Managerial Implications for Adopting and Implementing an Environmental Health Management System (EHMS) within Private Hospitals in Bangkok

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Abstract

Purpose: This is a research paper focused on assessing a hospital manager's perceptions of environmental management issues relating to private hospitals in Bangkok.

Methodology: In order to consider more implicitly the questions and issues raised, this empirical groundwork utilised an interpretive perspective. The scope for this research was the Medical Managers/Administrators of private hospitals situated in Bangkok, Thailand. The population for this study was made up of a number of individual (24) managers located at across multiple, but independent sites, and a total of 14 Managers were determined as the resultant sample frame.

Findings: The outcomes consisted of six (6) main themes, namely: Internal Stakeholders; Implementation Possibility; Standards; Costs; Administration; and Integration Issues; and nineteen (19) sub-themes.

Practical Implications: The paper gives a clear insight into the implementation issues of an EHMS associated with a hospital setting and the development of appropriate strategies. The paper also addresses some of the implications for continuing environmental management engagement and consequent developments. The paper suggests that developments of this kind may benefit from a greater use of cohesive systems management, whilst outlying the issues of significant costs and timing concerns, and the effects on marketing opportunities through EHMS certification.

Originality: Very little research has been conducted in this area in Bangkok and the paper exposes weak aspects of EHMS adoption and implementation that is previously unexplored in today's hospital environments.

INTRODUCTION

It is 20 years since the first introduction of ISO 14000 Environmental Management System (EMS) in 1996 (ISO 14000, 2016) and it has taken this amount of time to become accepted as an appropriate standard for health services application (Poksinska, Dahlgaard and Eklund, 2003; Dettenkofer, et al., 2000). In Bangkok - the local context for this paper - health service certification to ISO 14000 appears to have limited application as less than 21% (3) are certified to the standard, and of these only 2 have a long-standing commitment demonstrated through their certifications in 1998. In hospital advertising there is no use of ISO 14000 statement to show a hospitals' commitment to the environment (Clark, 1999) as elsewhere (Leipziger, 2010) thus showing a lack of credibility and progression (ISO.org,

2016). This, when viewed from the perspective of worldwide growth of 7% (2013-2014) (ISO.org, ibid) indicates the lack of managerial awareness of the possibilities that ISO 14000 certification brings to most organisations.

An EMS is defined as a framework for establishing environmental operational goals and achieving them through operating in accordance with established environmental principles (Summers-Rainers, 2002) and driven by corporate strategy and goals (Agarwala, 2005). This environmentally oriented management system (Liyin, Hong and Griffith, 2006) is designed to encompass a coherent voluntary operating framework (Cascio, 1994) to help integrate managerial policies, actions and processes (da Silva and de Medeiros, 2004), centred on mitigating corporate eco-environmental impacts (Tibor and Feldman, 1996; Psomas,

Fotopoulos, and Kafetzopoulos, 2011). The hospital EMS (EHMS) is often associated with external pressure, arising from one the most important stakeholders - the client (Block and Marash, 1999; Delmas, 2001) - ostensibly leading to greater competitiveness and profitability (Klassen and McLaughlin, 1996) whilst manifestly aligning the hospitals business strategy (Garrod and Chadwick, 1996). Elsewhere, further development appears to be the use of the ISO 14000 standard with Corporate Social Responsibility (CSR - ISO 26000) concepts, thus building a more engaged client-oriented proposition towards corporate governance (Lambin, 2014).

Adopting ISO 14000 - Nurturing an Environmental Health Management System (EHMS)

Previous experiences with the adoption of other management standards such as ISO 9000 provides suitable underpinning to introduce ISO 14000 (Delgado-Hernandez and Aspinwell, 2005). Consequently, the implementation of the ISO 14000 standard becomes easier, more durable if ISO 9000 is utilised as a prerequisite (Boiral and Sala, 1998) and is considered influential in affecting overall business and marketing performances (To, Lee and Yu, 2012). However considerable resources are necessary for the implementation of the EHMS and also maintaining its certification (Shen and Walker, 2001) – whether voluntary (Stapleton, Glover and Davis, 2001; Griffith, 2000), market-based (Kloepfer, 1997) or through compliance measures (Zhang et al, 2000).

Europe's Eco-management and Audit Scheme EMS system is another system (EMAS - created in 1993) (Sulzer, 1999) and its pursuit is to assess, manage and apply continuous improvement processes so that environmental performance is enhanced (Weaver, 1996). An evaluation of the EMS performance outcomes often reflects building environmental metrics that require institutional goal setting and monitoring processes (Fiksel, 1996). The EMAS is different to ISO 14000 in its application, as it focuses purely on building and targeting environmental performance. Consequently, this difference indicates that there is still confusion over what exactly the ISO 14000 standard measures (Krut and Gleckman, 1998).

