

## **KNOWLEDGE BY ASSOCIATION: COMMUNITIES OF PRACTICE IN PUBLIC MANAGEMENT**

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### **ABSTRACT**

Managers in any organization face myriad challenges. One way to figure out how to deal with these challenges is to learn what peers do in similar situations – to seek and share knowledge. Knowledge sharing has an established tradition in research. Empirical studies highlight communities of practice as one venue for knowledge sharing, although few studies examine how knowledge is shared within communities that span multiple jurisdictions particularly in public sector settings. This study reveals five structures, behaviors, and processes embedded in communities of practice that enable knowledge sharing across public sector jurisdictions: structured and unstructured exchange, anecdotes and storytelling, modeling by experienced members, multiple modes of communication, and confidentiality. Together, these practices establish a gateway to informal communication, build community through communication within and across groups, provide access to “know how” information from a diverse set of perspectives, and encourage peer comparisons.

Keywords: communities of practice, knowledge sharing, municipal government

### **INTRODUCTION**

How do public managers figure out ways to address the challenges they face? Public managers might start by learning about what peers do in similar situations – by seeking and sharing knowledge. Knowledge sharing has an established tradition in research, particularly on private sector organizations (Powell, Koput, & Smith-Doerr, 1996; Powell, 1998; Brown & Duguid, 2001). Knowledge sharing in the public sector tends to focus on connections across organizations that must coordinate to achieve a particular goal. Research in service delivery settings such as mental health (Provan & Huang, 2012), drug

courts (Hale, 2011), and emergency management (Waugh & Streib, 2006) are among the examples. However, public sector organizations may not necessarily need to coordinate to achieve a particular goal. Rather, organizations may simply need to know what others know in order to achieve their own goals. Knowledge sharing in such settings has had limited attention in research on public sector organizations. In research on organizations more generally, communities of practice (CoPs) are presented as one venue for such exchange of knowledge among peers (Lave & Wenger, 1991).

Yet, existing research on communities of practice has a largely private-sector orientation with few studies applied to the public sector (e.g. Hatmaker, Park, & Rethemeyer, 2011). In addition, this work focuses primarily on communities that have developed *within* organizations, with limited attention to communities that have developed *among* organizations. Furthermore, while this work articulates the ways that communities of practice enable knowledge sharing, detailed accounts of the actual structures, behaviors, and processes embedded in communities of practice that facilitate knowledge sharing is limited<sup>1</sup>. To build on this work, this study takes an inductive approach guided by the broad research question: How does a community of practice facilitate knowledge sharing across public sector organizations?

This question is examined by studying a particular community of practice, StatNet. StatNet is a group of U.S. municipalities interested in performance measurement. Data from five years of participant observation at StatNet meetings and events along with supplementary interview data reveal the content of the structures, behaviors, and processes that facilitate knowledge sharing in a community of practice. This study contributes to existing research on communities of practice in two ways. First, this study answers Bechky's (2006) call for empirical work that provides "thick description" of a community of practice that spans organizational boundaries. Second, while communities of practice research is predominately focused on private sector organizations, this study focuses on a community embedded in a public sector context. This study also contributes to public administration and management research more broadly

by focusing on knowledge sharing among organizations that are not working towards a common goal or delivery of service, but rather simply need to know what others know. The findings raise additional questions on knowledge sharing in public sector organizations as well implications for practitioners.

To frame this study, research on knowledge sharing and communities of practice drawn from management scholarship and public administration scholarship are integrated. Next, the context of the study, StatNet, and methods of data collection and analysis are described. Findings are presented and discussed along with a model that emerged from the data analysis. Finally, the study concludes with implications and directions for future research.

### **KNOWLEDGE SHARING**

Existing research acknowledges that organizations by themselves do not have all the knowledge they need to attain their objectives (van Wijk, Jansen, & Lyles, 2008; Anand, Glick, & Manz, 2002). Reaching across organizational boundaries in search of knowledge is not only necessary, but can be advantageous (Lane, Salk, & Lyles, 2001). Within organizations, individuals “know the ropes” and are competent in their work (Wenger, 2000, p. 227). When individuals interact with others outside their organization, new knowledge emerges. While knowledge sharing typically begins with individuals, knowledge then gets transferred to groups and organizations (Wenger, 2000; Ipe, 2003; Reid, 2003). The sharing of knowledge across organizations, particularly in the public sector, can lead to innovation (Hale, 2011), facilitate better problem definition (Dawes, 1996), reduce redundancies (Dawes, 1996), build trust (Mandell, 1999), increase professional networks and social capital (Dawes, 1996; Nahapiet & Ghoshal, 1998), facilitate the exchange of good ideas and best practices (Buchel and Raub, 2002), build long-term collaborative capacity (Weber & Khademian, 2008), and even increase accountability (Newcomber & Caudle, 1991).

However, there are perceived costs inherent in knowledge sharing. For instance, concerns that time spent on

knowledge sharing is time not spent on other important activities (Dawes, 1996), fear of sanctions or unflattering comparisons (Dawes, 1996; Ammons & Rivenbark, 2008), reservations over confidentiality and privacy of data (Fountain, 2001), and the risk of losing resources, autonomy, or discretion (Pfeffer & Salancik, 1978; Wilson, 1989) are some of the costs of sharing knowledge.

