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Concept Mapping for Healthcare Organisations in the 21st Century

The marketing and outreach for healthcare organisations in the 21st century will face many of the same challenges faced by marketers of commercial services and products. The media used by potential end users of healthcare, hospital, allied healthcare, wellness programmes, and the like are shaped by the Internet, social networking, and a growing distrust of traditional marketing messages. Nonetheless, the outreach programmes of all of these healthcare organisation types must still contain content that is potent enough to persuade potential end users of services that the organisation is oriented to "them".

No matter whether the medium is a Google banner ad, a social networking link, a YouTube video, or all of the above, the message must be persuasive enough to move the potential end user to action. The content must be informative and must create the strong intention to act on the message, use the service, or move the end user to seek a referral from a provider.

The presence of a mix of health insurers in European marketplaces means the persuasive message must also be placed well on whatever the medium may be, now or in the future. Consequently, persuasive messages cannot be well served by creativity alone. Nor will the presence of focus group data alone be sufficient to guide the content. A combination of measurement, focus group data, and an ability to adapt the content as the market changes will also be required.

Using communication theory and sound methodology will be the real tools to cope with the changes in the marketing environment faced by healthcare in the 21st century. This kind of approach has shown success when operationalised well. Yet, as Aggleton points out, the success of healthcare messages must be judged by behaviour change and behavioural change must be preceded by the intention to act.

Singh and Smith have investigated advertising in the prescription drug market for this very reason. They research product knowledge, behaviour regarding prescription drugs, and behavioural intentions. They found that behavioural intentions are influenced by brand awareness and feel empowered when messages about such products are directed at them. Importantly, they suggest that their findings mean that the quality of advertising of these products along with other important factors influence consumer motivation to purchase.

Using communication theory and sound methodology can also improve theory building. To have theory in the context of marketing, communication, and behavioural intention involves a theory of the mind, according to Braithwaite, et al. Building theory about communication and persuasive messages in healthcare can inform decisions about content, placement, and related outreach/marketing decisions. Theory of this kind can also position the healthcare outreach professional for changes in the environment and in the minds of end users in order to adapt as circumstances change.

The intention of this study is to illustrate how the sound methodology of concept combined with direct magnitude estimation (DME) can be the basis for creativity in message formation, focus group informed content, and the individual consumer orientation important in creating behavioural intentions to purchase.

Marketing and Outreach

Literature on marketing combines the traditional aspects of marketing such as advertising with outreach. In fact, in practice both need content for delivery. The delivery process often is done through various forms of media, including print, internet, television, and radio. In healthcare, hospitals, clinics, allied health facilities conduct both. Hospitals market image, community commitment, quality providers and staff, and the like. Hospitals, clinics, dental providers, behavioural health providers, physical therapists, and others perform community based screen and programming which is marketed as outreach. Drawing from the extant literature in these areas provides best practices, analysis of product knowledge research, purchase intention, and in healthcare in particular, behavioural change to seek treatment, stay in treatment, perform self screening, and other intentions regarding prevention.

The messages to deliver visibility, image, and product knowledge must have the content necessary to create product knowledge. The generation of intention must also be part of the content and its delivery. Consequently, the content must be extraordinarily strong to create both results for marketing and outreach.

The use of traditional media, such as newspapers, is often chosen because it is straightforward and generally well understood by hospital or other healthcare facility "marketers". But consumers or patients are becoming even more complex. Using creativity alone to trigger product knowledge and intention to act is likely to lead to rather expensive trial and error at best. Even if the placement of ads is somehow traced to increase in patient volume or revenue or other such "counts" rather than measurements, which is methodologically inaccurate unless patients are researched for exposure to any ads from the organisation, there remain several questions about the marketing. They would be:

- What elements of the message "worked"?
- How much exposure to the message was enough to make it "work"?
- Can the message effects on product knowledge and intent to act be replicated?
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Equally important to message content is that there may be content material available from those managing and delivering the healthcare services, prevention screenings, and outreach programmes "hidden" from those in charge of marketing. Ohsawa and Ishii discovered this problem in their research: product designers' concepts are hidden from those inside and outside of the company. Yet, it was the designers whose concepts were more closely aligned with brand identity. The designers in the Ohsawa and Ishii research are analogous to providers, nurses, wellness trainers, and other direct care personnel. Providers are closer to the patient and more often so, than marketers. Thus, they are more likely to be able to understand the dimensions of the psychology of patients than marketers are. Nonetheless, the concepts reported by providers are unlikely to be systematically gathered.