Issues with implementation of ISO 14000 EMS in hospitals

Hospitals create both non-hazardous waste and hazardous waste (radioactive, toxic, infectious and pharmaceutical waste) (Connor, Tomson and Mortimer, 2009) that has to be managed (Hoenich, Levin and Pearce, 2005). The most

difficult component of this to manage effectively is the hazardous waste. Consequently, hospitals affect the local natural environment through the production of solid bio-waste, which is often combined with toxic chemicals (Nandwani, 2010) and the implementation of a management standard such as ISO 14000 is a must to provide the integrity of the overall environmental system and the trust and credibility that often follows from its adoption.

The ISO 14000 standard can be applied to a single facility, multiple locations or the whole company. The need for flexibility and motivation (Fortunski, 2008) is paramount as is being environmentally proactive (Soh, 1998) and efficient (Emilsson and Hjelm, 2002). Further, costs associated with implementation processes may also have a negative effect (Carraro and Leveque, 1999) but can be reduced by the utilisation of appropriate scope (James, 1996).

Motivation relating to the implementation of ISO 14000 indicates the following perspectives, to:

1. Prevent/reduce environmental impacts (Clark, 1999)
2. Address main stakeholder concerns (internal and external) regarding the environment (Block and Marash, 1999)
3. Improve internal environmental awareness and training (Ruddell and Stevens, 1998)
4. Operate successfully in an increasing regulatory compliant environment (Zhang et al, 2000)
5. Improve downstream supplier relationships (Clark, 1999)
6. Improve ability to handle toxic/hazardous waste environmentally (O'Conner, 2000).
7. Divert/reduce environmental waste (Spivey-Tilson, 2002)
8. Build international/regional competitive advantage (Sayre, 1996)
9. Increase the strength of environmental company policy (Weaver, 1996)
10. Develop an internal environmental oriented culture (McManus and Sanders, 2001)

These perspectives create a basis for the orientation for the implementation process and signify what the system must focus on. Further, the ISO 14000 standard requires a specific evaluation, as the standard is difficult to adapt to the hospital environment and consequently, requires significant resources to validate (Guenther and Vittori, 2008). This suggests reasons why hospitals have not been certified to the ISO 14000 standard and have not developed an appropriate EMS engagement. However, there appears to be a dearth of research in the complicated area of the application of ISO 14000 (Turk, 2009) especially to service organisations like hospitals (Ann, Zailani and Wahid, 2006) in order to

understand the true implications of its application. Having raised this as a literature gap issue (Arksey and O'Malley, 2005; Househ, 2011), this creates the context for the research question, *What are the managerial issues when contemplating adopting and implementing an Environmental Management System (EHMS) in private hospitals in Bangkok?*

METHODOLOGY

To investigate the issues generated within a hospital implementation context, a deeper, more involved approach was considered appropriate that required more personal contact on such critical and important issues. In order to consider more implicitly these generated issues, this empirical foundation exploited an interpretive approach (Hill, Thompson and Williams, 1997; Walsh, White and Young, 2008). An assessment of environmental issues targets personal components raised out of individual experiences and is therefore an area of interest where qualitative methodology is most appropriate to generate this type of data.

This was an attempt to understand the perceptions of senior managerial experiences in private hospitals contemplating or preparing to implement ISO 14000. Consequently, hospital senior managerial staff were considered specialist knowledge agents and actors (Benn et al., 2008) as their opinions and experiences influenced their perception of environmental practices, and the development and application of building appropriate hospital-based management strategies and goals.

The research used a semi-structured interview conducted with senior managers who provided an appropriate element of context and flexibility (Cassell and Symon, 2004) and this was further aided by applying an inductive/theory building approach (Glaser and Strauss, 1967). Given the lack of appropriately focused research in this area, this methodology is seen as suitable for creating contextual data for the purpose of forming richer theory development (Cayla and Eckhardt, 2007). A pilot study was carried out with 4 respondents from the population (these were not used in main interview/data collection process) that allowed changes to language and questions that had more meaning and understanding by the respondents (following Kim, 2011). This led to a more effective and streamlined question routine and an enhanced communication approach with respondents (James and James, 2011).

