The Role of Social Media and Social Networking as Marketing Delivery Systems for Preventive Health Care Information

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Abstract – The use of social media and social networking (SM&N) is prevalent in health care. Through social media, individuals can access information to enhance their overall health and well-being. Given that prevention is crucial to a long healthy life, as well as restraining escalating health care costs, this study offers insights into the types of social media and networking platforms that health care consumers consider most important, especially with regard to obtaining Preventive Health Care Information (PHCI). Further, it goes on to identify the demographics of persons who consider social media and social networking platforms as most important. This research used an online survey that yielded a sample of 930, whose demographics were comparable to the U.S. population. The results indicated the most important SM&N platforms were traditional digital sources such as WebMD, Wiki's, and internet search browsers such as Google. Also, prestigious hospitals, such as John Hopkins, MD Anderson, Cleveland Clinic and public health websites were important delivery systems for PHCI. Lastly, social media platforms like Facebook are increasing in importance, while YouTube is used more often by health consumers. Demographically SM&N was most important for (1) those whose employers offered health promotion or wellness programs, (2) those employed part-time, (3) younger health consumers mostly in the 19-24 age group, (4) African-Americans, and (5) single people who have never been married. The next generation of health consumers are expected to make greater use of SM&N platforms to secure their PHCI.

Keywords – preventive health care information, social media, social networks

Introduction

Prevention must be the cornerstone of the healthcare system rather than the traditional reactive or symptomatic approach that currently prevails (BCC Research, 2009; Gagnon & Sabus, 2015). Preventive Health Care (PHC) is care resulting from the awareness and efforts a person undertakes to enhance and preserve physical, mental, and emotional health for today and the future (Cangelosi & Markham, 1994). At the broadest level, PHC includes over-the-counter prescriptions, programs to curb smoking or overeating, and advanced genetic testing to identify a predisposition to certain cancers and other health issues. It also includes innovative products such as wrist watches to track biometric data. The potential impact and significance of PHCI is evidenced by escalating health care costs estimated at $3.0 trillion in 2014, while consuming 17.5% of Gross Domestic Product. This staggering cost is the equivalent of $9,523 per capita (National Center for Health Statistics, 2016).

For a PHC system to work, information must be readily available. Several factors account for why persons may seek or ignore PHCI. These include attitudes about preventive health, differences in age, income and educational level, and cultural background (Dutta-Bergman, 2005; Satcher & Higginbotham, 2008). In addition, consumers respond differently to the various ways in which PHCI is delivered (Bloch, 1984; Cline & Haynes, 2001; Dutta-Bergman, 2004; Thomas, 2009). Prevention requires a fundamental change in the way individuals perceive and access the healthcare system, and the way healthcare is delivered. An estimated 75% of health care costs are related to preventable illnesses (Velasco, 2013). Hence, changing behavior is increasingly at the heart of healthcare. The old model of healthcare, a reactive system that treats illnesses after the fact, is evolving into one more centered on patients and prevention. Sixty-nine percent of total health care costs are heavily influenced by consumer behaviors, pointing to the need to reorient health systems toward prevention (McKinsey & Associates, 2012).

For the past five to ten years, the internet has been and continues to be rated as the single most important means of accessing PHCI (Cangelosi, Ranelli, & Kim, 2012). Although most health-related information acquired from the Web addresses symptomatic issues, the quest for PHCI is becoming increasingly more prevalent (Freudenheim, 2011). When one considers that almost 88% of the U.S. population is online, the power for delivering PHCI electronically cannot be underestimated (Internet World Stats, 2017).

Traditional internet search and browsing have been greatly facilitated and expanded by social media. Social media (SM) is a vehicle for people to share ideas, content, thoughts, and relationships online. It differs from traditional print, audio and video media in that anyone can create, comment on, and add to SM content (Scott, 2013). Although early efforts to document the impact of SM have not been encouraging, the potential for SM to deliver PHCI cannot be overlooked (Cangelosi, Ranelli, & Kim, 2013). Long before the arrival of SM, research had suggested that purchase preferences would be affected much more by recommendations from personal networks (family, friends and peers) than by

traditional advertising. SM draws people closer together, especially those who would not be part of a relationship if not for SM. As such, it may effectively deliver PHCI (Direct Marketing News, 2011; Hawn, 2009).