Organizational forms that can reduce some of these costs, particularly in public sector settings, include informal networks (Isett, Mergel, LeRoux, Mischen, & Rethemeyer, 2011), networks of practice (Binz-Scharf, Lazer, & Mergel, 2012), and knowledge networks (Dawes, Cresswell, & Pardo, 2009). Such organizational forms reduce costs by establishing shared understandings of language, building trust among participants, providing opportunities for face-to-face interaction, and forming connections that continue outside of the particular network (Dawes et al., 2009).

While research in public sector settings has recognized the importance of connections among organizations for decades, this research often focuses on connections among organizations that are interdependent (policy networks), must work together to deliver a service that one organization cannot deliver on its own (collaborative networks), or are working towards a common goal (governance networks) (Isett et al., 2011, p. i158). A new category of connections could include organizations that are simply doing similar things in different jurisdictions and could benefit from what others know. As discussed next, communities of practice are one venue for knowledge sharing (Lave & Wenger, 1991; Wenger, 2000), but have only recently been explored in research focused on public sector organizations (e.g. Hatmaker et al., 2011).

### **COMMUNITIES OF PRACTICE**

Knowledge and learning are inherently social and “communities of practice are the building blocks of social learning systems” (Wenger, 2000, p. 229). Communities of practice are “groups of people informally bound together by shared expertise and a passion for joint enterprise” (Wenger & Snyder, 2000 p. 139). Communities of practice may be formally

arranged or informally assembled by interested members (Chang, Chang, & Jacobs, 2009; Hatmaker et al., 2011; Wenger, McDermott, & Snyder, 2002). As long as members have an interest in sustaining the group, the community persists (Wenger & Snyder, 2000).

Communities of practice are different from work groups or project teams where a particular task must be accomplished, product delivered, or goal reached (Wenger & Snyder, 2000). Rather, the purpose of a community of practice is to build and exchange knowledge (Wenger & Snyder, 2000). Outputs are not necessarily tangible, agendas are not always adhered to or even explicit, and knowledge is often shared in unstructured and informal ways (Wenger & Snyder, 2000). The informal social learning and knowledge exchange processes of communities of practice tend to contradict typical hierarchical management practices (Wenger, 2000).

Communities of practice serve many purposes for organizations, the community itself, and the individuals participating (Fontaine & Millen, 2004). Communities of practice provide access to knowledge that might be considered explicit, such as training in the skills necessary for work, as well as knowledge that might be considered tacit, such as values, norms, and behavioral expectations (Feldman, 1981; Van Maanen & Schein, 1979). The type of knowledge, explicit or tacit, newcomers receive from communities of practice may evolve over time (Hatmaker et al., 2011).

Communities of practice and the informal learning that takes place in the community shape the professional identity of participants (Allee, 2000; Brockman & Dirkx, 2006; Chang et al., 2009; Wenger, 1998). In addition, a community of practice provides a local work context<sup>2</sup> which allows members of an occupational community to develop a shared sense of identity (Brown & Duguid, 2001; Van Maanen & Barley, 1984). Individuals may be a member of an organization but identify with an occupational group. For example, surgeons describe their professional identity by discussing what they do, as opposed to where they work (Pratt, Rockmann, & Kaufmann, 2006).

Communities of practice provide access to the “periphery of communication,” where members can pick up “know how” information (Brown & Duguid, 1991, p. 50). While tools such as formal training programs and documentation can provide individuals with “know that” information, the “know how” must be learned elsewhere. To use Ryle’s (1949) analogy as explanation, knowing the rules of chess does not mean one knows how to play chess. Direct phone calls, e-mails, and face-to-face conversations are peripheries of communication. Communities of practice provide access to these pathways.

The relationships developed through communities of practice provide a safe space in which members can openly admit lack of knowledge (Cross, Parker, Prusak, & Borgatti, 2001; Hatmaker et al., 2011). There are social costs to getting information as an individual does not want to be seen asking for information that he or she is expected to already understand (Miller & Jablin, 1991). A community of practice is a route to get such information at a lower social cost.

Communities of practice provide external links to other organizations. External links are a source for “leaky” knowledge (Brown & Duguid, 2001). In a private-sector context, “leaky” knowledge is undesirable, because it may reduce the competitive edge of the organization (Liebeskind, 1996). In contrast, knowledge sharing across public sector organizations is a way for organizations to learn for improving performance (Rashman & Hartley, 2002). In addition, being the origin of a good idea builds reputation and trust among other government organizations and residents (Henry, 2002) and boosts the status of a public sector organization (Ammons & Roenigk, 2014).

However, knowledge sharing through communities of practice is not without challenges. These challenges are particularly acute when a community of practice includes members from multiple organizations and disciplines. When shared, knowledge rooted in particular professional or organizational perspectives, may result in tension and competition reducing the chance to learn (Gherardi and Nicolini, 2002). Moreover, organizational, professional, social, and cognitive boundaries present significant barriers to knowledge sharing in a multidisciplinary setting (Currie & Suhomlinova,

2006; Ferlie, Fitzgerald, Wood, & Hawkins, 2005). Though, these challenges are not insurmountable. Communities of practice can develop boundary spanning processes that can facilitate learning across organizational and professional boundaries (Oborn & Dawson, 2010).