Persuasive Messages

The creation of persuasive messages for marketing and outreach requires being systematic, methodologically sound, and in touch with the "market". The psychology of market members is the territory that must be understood or mapped to create the results in the areas of product knowledge and intent to act on the product knowledge. Persuasion refers to any attempt to reconfigure belief, intention, attitude, and/or behaviour.

Kang and Cappella have researched the impact of emotions on message effectiveness in public service announcements. They were seeking ways to increase the effectiveness of such messages. They report that once several discrete emotions, i.e., concepts, were uncovered they turned out to be more "persuasive" than some others. Finding such emotions was determined to increase message effectiveness.

Attitudes do not exist in linear alignment. There are dimensions of consumer psychology. Jewell and Unnava note that the dimensions of attitudes research has been "fruitful". The consideration of dimensions of attitudes is important in the development of advertising or persuasive messages. Based on the dimensions of psychology research, then, recognising the dimensions of attitudes must be considered in developing marketing messages.

Theory Building

Coltman, et al., point out the importance of relying only on "reflective" measurement in building theory for marketing and business. Their work is applicable to marketing of healthcare. They note that practitioners and researchers will both benefit from developing constructs and measurement useful enough to bring theory to practical use.

Measurement and methodology combined will yield the kind of constructs necessary to build theory for marketing, advertising, branding, and other persuasive messages. Psychological dimensions should be added for the theory to have practicality.

Concept Mapping and Direct Magnitude Estimation

A promising approach to achieving all of the necessary elements of marketing, i.e., message content, dimensions of consumer psychology, and theory building is Concept Mapping combined with Direct Magnitude Estimation. Concept mapping using direct magnitude estimation applies both focus group and measurement data analysis to create a diagrammatic representation of the concepts gathered from consumers through open ended interview questions and follows the analysis of those questions with a perceptual measurement questionnaire based on the answers given in the interviews.

There is a great deal of literature on the concept: Bigne, et al describe the technique as cluster analysis using multidimensional scaling and Stanton and Lowenhar illustrate how concept mapping allows interpretation of complex stimuli, e.g., marketing messages, on consumers. Shewchuk and O'Connor have applied concept mapping to healthcare marketing directed at the elderly. Their method can inform marketing of healthcare. It can also be used for outreach programming. Trochim, et al., applied concept mapping to public health. They were seeking information to improve public health and to find data for addressing some of the challenges in public health.

Directed Magnitude Estimation

Direct magnitude estimation (DME) provides additional information to concept mapping methodology. DME information becomes important in the analysis of concept maps providing additional mathematically based information for the interpretation of the resulting map and the selection of concepts from that interpretation to be used in marketing messages. Importantly, using DME allows additions to the map as subsequent data become available.

The concept mapping methodology combined with DME can assist in interpreting how important a concept or product attribute is to a potential patient, doctor, or healthcare administrator. The product attribute is placed in distance contrast to a criterion. The respondent is, therefore, asked to determine how far apart or different a product attribute is from another product attribute using the criterion. In doing so, the measurement of product attributes or concepts is following the well established measurement principle of a reference.

DME Based Concept Mapping

The DME Concept mapping methodology adds to the traditional focus group research and follows the patterns of open-ended questioning of other marketing concept map developers. As in a focus group, researchers choose potential market respondents. Respondents are asked a series of open-ended questions intended to solicit important product attributes and/or concepts.

The responses from the open-ended questions are then analysed through cluster analysis software to determine frequency of responses but, more importantly, co-occurrence of responses. In doing so, this part of the analysis is applying a form of neural network analysis or pattern analysis. That is to say, respondents' answers to the open-ended questions are counted but are also analysed for how respondents are thinking about the concepts. The analysis is seeking to examine how respondents connect their thoughts about the product's attributes.

Once the software has analysed the concepts in this fashion, the researchers are able to determine clusters of concepts. The clusters are then used to develop a series of seven to ten key product attributes or concepts. To these product attributes are added the two key concepts of the

product itself or, in the case of coordinated care, the service, and the respondent/customer, referred to in DME concept mapping methodology as the self. The key concepts/ attributes, along with the product or service, are arrayed in pairs one against the other.

The respondent is then asked to apply the DME based measurement by indicating the distance or dissimilarity perceived between each pair after being given a related concept pair as the reference point.

Part two of this series (Issue 2 2010) will put the theory into practice with some working examples of concept mapping.

Author:

Michael Hall

Director, Master's of Public Administration

Director, Master's of Science in Leadership

Roger Williams University

mhall@rwu.edu

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