Past studies have examined (1) the tendencies of health consumers to access and apply PHCI in their lives (Cangelosi, Ranelli, & Markham 2009), (2) the various delivery systems for symptomatic issues (Cangelosi, Ranelli, & Kim, 2013), and (3) social media and networking (SM&N) channels preferred by health consumers (Cangelosi, Ranelli, & Kim, 2015). Because individuals respond differently to health information, producers and distributors of PHCI must have a better understanding of what health consumers seek in using SM&N. Also, to deliver PHCI to different target markets requires what people seek in SM&N. To this end this study examines which SM&N platforms are most important to health consumers identified by demographics.

Background Information

The spread of SM use can widely be understood as a bottom up, consumer-driven process that is changing the demand for access to health information, including PHCI. Web 2.0 or the read-write web gave the ability to accommodate internet users desiring to use, create, share, edit, and interact with online content. This aspect of Web 2.0 made possible the development of SM&N sites (Kaplan & Haenlein, 2010). It is a departure from the traditional Web 1.0, which was read-only content (Gagnon & Sabus, 2015).

The use of SM&N in healthcare is widespread. At the end of 2012, 67% of American adults with Internet access had used some form of SM, and 59% had used the Internet to look for health-related information (Brenner, 2013; Fox & Duggan, 2013). In addition to the traditional SM platforms such as Facebook and Twitter, Americans use a number of SM platforms to connect and collaborate with others who have the same health issues or may want to participate in a research study (Ramo & Prochaska, 2012). Reported benefits of using various health-related SM&N platforms (e.g., PatientsLikeMe) include a better understanding of one's medical condition, better sense of control in managing one's health, and improvement of treatment adherence. It should be noted that the U.S. health industry incurs an estimated $100 billion extra per year because patients do not follow their treatment protocol (Osterberg & Blaschke, 2005).

The goal of this study is to assess the importance of various SM&N platforms and sources as delivery systems to access PHCI. The various SM&N sources are analyzed through different demographic groups that have been researched earlier (Cangelosi, Ranelli, & Kim, 2015). The SM&N platform research questions that are addressed are as follows:

1)   In the aggregate, how important are the various SM&N platforms as delivery systems of PHCI?

2)   Which of the various SM&N alternatives or combinations of alternatives are considered most important by health consumers?

3)   More specifically, and for gaining insights into health consumer preferences, what are the demographics of health consumers that consider SM&N more important?

The importance of this research emanates from the growing literature discussing how social networking technologies can be used by health consumers. For instance, social networking approaches can potentially revolutionize the way people collaborate, identify potential collaborators or friends, communicate with each other, and identify information that is relevant to them (Steinhubl, Muse, & Topol, 2013). Digital technology helps health consumers engage in social networking, participation, openness and collaboration within and between health user groups. Through social networking technologies, patients find support, community, and second opinions when dealing with the ups and downs of their health condition (Bhatt & Quigley, 2012). Online technologies allow for better health management such as tracking physical activity, biometric information, and sharing health-related information (Gagnon & Sabus, 2015; Hawn, 2009). SM can better prepare patients for medical appointments and for informing patients about their health condition (Alsughayr, 2015).

Social media can assist modern medicine as it moves away from being hospital-based and other closed structures and systems within healthcare and medicine (Eysenbach, 2008). Because of their interactive nature, SM structures allow for information to be shared in a viral fashion to change behaviors and fight against unhealthy lifestyles (Santoro, 2013). Also, mobile apps can track caloric intake and physical activities aiding weight loss (Carter et al., 2013). As the vast majority look for health care information online, the need to help them find the best SM&N alternatives for self-diagnosis or diagnosis for others becomes significant (Gagnon & Sabus, 2015). A recent survey of more than 4,000 physicians found that 90% of physicians use SM for personal activities, whereas 65% use SM for professional reasons. Both personal and professional use by physicians is increasing (Ventola, 2014).

Research Method

The target population for this study was the United States. The sample frame consisted of a two million member online consumer panel owned by an online database vendor. The process involved three entities: the researcher, an online host for questionnaires, and the online consumer panel vendor that leases email addresses to researchers for a specified amount per usable response. The questionnaire was posted by the online host, and the online database vendor downloaded the email addresses. For this particular study, the survey resulted in 930 usable responses.