### **CONTEXT OF STUDY**

This study examines how communities of practice facilitate knowledge sharing in the public sector by studying StatNet. StatNet is a group of municipalities located in six contiguous U.S. states that are interested in performance measurement. Performance measurement can be defined as “the regular measurement of the results (outcomes) and efficiency of services or programs” (Hatry, 2006, p. 3). Performance measurement in public organizations is a good context to study knowledge sharing for several reasons. First, in times of financial constraints, the pressure on public managers for accountability, efficiency, effectiveness, and transparency has increased. With these pressures, performance measurement programs have proliferated at all levels of government.<sup>3</sup> Municipalities have limited resources and time to figure out how to make performance measurement work and thus, knowledge sharing in this arena is crucial.

Second, performance measurement programs serve many purposes for public managers besides the capacity to show accountability, efficiency, effectiveness, and transparency. Public managers can use performance information to: learn what is working and what is not, motivate staff and partners by setting targets and celebrating successes, budget by making decisions about where money should be spent, justify requests to legislative bodies, promote their organization by building transparency and trust with stakeholders, and improve by understanding what is really going on in their organization (Hatry, 2006; Hatry, Morley, Rossman, & Wholey, 2003; Behn, 2003; Wholey, 2002). Thus, public managers have an interest in successful implementation of such programs.

Third, public managers face challenges in the implementation of performance measurement programs and the

use of the information produced in such programs (Ammons, 1992; Hoontis & Kim, 2012; Julnes & Holzer, 2001). Existing research has provided many suggestions for dealing with these challenges (Wang, 2002; de Bruijn 2002; Behn, 2008; Newcomber & Caudle, 2011). However, knowing what needs to be done and how to make it happen are two different things (Wenger, 2004). Yet, little is known about knowledge sharing and the role of communities of practice in this context.

The idea for StatNet began with discussions between three municipalities about the need to share knowledge and best practices. In its original form, the group met twice in the spring and summer of 2008. Toward the end of the summer, the group agreed that the Edward J. Collins, Jr. Center for Public Management at the University of Massachusetts Boston would become its coordinator and administrative home. Since 2008, StatNet has held regular meetings three times a year in addition to special conferences and training events. Municipalities in any of the six states in the region are eligible to be members. StatNet decisions are driven by a steering committee which selects two co-chairs.

The primary activity for the group is the StatNet meetings held three times a year. A topic is selected in advance for each meeting. Topics typically focus on municipal departments or services, as well as cross-departmental functions. For instance, recent topics have included department of public works, human resources, dispatch services, constituent services, and inspectional services. Prior to the meeting, the StatNet coordinators at the Collins Center collect data on the meeting topic from participants via an electronic survey. As an example, the pre-meeting survey for dispatch services asked questions about the shift schedule for call takers, the number of full-time call takers, training call takers receive, and performance measures used for individuals and the call center as a whole. The StatNet coordinators at the Collins Center compile the pre-meeting data along with publically available data and present an analysis along with discussion questions during the StatNet meeting.

A typical StatNet meeting begins with a welcome and introductions and moves on to the core of the meeting – the



discussion of the pre-meeting survey data. This portion of the meeting is loosely structured around a presentation of the pre-meeting survey data. The presentation includes visual graphs and tables of data comparing and contrasting municipalities. During the presentation, facilitators from the Collins Center raise questions to the participants, but participants also volunteer commentary and engage in conversation with each other and the larger group. While an agenda is set for this portion of the meeting, coordinators encourage participants to drive the direction of the discussion. After discussion of the pre-meeting survey data, about a half an hour to an hour is devoted to lunch where attendees mingle in an unstructured way. This is an opportunity for participants to initiate connections with others and exchange contact information. Afternoon activities involve case studies presented by individual municipalities and small group exercises. For instance, one municipality presented a case study on using a “chase car” for emergency response and described the operational and financial benefits of this decision. The day concludes with announcements and a summary of next steps.

Attendees typically include 1-3 representatives from each municipality. The total number of participants varies with each meeting. Participants are usually those that are responsible for performance measurement in the municipality, representatives from the department/service that is the focus of the meeting, and appointed or elected officials. Individuals from state government, academic institutions, and consulting organizations attend as well. At its inception in 2008, StatNet had 20 participants at its first meeting. In 2011, StatNet meetings included, on average 43 participants. Participation remained steady in 2012 through 2014 at approximately 91 individuals.

## **DATA AND METHODS**

Because little is known about the role of communities of practice in facilitating knowledge sharing across organizations in public sector settings, this study takes an inductive approach using multiple methods of data collection and analysis. This

study draws primarily on participant observation supplemented by interviews with individuals involved in StatNet.

Participant observation is an approach that allows researchers to gain intimate knowledge of a social setting in a naturalistic way (Lofland & Lofland, 1995). Participant observers often use multiple methods to collect data. In this case, participant observation involved direct observation of StatNet meetings and special events, participation in informal conversations and group discussions during and after StatNet meetings, and a review of notes, documents, listserv postings, and post-meeting survey data. I attended nine regular StatNet meetings and two special StatNet conferences between October 2009 and June 2014. During and after each meeting and event, observations were recorded by hand and followed by memoing (Strauss & Corbin, 1998). In sum, data gathered through participant observation yielded 58 hours of observation and over 800 pages of pages of documents, notes, memos, post-meeting surveys, and listserv emails.

