local politicians, health organizations, community based organizations, and schools whereas transportation and urban planning professionals are more likely to collaborate with local politicians, legislative officials, and other transportation organizations. Both professions are less likely to collaborate with one another. This finding is in agreement with comments made during the focus group regarding collaborating with the same groups over and over again rather than different groups. Once again, the large "other" category is comprised mainly by local government officials. (Table 4.8)

Table 4.8 Most Likely to Collaborate

Stakeholders	Health Care	N/A	Other	Public Health	Transportation Planning	Urban Planning	Total
Local Politicians	1	8	48	13	13	26	109
Legislative Officials	1	5	33	7	11	15	72
Transportation Organizations	0	4	36	2	13	19	74
Health Organizations	2	1	16	13	1	4	37
Environmental Organizations	0	1	20	7	4	6	38
Universities	2	3	16	9	5	9	44
Community Based Organizations	2	1	34	14	7	13	71
Advocacy Groups	1	1	25	11	8	5	51
Primary/Secondary Schools	1	0	18	11	1	8	39
Other	0	0	3	0	0	1	4
Total	10	24	249	87	63	106	539
Percentage	1.80%	4.40%	46.10%	16.10%	11.60%	19.60%	100.00%

Frequency of Meeting for Collaboration

The majority of 123 participants or 54.4% indicated that their organization met for collaboration monthly or more often. This represents a significant amount of time spent on collaborative activity. (Figure 4.7)
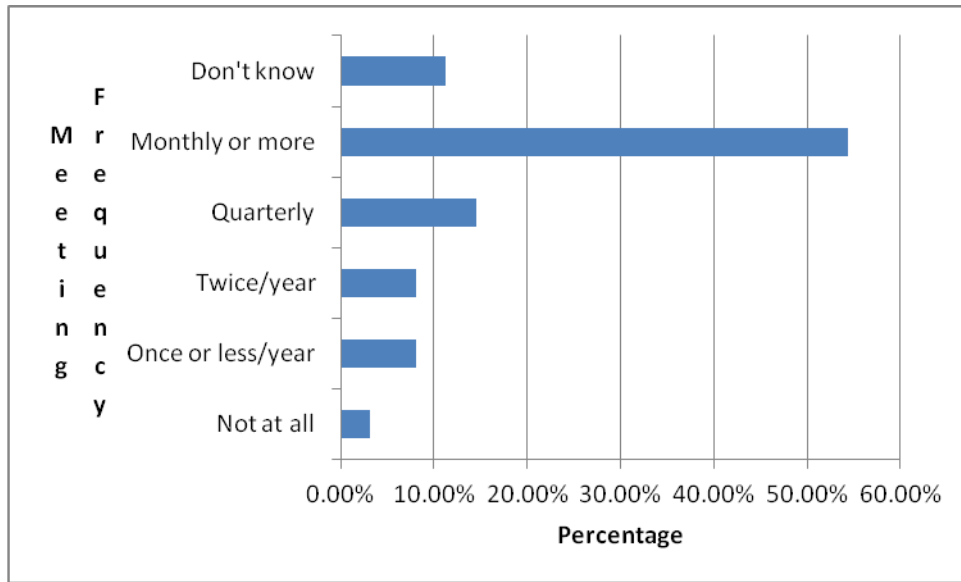
Figure 4.7 Frequency of Meetings

Organization Practices in Collaboration

Several network oriented practices were identified as being utilized the majority of the time during collaboration by the 127 respondents. The most frequently identified practice was development of cooperative or mutual goals. This practice relates to the performance domain of the Network Model and benefits participating organizations by working together with pooled resources in order to accomplish the same outcome. This practice has significance for transportation planning and public health in that improved identification of common goals could encourage greater collaboration. The next most frequently identified practice was data and information exchange which aligns with the knowledge domain of the Network Model and again provides a means for transportation planning and public health to increase collaboration. Mutual problem-solving was another frequently mentioned practice. Again, this would be a helpful practice for transportation planning and public health to adopt with each other. This practice aligns with the management, decision-making, structure, and knowledge domains. Consensus-building was another highly indicated practice. It aligns with the decision-making domain. Workshops and conferences were also mentioned and would lend themselves to the knowledge

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domain as strategies for transportation planning and public health to learn together. They included consensus-building 66.1%, mutual problem-solving 67.7%, development of cooperative/mutual goals 71.7%, data and information exchange 70.1%, workshops 56.7%, and conferences 55.9%. Other network oriented practices were used to a lesser degree and included goal formulation based on long term payoffs 49.6%, goal formulation focused on gains rather than losses 33.1%, trust building 35.4%, visioning exercises 33.9%, utilization /creation of shared databases   21.3%, scenario planning   37%, employee training 36.2%, mentoring/apprenticeships 11%, network strategic planning   29.1%, and research and development activities 16.5%. The two questions around goal formation might not have been clear enough or they might require follow up to find out more about participant comprehension of the questions versus actual practice. The rest of the items indicate a strong need for education and training regarding these issues. (Figure 4.8)
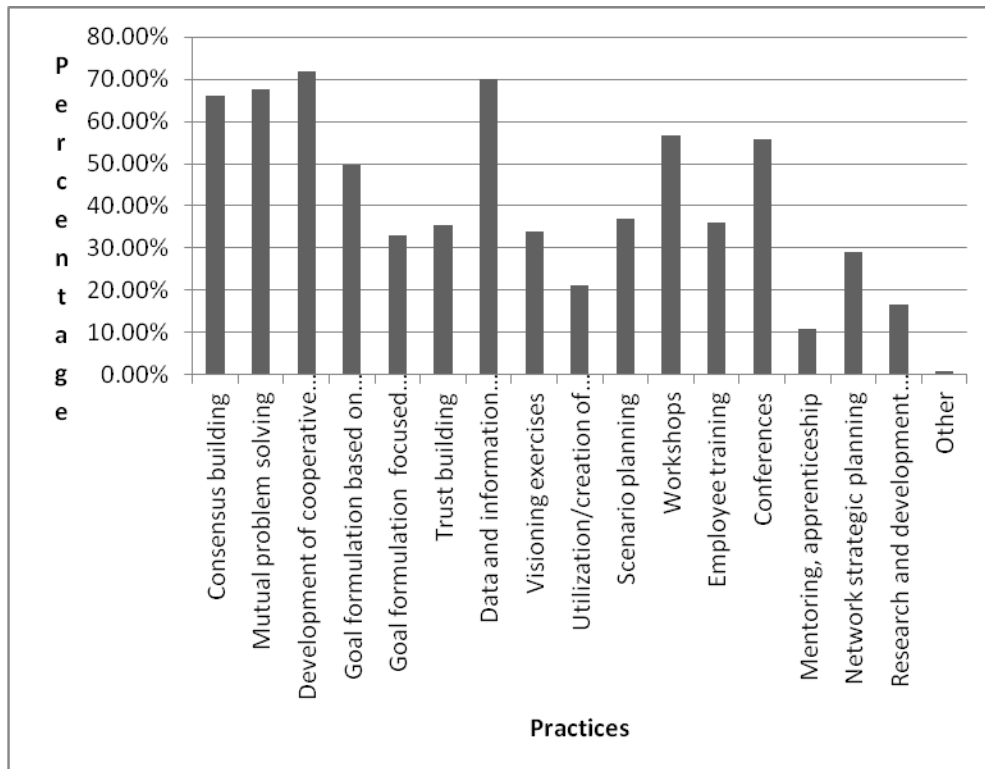
Figure 4.8 Organization Practices During Collaboration

Role of Organization

The greatest number of the 123 respondents, 51.2%, reported that their organization's role in a typical collaboration was as a regular attending member. Only 23.5% reported taking a leadership role while 24.3 % took an occasional attending participant role. (Figure 4.9)
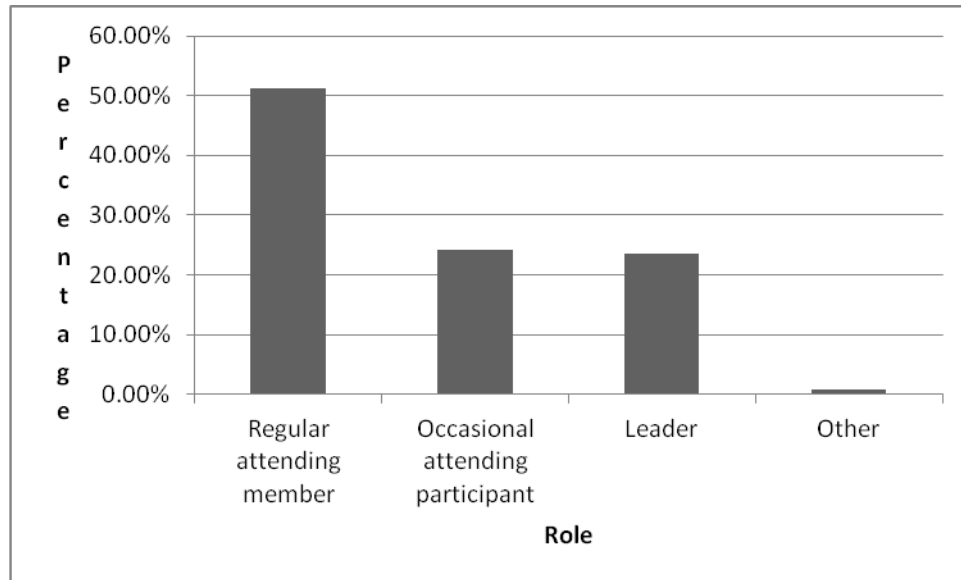
Figure 4.9 Role of Organization

Roles in Collaboration

Transportation planning, public health, urban planning, and other indicated that their most common role was as regular attendees. The 123 organizations reported their usual roles in collaboration. (Table 4.9)

Table 4.9 Roles in Collaboration

Role of Organization	Leader	Occasional Attending	Other	Regular Attending
Health Care	0	.80%	0	.80%
N/A	.80%	3.25%	0	2.40%
Other	9.75%	10.50%	0	22.70%
Public Health	4.00%	1.60%	0	8.10%
Transportation Planning	4.80%	2.40%	.80%	4.00%
Urban Planning	4.00%	5.70%	0	13.00%

The cross–tabulation reveals that the leadership in collaboration is provided by elected officials (which largely comprise "other") twice as often as it is by transportation planning, public health, or urban planning. This finding corresponds to other findings which indicate that elected officials are the most common stakeholder and that political will is important.

Stakeholders and Leadership

Previously, survey participants were asked about the role of their organization in collaboration. Then they were asked which stakeholders provided the leadership in the collaboration. Once again, local politicians were identified by 48.8% of the 127 respondents as the stakeholders that assume the leadership of the collaboration. Other stakeholders received the following results: legislative officials 20.5%, transportation organizations/consultants 32.3%, health organizations/consultants 10.2%, environmental 10.2%, university 7.9%, community–based 15.0%, advocacy groups 11.0%, school districts 6.3%, and local government staff 3.9% providing less of the leadership. (Figure 4.10)
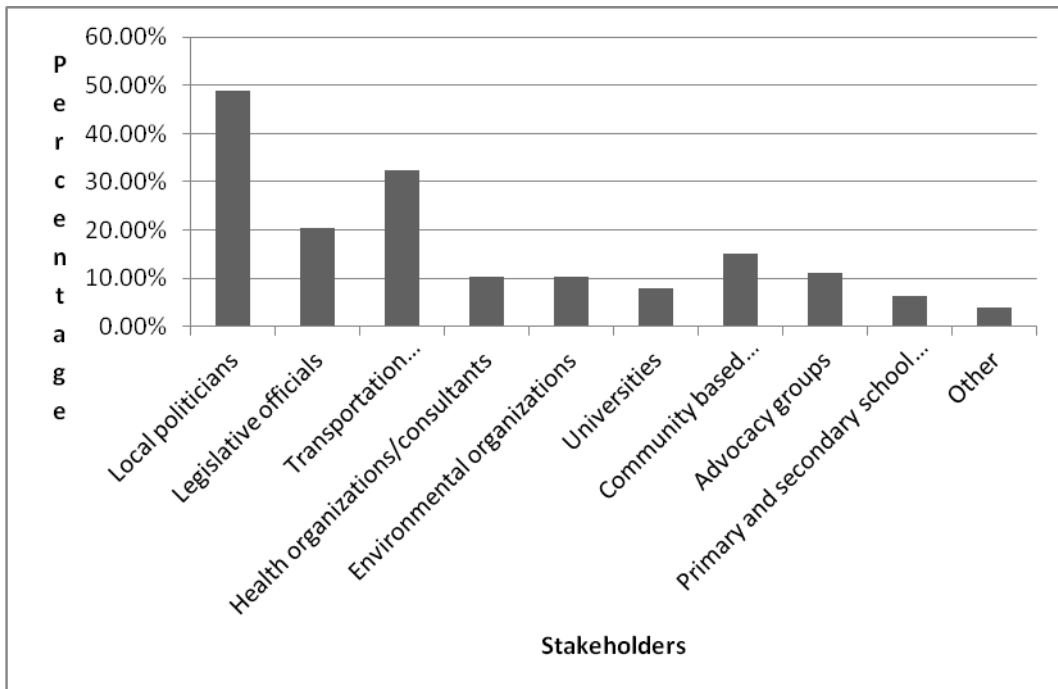
Figure 4.10 Stakeholders' Leadership in the Typical Collaboration

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Years Engaged in Collaboration

Eighty six respondents indicated that their organization had been engaged in collaboration more than 10 years. While this demonstrates years of experience collaborating among the participants it does not indicate that the experience has broadened to include more or different partners or enhanced skill-building regarding effective collaboration. In other words, the years of experience could be the same experience over and over with the same partners with similar missions and professional culture or language. The focus group identified this as a potential problem.

Reasons Why Organizations Collaborate

Most of the reasons support the network model and the five domains. The reasons supporting the management domain are:

- respond to complex issues
- coordinate organization actions
- network with other organizations
- respond to the unexpected
- share tasks

The reasons supporting the decision-making domain include:

- opportunity to learn from other organizations
- share staff and expertise
- benefits of networking.