The questionnaire consisted of 200 questions, dealing with PHCI and various SM&N as delivery systems for the information. The questionnaire utilized nine demographic characteristics and 28 possible social media and networking platform variables, for those seeking preventive and general health information. The itemized rating scale used to measure the importance of each SM&N variables for finding PHCI ranged from 1 to 4 where 1=very important, 2=somewhat important, 3=somewhat unimportant, and 4=very unimportant, and with 2.5 being the scale midpoint.

Data Analysis

A summary of the demographics of the survey indicate a sample balanced closely to the demographics of the US. To highlight, the survey indicated the following: 90% had some sort of health insurance, 42% had an employer with a health promotion or wellness program, 51% were women, 51% were employed full time, 67% were Caucasian, 12% were African American, and 13% were Hispanic, 60% were married or cohabitating, 42% had an associates or bachelor's degree, and 41% had annual incomes less than $50,000.

Table 1 details the SM&N platforms tested in this research. It summarizes all 28 SM&N variables by the health consumer's mean response, and the percentage of respondents who indicated the SM&N platform as a "very important" source of PHCI. The five SM&N platforms that health consumers considered most important are indicated in the darker shaded area of Table 1. SM&N platforms considered indifferent or of some importance are in the lighter shaded area. The remaining non-shaded area was considered to some degree not important.

Table 1
Importance of Social Media & Networking Platforms:
Mean Value and Percent "Very Important"

Social Media & Networking Platforms	Number of Respondents	Mean*	Very Important (%)
Internet Search Engines/Browsers (Yahoo, Google, etc.)	891	1.78	45.0
WebMD Website	863	1.79	46.2
Mayo Clinic Website	785	1.92	42.5
Health Insurance Provider Website	834	2.04	32.9
John Hopkins Website	693	2.06	39.0
Cleveland Clinic Website	652	2.21	32.4
Health-Related Weblogs or blogs	815	2.23	29.0
Health Forums	727	2.29	25.9
Wikipedia	850	2.33	25.1
MD Anderson Website	607	2.34	28.7
Online Public Health Service Publications	711	2.35	23.2
Health Webinars	690	2.38	24.6
Smartphone Apps	775	2.39	24.0
Other Hospital Social Media Websites	682	2.40	24.2
YouTube	841	2.46	24.3
Facebook	896	2.47	24.3
Employer Provided Websites	741	2.50	19.6
Health-Related Podcasts	671	2.53	20.9
PatientsLikeMe	603	2.64	19.4
Health-Related Listserv's	584	2.66	17.8
Apple's Health Kit	595	2.66	19.8
Microsoft Health Vault	575	2.67	18.3
Twitter	807	2.79	16.4
Pinterest	785	2.81	15.4
Instagram	772	2.90	14.5
WhatsApp Messenger	640	3.03	10.3
Tumblr	708	3.08	9.5
Flickr	654	3.19	6.6

* Lower Values indicate greater importance as a delivery system for or source to find PHCI

The top five SM&N platforms considered very important also had the greatest number of respondents. The five SM&N included a mix of traditional search engines (Google, Yahoo, etc), hybrid medical sites (WebMD, Mayo Clinic, John Hopkins) and Health Insurance Provider Websites. The lighter shaded group consisted of several hybrid sites, such as Cleveland Clinic, MD Anderson and "Other Hospital Websites," as well as health forums, blogs, public health and employer provided healthcare websites. The SM&N platforms of less importance included healthcare podcasts and listserv's. Some of the popular SM platforms (Twitter, Pinterest, Instagram, Tumblr, Flickr) comprised five of the six least important sources of PHCI. Newer health websites such as Microsoft Vault, Apple's Health Kit, and WhatsAPP Messenger were rated higher in importance but lower in mean value than the scale midpoint (2.5). The next step in the analysis was to examine the 28 SM&N

platforms to see if respondents evaluated them in a pattern in which they co-vary together, and could be placed into groupings of a general type of platform. Factor analysis was used to examine the underlying dimensions of the 28 SM&N platforms and create a more manageable set of measures.

To test the data for its suitability for factor analysis, the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity were run. The KMO test had a value of .973, which is well above the minimum of .7, regarding the data's suitability for principle component analysis. Bartlett's test was significant (chi-square value = 14088/429, degrees of freedom=378, p = .000) which suggests sufficient correlation among the variables for factor analysis (Meyers, Gamst, & Guarino, 2006). The varimax rotation of factor analysis produced three (3) significant components: SM&N1, SM&N2, and SM&N3. In Table 2 the shaded areas identify each of the components (SM&N1, SM&N2, and SM&N).

