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# **Reducing Hospital Associated Infection: A Role for Social Marketing**

Research Paper

## **Purpose**

Although hand hygiene is seen as the most important method to prevent the transmission of hospital associated infection in the UK, hand hygiene compliance rates appear to remain poor. This research aims to assess the degree to which social marketing methodology can be adopted by a particular organization to promote hand hygiene compliance.

## **Design/Methodology/Approach**

The research design is based on a conceptual framework developed from analysis of social marketing literature. Data collection involved taped interviews given by nursing staff working within a specific Hospital Directorate in Manchester, England. Supplementary data was obtained from archival records of the hand hygiene compliance rates.

## **Findings**

Findings highlighted gaps in the Directorate's approach to the promotion of hand hygiene compared to what could be using social marketing methodology. Respondents highlighted how the Directorate failed to fully optimise resources required to endorse hand hygiene practice and this resulted in poorer compliance.

## **Originality/Value**

From the experiences and events documented, the study suggests how the emergent phenomena could be utilized by the Directorate to apply a social marketing approach which could positively influence hand hygiene compliance.

*Keywords: Social Marketing, Public Health, Hospital Associated Infection, Nursing*

## **1. Introduction**

Poor nurse compliance with hand hygiene has been seen for a long time as a contributing factor to increasing infection rates. The traditional approach of increased training does not seem to fully confront the issues which need resolving. As social marketing deals with the promoting of behavioural change, it may offer an alternative approach.. Despite clinicians seeing 'marketing' as a business tool which is not valuable to their practice, Social Marketing could be said to differ in that human welfare and society's well being need to be balanced with consumer satisfaction and profit. The addition of the human welfare aspect to marketing methodology could prove to be more congruent with clinician values. The concepts of social marketing methodology can provide a framework for analysis, planning implementation and control of programmes designed to create, build and maintain beneficial exchanges with target customers, the patients and staff, for the purpose of achieving organizational objectives. Understanding the concepts and structure of social marketing may promote the use of marketing as a technique and tool for nursing to use in practice.

## **2. Social Marketing**

Despite marketing appearing to be accepted into the broader context of the NHS, doubts do seem to remain about clinician engagement (Laing and Galbraith, 1996; Byers, 2001). Clinicians perhaps see marketing in terms of promotion and selling, which they would not see as affecting them in their professional activities.

Influencing behaviour is an extremely important aspect of not only patient management but also of staff management in the wider healthcare arena. The marketing concept of 'Exchange' is easily understood in the context of exchanging goods for money, but exchange can also be perceived in other ways. For example stopping smoking for a better health or having a child immunized so not to be seen as a bad mother. This importance of the exchange concept influencing behaviour separates marketing from other forms of behavioural influences, for example, educational and regulatory influences (Lindblom, 1977; Kotler and Armstrong, 1999). Educational approaches emphasise knowledge as the primary determinant of human behaviour and regulatory approaches use coercion or punishment to influence behavior. Marketing, however uses choice and self interest as approaches to influence behaviour (Rothschild, 1999) and therefore it can provide clinicians with a vital additional tool. Marketing can also offer the wider healthcare arena a logical planning process

(MacFadyen et al, 1999). This involves processes similar to those already used by clinicians (market) research, (market) analysis, objective setting and identification of strategies. The only parts of this planning process that are not already utilized are market segmentation and marketing mix, which may potentially be key processes clinicians could develop to enhance practice.

In the research areas of healthcare and marketing, there is significant body of work referring to social marketing (MacFayden et al 1999, Grier and Bryant 2005, Evans 2006) as a distinct concept from general or commercial marketing. Social marketing is rooted in social and public policy and this could prove to be more congruent with clinician's values, rather than their stereotyped view of marketing.

The term "social marketing" was first used by Kotler and Zaltman (1971) when marketing was used to influence the acceptability of social ideas. It was further extended to include the voluntary changing of behaviour (Andreasen, 1995) and the acceptance, modification or abandonment of a behaviour for the benefit of individuals, groups or society as a whole (Kotler et al, 2002).

Social Marketing includes the following aspects: audience focus, exchange, marketing research, segmentation, targeting, competitive analysis, product positioning and the marketing mix (Mah et al, 2006; Morris and Clarkson, 2009). Social marketing seeks to understand from the audience's perspective, the benefits of performing the desired behaviour, for example increased hand hygiene. Its implementation is then based on the elements of product, price, place and promotion from the marketing mix to gain competitive advantage over other competing behaviours used in practice, for example the inappropriate using of gloves rather than hand washing.