While participant observation is the primary source of data for this study, semi-structured interviews were also conducted with seven key informants. Informants were purposively selected because of their knowledge of municipal government, involvement in StatNet, and their ability to articulate understandings of their experiences (Lofland & Lofland, 1995). These interviews were used as a way to cross-check information and conclusions reached through participant observation and gain insider understandings of phenomena emerging from the participant observation data (Lofland & Lofland, 1995). After seven key informant interviews, theoretical saturation had been reached (Strauss & Corbin, 1998). At this point, no new information was emerging from the interviews and recruitment was suspended.

Informant interviews were part of a larger project examining the current state of data use in municipal government, challenges municipalities face in implementing performance measurement, and the sources of advice for performance measurement issues. Although interviews covered the current state of data use broadly this paper focuses specifically on StatNet. Informants were asked about how information is

gathered to inform their work, what groups they seek information from, who they contact most for advice, and which municipalities are most similar to them. Participants were specifically asked about their participation in StatNet in the context of these questions. Interviews lasted approximately one hour and were audio-recorded. Interviews were transcribed verbatim by a professional transcriptionist.

Notes, memos, StatNet documents, post-meeting surveys, listserv emails, and verbatim interview transcripts were then coded using open and axial coding (Strauss & Corbin, 1998). During the open coding process, labels were assigned to observations and interview text. As patterns began to emerge, labels were consolidated into first-order codes and then further into categories. The codes and categories focused on the structures, behaviors, and processes evident in the community of practice and their outcomes. Finally, connections among the categories were established using axial coding. The connections among these categories describe how the structures, behaviors, and processes discovered in the data lead to four roles which communities of practice play in enabling knowledge sharing among municipalities. The codes and categories identified here emerged from the data but were also guided by existing literature. In particular, Wenger (2000) and Wenger and Snyder (2000) led me to focus on informal channels of communication, “know how” information, peer comparisons, and the administrative aspects of the community of practice. Hatmaker et al. (2011) led me to focus on the dynamics within the community of practice such as structured and unstructured exchange, role modeling, and multiple modes of communication. Both paper and NVivo software were used to organize relevant segments of data into codes and categories.

For confirmability and credibility, I engaged in member checks by discussing observations and findings with two additional key informants (Lincoln & Guba, 1985). In addition, I gave the two informants a written copy of my analysis for feedback and comments (Lincoln & Guba, 1985). Feedback received from informants confirmed that my coding process and interpretation of the data was representative of the reality experienced by participants. Engaging in field work over an

extended period of time and using member checks enhances the validity of qualitative studies (Donahue & O'Leary, 2012; Johnson, 1997; Yin, 2010; Vasavada, 2012).

## **FINDINGS AND DISCUSSION**

Participant observation and interview data reveal four roles that communities of practice play in facilitating knowledge exchange across public sector organizations. Each role is discussed next along with a description of the structures, behaviors, and processes embedded in the community of practice. To summarize the findings, communities of practice provide access to channels for informal communication, build community through communication within and across groups, are a source for “know how” information from a diverse set of perspectives, and offer an opportunity for peer comparisons and development of best practices. The structures, behaviors, and processes embedded in the community of practice that facilitate knowledge sharing include structured and unstructured exchanges, anecdotal sharing and storytelling, modeling by experienced members, multi-modal connection opportunities, and confidentiality. The findings conclude by highlighting strengths and limitations in the design and administration of communities of practice emerging from the data.

### ***Access to Channels for Informal Communication***

As one interview participant said, “you tend to talk to communities where you know people.” Affiliation with StatNet allows members to connect by providing access to informal communication through structured and unstructured exchanges, anecdotal sharing and storytelling, modeling by experienced members, and multi-modal connection opportunities.

First, StatNet meetings allow participants to construct an unofficial list of who knows what. Weaved in to the structured discussion of data is time for municipalities to share anecdotes and discuss differences in the data among municipalities. For instance, one of the StatNet meetings focused on inspectional services. The pre-meeting survey data showed variation across municipalities in a number of inspectional services areas such as

total staffing, spending per capita, and enforcement actions completed per inspector. To explain these differences, individual municipalities took turns standing up and addressing the group pointing to factors such as the department particular functions were located in, contracting out for particular services, using a mix of civilian and sworn staff for inspections, cross-training inspectors, and using technology for field work. During these anecdotal explanations, participants share strategies, ask questions, and make notes. For newcomers, these interactions serve as a model for participating in the community of practice.

Participants then seek each other out prior to, during, and after the meeting to connect on issues that they have in common or find out more details on what a community is doing in response to a particular challenge. During a recent meeting, after the discussion of pre-meeting data, a participant was walking around the room speaking with specific individuals and fervently taking notes on her iPad during their conversations. It is also common to see participants exchange business cards, phone numbers, and e-mail addresses and make plans to connect in the weeks after the StatNet meeting. A facilitator from the Collins Center summed up the importance of access to information channels when he remarked, “the way I determine the success of a StatNet meeting is by how quickly people go up to each other to talk after the meeting.”

Second, StatNet provides access to a listserv where participants pose questions and pass information to the group. Participants have posed questions on issues such as illegal fire hydrant use, municipal composting, regionalizing veteran services, and prevention of street cuts. Responses are either sent to the entire group or to the individual who asked the question. In many cases, the listserv contact is the initial contact and follow-up may be done off-line via phone call between municipal governments. Examples of listserv communication from two municipalities include:

[We are] currently working to overhaul the way we measure performance in our Assessing Department. Would other communities be willing to share how they track performance in assessing? I'd be

happy to share a compilation of the replies with whomever is interested.

