

Comparison of Millennials, Generation X, and Baby Boomers Attitudes Toward Preventive Health Information: A Social Media Emphasis

Joe Cangelosi, joec@uca.edu

*David Kim, davidk@uca.edu **

Ken Griffin, keng@uca.edu

Ed Ranelli, eranelli@uwf.edu

Introduction and basic definitions

In the US much attention is focused on cohort value systems where the generational cohorts the consumer was born into are measured and compared. The idea is that persons of the same generation have similar experiences that are significant enough to shape their attitudes and values. These tendencies are somewhat consistent and last throughout the consumer's life.

The interest in cohort value systems arises because of the relatively stable characteristics of cohorts that can be used to predict consumer behavior (Berkowitz 2017). This study compares the generational cohorts of Baby Boomers, Generation-X, and Millennials concerning their attitudes toward (1) the use of preventive health care information (PHCI), (2) the significance of social media, and (3) social networking methods in accessing preventive health information.

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 the staggering health care costs estimated at \$3.65 trillion in 2018. This is larger than the GDP's of Brazil, Great Britain, Mexico and Canada. It is also the equivalent of \$11,212 per person in the US (Sherman 2019).

For the US healthcare system to work more efficiently, there must be an increasing shift from symptomatic to preventive health care. 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). The transition to a PHC system means PHCI must be readily available.

Several factors account for why persons may seek or ignore PHCI. These include attitudes about preventive health, and differences in demographics and cultural background (Dutta-Bergman, 2005; Satcher & Higginbotham, 2008). Also, consumers respond differently to the various ways in which PHCI is delivered (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.

For at least the last ten years, the internet has been and continues to be rated as the single most important means of accessing PHCI (Cangelosi et al., 2012, 2018). 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 90% of the U.S. and Canadian population is online, the power for delivering PHCI electronically cannot be underestimated (Internet World Stats, 2019).

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). In a recent study, Facebook was cited as a “somewhat important” source of PHCI (Cangelosi et al., 2018). 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 otherwise 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), (3) attitudes toward PHCI delivered via SM (Cangelosi, Kim & Ranelli, 2015), and (4) social media and networking (SM&N) channels preferred by health consumers (Cangelosi, Ranelli, & Kim, 2018). 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.

A recent study compared behaviors of Gen Xer’s and Baby Boomers (Cangelosi et al., 2019). As an extension, this study examines and compares three dominant cohort groups in the US: Baby

Boomers, Generation X, and Millennials. These groups account for nearly two-thirds of the US population, and represents those aged 23 to 73 years (U. S. Bureau of the Census, 2019). The expanded emphasis on PHCI attitudes emanates from the inclusion of Millennials. In about ten years Millennials are expected to be the most important of the generational cohorts in the US (Kanski 2018). And because of their young age, Millennials' views of PHCI will be largely attitudinal instead of experiential. This study examines the three cohorts' PHCI tendencies toward (SM&N) as a means of acquiring the PHCI.

Background Information

Because of the ability to download, create, share, edit and interact with online content via Web 2.0, the use of SM&N in healthcare is widespread. As early as 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 several 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. In 2005 the U.S. health industry incurred an estimated \$100 billion extra per year because patients did not follow their treatment protocol (Osterberg & Blaschke, 2005).

Health care expenses generally increase with age. The results in Table A indicate that health care expenditures per capita increase five-fold from the youngest age segment (0-19) to the oldest (65 and over), from about \$4,600 to almost \$25,000. Persons 65 and older account for 36% of the health care spending in the US, but only 16% of the population. Considering that health care costs consume over 17% of the US Gross Domestic Product and is projected to top 20% by the year 2023, the need for preventive health care comes clearly into focus (Bradley & Claxton, 2019 and National Center for Health Statistics, 2016). The preceding is further highlighted by the estimated \$billions that could be saved if health care consumers would take advantage of preventive medicine. Lost job productivity amounts to \$260 billion annually, much of which could be avoided via PHC (Centers for Disease Control and Prevention, 2017).