The reasons supporting the structure domain include:

- supports mission/vision
- trust
- inter-local agreements
- federal mandate

The reasons supporting the knowledge domain include:

- opportunity to learn from others

- accelerated project completion

- access to data

The reasons supporting the performance domain include:

- supports the mission/vision

- mutual goals and objectives

Participants could choose multiple responses. The majority of the 127 respondents indicated several important reasons for collaboration. Those reasons included: support mutual goals and objectives 84.3%, respond to a complex multi-jurisdictional issue 59.1%, coordinate organization actions 52.8%, secure new funding 57.5%, share technical expertise/resources 54.3%, have a long history of working with the collaborating organizations 54.3%, opportunity to learn from other organizations 55.9%, and opportunity to network with other organizations 51.2%. However, there were a number of reasons that did not receive a lot of attention. These reasons are: required by federal mandate 29.9%, required by state mandate 31.5%, required by inter-local agreement or memorandum of understanding 43.3%, share risks 28.3%, respond to the unexpected 38.6%, share financial resources 45.7%, share staff/human capital 31.5%, have established trust with the collaborating organizations 49,6%, accelerated project completion 49.6%, gain access to data provided by the collaborating organizations 41.7%, realize the benefits of expanded networking 44.9%, don't know 2.4%, and supports our mission and vision .8%. The lower response rate for mandated or regulated is surprising given the focus group discussion in which participants cited these as compelling reasons to collaborate. The lower response to trust is also interesting given the higher response to longtime collaborations with organizations. This bears more investigation as well as attention in the recommendations section as do the rest of the lower responses. (Table 4.10)

Table 4.10 Reasons for Organizations to Engage in Collaboration

Domains	Reasons	%Response
Management		
	Response to complex issues	59.10%
	Coordinate organization action	52.80%
	Network with other orgs	51.20%
	Respond to unexpected	38.60%
	Share risks	28.30%
Decision-making		
	Opportunity to learn	55.90%
	Share staff and expertise	31.50%
	Benefits of networking	51.50%
Structure		
	Supports mission/vision	0.80%
	Trust	49.60%
	Inter-local agreements	43.30%
	Federal mandate	29.90%
Knowledge		
	Opportunity to learn	55.90%
	Accelerated project	49.60%
	Access to data	41.70%
Performance		
	Supports mission/vision	0.80%
	Mutual goals/objectives	84.30%

Level of Satisfaction

Overall, 76.6% of the 123 respondents were very or somewhat satisfied with their typical organization collaboration.

The cross-tabulation of the respondents and the organizational groups represented produced the following results from highest level of satisfaction to lowest: urban planning 18.13%, public health 11.69%, transportation planning 9.25%, other 4.81%, and health care 0.81%. The results could indicate that those with higher levels of satisfaction, urban planning and public health, have to collaborate with a broader array of stakeholders than the other

groups. Transportation planning may not collaborate with as broad a group. It is interesting to note that "Other" was so low since that category included government/elected official respondents. If this group is the least satisfied, it is also the group that is a frequent stakeholder in collaboration and provides the most frequent leadership. It is a group that can do something about it. (Table 4.11)

Table 4.11 Organization Satisfaction

Organization Satisfaction	Percent
Health Care	0.81%
Public Health	11.69%
Transportation Planning	9.25%
Urban Planning	18.13%
Other	4.81%

Collaboration Descriptors

Over 67% of the 123 respondents agreed that collaboration is best described as a system of interconnected individuals and 85.8% strongly agreed or agreed that a system of interconnected organizations is the best description. One participant stated that it was both. Over 72% did not agree that it is a patchwork of independent programs and 52% did not agree that it is an accumulation of silos. 28.3% neither agreed nor disagreed. The majority of survey participants demonstrated an awareness of what constitutes collaboration. (Figure 4.11)
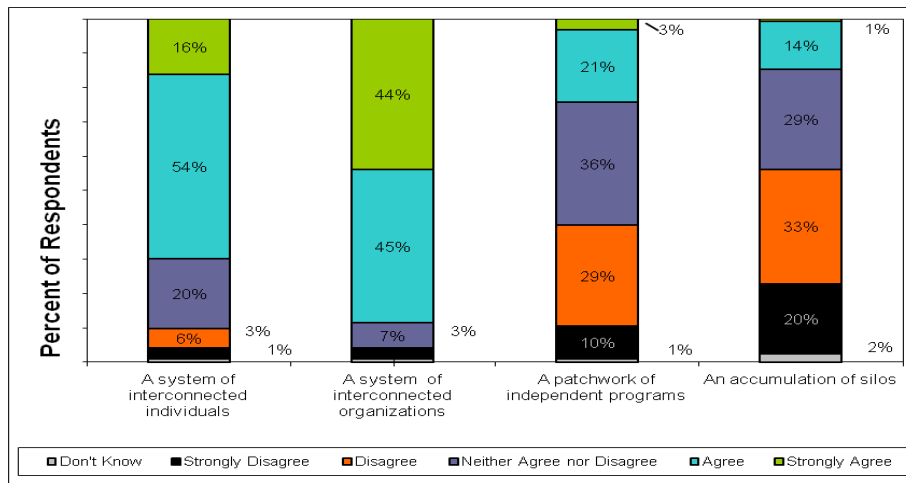
Figure 4.11 Collaboration Descriptors

Forces that Influence Collaboration

Among the forces that influence overall collaboration, the 123 respondents identified funding streams as the top influence at 73%. This has implications for all levels and types of funders and those who depend on those funds. Other groups and organizations at 23% had the least influence which has implications for the expanded use of the network model. Additional influences mentioned included competition between various political jurisdictions for funding , cross- jurisdictional problem solving, and willingness to collaborate. (Figure 4.12)
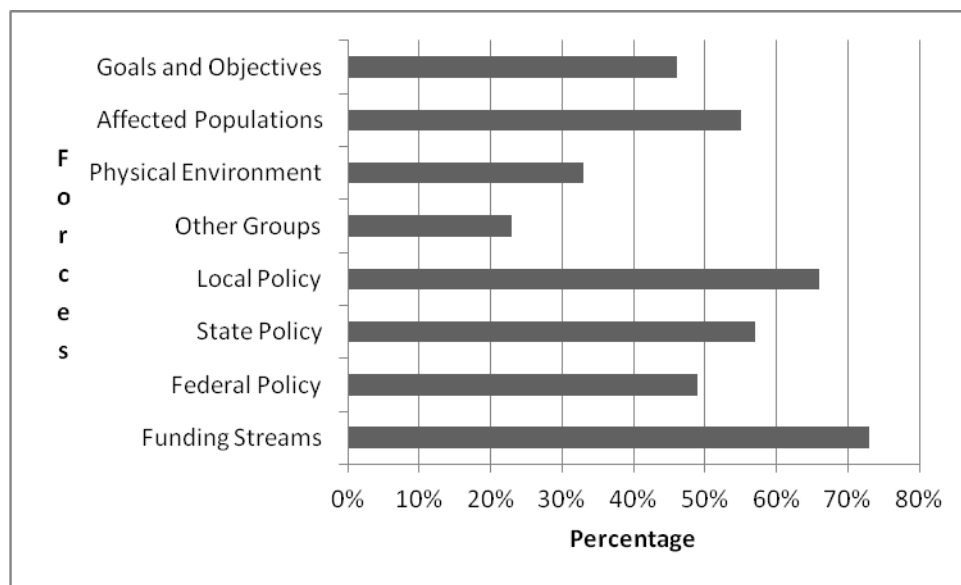
Figure 4.12 Forces that Influence Collaboration

Decision-making Style

About 47% of the 123 survey participants indicated that consensus was the decision-making style of collaboration; however, 27.6% indicated it was top down management while 20.5% indicated that it was compromise. About 2% said they did not know. (Figure 4.13)
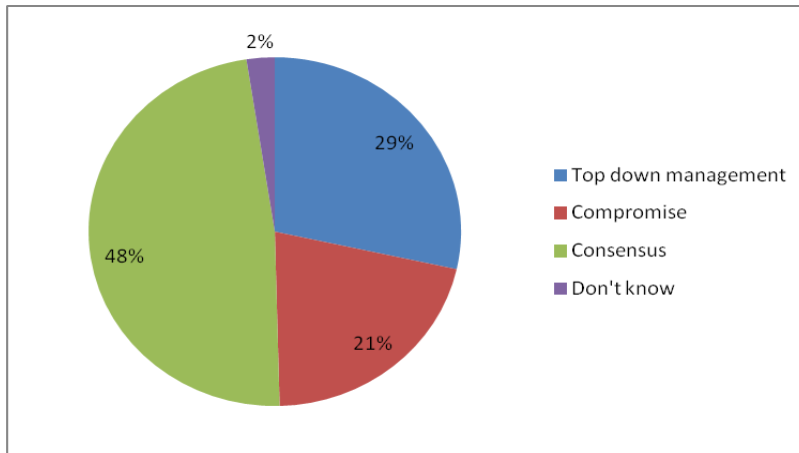
Figure 4.13 Decision-making Style of Collaboration

Tools

Whether or not transportation planners and public health professionals use some of the same tools is important in identifying benefits and barriers to collaboration. Tools may consist of sets of principles, assessments, programs, and activities. Smart Growth principles are an established set of guidelines for development which embrace various concepts including walkability, mixed used, and density. They are gaining popularity with planners and public health professionals. Land use planning/zoning refers to the local requirements established by municipalities for development in urban and suburban areas. Health impact assessment (HIA) is a way to look at the impact of potential development on the health outcomes of the population involved. Decisions can then be made with health consequences in mind. The Cook Children's Health Assessment (CCHAP) and Mobilizing for Action in Planning and Partnering (MAPP) and the Behavior Risk Factor Surveillance Survey (BRFSS) are community focused individual samplings to ascertain the health of a community. They are conducted by a local hospital and local public health. The Protocol for Assessing Community Excellence-Environmental Health (PACE-EH) is another community assessment tool for learning more about environmental factors influencing the community. Transportation Planning Capacity Building is used by transportation planners to determine future need. Walkability checklists are less formal tools used to determine how walkable a neighborhood might be. GIS mapping is a software capability

widely used by transportation planning and public health in order to chart geographically locations, incidence, and prevalence. Context Sensitive Solutions (CSS) is a transportation planning process which involves all stakeholders and perspectives in design of a new facility. Scenario planning/visioning are strategic planning techniques used to explore alternative strategies for achieving outcomes. A data repository refers to the ability to share data in one place so that stakeholders do not have to create totally separate data repositories. Bicycle and pedestrian programs are frequently supported by planners but may also be encouraged by public health professionals. Transportation Enhancement Programs (TE) relates to ways to improve intermodal transportation systems. Safe Routes to Schools (SRTS) is a program that encourages sidewalks, crosswalks, security and proximity for children to be able to walk to their school safely. Both planners and public health professionals support this program.

When asked about tools and other items used in collaboration the 123 respondents gave the highest response for land use planning/zoning and GIS mapping at 70.1%. The least familiar items were the health related assessment tools. This may again reflect the majority make up of the participants as planners and government but it could also support the focus group sentiment that public health needs to educate others about what it has to offer. (Figure 4.14)
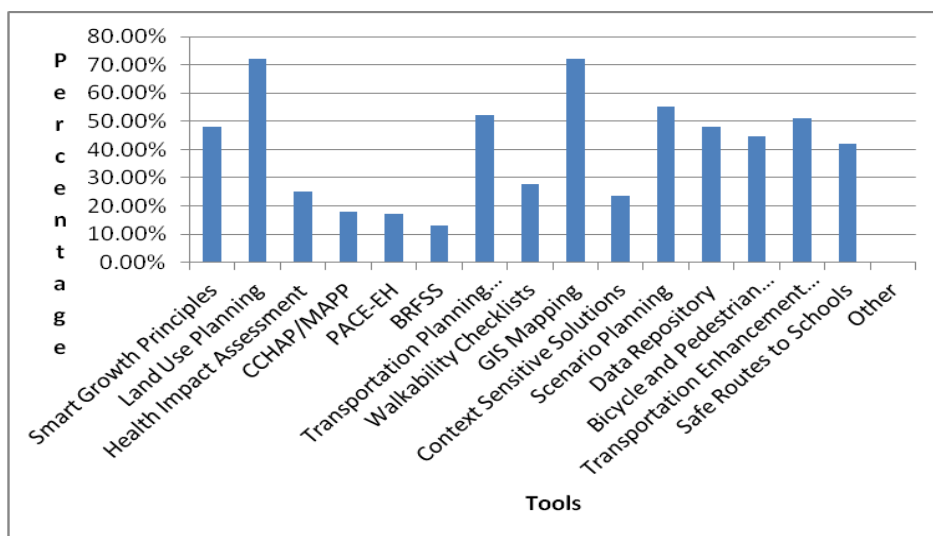
Figure 4.14 Tools Used in Collaboration

The cross-tabulation results for the disciplines and the tools used shows a number of interesting things (Figure 4.15). First of all, "other" comprised largely of local government was the high user for smart growth 20.33%, land use planning 30.89% , HIA 11.38%, PACE-EH 10.57%, transportation planning capacity building 25.20%, walkability checklists 12.20%, GIS 31.71%, Scenario planning 22.76%, data 21.95%, bike and pedestrian programs 17.89%, transportation enhancements 25.20%, and SRTS 17.07%. Urban planning was the second highest user of smart growth 16.26%, land use planning 22.76%, transportation planning capacity building 13.82%, walkability checklists 9.76%, GIS 18.70%, Scenario planning 15.45%, data repository 10.57%, bike and pedestrian 14.63%, transportation enhancement 15.45%, and SRTS 11.38%. Urban planning was the high user for context sensitive solutions 8.13%. Public health was the high user for MAPP 8.94% and BRFSS 7.32% and the second highest user for HIA 9.76%. Transportation planning was a mid-range user of most tools except the health-related tools including HIA, MAPP, PACE, and BRFSS. Health had the lowest level of use for all tools. Local government and urban planning use the most tools the most often. Public health uses the health-related tools and transportation planning uses the non-health tools but both leave room for far greater overall utilization of most tools. Health care (comprised of non-profit, volunteer, and hospital organizations) was the low user, clearly establishing the need for awareness and education regarding availability, benefits, relationship to health outcomes. (Figure 4.15)
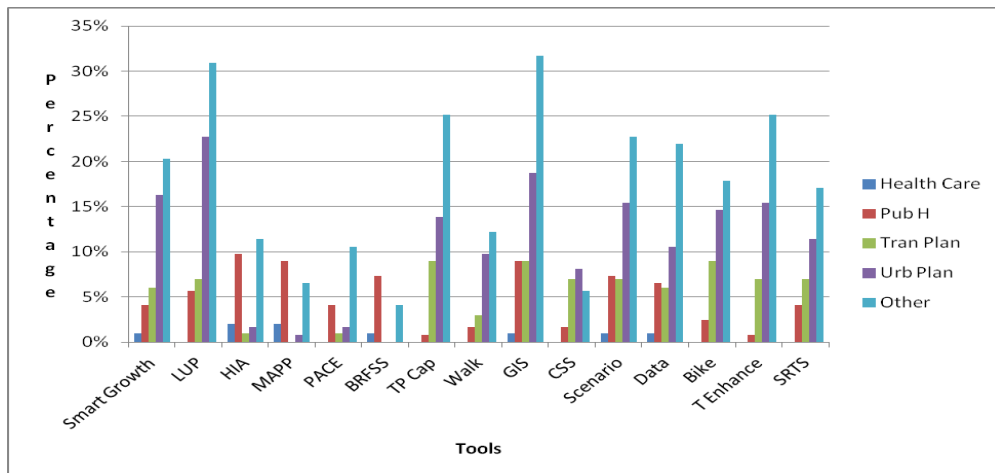
Figure 4.15 Tools Used in Collaboration by Organization Type