[Our city] is looking into running some sort of program to help reduce energy consumption in City buildings through changes in employee behavior....We were considering some education followed up by some sort of contest for energy savings pitting building against building to save the largest %, but are still brainstorming at this point. Have any of your cities or towns done any programs like this in the schools or municipal buildings, or can anyone offer any insights as to how to implement similar changes in behavior?

Participants also post job announcements, follow-up materials on something discussed during a StatNet meeting, grant funding opportunities, and information on performance measurement successes in their own municipality. Once established, the connections made through informal channels are not only used for performance measurement-related information exchange. The community of practice provides a way to connect with other municipalities in an informal way on a broad range of issues. In discussing the access to peers that StatNet provides, one interview participant remarked:

that's another great way, in terms of electronic media, there's a StatNet email distribution and very often I'll post a question, hey, has anyone gone out to bid for this, do they have an rfp that I can take a look at, use as a resource, or if you have a question, how did somebody budget for this particular item and which department is it in, do you centralize [or] decentralize. Call up one of my peers as part of the group, that's another great resource.

Finally, building on the communications that begin at meetings and continue on the listserv, municipalities find ways to connect outside of meetings through direct phone calls and in-person meetings. As participants gain an understanding of who

knows what and develop connections with others, visits between municipalities take place. For example, those municipalities who are advanced in their performance measurement program or who have had particular successes host guided visits for other municipalities. One participant commented, "I think we're among the top to you know brainstorm with...I would say that's really a common thing, I host [visits with individuals from other municipalities] maybe 10 times a year."

Here, the community of practice provides the initial access to several channels of informal communication that take place over a variety of mediums. The availability of this bundle of channels for communication provides municipalities with a comfortable space where participants can ask questions and learn from the experiences of their peers. One interview participant summed this up with the following comment.

The way that I keep connected with what other people are doing in the field is through StatNet. That's a really useful tool. I mean we have our steering committee meetings which are frequent and then we have the quarterly meetings with the whole group. And that's a real opportunity to just explore, experiment, share best practices. That and the on-going communication with the StatNet group on whatever it is we are examining. Through the listserv.

***Creation of Community Through Communication within and across Groups***

While access to informal channels of communication are a benefit of communities of practice, at StatNet the benefit is unique in that participants access channels of informal communication across organizations, but also across and within occupational communities. This cross-group communication builds community. Typically, 1-3 members from each participating community attend StatNet meetings. These attendees include the individual responsible for performance measurement (e.g. CitiStat Director, various administrators in the city or town, etc.), individuals from the department or service that is the topic of the day (e.g., Director of Department of

Public Works, Fleet Manager, etc.), and appointed or elected officials (e.g., members of the legislative body, mayors, chief of staff, etc.). Thus, access to and exchange of knowledge and information crosses organizations, but also occupational communities.

Evidence of cross-occupational community exchange is seen during both structured and unstructured exchanges, but particularly in the informal interactions during meetings. For example, during lunch at a recent meeting where municipal Fire Departments were the focus, men and women in suits (e.g., elected officials, administrators, performance directors) were mingling with men and women in uniform (e.g., fire chiefs, firefighters) from across municipalities. As performance measurement finds various levels of resistance and support across occupational communities, the cross-occupational community exchange builds opportunities for cooperation. At a recent meeting, an elected official made the following statement, “By creating measures ourselves, we can do this before the public creates those measures for us.” Note, the official’s comment and use of “we” indicate a cooperative approach to thinking about performance measurement in municipal fire departments. One meeting participant observed, “the general spirit of cooperation and sharing was very encouraging.” The atmosphere of cooperation and sense of community across occupational groups and organizations is further exemplified by an interview participant in the statement below.

one of the great things about this [public sector] industry, I often tell people is, as opposed to [the private sector industry] where I used to work, is we’re all collaborators. We’re not trying to outdo and get jobs that other people are not. So we can work together, where you so worried about keeping trade secrets in the private sector right, you’re very wary of one another.

***“Know How” Information from Diverse Perspectives***

While StatNet provides both “know how” and “know that” information, access to the “know how” information is a central feature. This is the kind of information that is gained



through the structured and unstructured exchanges, anecdotes and storytelling, and modeling by experienced members. For instance, one of the biggest challenges in performance measurement in municipal government is often lack of interest from departments. Proposed solutions focus on involving department heads in the performance measurement process. Knowing that this is a solution, however, is different than knowing how to implement such a solution. Various municipalities have developed and can articulate their strategies for dealing with this challenge. In a recent StatNet meeting, one municipality gave a short case study presentation that outlined the step-by-step process used to engage department heads. Here, the individual described not only the philosophy of the approach, but also how it was enacted through the creation of a formal element in their performance measurement program. Another municipal manager focused on the language he uses to describe to department heads the logic of using performance measurement. He suggested using phrases such as, "Let me help you use data to show why you need 6 more drivers." Two participants summarized the value of "know how" information by saying, "describing city/town scenarios and storytelling supported with visual aids – as always – is the best way to impart lessons learned" and "vicarious learning is valuable for everyone, but mostly for those who are at the early stages of implementing a performance measurement program."

