Leadership in Health Services
The influence of leadership behavior, organizational commitment, organizational support, subjective career success on organizational readiness for change in healthcare organizations

Mahmoud Al-Hussami and Sawsan Hammad
School of Nursing, The University of Jordan, Amman, Jordan, and
Firas Alsoleihat
Department of Conservative Dentistry, School of Dentistry, The University of Jordan, Amman, Jordan

Abstract

Purpose – The purpose of this study is to investigate the influence of leadership behavior, organizational commitment, organizational support and subjective career success on organizational readiness for change in the healthcare organizations. The authors want to determine if nurses who had higher levels of organizational commitment, organizational support and subjective career success relationships were more open and prepared for change.

Design/methodology/approach – Cross-sectional, descriptive-correlational survey design was conducted using self-reported questionnaires to collect data from registered nurses.

Findings – The subjective career success was the strongest predictors (β = 0.36, p < 0.001) followed by leadership behavior (β = –0.19, p = 0.03) and participants’ age (β = –0.13, p = 0.049).

Research limitations/implications – This study highlights the influence of leadership behavior, organizational commitment, organizational support and subjective career success on the organizational readiness for change in healthcare organizations. Therefore, this study forms baseline data for future local and national studies. Moreover, it will strengthen the research findings if future research includes a qualitative approach that explores other healthcare professionals regarding readiness for organizational change.

Practical implications – This study provides information to policymakers and healthcare leaders who seek to improve management and leadership skills and respond to organizational change efforts.

Social implications – It is important to know the extent to which healthcare professionals, especially nurses, understand how the influence of organizational support and organizational commitment on organizational readiness for change, as well as why specific leadership behavior and subjective career success, is important in implementing the change.

This research was supported by the Faculty of Scientific Research and Deanship at the University of Jordan. The authors also thank the nurses who filled the survey questionnaires.
Originality/value – This study examined the nurses’ readiness for change in hospitals. Organizational readiness for change could occur in situations where nurses can exert extra efforts at work because of leaders’ behaviors and the relationship between nurses and the institution.

Keywords Organizational commitment, Organizational support, Readiness for change, Leadership behavior, Subjective career success

Paper type Research paper

Introduction
Healthcare system in literature is considered to be one of the most complicated interrelated components (Glouberman and Mintzberg, 2001; Reay et al., 2016), especially managing healthcare activities and planning for change. Researchers such as Andersson (2015) and Kannampalli et al. (2011) had pointed out the complexity of healthcare and its effect on the quality of patients’ care and the readiness of employees for organizational change.

Healthcare system in Jordan is changing rapidly; nursing care in particular is facing forces such as increasing demands, equity in the face of decreasing resources and demand for more public accountability. Ongoing change has been essential in nursing because of rapid growth, new nursing ventures, exciting opportunities and novel leadership and management approaches (Eliopoulos, 2013). Whatever is the reason, continuous change is required for nursing care success (Khachian et al., 2013). However, to accomplish the change, an organization must be ready for change (Collins and Hewer, 2014). Researchers such as Johansson et al. (2014) and Sterns et al. (2010) stated that subordinates must be prepared and ready for change. Bernerth (2004, p. 36) mentioned in his study; “researchers and practitioners have both found employee readiness to be a critical factor in successful change efforts”. Rowden (2001) emphasized that for a healthcare institution to be moved toward a learning organization, practitioners and the institution must be in constant readiness. For directors of nursing to help nurses prepare for change, they should create readiness for change and overcoming resistance (Cummings and Worley, 2005). Hence, the purpose of this research study is to investigate the influence of leadership behavior, organizational commitment, organizational support and subjective career success on organizational readiness for change in healthcare organizations.

Bernerth (2004, p. 40) mentioned that “Readiness is more than understanding the change, readiness is more than believing in the change, readiness is a collection of thoughts and intentions toward the specific change effort”. Weiner et al. (2008) in their review of literature pointed out that organization readiness for change is a critical precursor to the successful implementation of complex changes in healthcare settings. Susanto (2008, pp. 50-62) stated that:

[...] employees’ readiness for change is involved with once beliefs, attitudes, and intentions regarding the extent to which changes are needed and their perception of individual and organizational capacity to successfully make those changes. Readiness is a state of mind about the need.

Therefore, nurses are ready for change when they understand, believe and intend to change because of the perceived needs.

The readiness for change among nurses is a key aspect of success in healthcare organizations (Rowden, 2001; Armenakis et al., 1993), and it is recognized as a critical factor in the success of organizational change efforts. Indeed, they should be prepared cognitively and emotionally for change (Jones et al., 2005). However, readiness itself has not been well-defined (Findlay and Verhoef, 2004), which has led to considerable vagueness around its
theoretical role in organizational change efforts, as well as the identification of multiple variables that might influence nurses readiness. According to the transtheoretical model of change, nurses proceed through stages of change, beginning with not considering change at all through the final stage of maintenance (Velicer et al., 1998; Armenakis and Bedeian, 1999). The theoretical framework around nurses' readiness for change arises from a combination of personal and organizational characteristics (George and Jones, 2007). Empirical studies have supported this framework (Cunningham et al., 2002; Leiter and Harvie, 1998). On a theoretical level, an examination of the relationships between leadership behavior, organizational commitment, organizational support and subjective career success may help provide a better understanding of how and why organizational change efforts succeed, which suggests that organizational factors significantly impact individual behavior in organizations.

Researchers stated in their work that organizational change was affected by leadership behavior as well as work related behavior, such as organizational commitment, organizational support, and subjective career success. Organizational commitment is employees' attitudes and feelings toward their employing organization (Bishop et al., 2005, p. 157). According to Mathews and Shepherd (2002, p. 369):

[... ] committed employees have a strong belief in and acceptance of the organization's goals and values, show a willingness to exert considerable effort on behalf of the organization and, have a strong desire to maintain membership with the organization.

Yeh (2014) clarified that organizational commitment has three types, namely, affective (identification), continuance (involvement) and normative (loyalty). Affective is focused on the emotional feeling and the attachment of the employees toward their organization. The continuance construct is the second part that encompasses the realization of the cost of leaving the organization which is extremely high. Moreover, it consists of the willingness of a nurse's effort for the hospital beyond expectation even if it takes extra work. Normative commitment to the organization is determined by feelings of obligation and duty of nurses to their organizations and their intentions to leave. This type of commitment encourages nurses to be optimistic toward readiness for change.

A study directly connecting organizational commitment, leadership behavior, organizational support, subjective career success and readiness for organizational change has not yet been reported in nursing or in healthcare literature. Nordin (2011) indicated that work-related behaviors were positively and fairly linked with organizational readiness for change. Moreover, Devos et al. (2002) stated that the failure of organizational change is often because of the lack of commitment and inspiration of the staff. Hence, organizational change advertisers improve the success of change efforts through generating readiness for change. However, some studies have found indirect correlations between these constructs. Eby et al. (2000) found that employees involved in change activities are expected to have more higher readiness levels. Weber and Weber (2001) explained that employees with high efforts of involvement in their organizations were more ready for organizational change. Researchers such as Nohe et al. (2013), Al-Hussami et al. (2011), Goulet and Singh (2002), and Yoon and Thye (2002) have found relationships between organizational commitment and work-related constructs with a possible correlation with readiness to change. Eby et al. (2000) reported that perceived organizational support was associated to readiness for change. Weber and Weber’s (2001) discovered that workplace improvement is correlated to organizational readiness for change. Cunningham et al. (2002, p. 387) revealed a weak relationship between readiness and social support. The authors mentioned, “These findings suggest that supportive colleagues may play a more important role in employee efforts to
cope with the stress of organizational change. Mitchell et al. (2012) stated that organizational support might increase organizational readiness for change.

Transformational nurse leaders are often described as effective; indeed, they facilitate positive change by inspiring, motivating nurses and building trust within the group. It has been documented in literature that transformational nurse managers were proven to enhance nurses’ retention, effective job performance and readiness for change (Al-Hussami et al., 2014; O’Neil et al., 2008). Transformational leaders are classified as the full range of leadership, as it is an active process by which nurses inspire, engage and motivate their employees to perform beyond expectation and achieve what they think is not achievable in the interest of the organization (O’Neil, 2013). Schwartz et al. (2011) described the integration of transformational leadership behaviors in nursing leadership as a strategy to achieve excellence in the nursing care. Schwartz et al. explained how transformational leadership behaviors were adopted at all levels of nursing leadership in their organizations and asserted that the nurse leaders’ ability to effect change and inspire the nurses to higher achievement is related to their leadership style. The literature supported the positive effect of transformational leadership on readiness for change including willingness of the nurses to exert extra efforts at work because of leaders’ behaviors (Andrews et al., 2012; Casida and Parker, 2011; Cummings et al., 2010).

Career success in general is the positive work-related outcome and achievement one builds up as a result of work experiences (Zacher, 2014), and it can be conceptualized as objective successes (e.g. pay and hierarchical position) and subjective career success, which is the employees’ evaluation of their career (Chudzikowski, 2012). Subjective career success in particular can be divided into self-referent success and as other referent success. Self-referent subjective career success is considered a career satisfaction (Bozionelos, 2004), whereas the other referent success compares the employees’ career to the national standards. Few research studies have been conducted on the topic of subjective career success. Therefore, little is known about the readiness of change gained as a result of subjective career success.

The relationships between readiness for change and demographic variables have been documented (Guerrero and Kim, 2013; Steinke et al., 2013). Hanpachern (1997) found that readiness for change was correlated to length of stay but not associated to age, gender, education or marital status. Cunningham et al. (2002) stated that there is no relationship between readiness for change, gender and marital status. Weber and Weber (2001) found no relationship between readiness for change, experience and level of education.

The purpose of conducting this survey, regarding the influence of leadership behavior, organizational commitment, organizational support, subjective career success on organizational readiness for change in healthcare organizations, is to provide information to policymakers and healthcare leaders who seek to improve management and leadership skills and respond to organizational change efforts. It is important to know the extent to which healthcare professionals, especially nurses, understand how the influence of organizational support and organizational commitment on organizational readiness for change, as well as why specific leadership behavior and subjective career success, is important in implementing the change.

The purpose of this study is to investigate the influence of leadership behavior, organizational commitment, organizational support and subjective career success on organizational readiness for change in acute healthcare settings. The authors conclude if nurses who had higher levels of organizational commitment, organizational support and subjective career success relationships were more prepared and ready for change. If the author felt that significant findings were obtained, suggestions for types of change
interventions would surface. To carry out this purpose, the following research questions will be explored:

*RQ1.* What is the relationship between the constructs (leadership behavior, organizational commitment, organizational support, subjective career success) and the nurses’ perceived readiness for organizational change?

*RQ2.* What are the relationships between various demographics (gender, employee age, marital status, length of time with employer, level of education and yearly household income) and each of the study variables (readiness for change, leadership behavior, organizational commitment, perceived organizational support and subjective career success relationships)?

*RQ3.* What is the strongest predictor of the nurses’ perceived readiness for organizational change of the leadership behavior, organizational commitment, perceived organizational support or subjective career success?

*RQ4.* To assess whether the association of readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success is similar in men and women.

*RQ5.* To determine the differences among nurses regarding their readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success in relation to practice sector.

**Study design**
A cross-sectional, descriptive-correlational survey design was conducted using self-reported questionnaires to collect data from registered nurses (RNs). This design method used to gather data from a large number of participants, and the use of questionnaire eliminated the effect of a researcher on participants that allowed them more freedom to answer the questions honestly and openly (Polit and Beck, 2014).

**Setting**
The healthcare system in Jordan is divided into public and private institutions. The public sector is divided into the ministry of health, royal medical services and public university hospitals. Ministry of health hospitals operate 30 hospitals which include 3,953 nurses. The royal medical hospitals have 2,619 nurses. The public university hospitals are the Jordan University Hospitals which have 534 nurses and King Abdallah Hospital that has 411 nurses. The private sector has 10,008 nurses. The eligibility criteria for hospitals selection was hospitals having medical, surgical, emergency rooms, critical care units and have specialized department of continuing education. In addition, only hospitals located in Amman are included in the study.

**Sample size**
Based on power analysis, G* power program version 3.0 (Faul et al., 2009) with minimal alpha significance level 0.05, power 0.80 and medium effect size, the minimum sample size is 120 participants. Although this number is needed, more participants were included to produce significant and reliable findings and to compensate for uncompleted questionnaires. However, taking into consideration the response rate and attrition rate (20 per cent), a total of 300 nurses were invited to participate in this study.
Population
Target populations were the RNs who work in healthcare sectors in Amman. The inclusion criteria included the following: working as a full-time nurse, with a minimum of one year experience in the working area and possessing an RN license as a minimal level of certification. Exclusion criteria included: nursing students and part-timers.

Sample and sampling
To obtain the subjects for this study, a multi-stage sampling technique was used. The authors selected hospitals from the two healthcare sectors located in Amman, using simple random technique including two public hospitals and two private hospitals. However, a convenience sample was applied for nurses. Data were collected from nurses whom were voluntarily willingly participated and fit into the inclusion criteria.

Ethical consideration
The research project was peer reviewed by the Scientific Research Committee and Institutional Review Board of the Faculty of Nursing at the University of Jordan. Ethical approval was obtained from the School of Nursing, the University of Jordan. In addition, approvals were gained from the ethical committees at each hospital involved before the data collection begins to gain access to registered nurses. Ethical aspects of the study were undertaken according to the principles of research ethics. Participation in the study was voluntary. Each participant was invited to participate in the study face to face and the purpose of the study was explained. The participant’s rights to withdraw from the study at any time were emphasized. It is anticipated that there are no perceived personal or professional risks associated with participation in this survey. The benefit from the study was raising awareness of organizational change. Remuneration for research inconveniences was offered. The personal identity was kept confidential and anonymous.

Data collection
The data collection occurred using a self-reported questionnaire that consisted of two parts:

1. a background questionnaire; and
2. nurses’ organizational readiness for change.

Instrument was pre-tested by a group of the RNs in one hospital to confirm the content validity and the clarity of the language of the instrument in English. The researcher provides explanations for the aims and the procedure of the study for the directors of nursing and for each department head at the participating hospitals. After taking the permission from them, the researcher invited the participants to a lecture room in each department to distribute questionnaires and asked them to fill out the questionnaires and return them to the researcher when finished.

Instrumentation measurements of variables
The nurses’ organizational readiness for change instrument was used in this study. It is a 95-item survey designed by the researcher. All statements were tested carefully against the purpose of measuring the construct intended. No items were chosen that obviously are similar to other items covering the construct. All statements were closed, with a seven-point Likert scale except for leadership behavior. A Likert scale was chosen because respondents can explicitly understand it and the scale discriminates well between respondents’ perceptions, their degree of agreement or disagreement. The format of the
Likert scale is straightforward and flexible. A note should be made to the fact that some of the measures are negatively worded, whereas others are positively worded. This was done to reduce the likelihood of agreement bias.

The perceived readiness for change served as the dependent variable, whereas leadership behavior, organizational commitment, organizational support and subjective career success served as independent variables, and the intervening demographic variables included gender, age, marital status, educational level, yearly household income and length of time with an organization. The author adapted five existing scales for this research project, namely, readiness for change, leadership behavior, organizational support, organization commitment and subjective career success in the workplace. In addition, the author asked six demographic questions. Hanpachern et al.’s (1998) original 10-item readiness for change scale was used to measure the organizational readiness for change, with slight alterations, based in part on McNabb and Sepic (1995). Participants were asked to circle one of the seven numbers on a Likert scale (1 = very unlikely; 7 = very likely). Hanpachern et al.’s (1998) pilot tested and found the Cronbach’s $\alpha$ of the scale was measured to be 0.82 which indicates good internal consistency.

The independent variable, organizational commitment measured by organizational commitment questionnaire” (Mowday et al., 1982) with an estimated Cronbach’s $\alpha$ 0.70 (Yoon and Thye, 2002). This is a 23-item instrument developed by Mowday et al. which measures the organizational commitment of employees by tapping the three concepts, namely, affective, continuance and normative. In total 16 items from Eisenberger et al.’s (1986) “survey of perceived organizational support” scale were used to measure the perceived organizational support. The Cronbach’s $\alpha$ for these items was found to be reliable at 0.75 (Yoon and Thye, 2002).

To measure employees’ perceptions of their leadership behavior, nurses were asked to respond to 21 descriptive elements of leadership behavior developed by Bass and Avolio (1992). The multifactor leadership questionnaire (MLQ) form 6S (Bass and Avolio, 1992) included 21 items to measure the four factors of transformational leadership, two factors of transactional leadership and one factor of laissez fair. Respondents were requested to answer the MLQ by rating how frequently their current immediate supervisor had displayed the behaviors described by using a five-point scale (1 = not at all; 2 = once in a while; 3 = sometimes; 4 = fairly often; 5 = frequently, if not always). Two scales were used to measure the subjective career. Both measures are on a seven-point Likert scale (1 = completely disagree to 7 = completely agree). The first assessed intrinsic job success (Nabi, 2001). This seven-item measure of subjective success focused on the perceptions of workrole and interpersonal success. The second scale focused on broader career-related aspects of subjective success Greenhaus et al., 1990) and found with high alpha reliability in previous studies (Judge et al., 1995). The internal consistency for the current study was 0.899 for organizational commitment, 0.878 for organizational support, 0.943 for leadership behavior, 0.918 for organizational success and 0.821 for organizational readiness for change.

**Data management plan**

The researcher was responsible for data collection process, data entry, data processing and data analysis. The data from the survey was analyzed using the statistical package for the social sciences (for Windows version 21). Frequencies and percentages computed to determine sample characteristics. Data were analyzed using descriptive and inferential statistical procedures. Pearson’s correlation was used to examine overall relationships between the leadership behavior, organizational commitment, organizational support, subjective career success and organizational readiness for change. Furthermore, multiple
regression and other relevant tests were used to examine effectiveness of demographics and personal characteristics within participant’s readiness for organizational change.

**Sample characteristics**
A total of 300 nurses were invited to participate in this study; 222 nurses participated with a response rate of 74 per cent. The majority of them were men (56 per cent, \( n = 124 \)), who worked at educational healthcare sectors (63 per cent, \( n = 140 \)) and had a bachelor degree in nursing (93 per cent, \( n = 207 \)) (Table I). Organizational commitment, perceived organizational support, leadership behavior, subjective career success and perceived readiness for change scales were transformed to scales out of 10 to facilitate comparisons among the study variables. As displayed in Table I, the mean scores of these variables are comparable, similar to each other.

**Analysis of relationships among study variables**
Pearson’s product–moment correlation was carried out to examine the relationship between the study variables. Statistically significant low negative relationship was found between participants’ age and perceived organizational support, \( [r (222) = -0.142, p = 0.035] \). Moderate and positive significant relationships were found among: organizational commitment and perceived organizational support \( [r (222) = 0.604, p < 0.01] \), organizational commitment and leadership behavior \( [r (222) = 0.505, p < 0.01] \), perceived organizational support and leadership behavior \( [r (222) = 0.580, p < 0.01] \), perceived organizational support and subjective career success \( [r (222) = 0.527, p < 0.01] \) and leadership behavior and subjective career success \( [r (222) = 0.589, p < 0.01] \). Finally, low positive relationships were found between organizational commitment and

<table>
<thead>
<tr>
<th>Variable</th>
<th>( n ) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>124 (56)</td>
</tr>
<tr>
<td>female</td>
<td>98 (44)</td>
</tr>
<tr>
<td><strong>Healthcare sectors</strong></td>
<td></td>
</tr>
<tr>
<td>Educational</td>
<td>32 (14.4)</td>
</tr>
<tr>
<td>Governmental</td>
<td>140 (63.1)</td>
</tr>
<tr>
<td>Private</td>
<td>50 (22.5)</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>84 (38)</td>
</tr>
<tr>
<td>Married</td>
<td>138 (62)</td>
</tr>
<tr>
<td><strong>Educational level</strong></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td>207 (93.2)</td>
</tr>
<tr>
<td>Master</td>
<td>11 (5)</td>
</tr>
<tr>
<td>Diploma</td>
<td>4 (1.8)</td>
</tr>
<tr>
<td><strong>Variables</strong></td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Participants age</td>
<td>29 (5.5)</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>97.2 (15.5)</td>
</tr>
<tr>
<td>Perceived organizational support</td>
<td>63.3 (11.6)</td>
</tr>
<tr>
<td>Leadership behavior</td>
<td>68.4 (18.6)</td>
</tr>
<tr>
<td>Subjective career success</td>
<td>76.6 (18.6)</td>
</tr>
<tr>
<td>Perceived readiness for change</td>
<td>43.9 (6.7)</td>
</tr>
</tbody>
</table>

**Table I.** Socio-demographic characteristics, \( N = 222 \)
subjective career success \( r (222) = 0.498, p < 0.01 \), organizational commitment and perceived readiness for change \( r (222) = 0.134, p = 0.04 \) and subjective career success and perceived readiness for change \( r (222) = 0.25, p < 0.01 \) (Table II).

**Predictors of perceived readiness for change**

Standard multiple linear regression analysis was applied to examine the predictors of perceived readiness for change. To test the individual contribution of individual predictors, the \( t \)-ratio for the individual regression slope was examined and revealed that out of five variables that were entered, only four predictor variables were found significant predictors of perceived readiness for change. The four predictor variables were subjective career success, leadership behavior, organizational commitment and participants’ age with their respective \( t \) and \( p \) values \( t = 4.268, p = 0.000, t = 2.224, p = 0.027, t = 1.997, p = 0.047, t = 1.982 \) and \( p = 0.046 \). However, the organizational support was excluded because it did not contribute significantly to the variance of organizational readiness for change. The overall regression, including all five predictors, was statistically significant \( [F (2, 218) = 5.6, p < 0.001, R^2 = 0.12] \). Moreover, the total amount of variance of the criterion variable that was predictable from the three predictors was 12 per cent. The subjective career success was the strongest predictors \( (\beta = 0.36, p < 0.001) \) followed by leadership behavior \( (\beta = -0.19, p = 0.03) \) and participants’ age \( (\beta = -0.13, p = 0.049) \) (Table III). This indicated that organizational readiness for change could occur in situation where nurses can exert extra efforts at work because of leaders’ behaviors and the relationship between nurses and institution. A further analysis was carried out on the three components of commitment, namely, affective, continuance and normative to examine which of these components could be identified as the significant predictors of organizational readiness of change.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Organizational commitment</td>
<td>-0.020</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived organizational support</td>
<td>-0.142*</td>
<td>0.604**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Leadership behavior</td>
<td>-0.056</td>
<td>0.505**</td>
<td>0.580**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Subjective career success</td>
<td>-0.073</td>
<td>0.498**</td>
<td>0.527**</td>
<td>0.589**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6. Perceived readiness for change</td>
<td>-0.128</td>
<td>0.134*</td>
<td>0.043</td>
<td>0.014</td>
<td>0.25**</td>
<td>1</td>
</tr>
</tbody>
</table>

**Notes:** * \( p \leq 0.05; ** \( p \leq 0.01 \)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>UnSE ( \beta )</th>
<th>t value</th>
<th>( p ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>42.6</td>
<td>3.8</td>
<td></td>
<td>11.154</td>
<td>0.000</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>0.058</td>
<td>0.029</td>
<td>0.134</td>
<td>1.997</td>
<td>0.047</td>
</tr>
<tr>
<td>Subjective career success</td>
<td>0.129</td>
<td>0.030</td>
<td>0.360</td>
<td>4.268</td>
<td>0.000</td>
</tr>
<tr>
<td>Participants age</td>
<td>-0.155</td>
<td>0.078</td>
<td>-0.129</td>
<td>-1.982</td>
<td>0.046</td>
</tr>
<tr>
<td>Organizational support</td>
<td>-0.076</td>
<td>0.052</td>
<td>-0.131</td>
<td>-1.455</td>
<td>0.147</td>
</tr>
<tr>
<td>Leadership behavior</td>
<td>-0.069</td>
<td>0.031</td>
<td>-0.194</td>
<td>-2.224</td>
<td>0.027</td>
</tr>
</tbody>
</table>

**Notes:** Predictors perceived readiness for change final model produced at \( \alpha = 0.05, F = 5.6, p < 0.001, R^2 = 0.12 \)
Based on the enter method, as shown in Table IV, the finding reveals that only two predictors’ variables were found to be significant. The predictor variables were affective commitment where the t-value was 2.227, \( p = 0.027 \) and continuance commitment where the t-value was 1.98 and \( p = 0.04 \). However, normative commitment with \( t = 1.36 \) and \( p = 0.175 \) was excluded because it did not contribute significantly to the variance of nurses organizational readiness for change. In addition, based on the adjusted \( R^2 \) value, the overall regression model was unsuccessful in explaining only 3 per cent of the adjusted variance in organizational readiness for change.

The difference among male and female nurses in regard to readiness for change

Independent t-test was used to examine the difference between male and female nurses concerning readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success. The normality of the five variables was tested. The homogeneity of variances of these variables for the two groups (males and females) was examined. The researchers carried out the study through Levene’s test for equality of variances. The results of Levene’s tests were not significant for the readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success (\( p = 0.665; p = 0.564; p = 0.811; p = 0.957; p = 0.186 \), respectively) (\( \alpha = 0.05 \) with a CI of 95 per cent). Thus, the results of the independent t-test showed no statistically significant differences in scoring of readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success among male and female nurses (Table V).

### Table IV.

Multiple regression analysis of organizational readiness for change with the three components of organizational commitment

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized coefficient ( \beta )</th>
<th>Standardized coefficient ( \beta )</th>
<th>( t )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>40.887</td>
<td></td>
<td>19.570</td>
<td>0.000</td>
</tr>
<tr>
<td>Affective</td>
<td>0.175</td>
<td>0.226</td>
<td>2.227</td>
<td>0.027</td>
</tr>
<tr>
<td>Continuance</td>
<td>0.131</td>
<td>0.139</td>
<td>1.980</td>
<td>0.040</td>
</tr>
<tr>
<td>Normative</td>
<td>0.140</td>
<td>0.138</td>
<td>1.360</td>
<td>0.175</td>
</tr>
</tbody>
</table>

Notes: \( F \)-Statistic = 3.029; significant \( \leq 0.05 \); adjusted \( R^2 = 0.028; R^2 = 0.041 \)

### Table V.

The difference between male and female nurses in respect to readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male Mean (SD)</th>
<th>Female Mean (SD)</th>
<th>df</th>
<th>( t )-value</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readiness for change</td>
<td>43.64 (7.02)</td>
<td>44.14 (6.10)</td>
<td>222</td>
<td>0.555</td>
<td>0.580</td>
</tr>
<tr>
<td>Leadership behavior</td>
<td>68.94 (18.94)</td>
<td>67.87 (18.14)</td>
<td>220</td>
<td>0.424</td>
<td>0.672</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>96.51 (15.32)</td>
<td>98.11 (15.37)</td>
<td>219</td>
<td>0.770</td>
<td>0.442</td>
</tr>
<tr>
<td>Organizational support</td>
<td>62.79 (11.53)</td>
<td>63.93 (11.53)</td>
<td>220</td>
<td>0.736</td>
<td>0.462</td>
</tr>
<tr>
<td>Subjective career success</td>
<td>76.72 (17.92)</td>
<td>76.53 (19.31)</td>
<td>220</td>
<td>0.078</td>
<td>0.938</td>
</tr>
</tbody>
</table>

Notes: **Significant at \( p \leq 0.01 \); *significant at \( p \leq 0.05 \)
Comparison of nurses’ practice sector in relation to readiness for change

Comparison of nurses’ practice sector in relation to readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success was presented in Table V. A one-way analysis of variance (ANOVA) was conducted to evaluate the relationship between nurses practice area and the dependent variables. The dependent variables were readiness for change, leadership behavior, organizational commitment, organizational support and subjective career success scores. The independent variable was nurses practice sector: governmental, private and university hospitals. A \( p \) value of less than 0.05 was required for significance. The one-way ANOVA was significant for readiness for change \( F(2, 219) = 3.30, p = 0.038 \), leadership behavior \( F(2, 219) = 6.85, p = 0.001 \), organizational commitment \( F(2, 218) = 10.75, p = 0.000 \), organizational support \( F(2, 218) = 13.48, p = 0.000 \) and subjective career success \( F(2, 219) = 7.36, p = 0.000 \). Because the overall tests were significant, post hoc tests using the Scheffe test were conducted to compare the means of the three groups with the different dependent variables. The results indicated that nurses in the private sector were more ready for change than nurses in the governmental and educational sectors. In addition, nurses in the governmental sector scored higher in leadership behavior and subjective career success than nurses in private and educational sectors. However, nurses in the educational sector scored higher in organizational support than nurses in governmental and private sectors. However, nurses working in the governmental sector were much committed to their organizations than other sectors (Table VI).

Discussion

Globally speaking, the readiness for change literature agrees with the current study findings that leadership behavior, organizational commitment and subjective career influence success change (Barr, 2002; Holt et al., 2014). In Jordan, the situation was not clear because there is a lack of published studies regarding nurses’ perceived readiness of change. The current study intends to investigate whether the leadership behavior, organizational commitment, organizational support and subjective career success influence the organizational readiness for change in healthcare organizations. The authors want to determine if nurses who had higher levels of organizational commitment, organizational support and subjective career success relationships were more open and prepared for change. If the authors felt that supportive findings were discovered, implications for types of change interventions would surface. Moreover, this study has explored nurses’ knowledge regarding readiness of change.

<table>
<thead>
<tr>
<th>Organizational variables</th>
<th>Governmental ((n = 140))</th>
<th>Private ((n = 49))</th>
<th>Educational ((n = 32))</th>
<th>(df)</th>
<th>(F)</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readiness for change</td>
<td>43.69 (6.88)</td>
<td>45.62 (6.19)</td>
<td>41.87 (5.54)</td>
<td>2</td>
<td>3.30</td>
<td>0.038*</td>
</tr>
<tr>
<td>Leadership behavior</td>
<td>71.70 (17.48)</td>
<td>60.94 (19.93)</td>
<td>66.09 (17.66)</td>
<td>2</td>
<td>6.85</td>
<td>0.001**</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>100.44 (15.45)</td>
<td>89.30 (13.80)</td>
<td>95.25 (12.38)</td>
<td>2</td>
<td>10.75</td>
<td>0.000***</td>
</tr>
<tr>
<td>Organizational support</td>
<td>66.17 (10.39)</td>
<td>57.56 (11.58)</td>
<td>95.68 (12.08)</td>
<td>2</td>
<td>13.48</td>
<td>0.000**</td>
</tr>
<tr>
<td>Subjective career</td>
<td>79.97 (19.08)</td>
<td>73.00 (15.02)</td>
<td>67.71 (17.27)</td>
<td>2</td>
<td>7.36</td>
<td>0.000***</td>
</tr>
</tbody>
</table>

Notes: 
**Significant at \( p \leq 0.01 \); *significant at \( p \leq 0.05 \)
The study results confirmed that the work-related behavior had a moderate influence on the readiness for change, and thus, it is apparent that there is a need to recognize those variables to make the changes in efforts effective. It was also noted that readiness for change played role in explaining four variables by identifying the increased variances: subjective career success, leadership behavior, participants' age and organizational commitment accounted for 10 per cent of the variance in readiness for change, while subjective career success alone explained 6 per cent of the variance in the readiness for change. The overall regression model was successful in explaining approximately 12 per cent of the adjusted variance in organizational readiness for change. The findings statistically showed that subjective career success had contributed the strongest unique contribution to explain organizational readiness for change.