The population frame (26) for this study was made up of registered senior Medical Managers/Administrators who had direct on-site responsibility for managing environmental programmes and were situate at identifiable locations, which is considered an existing frame (Ritchie and Lewis, 2003). This delivered an initial means for appropriate sampling assessment within clear boundaries (Coyne, 1997). Given that not all individuals in this working group were available for interview during the project data capture or were employed in the pilot study, the sampling frame was configured as 19, where all respondents were included (Fink, 2000), and no respondent was considered out of scope relative to the research orientation and requirements (Koerber and McMichael, 2008). Consequently, and in line with a qualitative approach (Bryman, 2012), the respondents were chosen through applying the approach of a targeted population of interest (Carman, 1990) and this reflected the criteria of theoretical purpose, relevance and appropriateness (Glaser and Strauss, 1967). This was considered appropriate for this inquiry (Guest, Bunce and Johnson, 2006; and Bryman, 2012) and empirically adequate (Spanos, 1990) but it had no bearing on the research logic and reasoning (Crouch and McKenzie, 2006). Additionally, using Glaser's (2004) sampling processes, a total of 14 senior Medical Managers/Administrators were thus determined as the resultant sample frame - which could also be considered convenience sampling according to Harrel and Fors (1992); and meets the saturation requirements of Guest, Bunce, and Johnson (2006) and thus takes the sample frame beyond an empirically expected level.

Each face-to-face interview was audio recorded for future analysis (Gill etl., 2008). Interviews were conducted in English and took approximately one hour. All interviews were recorded digitally after gaining explicit permission (following Duranti, 2007) and were later transcribed verbatim using NVivo 12 (a qualitative software package) following the approach indicated by Bailey (2008). The conduct of the interviews follows a similar process used by Gray and Wilcox (1995) and James (2014), with each individual being asked the same set of questions – modified through ancillary questioning (probes and follow-ups) in the same way as Balshem (1991). To increase the reliability of the data, the actual transcription was returned to each respondent – via e-mail – for comment, correction, addition or deletion and return, which followed the process of validated referral (Reeves and Harper, 1981). Whole-process validity was achieved, as the respondents were considered

widely knowledgeable of the possibilities associated with the context and content of the research orientation (Tull and Hawkins, 1990). Each interview was initially manually interrogated and coded using the Acrobat software according to sub-themes that 'surfaced' from the interview dialogue - using a form of open-coding derived from Glaser (1992), and Straus and Corbin (1990). This treatment was also reinforced and extended through the use of thematic analysis conducted using NVivo 12 (Walsh, White and Young, 2008). Each interview was treated and coded independently. In this way, no portion of any interview dialogue was left uncoded and the overall outcome represented the shared respondent's views and perspectives through a progressive coding-sequence (Buston, 1999). Various themes were sensed from the use of the software packages, as well as from the initial manual-coding attempts. This multiple form of interrogation was an attempt to increase the validity of the choice of both key themes and sub-themes through a triangulation process (Onwuegbuzie and Leech, 2007). NVivo 12 was further used to explore these sub-themes by helping to pull together each of these sub-themes from all the interviews (Harwood and Garry, 2003). In this way, it was possible to capture each respondent's comments across transcripts (Riessman, 1993) on each supported sub-theme and place them together for further consideration and analysis (Ryan and Bernard, 2003).

The structure of the outcome is greatly influenced by the emergence of the key-themes and sub-themes. The preferred strategy for the analysis of the primary data was to use the stated research question, which was used as a guide to providing the outcome (based on Yin, 1994; Hammersley and Atkinson, 1995). The research methodology used was considered a mixed methodology approach (James and James, 2011) and was determined to create the best possible narrative of the situation in question. The application of the overall research methodology produces construct validity (Healy and Perry, 2000) - based upon the realism paradigm and preferring to use the terms of credibility and dependability which are accepted by many qualitative researchers in place of reliability by applying Guba's constructs (Guba, 1981) and leading to the Lincoln and Guba (1985) notion of "progressive subjectivity".

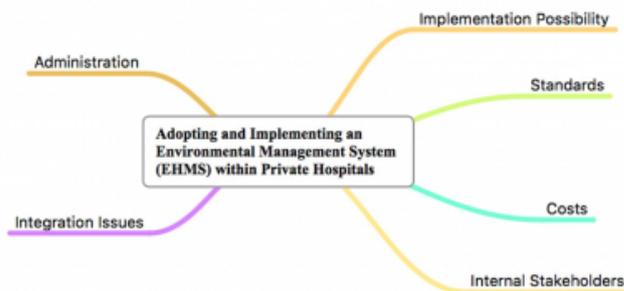**Figure 1**

Research Outcomes

Illustration of Research Outcomes

The outline of the research outcomes for this study is shown in Figure 1 above. The framework supported by appropriate literature, illustrated below in Table 1, consists of six (6) main themes, and nineteen (19) sub-themes. The outcomes are stated below where the discussion focuses on the sub-theme elements within each key theme. The discussion format used in this paper reflects the respondent's voice through a streamlined and articulated approach for reporting. Thus, the style adopted for reporting and illustrating the data is greatly influenced by Gonzalez, (2008) and also to a greater extent Daniels et al. (2007) and is discussed below, focusing on the raised research question and the resultant themes. Table 1, below illustrates the respondent references for each sub-theme.