The consequences of access to "know how" information through the community of practice are two-fold. First, in this setting, "know how" information provides diverse perspectives. Participating municipalities vary in size, median income, racial/ethnic characteristics, political environments, and governance structures among other things. As the different cities and towns share experiences and ideas, participants cite the diversity of perspectives as one of the advantages of participation. When asked about the biggest benefits from meetings, participants responded with, "the mixture of various disciplines and experience together in one room. An honest and good exchange among participants," "there are many ways to approach performance measurement," "seeing reps from other departments, some who are similar in size, others who are very

different – who are all dealing with the same issues,” “the dispatch discussion was good, especially having [a large city’s] to [a small town’s] input,” and “hearing about issues and practices taking place in each city from the perspectives of both performance management employees and police/fire/ems/dispatch employees.” Here participants celebrate the differences among participating municipalities by acknowledging that there is no best way. Rather, one can take from the variety of perspectives and apply what is most appropriate in their own municipality.

Second, these exchanges allow municipalities to build camaraderie as they empathize with each other’s problems, show pride in their work as they relay a hard fought solution to one of their most vexing concerns, and cultivate optimism for solving their most challenging problems. For one participant, “the ability to discuss topics that we are all grappling with due to restricted budgets and reduced staff” was one of the greatest benefits to attending StatNet. Camaraderie is also noticed in the common language understandings among participants and shared humor as they relate similar challenges.

#### ***Peer Comparisons and Best Practices***

StatNet encourages municipalities to make informal comparisons among each other. At StatNet, the comparisons begin with the structured presentation of the pre-meeting survey data. The presentation of pre-meeting survey data always includes discussion questions that specifically draw out comparative discussion. For instance, some discussion questions include, “who uses supervisors to ‘bird dog’ snow plowing and trash removal? How many employees per linear mile?” and “why is there such enormous variation in [street] sweeping? Are there differences in cleanliness?” Together with questions drawing out comparative discussions, is the repeated acknowledgement that the pre-meeting survey data are not perfect, but rather are to be used as a starting point for discussion. Facilitators also emphasize that the data is not to be publicized or shared beyond the immediate municipalities and departments attending the StatNet meeting. The data analysis discussed at the meeting is only in print form and all materials

contain the words “DRAFT – DATA NOT VERIFIED.” This reinforces the informal nature of comparisons and emphasizes comparisons are to be used for learning.

During this discussion, members from municipalities stand up and explain to the group why they have done so well or so poorly in a particular area. Because these comparisons are informal in nature and are accompanied by the opportunity to explain differences, municipalities repeatedly cite comparisons as one of the highlights of the meetings. When asked what the biggest takeaways of the StatNet meetings are, participants’ comments include, “some of the takeaways I found important were the comparison rankings. In general, I find it interesting to compare how we are doing against our peers”, “the information sharing, especially the comparison slides”, “the top takeaways are always the statistics, best practices, experiences of other communities”, “attaining comparative information”, and “it’s a breath of fresh air to see how my municipality compares to others.”

The structured discussion together with the sharing of anecdotes, informal comparisons, and confidentiality allow participants to get ideas and brainstorm with each other. As one participant put it, it is a chance to “steal from each other.” Others echoed this idea with comments such as, “we are not shy, we will steal any good idea you have” and “some of the best ideas are stolen.” In the course of these comparisons, best practices “bubble up.” As discussions come to a close, someone routinely asks, “how many think this is a best practice?”

### ***Design and Administration of CoPs***

Issues of design and administration can moderate the extent to which structured and unstructured exchange, anecdotes and storytelling, modeling by experienced members, multiple modes of connection, and confidentiality lead to the roles communities of practice play in facilitating knowledge exchange. The data suggest several characteristics of StatNet that promote value for public managers seeking information on dealing with challenges they face.

First, StatNet is administered by a respected outside party, not a municipality and the group holds regular predictable

meetings. The Collins Center coordinates the activities of the group by planning and announcing the meetings, conducting the pre- and post-meeting surveys, analyzing data, and facilitating discussion. As public managers already have time constraints, charging an outside party with administration of the group ensures timeliness and consistency in the group's activities and makes StatNet meetings time well-spent.

The attention to logistics and planning is noted by participants. When asked what she liked about the meetings, one participant said, "I like the discussion of data that was pulled together for the meeting. I think it encourages participation and gets people to think about the data." Other participants remarked, "the time management was impressive, and appreciated" and "everything was on time from the start of the meeting to breaks to the end of the meeting."

StatNet attempts to mimic, at least to some degree, CitiStat meetings (see Behn 2006 for a discussion of CitiStat characteristics). The data-focused discussion is one aspect of this, but time management and regularity is another. Rather than being ad hoc, participants can count on the next meeting occurring and know well ahead of time the topical focus of the meeting. For public managers incorporating predictable activities into their work is easier than making room for gatherings that happen on an ad-hoc basis.

Second, StatNet maintains a small, but sufficient, funding stream. Funding allows for minimal expenses, such as lunch for the StatNet meetings, a part-time administrator, a part-time analyst, and the production of materials and handouts necessary for the meetings.

Third, members drive the StatNet agenda. While an outside group administers StatNet, the topics and format of the meetings are driven by the steering committee and the interests of participant communities. This is crucial as communities of practice exist so long as there is interest from members (Wenger & Snyder, 2000). If members and participants in StatNet drive the agenda, this helps maintain interest in the group. This also allows the group to evolve as needed. For instance, to accommodate an increasingly large number of participants from

an ever more broad geographic area, the group has relocated its meetings to a more geographically convenient and larger space.