The result of this study was consistent with the research done by Nordin (2011) that showed the leadership behavior contributed to organization readiness for change. The current result further supported previous findings on significance of nurses' commitment for successful organizational change intervention (Iverson, 1996). Nonetheless, based on the multiple regression analysis, the results showed that the three components of organizational commitment accounted for low to moderate amount of the variance of organizational readiness for change. However, affective commitment showed the strongest contribution to explain organizational readiness for change. This could indicate the nurses' relationship with their work places. Therefore, the study findings confirmed the evidence from the nursing literature that affective hospital commitment was among the important factors of successful organizational change (Iverson, 1996; Nordin, 2011). According to Iverson, the more the nurse feels attached to the hospital, the higher is her commitment and the greater is her willingness to accept organizational change.

Previous research has highlighted the influence of leadership behavior on the readiness for change. According to the leadership theory (Northouse, 2015), transformational leadership facilitates positive change by inspiring, motivating nurses and building trust within the group. Also, the findings of this research had linked the leadership behavior to the readiness for change which is similar to what Nohe et al. (2013) found in their study. However, Nordin (2011) suggested otherwise, the results of his study showed that leadership behavior was not a statistically significant predictor of organizational readiness for change. On the other hand, the result of this study indicated that leadership behavior was a strong predictor of readiness for change. Even though the beta value of the leadership behavior was comparatively smaller than the other variables, it still has significant bearing on organizational readiness for change.

This study has some limitations that restrict the interpretation of its findings. First, measures of all concepts were gathered at the same time but through different questionnaires. Thus, common method of discrepancy exists. Owing to the cross-sectional nature of this study, causal inference would be difficult and may provide differing results if another time frame had been chosen. Second, although our study was conducted in the healthcare system, its results are not represented of all healthcare professionals; therefore, caution must be exercised in generalizing our findings. Third, regarding the study tool, the questionnaire was designed in English. It was based on research studies written in English. This may be a limitation to understanding by the nurses. However, nurses working in hospitals had studied in English and it is the second language in the country.

The results can be considered to support evidence-based practice nationally and internationally. Therefore, the study implications for practice can be validly implemented in
the region. Nursing administration should consider aspects of organizational change when planning for in-service or continuing educational programs, to enable nurses attain and maintain their competence in readiness for organizational change and to enhance their knowledge and attitudes. Moreover, the study findings emphasized the importance of the study constructs and their influence on readiness for change. For the successful acceptance of the constructive change, nurse leaders should pay attention to promoting readiness for change in their healthcare institutions.

Also, this study is an addition to the current body of knowledge. In addition, this study highlights the influence of leadership behavior, organizational commitment, organizational support and subjective career success on the organizational readiness for change in healthcare organizations. Therefore, it forms baseline data for future local and national studies. Moreover, it will strengthen the research findings if future research includes a qualitative approach that explores other healthcare professionals regarding readiness for organizational change.

This study was conducted on nurses currently working in healthcare institutions in Jordan, providing care and occupying administrative positions at the time of data collection. Therefore, the study is highly related to present evidence-based practice, which helps to unveil issues that need special attention and proper solutions. In addition, a relatively high response rate (74 per cent, n = 222) was achieved, indicating the perceived significance of the studied problem to the participants. In addition, this study has supplemented the body of literature in regard to readiness in healthcare setting. The method to collect data for this study enhanced the strength of the results and the credibility of the analyzed data. The results can serve as baseline data to be used by nurses, nursing administrators, educators and researchers to build upon.

Replication of the study in other healthcare institutions would be highly desirable. In this regard, similar studies on factors affecting readiness for change at other healthcare sectors such as ministry of health or military hospitals would seem appropriate. In addition, the study needs to be carried out not only through questionnaire survey but also through experimental studies and practical expert interviews in the healthcare sector sites, which would be good surface. Therefore, benefits and practical implications would be evident, and the result of this research will deliver useful information for contribution to the implementation of organizational change and the readiness of nurses in the healthcare institutions.

**Conclusion**

Based on the results of this study, the nurses’ responses to the survey questions reflected their relative understanding of the perceived readiness for change. However, the very wide dispersion of the scores reflected considerable variability in organizational support and normative organizational commitment among the participating nurses. The empirical findings showed how readiness for change was influenced by leadership behavior, organizational commitment and subjective career success. The main limitation of this study was that the questionnaire was designed in English and based on research studies written in English. This may be a limitation for understanding of the nurses. However, nurses working in hospitals had studied in English, and it is the second language in the country. Nevertheless, this study has strengths and many implications that may counteract these limitations. Significant implications will benefit nursing practice, administration and education, in addition to identifying potentials future research.
References


**Further reading**


**Corresponding author**

Mahmoud Al-Hussami can be contacted at: m.alhussami@ju.edu.jo
Sensemaking and cognitive shifts – learning from dissemination of a National Quality Register in health care and elderly care

Annika Maria Margareta Nordin
The Jönköping Academy for Improvement of Health and Welfare, School of Health and Welfare, Jönköping University, Jönköping, Sweden and Qulturum, Region Jönköping County, Sweden

Boel Andersson Gäre
The Jönköping Academy for Improvement of Health and Welfare, School of Health and Welfare, Jönköping University, Jönköping, Sweden and Futurum Academy for Health and Care, Region Jönköping County, Sweden

Ann-Christine Andersson
The Jönköping Academy for Improvement of Health and Welfare, School of Health and Welfare, Jönköping University, Jönköping, Sweden

Abstract

Purpose – The purpose of this study is to examine and establish how sensemaking develops among a group of external change agents (ECAs) engaged to disseminate a national quality register nationwide in Swedish health care and elderly care. To study the emergent sensemaking, the theoretical concept of cognitive shift has been used.

Design/methodology/approach – The data collection method included individual semi-structured interviews, and two sets of interviews (initial sensemaking and renewed sensemaking) have been conducted. Based on a typology describing how ECAs interpret their work, structural analyses and comparisons of initial and renewed sensemaking are made and illuminated in spider diagrams. The data are then analyzed to search for cognitive shifts.

Findings – The ECAs’ sensemaking develops. Three cognitive shifts are identified, and a new kind of issue-related cognitive shift, the outcome-related cognitive shift, is suggested. For the ECAs to customize their work, they need to be aware of how they interpret their own work and how these interpretations develop over time.

Originality/value – The study takes a novel view of the interrelated concepts of sensemaking and sensegivers and points out the cognitive shifts as a helpful theoretical concept to study how sensemaking develops.

Keywords External change agents, Quality registers, Cognitive shifts

Paper type Research paper

Introduction

In Sweden, health care is a public right, regulated but clearly decentralized (Blomqvist, 2007). The health care system is financed by tax revenues and is part of the public service.

National quality registers (NQRs) are considered important supporting the quality that health care organizations can deliver (Swedish Association of Local Authorities and Regions,
Swedish NQRs are usually IT-based, enabling a systematic and structured collection of data about specific diagnostic groups or procedures. Data can, besides supporting quality improvement, also be used in research, to produce statistics and to compare clinical outcomes between health care organizations (SFS, 2008, p. 355). The unique Swedish civic registration number supports the systematic registration and possibility for longitudinal follow-up. A hallmark of well-functioning NQRs is that they are disseminated to relevant health care professionals and that a high proportion of the patients the NQR covers are registered (Emilsson et al., 2015). However, it is voluntary for health care organizations to use the NQRs. During a nationwide effort to improve care for elderly with complex health conditions, the Swedish Government offered performance-based compensation for health care organizations which registered in pinpointed NQRs (Nyström et al., 2014). Since the project ended in 2016, no national reimbursements are available for affiliated health care organizations.

To increase dissemination, NQRs use a variety of approaches, and many health care professionals are engaged in the work of disseminating NQRs. In multiple scientific reports, the design of dissemination approaches and their outcomes are described (Edvinsson et al., 2015; Hallgren Elfgren et al., 2012; Nyström et al., 2014; Ovretveit et al., 2013; Peterson et al., 2007; Peterson et al., 2014), but, to our knowledge, there are no scientific reports on how health care professionals involved in strategic dissemination of NQRs interpret their work. Peterson et al. (2007, 2014) reported on team-based improvement collaboratives to improve dissemination and health care outcomes. Hallgren Elfgren et al. (2012) reported on the combination of a pay-for-performance program and a local registration support to increase dissemination in a county council’s primary care. Ovretveit et al. (2013) described the increased dissemination alongside the technical development of an NQR. There are also scientific reports on the dissemination of Senior alert (SA), an NQR included in the nationwide effort to improve care for elderly with complex health conditions (Edvinsson et al., 2015; Nyström et al., 2014).

SA is a process-oriented NQR with the objective of improving preventive work for elderly in health care and elderly care (Senior alert website, 2017). The register provides risk assessment tools to facilitate a structured and systematic estimation of the elderly’s tendency to fall, develop pressure ulcers and be prone to malnutrition. Tools to assess risks for catheter-related infections and bad oral health are also supplemented (Senior alert website, 2017). In a recent study by Lannering et al. (2016), nurses’ experiences of working with the assessment scales and the structured work process suggested by SA were described. The respondents reported both positive and negative opinions. Three categories were found in the content analysis: “lack of reliability in assessments”, “the value of structure” and “organizational factors limit preventive care”. The Lannering study described nurses’ experiences of SA as an integrated tool in daily work; however, there is lack of knowledge regarding how health care professionals involved in strategic dissemination approaches of NQRs interpret their work. To address this, we studied how external change agents (ECAs) engaged to disseminate SA made sense of their work (Nordin et al., 2017b). This forthcoming study showed that the ECAs expressed prospective sensemaking, an under-theorized perspective of sensemaking (Stigliani and Ravasi, 2012).

Several scholars have reported on the ongoing and dynamic character of sensemaking among change recipients (Gioia and Chittipeddi, 1991; Sharma and Good, 2013). However, to gain understanding of how and why ECAs succeed in their work, knowledge of their own emergent sensemaking is also needed, and this paper aims to address this issue by studying how the ECAs’ sensemaking develops over time. According to sensemaking theories, sensegivers are persons who deliberately attempt to influence the sensemaking of others (Maitlis and Lawrence, 2007; Rouleau, 2005). The ECAs were hired to initiate health care
organizations’ affiliation to SA and to motivate work units to use the register in daily work, and thus, the ECAs are studied as sensegivers.

In complex changes, different interpretations of change can develop, and these disparities can hamper or even hinder continuous dissemination (Bartunek et al., 2006; Iveroth and Hallencreutz, 2015). A prerequisite for ECAs to adapt to local conditions is that they are aware of their own sensemaking, including how it develops over time. To provide sufficient support to ECAs, leaders need this knowledge.

The purpose of this paper is to examine and establish how the ECAs’ own sensemaking of their work in nationwide dissemination of an NQR develops, when they act as sensegivers. By using the concept of cognitive shifts, the paper will examine and establish how the ECAs’ sensemaking of a project aiming to disseminate an NQR nationwide develops over time. By doing so, the theoretical contribution of the paper is to take a novel view of the interrelated concepts of sensemaking and sensegivers.

**Theoretical framework**

Since the seminal work of Gioia and Chittipeddi (1991), theories of sensemaking have become influential in the study of organizational change (Smerek, 2011; Weick, 1995). Change recipients strive to make sense of the continuous stream of events that construct organizational reality, and thus, one property of sensemaking is its ongoing nature (Weick, 1995). In sensemaking, change recipients constantly make sense of events they notice by the use of shared frameworks. The frameworks arise as the result of previously shared experiences and conversations, and to highlight the social and retrospective character of sensemaking, the frameworks have been called “past moments of socialization” (Weick, 1995, p. 111).

Sensegivers perform sensegiving, i.e. they deliberately try to affect the sensemaking of others, in a specific direction (Maitlis and Lawrence, 2007; Rouleau, 2005). To enable this, they facilitate reframing among change recipients, and communication is central to their effort (Frahm and Brown, 2007). A few scholars argue that sensegiving influences both change recipients and sensegivers (Weick et al., 2005). This means that sensegivers, as a consequence of their own sensegiving activities, can also be stimulated toward sensemaking.

Shared frameworks play a key role in the study of sensemaking. The cognitive shift is a related concept referring to a change in shared frameworks (Foldy et al., 2008). The concept captures how change recipients alter their interpretations of important aspects of their work, and thus, cognitive shifts provide insights into how sensemaking develops in a certain direction over time. Scholars have described strategies to influence cognitive shifts, and it has been pointed out that sensegivers deliberately try to influence how change recipients frame the problem or solution (issue-related cognitive shifts) and how they perceive themselves or believe they are perceived by others (constituency-related cognitive shifts) (Foldy et al., 2008).

**Methods**

*Research design and data collection*

One core feature of sensemaking is its continuous character. To capture this, several scholars have used longitudinal research designs (Gioia and Chittipeddi, 1991; Sonenshein, 2010). In this study, comparisons between two sets of interviews offered possibilities to study the emergent character of sensemaking. The first set of interviews was carried out in May 2010 (initial sensemaking) and the second in May 2011 (renewed sensemaking). The data collection method was individual semi-structured interviews. The interview guide was
developed in collaboration between the researchers and comprised questions regarding the ECAs’ assignment, work experiences and interpreted meaning of the register. The same interview guide was used in 2010 and 2011. The ECAs were interviewed when gathered at central conferences in the dissemination project. At the conferences, it was natural for the ECAs to reflect on their work and role as sensegivers, and the open-ended essay questions helped them put their interpretations into words. The interviews lasted approximately 20 min and were tape-recorded and transcribed verbatim.

Participants and their work
Eight ECAs were included in the study. They were recruited to the dissemination project early and were still employed one year later. Another 18 ECAs were engaged in the project, but their employment differed in terms of employment dates and lengths, and they were therefore excluded. The included ECAs were health care professionals: nurses (6), physiotherapist (1) and assistant nurse (1). All had professional experience of working with the elderly. However, they had no documented experience of working with dissemination, and only one ECA had some experience of SA. The ECAs participated in a preparatory two-day training program organized by the team responsible for the national dissemination. The training included general information about the functionalities of the register and the geographical areas in which it should be disseminated. SA was still under development, and either public data reports or complete guidelines describing the register or the dissemination approach were available as the dissemination project was launched. Consequently, the ECAs had to develop their own practices as they started work.

The ECAs’ assignment was to accelerate work units’ affiliation to SA and to support health care professionals in working according to the preventive practices suggested by the register regarding pressure ulcers, malnutrition and the tendency to fall (Senior alert website, 2017). During the first six months, the included ECAs visited over 500 work units. The high pace of work was possible, as their work was geographically delimited, and there was nothing to suggest the work pace should decrease with time. Experiences from the visits formed a rich base for their sensemaking.

A forthcoming paper describes how the ECAs made sense of their dissemination work, without scrutinizing the emergent aspect of their sensemaking (Nordin et al., 2017b). A typology including eight sub-themes, two themes and one main theme was used to show how the ECAs interpreted their work. Structure for a systematic work approach, transparency, financial benefits, cooperation, and engaged creativity were sub-themes, describing how the ECAs made sense from an organizational perspective. Prevention, equal safety and better life were sub-themes, describing how the ECAs made sense from a patient perspective. Based on the two perspectives, two themes emerged: organization-focused sensemaking and patient-oriented sensemaking. The ECAs consistently avoided basing their sensemaking on shortcomings or poor organizational results, and the main theme of the typology, desirable future outcomes, revealed that the ECAs were engaged in prospective sensemaking concerning their work. The sub-themes/themes are described in detail in Table AI (see Appendix).

Data analysis
The analysis was carried out in a series of steps. The material was read and meaning units marked by the first author. By the use of a thematic analysis, the first author coded, compared and sorted the meaning units based on their interpreted latent content (Braun and Clarke, 2006). Eight sub-themes emerged, and in collaboration, the researchers identified labels for the sub-themes corresponding their interpreted latent content. The researchers
jointly compared and analyzed the sub-themes, identifying two themes that were labeled after their fundamental characteristics. The researchers then analyzed the themes to find a main theme, which they interpreted as shared and coherent. After this, the first author made a count of the number of times meaning units were coded to each sub-theme. These frequencies represented the number of times the ECAs anchored their interpretations in the different meanings the sub-themes represent, and were not based on how often a particular word or manifest content was present in the text (Berelson, 1952). In the count, the first author also noted whether the counts appeared at the initial or the renewed sensemaking. To explore how the ECAs’ sensemaking developed, the first author compared the frequencies in the initial vs the renewed sensemaking and developed spider diagrams to illuminate similarities and differences (Figures 1 and 2). Lastly, in the search for cognitive shifts, the first author compared and analyzed the empirical material and spider diagrams with an interpretive approach. The researchers then discussed the findings and jointly developed the analysis until consensus was reached.

**Ethical considerations**

The study was preceded by research ethical considerations (Creswell, 2013). Special emphasis was placed on examining researcher objectivity and the participants’ experienced voluntariness of participating in the study. The benefits for the ECAs of participating in the

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**Figure 1.**
Spider diagram over frequencies of used sub-themes at the initial sensemaking (May 2010)

**Note:** Built on Nordin et al. (2017b), accepted

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**Figure 2.**
Spider diagram over frequencies of used sub-themes at the renewed sensemaking (May 2011)

**Note:** Built on Nordin et al. (2017b), accepted
study were also closely examined and these considerations revealed no ethical obstacles to conducting the study. The ECAs were given oral information about the purpose and procedures of the study. The principles of confidentiality and voluntariness were emphasized and the ECAs gave verbal consent to participate.

Results

The frequencies in the spider diagrams (Figures 1 and 2) correspond to the number of times the ECAs anchored their sensemaking in the different meanings the sub-themes represent (Nordin et al., 2017b). The sub-themes/themes were not “used” by the ECAs in the interviews. Rather, the ECAs’ statements could be attributed to the sub-themes/themes and the verb “used” is henceforth used to point this out.

In the spider diagrams, the gradations point out the number of times a specific sub-theme was used by the ECAs. The frequencies are given in parentheses, and sub-themes in capital letters are patient-oriented. The frequencies create profiles, and comparisons between them make the developed sensemaking apparent.

Only two sub-themes remained unchanged over time: prevention and financial benefits. The peaks of the profiles point out the larger changes: transparency and better life.

The changed balance between the numbers of used organization-focused sub-themes and patient-oriented sub-themes at the initial vs renewed sensemaking indicate that the sensemaking developed on group level. At the initial sensemaking, the ECAs used organization-focused sub-themes 19 times and patient-oriented sub-themes seven times. At the renewed sensemaking, the ECAs used organization-focused sub-themes 9 times and patient-oriented sub-themes 14 times. Hence, the emphasis shifted from organization-focused sensemaking toward patient-oriented sensemaking.

Cognitive shift – subject of the work

Although patient-oriented sensemaking and organization-focused sensemaking were apparent in both sensemaking episodes, organization-focused sensemaking was more dominant in the initial sensemaking and patient-oriented sensemaking in the renewed sensemaking. The sub-themes in organization-focused sensemaking describe organizational advantages of working according to the register, and thus, it looks as if the interpreted subject of the work in initial sensemaking was organizations affiliating to the register. In the renewed sensemaking, patient-oriented sensemaking was more present. The patient-oriented sub-themes are based on the assumption that the work is beneficial for patients. Consequently, it seems as if the interpreted subject of the work in the renewed sensemaking was patients. This means that a difference between the initial and renewed sensemaking concerns for whom the ECAs mainly interpreted the work to be beneficial, and the subject of the work is identified as one cognitive shift.

Cognitive shift – width of scope for patient orientation

The sub-themes prevention, equal safety and better life, share patient orientation as a common denominator, but they take different stances regarding its scope. Prevention concerns the official objective of SA, and patient orientation is restricted to the explicit preventive work employees are required to perform (Edvinsson et al., 2015). Equal safety includes prevention in terms of the elderly continuously being offered equal preventive actions. However, equal safety has a wider scope and includes an equal and continuous approach in all aspects of safety work. Better life is the widest patient-oriented sub-theme. The scope expands beyond what employees are expected to do and aims at a good life for the elderly in general. This means that the use of different patient-oriented sub-themes also
describes how the ECAs interpreted the width of scope for their patient-oriented work. The scope seemed to be narrower in the initial sensemaking and broader in the renewed sensemaking, when the sub-themes equal care and better life were more frequently used. From this, the width of scope for patient orientation is identified as another cognitive shift.

Cognitive shift – perception of organizational change
The sub-themes of organization-focused sensemaking reveal something about what kind of change the ECAs interpreted SA give rise to. The sub-themes of organization-focused sensemaking are close to the concept of continuous quality improvement, a notion to describe incremental improvements with a strong emphasis on a systematic approach, transparency and participation of employees (Bergman and Klefsjö, 2010). However, another fundamental property of continuous quality improvement is the strong customer focus, which was less present in the initial sensemaking than in the renewed sensemaking. Therefore, perception of organizational change is identified as a cognitive shift. In the initial sensemaking, the perception of change was closer to the notion of continuous change, and in the renewed sensemaking, it was closer specifically to continuous quality improvement.

Proposal for a supplementary issue-related cognitive shift
In the scientific literature, issue- and constituency-related cognitive shifts have been identified as two major types of cognitive shifts that sensegivers try to induce in change recipients (Foldy et al., 2008). Issue-related cognitive shifts break down into two kinds, concerned with framing of the problem and framing of the solution. The cognitive shifts identified in this study do not seem to be consistent with these kinds of issue-related cognitive shifts. The ECAs did not make sense by framing a specific problem or a certain solution. That is, they did not express issue-related cognitive shifts, as they have hitherto been described in the scientific literature. They did not frame their sensemaking in terms of different constituencies. Instead, the ECAs made sense by describing altered expected outcomes of their work. Consequently, an outcome-related cognitive shift is suggested as a complementary kind of issue-related cognitive shift. An outcome-related cognitive shift, as it is identified in this study, concerns people’s altered expectations of the consequence of their actions.

Discussion
International health policy has with growing clarity emphasized the need to put persons, instead of diseases, at the center of care (Institute of Medicine, 2001; The Health Foundation website, 2017). In person-centered care, patients are involved as active partners, and health care professionals strive to grasp patients’ understanding and experiences of their care (Ekman et al., 2011). Although there are some methodological difficulties, several studies indicate that person-centered care positively affects clinical outcomes and health care resources (Berwick, 2009; Olsson et al., 2013). A fundamental step toward person-centered care is that health care professionals leave an organization-focused perspective, and they start to focus more on patients. The ECAs in this study became more patient-oriented. The cognitive shifts illustrate that the ECAs at the group level started to orient their sensemaking around patients, instead of organizations. The stronger emphasis on patient-oriented sensemaking indicates that the foundation for person-centered care improved, which by extension can lead to better clinical outcomes (Olsson et al., 2013).

The dissemination project was part of a nationwide effort to improve the care for elderly with complex health conditions. NQRs played a central role in this effort, and during the study period, SA was developed further. The SA administration started a customer support
office for affiliated organizations and an out data portal was integrated into SA. ECAs operating in adjacent geographical areas participated in telephone conferences to jointly discuss and solve problems, and as the ECAs repeatedly visited work units, they cumulatively extended their bulk of experiences about the dissemination work. The national objectives for NQRs concerned coverage, online data, research, improvements, clinical outcomes and efficiency. The objectives are quantitatively formulated and evaluated by Vårdanalys (2017). By comparing the cognitive shifts with the national objectives, it seems as the cognitive shifts represent insights on a principal level, while the national objectives are more superficial. In our results, the ECAs’ cognitive shifts seem not to be contradictory to the national objectives; they seem to complement, deepen and extend them.

Using the themes that form the basis for this study, some comparisons between the results with the Lannering et al. (2016) study can be made. The ECAs did already from the outset of the dissemination project make sense from both an organization-focused and patient-oriented perspective. The respondents in the Lannering et al. (2016) study predominantly made sense from an organization-focused perspective, and no sub-category was explicitly patient-oriented. In the category “the value of structure”, the sub-category “structure facilitates equal and safe care” partly connects to a patient-focused perspective. However, the sub-category did not describe what equal and safe care meant from the perspective of patients. One feasible explanation for the difference in patient-orientation in the studies is that the ECAs may have had a pre-established patient-oriented perspective and voluntarily chose to work with SA because they assumed the register supported patient orientation. The respondents in the Lannering et al. (2016) study had a different point of departure for their SA work. Managers imposed the work on them, and the respondents’ commitment was not voluntary. This can have influenced the respondents to interpret SA as being mainly organizational-focused. The respondents in the Lannering et al. (2016) study also seemed to have a different time perspective than the ECAs. The respondents described their instantaneous situation without connecting to the outcomes the structured work could lead to in the future, in terms of desirable future outcomes. The ECAs, on the other hand, interpreted that this was the very essence of their work. It is difficult to speculate about the causes for this difference, but one possible explanation is that the respondents in the Lannering et al. (2016) study lacked a patient-oriented perspective in general. The respondents expressed that little learning occurred, which could also have influenced their possibilities to make sense of the SA work in a constructive way. The difference of time perspectives can also depend on methodological issues. The Lannering et al. (2016) study did not take a longitudinal approach, and did not include descriptions of on-going sensemaking. However, based on the results presented, it seems reasonable to believe that the respondents had not undergone the cognitive shifts that the ECAs had. Comparisons between the two studies illuminate that there are significant differences between how involved parties can make sense of SA. Thus, to address this, a forthcoming paper reports on a longitudinal study comparing change recipients taking on SA work with the initiator of SA (Nordin et al., 2017a).

Practical implications
To evaluate the dissemination project, the national SA management continually followed standard measures as the increased number of affiliated organizations and reported risk assessments. Insights of these measures were important to monitor the project. However, owing to the results of this study, the dissemination project impacted outcomes not captured by the standard measures. This study also highlights outcomes not recognized by Vårdanalys (2017). Thus, to get a comprehensive understanding of the impact of a project as
reported in this study, the importance of completing tangible outcome measures with qualitative inquiries is emphasized.

A cognitive shift is not an opinion; it is a frame of reference that change recipients use in their ongoing sensemaking. This means that the acquired cognitive shifts have significance beyond the specific project. The outcome-related cognitive shift for example, indicates that the ECAs turned more ambitious and expected more and better outcomes from their actions. This indicates that NQRs can be tools used to influence different parties, e.g. in terms of levels of patient orientation and ambition. The understanding that NQRs function as artefacts paving the way for certain meanings gives leaders of NQRs a reason to thoroughly consider the design of their NQRs and dissemination approaches. It also gives leaders in health care reason to think of how the artefacts are introduced to get the intended meanings developed.

In complex changes, different interpretations develop, and these disparities can hamper or hinder the dissemination of the change (Bartunek et al., 2006; Iveroth and Hallencreutz, 2015). In the dissemination of NQRs, ECAs need to take into account the fact that involved parties can depart from markedly different sensemaking. The ECAs must also bear in mind that they, as a consequence of their prolonged engagement, have undergone cognitive shifts that change recipients who worked a shorter time with the register have not. This can be an explanation why the respondents in the Lannering study mainly made sense of SA from an organizations-focused perspective.

In their role as sensegivers, the ECAs need to understand the change recipients’ current sensemaking. Otherwise they lack knowledge on how to communicate effectively (Frahm and Brown, 2007). With understanding of the cognitive shifts examined in this paper, the ECAs can provide change recipients with reflective questions to work with. The cognitive shifts can for example be translated into the following questions: “For whom is the work be beneficial?” (subject of the work), “How is the work beneficial for patients?” (width of scope for patient orientation), “How does the work support improvements?” (perception of organizational change) and “What are the long-term consequences of the work?” (outcome-related cognitive shift). With the understanding of how change recipients relate to these questions, the ECAs can “diagnose” the level of patient orientation among change recipients.

By repeatedly returning to the “diagnostic questions”, the ECAs can get insights into how patient orientation among change recipients develops and act accordingly.

Theoretical contributions
The analysis of the ECAs’ sensemaking described how the ECAs made sense of their dissemination work (Nordin et al., 2017b). The main theme was desirable future outcomes, pointing out their prospective sensemaking. In the current study, additional layers of knowledge are added by analyzing the data with a complementary perspective and by using complementary theories within the field of sensemaking research. By comparing how the ECAs expressed their interpretations at the initial vs the renewed sensemaking, and by using the theoretical concept of cognitive shifts, this study reveals how the ECAs’ sensemaking developed over time. The patient orientation increased, and the ECA’s sensemaking underwent three cognitive shifts. A new kind of issue-related cognitive shift, the outcome-related cognitive shift, was also suggested.

This cognitive shift needs further scientific examination. A proposed next step is to examine how the outcome-related cognitive shift finds expression among change recipients taking on NQRs. Based on this knowledge, ECAs, leaders of NQRs and leaders in health care, can better adapt their sensegiving to change recipients.
Methodological discussion
The point of departure for using frequencies and comparisons is that meaning units underpinning sub-themes are valued as equally important. However, a single meaning unit could be more significant for the studied phenomenon than other meaning units. The same could be valid for sub-themes. This calls for caution when frequencies are compared in qualitative studies. The importance, or “weight”, of meaning units and sub-themes needs to be valued before the decision to use the methodology is taken. The meaning units and sub-themes in this study are valued as equally important, or “heavy.” No single statement stands out significantly, and sub-themes with high frequencies are interpreted as more central on a group level than sub-themes with low frequencies.

The study covers one year of a two-year dissemination approach. To examine how sensemaking develops over time, it would have been valuable to study the ECAs for a more prolonged period. However, the study was based on an on-going change and the included ECAs left the project at various times. By restricting the study to one year, it was possible to ensure that the participating ECAs had the same preconditions. The paper reports on sensemaking and cognitive shifts on the group level. On the individual level, a single ECA’s sensemaking can appear to be different. Organizational sensemaking is a collective phenomenon (Weick, 1995), and the reported results are tendencies in the empirical material on the group level.

Conclusions
This study shows that the ECAs’ sensemaking developed on the group level and that patient orientation became stronger. However, parties can make sense of an NQR markedly different. The understanding that NQRs function as artifacts paving the way for certain meanings gives leaders of NQRs reason to thoroughly consider the design of their NQRs and leaders in health care to consider the way of introducing the artifacts.

