

# An Analysis of Multi-disciplinary & Inter-agency Collaboration Process

## Case Study of a Japanese Community Care Access Center

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**Keywords:** Community Care Access Center, Multi-disciplinary and Inter-agency Collaboration, Elderly Care, KJ Method.

**Abstract:** This study examines the process of collaboration between multi-disciplinary agencies at a Community Care Access Center (CCAC) for elderly care. Using the KJ method, also known as an “affinity diagram”, in two group meetings (before and after CCAC establishment) with practitioners and administrators from 6 agencies in the city of Kakegawa, Japan, 521 comments by agencies (214 from a meeting in 2010 and 307 from a meeting in 2012) were coded into 36 categories. In comparing the comments from the two meetings, the portion of negative comments regarding organization management decreased, while comments on the shared problems of the CCAC, such as difficult cases, user support, effectiveness, and information sharing increased. A multiple correspondence analysis indicated that the 6 agencies shared a greater awareness of issues after the establishment of the CCAC, but the problems pointed out by the agency with nurses providing in-home medical care differed from those of the other agencies. From this, it has become apparent that group meetings and comments analysis before and after launching a CCAC could illustrate the process of multi-disciplinary and inter-agency collaboration.

## 1 INTRODUCTION

The aging society is a society in which elderly people account for a large proportion of the population. This is a trend we are seeing around the world, but in Japan it is happening more rapidly and in significantly larger numbers than elsewhere. By 2025, Japan will have 36 million people aged 65 and older. This means that the elderly will account for 30% of the total population. We need an effective health care system for this large cohort of aging population within the demographic onus structure.

In order to cope with this tendency, the Japanese government changed the system for elderly care from institutional health care to community care. This community care provides the elderly with in-home nursing and medical care through a community general support center (CGSC) system launched in 2008 (Ministry of Health, Labour and Welfare, 2011). However, Japan's CGSCs do not

provide the kind of coordinated nursing and medical care that is provided by such agencies as the Community Care Access Centers (CCACs) of Ontario, Canada (OACCAC, 2009). A CCAC requires multi-disciplinary and inter-agency collaboration among medical, nursing-care, and welfare practitioners, but for practitioners in different fields to work together effectively, trust is necessary, and this relationship of trust needs to be established at an early stage (Bromiley and Cummings, 1995); (McKnight et al., 1998). There is little research, however, that is based on the analysis of real-world examples of individuals in different professions and organizations cooperating with each other (Okamoto, 2001); (Salmon, 2004); (Paletz, 2013).

This study elucidates the process of multi-disciplinary and inter-agency collaboration by making a case study of Fukushima, a Japanese-style CCAC health care system in Kakegawa, Shizuoka prefecture, and analyzing the comments shared in

group meetings of the participants held just before and after (2010, 2012) the launching of the CCAC.

## 2 LITERATURE REVIEW

### 2.1 Inter-agency Collaboration

In the UK, there has been an awareness since the 1970s of the need for multi-disciplinary and inter-agency collaboration in child and adolescent mental health services (DoH, 1997), and many studies have been made of the topic (Okamoto, 2001); (Salmon, 2004); (Robinson and Cottrell, 2005); (Salmon and Faris, 2006). These studies focus on how practitioners from several different agencies cooperate in the area of public health for youth, but many of their conclusions can be equally applied to the topic of general community care for the elderly. Okamoto, 2001, for example, examines how individuals with different professions in different organizations work together to address the issue of mental health among gangs of young people who are at high risk of becoming criminals.

The elements of successful multi-disciplinary and inter-agency collaboration are communication and cooperation (Okamoto, 2001); (Salmon, 2004); (Robinson and Cottrell, 2005); (Salmon and Faris, 2006). McKnight et al., 1998, emphasizes the role of communication in forging initial relationships of trust among inter-agency and cross-functional team members, and makes the following propositions: in initial relationships, highly trusting intentions are likely to be robust when (1) the parties interact face to face, frequently and in positive ways, or (2) the trusted party has a widely known good reputation. Still, these studies do not examine the methodology for achieving good communication among prospective collaborators nor explain how their mutual reputations are forged.