Much of the history of social marketing practice sits within the public health sector (Lefebvre and Flora, 1998; Hastings and Haywood, 1991, 1994; Lombardo and Leger, 2007 and Formoso et al, 2007). In the UK, the government white paper, "Choosing Health: Making Healthier Choices Easier" talks of the 'power of social marketing' and marketing tools applied to social good being used to build public awareness and change behavior. The UK government has established the National Social Marketing Centre and other governments most notably Australia, New Zealand, Canada and the United States all have social marketing institutions embedded within their health services.

An awareness of the differences between social and commercial marketing may enable clinicians to feel more comfortable using social marketing. The primary differences between social and commercial marketing that would probably encourage acceptance into the wider healthcare arena are identified by Kotler et al (2002). Whilst in commercial marketing the aim is financial gain for the company, social marketing is for social good, with the gain being for the individual and/ or society,. In commercial marketing the competition is mainly identified by other companies selling similar goods but in social marketing the competition is usually the current or preferred behaviour of the target group. It is not a physical good or even a service that is being marketed but less tangible concepts of ideas and behaviour change. In addition, social marketing frequently deals with negative demand. MacFayden et al, (1999) identify how the target audience can be apathetic about or strongly resist a proposed behaviour change. For example, at ward level, many healthcare professionals wear wrist watches which is not part of the hospital dress code policy because of the infection risk related to poor hand washing. The practice, however, continues. This indicates there is resistance and apathy to adhere to correct infection control practice with which social marketing could potentially deal.

Despite the differences between commercial marketing and social marketing, the similarities of the key elements as noted previously (customer orientation, the exchange theory, marketing research used throughout the process, audience segmentation, marketing mix etc.) provide social marketing with a structured framework for its implementation.

The literature documents the widespread adoption of social marketing within the sphere of public health (Farrelly et al 2005; Grier and Bryant, 2005; Evans, 2006; Gordon et al 2006; Stead et al 2006). Social marketing principles can influence public health improvement by having campaigns that clearly define problems, that make sure it is clear what the campaign is seeking to achieve, understands the target audience and barriers to behavioural change, ensures the target group is defined, notes stakeholder involvement plus identifies competition in the campaign strategy. However, despite the popularity and influence of social marketing, some have criticised public health professionals for their incomplete understanding of social marketing. There may be too much reliance on social advertising and communication activities with not enough attention paid to developing social marketing's conceptual framework ( Buchanan et al 1994, Hill, 2001, McDermott, 2003). There are also important ethical considerations (Fox and Kotler,1980; Wallack, 2002) as Social Marketing may be perceived as being manipulative as essentially power is given to one group in order to influence another. Unlike most commercial marketing, social marketing can affect deeply

held beliefs and moral judgments. Many questions can therefore arise such as how and by whom is 'social good' defined? Which is most important, the rights of the individual versus the rights of society? Part of the social marketing approach has to be to ensure all these important ethical considerations are involved in the process.

However, the positive examples of social marketing within the public health domain, highlight the real potential it has to enhance and make a significant contribution to the influencing of behavioural change. This means that it could be a useful tool for nursing as it recognizes the difficulties associated with behavioural change and has a structured framework to enable change and reduce barriers to change.

There is an increasing realization that existing methods and approaches to problems such as hospital infection control practices are unlikely to deliver the behavioural impact required to improve care for patients. Mah and Meyers (2006) comment on the lack of success associated with using an educational approach to infection control practices in hospitals. Social marketing, however, offers a framework to address individual behaviour change, it can encourage policy makers to adopt new policies plus it can encourage organisations to make improvements to their services and practices. Some have considered this in relation to infection control issues (Gopal et al, 2002; Mah and Meyer, 2006; Bissett, 2007). However, the possible reasons why successful behavioural change still remains elusive is that current change processes would seem to pay little attention to the notion of exchange for self interest (as noted previously) and audience segmentation and try to sell all things to all people rather than differentiating into sub groups. For example, healthcare workers and consultants are expected to respond to interventions in the same way. Also the marketing mix seems to have failed to have been sufficiently utilized. Rarely is consideration given to the product, what is being offered and what the 'customer' gets. In terms of price, how much will this cost in time and effort? What methods should be used to communicate? How can the 'customer' be reached?

Two past social marketing campaigns promoted the washing of hands: the "cleanyourhands campaign" in England (the National Patient Safety Agency, 2004) and "Health Protection Scotland" (2007) in Scotland. Both campaigns utilized the following social marketing framework to think about and manage the problem of poor hand hygiene compliance

- What is the problem?

- What is the competition to the change we want to bring about?
- Who is the consumer and what do we know about them?
- Who should be targeted?
- What are our precise objectives?
- What benefits can we offer the consumer in return for making the behaviour change?
- What is the best marketing mix for helping the consumer target to change?

This framework could be transferred for use at a local ward level as a technique and tool for nursing to use in practice, to effectively meet some of today's nursing objectives that related to solving intractable behavioural problems of ward teams.