The study also points out cognitive shifts as a helpful theoretical concept to study how sensemaking emerges among sensegivers. Three cognitive shifts are identified: the subject of the work, the width of scope for patient orientation and the perception of organizational change. Based on the identified cognitive shifts, a new kind of issue-related cognitive shift is proposed: the outcome-related cognitive shift. The shifts illuminate how the sensemaking developed, and the outcome-related cognitive shift is thereby closely related to why actions should be carried out, which in fact is a central issue in the study of sensemaking.

References
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Corresponding author
Annika Maria Margareta Nordin can be contacted at: annika.nordin@ju.se
Appendix

**Main theme – desirable future outcomes**
The main theme describes that the ECAs interpreted their work to be about creating future desirable outcomes. Their sensemaking spanned a wide field, including both organizations and patients. The sensemaking extended beyond the stated purpose of the NQR and the ECAs did not anchor their sensemaking in poor results or organizational shortcomings.

**Theme: Organization-focused sensemaking**
The theme describes how the ECAs interpreted their work from an organizational perspective. The six sub-themes are described below.

*Sub-theme: Structure for a systematic work approach*
The ECAs emphasized the need for a systematic work approach for prevention. The ECAs interpreted that they, by disseminating SA, provided health care professionals with a structure enabling this. The importance of SA being accessible for large proportions of health care professionals was underlined.

*Sub-theme: Transparency*
The ECAs interpreted that they by their work made preventive work more transparent. The ECAs described that the register highlighted both strengths and weaknesses in the preventive work and that the register pointed at actions health care professionals needed to take.

*Sub-theme: Financial benefits*
The ECAs interpreted that they contributed to improved housekeeping. They argued that SA provided affiliated organizations with financial benefits.

*Sub-theme: Cooperation*
The ECAs interpreted that they contributed to improved cooperation in health care. They underlined that the patient-focused teamwork needed to improve and that work according to SA supported this. The ECAs also believed that SA supported cooperation over organizational and professional borders.

*Sub-theme: Engaged creativity*
The ECAs interpreted that they contributed to engaged creativity among health care professionals. SA was described as a tool supporting dedication and the generation of new thoughts and ideas.

**Theme: Patient-oriented sensemaking**
The theme describes how the ECAs interpreted their work from an organizational perspective. The three sub-themes are described below.

*Sub-theme: Prevention*
The ECAs interpreted that they, with their work, supported improved prevention for the elderly. The ECAs described how the dissemination of the register supported health care professionals in protecting the elderly from pressure ulcers, falls, malnutrition and poor oral health.

*Sub-theme: Equal safety*
The ECAs interpreted that they provided health care professionals with structures enabling the delivery of equally safe health care and elderly care for all elderly. The ECAs thought that SA supported equal, continuous and safe care on an everyday basis for the elderly. Such care included the elderly being treated as individuals and ensuring they experienced a feeling of safety.

*Sub-theme: Better life*
The ECAs interpreted that they were engaged in making life for elderly better. The ECAs emphasized that the use of SA supported a good life from an elderly perspective in a broad sense. They mentioned factors as meaningfulness, quality of life and impact.

**Source:** Nordin et al. (2017b), accepted
Career path from a dentist to a leader
Tiina A. Tuononen  
Institute of Dentistry, University of Eastern Finland, Kuopio, Finland  
Anna Liisa Suominen  
Institute of Dentistry, University of Eastern Finland, Kuopio, Finland and  
Kuopio University Hospital, Department of Oral and Maxillofacial Diseases, Kuopio, Finland, and  
Johanna Lammintakanen  
Department of Health and Social Management, University of Eastern Finland, Kuopio, Finland

Abstract
Purpose – The purpose of this paper was to study the career paths of leaders with a career background as a dentist from basic degree to chief or executive leadership positions and individual factors that influenced their decisions.

Design/methodology/approach – Semi-structured interview and a questionnaire were used to study 13 leaders using the structure of Edgar Schein’s career anchor interview and career orientation inventory questionnaire. Theory-driven content analysis was used to analyze the data according to themes which included career paths, factors associated with job and career changes and thoughts about future careers.

Findings – Three different career path types were identified: Progressives (Type A), By chance (Type B), and Enthusiasts (Type C). The main motives were: the Progressives’ goal orientation to proceed to higher leadership positions, the By chance group’s job and even career changing by taking a chance on an interesting possibility that comes their way and the Enthusiasts’ willingness to make a difference and search for possibilities to change things. The most important career anchor was “pure challenge” among the Progressives and By chance groups and “general managerial competence” among the Enthusiasts.

Originality/value – Studies on personal factors associating with career paths in health care are scarce and similarly leaders with a dentist background are less studied, even though leadership could be an excellent career choice for a dentist. Different individuals can have varied motives and career paths toward executive positions. Because of the multi-professional functions in health care, organizations could benefit from having leaders with different expertise backgrounds.

Keywords Career, Leader, Career anchor, Career path, Dentist

Paper type Research paper

Introduction
A career path could be defined as an individual’s path from a basic degree through different stages (further education, different jobs and organizations) to a current or final situation (www.hrzone.com) (HRZone, 2017). This could also include the hopes or goals of the future. This path could be made up of multiple choices and decision situations and even career changes.

Early career selection and early career decisions have been found to be unsure predictors of a person’s entire career and career goals (Schein and Van Maanen, 2016). An individual can have multiple careers. Fahey and Myrtle (2001) described career change as movement to a new occupation including new demands and a new working environment. Traditionally,
health-care leaders’ careers have proceeded in one organization or at least within the same health-care sector. Career changes can be both vertical (from lower level to higher positions even to executive posts) and horizontal (changing to another leadership position of the same level) (Fahey and Myrtle, 2001; Myrtle et al., 2008; Ham et al., 2011). Working in the same organization could be an advantage, as the history, culture and functions of the organization are familiar. Vertical proceeding in one organization can still be a reality for many leaders, but job and career changes between different organizations and different health industry sectors have become more common in recent years, while working and living environments are in constant change. Work itself and organizations have become more complex.

Varied career paths including working in different sectors and organizations can be an advantage to leaders themselves, creating opportunities for professional growth and giving them greater job satisfaction (Myrtle et al., 2008; Chen et al., 2011; Mascia and Piconi, 2013). Similarly, organizations could benefit from versatile leaders with knowledge of and relationships between different sectors (Mascia and Piconi, 2013). It is probably nowadays also easier and more generally accepted to change jobs or even careers than during past decades. Ham et al. (2011) studied physicians with varied career paths. Some of those physicians had straightforward paths to medical chief executive positions, some were experienced in other leadership roles, including the civil service, and some of them had multiple career stages involving working abroad in different countries, as well as in private or public sectors or universities.

Different models exist for describing career development among leaders. Studies can be found focusing on, for example, career patterns (Gunz et al., 1998; Fahey and Myrtle, 2001), career stages (Myrtle et al., 2008; Spehar et al., 2012), career phases (Evans, 1988) and career streams (Gunz et al., 1998). Fahey and Myrtle (2001) introduced four different health-care executive and management career patterns: the most often found pattern was multiple career changes, second was a single career change, then the traditional career without seeking a career change and finally the fourth was careers with multiple changes back and forth between different health-care sectors. Job and career changes can be planned, unplanned or even involuntary. Some studies describe health-care leaders who were dropped in or persuaded to begin a leadership position (Boucher, 2005; Spehar et al., 2012; Tuononen et al., 2016b). In Fahey and Myrtle (2001), one-third of their respondents had at least one involuntary or unplanned job change in their career.

There are studies on dentists’ personality traits and perspectives on leadership careers (Westerman, 1991; Morison and McMullan, 2013), however, less studied are individual factors and especially intrinsic factors influencing various career decisions of leaders. Boucher (2005) studied health-care professionals and found six different attitudes toward leadership (management); variation ranged from those who thought they were “born managers” to those who thought that they were “stuck” in a leadership position including also a variety of those professionals who have never been and never wanted to be a manager. Individual differences exist including several specific extrinsic and intrinsic factors affecting careers and career decisions. Extrinsic factors could involve, for example, finances, family affairs or organizational reforms. Respectively, intrinsic factors could be, for example, age, education or one’s career anchors (Schein, 1978, 1993, 2006). Career anchors are described as a professional self-concept; how a person defines oneself in relation to their work and one’s own competence, needs, motives and values. The career anchor concept is based on Edgar Schein’s career evaluation theory (Schein, 1993, 1978) and is widely used in many studies dealing with varied professions, but less among health-care leaders (Boucher, 2005; Kaplan et al., 2009), and only a few career anchor studies include dentists (Delong, 1983; Boshoff et al., 1994, Tuononen et al., 2016a) or dentist leaders (Tuononen et al., 2016a, 2016b). For dentist leaders “lifestyle” and “technical and
“functional competence” were found to be important career anchors. However, “general managerial competence” was found to be the most important anchor supporting staying in a leadership position (Tuononen et al., 2016b).

Gunz et al. (1998) stated that many managers have the background of a functional expert. This is also common in health care, where almost all leaders and managers have the background of health-care professionals. Leaders in chief or executive positions in social and health care often have a physician background, which has been identified as a good foundation for leadership positions (Thomason, 1990). Being a manager was also described as being a good opportunity for a physician to combine clinical medicine and comprehension of health-care management (Fairchild et al., 2004; Lazarus, 2009). Some social and health-care leaders come from social and nursing sciences, but fewer leaders seemed to have a dentist background. Dentists traditionally stay working in the dental field. Only a few have chosen to continue their careers uncharacteristically further to positions of strategic management in social and health care or in other organizations. The purpose was to study the career paths of leaders with a career background as a dentist from basic degree to chief or executive leadership positions and individual factors that influenced their decisions.

Materials and methods
Study group
The materials were collected during summer 2016 from a group of 13 leaders having a dentist background and currently working as leaders in national-, regional- or local-level organizations. The potential target group was identified in autumn 2015 including 15 participants, of which one refused to participate and one was not reached during the data collection period. This group was purposefully sampled based on the authors’ knowledge of all potential study participants who could fulfil the following criteria:

- a basic dentist degree;
- working in a strategic management position; and
- being of working age.

The background information of the study group was collected from interviews, the internet, the Registry of Finnish Dentists 2000 and 2007 (collected and published by the Finnish Dental Association) and personal curriculum vita, given by some of the participants after the interviews. At the time of the study, participants were working in national, regional or local public administration or in private organizations (Table I). The mean age of the participants was 57 (range 45-64) and 53 per cent were male. Most of the participants had a doctoral degree or were working toward this. Two-thirds of the participants were specialists in public health, most participants had other major leadership and management studies and some participants had master’s degrees in health management or political sciences (Table I). Participants’ mean clinical dentist career length was 21.5 years (range 1-38). Most participants started their leadership career earlier than 10 years post dentist graduation. They had worked in their current position on an average of three years (range 1-9).

Material collection
The study materials were collected by semi-structured individual interviews. Themes included career paths, individual factors associated with job and career changes and future career thoughts. The structure of the interviews was modified from the career anchor interview from Edgar Schein (1993). Interest and consent to participate in the study were requested during the first contact via e-mail, which also included the information about the
The interview occasion and the location were arranged in the next contact by e-mail or by phone. Then, in another mail, the participants got a link to the career orientation inventory questionnaire and the request to answer that questionnaire before the interview. Career anchor score analysis (Schein, 2006) was completed before the interviews.

Interviews were conducted during summer 2016 (from May 3 to August 31, 2016) by the first author. At the beginning of the interview, participants were told that study materials will be treated with complete confidentiality in all phases of the study, and participants were guaranteed anonymity in the final work. Approval based on research ethics was not required, but participants provided informed consent by voluntarily participating in the interviews. Interview duration was between 27-45 min and they were recorded. The recordings were transcribed by the first author. Results of career anchor analyses were discussed with the participants after interview recordings; these discussions were not recorded.

Analysis
The transcribed interviews were read through several times to form an overall impression. The transcriptions were read over by the first and the third author separately and preliminary analysis was conducted together. Theory-driven content analysis was used to identify and list items which were mentioned by several study participants. These items represented different aspects of the participants’ careers such as motives for career choice decisions and how their careers had developed. From similar findings, three different career path types were identified. Then, participants’ background characteristics and other individual factors, for example, career anchors (Table II), were studied per each type to search for items which seemed to be type typical or common to all participants.

Career anchor evaluation
Career anchor evaluation was conducted by using the career orientation inventory questionnaire (COI) and a scoring table taken from Edgar Schein’s career anchors self-

<table>
<thead>
<tr>
<th>Organization</th>
<th>( n )</th>
<th>Current position/title</th>
<th>Previous positions (e.g.)</th>
<th>Additional degrees (e.g.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministries and other national-level organizations</td>
<td>4</td>
<td>General director ministerial counsellor</td>
<td>Assistant city manager, professor, health-care service manager and chief dental officer</td>
<td>PhD MSc (political science)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ministerial counsellor</td>
<td></td>
<td>Special in Dental Public Health</td>
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<td></td>
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<td>Change manager</td>
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<tr>
<td></td>
<td></td>
<td>Senior medical officer</td>
<td></td>
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<tr>
<td>National private health-care organizations</td>
<td>2</td>
<td>General manager</td>
<td>Assistant city manager, director of (social and) health services industry and chief dental officer</td>
<td>PhD MSc (Health management)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chief business officer</td>
<td></td>
<td>MSc (political sciences)</td>
</tr>
<tr>
<td>University (regional)</td>
<td>3</td>
<td>Dean Professor</td>
<td>Director of (social and) health services industry, health-care service manager and chief dental officer</td>
<td>PhD MSc (health management), Specialist in Dental Public Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director of administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional state administrative agencies</td>
<td>2</td>
<td>Senior medical officer</td>
<td>Health-care manager and Senior medical officer</td>
<td>PhD Specialist in Dental Public Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health-care manager</td>
<td></td>
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</tr>
<tr>
<td>Local health-care organizations</td>
<td>4</td>
<td>Director of (social and) health services industry</td>
<td>Chief dental officer</td>
<td>PhD Specialist in Dental Public Health</td>
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<tr>
<td></td>
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<td>Health-care service manager</td>
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</tbody>
</table>

Table I. Background information of the target group (\( n = 15 \))
assessment (2006). COI is a 40-item survey that can be self-scored; it includes five statements for each of eight career anchors (Table II). For each of the statements participants chose the best matching option from Likert-type answer options: never = 1, seldom = 2, often = 3 or always = 4. In addition to this, they gave five extra points to those statements with often or always options which most clearly characterized them. The sums of these scores were divided by five to obtain final scores for each of eight career anchors (theoretical range 1.0-9.0). These career anchor scores were calculated according to three career types. The most and the least important career anchors were also detected.

Results
Three types of career paths were identified. They differed by participants’ motives for career choice decisions and individual factors which had been associated with these decisions in their career paths. These types were referred to as Progressives (Type A), By chance (Type B) and Enthusiasts (Type C). Results are described in this order including career anchors. Citations 1-5 are from participants in group A, 6-9 in group B and 10-13 in group C.

Type A) Progressives
Participants in this group seemed to have developed their careers in a goal-oriented manner. They had educated themselves according to a clear plan to succeed in their current position or aiming for the future to be able to proceed to higher management positions.

<table>
<thead>
<tr>
<th>Career anchor category</th>
<th>Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical/functional competence</td>
<td>This kind of person likes being good at something and will work to become a guru or expert. They like to be challenged and then use their skills to meet the challenge, doing the job properly and better than almost anyone else</td>
</tr>
<tr>
<td>Managerial competence</td>
<td>These people want to be managers. They like problem-solving and dealing with other people. They thrive on responsibility. To be successful, they also need emotional competence</td>
</tr>
<tr>
<td>Autonomy/independence</td>
<td>These people have a primary need to work under their own rules and “steam” They avoid standards and prefer to work alone</td>
</tr>
<tr>
<td>Security/stability</td>
<td>These people seek stability and continuity as a primary factor of their lives. They avoid risk and are generally ‘lifers’ in their job</td>
</tr>
<tr>
<td>Entrepreneurial creativity</td>
<td>These people like to invent things, be creative and most of all to run their own businesses. They differ from those who seek autonomy in that they will share the workload. They find ownership very important. They get easily bored. Wealth, for them, is a sign of success</td>
</tr>
<tr>
<td>Service/dedication to a cause</td>
<td>Service-orientated people are driven more by how they can help other people than by using their talents. They may work in public services or in areas such as human resources</td>
</tr>
<tr>
<td>Pure challenge</td>
<td>People driven by challenge seek constant stimulation and difficult problems that they can tackle. Such people will change jobs when the current one gets boring, and their career can be varied</td>
</tr>
<tr>
<td>Lifestyle</td>
<td>Those who are focused first on lifestyle look at their whole pattern of living. Rather than balance work and life, they are more likely to integrate the two. They may even take long periods of time off work in which to indulge in passions such as travelling</td>
</tr>
</tbody>
</table>

Table II. Descriptions of the eight career anchors
I’ve been training myself systematically and tried to think about what kind of training, background and so on would be useful to me if I wanted to change jobs. (Informant 1)

[...] so, I went to various kinds of training [...] I went through all the administrative courses that they had available and concerning this (Informant 3).

Most participants in this group described that they had actively sought higher positions in their own or other organization; their careers seem to have developed vertically as straightforward paths toward higher positions even to the chief executive posts.

I’ve been active. (Informant 2)

The drive (motivation) was to expand my job description little by little (Informant 1).

Participants in this group were working in local- or regional-level organizations and had stayed working in the same area or even in the same organization for the main part of their careers, albeit a few of them had worked in different organizations or areas during the early years of their career. They could be referred to as area- or organization-attached or organization faithful. Most of them had described themselves as having “returned to their roots”.

Yes, the location was crucial too. I know this place, my home, and of course my present job [...] I’d been working in health care here for a long time [...] (Informant 5)

[...] so, I’m happy to stay put, and then when something comes up in our workplace community, I’d apply for it, like this health service manager job (Informant 4).

Actually, I’ve been here for my entire working career (Informant 3).

Most participants in this group were planning to continue in the same organization or the same area, but possibly were proceeding to work in a higher leadership position. Those, who were close to retirement, had plans for doing consulting work in their own expertise area.

I suppose I’ll be transferring to the regional government reform planning, and I’ve been involved in it already, and that’s what’s happening right now (Informant 5).

I’m retiring, but I’m staying on as an expert consultant [...] (Informant 3)

Participants in this group had the longest dentist clinical careers combining the years before and besides the leadership work (mean 27.4 years, range 17-38).

The highest career anchor mean scores in Type A were in “pure challenge” and “service and dedication to a cause” and the lowest were in “security/stability” and “entrepreneurial creativity”. Four different career anchors were found to be the most important anchor in this group (Table III).

Type B) By chance
Leadership career paths in this group seemed to have developed by chance; participants described that they have taken their chances to move on to different leadership positions when they encountered interesting opportunities. Most of them were working in national-level organizations. They describe themselves to have been courageous in their decisions.

Chance: being in the right place at the right time [...] and taking up opportunities (Informant 6).
The most- and the least-important career anchors (highest and lowest individual scores) and career anchor score means according to career path types

<table>
<thead>
<tr>
<th></th>
<th>Technical/functional competence</th>
<th>General managerial competence</th>
<th>Autonomy/independence</th>
<th>Security/stability</th>
<th>Entrepreneurial creativity</th>
<th>Service/dedication to a cause</th>
<th>Pure challenge</th>
<th>Lifestyle</th>
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<tr>
<td></td>
<td>TF</td>
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<td>AU</td>
<td>SE</td>
<td>EC</td>
<td>SV</td>
<td>PC</td>
<td>LS</td>
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<tr>
<td><strong>Progressives n = 5</strong></td>
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<tr>
<td>Most important</td>
<td>1</td>
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**Note:** ⁸One participant had two anchors with the same score
Maybe after I’d spent a few years at the health centre, I had the idea that I might have something to contribute to developing the service system. That was when I had the idea! But I haven’t been aiming for any specific position (Informant 9).

It must be about courage, I’ve always been bold in my choices (Informant 8).

Participants in this group have worked in several sectors and are experienced in different kinds of leadership roles in private and public social and health-care organizations or in public administration organizations. Careers in this group have mostly been vertical, but a few job changes have also been horizontal. By chance participants have been asked or requested to take posts, and they mentioned that their mentors were important in their early career stages in guiding them toward leadership tasks and careers.

I had a supervisor who had me do things like that and asked and encouraged me to do things that were useful later in superior duties and for management issues. And for my career (Informant 6).

My superior sort of became my tutor or mentor for my thinking, noticing that I had things to say about improving a lot of things, and then recommended me to take a management course to gain experience in management and administration (Informant 9).

Participants in this group had plans to continue leadership work, but not necessarily at a higher level, but maybe work abroad or even in lower level but closer to action.

But for myself, I’m still interested in international activities, a lot. I’ll have to see what’s on offer! (Informant 8)

If there’s some interesting management position open in health and social services. How these new structures [in the forthcoming health and social services reform] will create new jobs, and maybe not one at the very top but a middle management job, like managing a unit (Informant 6).

My duties are changing, I’m not concerned at all about finding work (Informant 9).

Participants in this group were the quicker starters in the leadership position after graduating with a degree in dentistry (5.3 years, range 2-8) than participants in other groups.

The highest career anchor mean score in this type was for “pure challenge” and the lowest were for “security/stability” and “entrepreneurial creativity”. “Pure challenge” was the most important career anchor in this type, three out of four participants had it as the most important anchor (Table III).

Type C) Enthusiasts
The main motives among participants in this group were the possibility and willingness to develop and make a difference; in a leadership position, they have had good opportunities for this. They have changed their jobs according to their own interest and orientation and they were currently working in national-, regional- or local-level organizations. Participants in this group described a willingness to make the world a better place or hope to have an influence on society.

[...] I’ve sought out jobs where you can make a difference. (Informant 13)

It must be the desire, the desire I have for development, for social issues, for pushing things forward. (Informant 11)
The scarlet thread for me has always been to go and choose jobs where you can [. . .] where there’s heart involved. (Informant 10)

They wanted to challenge themselves and have sought positions where this could be possible. Participants in this group have had both vertical and horizontal job changes during their careers.

It’s made up of all sorts of choices; I’ve been very energetic about trying out different things. [. . .] I want to have challenges all the time, and I’m not that keen on security (Informant 10).

I somehow like jobs with a challenge, that’s what makes the work interesting (Informant 11).

[. . .] making the world a better place, that’s the thing [. . .] I wanted to do something that would have an actual impact on society (Informant 10).

As future plans, participants in this group were looking forward to continuing leadership work or doing consultant work.

I don’t need to be the top boss anywhere, but I’d like to have the tools, the power and the responsibility to a suitable degree. To take things forward, in the right direction of course, but with the chance to make my mark on them (Informant 12).

I suppose I’ll be doing consultant work, expert consultations somewhere around the world (Informant 10).

Participants in this group have worked as leaders without dentist clinical work on an average for 14 years (range 7-28) which is the longest time among all groups.

The highest career anchor mean score in this group was in “general managerial competence”. Almost as high was the mean score of “pure challenge”. The lowest mean scores were in “entrepreneurial creativity” and “security/stability”. Four different most important career anchors were found among participants in this group. This was the only group where “life style” was found to be the most important anchor for a participant (Table III).

Common items in different types
These career path types were not entirely pure but many common items were also found. Almost all participants mentioned that they were not fully satisfied working only as a clinical dentist. They described the feeling that dentist’s clinical work was not enough and they wanted different challenges. However, many of the participants did continue their clinical career to a smaller extent beside their leadership career. Almost all participants were experienced working as a private dentist.

I always like the clinical side of it, but somehow it wasn’t enough (Informant 1).

[. . .] but I couldn’t find enough of an intellectual challenge (Informant 10).

My main job has always been in the public sector [. . .] the private-sector stuff is just extra. I’ve seen the whole range of jobs and duties, in both the private sector and in my public-sector job (Informant 5).

Many of the participants in all groups worked as researchers or teachers or both already during their dentist studies; many of them continued teaching for some time after their graduate studies. Almost all participants had a PhD or were working toward it.
I started doing research in my first year of studies. I didn’t know it would become so important; I was asked to participate in a study, and I was pleased to go (Informant 10).

Similarly, the interest in leadership and management rose early and many participants began to work in a leadership position soon after graduation.

Back then (at the start of my career) I was really interested in management and supervisor work (Informant 10).

Maybe I had a subconscious idea at that point about going into administration in dentistry or health care (Informant 6).

[…] thinking back now, my superior at the time encouraged me to think about it, this management stuff. It took 4 to 5 years from graduation (Informant 1).

I got a permanent job when the former chief dentist said that he didn’t like his job at all. I said I thought that administrative work is fun. So he said, “why don’t you do it” (Informant 3).

Most of the participants described that they were satisfied with career decisions, few of them mentioned that they had achieved more than they could have imagined at the beginning of their careers. Only a few described single jobs they had disliked. All participants seemed to be satisfied with their current career situations.

The career anchor “pure challenge” was important for the most participants. In all career path types, it had the highest (Progressives and By chance) or the second-highest (Enthusiasts) career anchor mean score. The other career anchors with high mean scores were “general managerial competence” and “service and dedication to a cause”. The most important personal career anchors were distributed between five different career anchors, “pure challenge” being most often found. The least important personal anchors were distributed between “security”, “entrepreneurial creativity” and “service and dedication to a cause”, “entrepreneurial creativity” being most often found to be least important (Table III).

Discussion
Three different career path types were identified in this study group. Different individual factors seemed to influence the leaders’ decisions and the choices they make while their careers develop. The main motives found to differentiate these types from each other were goal orientation to proceed to higher leadership positions (Progressives), changing jobs and even a career change by taking a chance on some interesting possibility that comes one’s way (By chance) and the willingness to make a difference and search for possibilities to change things (Enthusiasts).

Career planning has been found to be important for both individuals and organizations (Boucher, 2005; Schein and Van Maanen, 2016), although Boucher (2005) noted that some organizations and individuals lacked career planning. In this study, career planning seemed to be simply an individual’s responsibility. Participants in the Progressives group having vertical careers seemed to have planned their education to be able to succeed better in a current position and therefore have better opportunities in the future. A few of the participants described that they had a good combination of educational opportunities prior to the leadership career, for example, economics or social sciences, which were useful in their current situation, however, not purposefully planned beforehand. Career planning did not seem to have a significant role in the other participant types. Participants in the By chance group had several career changes, but they did not seem to have had strong intents to change jobs, they just had taken the opportunity when an interesting job became available.
The process of changing jobs or even a career is described as first alternating between an antecedent and intent to leave before the actual turnover (Mobley et al., 1978; Tham, 2006). In the current study, the need for a wider perspective, the wish to have greater influence, as well as getting bored, and looking for something more interesting were described as antecedents of a change in a job, career or even profession. The group of Enthusiasts changed their jobs to gain a better opportunity to work with things important to them and be in positions where they had the power to change things. This study focused on finding the individual factors influencing their decisions. However, personality traits surely have an effect also on careers of leaders and this would be worth future research.

Progressives stayed in the same region and most of them stayed even in the same organization during their leadership careers. Some of them could be described having a traditional career (with a bottom up approach) or career with a single career change (from a dentist to a leader towards an executive position) (Fahey and Myrtle, 2001). The By chance group participants had made courageous changes in their careers. They had worked in various kinds of organizations and developed their careers mostly vertically, although some changes were also horizontal. Their career paths could be described as having multiple career changes or some of them also changed their careers back and forth between private and public health sectors, which were two of four career patterns identified by the questionnaire study by Fahey and Myrtle (2001). The By chance group had similar careers as some of the leaders with a physician background, as described by Ham et al. (2011). Enthusiasts described they wanted to challenge themselves, and they described the wish to have a job with real possibilities to influence society. This could be a reason that they left clinical dentistry careers earlier than other groups. Fahey and Myrtle (2001) stated that career success increasingly requires broad leadership experience in different organizations. In their study, fewer leaders had a traditional career path with job changes in the same industry. This was similar among the current study participants; only a few had their entire career path in the same industry. Career path types could predict the organizational level to which leaders would proceed, while almost all participants in the By chance group had leadership positions on the national level. Enthusiast group participants were working on national, regional or local levels, and Progressives worked on local and regional levels.

Most participants seemed to be satisfied with their current career situations and earlier decisions. Ham et al. (2011) described that even though work in executive positions could be insecure, the freedom in these positions was satisfying. Other common items among all these groups were an early interest in something in additions to dentistry or clinical dental work, such as interest in research and/or teaching. Even though they had studied to become a dentist, they seemed to realize that clinician work alone was not enough for them. Similar results were found among other health-care professionals (Spehar et al., 2012) and physician leaders (Ham et al., 2011). Most participants in the current study continued working as clinicians for quite a long time in addition to their leadership career, which was similar in the physician leader study (Ham et al., 2011) where most of the interviewees wanted to combine clinical and leadership work as far as it was possible in their path to become a chief executive.

The career anchor evaluation results of the current study participants describing professional self-image were interestingly quite different from the results of an earlier study of dentist leaders’ (Tuononen et al., 2016b). Among dentist leaders, the career anchors “pure challenge” (seeking constant stimulation and will to tackle different problems) and “general managerial competence” (will to be a manager) were not found to be important. Instead “lifestyle” (will to integrate work and life outside work) and “technical/functional competence” (will to be an expert on their subject) were the most important anchors. However, even the lower level of “general managerial competence” was found to support staying in a leadership
position (Tuononen et al., 2016b). In the current study, “pure challenge” and “general managerial competence” were important career anchors among all career path types. The common unpopular career anchor among participants in this current study and in the dentist leader study (Tuononen et al., 2016b) was “entrepreneurial creativity” (interest in having their own business). Schein (1993) described that career anchors evolve during work and life experience, and once formed, this self-concept functions as a stabilizing force and anchors for the things of which one is not willing to give up in choice situations. While most participants in our study were in the late phase or at least in the middle of their careers, it would have been interesting to be able to compare their career anchors in their early leadership career stages. Schein and Van Maanen (2016) found career anchors as a good and an important tool to find better matches between individual and organizational needs. This was not exactly studied in this paper, but it is worth for future research among health-care leaders. Suutari and Taka (2004) showed that most managers had two or even three important separate career anchors; this was also found in the current study, contrary to expectations based on the original career anchor evaluation (Schein, 1993). Feldman and Bolino (1996) had a similar opinion to Suutari and Taka (2004). However, Schein and Van Maanen (2016) wrote:

Most careers permit people to satisfy several of these anchors so the identification of what is the “dominant” anchor – the anchor that they would not give up if forced to make a choice – often has to be teased out in the interview by posing hypothetical future choices.