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Level of Satisfaction

The 126 participants did not score any of the collaboration outcomes highly as they relate to satisfaction. Regional development vision was the item that garnered the most satisfaction but only at 55.9%. The other responses included long-range transportation 51.2%, short-term transportation projects 51.2%, memorandum of agreement 44.9%, and project specific collaborations .8%. The high percentage of neutrals and the lower range for the satisfied may indicate that these particular outcomes are not the most important to the participants, that outcome identification may not be an obvious conclusion, or that the participants were becoming weary as they did not add much in the "other" category. (Figure 4.16)
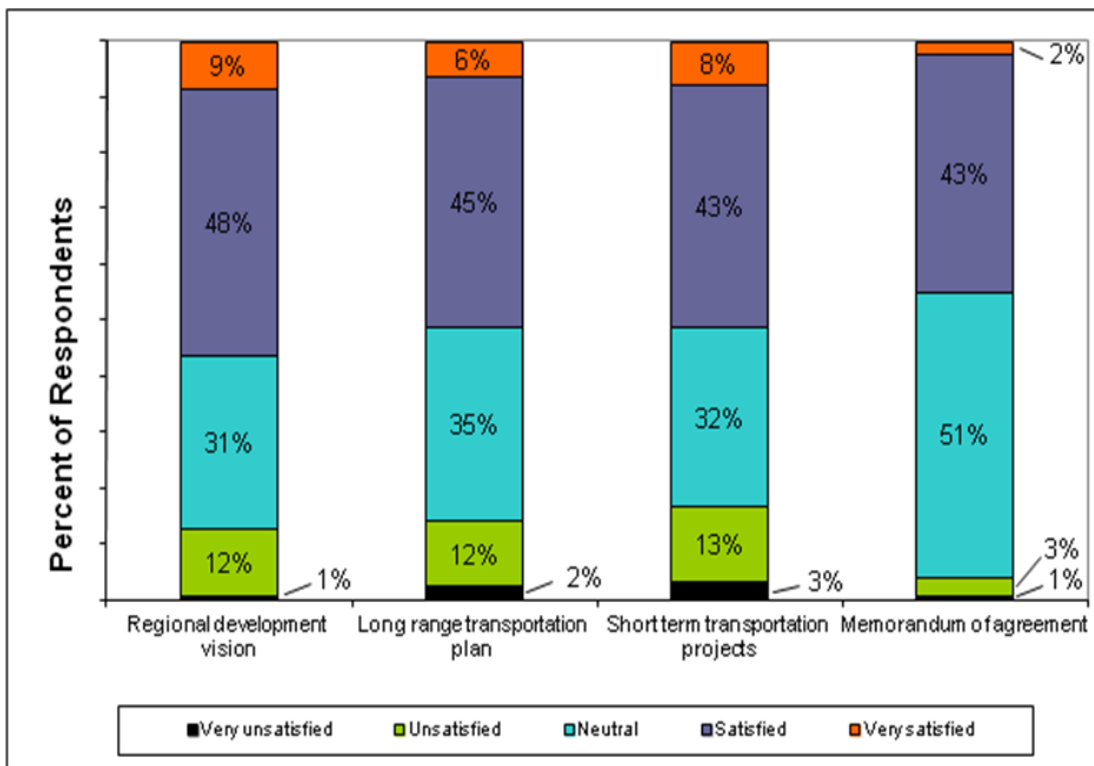
Figure 4.16 Satisfaction with Collaboration Outcomes

Supportive Factors for Collaboration

One of the three most critical questions in the survey pertaining to the research questions was the question regarding factors that support collaboration. Of the 127 respondents, 79.5% agreed that land use regulations that encourage regional efforts were a factor that supported collaboration. Regional transportation planning has been strongly encouraged by federal and state governments in order to provide seamless highway systems, adhere to environmental standards, and optimize resources. About 95% agreed with local-level governmental cooperation. Many transportation issues are larger in scope than most singular municipalities can address alone and so they seek out partnerships with nearby governments. Over 77% agreed with organizational incentives. Internal incentives include recognition for job performance and external incentives include award of federal and state funds. About 82% agreed with organizational objectives that encourage collaboration, Organization strategic plans, job promotion plans, and opportunities to advance can encourage collaboration. About 90% agreed with positive history of collaboration with organizations. Success breeds success so organizations that have experienced successful collaborative efforts should continue to do so. About 95 % agreed with personal or professional contacts with other organizations. "It's not what you know but whom you know" applies here. About 91% agreed with effective leadership. Leadership has to model collaborative behavior within the organization and among organizations. Over 84% agreed with coordination among pivotal organizations. The appropriate stakeholders have to be involved in the collaboration. About 62% agreed with streamlined requirements of transportation programs. The less complicated the requirements the more effective the collaborative effort can be. Only 43.3% agreed with streamlined requirements of health care programs. Again, the less complicated the more effective. Since the last two questions received lower numbers of agreement, the question itself might have been unclear; however, the health–related question was significantly lower and might again reflect the make-up of the participants. (Figure 4.17)
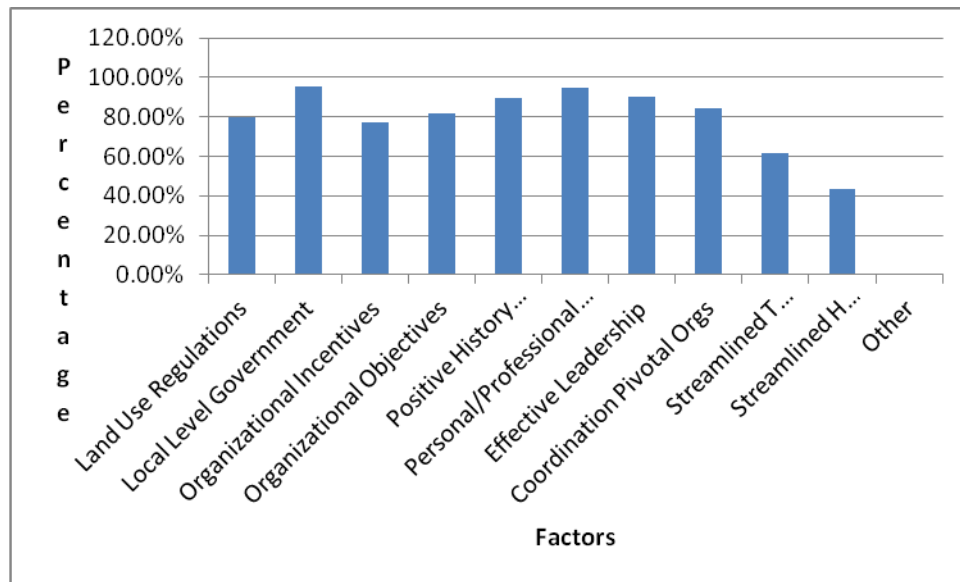
Figure 4.17 Supportive Factors for Collaboration

The highest ranked factor was local level government cooperation. The second highest was effective leadership of the collaboration. The third highest ranked factor was personal or professional contacts with other organizations. It is not surprising that local government cooperation was ranked highest since a large number of survey participants were local stakeholders and from local government and according to the focus group, used to working together in consistent patterns or groupings. It is interesting that effective leadership of the collaboration ranked second since the majority of respondents indicated that their organization did not take a leadership role but rather relied on elected officials to do so. Certainly leadership is important but this presents a gap in role and responsibility for collaboration. The third highest ranked factor, contacts with other organizations, demonstrates the importance of knowing your partners, valuing their contribution and trusting them (at least through familiarity) to work with you.

In an effort to learn whether planning or health leaders identified the supportive factors, a cross- tabulation of responses to the question regarding mission (which gave the clearest indication of planning or health orientation) and responses to the supportive factors question

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was implemented. The results: the highest number of responses for all three top priorities was from "other" followed by urban planning, then closely by transportation planning and public health, with health a distant last place. These findings are consistent with the findings in the question about tool utilization. (Figure 4.18)
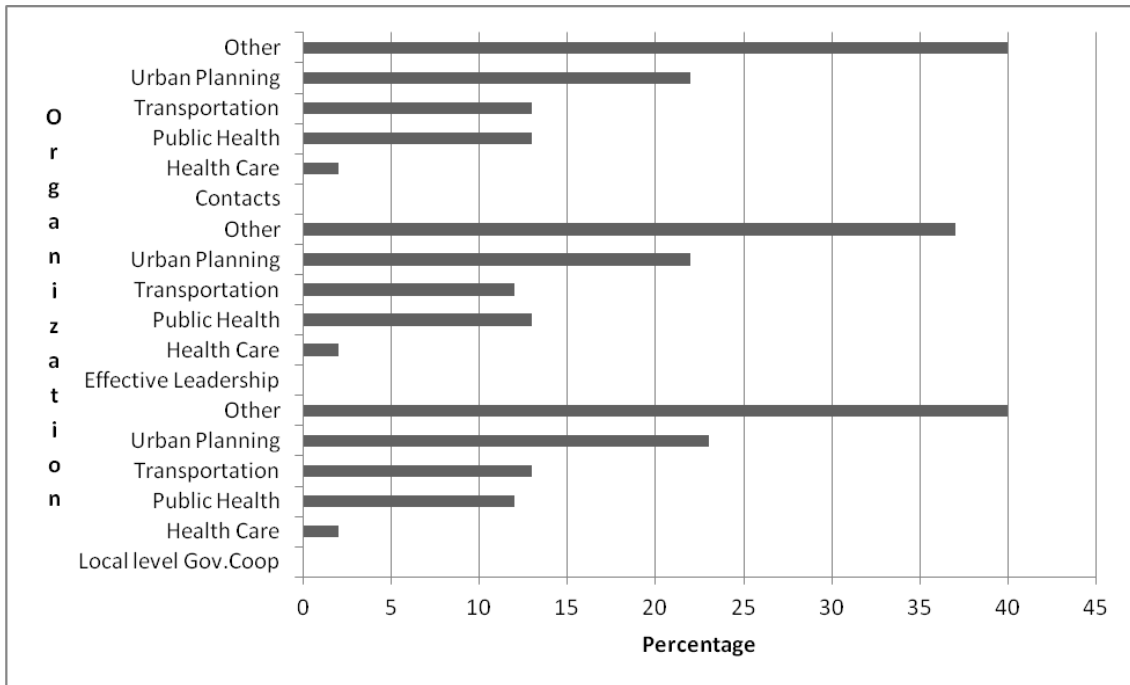
Figure 4.18 Supportive Factors by Groups

Part two of the question revealed a large governmental category that did not identify with either planning or health. 29 of the 55 "other" responses were identified as government. This is an important group to keep in mind throughout the discussion of findings and recommendations.

Barriers to Collaboration

The second critical question of this study pertains to the barriers to collaboration. No political will or support serves as a barrier when elected officials show no interest in collaboration particularly since they have been identified by the respondents as critical leaders in collaboration. If the reason for collaboration is narrowly defined as being for increased physical activity then that reason may not be seen as a priority by transportation planners. Fear

of loss of power or control can deter potential partners from collaboration particularly if there is a real or perceived uneven playing field between the partners. The amount of time a collaborative process might take can serve as a barrier. The process can be slower and gaining results may take longer. There may be a lack of trust which would prevent any initial collaborative activity from occurring. It may be perceived that collaboration will cost money and there may not be any available funding or there may need to be funding which requires collaboration. Staff time may not be identified for collaboration. Multi-modal transportation is one bridging concept between transportation and public health but if it has not been identified as a priority by one or both partners, then that lack of awareness or understanding serves as a barrier. Organizations have different missions, motivations and cultures. If there is not a common thread within the organization that links to the other organization, then that gap serves as a barrier. The same holds true for different professional mindset and language. If a transportation planner thinks about vehicle speed and destination rather than human scale and health outcomes then there is a barrier. An uneven playing field due to size of the organization, power, or resources can serve as a deterrent to collaboration – either way, large does not want to work with small or vice versa. Personal dynamics including personal dislike, bad experience in the past, or the unknown can serve as a barrier. Lack of information or understanding of each other's roles and resources can provide a barrier. Staff turnover can lead to weak or dwindling collaborative efforts. The leadership style of the top management and the corporate culture influence the organization's level of interest and skill in collaboration. A lack of common metrics can create a barrier to collaboration since measuring results is difficult. Fear of legal issues can also be a concern.

There were considerably more neutral responses to this question from the 127 respondents. Five items had over 40% neutral response. The five items: priorities do not include physical activity 48%, different professional language 43.3%, personal dynamics 42.5%, inadequate analysis tools (metrics 51.2%), and potential litigation/liability 46.5%. This could

denote hesitancy to give a negative answer or simply that it was not perceived strongly one way or the other.

Those factors receiving 50% or greater recognition included lack of funding 81.9%, no political will or support 75.5 % , slower process and longer time for results 71.7%, lack of staff 69.3%, uneven playing field due to resources 65.3%, lack of trust 63.8%, different motivation 63%, loss of power or control 58.2%, uneven playing field due to power 57.4%, uneven playing field due to size 56.7%, different mission 54.4%, and leadership style/corporate culture 54.3%. Those factors receiving less than 50% included priorities do not include physical activity 34.7%, priorities do not include multi-modal transportation 42.5%, different culture 46.4 %, different professional mindset 48%, different professional language 34.7%, personal dynamics 46.4%, inadequate information or communication sharing 47.2%, staff turnover 37%, inadequate analysis tools (metrics) 28.3%, potential litigation/liability 39.1%.