### **3. The Research**

The context or situation for this research is the use of social marketing to promote infection control practice on speciality specific wards within the Adult Medicine Directorate of a large acute hospital in the North West of England, UK. The Directorate comprised of wards caring for patients with acute, general and speciality medical conditions as well as elderly care wards. The bed base of the hospital at the time was approximately 1000 beds with the Directorate comprising of 9 adult wards which is about a third of the Hospitals beds. Most of the patients had been admitted through Accident and Emergency and therefore it was not routinely known if patients were already MRSA positive prior to hospital admission. The patient pathways meant patients moved from admission wards to speciality/general wards. Therefore for some wards, patient admission/discharge rates were high. On average each ward had approx 30 beds with a staffing establishment of over 30 nurses, the skill mix split between qualified and unqualified nurses being approx 60% qualified nurses to 40% unqualified staff.

The aim of the research was to assess the degree to which the application of social marketing could be used in nursing to promote nursing objectives. The particular nursing objective being the delivery of the highly important infection control agenda which included compliance with hand hygiene targets and standards. The promotion of infection control practice could be argued to be the highest priority nursing objective at this time with the national focus on reducing infection rates being monitored by the Department of Health.

The evaluation of the application of social marketing at ward/department level is also central to the aims of the research. As discussed previously traditional approaches had not provided the delivery of improved practice and therefore Social Marketing was viewed as a methodology to promote better practice

Case study research was seen as particularly appropriate as the processes and relationships associated with using social marketing concepts to promote infection control practices are unique to the particular setting. The researcher is acknowledged rather than hidden and this visibility of the researcher is fundamental to the research process, as conscious, reflective awareness of interactions contribute to the richness of data obtained (Bryar, 1999). This is appropriate as one of the researchers was involved with the promotion of infection control practices within the case study context itself.

The review of the literature identified variables from which the research questions were generated (see Table 1 below)

**Insert Table 1 here**

These variables related to the use of social marketing in promoting infection control practices such as monitoring and flexibility of approach, use of market research, segmentation and the use of the Marketing Mix. Identifying and exploring the gaps between literature and practice that exist in relation to the use of social marketing provided the potential topics for further investigation.

Two methods of data collection were utilized: semi-structured interviews and archival records. The main data collection focused on in-depth semi-structured interviews which offered the possibility and flexibility to pursue specific lines of enquiry in order to gather data from a defined group of staff. The method of investigation needed to provide an opportunity to describe and clarify possible relationships and processes, as well as providing the evidence to support further study. Appropriate populations of interest for this investigation were the qualified, permanent members of the nursing staff working within the Directorate. As a population they were all involved with the promotion of infection control practices. A sample of the 3 main bands of nurses: Band 5, Band 6 and Band 7 participated in the research. The interviews were planned to last between half an hour and an hour. Interviews took place in a private room away from the clinical area and were tape recorded



The fact that one of the authors of this paper holds the position of Head of Nursing within the Directorate could have prevented the participants from expressing their feeling openly and honestly. Her own particular bias towards their position and activities in relation to the subject under investigation therefore needed to be understood and taken into account. More positively, she was accepted by the participants, had established commonality and gained credibility with the participants.

Not only were questions asked of specific interviewees but data collection also focused on archival records of hand hygiene compliance and hand hygiene observation studies. Archival records as a supplementary resource to other forms of data collection is of value (Robson, 2002). Although this source of data collection was unlikely to provide direct answers to research questions it could be used to strengthen the validity of the methodology, as it is inclusive of the whole organisation (case) under inquiry.

In order to make the complexity of analysing data rigorous and understandable, thematic content analysis (Burnard, 1991) was used in the reduction of complicated data to its component parts. That is, notes were taken from the interviews and from these, themes were identified.

#### **4. Research Findings**

Category headings were identified to describe all aspects of the phenomena content. The list was then surveyed in order to reduce and group phenomena together. This process was then repeated in order to ensure that there was sufficient consistency between the differently identified categories. The re-checking process meant that the subjectivity of the investigators' processes of analysis could to a degree be minimised. Table 2 below presents this process.

**Insert Table 2 here**

Three dominant categories emerged from the data

- **Environment**
- **Facilitation**
- **Support**

These are to an extent all interactive and complement each other. For example the category of 'facilitation' follows on from the environment concept. All the respondents were aware of activities promoting hand hygiene, there was facilitation of activity but this could be attributed to the nurses working in a Directorate (environment) where importance is attached to hand hygiene. Hence, the interlinking of the main categories.

#### **4.1 Environment**

As the investigation is focused within a particular setting, it is not surprising that environment emerged from the analysis as one of the dominant themes. The situation, conditions, circumstances and setting relative to hand hygiene compliance are a unique description of the Directorate.