Table 1

Research question, themes and references

Research Question	Main Themes	Sub-Themes	No. Refs
What are the managerial issues when contemplating adopting and implementing an Environmental Management System (EHMS) in private hospitals in Bangkok?			
	Internal Stakeholders	Management	23
		Training	17
		Motivation	14
	Implementation Possibility	Regulatory	22
		Leadership	12
		Time	17
	Standards	Confusion	21
		Choice	24
		Compatibility	14
	Costs	Time	13
		Training	11
		Stakeholders	19
		Reputation	17
	Administration	Process Management	16
		Auditor Training	13
		Management Responsibility	19
	Integration Issues	With other standards	21
		Cohesion requirements	14
		Teamwork	23

Table 1 above indicates the minimum responses for each identified sub-theme.

Table 2

Major themes and respondents

Major Themes	Cited Respondent Number
Internal Stakeholders	2, 4, 5, 7, 8, 9, 10, 13
Implementation Possibility	1, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14
Standards	1, 2, 4, 6, 7, 8, 9, 12, 13
Costs	1, 3, 4, 5, 6, 7, 8, 10, 11, 12
Administration	1, 3, 5, 6, 7, 8, 9, 11
Integration Issues	2, 3, 4, 5, 6, 10, 11, 13, 14

Table 2 above indicates the major themes and cited respondents.

RESULTS

The results are presented below using the research question as a pointer and supportive empirical evidence through indicated extractions as in Gonzalez, (2008). Consequently, considering the research question - *What are the managerial issues when contemplating implementing an Environmental management system in private hospitals in Bangkok?*

The results are stated here as six (6) main themes, and nineteen (19) sub-themes as indicated in Table 1 and 2 above, where each sub-theme theme is placed with each corresponding main theme.

Main Theme – Internal Stakeholders

In order to determine a view of the implementation issues surrounding ISO 14000 in private hospitals in relation to this theme, it would appear that this is being driven by the more powerful internal stakeholders - especially top management. This was reasonable as the costs and direction of the implementation was under their control. Further, the application of the standard appeared to be a response to sensed changes in the requirements of both hospital staff and hospital patients.

In terms of Management, this is typified by one respondent (2) who suggested that, …*We need to know how difficult it would be. We are the ones most likely to be affected in the short-term. I need to know what I must do and how it will serve the hospital. It will be difficult…* Another respondent (9) signified that, …*I don't think management really know what they are doing. The last time we did something like this for ISO 9000, we had a total change of management and it left the hospital in a very difficult place. So I hope this doesn't happen this time…* Another respondent (13) indicated that, …*Sometimes I wonder what the hospital council do all day. Here's another example making sure*

manager's toe the line, by making them work harder…

In terms of Training, this is exemplified by one respondent (4) who suggested that, …*From a management perspective, I need more training if I'm going to involved in this process…* Another respondent (7) denoted that, …*Last time we did this type of thing, it created too many problems because we were unprepared, had little extra resources and staff of all kinds did not know what to do. Nothing has changed…* Another respondent (10) signified that, …*Obviously, management has determined that this implementation process must go ahead. But it would be easier if we knew why. Much easier…*

In terms of Motivation, this is characterized by one respondent (5) who suggested that, …*When I look around I see a whole lot of people who aren't going to be enthusiastic, as no one cares for this thing…* Another respondent (8) signified that, …*I am sure that all of us can see clearly that unless we get motivated enough, this is gonner fall on its head…* Another respondent (2) proposed that, …*Every-time management needs a rise, they pick up something to create chaos. No one here wants it really. I thought we learnt from before…*

Main Theme – Implementation Possibility

In order to acquire a picture of the status of the implementation of ISO 14000 in private hospitals in relation to this theme, the data denotes that as a management and stakeholder driven process the application of ISO 14000 standard appears to be a very strong possibility. This may also be a response to the previous application and experiences of ISO 9000 as in some of the hospitals.