In the current study two participants had scores of two anchors close to similar, but during the interview the main anchor came out clearly.

This study followed Schein’s (1978) recommendation, while the original career anchor concept was initially based on developmental interviews. A “career orientation inventory” questionnaire was created later to be used in addition to and beside the interview as a shorter and more quantitative supplement to the occupational history (Schein, 1993; Schein and Van Maanen, 2016). Characteristics of the identified career path types were clear and easily recognizable. Of the identified career path types, none were found to be better than others. Instead, they show the different ways and different career development by which one can achieve a satisfying and rewarding career as a leader. In career path or career studies involving personal opinions and characterization of study participants’ decision backgrounds, qualitative methods are valuable for describing subjective experiences. The gathered materials fulfilled the purpose of the study and provided good answers to questions and themes discussed during the interviews. The results of this study could be generalized in Finland, as well as in other countries. In addition, leaders with a dentistry background are less studied and because of the multidisciplinary nature of health care, organizations could benefit from also having leaders with this expertise background.

Conclusion
A variety of professional paths can lead from working as a clinician to an executive position. Three career path types were identified in this study: Progressives, with goal orientation to proceed to higher leadership positions; the By chance group, who were changing jobs and even careers by taking a chance on interesting opportunities; and Enthusiasts, whose motives were the willingness to make a difference and search for possibilities to change things. Career anchors called “pure challenge” (seeking constant stimulation and a willingness to tackle different problems) and “general managerial competence” (will to be a manager) were the most important for leaders in this study. Career planning seems to occur mainly at the individual level. Therefore, personal factors affecting leaders’ career choices, such as career anchors of health-care leaders, are worthy of further study to gain insight into leadership positions and
assist organizations in filling leadership positions with candidates that match well with the needs of their organization. There is also a need for integration of both individual and organizational perspectives in career planning to develop career paths in health-care organizations.

References


Further reading

About the authors
Tiina A. Tuononen, DDS, Specialist in dental public health and PhD student, is working as a Clinical Teacher of Oral Public Health at the Institute of Dentistry. Her research interests are health service research and leadership. Tiina A. Tuononen is the corresponding author and can be contacted at: tiina.tuononen@uef.fi

Anna Liisa Suominen, DDS, MSc (health care) and PhD is working as a Professor of Oral Public Health at the Institute of Dentistry. She is also Head of the Institute. Her research interests are health service research, epidemiology and health economics.

Johanna Lammintakanen, PhD, is working as a Professor of Health Management Sciences at the Department of Health and Social Management. She is also Head of the Department. Her research interests are human resource management in health care and prioritization in health care.
Prospective sensemaking of a national quality register in health care and elderly care

Annika Maria Margareta Nordin
The Jönköping Academy for Improvement of Health and Welfare, School of Health and Welfare, Jönköping University, Jönköping, Sweden and Qulturum, Region Jönköping County, Sweden

Boel Andersson Gäre
The Jönköping Academy for Improvement of Health and Welfare, School of Health and Welfare, Jönköping University, Jönköping, Sweden and Futurum Academy for Health and Care, Region Jönköping County, Sweden, and

Ann-Christine Andersson
The Jönköping Academy for Improvement of Health and Welfare, School of Health and Welfare, Jönköping University, Jönköping, Sweden

Abstract

Purpose – The purpose of this paper is to examine how external change agents (ECAs) engaged to disseminate a national quality register (NQR) called Senior alert nationwide in the Swedish health care and elderly care sectors interpret their work. To study this, sensemaking theories are used.

Design/methodology/approach – This is a qualitative inductive interview study including eight ECAs. To analyze the data, a thematic analysis is carried out.

Findings – Well-disseminated NQRs support health care organizations’ possibility to work with quality improvement and to improve care for patient groups. NQRs function as artifacts that can influence how health care professionals make sense of their work. In this paper, a typology depicting how the ECAs make sense of their dissemination work has been developed. The ECAs are engaged in prospective sensemaking. They describe their work as being about creating future good results, both for patients and affiliated organizations, and they can balance different quality aspects.

Originality/value – The number of NQRs increased markedly in Sweden and elsewhere, but there are few reports on how health care professionals working with the registers interpret their work. The use of ECAs to disseminate NQRs is a novel approach. This paper describes how the ECAs are engaged in prospective sensemaking – an under-researched perspective of the sensemaking theory.

Keywords External change agents, Quality registers, Sensegivers, Sensemaking theory

Paper type Research paper

Background

From a global perspective, Sweden has taken the lead in the development and spread of quality registers in health care (Swedish Association of Local Authorities and Regions, 2010). A Swedish national quality register (NQR) is a systematic and structured gathering of information about patient groups with the purpose of supporting continuous development and quality assurance of health care. The collected data can also be used in research to produce statistics and to facilitate comparisons (SFS: 2008: 355, 2015). The unique civic
registration number that all Swedish residents have facilitates systematic registration. Registration in NQRs is voluntary, and the registers are dependent on health care professionals’ commitment to report data (Levay and Waks, 2009). To stimulate the use of NQRs, the government introduced performance-based compensation for health care organizations reporting to selected NQRs in a national project (Nyström et al., 2014). Because the project ended in 2016, no reimbursements are available for health care organizations reporting to NQRs. The national vision for NQRs is that they should provide a basis for continuous learning, quality improvement and health care management (The National Quality Registers website, 2016). The increase in the number of new NQRs is significant. In 1989, eight NQRs were nationally approved, and in 2015, 106 NQRs received national funding (Edvinsson et al., 2015). After the establishment of an NQR, the call to disseminate it nationwide arose. First, all relevant health care organizations must be affiliated to the register. Second, all relevant work units within the affiliated organizations need to integrate the use of the register into their daily work (Emilsson et al., 2015). The latter is a more complex part of the dissemination process that includes changes in local practices, and it has proved difficult to disseminate changed practices within and between work units (Bevan et al., 2007; Greenhalgh et al., 2004). One difficulty for NQRs is to achieve completeness by ensuring that all patients in the target population are registered (Emilsson et al., 2015). Thus, the dissemination of quality registers is a major national-level strategic challenge. Recent reports describe the strategic dissemination of some NQRs (Edvinsson et al., 2015; Hallgren Elfgren et al., 2012; Ovretveit et al., 2013). However, there are few reports on how health care professionals engaged in the dissemination of an NQR interpret their work, that is, what they think their work actually is about, and this paper aims to address this issue.

This paper reports on a study of the dissemination of an NQR called Senior alert (SA). The SA is an NQR striving toward better health, and the stated purpose is to improve the preventive work for elderly people in health care and elderly care. The NQR provides risk assessment tools to estimate elderly people’s tendency to fall, develop pressure ulcers and malnutrition. Tools to assess risks for catheter-related infections and bad oral health can also be supplemented (Senior alert, 2016). External change agents (ECAs) were hired by the SA administration to disseminate the register nationwide, including to 290 municipalities, 20 county councils/regions and several profit/non-profit health care and elderly care providers (Edvinsson et al., 2015). Between May 2010 and May 2012, the number of health care professionals using SA increased from approximately 1,000 to 18,800, and all county councils/regions and 280 of 290 municipalities became affiliated (Senior alert, 2014). The ECAs disseminated SA to new users, whereas the SA administration coordinated the ECAs’ work and provided customer advice and support to affiliated users.

Sensemaking theories have proved to have relevance for studies of dissemination of change (Bartunek et al., 2006; Gioia and Chittipeddi, 1991), and in this paper, sensemaking theories are used to gain understanding of how the ECAs interpret (that is, make sense of) their dissemination work. Sensemaking concerns how change recipients interpret specific events in the continuous stream of events that constitute organizations. The objective of the sensemaking processes is to create reasonable explanations and a reality that is construed as coherent. These processes have mainly been described as retrospective, which means that present events are interpreted in the light of earlier collective interpretations (Weick, 1995).

A sensegiver is a central concept in sensemaking theories. A sensegiver is a person who deliberately attempts to influence the sensemaking of others (Maitlis and Lawrence, 2007; Rouleau, 2005). Leaders (Rouleau, 2005; Smerek, 2011) and innovators/entrepreneurs (Kannan-Narasimhan and Lawrence, 2011; Corvellec and Risberg, 2007) have been studied as sensegivers. However, in many organizational changes, internal change agents or ECAs
play key roles. They are the individuals who initiate, lead and direct a change or take responsibility for making a change (Caldwell, 2003). The ECAs in this study were hired to initiate health care organizations’ affiliation to an NQR and to motivate work units to use the NQR in the daily work, and thus, the ECAs are studied as sensegivers.

The paper focuses on the perspectives of sensemaking that, to date, have not been particularly highlighted. ECAs as sensegivers or how ECAs interpret their work have not attracted much scientific attention. There are inconsistencies between how sensegivers and change recipients make sense of a change and hamper the possibilities for sensegivers to succeed in their sensegiving efforts (Bartunek et al., 2006). To discover differences in sensemaking, the knowledge of both parties’ sensemaking is important, and there is a need to better describe the sensemaking of sensegivers. To align support to ECAs and their work with nationwide dissemination of an NQR, leaders need to know how ECAs interpret their work. So, the purpose of this paper is to examine how ECAs make sense of their work in a nationwide dissemination project of an NQR.

Methods
Research design and data collection
In this paper, a qualitative approach was used. A qualitative approach enabled a close examination of the ECAs’ interpretations and is well-suited to examine a socially constructed phenomenon such as sensemaking (Gioia and Chittipeddi, 1991). The data collection method included individual semi-structured interviews; two sets of interviews were conducted; one set in May 2010 and one set in May 2011. The interview guide was developed in collaboration between the researchers, and it included questions concerning the assignment, the meaning of the register and work experiences. The open-ended essay questions helped the ECAs express their interpretations in a reflective manner, thus illuminating their sensemaking. The same interview guide was used in 2010 and 2011.

The ECAs were dispersed over Sweden and worked from their homes. Interviews were conducted when the ECAs were gathered at central conferences in the dissemination project, to reduce their traveling time, and a neutral place for the interviews was made available. To not disrupt the conference program, the interviews were restricted to approximately 20 min. The interviews were tape-recorded and transcribed verbatim. The quotes were translated and, to a minor extent, linguistically improved by the authors to support the legibility.

Participants and their assignment
During the dissemination project, 26 ECAs were hired by the SA administration. However, the ECAs were not employed at the same time and the length of their employment differed. The eight ECAs included in the study started their work as the dissemination project began, and were still employed one year later. All ECAs were health care professionals: six were nurses, one was a physiotherapist and one was an assistant nurse. They had all worked professionally with the elderly, either in municipalities or in county councils/regions, but none of them had documented experience of working on dissemination or quality improvement efforts, and only one ECA had some previous work experience with SA.

The ECAs’ assignment was to visit work units with the objective of accelerating their affiliation to SA. At these visits, the ECAs helped health care professionals reflect on the results of their work and to reconsider current practices. During the first six months, the ECAs visited over 500 work units. The high work pace was possible because the work was geographically circumscribed, and there was nothing to suggest the pace should decrease with time. This means that the ECAs had plentiful experience to base their sensemaking on. The ECAs entered a novel field. No complete guidelines concerning SA or the expected work
performance were available, and the introduction was limited to a two-day training session arranged by the SA administration. This training included brief information about the register, the risk assessment tools and the geographical dissemination areas targeted for the register. Preliminary lists of organizations the ECA should visit were distributed, and the ECAs were urged to complement the lists with other organizations they identified as relevant to visit in their geographical area. During the two-day training period, a shorter role-play was also arranged. In the role-play, the ECAs both were given the roles of ECAs and work units receiving visits by ECAs, with the objective of preparing the ECAs for their first visit. The ECAs were then expected to develop an appropriate work approach on their own.

Data analysis
The data were analyzed using thematic analysis, focusing on the latent content (Braun and Clarke, 2006). The analysis was carried out in several steps. First, the material was read through and meaning units were marked by the first author. Second, the meaning units were coded, compared and sorted based on their interpreted latent content by the first author. Building on this, eight sub-themes emerged. The researchers collaborated to find labels for the sub-themes corresponding their interpreted latent content. The researchers then compared and analyzed sub-themes, and based on their different features, two themes that were labeled after their fundamental characteristics emerged in a third step. After this, the researchers analyzed the themes in search for a main theme which they interpreted as shared and coherent. Finally, a typology was developed in a fourth step. The primary purpose of the typology was to illustrate the examination of how the ECAs made sense of their work. The typology also underpins a study on how the ECAs’ sensemaking develops over time, which will be reported in a forthcoming paper (Nordin et al., 2017a). The sub-themes/themes capture how the ECAs interpret their work and were not “used” by the ECAs in the interviews. Rather, their statements could be attributed to the sub-themes/themes, and the verb “used” has been used in subsequent sections to point this out.

Ethical considerations
The study prompted several ethical considerations (Creswell, 2013). Based on the specific prerequisites of the study, special emphasis was placed on examining researcher objectivity and participants’ voluntariness. Also, the benefits they gained from participating in the study were closely examined. The considerations revealed no ethical obstacles for conducting the study. The ECAs were given oral information about the purpose and procedures of the study. The principles of confidentiality and voluntariness were emphasized, and the ECAs gave verbal consent to participate.

Results
The ECAs used a variety of sub-themes to express how they made sense of their dissemination work. Together eight sub-themes, two themes and one main theme depict how the ECAs interpreted what their work was actually about. Bringing the sub-themes/themes and main theme together, a typology (Figure 1) was developed. The typology shows how the ECAs made sense of their work. Additionally, the typology illustrates how the sub-themes and the main theme are interrelated.
Desirable future outcomes

The common denominator in the sub-themes/themes is that, in various ways, they describe how the dissemination of the NQR results in desirable future outcomes. The ECAs did not anchor their sensemaking in current poor results or organizational shortcomings. On the contrary, irrespective of which sub-themes/themes (or combinations) the ECAs used, they all described desirable future outcomes. Consequently, **Desirable future outcomes** is identified as a main theme. The main theme pinpoints that the ECAs interpreted their work to be about creating future desirable outcomes spanning a wide field, including both organizations and patients. They described a sensemaking that extended beyond the stated purpose of the NQR.

Organization-focused sensemaking

The ECAs highlighted the importance of structure and transparency. Also, the financial benefits were mentioned as gains with the introduction of SA. Other benefits the ECAs identified were increased cooperation and creativity among the professionals. Those sub-themes are further explained below.
Structure for a systematic work approach. This sub-theme describes how the ECAs interpreted that by disseminating SA, they provided health care professionals with a structure supporting a systematic work approach. The ECAs underlined that a systematic work approach was important for prevention, and that the SA provided a structure fostering this. The importance of SA being accessible for a large number of health care professionals was highlighted, and the register was described as a tool, or an instrument, enabling health care professionals to leave the random working process behind and to work more systematically. One ECA described the value of the structured questions provided by the register: “...it means to get something that is structured and to know what we have missed and then I fix it and get answers to these questions...” (ECA No. 6).

Transparency. This sub-theme describes how the ECAs interpreted that they contributed to making preventive work more transparent. The ECAs argued that the register highlighted strengths and weaknesses in the preventive work and that it pointed at actions health care professionals needed to take. One ECA explained that health care professionals with the register could: “...notice things that don’t work, because you see what actually is done, and what we do well and what needs to be improved...” (ECA No 3).

Transparency was highlighted as important, and the possibility to get positive feedback was especially noted. One ECA explained how positive feedback from SA facilitated coordinated actions among teams: “...everyone in the team gets the same positive feedback on this, and works in the same direction. I think that is very good and yes...” (ECA No 3).

Financial benefits. Some ECAs mentioned that SA provided affiliated organizations with financial benefits. Thus, this sub-theme describes how the ECAs interpreted that they contributed to improve housekeeping. One ECA described the benefit with SA as: “...a gain for both the person and society; to be able to allocate the resources to other things...” (ECA No 2).

Cooperation. This sub-theme describes how the ECAs interpreted that they contributed to improved cooperation. The ECAs emphasized that the patient-focused teamwork needed to improve and that work according to the register supported this. They also highlighted that the register supported cooperation over organizational and professional borders. One ECA exemplified the value of increased cooperation: “...then all in the group will work as a team, and I believe this is very important because sometimes I experience that we are divided into ‘we and others’...” (ECA No 3).

Engaged creativity. This sub-theme describes how the ECAs interpreted that they contributed to engage creativity among health care professionals. The register was described as supporting dedication and the generation of new thoughts and ideas. One ECA exemplified this with the words: “...sometimes it feels like revivalism. But it is about engagement” (ECA No 6).

Patient-oriented sensemaking
One benefit the ECAs identified was improved prevention. They also stated that the NQR could help in ensuring equality of care provision and thereby increasing the quality of life for the elderly. The three sub-themes are further described below.

Prevention. Improved prevention for the elderly is the stated purpose of the register, and this sub-theme describes how the ECAs interpreted that they supported this development. The dissemination of the register supported health care professionals in protecting the elderly from pressure ulcers, falls, malnutrition and poor oral health. One ECA said that the purpose with SA was to: “...work preventively in health- and elderly care and to reduce harm...” (ECA No 1).
Equal safety. This sub-theme describes how the ECAs interpreted that they provided structures enabling the delivery of equally safe health care and elderly care for all elderly. With equal safety, the ECAs thought the elderly could be offered equal, continuous and safe care on an everyday basis. Such care included treating elderly as individuals and ensuring they experience a feeling of safety. One ECA said that patients: “...should get the same prerequisites and be treated in the same way...”(ECA No 5).

Better life. This sub-theme describes how the ECAs interpreted that they were engaged in making life for the elderly better. The ECAs underlined that the use of the register supported a good life from an elderly perspective in a broad sense. Meaningfulness, the quality of life and impact were factors they mentioned. One ECA formulated that the point with SA was to: “Improve life; life quality...”(ECA No 7).

Discussion
As the number of NQRs increases, the registers have a bold ambition to support the creation of better health and health care. For scientific purposes, registrations in NQRs need to be structured and should be equivalent for all patients in the patient group (Emilsson et al., 2015). However, this paper illustrates that the systematic registration and the transparency the register provides also raised health care professionals’ awareness about equity. Thus, it seems as if the dissemination work raised awareness and influenced values. This is in line with a study on discourses by Norman and Fritzén (2012). In their study, organizations not sufficiently registering in SA received percentage reduction of their annual budget. Of the four discourses described in their paper, the discourse including financial incentives, was the most influential and dominated the other discourses. In the absence of financial incentives, however, health care professionals could balance different aspects of quality as patient orientation, clinical outcomes and equal care well (Norman and Fritzén, 2012). In this paper, the sub-theme financial benefits only concerned affiliated organizations. The ECAs had a fixed salary and their financial compensation was not based on the progress of their work, e.g. the number of affiliated organizations or registrations in SA their work has led to. Building on the paper by Norman and Fritzén (2012), it cannot be ruled that the ECAs’ sensemaking would have been different if the financial incentives also had included them. As the dissemination work was organized in this study, the ECAs could balance different quality aspects well, without letting the financial perspective taking over.

The objective with NQRs can be viewed in three parts: to improve local operations in care, to collect data for research and to create conditions for transparency and comparisons (SFS: 2008: 355, 2015). In this study, the ECAs consequently excluded science and research in their sensemaking, and this possibly differs from other NQRs. Most NQRs have a far-reaching commitment to research, and it is only recently the designs of NQRs have begun to support specific local work processes. In this paper, the ECAs’ sensemaking reflected the emphasis on processes that SA builds on.

Practical implications
This paper has highlighted that the ECAs’ sensemaking extended beyond official goals. In this paper, the ECAs’ sensemaking included existential and social aspects of their work that official objectives do not include. This more comprehensive understanding of the impact of NQRs implicates that NQRs are not only impartial computer systems for collection of data to improve health care and science but also are artefacts influencing how health care professionals make sense of their work. This in turn implicates that initiators and designers of NQRs can use the design of NQRs strategically to support specific values and behaviors.
Leaders of dissemination projects also need to consider how the projects enable ECAs, change recipients and other stakeholders to balance different quality aspects well. These considerations need to include what influence financial incentives have and how the NQRs support desired values and behaviors. To tailor dissemination projects to different groups adequately, leaders of dissemination projects need to take into account that groups attribute different meanings to NQRs. This means that leaders of dissemination projects need to learn how different groups make sense of the NQRs and accommodate the communication according to this. As for this paper, it is not self-evident that the change recipients make sense of SA in the same way as the ECAs do. For the ECAs to succeed in their work, they need knowledge of how the sensemaking among change recipients resembles and differs their own sensemaking, otherwise they risk “striking the wrong chords” in their sensegiving. How change recipients make sense of SA will be reported in a forthcoming paper (Nordin et al., 2017).

Theoretical contributions
This paper provides a close description of prospective sensemaking, an aspect of sensemaking theory that has not been sufficiently examined (Stigliani and Ravasi, 2012). The paper examines how ECAs, working as sensegivers, made sense of their dissemination work of an NQR. With their sensemaking, the ECAs described an attractive version of the future. Traditionally, sensemaking has been defined as a retrospective process (Weick, 1995). However, some scholars call for a “post-Weickian” form of sensemaking (Kaplan and Orlikowski, 2013, p. 967), highlighting prospective sensemaking as an attempt to make sense for the future (Gioia and Mehra, 1996, p. 1229). This kind of sensemaking is activated when change recipients need to make sense of events that have not yet occurred or of events that are completely novel or unfamiliar. In this situation, change recipients need to engage in a creative process of thinking in a future perfect tense (Gioia et al., 2002), which corresponds well with what the ECAs in this study did.

Suggestions for future research
To learn more about how ECAs can contribute to nationwide dissemination of NQRs, it is important that future research studies what ECAs do and how they succeed. It is also important to develop knowledge of how ECAs’ interpretations develop over time. This temporal aspect of sensemaking will be reported in a forthcoming paper (Nordin et al., 2017a). To further develop the understanding of how NQRs can be disseminated, the typology in this paper can function as a framework. How groups of ECAs and change recipients make sense of their particular NQR can be understood by comparing hallmarks and commonalities with the typology presented in this paper.

Limitations
The study has some limitations. The interviews were restricted to approximately 20 min, and it is difficult to ascertain if the ECAs would have expressed other forms of sensemaking in longer interviews. Another limitation concerns the length of the study. The study covers one year, and the typology could have developed further as the dissemination project continued. It is also precarious to claim that the prospective sensemaking described in this paper is solely based on the ECAs’ engagement in SA. During the dissemination project, several other NQRs were developed and disseminated, and the ECAs could have been affected by the general national interest for NQRs. However, the goals for NQRs do not include the ECAs or their interpretations of their work. The national evaluations of the
dissemination of NQRs do also not include the kind of qualitative aspects that are examined in this paper (Vårdanalys, 2017).

Conclusion
Well-disseminated NQRs support health care organizations’ possibility to work with quality improvement and to improve care for patient groups. NQRs function as artifacts that can influence how health care professionals make sense of their work. Thus, leaders of NQRs and dissemination projects need insights into how different groups make sense of the NQRs to accommodate the communication and to provide customized support. The use of ECAs is a novel approach to disseminate an NQR, and the ECAs in this study made a broad sense of their work. They described the work as being about creating future good results, both for patients and affiliated organizations. By examining how the ECAs interpreted their work, the paper provides descriptions of how prospective sensemaking can be understood.

References


**Corresponding author**

Annika Maria Margareta Nordin can be contacted at: annika.nordin@ju.se

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Quality improvement in curriculum development

Victor Maddalena, Amanda Pendergast and Gerona McGrath
Faculty of Medicine, Memorial University of Newfoundland, St John’s, Canada

Abstract

Purpose – There is a growing emphasis on teaching patient safety principles and quality improvement (QI) processes in medical education curricula. This paper aims to present how the Faculty of Medicine at Memorial University of Newfoundland engaged medical students in quality improvement during their recent curriculum renewal process.

Design/methodology/approach – In the 2013-2014 academic year, the Faculty of Medicine at Memorial University of Newfoundland launched an undergraduate medical education curriculum renewal process. This presented a unique opportunity to teach quality improvement by involving students in the ongoing development and continuous improvement of their undergraduate curriculum through the implementation of quality circles and other related QI activities.

Findings – The authors’ experience shows that implementing QI processes is beneficial in the medical education environment, particularly during times of curriculum redesign or implementation of new initiatives.

Originality/value – Student engagement and participation in the QI process is an excellent way to teach basic QI concepts and improve curriculum program outcomes.

Keywords Education, Quality, Quality improvement, Medical curricula

Viewpoint

The principles of quality improvement (QI) are well-established in the health-care environment. It is, therefore, no surprise that there is a growing emphasis on teaching patient safety principles and QI processes as part of medical education. This is a laudable goal considering that when medical students graduate and work as physicians they will be called upon to take leadership roles and participate in various QI activities at all levels of the health-care system – from individual clinical practice environments to large health institutions. Classroom, modular, online teaching of QI principles and trainee participation in clinical settings are helpful ways to teach QI principles and processes (Wong et al., 2012; Liao et al., 2015).

In the 2013-2014 academic year, the Faculty of Medicine at Memorial University of Newfoundland launched an undergraduate medical education curriculum renewal process based on the concept of a spiral curriculum. In a spiral curriculum, students are introduced to concepts repeatedly during their program of studies with increasing levels of complexity each time a topic is revisited (Harden and Stamper, 1999). That same year, the size of the incoming undergraduate medical education class expanded from 60 to 80 students. Curriculum renewal and an increase in class size brought myriad logistical issues and challenges. Understandably, this situation led to high levels of stress for students (and curriculum planners) and commensurate levels of anxiety. These circumstances presented a unique opportunity to teach quality improvement by involving students in the ongoing development and continuous improvement of their undergraduate curriculum through the implementation of quality circles and other related QI activities.
Most of the challenges associated with implementing a new curriculum and expanding class size were because of curricular content changes, sequencing of class sessions, developing new evaluation methods or modifying assessment plans. Those responsible for evaluation of the undergraduate medical education program believed this was an opportunity to develop more timely and responsive course evaluation processes. The previous curriculum had been characterized by short, topic-specific courses based on a systems approach to medical education. In the “old curriculum” courses and instructors were evaluated at the end of each semester. The new curriculum required a more timely and responsive formative evaluation process.

One of the criticisms of the previous approach to course evaluation was that any required changes or improvements could only be implemented in the following academic year, meaning the class providing the feedback would not necessarily benefit. With the new spiral curriculum, topics were integrated into longer courses taking place within phases or segments of the curriculum distinguished by theme or overall health stage of patients. The three phases comprising the first two years of medical school are as follows: Phase 1, the healthy person; Phase 2, the patient with acute and/or episodic problems; and Phase 3, the patient with chronic medical conditions. There were changes taking place on many levels, and this rendered the traditional approach to course and faculty evaluation inadequate or not responsive to meet the needs of students, faculty or administrators.

A means of soliciting real-time feedback from students on changes to the new curriculum was designed using basic QI techniques. Curriculum managers introduced a series of QI sessions (quality circles) with the students to solicit their feedback and to relay information to key individuals responsible for various aspects of the curriculum. Administrative and logistical support for the QI sessions was provided by the evaluation staff.

As part of the regular curriculum, integrated learning sessions (ILS) were scheduled every two to three weeks during the semester. The ILS provided a venue to periodically consolidate curriculum content in the form of small group sessions and a facilitated large group discussion. A portion of the ILS was dedicated to QI activities. Time was set aside during the ILS small group sessions for students to discuss and identify strengths, weaknesses and ideas for program, curricular or student services improvement. These small group sessions served as quality circles. The input was collected from each of the small groups and documented centrally and disseminated to the relevant person/office to address the issue. This information (a list of what worked well, what did not work well and suggestions for improvement) was compiled and presented at the facilitated large group QI session with the entire class of students.

In the facilitated large group session, the curriculum Phase Lead met with the full class and engaged in an open two-way discussion about the issues that had been identified in the small group sessions. The discussion involved identifying what worked well, what needed improvement, as well as providing updates on “work in progress” to address previously identified issues and brainstorming potential solutions. In some cases, the problems identified were resolved with a “quick-fix” that could be implemented almost immediately.

A tracking sheet outlining the identified items and actions was created and posted within the learning management system that students used for accessing course materials. This centralized and easily accessible online location meant students could monitor progress on each of the identified items.

Others problems identified were more complex and required further study, involvement of other faculty or curriculum management staff and as a result took longer to resolve. There were also several ad hoc QI sessions held during the school year at the request of students to
address particular areas of concern. A similar format in terms of problem identification, follow-up and monitoring was followed for each of the *ad hoc* QI sessions.

**Results of quality improvement sessions**
The QI sessions provided administrators with a real-time mechanism to gather student feedback efficiently and this facilitated timely feedback to students. Some of the more important outcomes from QI session participation included:

- teaching students the basics of QI through active participation;
- decreasing student anxiety by providing a channel to express themselves in a supportive environment with their peers (and having curriculum administrators listen!);
- reducing feelings of isolation by seeing that peers were having many of the same issues/concerns;
- giving students a sense of empowerment at a time when they were likely overwhelmed with both the pressures of medical school and uncertainty around expectations;
- providing an opportunity for students to show leadership and develop professionalism skills, for example, articulating criticisms in a collegial, respectful manner; and
- permitting faculty and curriculum managers the opportunity to identify and resolve curriculum or student issues in a timely manner.

In terms of overall curriculum and program evaluation, the sessions provided a necessary mechanism for timely, ongoing evaluation and continuous improvement. The QI sessions have now become an integral part of the evaluation framework of the undergraduate medical education program and updates from the QI sessions are presented at the curriculum management meetings, the program evaluation sub-committee meetings and at the undergraduate medical studies committee meetings.

**Evolution of Quality Improvement**
Currently, we are in the fifth year of the new spiral curriculum, and the first cohort of students graduated in 2017. Since they started medical school, the QI process has changed and evolved as problems in the curriculum were identified and resolved. Initially, sessions were held every two to three weeks and indeed this frequency was necessary during the first years of the new curriculum because of the fluidity of processes and the rapid changes required. After the initial three years, the QI sessions reached a point where fewer new issues were arising or longer-term issues requiring longer-term solutions were being revisited. As a result, QI sessions are taking place generally three or four times during each phase – one near the beginning, one at the midpoint and one at the end of the phase.

**Conclusion**
Quality improvement has been shown to improve processes and outcomes in the business and health care environment. Our experience shows that QI processes are equally beneficial in the medical education environment, particularly during times of curriculum redesign or implementation of new initiatives. Student engagement and participation in the QI process is an excellent way to teach basic QI concepts and improve curriculum program outcomes.
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Corresponding author
Victor Maddalena can be contacted at: victorm@mun.ca
Abstract

Purpose – Leadership, and leadership development, in health and human services is essential. This review aims to draw conclusions from practice within the Australian context.