From the situation of the Directorate it appears very evident from all the respondents that activities to promote hand hygiene were taking place. The respondents were able to describe a variety of activities. Activities which related to promotional posters and regulatory assessment of competency came across particularly strongly, for example the "Cleanyourhands" poster campaign and the Aseptic Non Touch Technique (ANTT) assessment. In addition, educational activities as a method of increasing hand hygiene compliance were also noted by respondents. As to be expected, it was the ward managers who identified a broader range of hand hygiene activities highlighting both regulatory and educational approaches. However, the more junior staff were sometimes unaware what was taking place claiming for example that although they had heard of regular audits taking place but had never seen any results displayed.

Respondents appeared to have difficulty in identifying if hand hygiene activity in the Directorate utilised particular components of social marketing. There was little recognition of the broader aspects of marketing other than the use of promotional posters. Activities such as raising awareness through audit and teaching were not seen as being linked to marketing in any way.

One Band 7 nurse believed that circumstances favoured greater use of a marketing approach compared to a regulatory or educational approach and through further discussion, the respondent did focus attention towards the concept of exchange by trying to sell the benefits to staff so that 'everyone wins'. This exchange, is of course a process central to social marketing.

Circumstances endorsing hand hygiene practice were seen as an important factor in improving compliance by the majority of respondents, but again the respondents highlighted the use of promotional material, which they thought was keeping patients well informed and this influenced the nurses.

Conversely the respondents were also able to highlight how the Directorate failed to optimise the resources required to endorse hand hygiene compliance. For example, although there were enough sinks, often things like soap dispensers and paper towel dispensers were empty, making it difficult to wash hands. Also, staff wear gloves to cut down on hand washing as they get sore hands and are pressed for time, but this should not happen, as wearing gloves should not be a substitute for washing of hands.

Additionally the respondents highlighted gaps in the Directorate's setting that could potentially affect hand hygiene compliance rates. It appeared to be particularly pronounced in the responses of the more junior staff. Their answers indicated a lack of activity related to communication and monitoring which are important components of social marketing. Generally, although respondents were able to describe a variety of hand hygiene activity occurring within the Directorate, there did seem to be a variety of viewpoints expressed as to the understanding of the application of the activities. However it would seem from the respondents that the particular situation, conditions, circumstances and setting within the Directorate are broadly reflective of an environment where hand hygiene is given considerable priority given that it is part of the overall performance measures of a ward and that there are regular checks.

## **4.2 Facilitation**

Facilitation emerged as a main theme. It encompasses the approach, attitudes, access and application of hand hygiene activity within the Directorate. A strong finding of the study was that respondents commented positively in relation to the amount of facilitated activity surrounding hand hygiene within the Directorate. All of the respondents were able to describe the application of some type of activity consistent with methods used in social marketing such as posters, use of hand gels, three-monthly audits, ANTT, leaflets etc.

Senior staff, however, showed a greater realisation that hand hygiene activity took several forms at a variety of organisational levels and they were also able to articulate the positive promotion of compliance benefits. Indeed it would seem that only senior people had this information via audit results, the latest government initiatives plus rewards if the ward did well. From this senior staff could see how things benefitted not just the patient but the ward and the staff.

Attitude and staff opinion and feedback tended to vary between the senior and junior staff. Junior staff describe a lack of consultation whereas senior staff felt that at their level, some input took place although there was acknowledgement that this was not the case for staff at lower levels.

The lack of a targeted approach to hand hygiene was highlighted. Targeting an audience forms part of the social marketing framework. The majority of the respondents felt the Directorate had a blanket approach to all staff and there did not appear to be any evidence that social marketing processes were utilized such as segmentation of different audiences. For example, a number of respondents noted that there needed to be different approaches for nurses as they had differing experiences, expertise and needs.

Similarly the respondents highlighted that the marketing mix, part of social marketing was not fully covered by the Directorate. Although promotion was strongly identified by the respondents, through the use of posters, little attention appeared to be paid to product, price and place. This also perhaps demonstrates that the Directorate does not follow a specific plan or structured framework in its approach to improving hand hygiene compliance but rather the general approach is reactionary and perhaps lacks cohesion.

### **4.3 Support**

Lastly, support was identified as a main category. Although support and facilitation can be construed as being similar, they emerged from the data analysis as distinct, yet complementary entities. The contributing aspects from the emergence of support as a main category heading were encouragement, interest, approval and help. The categories of facilitation and environment identify the formal and concrete elements within the Directorate in trying to improve hand hygiene compliance. The category of support, however, is a further, more abstract dimension that adds to the complex nature of the Directorate. The specific support mechanism recognised by the respondents

was probably the importance the Directorate and senior staff attached to hand hygiene. There is a link nurse role where the role holder meets regularly with ward managers to let her know what is happening about hand washing and other infection control issues. There is an Infection Control team that supports the ward manager and person responsible for hand hygiene compliance at ward level with whom problems can be discussed. However some of the respondents, mainly junior staff, felt little encouragement or interest was given to improve hand hygiene compliance. Few could identify encouragement through tangible benefits; (direct personal tangible benefit is an important part of the exchange concept of social marketing). Self interest was identified by the respondents as a potential area which the Directorate could utilise to improve hand hygiene compliance. This changes the benefit from the patient to the staff member.