### 2.2 Common Frame of Reference (COFOR)

In a multi-disciplinary and inter-agency team, each member perceives the goals and problems differently depending on their knowledge and interests. This is precisely why it is important that all participants are aware of their respective perceptions, convictions and motivations (Marmolin and Sundblad, 1991). Individuals with different fields of specialty, however, will each interpret what they see differently even when they are looking at the same thing. It is necessary, therefore, that they share a

common frame of reference for interpreting and integrating the information they communicate among themselves (Marmolin and Sundblad, 1991); (Hoc and Carlier, 2002). This common frame of reference (COFOR) is a mental structure that plays a functional role in cooperation. COFOR is only accessible to the observer by means of external entities, such as input and output (communication between agencies), or external representations in common media (e.g., a duty roster) (Hoc and Carlier, 2002).

### 2.3 KJ Method

A common frame of reference is an informal mental structure, albeit with a societal aspect, that participants need to build together. At the same time, this kind of informal structure can be difficult to recognize and is hard to make transparent. One solution to the problem of achieving COFOR transparency within the context of a multi-disciplinary and inter-agency CCAC is the application of the KJ method in group meetings and the creation of diagrams and charts showing the output from those meetings.

Devised by a Japanese anthropologist named Kawakita Jiro, the KJ method is a generalized brain storming technique—what he called an “idea-generating” methodology—to gather qualitative data (Scupin, 1997). The KJ method has been widely adopted in business circles, not so much for generating new ideas, but for its effectiveness in consensus making (Takeda et al., 1993). The KJ method is a theory generating methodology like the grounded theory methodology of Strauss and Corbin, 1990. In group discussions using the KJ method, individuals write their opinions as short phrases on slips of sticky notes or labels. There are four essential steps in the process: 1) label making, 2) label grouping, 3) chart-making, and 4) written or verbal explanation (Scupin, 1997). Everyone in the group participates in the step 1 process of label-making. After that, trained facilitators carry out steps 2 through 4, intuitively sorting the labels into groups and creating a diagram linking the groups with lines (A chart). This diagram, the so-called A chart, will help to show the connections and open the way for new interpretations, and this is the distinguishing feature of the KJ method (Kawakita et al., 2003).

Participants in a CCAC who are trying to achieve multi-disciplinary collaboration could apply the KJ method to create a COFOR for solving the issues that confront them. A comparison of the diagrams created before and after the launching of the CCAC will show how their perceptions of the issues have

changed and should help in clarifying the collaboration process. In the KJ method, a trained facilitator creates an A chart giving an overview of the issues, grouping the problems on the basis of experience and intuition. This, of course, means that the diagram will be slanted by the facilitator's personal perceptions and assumptions. For the purposes of this study, the labels generated in the group meetings were sorted according to the similarity of the issues they addressed. We did not attempt to examine the effectiveness of the group meetings in achieving COFOR, but instead used the labels as output of the group meetings to define the process of CCAC collaboration.

### 3 CASE STUDY METHODOLOGY

#### 3.1 Background

Multi-disciplinary and inter-agency collaboration is essential for community-based care of the elderly. Take, for example, the case of an old man who is released from a hospital after suffering a mild stroke. He is unable to walk and shows dementia-like symptoms, but everyone in the family works, and during the day the old man is left at home alone. Even in a large city like Tokyo, there is no facility where an individual like this can be immediately admitted, and in any case the cost is much too high for the family. If this man is to get in-home care so that he will not become totally bedridden, he needs the coordinated support of the following: A hospital community coordinator who can decide what kind of support and guidance the man will need after being discharged; a senior nursing care manager who can make arrangements for the home renovations that will be needed for in-home care; the public health care nurses and visiting nurses assigned to the area where the old man lives

Japanese local administrations are often criticized for being overly compartmentalized, but for effective community-based care of the elderly, this kind of tendency needs to be overcome. On the premise that multi-disciplinary and inter-agency case-level collaboration is best achieved when all parties concerned are housed in the same building, the city of Kakegawa launched a new Japanese-style CCAC called Fukushima in 2011 with plans to build a total of five such facilities throughout the city by 2015. Each Fukushima is staffed by personnel from six different agencies including city hall, the local social welfare council, the community general support center (CGSC), a visiting nurses' station, the

Kakegawa senior care manager liaison association, and the local city hospital, who cooperate in providing social welfare services.