Design/methodology/approach – This review is an overview of health leadership development in Australia, with a particular focus on the implementation of the national health leadership framework, Health LEADS Australia (HLA).

Findings – Since its inception, the HLA has influenced the development of health leadership frameworks across the Australian states and territories. Both the National Health Leadership Collaboration and individuals with “boundary-spanning” roles across state government and the university sector have contributed to the development of collaborative online communities of practice and professional networks. Innovation has also been evident as the HLA has been incorporated into existing academic curricula and new professional development offerings. Ideas associated with distributed leadership, integral to the HLA, underpin both sets of actions.

Practical implications – The concept of a national health leadership framework has been implemented in different ways across jurisdictions. The range of alternative strategies (both collaborative and innovative) undertaken by Australian practitioners provide lessons for practice elsewhere.

Originality/value – This article adds to the body of knowledge associated with policy implementation and provides practical recommendations for the development and promotion of health leadership development programmes.

Keywords Health leadership competencies, Health leadership initiatives

Paper type General review

Introduction

There is no jurisdiction, profession or sector of activity that has ignored the role and practice of leaders and leadership development (Bolden et al., 2003; Reinelt and McGonagill, 2009). In the health sector, national health leadership frameworks have been developed for countries such as the UK (NHS Institute for Innovation and Improvement, 2011), the USA (National Center for Healthcare Leadership, 2012), Canada (Canadian Health Leadership Network, 2015) and Australia (Health Workforce Australia, 2013).

Since its formal endorsement by the Australian Health Ministers’ Conference, the Australian Health Leadership Framework: Health LEADS Australia (HLA) (Health Workforce Australia, 2013) has been applied across public, private and community
healthcare settings. The HLA framework offers a typology of leadership that is closely related to the Canadian leadership framework Leads in a Caring Environment (Dickson and Tholl, 2014). It consists of five domains: leads self, engages others, achieves outcomes, drives innovation and shapes systems (Health Workforce Australia, 2013).

The disestablishment of Health Workforce Australia in 2014 left the HLA with no institutional “home”. As a result, HLA has not yet been fully developed as envisioned, with a “suite of freely available tools and programs” (Sebastian, 2015) and has only partially fulfilled the purpose of providing a:

 [...] nationally consistent and agreed approach, [to] provide a common language, portability across sectors and enable Australia to embed leadership development in early health education and training and in continuing professional development (Health Workforce Australia, 2012).

There has, however, been significant development by some government and non-government organisations, professional associations, and enterprising individuals. This article provides an overview of HLA use across these sectors and offers some analysis of the factors underlying its implementation. It concludes with a reflection on the insights offered by policy theory and the practical implications of their application.

Review of HLA implementation in Australia
Training programmes within state and territory health

Prior to its disestablishment, Health Workforce Australia had led an inter-jurisdictional group to develop draft behavioural statements for each of the 5 HLA leadership domains and 15 leadership capabilities. The Queensland Department of Health (QDoH), in its Healthcare Leadership Unit (HLU), continued this work, to develop a series of 57 behavioural questions which measure the capabilities outlined. The HLU subsequently commissioned and developed a range of tools based on the HLA, including an anonymous, on-line, multi-rater survey (360-degree feedback) Capability Assessment Tool. While a private provider was engaged to develop and host the tool, it is available to all health services in Queensland and other jurisdictions, on a user-pays basis (Davidson, 2017).

The survey allows participants to assess and develop their capabilities as viewed by themselves and others. It allows participants to identify their strengths and areas where they can improve and further develop their skills. The resulting Capability Assessment Report provides participants with guidance on how to interpret the feedback, including the rating scales and raters’ responses. Notable features of the report include a list of highest and lowest rated statements (core strengths and development opportunities) and a consideration of performance and Importance. This compares the participant’s perception of what is important to their role to their manager’s perceptions, and overlays capability importance ratings with performance data. A visual guide, the “circumplex summary”, is also included and is designed to provide a high level summary of performance. An example is provided in Figure 1. In this figure, the black line demonstrates the participant’s self-assessment and the colours are the average of all the other raters. Discrepancies between these rating (described as unknown strengths and unknown weaknesses) indicate areas where the participant perceives themselves as significantly more/less capable than others perceive them (Shannon et al., 2016).

Within the QDoH, a development guide has also been created for each of the 15 HLA capabilities. This includes suggestions for work-based experience, reflection and discussion and formal professional development opportunities. This informs a personalised learning and development plan, with associated time, cost and quality indicators. The on-line Capability Assessment Tool has also been adapted for face-to-face delivery. Where
participants are part of a leadership programme, raters and participants can undertake the assessment process together. The same questions are used to guide a conversation between the participant and the rater. The “conversation tool” is only used for participants in the Medical Leadership in Action Program and the Emerging Clinical Leaders Program. These programmes are for senior clinicians and participants receive training on how to have successful feedback conversations (Shannon et al., 2016).

Some Queensland health services, such as the Sunshine Coast Hospital and Health Service, have adapted the HLA, to create their own Leadership Success Profile (Sunshine Coast Hospital and Health Service, 2016). Leadership has become a key commitment in this service, with an annual target of 85 per cent of managers/supervisors to participate in management and/or leadership development programmes (Sunshine Coast Hospital and Health Service, 2016).

In Tasmania, the Department of Health and Human Services (DHHS), the Leadership and Management Development Unit, have run a number of HLA-themed “leadership intensives”

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**Figure 1.**
Queensland Department of Health HLA capability assessment report

![Figure 1](image_url)
for staff over the past four years, and they have produced a number of online videos that cover the HLA domains. They are also used in the HLA-based academic postgraduate unit run through the University of Tasmania (UTAS) (University of Tasmania, 2017). This has augmented and modified the HLA only to the point of explicitly including non-health staff in its wording (Department of Health and Human Services, 2013a; Department of Health and Human Services, 2013b).

In the Australian Capital Territory, ACT Health, uses the HLA as the basis for all the leadership and management development programmes offered to staff. The major programmes provided include those targeting particular employees, such as:

- people manager;
- emerging manager;
- critical care frontline leadership; and
- senior doctor leadership.

Further HLA-inspired initiatives are planned for 2017. The HLA also forms the conceptual basis of the ACT Health Leadership Network. The major objectives of the network are to:

- break down silos and create opportunities to build collaborative relationships and partnerships across the organisation;
- draw on the capabilities, corporate and business knowledge and experience of our leaders at all levels;
- generate solutions to meet organisational needs;
- further develop and refresh members’ leadership skills; and
- promote and support learning organisation principles including systemic thinking, integration and dialogue (Director Organisational Development ACT Health 2016, pers. comm., 23 December).

The HLA is also referenced as a key source document for the whole-of-government ACT Public Service Shared Capability Framework (ACT Government, 2015).

In South Australia, the HLA leadership capabilities have been incorporated in the Leadership and Management Competency Framework, along with elements of the South Australian Executive Service and the Australian Public Service leadership capability frameworks. In practice, this means that the five HLA leadership domains have been supplemented by four management domains. These relate to managing people, finances and procurement, a safe and healthy work environment and information and organisational processes (SA Health Workforce Directorate, 2015).

In Western Australia, the HLA has explicitly informed two of six leadership development programmes within the Department of Health. The Consultant Development Program, targeted at medical Consultants with Head of Department responsibilities, and/or clinicians aspiring to such a role, modifies the HLA domains to read Leading Self, Leading Others (Individuals), Leading Others (Teams), and Leading the Organisation. The Emerging Leadership Program, targeted at senior managers or equivalent policy and clinical roles, incorporates Leading Others, Leading the Organisation and Mindful Leadership (becoming an authentic leader) (Institute for Health Leadership, 2015).

The Northern Territory has delivered a range of eight leadership development programmes, but only the Emerging Clinical Leaders Program uses the HLA framework. Other programmes have been based on the Northern Territory Public Service Capability and Leadership Framework (Department of Health – Northern Territory Government, 2015).
The first New South Wales Health Leadership Framework was developed at the same time as the HLA and was influenced by many of the same key documents, including the Canadian leadership framework. The five domains listed include:

1. developing and leading self;
2. engaging people and building relationships;
3. achieving outcomes;
4. partnering and collaborating across boundaries; and
5. transforming the system (Health Education and Training Institute, 2013).

More recently, the establishment of Better Care Victoria has incorporated the Victorian Department of Health and Human Services Leadership and Organisation Improvement team’s work in leadership and service redesign (State of Victoria, 2016). The leadership programmes delivered previously have targeted particular employees with a focus on:

- executive leadership;
- leadership on the front line (managers and senior clinicians);
- health systems management (executives, senior managers, senior clinicians); and
- leadership in quality improvement programmes.

Historically, these programmes were broadly based on the NHS Leadership academy framework (NHS Institute for Innovation and Improvement, 2011), but it is planned that this work will be aligned to the HLA in 2017 (Senior Project Officer Priority Health Projects Branch Department of Health and Human Services 2016, pers. comm., 28 December).

Collaboration across jurisdictions
The QDoH has led cross-jurisdictional collaborative efforts. In August 2015, the HLU initiated the establishment of a National Health Leadership Collaborative. As health departments around Australia have continued to explore the implementation and evaluation of the HLA, the Collaborative has provided ongoing dialogue between peers. The first project undertaken by the Collaborative was to initiate a national overview of leadership programmes/strategies across the jurisdictions, with contributions from the Australian Capital Territory, New South Wales, Northern Territory, Tasmania, Queensland and Western Australia. The second initiative undertaken by the Collaborative, in May 2016, was to put a proposal to the Australian Health Minister’s Advisory Council to establish a leadership subcommittee of the Health Workforce Principal Committee.

Although this proposal was not successful, it has assisted in continuing to raise the issue of health service leadership development at a national level. This was perceived as an increasingly important task, as following the disestablishment of Health Workforce Australia, building a health workforce capacity was also removed as a key outcome in Australian Department of Health Portfolio Budget Statements. At this time, the health workforce became incorporated into Outcome 2: Health Access and Support Services (Commonwealth of Australia, 2016).

New engagement with the Australian Government, aged care and independent health agencies
At a national level, the disestablishment of Health Workforce Australia did not signal a complete withdrawal of the Australian Government from supporting health workforce
development. The rural health workforce continued to be a priority for the government of the day (Gillespie, 2016). In 2016, Rural Health Workforce Australia, a not-for-profit body funded by the Australian Government, identified leadership as a key issue and commissioned a programme to develop rural leadership skills in emerging health professionals. PHN Northern Territory worked with UTAS staff and the Centre for Remote Health to deliver the CARAH Health LEADS workshop in Alice Springs (PHN Northern Territory, 2016). This demonstration programme sought to further develop participants’ leadership skills through an exploration of the HLA and related tools for practice and to consider how participants will apply these skills in rural, remote and Aboriginal and Torres Strait Islander health contexts. International interest has been expressed in the work, with invitations to present and facilitate workshops at the 2017 World Rural Health Conference in May (Australian College of Rural and Remote Medicine, 2016) and another iteration of the CARAH Health LEADS programme in May-June 2017.

Like all Australian Government departments, the Australian Department of Health is guided by the material developed by the Strategic Centre for Leadership, Learning and Development (part of the Australian Public Service Commission). The tripartite model put forward here includes:

- leadership practices for development;
- management expertise; and
- core and foundation skills.

The identified leadership priorities include being a leader, leading people, leading change; strategic thinking and political nous (Australian Public Service Commission, 2017).

The Aged Care Housing (ACH) Group provides a range of residential and community care services in South Australia and Victoria. The ACH Group has adopted the HLA framework as a structure for some of its learning and development programmes (Aged Care Housing Group, 2016) and its Inter-professional Leadership Group (Moran et al., 2015).

Educational programmes within the university system

Within the academy, the HLA has been applied to medicine (Kaled and Linh, 2013; Sebastian et al., 2014), nursing (Day and Brownie, 2014; Sebastian, 2013) and allied health (Dean and Duncan, 2016) education. In mid-2015, a new higher education text, built around the HLA and providing a broad range of case studies, was also published (Day and Leggat, 2015). Two academic units have been developed using the HLA as a structuring concept (Dean and Duncan, 2016; Shannon, 2015) while the HLA also forms the base of the Leadership Capability Workbook within the Emerging Nurse Leader programme (Australian College of Nursing, 2015). In this way, HLA has become embedded in the selection of leadership frameworks to be explored within the university system.

Professional associations

At the time of writing, few professional associations refer their members to the HLA (Australian Institute of Medical Scientists, 2013) while many more refer to the documents produced as a result of the consultation undertaken during its development (Australian Medical Association, 2013; Australian Nursing and Midwifery Federation, 2013; Royal Australian College of General Practitioners, 2013; Australian Private Hospitals Association, 2013; Indigenous Allied Health Australia, 2013; Australasian Podiatry Council, 2013). The ongoing influence of the HLA has been noted in relation to leadership in medical practitioners (Dalton, 2014), dental practitioners (Australian Dental Council, 2016), aged care
Developing a virtual community

Individuals with “boundary-spanning” roles across state government and the university sector have also been significant in promoting the ideas associated with HLA. The conjoint appointment between the Tasmanian DHHS and UTAS is an example of this, allowing for the creation of a development pathway based on the HLA, linking both organisations. The institutional uncertainty associated with this kind of fixed-term contract position, and the associated challenges of dealing with two sets of diverging corporate strategic priorities, led to the identification of a need for a “third space” for this work. As a result, independent, virtual platforms to support the HLA were established, creating a store of joint resources and a virtual community for leadership development.

The Health LEADS Australia Resource Centre brings together a bibliography of published materials, dating from the July 2013 publication of the HLA, onwards (Shannon, 2016c). Where the related documents or audio-visual materials are in the public domain, there are links to provide instant access. Where these are held within academic libraries or databases, the links provide a marker for purchase or access through institutional arrangements.

Social media provides two opportunities for the development of an on-going leadership dialogue. The Health LEADS Australia Community of Practice is actively hosted as a Facebook group (Shannon, 2016a). It features regular posts exploring the HLA, on rotation:

- Mondays – leads self;
- Tuesdays – engages others;
- Wednesdays – achieves outcomes;
- Thursdays – drives innovation; and
- Fridays – shapes systems.

The LinkedIn Health LEADS Australia Professional Network also creates the space for discussion amongst practitioners (Shannon, 2016b).

Developing an international community

Prior to its dis-establishment, initiatives by Health Workforce Australia and members of the Canadian Health Leadership Network (CHLnet) and the Canadian College of Health Leaders (CCHL), led to active collaboration between Australia and Canada with plans for joint research, leadership development programmes and shared resources (Dickson and Tholl, 2014). This planning was facilitated by a visit by a Health Workforce Australia Executive member in mid-2013 to meet with executives from CHLnet, CCHL, Accreditation Canada and the Physician Management Institute of the Canadian Medical Association. Plans were furthered when Health Workforce Australia was invited to co-present a workshop at the 2014 Canadian National Health Leadership Conference and to participate in the associated LEADS Collaborative Community of Practice event (Dickson and Sebastian, 2014).

More recently, presentations at the 2017 World Rural Health Conference (Australian College of Rural and Remote Medicine, 2016) indicated a continued international interest.
Competing models and practices
The development of HLA has not halted the production of competing models. The MCAP Leadership and Management Competency Framework (Zhanming et al., 2013), developed by staff at La Trobe University, has six core competencies and 79 behavioural items. Some Victorian health services are using MCAP to structure their professional development programmes (Liang, 2012).

The ACHSM Master Health Services Management Competency Framework was developed by the International Hospital Federation (Australasian College of Health Service Management, 2016). It has five domains of practice and is still in the process of review to modify the numerous competencies, so as to suit the requirements of the college and those programmes that will have to report to this, such as the university accreditation programme.

At a national level, the Australian Department of Health has developed its own leadership framework (Australian Department of Health, 2015).

Further, in the absence of a strong, national proponent of the HLA, as originally provided by Health Workforce Australia, at least two professional associations (the Australian Dental Industry Association and the Dieticians Association of Australia) have removed the HLA material from their websites.

Discussion – innovation and collaboration for health leadership
The historical narrative provided by this review has highlighted two forces for the continued development and implementation of an Australian Health Leadership Framework in the absence of strong, national leadership. Collaboration has occurred through inter-jurisdictional forums, participation in online networks and engagement in international forums. Innovation has occurred through the incorporation of HLA into leadership development programmes at State and Territory health departments, aged care and independent healthcare providers, formal university-level education programmes and professional associations. The review has also noted that some professional associations have stepped away from the HLA over time.

One of the main differences between the Canadian health leadership model and the Australian one was the substitution of “drives innovation” for the original “develops coalitions” (Dickson and Tholl, 2014). The process of establishing the HLA as a national leadership framework has itself stimulated innovation through the incorporation of the HLA into education and training programmes within many organisations. Petrie (2011, p. 26) suggested that this is emblematic of a “new era” of innovation in leadership development, brought about by “networks of people who can bring together and re-combine different ideas and concepts from diverse domains”. This also reiterates the importance of the collaborative process.

The Canadian health leadership model provides an example of how collaboration can support a national health leadership framework. The Canadian LEADS framework originated from a single province, becoming a nearly national network in its second stage of development. The CHLNet has been vital in both the development and implementation of the Canadian LEADS framework, through collaboration across a broad range of institutions (Dickson and Tholl, 2014).

The strong take-up of the HLA in the QDoH, and their subsequent leadership role in the collaborative arrangements across jurisdictions, has been essential in maintaining the momentum of health leadership, and it is emblematic of an established leadership development programme which has been active for over a decade (Crethar et al., 2009; 2011; Haseman et al., 2009). Continuity of personnel within the organisation protects against loss
of institutional memory and helps develop a leadership learning culture that supports this work.

Taking a leaf from the Canadian approach, and engaging a more diverse range of participants could provide a more powerful voice for health leadership development in Australia. An example of this is the expansion of the National Health Leadership Collaborative to individuals and organisations outside of state and territory government organisations. Organisations that have already engaged with HLA, such as the ACH Group, Rural Health Workforce Australia, PHN Northern Territory, the Centre for Remote Health, UTAS and Macquarie University may have much to contribute to such a forum as may other health and social policy entrepreneurs, such as those involved in the development of Change Day Australia (Change Day Australia, 2017).

Collaboration has also facilitated the on-going promulgation of the HLA framework, through accessible, online lists of resources and social media (Facebook, LinkedIn) sites. A similar approach has been taken in the free online resources provided to support Australian Aged Care Leadership (The Aged Care Leadership Development Centre, 2017). These were developed with institutional support; however, through a partnership between Aged and Community Services Australia, Leading Aged Services Australia and the Community Services and Health Industry Skills Council, with funding from the Australian Government Department of Industry. The Aged Care Leadership Development Project resulted in a strategy, framework, companion guide, a range of leadership review tools and the online portal (Southworth and Fitzgerald, 2016).

In addition, international forums, such as the World Rural Health Conference, have provided a platform for featuring the Australian Health Leadership Framework. Examples of using events to promote policy direction has been evident in public health, with the Adelaide Thinkers in Residence scheme seen as, in part, leading to the adoption of the South Australian Health in All Policies strategy (Baum et al., 2015). The staging of a national or international event, such as a Health LEADS Australia conference, may strengthen collaboration through existing professional networks and communities of practice.

Other collaborative opportunities for the future include re-establishing contact with Canadian colleagues and further exploring ideas for partnership. Sponsorship to produce a greater array of leadership tools and resources available for widespread use would further support the uptake of HLA as would evaluation of some of the current initiatives.

These kinds of collaborative initiatives provide the ground for building the narrative of health leadership as originally conceived in the HLA: capacity-building, authentic and distributed (Health Workforce Australia, 2013). In their 2015 discussion of the HLA, however, Moran et al. amplify the importance of context to distributed leadership: “although leadership capacity might be innately evident within individuals, they must be given the space and opportunity for leadership practices to emerge” (Moran et al., 2015, p. 187).

Conclusion
The Australian health leadership framework has had many “adventures” in its first three years of existence (Shannon et al., 2016). This review provides insight into the dynamics of innovation and collaboration that have shaped this journey.

In the implementation of a national health leadership framework, the Australian experience suggests that both driving innovation and developing coalitions are required. Driving innovation by building collaborative networks would appear to provide the most promising opportunities for promoting the promulgation and further development of the HLA, into what will no doubt continue to be a dynamically changing landscape.
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Further reading


About the authors
Elizabeth Shannon is an Adjunct Senior Lecturer at the School of Health Sciences, University of Tasmania. She works with the Tasmanian State Service Management Office, Department of Premier and Cabinet, on a range of workforce-related policies and projects and is the Manager, Leadership and Management Development Unit, in the Tasmanian Department of Health and Human Services. She has an interest and expertise in leadership and management, strategic human resource management, political science (public policy), project management, university learning and teaching, and volunteerism. Elizabeth Shannon is the corresponding author and can be contacted at: e.shannon@utas.edu.au

Andi Sebastian is the Director of Change Day Australia. Other roles she has undertaken include Strategic Initiatives Manager with the Royal Australasian College of Health Service Managers; Project Manager, Leadership with Health Workforce Australia and an HIV/AIDS Consultant in Papua New Guinea. Andi Sebastian has worked in the community and tertiary sectors and designed and led a consultancy business. Andi has a Masters in Primary Health Care and is a member of the Australian Institute of Company Directors.

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Can Lean Six Sigma be used to reduce medication errors in the health-care sector?

Yaifa Trakulsunti and Jiju Antony
Department of Business Management, Heriot-Watt University, Edinburgh, UK

Abstract
Purpose – The purpose of this paper is to present the implementation of Lean Six Sigma (LSS) to reduce medication errors, by using four case examples. The paper will also suggest appropriate Lean and Sigma tools to improve the medication process.

Design/methodology/approach – The authors critically analyze four case examples that used LSS projects, to demonstrate the approach, benefits, success factors and lessons learnt.

Findings – LSS is a powerful process improvement methodology that could be applied by health-care sectors to reduce medication errors, increase patient safety and reduce operational costs. Common Lean and Six Sigma tools play a significant role in improving and sustaining the medication process.

Practical implications – It is necessary for the project team to select the most appropriate LSS tools to address medication process problems. Adoption of a LSS roadmap could help health-care organizations in the successful implementation of LSS.

Originality/value – The paper is valuable for health-care professionals seeking to reduce errors in the medication process or other processes that need to be improved.

Keywords Six Sigma, Lean Six Sigma, Health care, Lean, Medication errors

Paper type Viewpoint

Introduction
Lean is a philosophy that focuses on the elimination of waste and non-value-added activities from the process, improvement of speed and reduction of operational costs. Applying Lean in the health-care sector, particularly in hospitals, has shown an improvement in quality of care, patient safety and staff and patient satisfaction (Cheng et al., 2015). Currently, the implementation of Lean is favored by health-care managers worldwide because it combines cost reduction with an outstanding standard of health service to the patient, it is easy to understand and is straightforward to use by health-care staffs (Matthias and Brown, 2016).

Evidence has shown that just over 57 per cent of the employment of Lean in health care occurs in the USA, followed by the UK which accounted for 29 per cent, about 5 per cent in Australia and another 9 per cent internationally (Brandao De Souza, 2009).

Six Sigma is a business management strategy and a data-driven methodology, which aims to reduce variation within a process that can result in defects or errors. It was first applied in the manufacturing industry and has widely commanded attention subsequently in health-care delivery. Many leading health-care organizations have successfully implemented Six Sigma and has resulted in important outcomes such as reduced emergency room cycle time, increased timely completion of medical records, increased bed availability and a reduction in medication errors (Gijo et al., 2013). Lean and Six Sigma have been integrated after they have been used independently from the 1980s onwards (George, 2003). The integration of Lean and Six Sigma can contribute to better outcomes than the
separate implementation of each methodology (Bhat et al., 2014). Lean Six Sigma (LSS) uses different tools and techniques within the Six Sigma problem-solving methodology to address problems. After the first health-care organization (Commonwealth Health Corporation, KY) successfully implemented Six Sigma in 1998, several LSS projects have been applied in different areas of health-care settings to improve their processes, for example, emergency unit (EU), surgery/operating room, intensive care unit and the medication process. The next section will provide an overview on how LSS has been applied to reduce medication errors in existing literature.

**Lean Six Sigma in reducing medication errors: a review of literature**

Medication error is one of the primary causes leading to patient morbidity and mortality (Christopher et al., 2014). Medication error is any error that occurs at any stage of the medication process, stemming from prescribing, transcribing, dispensing or administration. Medication errors cause at least one death every day and injure approximately 1.3 million people every year in the USA (USA Food and Drug Administration, 2016). Health-care managers have not been successful so far in using effective tools and processes to reduce medication errors (Hussain et al., 2015). Buttigiet et al. (2016) claimed that quality in health care worldwide has been improved by the use of continuous improvement (CI) methodologies. The most popular CI methodologies used widely today in both manufacturing and service sectors are Lean and Six Sigma (Albiliwi et al., 2015) or its integrated format called LSS developed in 2002.

Going back to the early 2000s, a study by Chan (2004) first implemented Six Sigma to reduce dispensing errors in a pharmacy department in Taiwan. Furthermore, Lean was implemented to reduce missing dose incidents in a university hospital inpatient pharmacy by Hintzen et al. (2009). A study by Esimai (2005) combined Lean and Six Sigma methodology in a mid-sized hospital to reduce medication errors. This study has yielded a dramatic reduction in estimated labor costs of $550,000. Similarly, a study conducted by Hintzen et al. (2009) showed that the hospital can save the inpatient pharmacy $82,650 annually by reducing the number of errors and missing doses. There has been evidence that LSS tools have been applied to eliminate medication errors. For example, failure mode and effect analysis (FMEA), a Six Sigma tool, has been widely used to reduce errors in the prescribing, preparation, validation, dispensing and administration processes (Lago et al., 2012; Arenas Villafranca et al., 2014; Rodriguez-Gonzalez et al., 2015). Nevertheless, the current literature has shown the limitations of LSS application in reducing errors in the medication process, when compared with other health-care settings such as the emergency department, surgery/operating room and intensive care unit. The purpose of the paper is to present the four examples of LSS application in reducing medication errors, which have been selected from the existing literature.

**Application of Lean Six Sigma in reducing medication errors – examples from existing literature**

The purpose of this section is to analyze each of selected case examples under the following headings.

- setting and context;
- approach;
- key success factors;
- benefits; and
- key lessons learnt.
Case example 1 – Lean Six Sigma reduces medication errors (Esimai, 2005)

**Setting and context:** A mid-sized hospital decided to implement an LSS project to reduce errors in a medication process by changing policy and practice. A project team, supervised by a steering committee, was set up to achieve this objective.

**Approach:** The project team used different tools during each phase of Define-Measure-Analyse-Improve-Control (DMAIC) methodology. In the define phase, the project team used a project charter to identify the scope and goal of the project (Bhat et al., 2014). The scope of the project was focused on the medication order (OE) process and aimed to reduce medication administration record (MAR) errors by the end of the project. During the measure phase, the hospital’s quality improvement department used process mapping to depict the process steps of pharmacy OE and the MAR transcription process and compared these with the current sequences of operations. The team reviewed the errors that were observed in the pharmacy OE process, and they finally identified the different types of errors. The team then used Pareto analysis to prioritize the relative frequency of the occurrences of errors. The total error rate from the overall MAR process was 3300 per million which accounted for 0.33 per cent. Within the analysis and improve phase, brainstorming was used to find the root causes of all types of errors and to recommend solutions to reduce these errors such as using computerized physician order management (CPOM). To sustain the solutions, in the control phase, the simple linear regression analysis of each type of error showed a negative trend.

**Key success factors:** The three success factors were great understanding of the process, good team dynamics and support of the quality improvement department along with backup from senior management.

**Benefits:** The key benefits from the use of the LSS methodology were as follows:
- Total error rate was declined from 0.33 to 0.14 per cent in five months.
- An estimated labor cost was reduced to $550,000 per year.
- Patient satisfaction was increased.
- Employee morale and better relationships between nurses and pharmacists were enhanced.

**Key lessons learnt:** The combination of Lean and Six Sigma tools and techniques has provided a noticeable result in reducing medication errors. Moreover, the importance of teamwork and team dynamics, as well as selection of right people for the right project makes an immense difference in the successful execution of the project.

Case example 2 – using Six Sigma to reduce medication errors in a home-delivery pharmacy service (Castle et al., 2005)

**Setting and context:** The home-delivery services have become a high-volume operation. Medco Health Solutions, Inc. decided to conduct a Six Sigma project to reduce medication errors in its home-delivery pharmacy service, which consisted of eight prescription processing, three dispensing and six call center pharmacies.

**Approach:** The project team used the DMAIC methodology to reduce variation within the medication process. In the define phase, the team identified the dispensing accuracy rate as an issue to be tackled. The project team used process mapping to depict the prescription fulfillment process to identify potential errors in each step. An electronic reported errors form was developed in the measure phase to capture potential medication errors. However, to improve the reliability of data collection, the entire errors reporting process was reconstructed and then a centralized reporting unit was created to standardize the data.
collection process. A committee further reviewed the centralized unit’s reports and identified the root cause of each error. During the analyze phase, the project team used process control tools (e.g. control chart) to identify the data collected from the 3,623 reported errors during the first five months of the new reporting process. The data showed that of the reported errors, the prescription processing pharmacies were the largest contributor. Therefore, the project team continuously analyzed the performance indicators for the prescription processing pharmacies, which considered to be the most error-prone of the system. In the improve phase, they implemented the solutions, for example, creating a procedure to enhance sound-alike/look-alike (SALA) alert, providing an ongoing education and training for the pharmacist. They used a linear regression analysis to demonstrate a reduction in the reported errors number. Within the control phase, a control chart was used to sustain the reduction of medication errors over a period and to identify when additional analysis might be required.

**Key success factors:** The success factors were effective training in the organization and development of LSS infrastructure, allocation of time and financial resources to projects and the clear identification of goals and roles and responsibilities of team members at the beginning of the project.

**Benefits:** The implementation of Six Sigma methodology resulted in an improvement in the data collection process and a decline in dispensing accuracy rate and number of several types of medication errors that included:

- wrong dose selection (33 per cent);
- wrong direction (49 per cent);
- SALA errors (69 per cent);
- supply errors (48 per cent); and
- patient name errors (46 per cent).

**Lessons learnt:** It is important for health-care organizations providing medication services to create a continuous quality improvement process to ensure that medication errors are minimized. Furthermore, the selection of team members based on their daily responsibility aligned with the project’s goal helped the project to maximize resources.

**Case example 3 – reducing medication errors using Six Sigma methodology and quality function deployment (Benitez et al., 2007)**

**Setting and context:** Alton Memorial hospital was aware of the potential cost savings from the improvement of adverse drug events. Based on the hospital database, 43 per cent of those medication errors were caused by transcription errors. A project team was formed to reduce transcription errors in the hospital.