However approval by the Directorate managers was also seen as an important dimension of support, particularly for the ward managers who are responsible for hand hygiene compliance rates within their ward. They also felt help was given by the Directorate if required. Conversely junior staff highlighted that more could be done to help specific groups of staff, particularly ensuring that new staff should spend time with the Infection Control team and that support workers needed more teaching on the technique of good hand washing practice.

The results of the respondents would again appear to suggest that as with the other main categories support is a concept that is threaded through the Directorate but there is patchy recognition suggesting lack of structure.

Although the analysis of the respondents' interviews provided illuminating data about the experiences, thoughts and feelings of the nurses interviewed, it was important to ensure the investigation focuses on the Directorate and not just the nurses interviewed. Therefore data analysis also included reviewing the hand hygiene compliance rates of the Directorate (Table 3 below). This data was seen as being complementary to the interview data rather than providing direct answers to the research question.

### **Insert Table 3 here**

The archival data showed hand hygiene compliance audit rates from 2004 to 2007. Prior to these years, no suitable records could be obtained for analysis. Within the Directorate there had been an increase in hand hygiene compliance rates from the audits performed. However, the data revealed

that there had not been a consistent methodology. Until 2007, data did not include each ward area as from 2004 to 2006 only sample wards from the Directorate were audited. Therefore it is difficult to provide a comprehensive assessment of hand hygiene across the Directorate. From 2007, regular audits on all wards had been performed. Unfortunately, although the respondents' data highlights that many different activities were being used to promote and sustain hand hygiene, compliance rates had not yet reached 95% across the board.

## **5. Discussion**

Most of the respondents described their knowledge of, and participation in, hand hygiene activity such as promotional posters, competency assessment and attendance at education sessions and these approaches to hand hygiene compliance have already been recognised within the literature (Gopal et al, 2002, Mah and Meyer, 2005). However, the archival records showed that the "gold standard" of 95% compliance had not been achieved across all the wards in the directorate. Lindblom (1977) and Kotler and Armstrong (1999) believe that educational and regulatory influences on behaviour miss the important marketing concept of choice and self interest which could have greater influence on behaviour than regulatory and educational activities. The literature further highlights how social marketing provides a framework of support and understanding in order to promote better behaviour (Lowry et al, 2004). This is reflected to a degree by some of the respondents as they spoke of the support the Directorate gave them in their specific roles as hand hygiene champions. This generally could suggest that component aspects of social marketing appear to be congruent with the three main categories of Environment, Facilitation and Support which evolved from the investigation of the case.

Initial description of hand hygiene activity by the nurses focused on the use of promotional posters, particularly when asked about the use of a marketing approach. The respondents did not make the link of audit and educational activities being associated with marketing. This would fit with McDonald and Miles (1995) who believe there is an issue with health professionals understanding the fundamentals of marketing. Encouragingly, there was the recognition by one respondent that there could be distinct benefit from the important concept of exchange, an essential aspect of social marketing. Bissett (2007) in her study, based on social marketing, recognised that giving something of value to staff (education, choice of hand gel, identification of skin care needs) in exchange for better behaviour in complying with hand hygiene did have positive results. However, respondents in this investigation highlighted how the Directorate failed to fully optimise resources required to

endorse hand hygiene practice and this resulted in poorer compliance. Fully utilising a social marketing methodology could perhaps potentially improve practice for the better.

There is little evidence that a structured approach to social marketing which is identified in the literature (Kotler and Zaltman, 1971) is being applied and therefore it is difficult to make any direct association between improved hand hygiene compliance and a social marketing methodology for this aspect of the case under investigation (however, the literature is able to provide examples of social marketing campaigns that have improved outcomes: Grilli et al 2002, Farrelly et al 2005). This lack of an overall social marketing framework within the Directorate may be a reflection of the difficulty clinicians have in engaging with the concept of marketing (Laing and Galbraith, 1996; Byers 2001). If social marketing is not properly communicated there will be lack of knowledge and understanding, which is clearly demonstrated by the respondents. Therefore, the generation of a conceptual framework and the results of this investigation could be important in highlighting the application of social marketing to improve hand hygiene compliance.