In 2010, prior to the launching of the new facility, the authors were asked by Kakegawa city to interview the staff of all six agencies. All of the staff interviewed expressed misgivings of the organizational management of Fukushima, including their own agency management: they worried about how they could work effectively with their counterparts in such different organizations. It was evident that collaboration would be difficult even with a new organizational structure and facility. It was therefore decided to hold group meetings in which the KJ method would be applied. This paper examines the results of two group meetings sharing the same protocol that were held before (2010) and after (2012) the Fukushima launching.

#### 3.2 Method

Our research question was, "What is the process of multi-disciplinary and inter-agency collaboration between administration staff and practitioners within a highly differentiated and complex system of care for the elderly?" Our approach to finding an answer was to carry out a quantitative analysis of the KJ method label output from the two group meetings. The labels bore comments made by the staff of the six agencies about each other.

In our analysis, we looked first to see what kinds of comments increased or decreased in relation to the awareness of problems. This was done by comparing the number of comments made at the two meetings before and after the launching CCAC, and recording the difference. Our next objective was to see if there was any change in the affinity of awareness of problems among the meeting participants in the two meetings, and this was done through multiple correspondence analysis of the comments made at the two meetings.

The two meetings were attended each time by 29 practitioners and administrative staff from the six agencies comprising Fukushima. The first meeting participants were: 8 from city hall; 10 from the CGSC; 3 from the local social welfare council; 3 from the visiting nurses station; 2 from the local hospital, and 3 care managers. For the second meeting: 10 from city hall; 8 from the CGSC; 4 from the local social welfare council; 2 from the visiting nurses station; 4 from the local hospital, and 1 care manager. At each meeting, the 29 participants were divided into 6 groups and given sticky labels on which to write their comments; blue labels for

comments about their own agency and red labels for comments about the other agencies. On the red labels, participants were asked to write their own agency name and the name of the agency they were commenting about. The meetings were chaired by the lead author of this paper. The red and blue labels were pasted onto a white board so that everyone could see what kind of comments were being made and which agencies were making the comments. The first meeting produced 220 comments and the second, 314 for a total of 534 comments. After excluding 13 illegible comments, 521 comments were then coded into 36 categories according to the issue or problem they referred to. This task was carried out individually by three researchers, and where the results did not correspond, a final decision was made through discussion among the three. Finally, the comments were sorted in a cross-tabulation table for multiple correspondence analysis.

## 4 FINDINGS

### 4.1 Changes in Comment Proportions

For a better grasp of the trends, a comparison of the change in number of comments between the first and second meetings was made in categories that had 10 or more comments in total from the two meetings. Figure 1 shows the change in proportion between the comments from the first and second meetings, starting with those showing the greatest increase in the second meeting at the top of the chart. The comments that showed the greatest increase in the second meeting were those related to specific shared issues of the CCAC. These comments were classified into the categories of “difficult cases”, “user support”, “regional collaboration”, “in-home care”, and “patients”. There was also a notable increase in the number of comments related to work procedures, in the categories of “effectiveness”, “information sharing”, and “complicated procedures”.

There was little change in the number of comments made at the two meetings in the categories of “inconsistency”, “lack of doctors”, “insufficient human resources”, those related to problems of organization structure and procedures. Likewise, little change was seen in the number of comments related to inter-agency and intra-agency collaboration. To be more precise, there was an increase in the actual number of comments, but little change in the proportionate share of these comments within the designated categories. A decrease was

evident in the number of comments related to the organization as such. These were comments on “agency management”, “compartmentalization”, “developing human resources” and “insufficient publicity”.

In the second meeting only, participants came up with a total of 76 positive comments which included the following: Comments on cooperation, from the social welfare council to city hall: appreciation for taking over when council staffs were absent; from the CGSC to the care managers liaison association: appreciation for reporting back on follow-up.