The top barrier identified was lack of funding. This is an interesting barrier to be ranked so highly since lack of funding could also be a reason for collaboration and collaboration can occur without funding. If participants linked this item to funding mandates for collaboration then that could serve as another explanation. The next barrier was no political will or support. This is not a surprising one since earlier participants had identified the importance of elected officials' leadership role in collaboration. Several factors received the same percentage. These factors included slower process and longer time for results, different mission, different motivation, and uneven playing field due to power. Slower process/longer time for results is certainly a concern but with more emphasis on collaboration skills including short term metric development, this barrier could be addressed. Different mission and motivation can be addressed through mutual learning in order to identify common interests and goals. The uneven playing field due to power may require elected official intervention. Governments at all levels need to consider greater emphasis on collaboration in their funding requirements and they need to make the importance of collaboration clearer by tying the missions and motivations closer together. Elected officials

and government staffs need to increase awareness about the benefits to collaboration and advocate for collaboration on a level playing field. Transportation and public health professionals need to break down long-term goals in to smaller short-term measurable goals. (Figure 4.19)
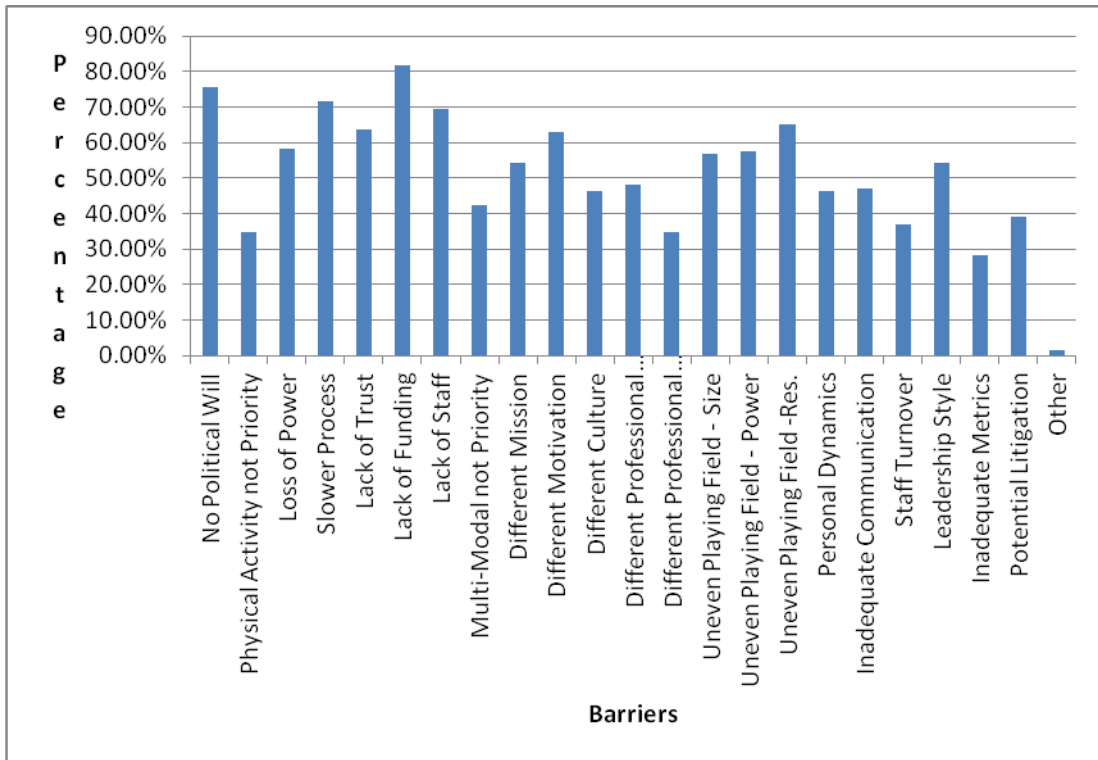
Figure 4.19 Barriers to Collaboration

The cross-tabulation showed that the "other" group comprised primarily of government followed by urban planning and public health related participants indicated the highest ratings for priorities. Other had a 25% or greater ranking for all categories. Urban planning had a 13% or higher on all categories. Public health had an 8% or higher. Transportation ranked with public health on no political will, slower process, and lack of funding but trailed in the other categories which included mission, motivation, and uneven playing field due to power. It is interesting to note that local government participants rank no political will, lack of funding, and slower process as the top barriers. The connection to elected officials as the usual leaders in collaboration

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bears further study. Health was a distant fifth place which may reflect the low numbers of participants in this area or a lack of awareness, interest, or actual experiencing of difficulty. (Figure 4.20)
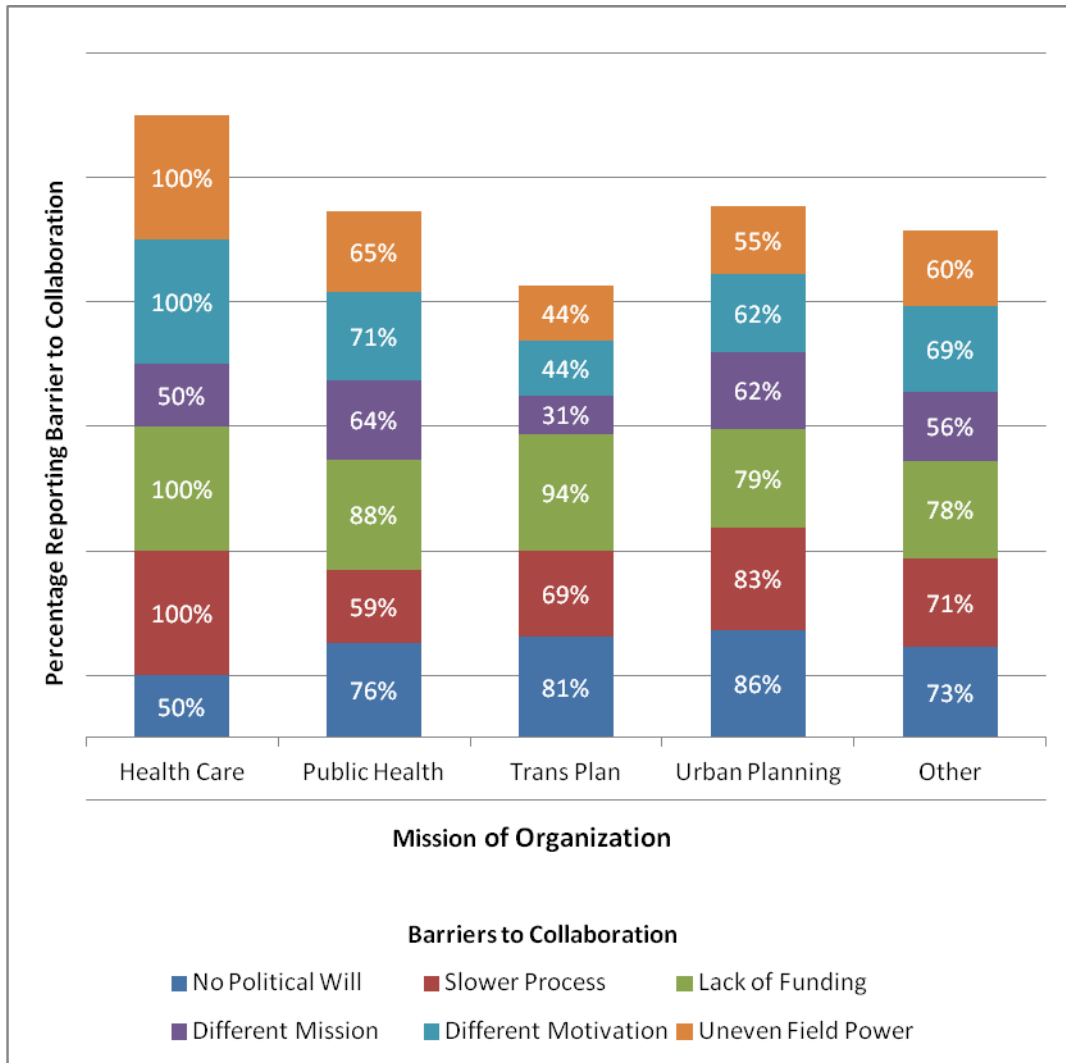
Figure 4.20 Top Barriers

Importance for Transportation Planning to Consider Public Health

Of the 127 respondents, about 80% indicated that it was either somewhat or very important. The cross-tabulation showed that 17 respondents were from health, 34 were from planning, and 45 were from other. 6.3% indicated it was not so or not at all important and 14.2

% were neutral/no opinion.   The cross-tabulation showed that 2 respondents were from health, 11 from planning, and 10 from other. The majority of health, planning, and other (largely comprised of local government) view health as being very or somewhat important to transportation planning. The lack of response from transportation planning or public health is noteworthy. It could signify a lack of belief in the importance which would require further investigation and ultimately awareness and education or it could be a completion issue for participants since this was one of the last questions.
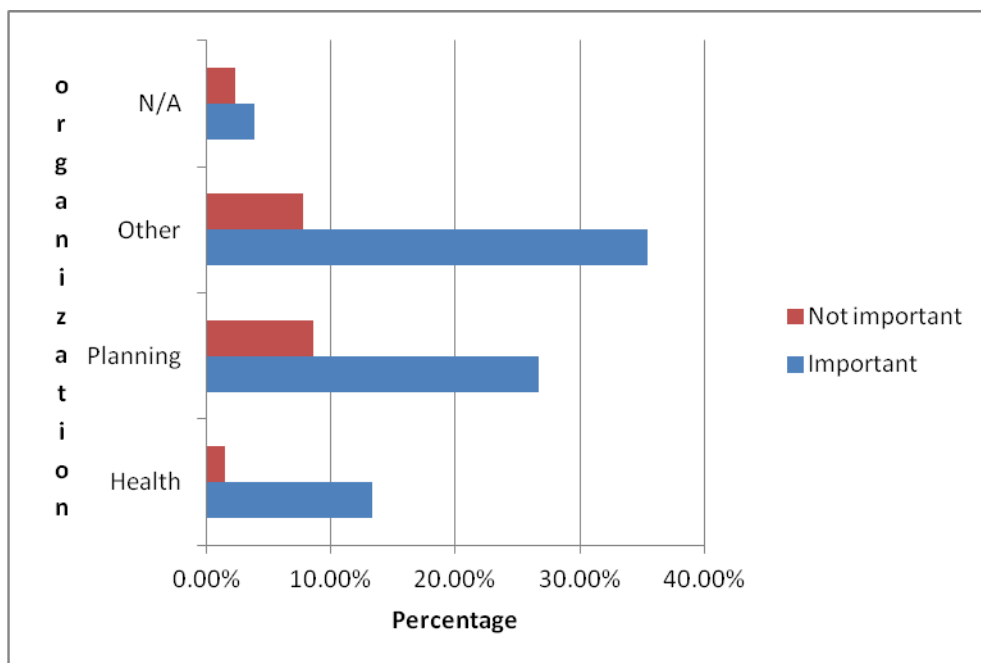
Figure 4.21 Importance of Public Health to Transportation Planning

Results included some of the expected supportive factors mentioned in the earlier hypothesis. These results included effective leadership, local level government cooperation, and personal or professional contacts with other organizations. Results included less identification with organizational incentives and objectives and positive history of collaboration with other organizations. Results also showed a higher response to the following barriers: no political will, slower process, lack of funding, different mission and motivation, uneven playing field due to

power. Other barriers that did not receive as much attention included loss of power, lack of trust, and different culture.

CHAPTER 5

DISCUSSIONS AND CONCLUSIONS

5.1 Introduction

The identified problem addressed in this study is the disconnect between transportation planning and public health. The research questions addressed included what are the barriers to collaboration between transportation planning and public health and what are the recommendations for addressing the barriers. A literature review was conducted which included a historical view of the two professions and how they have moved away from each other over the years and reasons why it is important that they work together more. A focus group and a survey were conducted in order to gain more information about current awareness, understanding, and interest in collaboration. The participants for both activities included senior leaders from transportation planning and public health as well as closely aligned organizations such as local government, hospitals, and non-profits.

This chapter summarizes the findings from the focus group and the survey and recommends eight action items using the Network Model for Collaboration. The first seven action items include building a compelling argument for collaboration between transportation planning and public health, increasing training and education, identifying/developing/utilizing tools, increasing leadership among organizations and stakeholders, developing more incentives for collaboration, building trust, and enhancing the role of local government. The eighth action item is adopting the Network Model for Action. Implications of the findings from the study regarding planning and public health practice and future research are discussed.

5.2 Summary of Findings: Focus Group

The majority of focus group participants (there were 12 total) stated that they had very little awareness of the each other's disciplines. If they were in transportation then they had not

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collaborated with public health and if they were in health the converse were true. Although there is quite a bit of literature regarding the need for collaboration between transportation and public health, participants did not mention any familiarity with it. Therefore, the need for collaboration between the two entities had not been framed as an issue in need of addressing.

Some of the focus group transportation participants mentioned mandated and regulatory reasons for collaboration and then questioned how much true collaboration can occur under those circumstances. Health participants mentioned specific health issues and non-profit organizations that they typically identified as partners. In both cases, the partners have their own cultures and professional languages which they understand. The cultures and professional language for transportation planning and health are dissimilar. Transportation planning has been historically automobile- oriented while health has been human scale- oriented. Transportation measures vehicle miles traveled and congestion levels while health measures the incidence and prevalence of disease and injury. The connection did not seem clear or compelling to the participants.

Collaboration and working within a network collaboration model requires a set of skills and knowledge of the benefits of collaboration. If many planners or health professionals perceive the reason for collaboration as being required, then the possibilities for greater results may never be fully explored once the required deliverables are accomplished. If there is no expectation for the two to collaborate then it probably will not happen without a greater appreciation for the need and a greater skill level.

<u>5.3 Summary of Findings: Survey</u>

There were 127 surveys used for this study. Section I and IV of the survey dealt with descriptive factors of the organization and the individual survey participant. The majority of respondents (73.2%) were from a local government organization of some type including public health and planning. While 43% indicated an urban/transportation planning mission and 23% indicated a health/public health mission, 28% indicated other. Within "other", 55 mission

statements were noted. Many of these were more specific variations of planning or public health. The organizations ranged from small to large in terms of number of employees, populations served, and budgets. Local funding accounted for 62.2% of funding streams. Of the 127 respondents, 86 were senior level including mayor, city manager, CEO, and vice-president. The majority or 72.4% were male. The respondents were experienced with 49% having 6-20 years of experience and 10% having more than 20 years.