The facilitation of hand hygiene activity by the Directorate seems to be approached and applied on different levels. This is best illustrated by the senior staff who talk about seeing audit results, being told about latest government initiatives and from this they alluded to the positive promotion of compliance benefits. The literature reviewed confirms that selling or exchanging benefits with staff can improve compliance, particularly when associated with improving hand hygiene (Bissett, 2007, Gopal et al, 2002). However, important aspects of social marketing methodologies and therefore the success of social marketing, is drawn from commercial marketing: the use of a targeted approach and segmentation of audience (MacFadyen et al, 1999). Within the case particularly, the junior respondents show that there is a lack of evidence to suggest there is any type of targeted approach or audience segmentation to meet their particular needs. Unfortunately the archival data from the case does not divide hand hygiene compliance rates into identified junior and senior staff groups in order to provide a clearer picture relative to the effect of failing to target and segment approaches to these two different staff groups. Indeed, as well as failing to identify the needs of certain staff within the Directorate through audience segmentation and targeting, the respondents generally thought there was a blanket approach that restricted access to hand hygiene activity. This could potentially adversely affect compliance rates. For example, educational sessions were difficult to access for ward nurses, therefore vital educational information about aspects of hand hygiene failed to be passed to front line staff.

Respondents were not able to identify that the marketing mix was used to its full potential by the Directorate. The respondents did note that promotion of hand hygiene particularly through the use of posters was a strong feature in the Directorate but little attention was paid to type of products used, price in relation to time taken to carry out hand hygiene as well as the place where hand hygiene materials were situated. The heavy reliance on promotion through social advertising has been cited as a criticism of the use of social marketing in the public health field (Buchanan et al 1994, Hill, 2001, McDermott, 2003). It is felt that more attention should be paid to developing social marketing's conceptual framework rather than focusing on social advertising. Therefore, in order to develop social marketing methodology from emergent practice, the Directorate could build on a conceptual framework devised here to enable the full utilization of social marketing. The Directorate could frame the component parts of social marketing methodology through the three main themes identified to completely capture social marketing methodology. This would then give the staff within the directorate the environment, facilitation and support required to improve hand hygiene compliance. The development of a conceptual framework may also provide a more useful, practical and understandable tool to introduce social marketing principles to healthcare professionals who have a limited knowledge of social marketing. Figure 1 illustrates how such a framework can be developed utilizing the social marketing variables as they relate to the context and in light of the identification of the three main phenomena (environment, facilitation and support) through the investigation of the case in order to make improvements to practice.

**Insert Figure 1 here**

The identification of support as a main category is worthy of note as it does not appear to emerge from the obvious tangible activities related to hand hygiene. Support seems to emerge from the less tangible factors of interest, approval and help and therefore may be a more difficult concept to apply in practical ways. Support to change behaviour comes through engagement with stakeholders and promoting the concept of exchange (Lowry, 2004; Bissett, 2007). In this case, the respondents highlighted that the Directorate did support, show interest and provide help with hand hygiene activity. In the context of social marketing methodology, it is important that the notion of exchange for self interest and personal benefit are exploited to their full potential. Gopal et al (2002) and Mah and Meyers (2005) document that by focusing on the exchange concept, improvements in hand hygiene practice can be made. By utilizing the conceptual framework, the Directorate could potentially bring greater focus to the abstract concept of supporting complex behavioural change.



Generally the study has been able to produce some useful insights. The study is aiming only for the lowest level of theory generation, describing how the possible link between promoting hand hygiene compliance through social marketing methodology looks rather than examining any cause and effect. Although this has been a limited, small scale study using two different types of data collection methods, it has been possible to isolate variables which provide some definition to the description of this case. The development of a conceptual framework adds to the clarity of this complex situation and could possibly in the future provide a way of measuring the strength of the impact that social marketing methodology has relative to promoting hand hygiene compliance.

## **6. Conclusion**

Social Marketing has been utilized successfully for many years in different disciplines but particularly within public health. It is able to provide a valuable methodology for behaviour change and allows for a systematic process to reduce barriers to behaviour and fit desired behaviours into daily work routines through understanding the audience as well as offering benefits for adherence. This research sought to explore the use of social marketing in nursing to promote hand hygiene compliance. The literature review revealed that there was little work specifically connected to the use of social marketing in nursing and consequently this meant the research methodology needed to be exploratory in nature in order to describe the situation within the Directorate.

Concepts taken from social marketing methodology, as well as the stated nursing studies provided the foundation for exploratory research topics of this study.

The in-depth interview data drawn from the case highlighted the areas which need to be further developed if the social marketing concept is to be embraced. It also highlighted what the perceived benefits may be in relation to trying to improve hand hygiene compliance.