These results indicate that while the six agencies had many critical comments related to the organization management at the time of the launching of Fukushima, after the facility was set up their comments focused more on such factors as the quality of general community care services and specific shared issues of concern, rather than on criticisms of organizational structure or attitudes.

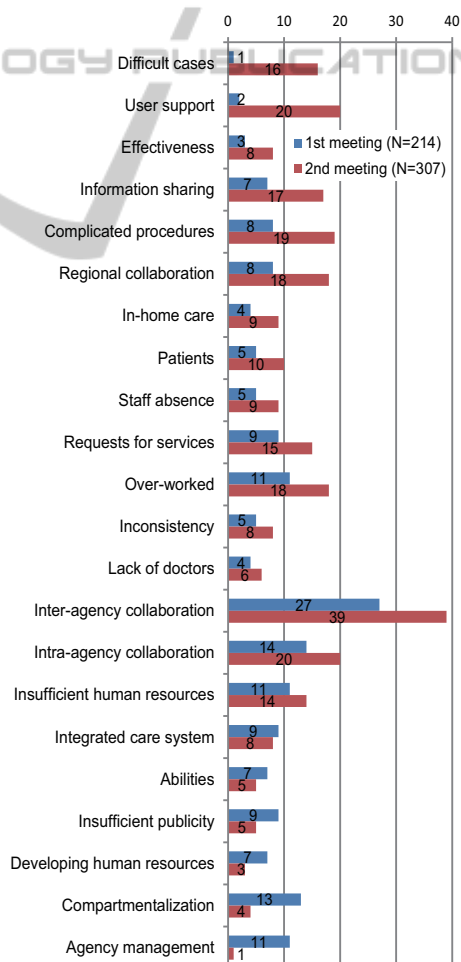


Figure 1: Proportion of comments from the two group meetings.