Table 2
Factor Analysis with Varimax Rotation for SM&N Platforms

Social Media Platform or Network	SM&N1	SM&N2	SM&N3
Mayo Clinic Website	.671	.131	.501
Cleveland Clinic Website	.797	.213	.238
MD Anderson Website	.826	.301	.209
John Hopkins Website	.794	.216	.298
Microsoft Health Vault	.676	.559	.171
Health Forums	.731	.368	.341
Health Webinars	.780	.392	.272
Other Hospital Social Media Websites	.691	.434	.330
Apple's Health Kit	.647	.553	.198
Online Public Health Service Publications	.704	.421	.355
Health-Related Listserv's	.709	.510	.245
Health-Related Podcasts	.696	.476	.303
Employer Provided Websites	.626	.427	.313
Health Insurance Provider Website	.581	.258	.450
Facebook	.138	.701	.454
Twitter	.298	.788	.234
Tumblr	.313	.836	.083
Instagram	.220	.857	.198
Pinterest	.292	.752	.270
Flickr	.336	.832	.058
WhatsApp Messenger	.374	.734	.095
Smartphone Apps	.390	.563	.478
PatientsLikeMe	.524	.597	.276
YouTube	.278	.570	.544
WebMD Website	.479	.050	.689
Wikipedia	.331	.422	.591
Internet Search Engines/Browsers (Yahoo, Google, Bing)	.299	.167	.785
Health-Related Weblogs or blogs	.483	.440	.494

Table 3 summarizes each component (SM&N1, SM&N2, and SM&N3) by the description of the composite factor loading, percent of variance explained, mean response score and average number of responses for each component. Table 2 and Table 3 results clearly indicate that health consumers consider traditional digital sources (SM&N3) the

most important (mean = 2.03). SM&N3 did not account for as much variance, having only four (4) variables in its composite, and had the lowest average factor loading. The low factor loading was due to the Health-Related Weblogs or Blogs variable, which had a very low factor loading (.494), and whose factor loadings were similar for SM&N1 (.483) and SM&N2 (.440). This variable was not deleted from the analysis because of its standing as the seventh most important SM&N variable (2.23). See Table 1. SM&N3 had the highest average number of responses (855). The hybrid digital sites, including prestigious hospital websites (Mayo Clinic, John Hopkins), health forums, employee and insurance websites, Listservs and podcasts comprised SM&N1, which was the second most important to health consumers (mean = 2.36), and explained almost 32% of the variance. The contemporary SM&N platforms (SM&N3) included Facebook, Twitter and YouTube as well as interactive Sites such as WhatsAPP Messenger, PatientsLikeMe, and Smartphone APPS. SM&N2 was the least important to health consumers (mean = 2.78).

Table 3
Composite Factored Variables and their Components

Composite Variable	Generalized Description of SM&N Composite Variable	Composite Factor Loading	Percent of Variance Explained	Mean Score	Average Number of Responses
SM&N1	Hybrid Electronic Sites (hospitals, webinars, employer, insurance and public health websites, listservs, and podcasts)	.709	31.7%	2.36	682
SM&N2	Contemporary SM&N Platforms (Facebook, Twitter, YouTube); Interactive Sites (WhatsAPP Messenger, PatientsLikeMe, Smartphone APPS)	.723	28.4%	2.78	748
SM&N3	Traditional Digital Sources (WebMD, Wikipedia, Internet Search Engines, and Health-Related Blogs)	.639	14.5%	2.03	855

To examine and classify the three components by respondent demographics, ANOVA (Analysis of Variance) was invoked. The ANOVA process determined if there were any significant differences within each of the groups of the demographic characteristics, for each of the SM&N's. In this study, nine demographic characteristics were measured which were: (1) Do you have (any type) health insurance?, (2) Employer Offers Health Promotion and Wellness Programs, (3) Gender, (4) Occupational Status, (5) Age Category, (6) Ethnic Category, (7) Marital Status, (8) Educational Attainment, and (9) Household Income Category.

The results of the ANOVA for demographic variables with significant differences are contained in Table 4. Noticeably absent from the table are three variables which did not have any significant differences between their demographic groups: 1) Do you have health insurance?; 2) Educational Attainment; and 3) Household Income Category.