Although the data failed to describe the overall structural concept of social marketing, it did describe some of the elemental factors of the concept. This may help draw attention to the possible gains from developing the social marketing methodology in order to promote hand hygiene. For example, the following recommendations are proposed:

- Greater emphasis on commitment of staff to do the patient no harm rather than the compliance aspect of compliance to carry out Hand Hygiene
- The surveying and greater involvement of staff in choosing the products used for Hand Hygiene, to promote staff engagement
- Regular and refreshed poster campaigns related to Hand Hygiene showing all levels of staff engagement, commitment and the importance of Hand Hygiene to the Organisation
- Regular feedback from patients about their impressions of staff's Hand Hygiene compliance

The identification of the main categories of environment, facilitation and support seem to fit well within a conceptual framework adding a further layer of depth and to some extent clarity to the study. This may be of particular use to a profession unfamiliar with the marketing world. The conceptual framework demonstrates that social marketing encompasses a spectrum of components that are suitable and effective tools to practically use to promote hand hygiene.

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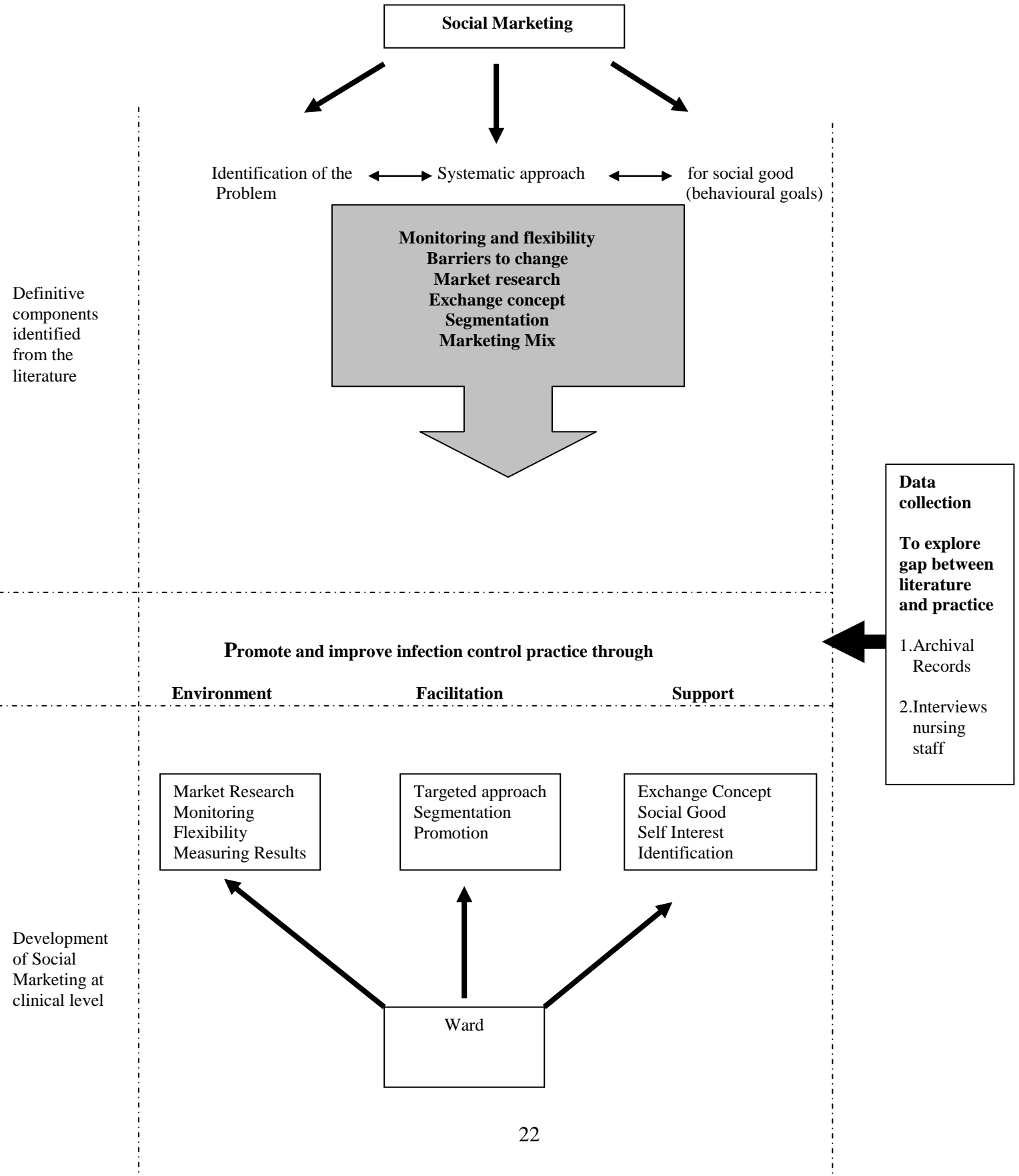
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**Figure 1: Development of a conceptual framework in order to utilize social marketing to increase hand hygiene compliance in the examined case**