StatNet is not without limitations, however. Aspects of time are the most commonly critiqued features of StatNet. The collection, analysis, and presentation of pre-meeting survey data that drives the discussions is highlighted as a valuable part of the meeting by participants. Yet, the time that participants must spend prior to the meeting collecting data can be frustrating to already busy public managers. One participant highlights the duplication of their efforts by saying, “because we are already in the CityStat [*sic*] program it felt duplicative to gather some of the same data in a different format.” Others commented on time allotments during the meetings. The quotes from meeting participants below suggest that the time necessary to create useful data and the time devoted to discussion must be balanced in a way that does not discourage participation.

Too much material to try and fit into that time frame. Would have liked more discussion on the case studies and the particulars of starting a CitiStat or performance management program. The amount of time devoted to other performance management initiatives and sick time was unnecessary.

Even though the intent is high level overview, some additional time for detailed explanation would be good. I would have made the general session briefer and given each of the breakouts and extra 15 minutes.

Physical space configuration is also important for the benefits of a community of practice to be realized. Acoustics, seating arrangements, and access to amenities such as parking and restrooms make a difference. If participants spend a day at StatNet, the benefits of StatNet decrease if they are not at least reasonably comfortable. As the community began to grow in size, these concerns were reflected in the participant comments below.

I suspect the set-up is deadly for people NOT sitting around the tables. When we have such a large number of people, can we find a better arrangement? Organize tables, screen, etc. more efficiently -- so that everyone hears and sees it all.

The presentation by [the CitiStat group in a municipality] was great, just hard to follow because of the room set up, difficult to hear what she was saying.

In sum, the structures, behaviors, and processes embedded in communities of practice lead to several roles in facilitating knowledge sharing among public managers. For communities of practice to be useful, thoughtful design and administration is also important. Taken together, these findings suggest a model identifying how communities of practice facilitate knowledge exchange among public managers.

### **MODELING CoPS AND KNOWLEDGE EXCHANGE**

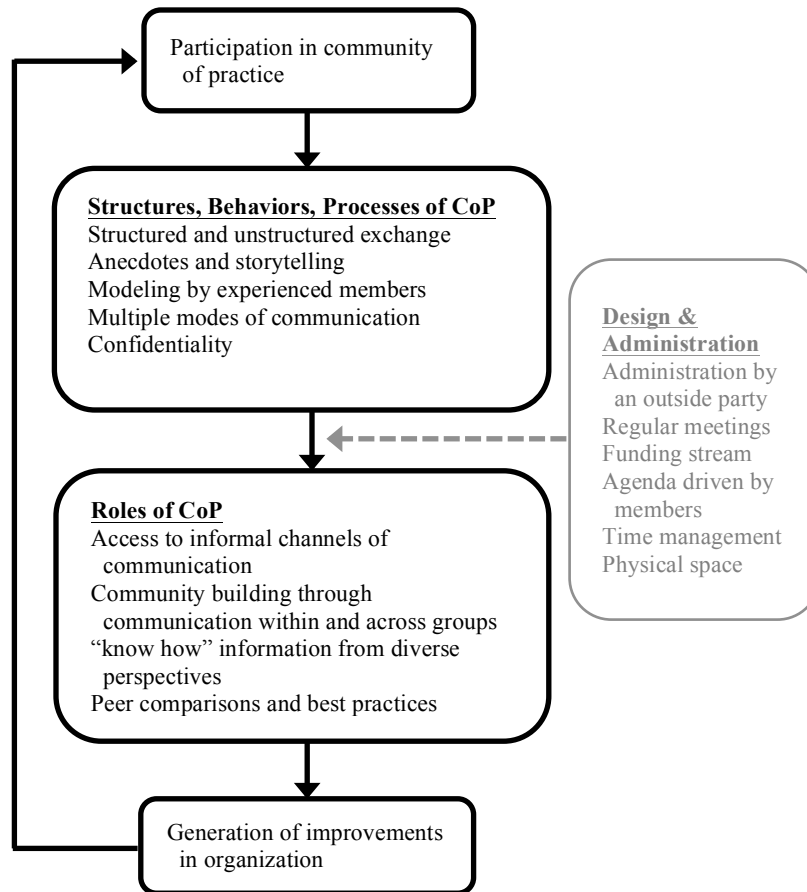
Figure 1 presents a model describing how communities of practice facilitate knowledge exchange among public managers. This model is inductively developed from the analysis of participant observation data. The model begins with participation in a community of practice. Engagement in the community of practice involves participants in behaviors, structures, and processes that lead to access to informal channels of communication, community building through communication within and across groups, “know how” information from a variety of perspectives, and peer comparisons and best practices. The extent to which these behaviors, structures, and processes lead to the facilitation of knowledge exchange is moderated by the administration and design of the community of practice. Simply setting up the community is not enough to ensure knowledge exchange. Attention to time, space, and other administrative issues influences knowledge sharing in CoPs. Finally, the model suggests that the roles of the community of practice lead participants to generate improvements in their own

organization which are then brought back to the community of practice, creating a cycle of learning and knowledge exchange for participants.