**Approach:** The project team initially followed DMAIC methodology. The team has identified two different goals in the define phase:

- to reduce the defect rate of the current process with quick wins; and
- to develop a standardized process across the hospital except the EU.

The team aimed to improve the accuracy of order entry, which related to the transcription errors by 50 per cent, with the two above goals. In the measure phase, the team used process mapping to represent virtually the process of OE entry. The MAR and chronological sheet, a tool used by nursing staff, were the most commonly used documents to ensure order accuracy. The team further decided to collect data to compare the accuracy of the MAR and
the chronological sheet and finally concluded that the chronological sheet had to be removed because it was not adding value to OE entry accuracy. In the analyze phase, the team identified the potential causes of transcription errors as the interruption of the pharmacist during the order entry process and the illegibility of the physician order, and they took remedial actions to eliminate these causes. In the improve phase, the team decided to implement the existing patient care activity record based on the plug matrix results. Within the control phase, the team used control charts to maintain the improvement over a longer period. Moving to the second goal, the team decided to follow the design for Six Sigma (DFSS) methodology and used quality function deployment to bridge the customer's expectations with the design of the process function.

**Key success factors:** This included the use of an experienced Black Belt to use LSS methodology, team dynamics and effective communication across the team members with less silo mentality, followed by relevant training on Six Sigma methodology and the project management aspects.

**Benefits:** Following are the key benefits reported from the implementation of the project:

- After the process change, the percentage of order entry accuracy has been improved by 90 per cent.
- There is an improvement in patient satisfaction.
- After the chronological sheet was removed, there was a reduction of 7-min workload per patient per day.

**Lessons learnt:** The reaction plan revised by the team is useful for the hospital to solve the problems when the process goes out of the control. DFSS methodology was proved to be appropriate to create a new process.

**Case example 4 – use of Six Sigma methodology to improve pharmacist-dispensing error at an outpatient clinic (Chan, 2004)**

**Setting and context:** In Taiwan, pharmacist-dispensing errors ranked second on a list of all medication errors, based on the medication errors reporting system. Previously, the pharmacy department had implemented several quality improvement strategies, but the results were not satisfactory. Therefore, they made a decision to reduce dispensing errors by applying Six Sigma methodology.

**Approach:** The project team followed DMAIC methodology to achieve the operational goals. In the define phase, the team identified the goal and scope of the project by using the voice of the customer (VOC) analysis to obtain data regarding the customers’ needs; in this case patients and nurses were identified as the customers. During the measure phase, the team used historical data and manually collected data to establish baseline performance of the process. The frontline pharmacists were trained to use data collection sheets to capture the dispensing errors in a double check process before giving medicines to patients. The data sheets were analyzed by the team leader at the end of each day. Within the analysis phase, the team developed process mapping of dispensing at an outpatient clinic to identify sources of variability in the process. The collected data showed that human factors such as working attitude, knowledge and experience were the largest contributor of dispensing errors. In the improve phase, the team used an automatic dispensing machine for drug prescription to indicate a dosage error. After implementing the process, the team leader was required to collect data to monitor the process until it was working smoothly. In the control phase, the team used control charts and process capability analysis to ensure that the improvement was sustained.
**Benefits:** The key benefits were as follows:
- improvement in patient safety;
- improvement in frontline staff productivity; and
- reduction in dispensing errors by over 30 per cent.

**Key success factors:** This included effective training, right choice of project for Six Sigma, good communication and management backup.

**Lessons learnt:** Six Sigma is a powerful methodology that can encourage pharmacists to work efficiently and help them to be aware of the impact of their errors on patient safety. Six Sigma has provided a systematic and disciplined approach that could be implemented in a complex health-care system.

**Leadership for Lean Six Sigma deployment**
Leadership is an essential component for LSS deployment, as it requires workforce to exhibit leadership across all levels irrespective of their position in the organizational ladder. While the top management understands the need of the organization and business better than anyone, it is the bottom-line workers who know the process better than the top management, as they work day-in and day-out on the operational transactions.

According to Laureani and Antony (2017), no matter how successful a LSS program appears to be, inevitably there will be operational issues, budget constraints and ad hoc challenges that will divert the organization’s attention from the program. There is a strong role for visionary and strategic leadership at this stage to demonstrate firm dedication towards the successful deployment of LSS.

Leadership needs to enable employees at all levels to shift from their current culture to a new culture. The range of leadership responsibilities for creating a successful LSS initiative in any industrial setting includes:
- setting a clear vision for establishing the desired culture;
- communicating the vision to employees at different levels to gain organizational commitment;
- empowering employees and giving them a sense of accountability and ownership; and
- conducting regular performance reviews, reinforcing desired behaviors and celebrating successes.

The most important leadership traits for the successful deployment of LSS are persistence and tenacity, adaptability, honesty and integrity, energy and self-confidence (Antony and Snee, 2010). The authors also view that a transformational style of leadership will ensure the LSS initiative and bottom-line results of the improvement projects are sustained over time.

**Discussion and implications**
The most powerful finding of LSS application from all the case studies is a significant outcome regarding the reduction of errors in the medication process. The predominant benefits of LSS application from all the case studies include improved patient safety, improved internal and external customer satisfaction, effective communication, improved team dynamics, enhanced employee morale and quantifiable cost savings. The clear vision and support from top management and the assistance of other related departments such as quality improvement and information technology were crucial to the successful implementation of the project. Most of the selected case studies have provided LSS training to the project team to understand DMIAC.
methodology and related Lean and Six Sigma tools. However, training alone would not guarantee a successful completion of projects. Effective coaching and mentoring by LSS project champions and right choice of projects are imperative. However, none of the case studies discuss how to select LSS projects and what criteria should be used in the project selection process. If organizations do not adopt the right project at the early phase of the initiative, the LSS initiative could be a waste of resources, potentially leading to frustration for many, especially for the senior management team within an organization.

All the selected case studies have followed DMAIC methodology, and several Lean and Six Sigma tools have been used across each phase of this methodology. The most common Lean and Six Sigma tools are process mapping and control charts, used in all the case examples. Process mapping has been used to depict the process steps and identify potential errors in medication process. Control charts have been applied in the control phase to maintain the improvement of the process over a period. Another dominant tool observed from the case studies was the use of VOC to understand and evaluate their needs. Furthermore, one of the tools used in the improve phase is poka-yoke or mistake proofing, whereby devices or systems and software programming are implemented to prevent the errors. These include CPOM, an automatic dispensing machine and optical character recognition technology. This paper is valuable for health-care sectors seeking to reduce errors in the medication process or other processes that needed to improve. Furthermore, it would be of interest to hospitals, with the dual aims of improving patient safety and reducing operational costs.

Conclusions
The case examples have been shown that LSS is a powerful process improvement methodology that could be applied by health-care sector to reduce medication errors. The methodology of LSS, its tools, benefits and the success factors of LSS application in the context of medication errors has not been reported before in the literature, and this paper could bridge this gap. Many valuable concepts have been extracted from four case studies. The integration of Lean and Sigma tools plays a key role in the improvement of the medication process. Lean tools can be used to enhance the workplace environment, which could reduce excessive workloads of staff, incorrect dosage calculation and miscommunication, whereas Six Sigma tools can be developed to reduce mean errors and even variation in error rate in the process. The authors are in the process of developing a LSS roadmap for health-care practitioners to guide them in the implementation and deployment of LSS along with a customized LSS tool kit for reducing medication errors. Finally, this study highlights the importance of putting the right leadership in place to ensure successful deployment, coupled with the top talent in the organization involved in LSS, providing them with the right project management tools and methodology, and making them financially accountable for the success of the initiative.

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Corresponding author
Jiju Antony can be contacted at: j.antony@hw.ac.uk

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Organisational learning
John Duncan Edmonstone
MTDS, Ripon, UK

Abstract
Purpose – The understanding of “organisations” has changed fundamentally from seeing them as concrete entities to viewing them as communities of meaning. Mature adults in healthcare learn best when addressing pressing problems in company of their peers. Healthcare is unlike other sectors because of the emotional labour which is part of the experience of clinical staff. Absorptive capacity offers a conceptual model for viewing organisational learning and the encouragement of systemic eloquence can be enabled through a variety of approaches, provided they are designed and delivered as part of a well-thought-through approach to developing local absorptive capacity.

Design/methodology/approach – This is a viewpoint paper.
Findings – Healthcare differs from other sectors. Organisational learning can be enabled by a range of approaches, but these need to be sensitive to local circumstances.

Originality/value – The paper asserts that healthcare is unlike other sectors because of emotional labour on the part of clinical staff. It maintains that organisations are communities of meaning, rather than concrete entities. Systemic eloquence can be enhanced by the concept of absorptive capacity, applied in local contexts.

Keywords Organizational learning, Absorptive capacity, Healthcare, Emotional labour

Paper type Viewpoint

What do we mean by an “organisation” and how does learning take place within it? Employees of health-care organisations are mature adults; so how adults learn in work contexts is important. The unusual nature of health-care organisations is also important, and so the question of by what means such organisations can learn is crucial.

What do we mean by an organisation that it may learn?
We take health-care organisations for granted as the places where we work and spend much of our waking time but typically underestimate their ephemeral nature. Their names and abbreviations seem to appear and disappear in a word salad of “re-disorganisation”, which makes for confusion.

At the root of this may be what is termed the “positivist” viewpoint in the social sciences – treating organisations as concrete entities with an objective existence independent of those who work within them and those who lead and manage them – so, organisations are seen as easily definable and measurable (Francis, 2002). This is a form of “reification” which occurs when human creations such as organisations are misconceived as “facts of nature, results of cosmic laws or manifestations of divine will” (Berger and Luckmann, 1966).

There is a danger of ignoring vital dynamics relating to organisational politics and emotion, as these are “complex, difficult to understand and at times overwhelming” (Vince, 2004). From a different perspective, organisational life can be seen to be co-created by both the rational and the emotional and so organisations are “the temporary product of interactional processes” (Rigg, 2008). This emphasis is more on the social process of organising than on organisations as entities. This view rejects the possibility of one objective “grand narrative” in favour of a reality that is socially constructed and in which
context and culture influence and are influenced by organisational actors who, in turn, shape and are shaped by this process and in which the worldview is constantly reformed and negotiated by coalitions and powerful players. No single objective truth can be known because all of us are participating in or co-constructing that process.

Health-care organisations are thus far from being rational and stable entities. Organisational reality is shaped by conversations and dialogues that take place between the people within them and this is constantly shifting. “Organisations” are rather communities of meaning, sustained and perpetuated by communication and interaction patterns and shaped by individuals’ power relations and emotions. Organisational learning is the process of creating, retaining and transferring knowledge within an “organisation” and between “organisations”. It can be seen as a means of encouraging “systemic eloquence” – the ability of parts of a health-care system to talk well to each other (Edmonstone, 2011).

**What is the nature of adult learning?**
Adult learning is understood as a natural process, rather than an ego-driven one (Claxton, 1981). It is not something that “I” do but happens of itself, often in spite of “I” and not because of it. Learning is not confined to formal structured settings such as educational and training programmes but can also be informal in nature – predominantly experiential and non-institutional – and may also be incidental – unintentional and a by-product of other activity (Marsick and Watkins, 1997). While individual human beings are naturally “programmed” to learn, organisations are not.

What is known in adult learning terms is that:

- **Learning starts from not knowing**: It is when people admit that they do not know how to proceed that they become open to learning. There can be no experts in situations in which there are no “right” answers and no obvious ways forward. In such situations, people must act to learn.

- **Learning involves the whole person**: People do not, in practice, separate their emotions from their intellect. The popularity of emotional intelligence is a recognition of the role that feelings play in learning (Goleman, 1996).

- **Much learning is episodic in nature, rather than continuous**: It takes place in bursts of intense activity which absorbs the learner’s attention and ends when the purpose of learning has been achieved. People then resort to a slower pace of learning before the next intensive episode occurs, stimulated by a problem which demands resolution.

- **We feel the urge to learn when we are faced with difficulties we would like to overcome**: Real-world problems provide us with the motivation to learn. People taking responsibility in a situation have the best chance of taking actions that make a difference. We learn most, and best, when what and how we learn is experienced as relevant.

- **Learning is not just about the assimilation of knowledge but also about the recognition of what is already known**: Learning is based upon, and builds on, previous experience. It involves what is taught and also our questioning insight. It is both the acquisition of yesterday’s ideas and the trying out of new ideas. It involves asking questions in conditions of uncertainty and implies a degree of risk – taking actions that may or may not work.

- **A powerful block to learning is our predisposing way of seeing the world**: Our “mindset” or way of seeing the world has been formed by previous experience and
comprises our fears, hopes, speculations, queries, intuitions, habits, identifications, prior training, social conditioning and internalised cultural expectations. These are usually not shared, explicit or even logical but contribute to the patterns of beliefs, traditions, fears and conflicts that make some things possible and others impossible.

- Revision of mindsets is easier in a safe and secure atmosphere: We learn best with and from other people when addressing together pressing difficulties to which no one knows the solution. Learning is increased when we are asked questions and reflects on what we did, when we have time and space to address problems and when we are both supported and challenged (Edmonstone, 2011).

What is the nature of healthcare organisations?
The conventional wisdom is to consider health-care organisations in exactly the same way as other types of organisation. Yet, there is a powerful case that health-care organisations are different from industrial and commercial enterprises. The closest parallels would be with people working in other “human service organisations” such as education, social services and the police (Edmonstone, 1982) where “street-level bureaucrats” (Lipsky, 1980) have operated in conditions of high discretion and low prescription when dealing with the public. The reason for this difference is because the people who work in healthcare (particularly clinical staff) have to undertake what is termed “emotional labour”, a recent term used to describe a much older phenomenon. Revans (1964) from work at Manchester Royal Infirmary originally described a hospital as an institution “cradled in anxiety” and Menzies–Lyth (1959) highlighted healthcare staff as bearing:

[...] the full immediate and concentrated impact of distress, tragedy, death and dying which arise from patient care and which are not part of the typical working experience for most of the public.

While Tallis (2005) identified that:

It is easy to forget the appalling nature of some of the jobs carried out by healthcare staff day-in, day-out – the damage, the pain, the mess they may encounter, the sheer stench of diseased human flesh and its waste products.

and that:

Contact with emotional distress and disturbance can be [...] harrowing. Existential questions about identity, suffering, madness and death are raised and may put people in touch with extreme feelings of confusion, pain and loss. The struggle with feelings of helplessness and hopelessness in the face of suffering cannot be avoided and individuals, depending on their personality and past experience, protect themselves in different ways from the emotionally traumatic environment.

Emotional labour is the “suppression of feeling to sustain an outward appearance that produces in others a sense of being cared for” (Hayward and Tuckey, 2011). In practice, it involves:

- depersonalisation and categorisation of patients;
- the cultivation of professional detachment and self-control – a “caring but distant” demeanour vis-à-vis patients and relatives;
- ritualistic task performance involving checking, rechecking and form filling as avoidance;
delegation upwards to seniors to avoid responsibility; and
suspicion of organisational change – or alternatively an obsession with regular
reorganisations.

The protection against anxiety that care-giving induces by the suppression of personal
emotions over a sustained period leads to a reduced ability to withstand the emotional toll of
care which, in turn, leads to either burnout or unhealthy detachment – no longer noticing or
acting on the distress of others.

While this is true of individual professional healthcare workers, there is also an
institutional impact:

Healthcare organisations operate in society as “containers” of the emotions and anxieties of
patients’ relatives and families and because of this the experience of leaders and managers of
clinical professional staff is different from that of an industrial/commercial enterprise. Managerial
initiatives from the 1980s onwards have served to increase and bolster the potential defence
mechanisms in play to deal with the inherent anxiety of working in healthcare. Increased
bureaucratisation of professional work has also served to increase prescription and decrease
discretion (Edmonstone, 2013).

Accordingly, learning in health-care organisations is marked by the nature of the work
undertaken by clinical professionals and also permeates and influences the entire
organisation (Hinshelwood and Skogstad, 2000). When a scandal in healthcare is exposed,
the default “solution” involves the imposition of bureaucratic controls and the mandating of
formal staff education and training – but these cannot guarantee individual, group and
“organisational” learning or change in work practices.

How “organisations” might learn
A useful concept in considering how systemic eloquence might be enhanced is absorptive
capacity – the capacity of an “organisation” to acquire, assimilate and apply knowledge. It is
shaped by external and internal factors. The former includes:

- wider environmental conditions, such as the pace of change or the scale of challenge
  faced;
- how easy it is for a health-care organisation to access both explicit and tacit
  knowledge about performance, and how that knowledge is shared and transferred at all levels and across all staff groups; and
- how a health-care organisation works with other stakeholders and whether those relationships exhibit a high degree of collaboration, trust, mutual respect and parity, and how close or distant these relationships are.

The latter comprises:

- how inward- or outward-looking a health-care organisation is – how it responds to
  experimentation and innovation in clinical and managerial terms;
- how hierarchical or controlling it is;
- the existence of strategies that make the focus of performance improvement clear, are shared and supported by all staff groups and are realistic and consistent; and
- the existence of intra-organisational structures and processes for mobilising
  knowledge – such as intelligence gathering, capacity development, change management.
The way that health-care organisations acquire, assimilate and apply such knowledge (or learn) is shaped by a combination of these external and internal factors (Walshe et al., 2009). So, how might such learning be fostered? A number of strategies exist including:

1. **Action learning sets**: Action learning is “a method for individual and organisational development based upon small groups of colleagues meeting over time to tackle real problems or issues to get things done, reflecting and learning with and from their experience and from each other as they attempt to change things” (Edmonstone, 2003). Action learning sets can operate within an organisation, across several organisations and even across an entire health and social care system (Edmonstone, 2011). Obolensky (2014) asserts that most organisations are stuck in a charade because those at the “top” know that they do not know the answers to the questions facing the organisations they lead – but feel that they should know – and so pretend to know. Those at the “bottom” do know most of the ways forward and also know that people at the “top” do not know, yet they expect them to know, and so, they often pretend not to know! Revans, the instigator of action learning noted that “doubt ascending speeds wisdom from above”.

2. **Large group events**: A range of approaches exist under this heading and give as much importance to the understanding and resourcefulness of participants as to those of experts. Participants reveal their own experience, beliefs and mental models. For this to happen, time and space are needed for individuals to engage in conversations through which their mindsets may change. The mix of participants and wide variety of perspectives are key here. The approaches include:

   3. **Conversational conferences** (Pratt et al., 2003): Designed to engage participants’ practical experience and interaction with external experts to promote conversations and networking and promote implementation after the event, pursued through focus on a shared task, opportunities for mutual support and question and answer.

   4. **Future search** (Weisbord and Janoff, 1995): The most structured of the large group approaches with the purpose being system-wide strategic planning. It is particularly applicable when enabling diverse groups to find common ground for constructive action and new approaches to address “wicked” problems (Rittel and Webber, 1973). A long lead time, preparation through a steering group composed of representatives of the stakeholders and an event of three days duration are necessary to get representatives of the whole system into one room and working together.

   5. **Open space** (Owen, 1995): A more fluid version of some of the other approaches.

   6. **Real-time strategic change** (Jacobs, 1994): Similar to future search, but capable of dealing with larger numbers of people, with a focus on building and maintaining a common database, fostering a sense of community and identifying preferred futures.

These approaches have a growing worldwide track record of application in the public sector, including healthcare (Harries et al., 1999).

Additionally, there are well-established methods already in use which enable the sharing of information, experience and perceptions between individuals and professions, including:

1. **Teamwork development**: Increasingly it is realised that healthcare can only be delivered by professional and multiprofessional teams. There is a tendency to label any staff grouping (even groups as large as 20 people) as a “team”, but these are
better described as “pseudo teams”. Nonetheless, there is evidence of emerging good practice in team working in healthcare (West and Lyubovnikova, 2013).

(2) **Benchmarking**: Seeking out and implementing best practice at best cost across several organisations, selected on a like-for-like basis, as a means of comparison (Ettorchi-Tardy et al., 2012).

(3) **Coaching and mentoring**: The most widely used development methods used globally in all kinds of organisations, these have a track record of success in healthcare, especially when directed towards the need to work across professional and organisational boundaries (West et al., 2015).

These should not simply be “initiatives” inspired locally or imposed nationally but be part of a comprehensive and well-thought-out local approach to developing absorptive capacity, which is sensitive to the immediate context, considering such matters as culture and history.

**Conclusion**

Our understanding of “organisations” has changed fundamentally from seeing them as concrete entities to viewing them as communities of meaning. Mature adults working in healthcare learn best when addressing pressing problems in the company of their peers. Healthcare is unlike other sector because of the emotional labour which is part of the lived experience of clinical staff. Absorptive capacity offers a conceptual model for viewing organisational learning and the encouragement of systemic eloquence can be enabled through a variety of approaches, provided they are designed and delivered as part of a well-thought-through approach to developing local absorptive capacity.

**References**


**Corresponding author**

John Duncan Edmonstone can be contacted at: john.edmonstone@btinternet.com

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Incorporating sustainability in small health-care facilities: an integrated model

Kevin Wing Ki Chu and Lenis Lai Wan Cheung
Institute of International Business and Governance
and Lee Shau Kee School of Business and Administration,
The Open University of Hong Kong, Kowloon, Hong Kong

Abstract
Purpose – It is challenging for small health-care facilities to implement changes when human and financial resources are limited for day-to-day operations. This paper aims to propose an integrated model for small- and medium-sized health-care facilities to integrate sustainability in their day-to-day operations, which have been derived from the leadership and change theories.
Design/methodology/approach – Drawing on previous research on leadership and change theories, the paper first critically reviewed the approaches to implementing changes and how applicable they are in the context of small- and medium-sized health-care facilities. Next, it proposes an integrated model with an execution plan.
Findings – The first part of the paper discusses how either the planned approach or emergent approach for change may fail in facilitating the implementation of sustainable initiatives, as incorporating sustainability into operations require both leadership of change and open learning systems. The second part outlines the four-phase combined approach, which includes phases of “exploration”, “planning”, “action” and “integration”, and discusses how change readiness is ensured through such approach.
Practical implications – The authors propose an integrated model as a framework for integrating sustainability into the operations of small health-care facilities. The clearest possible steps at various phases are proposed. Potential barriers and risks are highlighted and the coping strategies proposed to maximise the chance of successfully transforming organisations.
Originality/value – Applying the “how to” ideas based on the integrated model for change management will help leaders of health-care facilities gradually integrate sustainability into their day-to-day operations.

Keywords Change management, Sustainable practices, Change theories, Implementing change

Paper type General review

Health-care facilities are expected to take a more active role in building a low-carbon and resource-efficient economy. While health-care facilities make medical services more accessible and sometimes more affordable in the community, they can bring harm to the environment. Providing quality health-care services often comes at a hefty environmental cost. The waste produced by any health-care facilities and their uses of the consumables lead to climate change, ozone depletion, biodiversity loss, ocean acidification and chemical pollution. This points to the need for health-care facilities to implement sustainability measures. They should first identify its sustainability direction and set goals, which should be aligned with the business main targets as part of its values and beliefs, communicated with all the stakeholders. Sustainability guidelines and policies should be established and observed. This paper aims at discussing how a health-care facility could integrate sustainability into its organisational strategies and day-to-day operations. The paper starts with a discussion on how sustainability change could be effective in long run in the light of
the recent leadership and change management theories. It is then followed by a detailed framework which has taken into account the nature and the scale of the anticipated change.

Small health-care facilities’ responses to changes tend to be reactive, discontinuous and ad hoc, which is common across different domains of business (Burnes, 2004; De Wit and Meyer, 2005; Luecke, 2003; Nelson, 2003). Change management has been defined as “the process of continually renewing an organisation’s direction, structure, and capabilities to serve the ever-changing needs of external and internal customers” (Moran and Brightman, 2001, p. 111), and it been widely recognised as a great challenge to any organisation. A failure rate of around 70 per cent of all change programmes initiated was reported by Balogun and Hope Hailey (2004). The poor success rate may indicate a lack of a valid framework for implementing and managing organisational change as what is currently available to academics and practitioners is a wide range of contradictory and confusing theories and approaches (Burnes, 2004). By critically reviewing the current leadership and change management theories and approaches, a new and pragmatic framework for introducing and managing any sustainability initiative is then derived.

**Leadership of change**

The first thing required for making change happen is leadership (Elgström, 2007; Karlsson et al., 2011). Research indicates that organisational change can never be separated from organisational strategy, or vice versa (Burnes, 2004; Rieley and Clarkson, 2001) and managing changes is becoming a highly required managerial skill (Senior, 2002; Social Enterprise Knowledge Network, 2006). As Graetz (2000, p. 550) suggests, “Against a backdrop of increasing globalisation, deregulation, the rapid pace of technological innovation, a growing knowledge workforce, and shifting social and demographic trends, few would dispute that the primary task for management today is the leadership of organisational change”. Full-range leadership theory, as one of the most widely recognised theories of leadership, proposes three styles of leadership, namely, transformational, transactional and laissez-faire (Avolio, 2010; Sohmen, 2013). Among these three styles, transformational leadership, as an approach to change, has been empirically supported to be the most effective in facilitating corporate transformation (as discussed in Burke et al., 2006; Sims et al., 2009). While transactional leadership, which is based on contingent rewards, focuses on completing tasks by the deadlines, transformational leaders express a clear vision of the team; develop team members’ ownership of the vision; inspire and motivate them to achieve the goals (Sims et al., 2009).

To ensure that sustainability can be fully incorporated into day-to-day practice, a team culture of change has also to be cultivated (Sohmen, 2013). Recent research shows that team building has a positive mediating effect on project success (Aga et al., 2016). However, research in health-care sector has raised the awareness of the importance of understanding the existing culture of health-care organisations and how shared beliefs, values and practices developed over time could become resistant to change (Bowden and Smits, 2012; Cameron and Quinn, 2011). Having considered sustainability measures are not taken on an ad hoc basis, it is, therefore, important for the leaders to develop a cadre of passionate team members who truly share the values of sustainable practices and are eager to put into consideration the sustainability guiding principles when devising and revising clinical and administrative procedures.

**Sustainable initiatives as “continuous change”**

While change identified by scale can be divided into four different characteristics: fine-tuning, incremental adjustment, modular transformation and corporate transformation, the
introduction of sustainability initiatives to SMEs is of the type of corporate transformation, according to Dunphy and Stace (1993), as the change is corporate-wide and characterised by radical alterations in the business strategy. Corporate transformation is typically carried out in the form of discontinuous change, defined as “change which is marked by rapid shifts in either strategy, structure or culture, or in all three” (Grundy, 1993, p. 26). Luecke (2003) further states that discontinuous change is onetime events that take place through large, widely separated initiatives, which are followed up by long periods of consolidation and stillness and describes it as “single, abrupt shift from the past” (Luecke, 2003, p. 102). Advocates of discontinuous change argue this approach to be cost-effective, as it does not promote a never-ending process of costly change initiatives, and that it creates less turmoil caused by continuous change (Guimaraes and Armstrong, 1998). However, a growing body of research indicates that the benefits from discontinuous change do not last (Bond, 1999; Grundy, 1993; Love et al., 1998; Taylor and Hirst, 2001). According to Luecke (2003), this approach allows defensive behaviour, complacency, inward focus and routines, which again creates situations where major reform is frequently required. What is suggested as a better approach to change is continuous approach, which refers to a situation where organisations and their people continually monitor, sense and respond to the external and internal environment in small steps as an ongoing process (Luecke, 2003). In sharp contrast to discontinuous change, health-care facilities build its ability to change continuously in a fundamental manner to keep up with the fast-moving pace of change.

The planned approach: four-phase model
The planned approach initiated by Lewin (1946) is to explain what changes an organisation needs to make and how to implement them (Bamford and Forrester, 2003). It emphasises the importance of understanding the different states which an organisation will have to go through to move from an unsatisfactory state to an identified desired one (Eldrod and Tippett, 2002). Having reviewed more than 30 models of planned change, Bullock and Batten (1985) developed a four-phase model of planned change that splits the process into exploration, planning, action and integration. Although it has come under criticism since the early 1980s (Kanter et al., 1992; Burnes, 1996) that the approach’s emphasis is on small-scale change, and it is unable to cope with situations such as crisis where directive approaches and quick responses are required, the planned approach remains applicable to the small health-care facilities as the pace of change in such context can be flexible.

In response to this criticism of the planned approach to organisational change, the emergent approach has gained ground. Rather than seeing change to be top-down driven, the emergent approach tends to see change driven from the bottom-up (Bamford and Forrester, 2003; Burnes, 1996, 2004). The approach suggests change to be so rapid that it is impossible for senior managers effectively to identify, plan and implement the necessary organisational responses (Kanter et al., 1992). Therefore, the responsibility for organisational change has to become increasingly devolved (Wilson, 1992). The emergent approach emphasises that change should not be perceived as a series of linear events within a given period, but as a continuous, open-ended process of adaptation to changing circumstances and conditions (Burnes, 1996, 2004; Dawson, 1994). Apart from only being a method of changing organisational practices and structures, change is also perceived as a process of learning (Altman and Iles, 1998; Davidson and de Marco, 1999; Dunphy and Stace, 1993).

A combined approach to implementing change
The emergent approach and the planned approach are not necessarily mutually exclusive. A combined approach is proposed to be adopted. While top-down driven change is crucial to
the success of corporate transformation, the need for change could also be identified by every member of the staff. A small health-care facility needs to become open learning systems where strategy development and change emerges from the way the facility itself as a whole regularly acquires, interprets and processes information about the environment (Dunphy and Stace, 1993; Pahl-Wostl et al., 2008; Senge, 2014). The approach stresses a promotion of “extensive and in-depth understanding of strategy, structure, systems, people, style and culture, and how these can function either as sources of inertia that can block change, or alternatively, as levers to encourage an effective change process” (Burnes, 1996, p. 14). Furthermore, Burnes (1996, p. 13) argues, “successful change is less dependent on detailed plans and projections than on reaching an understanding of the complexity of the issues concerned and identifying the range of available options. Such proposal on building an organisation of continuous change and transformative learning has been identified as a crucial factor contributing to significant progress towards a sustainable world as well as the business success (Bebbington et al., 2007; Howie and Bagnall, 2015; Kitchenham, 2008). Change readiness is, therefore, the key aspect of the whole plan so as to engage all staff members and facilitate change rather than to provide specific pre-planned steps for each sustainability initiative.