Section II and III questions were developed based on the five domains or dimensions of the Network Model as discussed in Chapter II. This was done in order to learn more about participants' knowledge of Network Model principles and practices. Section II dealt with internal organization collaboration. Most (63.8%) did not have a dedicated position for collaboration but encourage collaboration across divisions or work units. Structure (S) was the dimension. The most frequently identified stakeholder was a local politician (85%) and the least was health (40.9%) (S).The majority (77.9%) agreed that their organization was a system of interconnected divisions and departments as opposed to a patchwork of independent programs or silos (60% disagreed with this description) (S). Participants viewed their organizations encouraged employees to collaborate internally (89.8%) and externally (85.8%). Management (M) was the dimension. The most frequently engaged collaborative activities were data and information exchange (90.5%), followed by workshops, employee training, and conferences. Those activities not as frequently identified included mentoring/apprenticeship, research and design, visioning, shared database, scenario planning, and organizational strategic planning. Knowledge (K) was the dimension. The most frequently identified practices, actions, and behaviors included ongoing interaction, consensus building, sharing information and resources, mutual problem solving, and multiple viewpoints. The least mentioned included cooperative goals, trust building, goals for long term payoffs, and goal formation for gains versus losses. Decision-making (D), Performance (P) and (K) were the dimensions. Motivations for collaboration included overall goals and objectives of the organization (90.6%). Only 52.8%

identified enhanced networking as important (M,D,S). Participants (75.6%) largely indicated that they were satisfied with internal organization collaboration (M).

Section III asked about external collaboration. Almost 82% of respondents indicated that they participated in regional transportation planning. Reasons for not participating included not invited, not relevant to work, low priority, reluctance of elected official, and work through other groups. The majority of respondents had collaborated with municipal transportation planning (91%) and other municipal planning (93%) but had not been as involved with public health planning (45%) or community outreach (46%) (K, P). Specific stakeholders identified the most often were local politicians (86%) with transportation planning receiving 58.3% and health 29.1% (S). The majority of respondents meet monthly or more (S). Network oriented practices that organizations used much of the time included consensus building (66.1%), mutual problem solving (67.7%), development of cooperative/mutual goals (71.1%), data and information exchange (70.1%), workshops (56.7%), and conferences (55.9%). Those used to a lesser degree included goal formulation based on long term payoffs, goal formulation focused on gains rather than losses, trust building , visioning exercises, utilization/creation of shared databases, scenario planning , employee training, mentoring/apprenticeships, network strategic planning, and research and development activities (D,K,P). The participants' organizations most often assumed the role of meeting attendee rather than leader (M). Among organization stakeholders, elected officials most often took on the role of leadership in a collaborative effort (M). Respondents indicated that most had over 10 years of experience in collaborations (K). The reasons for collaboration that were most frequently indicated included supports mutual goals and objectives, respond to a complex multi-jurisdictional issue, coordinate organization actions, secure new funding, share technical expertise/resources, have a long history of working with the collaborating organizations, opportunity to learn from other organizations, and opportunity to network with other organizations. Those not mentioned as frequently included required by federal or state mandate, required by inter-local agreement, share risks, respond to the

unexpected, share financial resources, share staff,   established trust with collaborating organizations, accelerated project completion, gained access to additional data, realized benefits of expanded network, and support mission and vision(M,D,S,K,P). The level of satisfaction with collaboration was 76.6% (P). Urban planning and public health were the most satisfied while "other" and health were the least satisfied. Most of "other" consisted of local government.   Overall, participants demonstrated an understanding of what comprises collaboration by identifying the importance of interconnected individuals and organizations rather than a patchwork of programs or silos (S). They also identified funding streams as the greatest force to influence collaboration and other groups or organizations as the least influential force (D). The predominant decision-making style was consensus with almost a quarter identifying top-down and the remaining quarter identifying compromise (D). The most common tools used by respondents included GIS mapping and land use planning/zoning. The least common tools used were the health-related tools such as HIA and BRFSS (K). The level of satisfaction with any one type of collaboration was not higher than the almost 52% for regional development vision. The top three supportive factors for collaboration included local level government cooperation, effective leadership of the collaboration, and personal and professional contacts (M,D,S,K,P). The top barriers to collaboration included lack of funding, no political will and four equally reported items: slower process, different mission, different motivation, and uneven playing field due to power (M,D,S,K,P). About 80% indicated that collaboration between transportation planning and public health was important (M,D,S,K,P). There is room for improvement in the level of satisfaction with external collaboration (M). Even the highest scored collaborative effort, regional planning, offers opportunity for enhanced network collaboration but also provides challenges for assuring that the supportive factors are many and the barriers are few and surmountable.

Based on the comments from the focus group participants and the survey, recommendations include the identification of eight needs and the companion action items and strategies .The needs include 1.) greater awareness of the issues and how collaboration between the two professional groups can address those issues, 2.) increased knowledge about each other's professional strengths, 3.) increased knowledge about tools or lack of tools, 4.) more interested and knowledgeable leadership , 5.) more incentives, 6.) greater trust, 7.)a level playing field with key stakeholders involved and 8.) achieve greater outcomes through enhanced collaboration. The corresponding action items include 1.)Make the compelling argument to stakeholders as to the importance of collaboration between transportation planning and public health. 2.) learn together 3.) Identify/develop/utilize tools 4.) engage leaders 5.) provide incentives 6.) build trust 7.) include local government and 8.) work within the Network Model for Action .

Table 5.1 illustrates the relationship between action items and the five domains of the Network Model.

Table 5.1 Action Items and Network Model Domains

Action Item	Management Domain	Decision-making Domain	Structure Domain	Knowledge Domain	Performance Domain
Compelling Argument	X			X	X
Learn Together	X	X	X	X	X
Tools	X			X	X
Leadership	X	X	X	X	X
Incentives	X	X		X	X
Trust	X	X	X	X	X
Government	X	X	X	X	X
Network Model for Action	X	X	X	X	X

<u>5.5 A Discussion of Action Items and Strategies</u>

The first item is to make the compelling argument to stakeholders regarding the importance of collaboration between transportation planning and public health. The argument must include points made in Chapter I regarding the overwhelming costs of maintaining infrastructures for transportation and healthcare much less expansion/improvement costs in the future. It must also include recommendations made by national and international governmental and professional organizations for transportation and health to collaborate. And it must provide a list of critical cost-benefit outcomes and measures of success that can be realized regarding the quality of life for the area. Once the argument is made, it can be disseminated by developing a marketing and education plan to raise awareness at all levels including governmental, academia, practice, elected officials, and voters. Existing councils (i.e. city council), commissions (i.e. zoning commission), and other established professional and governmental groups (i.e. local planning/public health associations, regional council of governments) should be accessed for the purpose of sharing the information. Examples of compelling arguments include the World Health Organization's Charter and the American Public Health Association whitepaper on Transportation and Health.

The second action is to learn together. This learning needs to address several types of training. One is to provide more training on collaboration and network collaboration so that participants can maximize the benefits of collaboration and minimize the barriers. The top three supportive factors for collaboration and the top three barriers to collaboration deserve attention. Maximizing the benefits of collaboration would include learning more about local government cooperation, effective leadership of the collaboration, and personal/professional contacts with other organizations. In addition, emphasis is needed on the other benefits of collaboration that were not as frequently identified. Minimizing the barriers to collaboration would include ways to identify funding, strengthening political will or support, and introducing ways to measure progress in the short term, ways to link missions and motivations, and collaboration skills to

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level of power playing field. While survey participants rated several of the network model of collaboration traits high, they left some room for improvement as well as rating others rather low indicating a possible lack of awareness as to their usefulness. Consensus building, mutual problem solving development of cooperative/mutual goals, and data and information exchange were rated 60-70%. But workshops and conferences where mutual learning could occur received a lower rating as did goal formulation based on long term payoffs/gains rather than losses, trust building, visioning, utilization/creation of shared databases, scenario planning, employee training, mentoring/apprenticeships, network strategic planning and research and development activities. These are all important skills to exercise in a network model of collaboration. Education regarding collaboration and regarding the various /transportation/health issues and tools available would also be beneficial. Cross training or mutual learning is a cornerstone of the network model. All stakeholders who offer training of any type should be engaged in this effort. This would include human resources, colleges and universities, councils of government, and professional continuing education associations. The 2004 Symposium convened by APA and NACCHO is an example of leaders from both fields coming together for shared learning and mutual goal setting.

The third action item would be to identify existing tools and develop additional ones that would assist with the collaborative planning process. There are a number of tools already available to transportation planners and public health professionals. Some of these tools seem to be better known than others. Introduction to these tools through mutual learning workshops would be beneficial with professionals from the representative group teaching the other group. As collaboration experience gains, then additional tools could be identified for development by the collaborative group. Shared data bases and assessment tools, and evaluation measurements would be of utmost importance. Some planning participants indicated an awareness of HIAs. Choosing a tool that has obvious mutual interest and benefit to start with may prove to be a good start to this effort. Some planners have invited public health to

participate in the comprehensive planning process while some public health professionals have invited planning to the community health assessment process. The San Francisco Department of Public Health HIA led to the development of a very extensive health indicator tool used by many stakeholders in the area. It was recently adapted for use in North Central Texas.

The fourth action is to engage leaders. One strategy would be to identify the potential leadership role that elected officials, senior managers, senior faculty, and community advocates have in convening mutual learning and knowledge sharing collaborations. Over 40% of the survey respondents were between 50 and 59 years old. This means that new leadership will be needed in the coming years. The survey indicated that the participants' organizations did not take a leadership role very often in collaboration. Yet 86 of the 127 responses were senior leaders in the region and they did not perceive that their organizations assumed leadership. This bears more investigation. Who does assume leadership and why? Why do these organizations not assume leadership? In a network model, leadership is often shared so perhaps there is some room for interpretation. If someone needs to be ready to step up who is it? Is it the local politician? Is it health which was identified as needing to market itself more during the focus group? Is it local government who was very evident in the survey participation? Or is it planning since almost every local government has a planning department? Perhaps it is all of these. They would all benefit from additional information regarding the issues, collaboration and leadership in a Network Model. Again, local and regional organizations with a training component need to be involved. A council of government, a school of public health, and a school of urban planning could develop a workshop or online course for professional credit for stakeholders to complete. The MAPP process is being implemented in more and more communities. Tarrant County Public Health is currently implementing it and involving local leaders from many different organizations and communities.

Supporting strategies for the first four recommendations include the need for joint education of planners and decision makers , the formation of a common set of quality of life

indicators which include outcome measures from both transportation , health and government; greater awareness of the benefits for collaboration, recommendations for an implementation action plan, shared data and assessment tools, the need for development of new data and assessment tools, the emphasis of incentives such as funding and legislation, greater interest in collaboration, support of the implementation plan.

Provide incentives is the next action item. Participants reported that 62% of their funding came from local funds. That implies local control of how those funds are spent. And yet "funding streams" was ranked as the greatest force affecting collaboration. If this is the case, then efforts to prioritize local funding for collaborative efforts would seem logical. Funding streams implies multiple sources and often state and federal funding comes with very strict guidelines and deliverables. Funders at these governmental levels are encouraged to review requirements for collaborative efforts that clearly identify the need for transportation and public health to collaborate. Other incentives for transportation planning and public health to collaborate include effective collaboration leadership and personal or professional contacts with other organizations. The former was addressed in the leadership section. The need for personal contacts suggests that leaders in both areas should reach out to the other organizations to learn about each other and begin to establish the collaborative effort. Additionally, organizations which have collaboration as part of the corporate culture are then seen as supporting external collaboration. Organizations should examine their mission, values, and goals and objectives for supportive language and corresponding performance indicators. Federal grant requirements can include incentives for collaboration. Local governments should consider using this same strategy to steer more local funds to local collaborative efforts. Incentives can be viewed as positive forces or as negative depending on the circumstances and the leaders perception of them. Some researchers point out that a role of the leader can be to steer the tensions of the group around incentives to greater success for the collaboration (Bingham and O'Leary, 2008).

Trust building is the next action item. Lack of trust received 64% agreement from survey participants as a barrier to collaboration. Trust is one of the core values of the network model. In order to be able to learn together, share information and power, commit resources and evaluate success together; there has to be a high level of trust. While it was not stated as such, the long standing relationships with the same organizations probably substituted for trust and therefore it was not highly recognized in some of the questions. If transportation planning and public health do not know each other well, then how can there be much trust? So there is neither a long standing relationship nor trust. Again it is up to the leaders to reach out and build the bridges for the staff to cross in shared learning and problem solving. Mutual learning assists with trust-building. Shared leadership , data resources, and performance measures – all within the domains of the Network Model assist with trust building. Organizations already engaged in collaboration should also be aware of their role as a model to others by publishing the results of their efforts, presenting at meetings, and using story telling of lessons learned with colleagues and stakeholders. Mutual learning experiences such as MAPP can assist in building trust among the group members as they have the opportunity to learn about each others' cultures and priorities.

Include local government is the next action item. This study identified transportation planners and public health professionals as the original groups of focus. However, it became apparent early on that there were not that many local health departments and that health would need to be broadened to include other health entities such as hospitals, non-profits and professional groups. It also became apparent that urban planners should be included as well as local government staff and elected officials. This inclusion provided the opportunity for a great deal of participation from government mostly staff and some elected officials. Two issues emerged. The first was that the small number of local public health departments and the large number of planning professionals creates a knowledge imbalance. This imbalance may require a third party to assist in establishing the compelling argument for collaboration. This third party

could be local government leadership. The second issue was that for whatever reason there was a low response from hospitals to the survey and this needs further investigation as to why. Several theories include a greater lack of awareness of the connection between health and transportation planning or more pressing priorities such as healthcare reform and reimbursement rule-changes. Stakeholders should seek out leaders in healthcare, share the compelling argument (which should speak to some of their priorities as well) and encourage their participation. The Council of Mayors endorsed complete streets which led to local governments initiating programs in their municipalities.

The final action item is the creation of the Network Model for Action. All of the action items identified in the study support one or more of the Network Model domains. The supportive factors for collaboration and the strategies to address the barriers to collaboration also support the Network Model and lend themselves to the configuration of the Network Model for Action. Figure 1 is revisited, deconstructed, and reassembled as the Network Model for Action Figure 5.