From Table 4 the demographic groups that place greater importance on SM&N1 include those whose employers offer health promotion and wellness programs; those employed part-time or presently unemployed; those aged 19-24; African-Americans; and

those single-never married. For SM&N2, the demographic groups indicating greater importance were those whose employers offer health insurance; those employed full-time or part-time; those aged 19-24; African-Americans; and those single-never married. For SM&N3, the groups indicating greater importance were those whose employers offer health promotion and wellness programs; women; those employed part-time or presently unemployed; those aged 19-24, 25-34, and 35-44; African-Americans; and those single-never married. In sum those placing greater interest in SM&N were generally much younger, African-American, single-never married and employed at least part-time.

Table 4:
ANOVA - Composite SM&N Platforms/Networks and Demographic Variables

Demographic Variable Groups	SM&N 1: Hybrid Electronic Sites (hospitals, webinars, employer and public health websites)	SM&N 2: Contemporary SM&N Platforms & Networks	SM&N 3: Traditional (WebMD, Wiki's) Digital Sources
Does your employer offer health promotion or wellness programs?	Employer offers health promotion or wellness p = .001 Mean =2.27	Employer offers health promotion or wellness p = .000 Mean = 2.60	Employer offers health promotion or wellness p = .005 Mean = 1.97
Gender	Not significant	Not significant	Women p = .023 Mean = 1.99
Occupational Status	Employed part-time p = .001 Mean = 2.27 Presently unemployed p = .001 Mean = 2.29	Employed full-time p = .000 Mean = 2.67 Employed part-time p = .000 Mean = 2.63	Employed part-time p = .036 Mean = 1.97 Presently unemployed p = .036 Mean = 1.95
Age Class	Age 19-24 p =.000 Mean = 2.02	Age 19-24 p =.000 Mean = 2.19	Age 19-24 p = .000 Mean = 1.76 Age 25-34 p = .000 Mean = 1.92 Age 35-44 p = .000 Mean = 1.97
Ethnic Background	African-American p =.000 Mean = 2.09	African-American p =.000 Mean = 2.37	African-American p =.000 Mean = 1.72
Marital Status	Single, never married p =.000 Mean = 2.18	Single, never married p =.000 Mean = 2.51	Single, never married p =.000 Mean = 1.94

NOTE: lower mean values indicate greater overall importance for the SM&N Composite Factored Variables

Discussion, Summary and Future Research

With the growth in health consumers' usage of SM&N as a means for collecting PHCI relevant to them, this study sought to (1) identify sources considered most important, (2) group the health consumer responses that co- vary together, and (3) classify the groups of SM&N's by respondent demographics.

The most important (top ten) SM&N's were: (1) traditional internet search engines (Google, Yahoo, etc.), (2) WebMD website, (3) Mayo Clinic website, (4) Health Insurance Provider website, (5) the John Hopkins website, (6) Cleveland Clinic website, (7) Health-related blogs, (8) Health forums, (9) Wikipedia and (10) MD Anderson website. Five of the top ten websites were once Web 1.0 sites, in which the health consumer would merely input a key word and receive information. These websites have evolved to Web 2.0, whereby health consumers can obtain (even second opinions) information, but also interact by providing their own content to the website and respond to website blogs.

Other important SM&N platforms for PHCI were Public Health Service Online Publications, Health Webinars, Smartphone Apps, other hospital websites, YouTube, Facebook, and employer provided websites. Whereas Facebook was considered an important vehicle for accessing PHCI, other contemporary SM platforms, such as Twitter, Flickr, Tumblr, Instagram and Pinterest, were not. Also of less importance, at this point in time, were Apple's Health Kit and Microsoft's Health Vault. Overall, the findings suggest a growing tendency toward sharing health concerns via social media.

The factor analysis of the 28 SM&N's produced three composite factored variables: SM&N1, SM&N2, and SM&N3. SM&N1 was comprised of the hybrid prestigious hospital websites (Mayo Clinic, etc.), health forums, listserv's, webinars and podcasts, public health, employer and health insurance websites, as well as couple of new platforms including Apple's Health Kit and the Microsoft Health Vault. SM&N2 consisted of the contemporary social media platforms, YouTube, the interactive PatientslikeMe website, and a couple of APP-related sites. SM&N3 consisted of only 4 platforms, but included WebMD, Wikipedia, traditional internet search engines, and health-related healthblogs and blogs.