Resilience of health-care facilities and sustainability
The integrated approach echoes the Chassin and Loeb’s (2013) call for enhancing resilience of health systems. The open learning systems built and change readiness facilitated will allow health-care facilities to recognise and contain errors quickly, thereby preventing them from mushrooming into bigger problems. Balbus et al. (2016) state that changes for sustainability and resilience are in fact two sides of a coin. For example, resources conservation can ultimately lower the cost of resilience and a health-care facility with mature sustainability practices stands a better chance maintaining its service to the community during adverse events. Despite the urgency of addressing both resilience and sustainability, the awareness of building sustainable health-care operations with more resilient systems remains low (Balbus et al., 2016) and the discussion about effective approaches to transforming health-care facilities into sustainable ones remains limited.

To sum up, under transformational leadership, securing the buy-in of the stakeholders, the staff members in particular, comes as top priority in implementing sustainability changes. Leadership to manage change should be in place to continuously monitor the change. While the four-phase model is, therefore, proposed as the skeleton of the plan, measures are to be taken to cultivate the organisation to be a learning organisation so as to enhance its resilience to sustainability changes.

Framework for introducing sustainable initiatives
Sustainability performance begins with the commitment of the Board of Directors and the development of a mission and strategy is of utmost importance. The emphasis of the mission should be shifted from the merely financial or social aspect to all three aspects of sustainability: social, financial and environmental. A sample mission statement of a health-care facility is as follows:

[Name of the clinic] is widely recognised and valued as a sustainable healthcare facility, where local communities benefit, businesses prosper and the environment is sustained through the coordinated delivery of quality healthcare services.

Then sustainability strategies are to be developed to move any health-care facility towards a full integration of sustainability. Such a move must be seen as a core corporate value, central
to the centre’s operations, rather than as a reaction to current any regulations or guidelines laid down by any external accreditation bodies.

The framework describes in the clearest possible way the management initiatives and procedures that should be taken to, first, enable the realisation of the mission statement and, second, foster a learning organisation which allows staff to reflect upon their practices and make contribution from the perspective of sustainability.

**Phase 1 exploration: engaging the whole team**
Integrating sustainability into the organisation is the process of ensuring the achievement of the environmental, social and economic goals through organisation-wide efforts. The following steps are proposed to be taken to win the buy-in of the team on the change.

*Management meeting*
Individual meeting with the executive team members to inform them of the sustainability issues and why the organisation should transform itself into an exemplar of a sustainable health-care facility and to familiarise them with the revised mission statement and the actions to take. An important agenda item in the meeting is to decide the memberships of a newly formed sustainability working group, which will be assigned the duties of planning, executing and monitoring the whole corporate transformational change.

*Staff meeting I: engaging the staff*
In a regular staff meeting, all staff will be notified of the new mission of the centre and the changes it will bring about and invitation for joining the sustainability working group is extended to every staff member.

*Staff meeting II: the beginning of the planning phase*
In the staff meeting that follows, the membership of the sustainability working group is confirmed. It is hoped that broad-based institutional support for the organisation’s strategy is sought in-between the two staff meetings through formal and informal communication.

**Phase 2 planning: energy save, waste reduction, purchasing policies and monitoring systems**
Planning phase involves devising guiding principles for decision-making including sustainable purchasing policies and human resources policies; and developing reporting, measurement and monitoring systems.

*Development of guidelines regarding furniture, equipment, consumable purchase*
An example of developing new guidelines is that an organisation should abandon the price-oriented purchase policy and prefer environmentally friendly products and those socially responsible suppliers.

*Revising appraisal system taking into sustainability elements such as work–life balance*
The pay, number of working hours, the subsidies for self-development and training opportunities are to be reviewed under the lens of sustainable human resources practice. For example, changes have to be made if the work–life balance has not yet been included in the current appraisal form and not discussed in the appraisal meeting. Other indicators such as self-reported amount of contribution to sustainable practice could also be included.
Development of guidelines for energy use, waste reduction including water use and the measurement and record keeping systems

A form is to be designed to record the energy use, water use, waste reduction and guidelines on how the organisation could reduce the consumption of resources are devised after carefully reviewing the day-to-day operations and considering the hygienic risks and work safety at the organisation.

Development of overall reporting and monitoring systems

A goal-setting, reporting structure and measuring the success or failure are crucial components to make sustainability performance work and long lasting. To start with, a conservative and realistic goal, for example, energy cost saved by 5 per cent, is proposed. By witnessing the progress of the improvement of its sustainability performance, the stakeholders will be motivated and their new practice fossilised.

Phase 3 action: strategic performance measurement systems

The balanced scorecard is a strategic management system that links performance measurement to strategy using a multi-dimensional set of financial and nonfinancial performance metrics. It was first developed by Kaplan and Norton (1996) and then revised for sustainability by Epstein and Wisner (2006). It has been amended to fit the context of small-scale health-care facilities. The four perspectives in the balanced scorecard, namely, financial, stakeholder, internal business process and learning and growth, represent four key components of creating and sustaining the practices. The scorecard serves as a tool to focus the management’s attention on the performance indicators which measure the progress of the sustainability developments of the organisation and ensures building a learning organisation to maximise its capability to cope with the changes. A draft of the balanced scorecard for sustainability at small-scale health-care facilities is shown in Figure 1.

Implementing financial initiatives

The specific actions that have to be taken include staff’s minimising energy and water use without compromising the safety and quality of the services delivered, according to the

<table>
<thead>
<tr>
<th>Financial dimension</th>
<th>Stakeholder dimension</th>
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<tr>
<td>• Energy costs saved</td>
<td>• Employee satisfaction survey done biannually</td>
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<tr>
<td>• Water saved</td>
<td>• Client satisfaction by survey &amp; number of community complaints</td>
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<tr>
<td>• Percent of sales revenues from ‘green’ healthcare / rehabilitation products*</td>
<td>• Funds donated for community support</td>
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<td><strong>Internal business process dimension</strong></td>
<td><strong>Learning and growth dimension</strong></td>
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<tr>
<td>• Amount of general waste and hazardous waste</td>
<td>• Number of hours of training re sustainability (including outsourced or internal)</td>
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<tr>
<td>• Percentage of socially and environmentally responsible suppliers</td>
<td>• Employee benefits promoting (innovative) sustainable practice at work</td>
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<tr>
<td>• Carbon consumption audit</td>
<td>• Number of hours of voluntary services for the local community</td>
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Figure 1.
Balanced scorecard for sustainability
policies and/or guidelines devised in Phase 2. Records of sales of “green” health-care products, the monthly energy and water consumption are kept.

*Implementing stakeholder initiatives*
Employee satisfaction is indicated by the appraisal form on which ensuring sustainable practice will become one of the new key responsibilities. The actions taken including reviewing the number of working hours and pay, providing or sponsoring training opportunities and the incentives that promote staff’s work–life balance. Client satisfaction is to be reflected by number of referrals and their self-reports on the survey conducted at the organisation.

*Implementing initiatives regarding internal business process*
The specific actions that have to be taken include minimising waste. The organisation also sources and appoints socially and environmentally responsible suppliers of medical equipment and consumables such as plastic gloves without the plasticizers di-ethylhexyl phthalate and polyvinyl chloride.

*Creating a learning organisation*
To create a learning organisation, sustainability-related seminars or workshops can be offered to its staff. Some other possible actions to take include a 15-min sharing session to be embedded in regular staff meetings. Staff members are encouraged to exchange suggestions on the sustainable practices and share their relevant experience. As part of the staff appraisal practice, staff members can also be asked to reflect upon their everyday practice and report their contribution to the sustainability issues.

**Phase 4 integration: monitoring and review**

*Weekly staff meeting*
A 15-min session in the weekly meeting is to be allocated on reporting the progress of any sustainability-related planning and actions.

*Quarterly balance scorecard*
The balanced scorecard is filled out, reported and reviewed quarterly. New measures to cover a wider scope of sustainability are to be added to the scorecard. The scorecard indicating the sustainability performance is to be reported to the Board of Directors quarterly (Figure 2).

**Resources needed, potential barriers and risks**
A person-in-charge should be appointed to head the Sustainability Working Group. That person will have to work intensively from Week 3 to Week 15, to review the organisation’s day-to-day operations and devising guidelines. A temporary half-time or part-time staff may need to be hired for three months from Week 3 to Week 15 to take up part of the existing duties of the person-in-charge, and some working hours of the other members of the working group. To implement the plan using the framework proposed, barriers and risks, however, are anticipated.

**Failure in fully engaging staff**
The first barrier of the plan is whether every member of the staff would fully embrace the sustainable practice or just see it as top-down instructions and “extra workload”. The current action plan presumes that all stakeholders in this change project are willing and interested in implementing it, and that a common agreement can be reached.
Figure 2. A sample Gantt chart of a nine-month timeframe for the implementation.

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<tr>
<th>Tasks</th>
<th>1st Month</th>
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<td>1.3 Staff Meeting II</td>
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<td>2.1 Developing Purchasing Guidelines</td>
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Ownership of the sustainability issues
The staff members could gain satisfaction by receiving praises irregularly from the patients they heal. The environmental impacts, however, have effects that are often longer-term and distant from their everyday work and personal life. What is more, the ozone depletion, for example, resulting from the carbon emission of a small-scale health-care facility would be insignificant compared to that of any single manufacturer. These may discourage the staff from taking active participation in the change process.

Financial incentives
Some actions such as energy save improve both social and financial performance simultaneously. However, purchasing environmentally friendly consumables may simply mean increase in the operating costs and such action to improve the environmental performance does not necessarily bring more patients to the organisations because what matters most to the patients is the quality of the treatment.

Therefore, the aim of the corporate transformation and its benefits should be effectively communicated to the staff and align them to overall strategic direction. Personal counselling may be needed to alleviate any change-related fears. Creating a learning organisation by encouraging staff to exchange ideas, and setting and measuring the progress would be vital as these, hopefully, engage everyone by making them witness and share the success.

Conclusion
An organisation will experience both the status and responsibility that come with this role—a truly sustainable business practice for a small-scale health-care facility. The time is right for the health-care industry to respond to the sustainability challenges with creativity, insight and courage. Still, change is never easy. But with reference to the proposed framework and plan, a small- or medium-sized health-care facility should be able to progressively turn into a truly sustainable business entity which achieves excellence in social, environmental and financial performance simultaneously, instead of merely achieving social objectives in financially sustainable way. In view of the gaps in the theories and practices addressing the implementation of sustainability initiatives in health-care facilities, future research is needed to advance the theory development and examine closely the effectiveness of adopting the proposed four-stage integrated model in different contexts.

References


Further reading


Corresponding author
Kevin Wing Ki Chu can be contacted at: kwkchu@ouhk.edu.hk

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Leadership in interprofessional health and social care teams: a literature review

Tony Smith
Centre for Leadership in Health and Social Care, Faculty of Health and Wellbeing, Sheffield Hallam University, Sheffield, UK

Sally Fowler-Davis
Centre for Health and Social Care Research, Sheffield Hallam University, Sheffield, UK

Susan Nancarrow
Southern Cross University, Lismore, Australia, and

Steven Mark Brian Ariss and Pam Enderby
School of Health and Related Research, University of Sheffield, Sheffield, UK

Abstract

Purpose – The purpose of this study is to review evidence on the nature of effective leadership in interprofessional health and social care teams.

Design/methodology/approach – A critical review and thematic synthesis of research literature conducted using systematic methods to identify and construct a framework to explain the available evidence about leadership in interprofessional health and social care teams.

Findings – Twenty-eight papers were reviewed and contributed to the framework for interprofessional leadership. Twelve themes emerged from the literature, the themes were: facilitate shared leadership; transformation and change; personal qualities; goal alignment; creativity and innovation; communication; team-building; leadership clarity; direction setting; external liaison; skill mix and diversity; clinical and contextual expertise. The discussion includes some comparative analysis with theories and themes in team management and team leadership.

Originality/value – This research identifies some of the characteristics of effective leadership of interprofessional health and social care teams. By capturing and synthesising the literature, it is clear that effective interprofessional health and social care team leadership requires a unique blend of knowledge and skills that support innovation and improvement. Further research is required to deepen the understanding of the degree to which team leadership results in better outcomes for both patients and teams.

Keywords Collaboration, Health care, Leadership, Teamwork, Interprofessional, Multiprofessional

Paper type Literature review
**Background**

This paper reports on the results of a critical literature review (Grant and Booth, 2009) that aimed to evaluate the evidence and to present an analysis of leadership in interprofessional teams in health and social care organisations.

Concerns over leadership in the UK National Health Service (NHS) first became an area of focus in the late 1980s when professional management was introduced (Mackie, 1987). When the labour government came to power in 1997, leadership capacity was recognised as a critical factor in the reform agenda; to modernise the NHS (Goodwin, 2000). The Department of Health set up a National Centre for Leadership in 2001 as part of the NHS Modernisation Agency and this led to a plethora of leadership initiatives commissioned by NHS organisations that included public health (McAreavey et al., 2001), a range of leadership frameworks (Bolden et al., 2003) and competency frameworks (Bolden et al., 2006). For nearly two decades, leadership development has been a priority within health care but less attention has been given to the effectiveness of leadership on the outcomes of teams. Reports on health service failures at an organisational level have further regularly identified poor leadership as a contributory factor in criminally negligent care (Keogh, 2013; Francis, 2013; Berwick, 2013).

The Kings Fund (2011) has consistently calls for replacement of heroic leadership models which focus on the development individuals in favour of an increased focus on shared/collective leadership models and extension of leadership development efforts to all levels. The continuing erosion of professional divisions in intermediate care and particularly community services has been driven in part by the ambition to create integrated services has enabled health and social care professions to increasingly work together around discrete stages of patient pathways (Ovretveit, 1997; Pollard et al., 2005, Means et al., 2003).

The formation of interprofessional teams has brought the issue of leadership to the fore with the challenge of enabling sometimes large teams of different professionals and differently skilled workers to coordinate their efforts and work more closely together than was traditionally the case. This integration agenda is not straightforward, however, as it fundamentally contradicts many of the fundamental tenets of professionalism (Reeves et al., 2010), with health-care leaders sharing responsibility across services, for the delivery and outcomes of care.

Thylefors et al. (2005) developed a useful taxonomy to understand the level of integration of work practices in health-care teams consisting of a range of professions/disciplines.

“Multiprofessional” teams have no focus on collective working. Professionals treat the patient independently, without the input of other team members. This model represents the customary form of health-care delivery in which doctors traditionally took responsibility for coordinating independent contributions to the care of patients.

*Interprofessional* working encapsulates the core notion of teamwork, where outputs are measured and based on the collective effort of team members working with the patient. Effective care is accomplished through the interactive efforts of health-care workers, with some responsibilities shared, requiring collective planning and decision-making (Day, 1981; Sicotte et al., 2002).

A study of the effects of multiprofessional and interprofessional team approaches on teamwork; and team effectiveness for rehabilitation teams, found that interprofessional teams showed significantly better results for nearly all aspects of teamwork and team effectiveness measured (Korner, 2010).

This paper presents a review of leadership in interprofessional health and social care teams, seeking to identify elements that are characteristic of and/or associated with higher performance and achieving better patient outcomes.
Methods
Critical review is undertaken as a method for enabling new conceptual insights by seeking to embody existing or derive new theory from existing literature (Torraco, 2016). A potential difficulty with the approach is that the evaluation of contribution is dependent on the type of evidence. In management literature, publications about the topic may be small in quantity, of poor quality, and/or inconsistent in terms of both the application of methods and epistemology (Tranfield et al., 2003).

In addition, systematic reviews in management literature need to relate directly to the context of health and social care (Easterby-Smith et al., 2008) to be considered the best evidence available, even though these may not be rigorous experimental studies of the type normally conducted within the medical sciences and may even propose theory where no empirical evidence exists.

Review questions/objectives
The specific aim of the review was to describe facets of leadership within interprofessional health and social care teams and generate a thematic framework that explains and develops conceptual understanding of that role.

The review addresses the following key objectives:

- research and grey literature on interprofessional team leadership in health and social care, to appraise any key theoretical constructs and tested variables; and
- research and grey literature relating to interprofessional health and social care team working, commenting on interprofessional team leadership.

The search strategy was designed to access peer-reviewed, published studies for the period 1994–2015. This time period was determined as significant, based on the policy context i.e. Department of Health had begun to focus increasingly only patient pathways and interprofessional working to improve patient care (NHS Plan 2000 – www.nhshistory.net/nhsplan.pdf) and at the end of the period, the Five Year Forward View (NHS England, 2014) outlined and consolidated the ambition to commission and provide integrated health care with significant focus on the leadership of new services and ways of working (Ham and Murray, 2015).

The peer-reviewed databases listed below in Databases were searched, together with governmental databases such as the Department of Health and the NIHR:

- ASSIA;
- CINAHL;
- Cochrane database of systematic reviews;
- Health management information consortium;
- EMBASE;
- ERIC;
- MEDLINE;
- PsycINFO;
- NIHR;
- NHS Confederation;
- Department of Health;
- King’s Fund; and
- University of Sheffield, STAR library database.
A search using all identified relevant keywords and index terms (see Table I) was then undertaken across all included databases. Hand searching included reference lists of all identified reports and articles, which were screened to identify additional studies and relevant texts in the grey literature referring to interprofessional team leadership in health services. The search was then extended to include any identifiable reference to “team-working” and interdisciplinary, which were broader than interprofessional, to identify any mention of team leadership in a health context. An additional reason for the extension was in recognition of unqualified or non-professional staff who are part of the teams caring for and treating patients. Finally, the search terms identified a range of team and service outcome metrics that refer to the process of care and the impact of care typically using outcomes of service/team rather than health status or health outcome.

Table I below outlines the key search terms and Table II provides the terms used for the additional focus on potential outcomes of team leadership within the care context.

**Inclusion and exclusion criteria**

The critical review aims to develop an evidence-based theoretical understanding of interprofessional team leadership, including conceptual models for practice. It is based on empirical findings or narrative examples from practice, described and/or evaluated. Selection began with an initial screening of the papers by title and abstract using the specific decision rules to identify relevant papers. A set of decision criteria were developed; to identify relevant papers that would distinguish between leadership theories in health care and those particularly referring to interprofessional teams. The initial categories related to main methodology i.e. empirical study, qualitative research, or a narrative study, or systematic review. This method sorted papers and enabled authors to select key papers related to the review objectives and enhanced decisions about which papers to include or exclude (Paterson et al., 2001). Further selection identified any papers including reference or outcomes achieved through interprofessional team leadership in health and social care. As there were few papers specifically on this topic, the search was extended to include papers on interprofessional teamwork, again allowing leadership to become the emerging narrative within publications on health care team practice. Owing to the dearth of literature on interprofessional team leadership publications discussing primary or secondary research on interdisciplinary team leadership, or interdisciplinary team working were included. Papers that had no apparent evidence base were excluded from the review and these included opinion pieces and editorials with particular views of a single author.

A mixed methods quality appraisal tool was then used to evaluate the selected empirical studies and this was also adapted and applied to the descriptions of teams and clinical practice context. Table III includes the quality assessment criteria used for the study. Evaluations of leadership or team outcomes and processes were included and the content reviewed for satisfactory description and relevant content.

<table>
<thead>
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<th>Key search terms for IpTL</th>
<th>Inclusion and exclusion criteria</th>
<th>Health and social care teams</th>
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<td>Interdisciplinary or interprofessional or multiprofessional or multidisciplinary or inter-disciplinary or inter-professional or co-operate* or multi-professional or multi-disciplinary or “inter disciplinary” or “inter professional” or “multi disciplinary” or “multi professional”</td>
<td>And</td>
<td>Team*[includes team, teams, team work, teamwork or team working]</td>
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Data extraction and synthesis

Data extraction was undertaken manually using an excel spreadsheet designed for the purpose of categorising findings. Papers were read and re-read as full text and emergent ideas were identified with key ideas and theories recognised and noted. The Ritchie and Spencer (1994) “Framework” approach was adopted to code the data and further analysis was undertaken using the findings from the selected reports (grey literature). This approach was chosen, because it was both rigorous and permitted the analysis of original data but was also open to adaptation and change; allowing methodical treatment of all similar units of analysis and some case comparisons. Principally it was adopted as a means of synthesis that allowed full review of the located data (Ritchie and Spencer, 1994). Following the coding of papers and data extraction into categories a number of preliminary themes were developed. These formed the basis of the framework that could then be used to create some broader, higher order themes and additional data were included, based on agreement with other authors. The framework was continually modified as a deeper understanding of the data was developed, as new data were coded and new themes emerged. The synthesis was completed when all data had been incorporated and items checked to ensure that the framework permitted a robust “container” for the data and permitted a more conceptual analysis of interprofessional leadership.

Results

Searches for Interprofessional Team (working and) Leadership identified a total of 634 texts and after supplementing these searches with relevant papers identified in the interprofessional teamwork literature review and back-chaining through reference lists,
1,419 papers were identified as being of possible interest. All papers contained a combination of the key words used in the search from published literature between 1994 to 2015.

Following full text screening, categorisation by methods to exclude opinion pieces and critical appraisal a total of twenty-eight papers were selected. These were deemed to provide an analysis of outcomes from team leadership and proposed conceptual frameworks of IpTL or discussed elements of IpTL in-depth.

<table>
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<th>Screening questions</th>
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| 1 Problem statement  
Does the statement of the phenomenon lead directly to the purpose of the study and the research questions? |             |    |
| 2 Purpose of the research  
Is the purpose of the research clearly expressed? |             |    |
| 3 Research questions  
Are the research questions explicitly expressed? |             |    |

**Table III. Quality assessment criteria**

<table>
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<th>Detailed questions</th>
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| 4 Literature review  
Is the literature related to the research problem and point towards the research purpose? |         |
| 6 Sampling and participants  
Is there description of type of sampling procedure?  
Is there identification of inclusion criteria?  
Does the sample size and configuration fit the purpose and sampling strategy?  
Are features of the sample critical to the understanding of the findings described?  
Do sites of recruitment fit the evolving needs of the study? |         |
| 7 Data gathering strategies  
Is there clear description of data gathering procedures?  
Is there discussion of time frame of data gathering? |         |
| 8 Data management and analysis strategies  
Are methods used described?  
Is there identification of categories or common elements found? |         |
| 9 Findings  
Are interpretations of data demonstrably plausible and/or sufficiently substantiated with data?  
Are concepts or ideas well-developed and linked to each other?  
Are concepts used precisely?  
Is there provision of evidence as to how representative in the sample the various findings were? |         |
| 10 Conclusions, discussion, implications, suggestions for future study  
Does the discussion pertain to all significant findings?  
Do the interpretive statements correspond to the findings?  
Are the study findings linked to the findings of other studies or to other relevant literatures? |         |
| 11 Validity  
Is there evidence that researcher has considered the effect of his/her presence on the research findings?  
Is there evidence that researcher has considered possibility of research bias or misinterpretation?  
Are validation techniques used that fit the purpose, methods, sample, data and findings of the study? |         |
The findings of the analysis of these papers is set out below and summarised in IpTL framework. Further explanation of the relevance of each category is also added below to explain the IpTL Framework:

(1) Facilitate shared leadership:
- consciously involve team members in, decision-making and delegate responsibilities appropriately (Day, 1981; McCallin, 1999; Wilson, 2001; Ovretveit, 1997; Mickan and Rodger, 2000; McCallin, 2003, Institute-for-innovation-and-improvement, 2010, Sicotte et al., 2002; West et al., 2003);
- empower team members (McCray, 2003);
- develop and maintain non-hierarchical structures (Ovretveit, 1997; Krueger, 1987);
- provide information the team requires (Mickan and Rodger, 2000);
- work to create agreement (Mickan and Rodger, 2000); and
- coach colleagues in shared leadership (McCallin, 2003; Maister, 1993).

(2) Transformation and change (McCray, 2003; Irizarry et al., 1993):
- create a climate where staff are challenged, supported, motivated and rewarded (West et al., 2003);
- respond to change flexibly (Suter et al., 2007);
- facilitate or act as a catalyst for practice change (Willumsen, 2006);
- act as a role model (Pollard et al., 2005; West et al., 2014); and
- inspire other team members (West et al., 2003).

(3) Personal qualities:
- enthusiasm (Pollard et al., 2005);
- commitment (Abreu, 1997);
- empathy (McCray, 2003); and
- knowledge of people (Suter et al., 2007).

(4) Goal alignment:
- ensure the team has articulated a clear and inspiring vision of its work (Lyubovnikova et al., 2015);
- assure productivity and goals are in line with the organisation (Leathard and Cook, 2004);
- protect regular time for the team to review its performance (Lyubovnikova et al., 2015); and
- provide feedback about important issues (Mickan and Rodger, 2000; Leathard and Cook, 2004).

(5) Creativity and innovation:
- establish a productive balance of harmony and debate to ensure creativity (Leathard and Cook, 2004);
- develop innovations and new practice models (Suter et al., 2007); and
- ensure effective leadership and team work processes (West et al., 2003).

(6) Communication:
- maintain clear communication channels and facilitate interaction processes (Ovretveit, 1997; Suter et al., 2007; Willumsen, 2006; Blewett et al., 2010);
• listen to, support and trust team members (Mickan and Rodger, 2000; Leathard and Cook, 2004);
• initiate constructive debates and share their own ideas (Mickan and Rodger, 2000; Lyubovnikova et al., 2015); and
• manage conflict and maintain a productive balance between harmony and healthy debate (Mickan and Rodger, 2000; McCray, 2003).

(7) Team-building:
• set expectations for working together (Suter et al., 2007);
• create a climate of mutual respect (Ovretveit, 1997; Leathard and Cook, 2004);
• ensure cohesion (Willumsen, 2006);
• develop the interpersonal skills of the team (Ovretveit, 1997);
• ensure the contextual socialisation of new/inexperienced team members (McCray, 2003);
• promote interprofessional collaboration (Suter et al., 2007; McCallin, 2003; Branowicki et al., 2001); and
• facilitate group reflection on practice (McCallin, 1999; Branowicki et al., 2001).

(8) Leadership clarity:
• ensure clarity of leadership (Nancarrow et al., 2009; West et al., 2003); and
• combine strong leadership and high involvement (Rosen and Callaly, 2005).

(9) Direction setting:
• coordinate tasks (Mickan and Rodger, 2000);
• manage processes (Maister, 1993);
• ensure work is allocated work equally (Pollard et al., 2005); and
• set clear tasks (Ross et al., 2000).

(10) External liaison:
• represent the team externally (Irizarry et al., 1993);
• ensure necessary resources (Maister, 1993);
• develop strategies for promoting the work of the team (Irizarry et al., 1993);
• demonstrate effectiveness through data collection and evaluation (Irizarry et al., 1993);
• ensure the team understands its customers and can exploit new opportunities (Willumsen, 2006); and
• develop networks and linkages (Pollard et al., 2005).

(11) Skill mix and diversity:
• recruit externally and develop internally (Ross et al., 2000);
• ensure regular supervision and PDR (Burton et al., 2009); and
• assure access to relevant training (Burton et al., 2009).

(12) Clinical and contextual expertise:
• high levels of professional expertise (Maister, 1993; Irizarry et al., 1993; Branowicki et al., 2001);
• demonstrate in-depth understanding of the organisation (Branowicki et al., 2001) and current development programmes (West et al., 2014);
balance focus between the needs of the patient, organisation and team (Branowicki et al., 2001);
facilitate understanding of context and ensure all perspectives are taken into account (Abreu, 1997); and
knowledge of the professional role of others (MacDonald et al., 2010).

Facilitate shared leadership
For interprofessional teams to work effectively, each team member must accept responsibility as a member-leader stepping in and out of the leadership role when their professional expertise, particular knowledge of a client, or the situation comes to the fore (McCallin, 1999; Wilson, 2001).

This process requires a formal leader who has overall responsibility for the performance of the team, but consciously shares the leadership function facilitating joint decision-making and delegates leadership roles (Day, 1981; Sicotte et al., 2002; Ovretveit, 1997; Mickan and Rodger, 2000; McCallin, 2003, Institute-for-innovation-and-improvement 2010, West et al., 2003).

The key mechanism for achieving this is empowerment (McCray, 2003). The leader actively works to develop/maintain non-hierarchical, democratic structures (Ovretveit, 1997; Krueger, 1987). They coach team members (Maister, 1993) to develop the skills required (McCallin, 2003) share their ideas, work to create agreement and supply information the team requires (Mickan and Rodger, 2000).

Transformation and change
Transformational leadership is important (McCray, 2003; Irizarry et al., 1993). The IpTL acts as a role model in line with their espoused values (Pollard et al., 2005; West et al., 2014) to create a climate in which staff are inspired (West et al., 2003) challenged, supported, motivated and rewarded (Irizarry et al., 1993); respond to change in a flexible way (Suter et al., 2007); and facilitate or act as a catalyst for practice change (Willumsen, 2006).

Personal qualities
The IpTL must be able to show enthusiasm (Pollard et al., 2005), commitment (Abreu, 1997), the ability to empathise (McCray, 2003) and knowledge of people (Suter et al., 2007).

Goal alignment
The IpTL works to influence the direction and climate of the group to ensure goal alignment with the organisation and productivity (Leathard and Cook, 2004). They do this by ensuring the team has articulated a clear and inspiring vision of its work, creating regular times when it can review it’s performance (Lyuobonikova et al., 2015) providing feedback to highlight important issues (Mickan and Rodger, 2000; Leathard and Cook, 2004).

Creativity and innovation
A productive balance of harmony and debate is vital to ensure creativity (Leathard and Cook, 2004) and development of innovations and new practice models (Suter et al., 2007). However, teamwork processes and team leadership have been found to consistently predict team innovation (West et al., 2003).
Communication
The leader must facilitate the interaction processes and develop/sustain clear communication channels in the team (Ovretveit, 1997; Suter et al., 2007; Willumsen, 2006; Blewett et al., 2010). They do this by initiating constructive debates and modelling their own ideas (Mickan and Rodger, 2000; Lyubovnikova et al., 2015) and supporting, listening to and trusting team members (Mickan and Rodger, 2000; Leathard and Cook, 2004).

The leader must also manage conflict, ensuring a productive balance between harmony and healthy debate (Mickan and Rodger, 2000; McCray, 2003).

Team-building
Teamwork is not a naturally occurring phenomenon (Lyubovnikova et al., 2015). The team leader must therefore invest time in team-building, setting expectations for working together (Suter et al., 2007) and creating a climate of mutual respect (Ovretveit, 1997; Leathard and Cook, 2004). They work to ensure cohesion (Willumsen, 2006), developing the interpersonal skills of the team (Ovretveit, 1997) promoting interprofessional collaboration through group reflection (McCallin, 1999; Branovicki et al., 2001) on practice and ensuring contextual socialisation of new or inexperienced team members (McCray, 2003).

Collaboration is promoted by allowing enough time for discussion and reflection on practice and encouraging staff to interact with those outside their profession (Suter et al., 2007; McCallin, 2003; Branovicki et al., 2001).

Leadership clarity
In spite of growing support for shared/collaborative/collective leadership models there is evidence to suggest that interprofessional teams need an overall team leader to operate effectively (McCallin, 2003).