Age Group (in years)	Age Group Population	Age Group Population (%)	Health Care Spending by Age Group	Health Care Spending by Age Group (%)	Health Care Spending Per Capita
under 19	78,859,958	24	\$365,000,000,000	10	\$4,628
19 to 34	72,288,295	22	\$401,500,000,000	11	\$5,554
35 to 44	39,429,979	12	\$365,000,000,000	10	\$9,257
45 to 54	42,715,810	13	\$474,500,000,000	13	\$11,108
55 to 64	42,715,810	13	\$730,000,000,000	20	\$17,090
65 and over	52,573,305	16	\$1,314,000,000,000	36	\$24,994
TOTALS	328,583,157	100	\$3,650,000,000,000	100	\$11,108

Table A: Share of Total Health Care Spending By Age Group

SOURCE: Kaiser Foundation: Health Care System Tracker

Baby Boomers, Generation Xer's and Millennials can each be described as a cohort, or a group of people grouped together in history by a set of events. These events can be anything from technological changes, wars, political changes and so forth. These events shape many of the attitudes that persons in a cohort have in common. The unique aspect of cohort groups is that as they transition into higher age categories, the values they acquired as a group are resistant to change or do not change. Attitudes towards health care are just one of the many cohort attitudes possessed by various cohort groups. Hence, as cohort groups, Baby Boomers, Generation Xer's and Millennials can be considered as groups for analysis (Berkowitz, 2017).

Table B illustrates the various cohorts in the US population as of April 2019. The definitions of US generational cohorts vary somewhat depending upon the source. For this study, the US Bureau of the Census groups was used (Robinson, 2018). Comparing the cohorts, Baby Boomer and Millennial cohorts are almost the same size (22.56% & 22.06%), with Generation X being slightly less at just over 20%.

Generational Cohort	Birth Dates	Age Range (years)	Population by Cohort	Population (%)
Greatest Generation	Before 1928	92 and older	2,595,807	0.79
Silent Generation	1928-1945	74-91	25,892,353	7.88
Baby Boomers	1946-1964	55-73	74,128,360	22.56
Generation X	1965-1980	39-54	66,275,223	20.17
Millennials (Gen-Y)	1981-1996	23-38	72,485,444	22.06
Generation Z	1997-Later	0 to 22	87,205,970	26.54
TOTALS			328,583,157	100.00

Table B: US Population by Generational Cohort

SOURCE: US Bureau of the Census, April 2019

This study examines generational cohort attitudes towards PHCI, and assesses the importance of various SM&N platforms and sources as delivery systems to access PHCI. The various SM&N sources and PHCI attitudes were analyzed through different demographic groups studied earlier (Cangelosi, Ranelli, & Kim, 2015). The SM&N platform research questions and PHCI attitudes are addressed as follows:

1. In the aggregate, how important are the various SM&N platforms as delivery systems of PHCI for Baby Boomers, Generation Xer’s and Millennials?
2. Are there significant differences across the cohorts?
3. How do Baby Boomers, Generation Xer’s and Millennials differ in their attitudes concerning PHCI?

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 et al., 2013). Digital technology helps health consumers engage in social networking, participation, openness and collaboration within and between health user groups, such as Facebook Groups (Santoro, 2013, Eysenbach, 2008). 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).

As the great majority of health consumers 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). SM can be a very effective tool for communicating PHCI, but the spread of information must be monitored to prevent harmful misinformation of patients. In sum, SM allows patients more frequent and direct communication with each other as well as with health professionals (Moorhead et al., 2013).

The main limitations of SM regarding health care information is well documented and can be summarized as lack of trust due to the user generated content, threats to patient privacy, and the potential for incorrect or even harmful information being shared by patients with similar medical problems (Moorhead et. al., 2013). In totality, however, the use of SM&N is increasing and is an excellent way for health consumers to share their health concerns and acquire HCI about HC issues and sources to help their situation (Norton & Strauss, 2013).