While this model generates insights for theory and practice, there are limitations inherent in the data that lead to further questions about knowledge sharing processes across public organizations. First, the data collected here does not address what happens in organizations after participation in a community of practice – the feedback represented by the final arrow in the model. In other words, the data does not consider the extent to which organizations have initiated improvements as a result of participation in StatNet or if these improvements are brought back to the StatNet. Longitudinal data collection with a sample of StatNet participants might be one way to understand the long-term implications for the organizations participating and StatNet itself. Second, while the connections forged among participants in StatNet are seen as one of the most valuable aspects of this community of practice, the data collected here do not allow exploration of the structural characteristics of these social connections. The findings of this study suggest that informal connections are established and that these connections reach within and across groups. However, an empirical definition of such a network cannot be gleaned from these data. Additional questions are raised. For instance, are there some actors that are more central than others? What types of actors are considered most central? How does centrality in such a network influence behavior in the community of practice? Identifying the social networks established through this CoP and how the structure influences work is the next step. Finally, the data do not focus on what factors influence a municipality's decision to participate in StatNet. The model suggests that the institutionalized structures, behaviors, and processes of StatNet lead participants to access to informal channels of communication, community building through communication within and across groups, "know how" information from diverse perspectives, and peer comparisons and best practices. However, participants do not join StatNet as blank slates. Are certain kinds of municipalities more likely to engage in a

community of practice than others? If so, are these municipalities also more likely to engage in learning as well?

**Figure 1: How Communities of Practice Facilitate Knowledge Sharing Among Public Managers**



## IMPLICATIONS AND CONCLUSION

This study builds on existing research on knowledge sharing and communities of practice by focusing on a community in a public sector setting, with members across



jurisdictions and professions, and members who are not necessarily interdependent, but rather simply want to know what their peers know. While existing work points to the knowledge sharing benefits of CoPs (Brown & Duguid, 1991; 2001; Hatmaker et al., 2011), this work provides only limited description of *how* the benefits are realized. As called for by Bechky (2006), this study reveals detailed accounts of the structures, behaviors, and processes embedded in a community of practice that spans organizational and professional boundaries. These findings have implications for both theory and practice in public management.

First, the findings of this study suggest that trust can be built when knowledge sharing agreements are not explicit (Molm, Takahashi, and Peterson, 2000). Existing literature on knowledge sharing underscores a tension. Organizations and the individuals within them recognize the value of knowledge sharing (Ipe, 2003). Public managers want to know what others know and want to share what they know. Yet, there are perceived costs in sharing knowledge (Dawes, 1996; Fountain, 2001). Still, StatNet has grown in popularity among municipalities. One explanation is StatNet is a low risk way to test the waters of knowledge exchange. The organizational structures, processes, and behaviors that have been institutionalized in StatNet allow individuals to ease into knowledge sharing relationships. Individuals and organizations can passively observe discussions, have one-on-one informal conversations, and see what others share. There are no explicit agreements on what will be shared by whom and trust is the result (Molm et al., 2000). For public managers, establishing a community of practice where agreements on knowledge exchange are not explicit could facilitate low-risk knowledge exchange in multiple settings (e.g. e-government, public education).

Second, the social capital generated through communities of practice has multiple dimensions and benefits. Communities of practice research acknowledges the role that social relationships play in the ability to learn and employ knowledge (Brown & Duguid, 1991; Wenger & Snyder, 2000), but also the social and cognitive boundaries that relationships

can create (Ferlie et al., 2005). The findings of this study build on this work by further refining the types of relationships developed within communities of practice. At StatNet, both heterogeneous and homogeneous occupational communities connect from within and across municipalities. In other words, both bonding and bridging social capital are built through the structures, behaviors, and processes embedded in communities of practice (Putnam, 2000). Individuals who do the same work in different jurisdictions connect (e.g. human resources managers from several municipalities). These connections invoke shared language, camaraderie and support when facing similar challenges, exchange of “know how” information, and ultimately, trust. In addition, individuals who hold different positions also connect (e.g. administrators and firefighters). These connections invoke cooperation, understanding of multiple viewpoints, willingness to work together, and again, trust. Evidence of both bridging and bonding social capital in communities of practice underscores the role of social relationships in learning. Furthermore, this study provides “thick description” of the actual practices that facilitate boundary spanning (Oborn & Dawson, 2010). If communities of practice encourage cross-occupational community building, starting a community of practice for stakeholders with different interests might be a practical way for public managers to move forward even on more contentious issues.

In sum, this study examined knowledge sharing across municipal governments through communities of practice. Data analysis reveals the structures, behaviors, and processes embedded in communities of practice that offer public managers a gateway to informal communication, build community through communication within and across groups, provide access to “know how” information from a diverse set of perspectives, and encourage peer comparisons. This study represents nascent work on communities of practice in public sector settings, identifies practical implications for public management, and raises additional questions for future research.

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### NOTES

1. Structure here refers to the “blueprint for activities” and how “activities are to be fitted together” among internal and external players in the organization (Meyer & Rowan, 1977, p. 342; Bolman & Deal, 1997). This view considers formal elements of organization such as hierarchies, rules, positions, and tasks as structures.
2. Local here refers to an occupational community which may be a subunit of an organization or organizations. This distinction is in the spirit that Tonneis (1971) emphasized local community or *gemeinschaft*.
3. At the federal level, prominent programs include the Government Performance and Results Act of 1993, the No Child Left Behind Act of 2001, and the Program Assessment Rating Tool of 2002. At the state level, Washington has been recognized for implementing the Government Management Accountability and Performance program (State of Washington, 2012). At the local level, programs such as CompStat of the New York City Police Department and CitiStat in Baltimore, Maryland have received attention (Behn, 2006; Smith & Bratton, 2001).

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