A 2009 study found that teams with a specific team leader had higher levels of staff satisfaction than teams where the leadership role was split (Nancarrow et al., 2009). Clarity of leadership is associated with clear team objectives, high levels of participation, commitment to excellence and support for innovation (West et al., 2003). Primary health-care team members rated their effectiveness more highly when they had strong leadership and high involvement amongst team members (Rosen and Callaly, 2005).

Direction setting
The leader ensures that the team retains a focus on its priorities and goals and that individual team members maintain the correct focus (Mickan and Rodger, 2000). They work to manage team processes (Maister, 1993) including setting clear tasks (Ross et al., 2000) coordinating work (Mickan and Rodger, 2000) and ensuring equitable allocation (Pollard et al., 2005).

External liaison
The team leader must exercise external responsibility for the team (Irizarry et al., 1993) ensuring that it is represented and gains the resources it requires (Maister, 1993). This requires: promoting the work of the team (Irizarry et al., 1993) the ability to develop networks and linkages (Pollard et al., 2005) demonstrating effectiveness through data collection and evaluation (Irizarry et al., 1993) and adopting a marketing orientation to ensure the team understands its clients and can exploit new opportunities (Willumsen, 2006).
Skill mix and diversity

The team leader’s role is to ensure that the team contains the right skill mix and diversity to achieve its goals and tasks. This involves both external recruitment and internal development (Ross et al., 2000) with regular supervision, annual performance reviews and access to relevant training important factors (Burton et al., 2009).

Clinical and contextual expertise

Professionals will only be accepted into IpTL roles if they prove their professional expertise (Maister, 1993; Irizarry et al., 1993; Branowicki et al., 2001). Knowledge of the professional role of others is also a key competency (MacDonald et al., 2010). Within this, it is important that the team leader balances focus between the needs of the patient, organisation and team (Branowicki et al., 2001). Understanding of the organisation’s mission, structure, economics, politics (Branowicki et al., 2001) and current development programmes (West et al., 2014) together with a sound historical perspective, are also important to facilitate understanding of context and ensure all perspectives are taken into account (Abreu, 1997).

Discussion and conclusions

An IpTL framework in health care has been synthesised from the available published evidence and has been presented as a range of particular competencies that can be compared to the general management literature related to team management and leadership.

Many factors associated with better team leadership within management literature can also be seen in the IpTL framework. Both bodies of literature include a focus on: achieving organisational goals, managing performance, managing external relationships (boundary spanning activities) and demonstrating technical expertise (Larssen and LaFasto, 1989; Hackman, 1989; Stanniforth and West, 1995; LaFasto and Larssen, 2002; Hayes, 2002; Hackman, 2002; Katzenbach and Smith, 2003; Shackleton, 1995; Stoker, 2008; Burke et al., 2006; Stoker, 2008).

In contrast, the IpTL framework specifically highlights a leadership function for the team and the review demonstrates that as well as maintaining the managerial function an interprofessional team requires a person who can promote transformation and change and support creativity and innovation as key elements of their role. Significantly, a meta-analysis by Burke et al. (2006) shows that transformational leadership behaviours, (often linked to change and innovation) can have a potent effect within teams. West et al. (2003) also found that teamwork and team leadership processes consistently predict innovation.

Empowerment appears as a primary focus in the generic team leadership literature as a mechanism for collaboration, but the focus in the IpTL literature is more on shared, collaborative or more recently collective (West et al., 2014) leadership. Conceptually these factors are distinct, but in the ways they are described appear to have more similarities. The IpTL literature talks more about shared, collective and collaborative leadership, particularly in relationship to professionals within the teams. However, there is a paradox in that there is good evidence that clarity of leadership (West et al., 2003; Nancarrow et al., 2009) also appears to be important. Other commentators clarify, that shared leadership in IpT’s is facilitated by the team leader (Krueger, 1987; Maister, 1993). It may be that shared or collective leadership are more palatable concept to professionals than empowerment as they lend more status to professional expertise and accommodate autonomy rather than challenge it.

The IpTL framework overtly mentions team building as a key activity of the team leader and the wider literature on team leadership also refers to the fact that it takes effort to
develop a team (Stanniforth and West, 1995; Hackman, 2002; Katzenbach and Smith, 2003). In the IpT literature, teamwork is still often an ideal that health and social care organisations are working to attain and a level of complexity is apparently which is to do with ensuring the correct mix and level of skills in the team. The IpTL literature focuses on developing the dynamics within the team as a whole and increasing integrated professional practice, with less attention paid to setting priorities and managing performance.

The literature review also raised some general questions about IpT’s. There is consensus in teamwork literature that teams become less effective as they become larger. However, Nancarrow et al. (2009) found that larger interprofessional care teams providing intermediate and community care for older people produced better patient outcomes, in spite of less satisfaction amongst team members and higher intention to leave. It is not clear from these results whether there is a limit to this relationship, where the economies of scale and enhanced workforce flexibility delivered by larger services, becomes offset by the impact on teamworking? In a further study (Nancarrow et al., 2013) comments on the difference between assumed shared decision-making and shared power across professions and the reality; perhaps alluding to the challenges of working across a large multi-professional context.

A second issue is that whilst many of the services that took part in this particular study were called teams, it is unclear how many operate as teams in practice. As already discussed, “team” is a term almost ubiquitously applied to work groups. Certainly, the size and structure of teams in this study are often outside the parameters put forward in the literature on teams. A final issue is the term interprofessional. There are increasing numbers of none professionally qualified staff in health care IpT’s, however their role and function in the literature on interprofessional teamworking and leadership is totally absent. We would therefore propose that that interdisciplinary is a more suitable term to use as it is broader and inclusive of all team members.

What is different about IpTL in health care appears to be the unique context in which it is applied. The multiprofessional nature of the workforce in health, the public service setting, their function and the contexts that they operate within, make the dynamics in health care IpT’s differ from the dynamics of teams in other settings. This difference seems to be highlighted by West et al. (2014) who advocate collective, distributed leadership practices for the NHS as a whole that resonate closely with the findings of this review.

Further, the literature does indicate that there are some elements of leadership practice, which may be particularly effective in interprofessional team settings. Perhaps the key issue highlighted is the fact that the operational workforce within health and social care is predominantly multi-professional in nature. Increasingly these professionals, together with other disciplines, are working together in a more integrated fashion. The creation of IpT’s has therefore created a unique leadership context. Whereas traditionally professions would be functionally led (i.e. doctors by doctors, nurses by nurses) by a professional with recognised expertise, in IpT’s, this functional leadership divisions are impossible to sustain. The leader can at most be only from one profession or discipline and therefore cannot therefore demonstrate greater professional expertise in other professions. This makes IpT leadership more demanding as the team leader, needs to find a way of leading a diverse professional workforce, without being able rely on professional credibility as a locus of authority. Further, the IpTL needs to be able to find ways to persuade an interprofessional group, to give up some professional autonomy, to integrate their practices and operate as a team.
Conclusion
This critical literature review examines how leaders of interprofessional teams are functioning and the synthesis identifies a framework of factors that contribute to good leadership practice. With a continuing paucity of empirical research data on IpTL, there is still much that is unknown about the IpTL process.

References


Further reading


Kings Fund (2016).

About the authors
Dr Tony Smith is a Senior Lecturer, in Leadership and Organisation Development, at the Centre for Leadership in Health and Social Care, Sheffield Hallam University and has conducted research related to leadership in health and social care teams. Tony Smith is corresponding author and can be contacted at: t.smith@shu.ac.uk

Dr Sally Fowler-Davis is a Clinical Academic Researcher in the Centre for Health and Social Care Research, Sheffield Hallam University and Clinical Research Development Officer for the Combined Community and Acute Care Group at Sheffield Teaching Hospitals.

Susan Nancarrow is a Professor of Health Sciences and Chair of Academic Board at Southern Cross University, Australia. Susan is a Health Services Researcher with a particular interest in health workforce development.

Dr Steven Mark Brian Ariss is a Research Fellow at the School of Health and Related Research, University of Sheffield, UK.

Pam Enderby is a Professor Emeritus of Community Rehabilitation in the School of Health and Related Research University of Sheffield. She is a Speech and Language Therapist and has worked clinically and conducted research related to intermediate care.
Factors that foster or prevent sense of belonging among social and health care managers

Mai-Stiina Lampinen
School of Health Sciences, University of Tampere, Tampere, Finland

Anne Irmeli Konu
Faculty of Social Sciences, Health Sciences, University of Tampere, Tampere, Finland

Tarja Kettunen
School of Health Sciences, University of Jyväskylä, Jyväskylä, Finland and Central Finland Health Care District, Unit of Primary Health Care, Jyväskylä, Finland, and

Elina Annikki Suutala
Faculty of Social Sciences, Health Sciences, University of Tampere, Tampere, Finland

Abstract
Purpose – The purpose of this study is to identify factors that foster or prevent sense of belonging among frontline and middle managers in social and health-care services in Finland.

Design/methodology/approach – The data have been collected among social and health-care managers (n = 135; 64 per cent nursing managers) through two open-ended questions in a questionnaire concerning sense of community. The results of the open-ended questions have been analyzed using qualitative content analysis.

Findings – Among managers, six categories of factors that foster sense of belonging (open interaction, effective conversation culture, support and encouragement, common values, a shared vision of the work and its objectives and structure of leadership) and five categories of factors that prevent sense of belonging (negative work atmosphere, lack of common time, structural solutions in the organization, problems that occur in the organizational level and problems related to leadership and management) have been identified.

Practical implications – The resulting information can be used to develop sense of belonging among managers at all levels of organization (horizontal and vertical).

Originality/value – Paying attention to the quantity and quality of interaction and to structural solutions in the organization can affect the sense of belonging among frontline managers and middle managers.

Keywords Content analysis, Sense of belonging, Middle managers, Frontline managers, Health and social services

Paper type Research paper

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Introduction
Sense of belonging appears to be an important element in developing and managing one’s relationship with others (Hagerty et al., 1996). Using a concept—analysis strategy proposed by Walker and Avant (1988), Hagerty et al. (1996) defined the concept of sense of belonging (in psychiatric nursing) as “the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment.” The defining attributes of sense of belonging are:

- the persons’ experience of being valued, needed or important with respect to other people, groups or environments; and
- the persons’ experience of fitting in or being congruent with other people, groups or environments through shared or complementary characteristics.

According to Hagerty et al. (1992, 1996), belonging should be considered from psychological, sociological, physical and spiritual perspectives. Sociologically, belonging connotes membership in groups or systems and it can be observed and described through behavioral referents, such as membership in groups and social networks.

Related to the concept of sense of belonging is sense of community (Edwards, 2011). The concept of sense of community has been defined as:

A feeling that members have of belonging, a feeling that members matter to one another and the group, and a shared faith that members’ needs will be met through their commitment to be together (McMillan and Chavis, 1986).

According to McMillan and Chavis (1986), the model of sense of community consists of four elements: membership, influence, integration and fulfillment of needs and shared emotional connection. The element of membership refers to a feeling of belonging to or being part of a group. The dimension of membership consists of five attributes that work together to create the membership element: boundaries, emotional safety, sense of belonging and identification, personal investment and a common symbol system. The attribute of sense of belonging and identification involves the feeling, belief and expectation that one fits into the group and has a place there, a feeling of acceptance by the group and a willingness to sacrifice for the group (McMillan and Chavis, 1986).

In their investigation, Burroughs and Eby (1998) used theoretical foundations to operationalize the construct of psychological sense of community in the workplace (PSCW). According to them, sense of belonging is one of the six dimensions of PSCW. The dimension of sense of belonging addresses the trust and security component of membership and the extent to which individuals in a group are well known to each other and willing to help each other; in essence, the “feeling of acceptance by the group and a willingness to sacrifice for the group” (McMillan and Chavis, 1986, p. 19). Sense of belonging occurs when members of the workplace community identify with one another and have feelings, beliefs and expectations that they fit in the organization and have a place there.

According to Winter-Collins and McDaniel (2000), sense of belonging is an important aspect to study because of the impact interpersonal relationships have on an individual, and an individual’s sense of belonging in an environment is dependent on the strength of relationships within that environment. In previous work-related studies on health care, sense of belonging was connected to work engagement (Bishop, 2013), job satisfaction (Winter-Collins and McDaniel, 2000; Lim, 2008) and team work (McKenna and Newton, 2008). In these studies, the target group was nursing staff members. The review of previous studies showed us that little research has been done from the perspective of sense of
belonging among managers. In this study, which is part of a larger study, researching managers' sense of community, the focus is on the sense of belonging among managers.

**Purpose**
The purpose of this study is to describe the factors that foster or prevent sense of belonging among social and health-care managers (frontline and middle managers).

**Subjects and methods**

**Design**
A qualitative descriptive approach was used to explore the factors that foster or prevent sense of belonging among social and health-care managers working in social and health-care services in central Finland. The method of content analysis was used to analyze the data based on two open-ended questions in a broader questionnaire for sense of community (Lampinen et al., 2015).

**Participants**
A total of 135 frontline and middle managers working in social and health-care services in central Finland participated in the study. Most of the participants were female (n = 122), and their age varied from 28 to 65 years (mean = 51.3). Most of the respondents had a higher academic degree (89.3 per cent). The professional background of the respondents was mostly nursing (63.9 per cent), social work (18.5 per cent) or medical doctor (9.8 per cent). Less than half of the respondents (40.9 per cent) were working in the joint social and health-care sector. The work experience in social and health-care sector among the research participants varied from 5 to 42 years (mean = 24.9). The work experience in managerial position varied from four months to 38 years (mean = 11.1), and the work experience in current position varied from less than a year (4 months) to 33 years (mean = 5.0). Of all the respondents, 91.1 per cent were full-time managers, the remainder working as part-time managers.

**Data collection**
The data were collected from March to May 2013 through a questionnaire developed for a study measuring sense of community. The questionnaire contained two open-ended questions:

Q1. What are the factors that foster sense of belonging among managerial community?

Q2. What are the factors that prevent sense of belonging among managerial community?

The questionnaire was based on a systematic literature review conducted by Lampinen et al. (2013).

**Data analysis**
Qualitative content analysis, as described by Granheim and Lundman (2004), was used to evaluate the answers for the open-ended questions. First, the data produced by the responses were read carefully through several times to obtain a sense of the whole. After that, the data were divided into meaning units. Units of analysis were single words, phrases or sentences. The meaning units were abstracted and labeled with codes. This resulted in 329 initial codes. Of these, 186 included into the factors that foster, and 143 into the factors that prevent, sense of belonging among managers. The various codes were compared on the
basis of differences and similarities, and sorted into sub-categories which were then combined into categories. Finally, six categories of factors that foster sense of belonging among frontline managers and middle managers and five categories of factors that prevent sense of belonging among frontline managers and middle managers were identified from the analysis of the data. The concepts of credibility, dependability and transferability as defined by Granheim and Lundman (2004) were taken into account to describe the various aspect of trustworthiness (Granheim and Lundman, 2004). Co-researchers worked in close cooperation at all stages of the analysis process. The analysis process and the results have been described so that readers can form a clear understanding of the analysis process and findings (Granheim and Lundman, 2004; Elo and Kyngäs, 2007). The background information of the study group is briefly described to evaluate the transferability of the research results. Factors that weaken credibility of the study are discussed in the section limitations. Examples of the procedures are shown in Table I.

**Ethical considerations**

It this study, ethical aspects of the scientific process were followed (The Finnish Advisory Board of Research Integrity, 2012). Participation in the study was voluntary and based on informed consent. Privacy and confidentiality were maintained throughout the study.

<table>
<thead>
<tr>
<th>Meaning unit</th>
<th>Code</th>
<th>Sub-category</th>
<th>Category</th>
<th>Theme</th>
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<tr>
<td>“Fortunately, there was one supervisor colleague with whom you could discuss work-related matters, ask questions and give advice etc.” “Getting help and offering it when necessary” “That you can ask when you face challenging situations and, in turn, you can help the other person when they are in the same situation” “Encouraging one another and guiding each other in work-related issues” “Giving feedback to each other. Encouraging each other” “Supportive attitude towards the other person” “Sharing good work practices” “The experience that we are in this together, in other words: sharing pros and cons of the work gives you strength” “Sharing experiences and information”</td>
<td>Ask for and give advice To receive and offer help Can ask for and offer help in challenging situations</td>
<td>Helping each other</td>
<td>Support and encouragement</td>
<td>Factors that foster sense of belonging among frontline managers and middle managers in social and health-care services</td>
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<td>Mutual encouragement Mutual encouragement Supportive attitude</td>
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<td>Sharing work practices Sharing pros and cons of the work Sharing experiences</td>
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Table I. Examples of the analysis process
Results
From the 135 survey respondents, 83 participants (61 per cent) responded to the first open-ended question (What are the factors that foster sense of belonging among managerial community?), and 86 participants (63 per cent) responded to the second question (What are the factors that prevent sense of belonging among managerial community?). From the analysis of the data, we identified six categories of factors that foster a sense of belonging and five categories of factors that prevent a sense of belonging among frontline managers and middle managers in social and health-care services in Finland (Figures 1 and 2).

Factors that foster sense of belonging among frontline and middle managers in social and health-care services
Factors that foster sense of belonging among frontline managers and middle managers were open interaction, effective conversation culture, support and encouragement, common values, a shared vision of the work and its objectives and the structure of leadership (Figure 1).

Open interaction
Open interaction was described as an opportunity to express one’s thoughts and opinions openly, even when they differ from others’ views. It also contained balanced conversation and mutual listening.

Figure 1. Factors that foster sense of belonging among frontline managers and middle managers in social and health-care services

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Effective conversation culture

Effective conversation culture was seen as consisting of regular joint meetings and joint conversation, and being able to spend time together. Regular joint meetings included official meetings, appointments, team development days, etc. Joint conversation offered an opportunity to discuss work-related issues, even the problems, together. Through joint conversation, it was also possible to get support for one's own ideas. In addition, the possibility for open discussion outside the regular meetings was seen as important:

Superiors should have time together also outside the meetings. (When we see each other in meetings, there is a lot we would like to discuss but with the meeting schedules and regular agendas, there is not time for this)

Support and encouragement

Support and encouragement was seen as including helping each other, encouraging each other, collegiality, sharing work experience, open flow of information, professional guidance and personal relationships and networks. Helping and encouraging each other included the
ability to ask for and give advice, mutual guidance in work-related matters and sharing know-how with colleagues. Personal relationships and networks included expressions such as long-term and good personal relations between leaders, good team spirit, good personal chemistry, good teamwork and polite and good behavior in meetings and in communication:

[... that you can ask when you encounter a challenging situation and, vice versa, you can help when your colleague is in the same situation.

Common values
Common values were described as humor, trust, respect, appreciation, honesty and sharing of same values. In addition to mutual appreciation, the respondents highlighted the appreciation of other person’s know-how, education and work. Like appreciation, trust also appeared as trust of the other person’s know-how. Sharing the same values was described as uniformity of work-related values and attitude toward work.

A shared vision of the work and its objectives
A shared vision of the work and its objectives was described as mutual goals and modes of operation at work, common rules and agreements and the commitment to them, recognition of the work done by another person and collaboration. A shared vision of the importance of work, as well as facing the same challenges and coping with them were seen as factors that foster mutual sense of belonging. Knowledge of the work done by another person or unit reduces errors in interpretation, and adds to mutual appreciation:

[...] knowledge of the work done by another person increases appreciation.

[...] knowledge of the work of others reduces errors in interpretation.

The structure of leadership
The structure of leadership was seen as consisting of functional practices, and good superior-subordinate relationship. Functional practices consisted of clear organization, clear division of work tasks, a reasonable sized management team and functional meeting practices and meeting schedule. A good superior—subordinate relationship included expressions such as a good superior, equal treatment from higher management level, fair management and appreciation, actions of person’s own superior, interest in their employees’ know-how of person’s own superior, appreciation received from person’s own superior and them trusting that things get done.

Factors that prevent sense of belonging among frontline and middle managers in social and health-care services
The analysis yielded five categories of factors that prevent sense of belonging among frontline managers and middle managers. Those were negative work atmosphere, lack of common time, structural solutions in the organization, problems that occur in organizational level and problems related to leadership and management (Figure 2).

Negative work atmosphere
Negative work atmosphere was seen as consisting of distrust, competition, envy, underestimation of the other person (including their work and responsibilities), talking behind someone’s back (e.g. criticism), self-interest, lack of appreciation (e.g. person’s work
and know-how) and inappropriate interaction. Distrust showed itself as lack of trust towards a colleague. In addition, distrust was seen as causing communication problems in the organization, because it cannot be completely open for all people. In addition to competition between colleagues, competition was described as competition for power and economic resources. Competition also showed itself as competitive spirit, and competition in wrong things, for example between units. Self-interest was described with expressions such as “navel-gazing” and “to pull the rug out from under someone’s feet.” Negative work atmosphere appeared also as inappropriate interaction, such as discord, quarreling, searching for the culprit and interrupting when someone is talking.

Lack of common time
Lack of common time was seen to consist of sense of urgency and of workload, so that managers had no time to have collegial discussions and joint meetings. In addition to the lack of time with colleagues, the participants highlighted the lack of time with their own superiors:

[...] recently the workload has been so high that you don’t have time to meet with colleagues often enough.

Structural solutions in the organization
Structural solutions in the organization included the organizational structure, the distance between functional units and the organizational changes. The hierarchy and scope of the organization, too large line-ups in meetings and an increasing number of colleagues (more than ten) were mentioned as factors that prevent sense of belonging in the organization. The scope of the organization had an effect on the fact that managers could not know all their colleagues. One of the respondents described the existing situation as follows:

[...] social and health care services is an extensive organization, and one doesn’t know most of one’s manager colleagues.

Furthermore, constantly changing organization and changes in leadership were experienced as factors that prevent sense of belonging. Distance between units was seen as a physical distance from colleagues and superiors. The physical distance from other managers was experienced as being alone in one’s own work as a leader and as lack of peer support in challenging situations:

[...] physical distance from other managers – leading “alone”, lack of peer support in challenging situations.

The problems that occur in the organizational level
The problems that occur in the organizational level were described as financial situation, lack of shared vision, lack of common goals, lack of commitment to joint agreements and decisions and lack of cooperation. Economic problems were described as weak financial situation, which led to comparing of the results and competing for resources between units. Lack of cooperation was described as lack of interaction and joint operations between units. Focusing on issues and interests of one’s own staff or own unit was seen as leading to partial optimization leaving the interests of the entire organization in the background. In cases where organizations were merged into one, factors preventing sense of belonging were the old ways of working still visible in the work community and the dictating role of the larger party when building cooperation within the new organization:
everyone focuses on their own issues and promotes, for example, the benefits of their own staff, will easily lead to partial optimizations.

Problems related to leadership and management
Problems related to leadership and management included poor flow of information, bypassing formal organizational lines of leadership and weak leadership and management. Poor flow of information showed itself as slowness of the flow of information, withholding of information and unequal allocation of information. Certain actions of participants’ own superior were felt to weaken the sense of belonging among colleagues. In addition, weak leadership and management were described as inappropriate treatment of subordinates and as unfair management. Inappropriate treatment of subordinates was seen to consist of aggressive or hostile attitude and pointing out of errors. Unfair management was expressed as management based on friendship or favoritism, and occurred in the form of “divide and conquer” style of management, which could drive a wedge between management groups.

Discussion
According to the results, the factors that either foster or prevent sense of belonging among social and health-care managers can be summarized in the form of the quantity and quality of interaction between colleagues, support and encouragement, organizational structure and common practices, as well as leadership and management.

Interaction, based on openness, mutual trust, respect and appreciation, was seen as key in fostering sense of belonging among colleagues. In turn, distrust, competition, envy and lack of appreciation were mentioned to prevent sense of belonging among colleagues. Regular joint meetings making it possible to discuss work-related issues in managerial work were also considered as one factor fostering sense of belonging. Such discussion also allows sharing of work-related experiences, as well as mutual support and encouragement in managerial work-related problems. According to the results of this study, factors that prevent sense of belonging and form obstacles to interaction and conversation among managers were sense of urgency, lack of time and workload. Also in previous studies among teachers, mutual trust and respect have been found to be important in establishing and building relationships (Fox and Wilson, 2009), and the same is true for inter-professional teamwork in health care (Dieleman et al., 2004). In addition, open communication has been identified as important for collaboration between team members (Dieleman et al., 2004). Effective team communication, in turn, is achieved through regular team meetings (Heale et al., 2014). Furthermore, Peterson et al. (2008) found that participating in a reflecting peer support group gave the participants a sense of belonging.

In this study, factors related to organizational structure, such as organizational hierarchy and scope, too large assemblies in meetings and an increase in the number of colleagues (more than 10) prevented the sense of belonging among managers in the organization. One reason that emerged from the responses may be that joint conversation becomes more difficult in large groups and there is no room to hear the views of all group members. This view is supported by Molyneux (2001) who found that within inter-professional health-care teams, a small number of team members was seen to make communication easier and to facilitate the development of positive working relationships within the team.

The physical distance between units was one of the factors that prevented sense of belonging among managers. The distance between units was experienced as physical distance from colleagues and one’s own superiors. In previous studies, geographical or physical distance has been found to reduce cooperation within or between professional
groups (Gask, 2005; Mascia et al., 2011; Clancy et al., 2013). Xyrichis and Lowton (2008) found that the geographical proximity of team members is vital for successful team-work: according to them, team members who work in separate location or buildings can be less integrated with the team, which, in turn, may limit the team’s functioning and effectiveness. In our study, the same phenomenon was experienced as the feeling of being alone as a leader, and as lack of peer support in challenging situations. However, even though face-to-face interaction has been found to be important to community-building in the workplace (White et al., 2010), one solution, which should be noted when speaking about physical distance between units or colleagues is the current development of information and communication technology (ICT) and communication channels which have created new opportunities for interaction and cooperation in the organization. For example, Koivunen et al. (2014) found that electronic communication increased cooperation among nursing professionals: according to them, the use of electronic devices for communication among health-care professionals is a promising method, provided that certain obstacles (e.g. information security and lack of technical skills) are taken into account.

ICT can also be used to influence the flow of information, which was seen in our study as one factor that both fosters and prevents sense of belonging among social and health-care managers. Open flow of information was seen as one factor that fosters sense of belonging, whereas poor flow of information (e.g. slowness), withholding information and unequal allocation of information were factors that prevent sense of belonging among managers. Technology can be used to speed up the flow of information in the organization. However, it cannot affect people-dependent factors, such as withholding information and unequal allocation of information.

Constant organizational changes were considered as one factor preventing sense of belonging. One of the reasons may be that organizational changes can also bring changes to the manager community. In such situations, the group of managers has to rebuild their sense of belonging and networks again. One of the four elements based on the model of sense of community by McMillan and Chavis (1986) is a shared emotional connection: it is based on, in part, a shared history. According to McMillan and Chavis, it is not necessary for group members to have participated in the history to share it, but they must identify with it. And, as we think, identifying oneself with a new managerial group may take time in the new composition of the leadership community. Hence, in constant changes, the sense of community supports leadership and management.

What comes to common practices, such as shared vision of goals, agreements and models of operation at work, and commitment to these, in our study they were seen as factors that either foster (they are present) or prevent (they are absent) sense of belonging among colleagues. Instead, a tight financial situation leading to comparison of results and competition for resources between units was seen as an issue that prevents sense of belonging among managers. Lack of cooperation was described as the lack of interaction between units and the lack of joint operations between units. Focusing on issues and interests of own staff or own unit was seen as leading to partial optimization, putting the interests of the entire organization to the background. In situations where organizations were combined factors that prevent sense of belonging were old ways of working haunting the work community and the larger partner dictating how things should be done when building cooperation.

In addition to good interaction between leaders, good superior—subordinate relationship was felt to foster sense of belonging among managers. Leadership based on fairness, appreciation and equal treatment from higher management level was seen to foster sense of belonging among managers. Instead, leadership based on inappropriate and unfair treatment of subordinates was experienced to prevent sense of belonging among managers. Inappropriate
treatment of subordinates was described in terms such as aggressive or hostile attitude and pointing out of errors. Furthermore, unfair management style was seen as something based on friendship or favoritism and occurring in the form of “divide and conquer” management, which can drive a wedge between management groups. The results of this study support the work of Rouse and Al-Maqbali (2014), who analyzed nursing professionals’ perceptions of the communication qualities that are essential for nurse managers to carry out their job effectively. They found out that nurse managers should be fair, should avoid discrimination and favoritism (i.e., they should not have favorites in their staff but, instead, everyone should be treated equally), should not only look for flaws or mistakes and should give feedback privately and in a positive and constructive tone. Ethical behavior in the workplace involves respecting colleagues at all levels of the organization, and professionals, especially those in health care, should not have to be reminded of this fact (Huston and Brox, 2004). According to Huston and Brox (2004), “divide and conquer” may work on war battlefields, but these tactics only serve to destroy the work environment and remove any sense of trust for effective teamwork among employees (Huston and Brox, 2004).

Limitations of the study
The main limitation of this study was the data collection method. The data were collected by a questionnaire including two open-ended questions. The form of the questions was “what” (What are the factors that foster/prevent sense of belonging among managerial community?), lacking a follow-up question “how.” In this form, the answers were partly too open for interpretation. In the future, the subject should be approached from the “how” perspective, to find out more in-depth information about the factors that foster or prevent sense of belonging among frontline managers and middle managers in social and health-care services in Finland. Alternatively, interviews could be used for data gathering to obtain deeper knowledge. Other limitations were the small number of respondents (n = 135) and the limited amount of information that the participants provided on these open-ended questions. In addition, there were one to two word expressions in the respondents’ answers. According to Granheim and Lundman (2004), too narrow meaning units, for example only a single word, may result in fragmentation, and there is a risk of losing meaning of the text during the condensation and abstraction process. However, the researchers of this study have done their best to avoid this problem during the analysis process.

Implications for practice
This research illustrates the factors that foster or prevent sense of belonging among social and health-care managers. The results can be used to develop the sense of belonging among managers at all levels in the organization (horizontal and vertical). Ultimately, this research shows the importance of mutual interaction and communication throughout the organization. Therefore, time and place should be organized for joint discussions, where ideas and opinions can be exchanged between colleagues and where sense of belonging could be fostered. Sense of belonging can be seen as the quality factor for functional and goal-oriented management.

Conclusion
Paying attention to the quantity and quality of interaction and to structural solutions in the organization, such as physical distance between units and the scope of organization, can affect the sense of belonging among frontline managers and middle managers. This study also showed the importance of superior–subordinate relationship at all levels of organization when discussing the mutual sense of belonging.
References


Further reading


Corresponding author

Mai-Stiina Lampinen can be contacted at: mai-stiina.lampinen@pp.inet.fi

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