As Baby Boomers age, they will have increasing medical needs and are likely to place large demand on HC resources. Consumer health technologies may help stem rising HC needs and costs by providing better HC provider-to-patient communication, health monitoring, and information access, all of which will better enable self-care. Hence, the question becomes “how ready are Baby Boomers to use consumer technologies that will enable self-care?” LeRouge et al. (2014) found that Baby Boomers are more likely to indicate that advanced consumer technologies (blogs, wikis, podcasts, smartphone health apps) are not appropriate for their HC needs. The study found out that Baby Boomers have experience with advanced consumer technologies, but need to be shown how they are appropriate for PHC applications.

Gen-Xer’s are the first Cohort to grow up in an era of internet-available health information. They tend to be less passive and more discerning towards health than Baby Boomers. They are hungry for information, but skeptical of experts. More so than Baby Boomers, Gen-Xer’s actively look to a variety of sources for information, which can include face-to-face, HC institutions, websites, medical journals, television programs, and news websites. They are cynical about large HC institutions, especially pharma. They get information from the internet, but still rely on their personal physicians as their best source for keeping them and their loved ones healthy (O’Connor, 2017).

Gen-Xer’s represent the first generation of true healthcare consumers, as they shop for healthcare much the same way they shop for retail goods and services. They have a natural tendency to consult online information sites, especially those with ratings and reviews. They exhibit less loyalty to HC providers and will not hesitate to switch providers based recent experiences. Baby Boomers, while using some SM&N sites, rely heavily on word-of-mouth, and are slower to change HC providers than Gen-Xer’s (smithandjones.com 2015).

Millennials are perhaps the most complex of the 3 cohorts. They dislike checkups, want low cost HC, and greatly value convenience in getting HC, when needed (Majors 2018). Given their younger ages (23-38), Millennials are tech savvy when it comes to the search for HCI. They tend to be more self-reliant than the other cohorts (Smith et al., 2009). Thirty-eight percent trust their peers more than medical professionals; 55% believe HCI online is more reliable than their doctors; and they have the lowest satisfaction rate of the 3 cohorts for doctors. The issue of distrust of HC professionals makes communicating with Millennials a complex process (Kanski, 2018).

Millennials are very skeptical, trust friends regarding HC advice, use technology to compare more HCI faster. They are more likely to try an APP or click on an online ad before considering anything from a HC provider or insurer. Even though Millennials are younger and less experienced regarding healthcare, they have a great need to be part of the conversation concerning the healthcare that they need. To reach Millennials, HC marketers are challenged to find the right mode of communication, including SM, podcasts, blogs and other digital technologies (Mahoney, 2018). One method that seems perfect for reaching Millennials is Telehealth, given how they value convenience, a disliking for checkups, and being technology savvy (Tuckson et al., 2017).

In summary, while Millennials value ease, accessibility, Baby Boomers place a high value word of mouth, and Gen Xer's want convenience concerning routine services (Majors, 2018). There is some evidence that Baby Boomers are becoming more tech savvy with the fastest growing demographic on social media being women, aged 65 and over (Reddington, 2018).

Research Method

The target population for this study was the United States. The sample frame consisted of an online consumer panel with two million members, 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 study, the survey resulted in 820 usable responses.

The questionnaire consisted of 217 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. The measurement of 43 PHCI attitudes was done with a 6-point extent of agreement

scale where 1=definitely agree, 2=generally agree, 3=slightly agree, 4=slightly disagree, 5=generally disagree, and 6=definitely disagree.

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Keywords: preventive health care information, attitudes, social media, social networks, Baby Boomers, Generation X, Millennials.

Relevance to Marketing Educators, Researchers and Practitioners: Marketers seek reliable consumer characteristics to predict behaviors. The interest in cohort value systems arises because of the relatively stable characteristics with cohorts that can be used to predict consumer behavior. In this study, the generational cohorts of baby boomers, generation-X and millennials are measured concerning their attitudes toward the use of preventive health care information (PHCI), and the significance placed on social media and social networking methods in accessing preventive health information.

Author Information:

Joe Cangelosi, University of Central Arkansas

David Kim, University of Central Arkansas

Ken Griffin, University of Central Arkansas

Ed Ranelli, University of West Florida

Track: Services Marketing

ID #: 1437