In terms of Regulatory, this is typified by one respondent (14) who suggested that, …*I don't think the government is forcing us or making health services do this. So why now? It isn't usual to do things like this without there being a need. Doubt if it will really succeed…* Another respondent (6) indicated that, …*We don't really want any government or other body overseeing what we do here. I came to the private sector to get away from such problems…* Another respondent (11) denoted that, …*It will be difficult to help the local authorities know what we do. But it is something management want, I assume, but I don't know…*

In terms of Leadership, this is demonstrated by one respondent (3) who advised that, …*I don't think there is anyone here who could lead such a massive programme. It*

will take something special, someone experienced in this process to help us - but we cannot do it on our own… Another respondent (9) indicated that, …*It will cost a lot of money to get someone here. But we can't really afford it. Management will need to get permission from the governors to attempt it, but what for?…* Another respondent (1) directed that, …*I am sure we will get a consultant or two who will tell what to do and then they will disappear to leave us pick up the pieces. In the end it will be up to us, not management…*

In terms of Time, this is revealed by one respondent (7) who submitted that, …*Because it hasn't been done much here, no one will know how long it will take. Management can state a given time - perhaps 6 months or a year, but they really don't know…* Another respondent (4) signified that, …*No one outside the organisation will be pushing us, so it will take longer than expected and cost more. It will be a really problematic task…* Another respondent (13) denoted that, …*Sometimes, we will be working and hitting our heads against a wall. Not good really. And then at other times it will be clear what it is that we're working for. Consequently, it will be a long time before the system will be easy to work with…*

Main Theme – Standards

In order to acquire a picture of the status of the implementation of ISO 14000 in private hospitals in relation to this theme, the data signifies that the process may be difficult to address cohesively by management and illustrates significant differences between stakeholder views regarding adoption and the implementation of an appropriate environmental standard.

In terms of Confusion, this is revealed by one respondent (1) who proposed that, …*I am not sure that management have thought this through. It doesn't make sense to do this right now, as no one else is doing it. So it will waste time and effort…* Another respondent (6) signified that, …*As I see it, not such a good idea. We still haven't been informed as to what [standard] we should be working on. The situation needs to be resolved…* Another respondent (8) conveyed that, …*I can see quite clearly that unless top management are committed - in terms of money and energy, this situation is unnecessary. Management's fault really…*

In terms of Choice, this is revealed by one respondent (4) who advised that, …*Is this [ISO 14000] the appropriate standard? I can think of other more effective ones, that*

aren't as expensive or foreign… Another respondent (12) signified that, …*Can't it be easier? I am sure it doesn't have to be so specific and ingrained…* Another respondent (9) denoted that, …*I have heard that the system can be applied by department. So I think that it should be done somewhere else first and not everywhere at once. Why can't [it] be done this way?...*

In terms of Compatibility, this is revealed by one respondent (2) who proposed that, …*I think that management will need to resolve this issue and it will be more difficult than they imagine. It is something that is monumental and will take time…* Another respondent (13) signified that, …*We need to establish a uniform approach to implementing any standard at this hospital. To date it is left to two people. This must be changed…* Another respondent (7) indicated that, …*We will need to be more effective in how we generate data to help substantiate the implementation of this standard, but our systems are not very supportive of an all-hospital process…*

Main Theme – Costs

In order to acquire a picture of the status of the implementation of ISO 14000 in private hospitals in relation to this theme, the data implies that costs have a large impact on ISO 1400 take-up and application. It also appears to have an affect by restricting other resources, so that management choices become more difficult.

In terms of Time, this is revealed by one respondent (5) who proposed that, …*It's the same thing over again. They [Management] will tell to do this or that and then after a period of time and lots of money, they will forget about it - at least for most of us…* Another respondent (12) signified that, …*We are already working on so much, another thing will just drown us. It's so unfair…* Another respondent (3) intimated that, …*I see this as another major task. Not sure what will come of it, but we can learn and then move on. No sure why they [Management] do this to us…*

In terms of Training, this is revealed by one respondent (8) who advised that, …*We are not trained to do this. What training we do get isn't sufficient. It will be just like before, no money, no funding and just an increase in our work load…* Another respondent (4) implied that, …*Some of us don't really want to do this because it will cost us in terms of focus, change the way we do things and it will cost us personally through more work and less pay…* Another respondent (11) denoted that, ...*Yes, I think more training is necessary. Sure management say this when we start, but it is*

to our cost in the long run. Management can't really afford this, so we'll pay…*

In terms of Reputation, this is revealed by one respondent (12) who offered that, …*In the end, all this effort is for the patients. But I'm sure that our reputation would also be enhanced because it shows we care*… Another respondent (4) signified that, …*At meeting recently, management stated clearly that we have to do it or some of us will have to go to reduce costs. To them it is necessary, but to us we are just cost elements*… Another respondent (7) directed that, …*We know it's for the good of the hospital, but… but [it] comes at a cost. I hope our marketing is helped by this*…

Main Theme – Administration

In order to acquire a picture of the status of the implementation of ISO 14000 in private hospitals in relation to this theme, the data suggests that the process and its administration will be difficult to manage and require changes in how staff perceive the need for its application, as well as the individual and group work ethic associated with its possible implementation.