5.6 Network Model of Collaboration Deconstructed

Circle - Policy and regulatory context speaks to the need for strengthening/clarifying the government role in articulating the need for collaborating, translating that need into policy, regulation, funding requirements, incentives, research support, tool development and dissemination, and short term measurable outcomes with smaller price tags.

Small Circle – Public Health professionals need to strengthen leadership skills in network collaboration, increase issue awareness, increase tool utilization, increase mutual learning and partnering with new organizations from the other field, and trust-building.

Small Circle – Transportation planning professionals need to strengthen leadership skills in network collaboration, increase issue awareness, increase tool utilization, increase mutual learning and partnering with new organizations from the other field, and trust-building.

Small Circle – Other interested groups such as local government staff, elected officials and funders need to increase leadership, skills, and knowledge as mentioned.

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Triangle – all partners need to create incentives for collaboration, become familiar with the reasons for collaboration from both professional perspectives, seek the common elements of each others' missions, identify/dedicate funding particularly at the local level for joint planning, master the Network Model of collaboration in order to level the playing field.

Arrows – all partners need education and practice in the implementation of the five domains of the Network Model: management, decision-making, structure, knowledge, and performance.
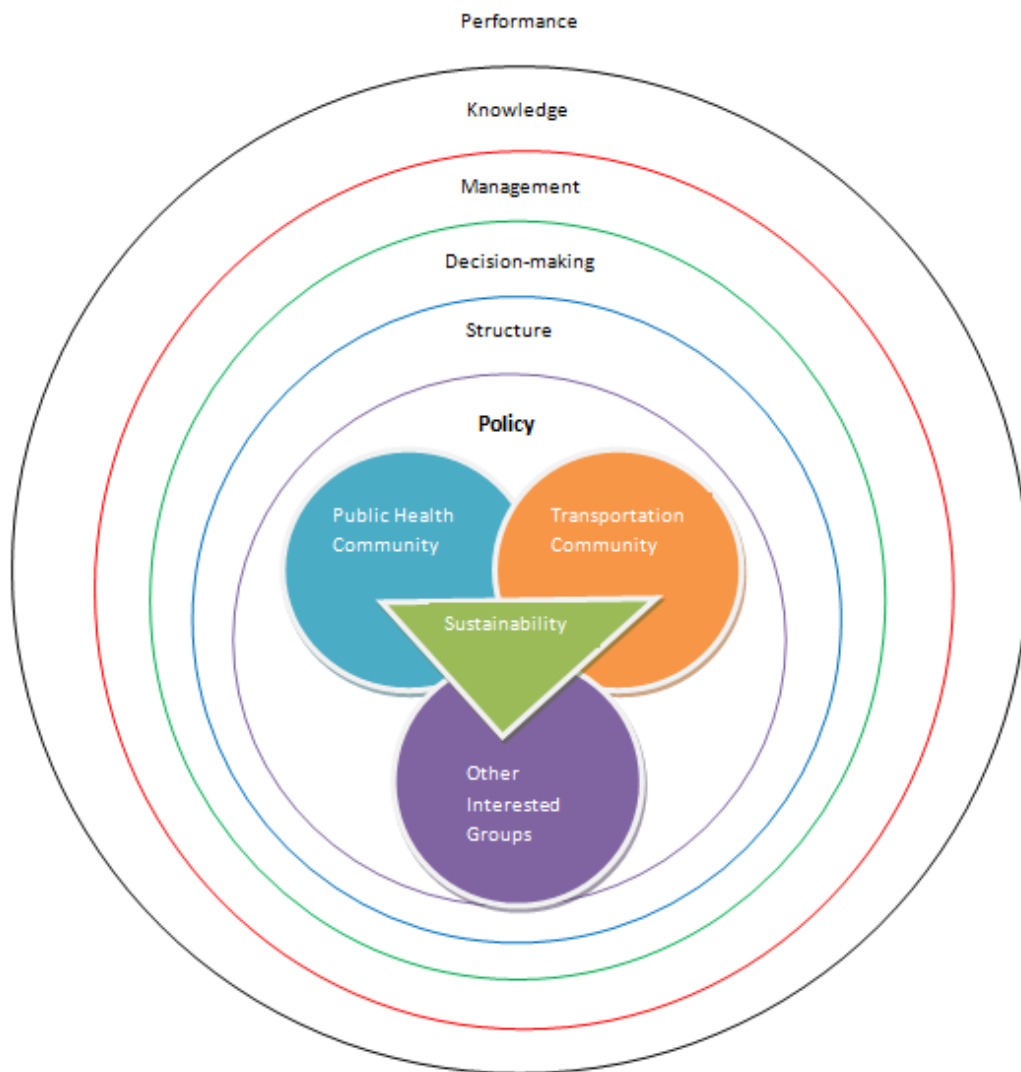
Figure 5.1 Network Model for Action

The most notable changes include the overlapping of the three inner circles since they now collaborate using the Network Model and therefore no longer operate as disconnected organizations or silos. Another change is the replacement of the arrows with circles of action representing the five domains of the Network Model. This model can be used as a guideline for leaders in transportation planning and public health as well as local government to strengthen the collaborative efforts between the two professions in order to create a sustainable, thriving community that is not a cost-burden to the residents either in health or transportation dollars.

5.7 Summary

The survey results agree with some of the points made in the focus group and they also identify additional areas for consideration. In addition to the need for a compelling argument for transportation planning and public health to collaborate, training and education for both professional groups as well as others, identity of existing tools and development of new ones, and leadership development; emphasis needs to be placed on identifying incentives, the development of trust, and the role of local government. The survey results support the need for the development and marketing of the compelling argument for transportation planning and public health to collaborate. With over 55 different missions perceived by the survey participants, the challenge for finding common ground is high. While the majority of participants thought it was important, they did not know much about health related issues, strategies, or tools and did not collaborate with health organizations that often. While external collaboration occurs, it may be with the same like organizations over time to support more obvious mutual goals and objectives. So silos occur between dissimilar organizations. Something or someone is needed to act as a catalyst to initiate the interaction. The need for mutual goals or outcomes is important and could serve as a guiding force. Several times throughout the survey, local politicians are mentioned as people to involve. Should they assume a greater role as well as their local governmental organizations? This might require a paradigm shift for those who do not

have local public health or public hospital responsibility – that is to think of health issues as public domain issues.

5.8 Conclusion

The twenty-first century is in its second decade. What will students of transportation planning and public health be writing about this century in the decades to come? Based on the current literature, a focused group of twelve local leaders, and a representative group of 127 regional leaders the students could be writing about the reconnecting of transportation planning and public health in order to achieve solutions to the complex problems facing them. The early part of the twenty-first century could be remembered as the time when the Network Model for Action supplied the necessary action steps for greater collaboration. This in turn led to greater achievement of outcomes for the sustainability of a vibrant community with thriving and interdependent transportation and health systems. Both groups work together along with government leaders to continuously improve the quality of life of their residents.

APPENDIX A

FOCUS GROUP QUESTIONS

Appendix A: Focus Group Questions

1. Have you or your organization collaborated with organizations responsible for transportation planning or public health? (If the majority answers "yes", then proceed to question #3. If "no", then proceed to question #2)

2. If not, how familiar are you with these organizations? a.Have you or your organization collaborated with other organizations?

3. How long have you collaborated with them?

4. Have you worked with the same organization(s) or a variety over time?

5. Please describe your experience with such collaborations including the following:
   a. Reason for the collaboration
   b. Goals for the collaboration
   c. Who did you work with from the other organization?
   d. What tools were used to assist with the collaboration?
   e. What was the outcome of the collaboration?

6. What do you see as the benefits of collaboration? (the following are prompt questions to be used only if necessary)   .
   a. Respond to complex multi-jurisdictional issues

   b. Share costs

   c. Share data/expertise

   d. Secure new funding

   e. Other

7. What do you see as the barriers to collaboration? (prompt questions follow)
   a. No political will or support
   b. Trust
   c. Loss of power or control
   d. Different mission, motivation or culture, ways of doing business?
   e. Other

8. In your leadership role, how would you encourage transportation and health to collaborate?

9. What are the tools or policies available to assist with the collaboration? (prompt questions follow)
   a. Health impact assessment
   b. Safe Routes to Schools
   c. Complete Streets
   d. Active transportation
   e. Other

10. Is there anything that was missed in the discussion that you would like to add?

Is there anything that you came wanting to say that you didn't get a chance to say?

APPENDIX B

FOCUS GROUP LETTERS

Appendix B: Focus Group Letters

Follow Up Phone Call

Hello, I am calling as a follow up to the recent invitation you received to participate in a focus group regarding transportation planning and public health. The University of Texas at Arlington received a Department of Transportation grant to identify barriers to collaboration between transportation planning and public health. As a leader in this region, you are invited to participate in this discussion about sustainability and quality of life, the opportunities and challenges for working together. The focus group will be held at the North Central Texas Council of Governments office in Arlington. It will last no longer than two hours. I will be glad to answer any questions you have. Would you be interested in participating? If so, which of the following dates and times would you have available:

You will need to review and sign the consent form and either email it to me or bring it with you to the focus group. I will email another copy to you after this call.

Thank you for your time and consideration. The final time and room location will be emailed to you shortly.

Reminder Email Text

Dear Focus Group Invitee:

If you have not yet responded to the earlier email invitation requesting your participation in a Focus Group to discuss collaboration between transportation planning and public health, please let me urge you to do so. You will be one of only twelve regional leaders in transportation planning or public health to have the opportunity to express your ideas and concerns about the challenges and opportunities for collaborative planning to address today's pressing issues of sustainability and the future's quality of life for the region. Attached please find the original invitation as well as the consent form. After indicating your meeting time preference and completing the consent form, please email your time preference and a signed copy of the consent form back to me at lkbrewer@tarrantcounty.com. Please do not hesitate to email or call with any questions. My number is 817-321-5300. You may bring the signed consent form with you to the focus group if you prefer A signed consent form will be necessary to participate.

Thank you in advance for your interest and consideration.

Sincerely,

Lou K. Brewer

Health Focus Group

Date

Dear Health Leader:

I am currently working on my dissertation as a requirement for completing my PhD in Urban Planning and Policy at the University of Texas at Arlington. My dissertation efforts seek to identify the benefits and barriers to collaboration between health organizations and transportation planning organizations. I am fortunate to be working with a team of faculty and graduate students who are part of a grant funded by the U.S. Department of Transportation. In addition, Tarrant County Public Health and the Transportation Division of the North Central Texas Council of Governments are supporting partners.

You are a leader in the health arena in our region and I would invite you to participate in a focus group which I will be conducting in order to assist in identifying the benefits and barriers. Your participation is voluntary. Upon your agreement to participate, you will be asked to discuss with other participants some questions related to the study as mentioned above. Meeting discussions will be audio taped, but your identity will be kept anonymous. Protections will be taken to ensure the confidentiality of your responses. Please indicate your availability by checking all meeting times that you are able to attend.

Dates:

Times:

Place: Room X North Central Texas Council of Governments

Refreshments will be served. In appreciation for your time and ideas, copies of the executive summary of a local HIA will be available following the focus group. Please RSVP to lkbrewer@tarrantcounty.com or 817-321-5300 by…

In addition to indicating your available meeting times, you will need to read and sign the enclosed form regarding your rights as a participant in a research project at UTA. Please return this form to me at the above email or bring it with you to the focus group. Questions about this research or your rights as a research subject may be directed to the faculty advisor, Dr. Jianling Li at 817-272-272-3367. You may also contact the UTA IRB at 817-272- 3723 in the event of a research-related injury to the subject.

Thank you in advance for your interest and support in this effort.

Sincerely,

Lou K. Brewer, RN, MPH

Health Director, TCPH

Transportation Focus Group

Date

Dear Transportation Stakeholder:

The University of Texas in Arlington (UTA), School of Urban and Public Affairs, has received a grant from the U.S. Department of Transportation. The purpose of the grant is to promote greater collaboration between transportation planning and public health for transportation planning and development decision –making. Dr. Jianling Li and Dr. Colleen Casey are the faculty advisors. Lou Brewer is the doctoral student conducting the focus group and the North

Central Texas Council of Government Transportation division and Tarrant County Public Health are participating as project advisors.

You are a leader in the transportation arena in our region and I would invite you to participate in a focus group which I will be conducting in order to assist in identifying the benefits and barriers. Your participation is voluntary. Upon your agreement to participate, you will be asked to discuss with other participants some questions related to the study as mentioned above. Meeting discussions will be audio taped, but your identity will be kept anonymous. Protections will be taken to ensure the confidentiality of your responses. Please indicate your availability by checking all meeting times that you are able to attend.

Dates

Times

Place: Room X   North Central Texas Council of Governments

Refreshments will be served. In appreciation for your time and ideas, copies of the executive summary of a local HIA will be available following the focus group. Please RSVP to lkbrewer@tarrantcounty.com or 817-321-5300 by…

In addition to indicating your available meeting times, you will need to read and sign the enclosed form regarding your rights as a participant in a research project at UTA. You may email a signed copy of the consent form to me at the above address or you may bring the signed consent form to the focus group. Questions about this research or your rights as a research subject may be directed to the PI Jianling Li at 817-272-3367. You may also contact the UTA IRB at 817-272- 3723 in the event of a research-related injury to the subject.

Thank you in advance for your interest and support in this effort.

Sincerely,

Lou K. Brewer, RN, MPH

Health Director, TCPH

APPENDIX C

SURVEY QUESTIONS

Appendix C: Survey Questions

The University of Texas at Arlington (UTA), in partnering with the North Central Texas Council of Governments (NCTCOG) and Tarrant County Public Health (TCPH), is conducting research on identifying barriers to and opportunities of collaborations between transportation planning and public health communities for regional transportation planning. As part of this research, we are asking key stakeholders to participate in a survey that asks questions about your organization, your organizational experience with collaboration, and perceived benefits and barriers to collaboration. The information gained from the survey will be used in part to develop recommendations to facilitate greater collaboration between planning and public health.

You have been selected for this study because of your position in either the transportation planning or public health fields as a leader at your organization. The survey contains four sections with about six to twenty questions in each, and should take about 20-25 minutes to complete. Please complete the survey by [DATE].

Your participation in this study is valuable and will help find ways to incorporate public health indicators and outcomes into transportation planning. However, your participation is voluntary and your refusal to participate in the study will involve no penalty. You may also discontinue your participation in the study at any time. If you choose to participate, your responses and personal information will be kept in strict confidence.