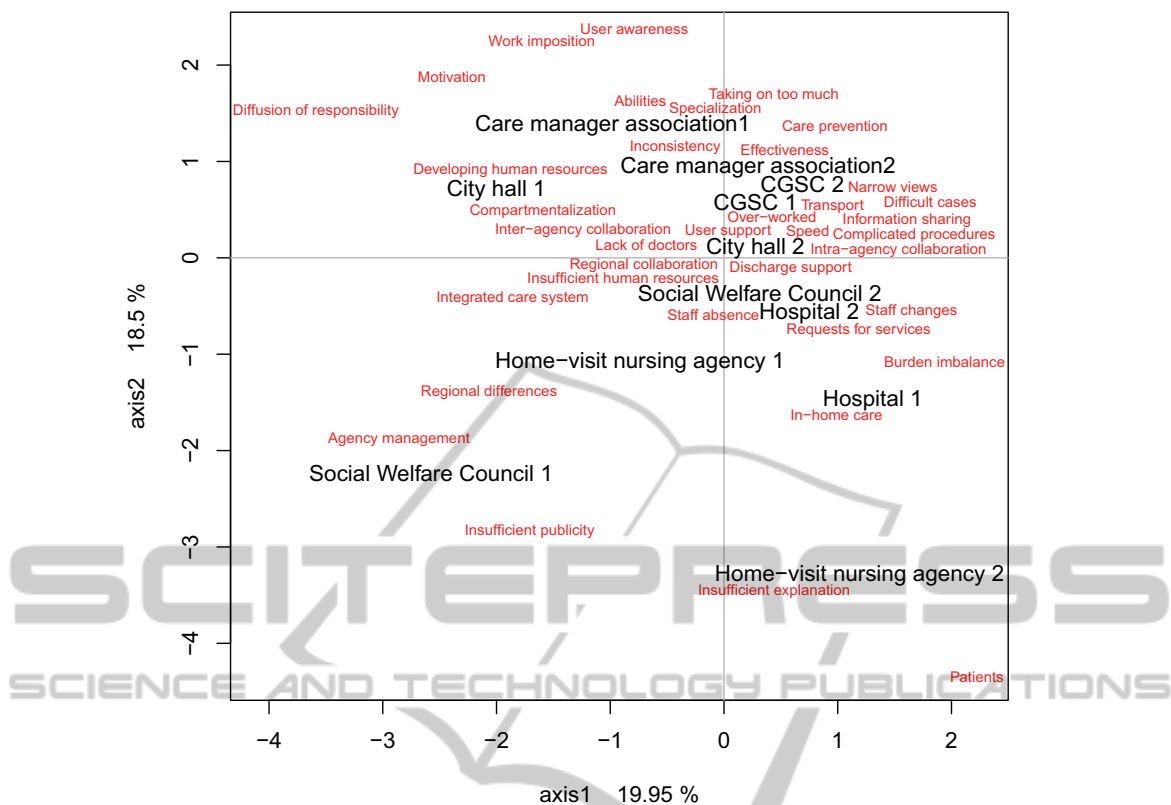


Figure 2: Multiple correspondence analysis of comments from the two group meetings; Phrases in black indicate agencies. The numbers 1 and 2 indicate the first or second meeting, and the phrases in red indicate categories.

#### 4.2 Changes in Awareness Affinity among the Six Agencies

Figure 2 shows the result of multiple correspondence analysis of the comments from the first and second group meetings. This analysis shows that by the second meeting all but the visiting nurses station had come to share a similar awareness of the problems. In the first group meeting, the six agencies shared similar concerns about agency management, “information sharing” and “intra-agency communication”, but by the second meeting their shared concerns had expanded to encompass specific problems of health care, such as “regional collaboration”, “lack of doctors” and “discharge support”.

The meeting participants from the visiting nurses station only raised issues within their own organization and made absolutely no comments about the other agencies. The issues they raised included such topics as—“With only 3 fulltime staff, there is considerable after-hours burden”, “it is difficult to establish an effective visiting program plan”, “there are citizens and care managers who are unaware of the visiting nursing program” and

“financial difficulties in management”—all issues that are difficult for the visiting nurses agency to solve on its own. The fact that the visiting nurses agency is the only private business participating in Fukushima is probably a contributing factor to the problems the visiting nurses appear to have in communicating with the other agencies, but it should also be noted that the issues raised by nurses tend to be introverted. The services provided by the visiting nurses are crucial to Fukushima and there is a critical need to address the issue of how the other agencies may provide better support to the visiting nurses station.

#### 5 DISCUSSION

The analysis of the comments made at the two group meetings held before and after the launching of Fukushima show that there was a change from criticism of organizational management to a shared focus on specific issues confronting Fukushima as a CCAC. It is evident that the six agencies had come closer to a common awareness of the issues before

them. Clearly, the six agencies had overcome their mutual fear to forge a stronger awareness of their shared role as a public provider of general community care services. At the same time, however, it was evident that the private visiting nurses station did not share this general awareness.

Only two or three individuals from the visiting nurses station attended the group meetings and they can hardly be said to be representative of their organization. If general community care is to evolve from a mere concept to a truly multi-disciplinary and inter-agency undertaking to provide specific community services, and if it is to include private enterprise, strategies will be needed to tackle the issues that have arisen since the launching of Fukushima, issues which are represented by the keywords of “regional collaboration”, “lack of doctors” and “discharge support”. The next step is to decide what kind of communication among the six agencies is needed to achieve this.

In this study, we also proposed a method to clarify the COFOR in problem awareness among the Fukushima members. It was found that a degree of objectivity could be achieved by applying multiple correspondence analysis to the awareness affinity diagram created by the meeting facilitators based on their subjective observations in previous studies. This led us to the conclusion that it may be possible to objectively externalize the latent potential for a multi-disciplinary and inter-agency collaboration COFOR, using the group meetings and the analysis of the comments. However, we were not able to analyze the impact of the group meetings or the affinity diagram on the awareness of the individual participants in the meetings. We have therefore been unable to examine the factors that may have contributed to the change in the Fukushima members’ awareness. Still, there was discussion among all participants, after the group meetings using the KJ method labels, on what changes had or had not taken place in the year since the launching of Fukushima. We hope later to apply the theoretical COFOR framework of Hoc, 2001, to this discussion to analyze its aspects of cooperative activities.

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