In terms of Process Management, this is revealed by one respondent (3) who proposed that, …*Management really have done it this time. With all the environmental problems we have generally, how can management want to document everything that we do. It will be a mess*… Another respondent (8) denoted that, …*The effect of implementing this [standard] is to shake up the system reporting. Not one department will be left out and it also has implications for managers to develop systems that work*… Another respondent (6) indicated that, …*I can see that my manager likes this idea. But not everyone. Because it focuses on bureaucracy. It also means more responsibility for staff - especially those involved in monitoring the new environmental system*…

In terms of Auditor Training, this is revealed by one respondent (5) who offered that, …*We expect a lot from our staff, but this will test them much more. I can honestly say that it will be a big shock for some. But we need more auditors and some people will be uncomfortable with this*… Another respondent (11) signified that, …*I know of a number of staff who really want to do this, to learn to do something new and to increase their skills to help the hospital. It's an opportunity, that's what it is*… Another respondent (7) conveyed that, …*I have the responsibility to train new staff in auditing, but this is different to their jobs.*

So for some it is stressful, even though it is necessary. It is still an issue…

In terms of Management Responsibility, this is revealed by one respondent (1) who advised that, …*You know, it's their responsibility not ours, and then they come back to us with their ideas of how well we did and what needs improvement. I sometimes think it is the administrators and not the doctors who are running this place*… Another respondent (9) proposed that, …*I am not sure about that. We have talked about it. Unfortunately, management just tell us, rather than asking our opinion. It would be implemented so much easier if they did that*… Another respondent (11) signified that, …*Of course it's theirs [management]. We need leadership and that means it's their responsibility to provide it. No question about that*…

Main Theme – Integration Issues

In order to acquire a picture of the status of the implementation of ISO 14000 in private hospitals in relation to this theme, the data indicates that integration is an issue that require management's response targeting teamwork to underpin integration orientation and to also assess and be better informed regarding other standards options and usefulness.

In terms of With Other standards, this is revealed by one respondent (2) who intimated that, …*Some of us have experience of implementing ISO 9000 here, but for most of us, it will be the first time. It won't be easy at all. I know that*… Another respondent (5) signified that, …*I am sure that collectively we have experience with standards, but not necessarily here. I feel that our response will be inadequate unfortunately*… Another respondent (14) showed that, …*There are many staff who have such experiences, but only from the data management and collection point of view - very few of us have experience of implementing a whole system*…

In terms of Cohesion requirements, this is revealed by one respondent (10) who proposed that, …*Management clearly indicate that integration across standards will be easier and lower the documentation load. But I don't think that will be the case at all. Management have underestimated the problem and we'll be the ones to sort the problem out*… Another respondent (4) recommended that, …*Formerly, I have already done this. Most staff don't seem to understand how such standards must be integrated. This is an issue that has to be faced*… Another respondent (6) signified that,

…To be sure about this, we don't even have a focal point. For example, we don't know what the patients think about such a process. They have to be informed and their views documented early…

In terms of Teamwork, this is revealed by one respondent (3) who submitted that, …*We will need to work together on this. It is going to be very difficult, so we need to work together*… Another respondent (11) signified that, …*It's obvious that some people will not accept this extra work. But in the end it will be upto us to implement it. It will be OK, I know*… Another respondent (13) denoted that, …*I don't know what's going to happen. Working with other people on this is going to stretch us. It's not normal here as we are normally independent*…

DISCUSSION

In order to take this inquiry forward, the discussion concentrates on the raised question to help address the outcomes. The outcome illustrates the conceptual development and relationships perceived to correspond to the features informing the possible adoption and implementation issues of ISO 14000. The main focus for this discussion are the characteristics revolving around the main themes – Internal Stakeholders; Implementation Possibility; Standards; Costs; Administration; and Integration Issues.

Internal Stakeholders

The role of top management would appear to be central to implementing ISO 14000 (Gupta, 1995) by creating a proactive working environment (Berry and Rondinelli, 1998). Stakeholder analysis appears to be a useful way forward when considering implementation avenues of ISO 14000 (van Beurder and Gössling, 2008). Staff responses indicate their concerns relative to previous experience of previous ISO standards programmes (Shen and Walker, 2001), thus management could help to initiate benefits through process improvement (Valdez and Chini, 2002). Additionally, management must take this seriously if the adoption and implementation process is to be successful (Zhang et al., 2000).

Managing the change process related to the adoption and implementation of ISO 14000 would appear to be a difficult task for staff as previous experience has shown (Christmann and Taylor, 2006) and that focused training would be a necessary requirement (Hui and Pun, 2001). Management would probably benefit the most as it would raise awareness

of ISO 14000 and its consequent managerial implications through policy changes and structural strategies as it affects the hospital performance characteristics (Moneva and Ortas, 2010).