SM&N3 was considered the most important, followed by SM&N1, and SM&N2. Health consumers may be most familiar with traditional search engines, WebMD, Wikipedia, and healthblogs in obtaining PCHI. With familiarity may come greater trust that the traditional sources are reliable form of preventive health information. Given that SM&N1 consists of the more recent Web 2.0, health consumers rely on them to share and interact online. However, the read-only websites such as WebMD may be considered more reliable.

SM&N2 was considered least important to health consumers. Contemporary SM&N Platforms (Facebook, Twitter, YouTube) and Interactive Sites (WhatsAPP Messenger, PatientsLikeMe, Smartphone APPS), may be important in sharing one's health condition with others, or seeking advice from trusted friends and professionals. However, SM&N2 may lack the perceived health care expertise found in WebMD, or prestigious hospital websites.

Although this finding is consistent with earlier research (Cangelosi, Ranelli & Kim, 2013), the importance placed on social media is again evident as indicated by mean scores for Facebook (2.47) and YouTube (2.46).

The importance of electronic delivery systems have been discussed in previous PHCI and demographics research. Health consumers rated the most important PHCI delivery systems to be online health forums, health-related blogs, Wiki's, health-related listserv's and podcasts (Cangelosi, Ranelli, & Kim, 2015). In an earlier study, internet search engines, WebMD, online health forums, health insurance websites, public service online publications, hospital websites and health-related blogs were found to be important delivery systems of PHCI (Cangelosi, Ranelli, & Kim, 2013).

This study extends previous research in PHCI and demographics. Although many of the same delivery systems were examined, a larger and more current database was used. Also more SM&N platforms (28 of them) were considered which allowed respondents to be more precise in identifying PHCI delivery systems most important to them. In addition to WebMD, Wiki's, and traditional internet search engines, five prestigious hospital sites were in the ten most important SM&N's. Facebook emerged as an increasingly important platform for health consumers.

At this point in time, other contemporary social media platforms such as Twitter and Instagram, and new corporate sites such as Microsoft Vault and Apple Health Kit, were not considered important delivery systems. Given the increasing importance of Facebook, it might be a matter of time before some of the other social media platforms are considered more important by health consumers.

With respect to demographics, income and educational attainment had traditionally shown strong correlation with the use of PHCI. But that relationship was not found in this study. The use of SM to access preventive care information could not be delineated by different income groups or different levels of educational background. This may suggest that income and educational background has little bearing on SM usage to obtain preventive health information.

Making comparisons with earlier studies is complicated because of the inclusion of a larger number of SM&N's in the present study. And yet, it is evident that SM&N's are increasing in importance as PHCI delivery systems. Likewise, the demographics indicate some similarities with recent studies. One, women considered traditional digital delivery systems more important than men. This is consistent with previous research that suggest women to be more PHC oriented than men. Two, demographic groups indicating greater importance for PHCI via digital technology tend to be African-American, younger, and single-never married. This was consistent with earlier findings (Cangelosi, Ranelli, & Kim, 2015; Cangelosi, Ranelli, & Kim, 2013; Cangelosi, Ranelli, & Kim, 2010; Cangelosi, Ranelli, & Voss, 2009; Cangelosi, Ranelli, & Markham, 2009). African Americans and other minority groups in general receive lower-quality interpersonal care and therefore rely less on direct clinical care professionals (Musa et al., 2009). As such, SM&N may be substantially more important in obtaining PHCI. Furthermore, this demographic profile fits the traditional college student who characteristically, work part-time, and are more likely not to be married.

Using digital technology for obtaining PHCI is expected to grow. By knowing the SM&N preferences of health consumers, health care marketers can do a better job of making PHCI available to those who desire it the most, but also identify the demographic groups that are most at risk without it. With health consumers becoming more skilled at securing PHCI, and often being more knowledgeable about their personal condition than their primary physician, a study into the types of health consumers who would look for

nontraditional alternatives to meet their health and preventive health care needs is needed (Munn, 2010). Finally, demographic studies that warrant further examination include (1) how and why reliance in SM&N is developed vs. ignored, (2) why certain SM&N delivery systems are more important than others, and (3) how health care professionals can use SM&N to enhance interaction and engagement with health consumers.

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