**Table 1: Generation of Research and Interview Topics from the Literature**

Literature	Research Question	Interview Topics (and prompts)
<p>Identified hand hygiene activity Enforcement/Regulatory Education Marketing/Social Marketing</p> <p>Examples: Kotler and Armstrong (1999) Lindblom (1997) Mah and Meyers (2006)</p>	<p>What is going on within the Directorate to promote hand hygiene practices</p>	<p><b>1. Recent activities promoting hand hygiene</b> (prompts: attending study session, poster campaigns, aseptic assessment, audit)</p> <p><b>2. The approach of the activity</b> (prompts: educational, regulatory, marketing)</p> <p><b>3. Opinions of particular approach</b> (prompts: increasing/decreasing compliance, benefits to staff, patients)</p> <p><b>4. In broad terms is marketing approach used?</b> (prompts: analogy to commercial products, promotion, exchange)</p>
<p>Suggested social marketing activity related to the promotion of hand hygiene. Problem identification Barriers to change Market research/know consumer Exchange concept Segmentation Use of Marketing Mix (4 Ps) Monitoring and feedback</p> <p>Examples: Evans (2006) Grier and Bryant (2005)</p>	<p>What are the distinguishing features (elements/factors) of social marketing activity in relation to promoting hand hygiene within the Directorate?</p>	<p><b>5. Staff in put into identifying problems and barriers</b> (prompts: questionnaires, market research, objective setting, audit feedback)</p> <p><b>6. Benefits of hand hygiene promoted</b> (prompts: staff, patients, organisation, exchange, self interest, value of effort)</p> <p><b>7. Targeted approach for specific staff</b> (prompts: different methods, uniform methods, priority audience)</p> <p><b>8. Staff needs identified</b> (prompts: products used, price in time, place/ location/ accessibility, promotion)</p>
<p>Specific to case (Directorate) Positive relationship of social marketing concepts and improved hand hygiene</p> <p>Examples: Bissett (2007) Gopal (2002) Mah et al (2006)</p>	<p>How are these concepts (factors/elements) significant in relation to improving hand hygiene practice?</p>	<p><b>9. Influencing factors on behaviour in relation to hand hygiene</b> (prompts: self interest, patient safety)</p> <p><b>10. In what ways do you think the directorate shows the value it attaches to hand hygiene?</b> (prompts staff interest, patient interest, organisational interest)</p>

**Table 2: Generation of Three Main Categories**

<b>General themes from transcripts</b>	<b>Identified phenomena from general themes</b>	<b>Reduction to three categories</b>
<p>Promotional activity  Training  Audit activity  Organisational input  Level of consultation  Concern  patient/staff/organisation  Views hand hygiene important  Level of satisfaction with organisation  Promotion of benefits  Application marketing principles  Identified programme/framework  Audience perspective</p>	<p><b>Situation:</b> activities taking place  <b>Conditions:</b> involvement of staff and patients  <b>Circumstances:</b> resources provided  <b>Setting:</b> monitoring, communication</p> <p><b>Access:</b> to staff opinion/feedback  <b>Approach:</b> positive promotion  <b>Attitude:</b> managers, sisters, nurses  <b>Application:</b> use of marketing in practice</p> <p><b>Interest:</b> shown by organisation, staff , patients  <b>Encouragement:</b> performance acknowledged  <b>Approval:</b> participating in good hand hygiene care  <b>Help:</b> able to improve practice</p>	<p><b>ENVIRONMENT</b></p> <p><b>FACILITATION</b></p> <p><b>SUPPORT</b></p>



**Table 3: Directorate Hand Hygiene Compliance Rates 2004 to 2007**

Year	Ward	Audit	Compliance
2004	D	Snap shot audit, 18 nurses hand washing post clinical procedure	13/18 = 72%
2005	A B C D E	5 out of 10 directorate wards, 10 nurses per ward, observation of compliance with correct hand washing procedure	A = 75% B = 81% C = 93% D = 76% E = 81%
2006	Various	293 staff, 146 nurses, 53 doctors, 65 support workers, 29 other	84%

2007	Ward	Audit								
	All	20 observations per ward, multidisciplinary staff Results traffic lighted and feedback to ward managers								
Results	Ward									
	A	B	C	D	E	F	G	H	I	J
March	87%	90%	89%	89%	93%	90%	90%	91%	84%	90%
June	92%	94%	90%	92%	93%	91%	89%	85%	91%	92%
September	90%	94%	85%	92%	95%	91%	94%	87%	91%	86%
December	92%	95%	92%	94%	89%	90%	96%	87%	89%	94%

At the time of the research the hand hygiene audits focused on the process of Hand Hygiene and the compliance related to the way staff were taught to wash/gel their hands eg thumbs washed, in between fingers washed, backs of hands and wrists washed rather than the WHO 5 moments. The audit also observed if staff were wearing watches or rings.