When the data was examined it suggested conclusively that one of the major motivational forces in driving private hospitals to engage in ISO 14000 is the perceived pressure from patients (Armstrong and Hagel, 1996) resulting in greater influence over subsequent competitive strategies (Devers, Brewster and Casalino, 2003) leading to enhanced hospital services (Robinson, 2001). This in itself has created an enormous power shift relating to the internal burden of additional work brought on by such management strategies (Moss-Kanter, 1983) - for staff. Working with the implementation of ISO 14000 could conceivably lead to benefits for the organisation as well for the major external stakeholder - patients (Karagozoglu and Lindell, 2000).

Implementation Possibility

Regulatory impacts appear to be less of an issue in Thailand than in other countries (Marimón, Casadesús and Heras, 2010), which could result from spurious variations in the application of laws (Prakash and Kollman, 2003) and uneven uptake (Neumayer and Perkins, 2004) but are nevertheless are just as important to acknowledge and comply with (Ilnitch, Soderstrom and Thomas, 1998). Further, the implementation of ISO 14000 may also reflect a self-regulatory initiative (Gunningham and Sinclair, 2002) seeming to anticipate the application of good governance strategies (Aras and Crowther, 2010).

The issue of staff not knowing what is driving the implementation of ISO 14000 leads to speculation that inadequate management communication processes are used (Cho and Patten, 2007) to help motivate staff to implement the expected standard. This is an obvious outcome, as ISO 14000 is less prevalent in hospital services than in manufacturing (Lagomidos, Chountalas and Chatzi, 2007). Management's level of leadership capability is also raised as a concern by staff as questionable, deleterious, manifestly risky (Andrews, 1999) and lacking engagement in social responsibility (Luo and Bhattacharya, 2006). This has implications for the demonstrated efficacy of arrangements to manage an environmental management system adequately (James, 2015).

Implementation time has been voiced as an issue in the data and this is supported in the literature as a major ongoing

issue (Boiral and Amara, 2009) as ISO 14000 needs to integrate and dove-tail into the present operations (Ambika and Amrik, 2004) and modify them for future effective environmental engagement. Managing time associated with staff expectancy (Martinez-Costa and Martinez-Lorente, 2007) and increased internal bureaucracy (Boiral and Amara, 2009) requires managerial focus and resources that hospitals may not have available.

Standards

The data suggests that over time, confusion corresponds to differing treatment of standards (Nelson, 2006) and on the meaning of expressed terminology associated with each (Kockaert and Steurs, 2015). This exemplifies the need for hospital management to provide impartial training regarding the ISO 14000 standard and to indicate what its relative scope and more importantly, what management's focus is for its use and implementation (Feng, Terziovski and Samson, 2008) for building hospital sustainability (Petrini and Pozzebon, 2009).

The surfaced data indicated that staff raised the issue of adoption choice of environmental standard. This is however, seen as a strategic management decision (Delmas, 2002), but it does presuppose a lack of clarity and communication by management. Thus, it is seen as vital that management respond more positively and help build trust through better communication processes.

Fewer than 15% of private hospitals in Bangkok is currently certified to ISO 14000; have some form of an EHMS implemented; or are intending to develop one. This was possibly a result of a weak response to voluntary certification take-up in Asia (Managi, 2015). Further, it is also implied from the data that a small percentage (20%) have been certified to ISO 9000 and therefore the majority of hospitals lack planned certification scope to accommodate environmental development to ISO 14000 designed to underpin strategic hospitals goals (Matthews, 2001).

Costs

A major issue with the implementation of ISO 14000 is cost (Briscoe, Fawcett and Todd, 2005; Ofori et al., 2000) even though after implementation it will have a positive effect on institutional costs (Gomez and Rodriguez, 2011) through due diligence actions (Anton, Deltas and Khanna, 2004) and consequent marketing and reputation effects among major stakeholders and patients (Miles and Covin, 2000; Walker,

2000). Changes to the overall management system will need to be undertaken and this requires significant investment in resource requirements (Krizan, 1999) and lead to elevated administrative costs (Tam, Tam and Zeng, 2002).

Appropriate developments relating to the necessary training to deal with the implementation process (Arauz and Suzuki, 2004; Calisir, 2007) shows concern from staff and would appear to be a requirement so that organisational performance is not negatively impacted (Bowern and Mortensen, 1999). Further, focused training on specific aspects of the ISO 14000 standard would also be required as is changing and reforming staff attitudes to dealing with environmental concerns of the major stakeholders.