If in the unlikely event it becomes necessary for the Institutional Review Board to review your research records, the University of Texas at Arlington will protect the confidentiality of those records to the extent permitted by law. The data resulting from your participation may be made available to other researchers in the future. In such cases, the data will contain no identity information that could associate with any participants.

If you have any questions or comments about this study, please do not hesitate to contact Lou Brewer by phone at 817-
480-8118 or by email lou.brewer@mavs.uta.edu. If you have any questions about your rights as a participant in this study, you may contact a representative of the UTA Institutional Review Board at 817-272-3723.

Thank you very much for your time and

support for this study. Sincerely,

Jianling Li, Ph.D., AICP
Professor Urban Policy and Planning
The University of Texas at Arlington

Lou Brewer, RN, MPH
Doctoral Student
The University of Texas at Arlington

Please check the box below if you wish to participate in the survey.

☐ By checking the box, I acknowledge that I have read my rights as a participant and grant consent to participate in this research

I. ORGANIZATION PROFILE

What type of organization is your agency? (check ONE)

- Federal agency

- State agency

- County government

- City government

- Regional/Metro/Special district/Quasi-government

- University/College

- State Legislative/Congressional staff

- Advocacy organization(grass-root, faith-based, community organization)

- Business/For profit(health insurance, workplace wellness)

- Hospital/Health facility

- N/A

- Other (please specify)

I. ORGANIZATION PROFILE

What is the mission of the organization? (check the ONE that best describes the mission)

- Public health

- Health care

- Transportation planning

- Urban planning

- N/A

- Other (please specify)

I. ORGANIZATION PROFILE

How many full time employees does your organization have? (check ONE)

- <10
- 10-49
- 50-99
- 100-249
- 250-499
- 500-999
- 1000-2499
- 2500-4999
- 5000+
- Don't Know

I. ORGANIZATION PROFILE

What size population does your organization serve? (check ONE)

- <5,000
- 5,000-9,999
- 10,000-24,999
- 25,000-49,999
- 50,000-74,999
- 75,000-99,999
- 100,000-199,999
- 200,000-499,999
- 500,000-999,999
- 1,000,000 +
- Don't know

I. ORGANIZATION PROFILE

What is the total budget for your organization? (check ONE)

- < $500,000
- 500,000-4,999,999
- 5,000,000–9,999,999
- 10 million +
- prefer not to answer

I. ORGANIZATION PROFILE

What is the primary source of funding for your organization? (Check ONE only)

- Local

- State

- Federal

- Fees

- Don't know

- Other sources (specify)

I. ORGANIZATION PROFILE

In your organization, is there a dedicated position or department responsible for external collaboration?

- Yes

- No

Are multiple divisions or people in your organization responsible for engaging in external collaboration?

- Yes

- No

I. ORGANIZATION PROFILE

Which key stakeholders does your organization target during external collaboration?
(Check ALL that apply)

- Local politicians
- Legislative officials
- Transportation organizations/consultants
- Health organizations/consultants
- Environmental organizations
- Universities
- Community-based organizations/Associations
- Advocacy groups
- Primary and Secondary School Districts
- Other (please specify below)

Other

With which of the following sectors is your organization most likely to collaborate?

	Most likely	Neutral	Least likely
Public			
Private for profit			
Non-profit			

II. INTERNAL COLLABORATION

We are now going to ask you a series of questions about collaborations INSIDE your organization.

The following are statements about YOUR ORGANIZATION. Would you agree/disagree that your organization is …

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
A system of interconnected divisions and departments	☐	☐	☐	☐	☐
Only one part of a larger network/array of groups and organizations	☐	☐	☐	☐	☐
A patchwork of independent programs	☐	☐	☐	☐	☐
An accumulation of silos	☐	☐	☐	☐	☐
Other (please explain)	☐	☐	☐	☐	☐

Other

II. INTERNAL COLLABORATION

To what extent are employees in YOUR ORGANIZATION encouraged to …?

	Strongly discouraged	Discouraged	Neither discouraged nor encouraged	Encouraged	Strongly encouraged	Don't know
Collaborate with other departments within the organization	☐	☐	☐	☐	☐	☐
Collaborate with external organizations	☐	☐	☐	☐	☐	☐

II. INTERNAL COLLABORATION

WITHIN YOUR ORGANIZATION, how frequently does your organization engage in the following?

	Never	Occasionally	Moderately	Frequently	Always	Don't know
Data and information exchange	☐	☐	☐	☐	☐	☐
Visioning exercises	☐	☐	☐	☐	☐	☐
Utilization/Creation of shared databases	☐	☐	☐	☐	☐	☐
Scenario planning	☐	☐	☐	☐	☐	☐
Workshops	☐	☐	☐	☐	☐	☐
Employee training	☐	☐	☐	☐	☐	☐
Conferences	☐	☐	☐	☐	☐	☐
Mentoring/Apprenticeships	☐	☐	☐	☐	☐	☐
Organization strategic planning	☐	☐	☐	☐	☐	☐
Research and development activities	☐	☐	☐	☐	☐	☐
Other (please explain below)	☐	☐	☐	☐	☐	☐

Other

II. INTERNAL COLLABORATION

To what extent does your organization support the following practices, actions and behaviors AT ALL LEVELS WITHIN YOUR ORGANIZATION?

	Never	Occasionally	Moderately	Frequently	Always	Don't know
Consensus-building	⬚	⬚	⬚	⬚	⬚	⬚
Mutual problem-solving	⬚	⬚	⬚	⬚	⬚	⬚
Development of cooperative goals	⬚	⬚	⬚	⬚	⬚	⬚
Trust building	⬚	⬚	⬚	⬚	⬚	⬚
Ongoing interaction	⬚	⬚	⬚	⬚	⬚	⬚
Goal formulation based on long term payoffs	⬚	⬚	⬚	⬚	⬚	⬚
Goal formulation focused on gains rather than losses	⬚	⬚	⬚	⬚	⬚	⬚
Sharing information and resources	⬚	⬚	⬚	⬚	⬚	⬚
The expression of multiple viewpoints	⬚	⬚	⬚	⬚	⬚	⬚
Other (please explain)	⬚	⬚	⬚	⬚	⬚	⬚

Other

II. INTERNAL COLLABORATION

Which of the following are important for YOUR ORGANIZATION? (check ALL that apply)

- Individual goals and objectives

- Divisional goals and objectives

- Overall organizational goals and objectives

- Competition

- Profit Maximization

- Ecologically sustainable developments

- Increased science and technical expertise

- Process enhancement

- Human capital building/development

- Increased access to decision makers

- Enhanced networking

- Public service opportunity

- Don't know

- Other (please specify)

II. INTERNAL COLLABORATION

How would you rate your level of satisfaction with collaboration WITHIN your organization?

- Not satisfied
- Somewhat unsatisfied
- Neutral
- Somewhat satisfied
- Very satisfied
- Prefer not to to answer

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We are now going to ask you a series of questions about collaborations OUTSIDE of your organization. For the following questions, please consider "typical" as usual or overall experience with collaborations.

III. EXTERNAL COLLABORATION

HAS or IS your organization involved in collaboration for REGIONAL TRANSPORTATION
PLANNING such as planning activities led or supported by the North Central Texas
Council of Governments, the Metropolitan Planning Organization (MPO) or other regional planning efforts?

☐ Yes

☐ No

Why does your organization NOT participate in REGIONAL TRANSPORTATION PLANNING? (check ALL that apply)

- ⊖ Not relevant to my organization
  ℂ

- ⊖ Not been invited
  ℂ

- ⊖ Nothing to contribute
  ℂ

- ⊖ Don't know what regional transportation planning is about
  ℂ

- ⊖ No opinion
  ℂ

- ⊖ Other (please specify)
  ℂ

III. EXTERNAL COLLABORATION

Has your organization been involved in collaboration for any of the following? (check ALL that apply)

- Municipal transportation planning

- Other planning at the municipal level

- Public health planning

- Community outreach for active transportation

- Community outreach for public health

- Don't know

- Other (please specify)

Which stakeholders typically participate in your collaborations?

- Local politicians
- Legislative officials
- Transportation organizations/consultants
- Health organizations/consultants
- Environmental organizations
- Universities
- Community-based organizations/associations
- Advocacy groups
- Primary and Secondary School Districts
- Other (please specify)

Other

With which of the following sectors is your organization most likely to collaborate?

	Most likely	Neutral	Least likely
Public			
Private for profit			
Non-profit			

III. EXTERNAL COLLABORATION

On average, how frequently does your organization meet for collaboration (check ONE only)?

- Not at all
- Once or less/Year
- Twice/Year
- Quarterly
- Monthly or more
- Don't know

III. EXTERNAL COLLABORATION

In which of the following does your organization engage during typical collaboration?

- Consensus-building

- Mutual problem-solving

- Development of cooperative/mutual goals

- Goal formulation based on long term payoffs

- Goal formulation focused on gains rather than losses

- Trust building

- Data and information exchange

- Visioning exercises

- Utilization/Creation of shared databases

- Scenario planning

- Workshops

- Employee Training

- Conferences

- Mentoring, apprenticeships

- Network strategic planning

- Research and Development Activities

- Other (please explain)

Other

III. EXTERNAL COLLABORATION

How would you describe the role of your organization in typical collaborations? (check ONE only)

- Regular attending member

- Occasional attending participant

- Leader

- Other (please specify)

Which stakeholder(s) lead the typical collaboration? (check ALL that apply)

- Local politicians

- Legislative officials

- Transportation organizations/Consultants

- Health organizations/Consultants

- Environmental organizations

- Universities

- Community-based organizations/Associations

- Advocacy groups

- Primary and Secondary School Districts

- Other

Other

Which stakeholder(s) also lead the typical collaboration? (check ALL that apply)

◉ Local politicians
○

◉ Legislative officials
○

◉ Transportation organizations/Consultants
○

◉ Health organizations/Consultants
○

◉ Environmental organizations
○

◉ Universities
○

◉ Community-based organizations/Associations
○

◉ Advocacy groups
○

◉ Primary and Secondary School Districts
○

◉ Other
○

Other

III. EXTERNAL COLLABORATION

Approximately how many YEARS has your organization engaged in collaborations?

Why does your organization engage in collaboration? (check ALL that apply)

- ☉ Required by federal mandate
- ☉ Required by state mandate
- ☉ Required by inter-local agreement or memorandum of understanding
- ☉ Supports mutual goals and objectives
- ☉ Respond to a complex multi-jurisdictional issue
- ☉ Coordinate organization actions
- ☉ Secure new funding
- ☉ Share risks
- ☉ Respond to the unexpected
- ☉ Share financial resources
- ☉ Share technical expertise/resources
- ☉ Share staff /Human capital
- ☉ Have established trust with the collaborating organization(s)
- ☉ Have long history of working with the collaborating organization(s)
- ☉ Accelerate project completion
- ☉ Opportunity to learn from other organization(s)
- ☉ Opportunity to network with other organization(s)
- ☉ Gain access to data provided by the collaborating organizations
- ☉ Realize other benefits of expanded networking
- ☉ Don't know

○ Other (please specify)
○

III. EXTERNAL COLLABORATION

Overall, how would you describe your organization's level of satisfaction with typical COLLABORATION?

- Not satisfied

- Somewhat unsatisfied

- Neutral

- Somewhat satisfied

- Very satisfied

- Prefer not to answer

Would you agree/disagree that overall, collaboration is best described as…

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know
A system of interconnected individuals	○	○	○	○	○	○
A system of interconnected organizations	○	○	○	○	○	○
A patchwork of independent programs	○	○	○	○	○	○
An accumulation of silos	○	○	○	○	○	○
Other (please explain)	○	○	○	○	○	○

Other

III. EXTERNAL COLLABORATION

Please rank the following forces that influence overall collaboration (Use 1 for the least influential and 8 for the most influential).

	1 (Least)	2	3	4	5	6	7	8 (Most)
Funding Streams	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚
Policy Decisions at the Federal Level	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚
Policy Decisions at the State Level	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚
Policy Decisions at the Local Level	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚
Other groups and organizations	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚
Impacts on the physical environment of the service area	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚
Affected population groups/communities	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚
Collaboration goals and objectives	⬚	⬚	⬚	⬚	⬚	⬚	⬚	⬚

If there are any other highly influential factors, please specify here:

	5
	6

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III. EXTERNAL COLLABORATION

Overall, how would you describe the decision-making style of collaboration? (Check the
ONE that best describes the COLLABORATION)

- Top down management (a few key leaders make decisions)

- Compromise

- Consensus

- Don't know

III. EXTERNAL COLLABORATION

Please indicate which of the following are used in collaboration (check ALL that apply).

	Not aware	Aware/not used	Plan to use	Used	Don't know
Smart growth principles	☐	☐	☐	☐	☐
Land use planning/zoning	☐	☐	☐	☐	☐
Health Impact Analysis	☐	☐	☐	☐	☐
Children's Health Assessment Program/Mobilizing for Action through Planning and Partnerships	☐	☐	☐	☐	☐
Protocol for Assessing Community Excellence-Environmental Health	☐	☐	☐	☐	☐
Behavioral Risk Factor Surveillance System	☐	☐	☐	☐	☐
Transportation Planning Capacity Building	☐	☐	☐	☐	☐
Walkability checklists	☐	☐	☐	☐	☐
GIS Mapping	☐	☐	☐	☐	☐
Context Sensitive Solutions	☐	☐	☐	☐	☐
Scenario planning/ visioning	☐	☐	☐	☐	☐
Data repository	☐	☐	☐	☐	☐
Bicycle and pedestrian programs	☐	☐	☐	☐	☐
Transportation enhancement program	☐	☐	☐	☐	☐
Safe Routes to Schools	☐	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐	☐

Other

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Which stakeholders participate in the regional transportation planning process?

- ⬡ Local politicians
  ○

- ⬡ Legislatives officials
  ○

- ⬡ Transportation organizations/consultants
  ○

- ⬡ Health organizations/consultants
  ○

- ⬡ Environmental organizations
  ○

- ⬡ Universities
  ○

- ⬡ Community-based organizations/associations
  ○

- ⬡ Advocacy groups
  ○

- ⬡ Primary and Secondary School Districts
  ○

- ⬡ Other (please specify)
  ○

Other

With which of the following sectors is your organization most likely to collaborate?