Implementation issues raised elsewhere in this paper have an impact on the acuity of the scope and process used to deliver a functional ISO 14000 EHMS. It would have impacts in international spaces when promoting private hospitals from Thailand as a serious alternative to Western health systems. In this respect, it would appear to be that adoption of ISO 14000 is a vital component of the reputation of each private health provider with an international orientation and that the focus and orientation demands of international patients must also be considered in terms of sustainability demands (Zeng et al., 2003). The implementation exercise in this case would need to demonstrate an effective engagement of environmental performance (Morrison et al., 2000) in order to build an associative environmental health system reflecting dominant patient environmental values underpinned through social sustainability resolutions (Liyin, Hong and Griffith, 2006).

Since most hospitals appeared to ignore the publication of certification (where certified) the lack of promotion evidence also leads to speculation that private hospital management are not aware of the growing issue of stakeholder greening and its possible effects on the quality of health provision. Further lack of direct promotion signals to stakeholders that private hospitals weren't ready to invest directly in such environmental standards. This may also be promulgated by a lack of government leadership in this respect. This may also be viewed from the perspective of very low certifications in ISO 14000 in hospitals generally and private hospitals in particular. This leads to suggestions that hospitals should be "healthy places" (Vicente, et al., 2015). There was also no central register of hospitals - public or private (regional or national) that could be utilised to discover the level of environmental engagement by hospitals. This outcome may

be compared to the world register of ISO 14000 (ISO.org, 2016), which indicates 54.75% of hospitals are certificated to ISO 14000 in Spain as a direct comparator for Thailand. Further, when compared to the global figure for health care, Thailand figures are slim, even if biased to private health. Consequently, the ongoing issues surrounding environmental management - water, energy, waste recycling, waste management and air pollution (Riedel, 2011 149) concerns do not appear to be a serious issue for private hospital managers as the carbon footprint (Connor, Lillywhite and Cooke, 2010) of private hospitals in Bangkok in particular, remain undocumented (McGain and Naylor, 2014).

Administration

Understanding the operational management of processes underpins the effective management of a successful implementation of ISO 14000. This requires leadership engagement (Olson, 1999), a keen need to communicate effectively, auditing capability (Sousa-Poza, Altinkilinc and Searcy, 2009) in order to measure progress and inform improvements (Sadri and Lees, 2001). Part of the data suggested that staff were untrained in auditing process in general, but ISO 14000 specifically. This indicated that staff were aware of the need for auditing and that this exemplified the orientation and the motivation to seek help. Further, as auditing was a requirement of the ISO 14000 standard (James, 2005), appropriate staff were needed to be specifically trained to audit the developing environmental system (James, 2005) in order to show consistent compliance (Kuhre, 1995). Implementation processes needs to be driven by top management who take overall responsibility for its sustainable performance, which in turn is oriented to the created culture (Gore, 1999). Management buy-in to adopting ISO 14000 appears to remain illusive and this may reflect inconsistent approaches to its adoption and thus improving its positive affects on hospital environmental performance (Argyres and Liebeskind, 1999).

Integration Issues

The data shared suggest that integration across standards will not only be difficult, it will influence how effective the final outcome would be (Renzi and Cappelli, 2000). However, this process can also lead to sytemising all the standards utilised at a hospital under one umbrella (Delmas and Montiel, 2008), thus reducing resourcing issues and enhancing data collection and analysis (Block and Marash,

1999) and consequent management planning, decisions and actions.

Cohesion requirements were raised as a necessary process-based issue to ensure the ISO 14000 standard could be worked into the strategic corporate scheme of operations (Wilkinson, 1999; Garvin, 1991). This was identified as underpinning poor compatibility with other standards (Dick, 2000) and as a prospective internal barrier to the standards' implementation process (Hillary, 1999) that needs to be overcome (James, 1996). Building teams and processes appear necessary for the successful implementation of ISO 14000. Moreover, experience implementing other corporate standards suggested that this is mandatory (Welford, 1995; Meegan and Taylor, 1997).

CONCLUSION

The motivation to adopt an EHMS in private hospitals in Bangkok is clearly related to a unilateral voluntary and symbiotic development for the benefit of both the hospital and main stakeholders (Dasgupta, Hettige and Wheeler, 2000). There is an expressed understanding that there are significant issues relating to the adoption and implementation of ISO 14000 and that these issues reflect corporate environmental policy, inadequate training, the effect of previous experiences with standards implementation, standards administration and integration issues. There still remains the issue of the difference between adoption and certification drivers and these are likely to affect the consistent move towards the take-up of the ISO 14000 standard (Neumayer and Perkins, 2004) in private hospitals in Bangkok.

Further, it is also recognised that there is little data available from current hospital systems across Asia to help understand the impacts of the adoption and implementation of ISO 14000 (Bellesi, Lehrer and Tal, 2005) in hospital settings. This may off-set proposed adoptions considered as being arbitrary, costly and ultimately ineffective in meeting the environmental strategies, goals and business and social responsibilities of private hospitals.

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