	Most likely	Neutral	Least likely
Public	⬡	⬡	⬡
Private for profit	⬡	⬡	⬡
Non-profit	⬡	⬡	⬡

III. EXTERNAL COLLABORATION

How frequently does your organization meet for collaboration for regional transportation planning (check ONE only)?

- Not at all
- Once or less/Year
- Twice/Year
- Quarterly
- Monthly or more
- Don't know

In which of the following does your organization engage during regional transportation planning?

- ☺ ○ Consensus-building

- ☺ ○ Mutual problem-solving

- ☺ ○ Development of cooperative/mutual goals

- ☺ ○ Goal formulation based on long term payoffs

- ☺ ○ Goal formulation focused on gains rather than losses

- ☺ ○ Trust building

- ☺ ○ Data and information exchange

- ☺ ○ Visioning exercises

- ☺ ○ Utilization/Creation of shared databases

- ☺ ○ Scenario planning

- ☺ ○ Workshops

- ☺ ○ Employee Training

- ☺ ○ Conferences

- ☺ ○ Mentoring, apprenticeships

- ☺ ○ Network strategic planning

- ☺ ○ Research and Development Activities

- ☺ ○ Other (please explain)

Other

III. EXTERNAL COLLABORATION

How would you describe the role of your organization in the regional transportation planning process? (check ONE only)

- Regular attending member

- Occasional attending participant

- Leader

- Other (please specify)

III. EXTERNAL COLLABORATION

Which stakeholder(s) lead the regional transportation process? (check ALL that apply)

- Local politicians
- Legislative officials
- Transportation organizations/Consultants
- Health organizations/Consultants
- Environmental organizations
- Universities
- Community-based organizations/Associations
- Advocacy groups
- Primary and Secondary School Districts
- Other

Other

III.EXTERNAL COLLABORATION

Which stakeholder(s) also lead the regional transportation process? (check ALL that apply)

- Local politicians

- Legislative officials

- Transportation organizations/Consultants

- Health organizations/Consultants

- Environmental organizations

- Universities

- Community-based organizations/Associations

- Advocacy groups

- Primary and Secondary School Districts

- Other

Other

III. EXTERNAL COLLABORATION

Approximately how many YEARS has your organization engaged in collaboration for regional transportation planning?

Why does your organization engage in regional transportation planning? (check ALL that apply)

- ○ Required by federal mandate

- ○ Required by state mandate

- ○ Required by inter-local agreement or memorandum of understanding

- ○ Supports mutual goals and objectives

- ○ Respond to a complex multi-jurisdictional issue

- ○ Coordinate organization actions

- ○ Secure new funding

- ○ Share risks

- ○ Respond to the unexpected

- ○ Share financial resources

- ○ Share technical expertise/resources

- ○ Share staff /Human capital

- ○ Have established trust with the collaborating organization(s)

- ○ Have long history of working with the collaborating organization(s)

- ○ Accelerate project completion

- ○ Opportunity to learn from other organization(s)

- ○ Opportunity to network with other organization(s)

- ○ Gain access to data provided by the collaborating organizations

- ○ Realize other benefits of expanded networking

- ○

Other

III. EXTERNAL COLLABORATION

How would you describe your organization's level of satisfaction with COLLABORATION
for regional transportation planning?

- Not satisfied

- Somewhat unsatisfied

- Neutral

- Somewhat satisfied

- Very satisfied

- Prefer not to answer

Would you agree/disagree that, overall, collaboration is best described as…

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know
A system of interconnected individuals						
A system of interconnected organizations						
A patchwork of independent programs						
An accumulation of silos						
Other (please explain)						

Other

III. EXTERNAL COLLABORATION

Please rank the following forces that influence overall collaboration for regional transportation planning (Use 1 for the least influential and 8 for the most influential).

	1 (Least)	2	3	4	5	6	7	8 (Most)
Funding Streams	☐	☐	☐	☐	☐	☐	☐	☐
Policy Decisions at the Federal Level	☐	☐	☐	☐	☐	☐	☐	☐
Policy Decisions at the State Level	☐	☐	☐	☐	☐	☐	☐	☐
Policy Decisions at the Local Level	☐	☐	☐	☐	☐	☐	☐	☐
Other groups and organizations	☐	☐	☐	☐	☐	☐	☐	☐
Impacts on the physical environment of the service area	☐	☐	☐	☐	☐	☐	☐	☐
Affected population groups/communities	☐	☐	☐	☐	☐	☐	☐	☐
Collaboration goals and objectives	☐	☐	☐	☐	☐	☐	☐	☐

If there are any other highly influential factors, please specify here:

	5
	6

III. EXTERNAL COLLABORATION

How would you describe the decision-making style of collaboration for regional transportation planning? (Check the ONE that best describes the COLLABORATION)

- [ ] Top down management (a few key leaders make decisions)

- [ ] Compromise

- [ ] Consensus

- [ ] Don't know

III. EXTERNAL COLLABORATION

Please indicate which of the following is used in the regional transportation planning process (check ALL that apply).

	Not aware	Aware/not used	Plan to use	Used	Don't know
Smart growth principles	☐	☐	☐	☐	☐
Land use planning/zoning	☐	☐	☐	☐	☐
Health Impact Analysis	☐	☐	☐	☐	☐
Children's Health Assessment Program/Mobilizing for Action through Planning and Partnerships	☐	☐	☐	☐	☐
Protocol for Assessing Community Excellence- Environmental Health	☐	☐	☐	☐	☐
Behavioral Risk Factor Surveillance System	☐	☐	☐	☐	☐
Transportation Planning Capacity Building	☐	☐	☐	☐	☐
Walkability checklists	☐	☐	☐	☐	☐
GIS Mapping	☐	☐	☐	☐	☐
Context Sensitive Solutions	☐	☐	☐	☐	☐
Scenario planning/ visioning	☐	☐	☐	☐	☐
Data repository	☐	☐	☐	☐	☐
Bicycle and pedestrian programs	☐	☐	☐	☐	☐
Transportation enhancement program	☐	☐	☐	☐	☐
Safe Routes to Schools	☐	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐	☐

Other

Based on your overall experience, would you agree/disagree that the following factors SUPPORT collaboration?

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree	Don't know
(A) Land use regulations that encourage regional efforts	☐	☐	☐	☐	☐	☐
(B) Local- level governmental cooperation	☐	☐	☐	☐	☐	☐
(C) Organizational incentives to encourage collaboration	☐	☐	☐	☐	☐	☐
(D) Organizational objectives that encourage collaboration	☐	☐	☐	☐	☐	☐
(E) Positive history of collaboration with other organizations	☐	☐	☐	☐	☐	☐
(F) Personal or professional contacts with other organizations	☐	☐	☐	☐	☐	☐
(G) Effective leadership of the collaboration	☐	☐	☐	☐	☐	☐
(H) Coordination among pivotal organizations	☐	☐	☐	☐	☐	☐
(I) Streamlined requirements of transportation programs	☐	☐	☐	☐	☐	☐
(J) Streamlined requirements of health care programs	☐	☐	☐	☐	☐	☐
(K) Others (please specify)	☐	☐	☐	☐	☐	☐

Other _____

Among the above factors, please rank the top three factors that are most important to collaboration efforts (Please use the labels in front of each factor above).

The most important	☐
The second most important	☐
The third most important	☐

III. EXTERNAL COLLABORATION

How would you describe/anticipate the level of your organization's satisfaction towards collaboration outcomes?

	Very unsatisfied	Unsatisfied	Neutral	Satisfied	Very satisfied
Regional development vision	☐	☐	☐	☐	☐
Long range transportation plan	☐	☐	☐	☐	☐
Short term transportation projects	☐	☐	☐	☐	☐
Memorandum of agreement	☐	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐	☐

Other

Based on your overall experience, would you agree/disagree that the following are OBSTACLES/BARRIERS to collaboration?

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
(A) No political will or support	☐	☐	☐	☐	☐
(B) Priorities do not include physical activity	☐	☐	☐	☐	☐
(C) Loss of power or control	☐	☐	☐	☐	☐
(D) Slower process and longer time for results	☐	☐	☐	☐	☐
(E) Lack of trust	☐	☐	☐	☐	☐
(F) Lack of funding	☐	☐	☐	☐	☐
(G) Lack of staff	☐	☐	☐	☐	☐
(H) Priorities do not include multi-modal transportation	☐	☐	☐	☐	☐
(I) Different mission	☐	☐	☐	☐	☐
(J) Different motivation	☐	☐	☐	☐	☐
(K) Different culture	☐	☐	☐	☐	☐
(L) Different professional mindset	☐	☐	☐	☐	☐
(M) Different professional language	☐	☐	☐	☐	☐
(N) Uneven playing field due to size	☐	☐	☐	☐	☐
(O) Uneven playing field due to power	☐	☐	☐	☐	☐
(P) Uneven playing field due to resources	☐	☐	☐	☐	☐
(Q) Personal dynamics	☐	☐	☐	☐	☐
(R) Inadequate information or communication sharing	☐	☐	☐	☐	☐
(S) Staff turnover	☐	☐	☐	☐	☐
(T) Leadership style/corporate culture	☐	☐	☐	☐	☐
(U) Inadequate analysis tools (metrics)	☐	☐	☐	☐	☐
(V) Potential litigation/liability	☐	☐	☐	☐	☐
(W) Other (please explain)	☐	☐	☐	☐	☐

Other _____

Among the above factors, please list the top three OBSTACLES/BARRIERS that prevent collaboration efforts (Please use the labels in front of each factor above).

The most important	
The second most important	
The third most important	

III. EXTERNAL COLLABORATION

How important do you feel it is for transportation planning to consider public health?

- Not at All Important
- Not so Important
- Neutral/No Opinion
- Somewhat Important
- Very Important
- Don't know

What is your job title?

What is your age range?

- 20-29
- 30-39
- 40-49
- 50-59
- 60+
- Prefer not to answer

Gender:

- Male
- Female
- Prefer not to to answer

How many years of experience have you been in the current position?

What was/were your field(s) of study in bachelors program(s)?

- Biology
- Business
- City/ Regional Planning
- Economics
- Engineering
- Environmental Studies
- Management
- Medicine
- Psychology
- Public Affairs

○ Public Health

○ Transportation

○ Prefer not to answer

○ Other (please specify)

What was/were your field(s) of study in Masters program(s)?

- ○ Biology

- ○ Business

- ○ City/ Regional Planning

- ○ Economics

- ○ Engineering

- ○ Environmental Studies

- ○ Management

- ○ Medicine

- ○ Psychology

- ○ Public Affairs

- ○ Public Health

- ○ Transportation

- ○ No master's degree study

- ○ Prefer not to answer

- ○ Other (please specify)

THANK YOU FOR YOUR TIME AND INTEREST. YOU WILL RECEIVE A COPY OF THE RESULTS OF THE SURVEY WHEN THEY ARE FINALIZED.

APPENDIX D

SURVEY LETTERS

Survey Cover Letter

Dear XXXX:

My name is Lou Brewer and I am a Doctoral Student at the University of Texas Arlington and part of a research team evaluating collaboration between transportation planning and public health. As part of this research, we are asking key stakeholders to participate in a survey that asks questions about your organization, your organizational experience with collaboration, and perceived benefits and barriers to collaboration. The information gained from the survey will be used in part to develop recommendations to facilitate greater collaboration between planning and public health.

You have been selected for this study because of your position in either the transportation planning or public health fields as a planner or director. The survey should take about 15 minutes to complete. Please complete the survey by [DATE].

Your participation in this study is valuable and will help find ways to incorporate public health indicators and outcomes into transportation planning. However, your participation is voluntary and your refusal to participate in the study will involve no penalty. You may also discontinue your participation in the study at any time. If you choose to participate, your responses and personal information will be kept in strict confidence.

If in the unlikely event it becomes necessary for the Institutional Review Board to review your research records, the University of Texas at Arlington will protect the confidentiality of those records to the extent permitted by law. The data resulting from your participation may be made available to other researchers in the future. In such cases, the data will contain no identity information that could associate with any participants.

If you have any questions or comments about this study, please do not hesitate to contact Lou Brewer by phone at 817-321-5301 or by email lou.brewer@mavs.uta.edu. If you have any questions about your rights as a participant in this study, you may contact a representative of the UTA Institutional Review Board at 817-272-3723.

Thank you very much for your time and support for this study.

Sincerely,

Jianling Li, Ph.D., AICP   Lou Brewer, RN, MPH

Professor   Urban Policy and Planning Doctoral
Student
The University of Texas at Arlington   the University of Texas at Arlington

Please check the box below if you wish to participate in the survey.

☐ By checking the box, I acknowledge that I have read my rights as a participant and grant consent to participate in this research.

Survey Reminder E-mail Text

Dear Survey Participant:

If you have not yet responded to the earlier email invitation requesting your participation in a survey to discuss collaboration between transportation planning and public health, please let me urge you to do so. As a leader in the North Central Texas region in transportation planning or public health, you have the opportunity to express your ideas and concerns about the challenges and opportunities for collaborative planning to address today's pressing issues of sustainability and the future's quality of life for the region. Attached please find the original invitation as well as the survey. Please do not hesitate to email or call with any questions. You may contact me at lou.brewer@mavs.uta.edu or 817-321-5301.

Thank you in advance for your time and interest in completing the survey.

Sincerely,

Lou K. Brewer

Survey Follow-up Phone Call

Hello, I am calling as a follow up to the recent invitation you received to participate in a survey regarding transportation planning and public health. The University of Texas at Arlington received a Department of Transportation grant to identify barriers to collaboration between transportation planning and public health. As a leader in this region, you are invited to complete the survey emailed to you previously. The questions in the survey pertain to collaboration experience that you and your organization have had and specifically how you view the barriers and benefits of collaboration between transportation planning and public health. By participating in the survey you will be assisting in identifying ways to overcome the barriers and enhance future collaborations.

If you need another copy of the survey, I will be glad to e-mail it to you. Are there any questions regarding the survey? Do you plan to complete it?

Thank you for your time and consideration.

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Lou Kelley Brewer, RN, MPH, serves as the Health Director for Tarrant County, Texas and has over thirty years of experience in public health at the local and state levels including academia and practice. She received her BS in nursing and her MPH from the University of North Carolina at Chapel Hill. She plans to complete her PhD in Urban Policy and Planning from the University of Texas at Arlington in August 2012. Lou has held numerous leadership positions at the national, state, regional and local levels. She believes that one of the critical public health prevention strategies for decreasing the incidence and prevalence of chronic diseases relates to urban policy and planning.