



Healthcare Consumerism and Patient Loyalty in the Age of Telehealth: An Exploratory Roadmap

Ik-Whan G. Kwon

The Center for Supply Chain Excellence,
Saint Louis University, Saint Louis, MO, USA

Sung-Ho Kim

Department of Healthcare Management,
Cheongju University, Republic of Korea

ABSTRACT

Customer loyalty is known as a source of sustained revenue stream and means of building and maintaining a strong relationship with customers for lifetime shopping experiences. Although there are a few studies in patient loyalty in healthcare fields, there is no theoretical or empirical studies on patient loyalty under the telehealth environment. This study, therefore, borrowed the framework from the commercial consumer loyalty model and build patient loyalty framework for healthcare practices in telehealth environment. There is a growing trend in both academic and industry circles that telehealth will stay as a one of the viable healthcare management alternatives even after Covid period. This study reviews the current status of patient loyalty based on the existing literature and explores a pathway to establish patient loyalty in telehealth platform.

Keywords: Customer loyalty, Patient loyalty, Brand loyalty, social determinants of health, Healthcare consumerism, Normative goods, Transaction cost, Determinants of patient loyalty, Digital health literacy.

INTRODUCTION

As out-of-pocket healthcare costs and health payer deductibles have both grown, the patients increasingly consider themselves as major payers for their care. In the United States, the ongoing growth of cost-sharing has given consumers greater influence over healthcare delivery and cost management. For example, between 2006 and 2015, the average deductible for employees with employer-sponsored insurance grew by more than 120% (Flavelle, 2015). Consumers now directly control \$330 billion annually in out-of-pocket healthcare expenses worldwide (WHO, 2020). The choices that they make have the potential to affect 61% of all healthcare spending (Anand *et al.*, 2016). Accordingly, it is not surprising that consumers are beginning to actively engage in making decisions about their health, healthcare and spending.

Consumers in healthcare now become active participants in search for the best buy for their health management creating healthcare consumerism. The concept of consumerism in health care is a relatively new in the healthcare industry. The concept is generally understood as that people proactively using trustworthy, relevant information and appropriate technologies to make better-informed decisions about their health care options with limited healthcare budget,

both within and outside the clinical setting (Carman *et al.*, 2019). Kwon and Kim (2022, p.2) further advanced three factors underline successes of consumerism; “trust-based commitment, comprehensive information display, and technologies”. Absence of any one of these requirements will hamper successful healthcare consumerism. Commitment to the patients that they would receive the best care is the most important requirement in creating and fostering patient loyalty. Now more than ever, patients armed with technologies are surfing provider’s capability and “reputation” to deliver care that they consider “worth” for their spending.

LITERATURE REVIEW

While patient consumerism is seeking a better “value” from their spend on healthcare services, the provider has been equally active in branding their products in such a way to create patient’s “loyalty” for sustainable value creation. Customer loyalty is a commitment between a customer and a brand that causes the customer to make repeat purchases. Customer loyalty is different from brand loyalty. While customer loyalty is transactional in nature and occurs as the result of money-saving offers from the brand, brand loyalty stems from a stronger, emotional and personal relationship between the customer and the brand (Blizzard, 2005). A separation and switch from their favorite brand cause emotional stress with high anxiety that many customers try to avoid and stay with their brand(s) even if the price is higher than competitor’s. In the healthcare industry, many patients are attracted to the brand name (e.g., reputation of healthcare systems, such as Mayo Clinics) even if there are some products/services within the system subpar to their brand name because patients trust the brand name.

Can patients become repeat customer? There is evidence in healthcare industry that patients could become repeat customers with their providers when and if they consider that they receive cares worth of their spending. For example, in 2018 in the United States, each healthcare consumer in average repeated their purchases 2.67 times (National Hospital Ambulatory Medical Care Survey, 2018). Although the report does not reveal whether 2.67 visits per patient is repeat visits to the same providers, we can only speculate that some of them especially for the older population who consume the bulk of healthcare resources and who have been with the same providers for many years, could be repeat customers. Spend on healthcare by older population is larger than in any other age brackets. For example, among the top five percent of Americans on healthcare spending, the vast majority of these individuals were 65 years or older. Although this population shares only 16% of the total population, they consume 36% of total healthcare spending (Sawyer and Claxton, 2019). These older population has been emotionally attached to their providers for many years and seldom considering switch to other providers. Such A behavior would create a long-term relationship leading up to patient loyalty.

Healthcare is a “normative and social” goods. It is a normative since healthcare is considered as a “right” for every consumer and it is a “social” goods as it is a part of societal health status (e.g., pandemic). If we face a situation where normative condition prevails, consumers are empowered to “shop” providers who have been known with reputation as a system or individual. A lack of open and credible information exchange between providers and patients may hamper active search for the best providers whom patients wish to be as a “repeat” customer, a pathway for creating “loyalty”. Providers are aware that customers/patients are searching for the best providers (social goods), yet they (providers) are not ready to accommodate due mainly to a lack of infrastructure.

Once patients become repeat “customers”, anxiety for being at healthcare environment (“white coat syndrome”) diminishes as repeat patients became aware of “surroundings” not just for setting (impersonal), but more importantly personnel who intimately engage with patients on their care (personal). The emotional “wall” between providers and patient is to be removed. Provider’s office and building become familiar place where personal and emotional interaction between patient and provider become much more conducive, opening up a door where intimate information sharing becomes less awkward. However, information sharing between providers and patients should not be limited to only medical issues, but more importantly other areas such as family dynamics, circle of friends, social networks, etc.(social determinants of health) that patients are interacting on a daily basis. It has been reported that “chit chat” between patients and physicians improves patient’s “total wellbeing” and remove artificial wall between patients and providers (Pollack, 2019). It was also reported that focusing on personal interventions has the most effective for increasing portal use in vulnerable populations (Grossman *et al.*, 2019). Under the current healthcare system where revenue is determined by the volume, providers may argue this approach unacceptable, less attractive and uneconomical, therefore operationally unworkable. Yet, this practice leads to creating “loyal” and “repeat” patients where a long-term revenue stream is to be secured.

Repeat customers not only render a steady revenue stream, more importantly they are also major contributors to decreasing transaction costs, a cost/expense *that incurs by engaging in economic exchange of any kind, e.g., recruiting new patients. Transaction cost in general consists of costs for* searching for new patients (search cost), cost searching for right treatment (negotiation cost) and cost to verify whether information on patients and supporting groups correctly entered into the healthcare system, thereby the providers render the most effective and efficient treatment for patients (verification cost). The marketing cost (search cost) to recruit new patients will be lowered as repeat patients tend to stay with the same providers thereby decreasing or eliminating repeat cost (investment) on repeat patients. Providers can easily access to the up-to-date information on the repeat patients and therefore, resources (marginal cost) to be spent on repeat patients should be lower than new patients. Finally, providers have completed, up-to-date information on repeat patients in dashboard so as to provide best and timely treatment and thereby less resources will be needed to verifying treatment process and outcomes (verification cost).

Considering the sizeable investment into advertising (\$29.9 billion in 2019) by the healthcare industry (Rapaport, 2019), a steady flow of repeat patients into the same healthcare system with low transaction cost certainly contributes to a higher profitability (Heskett, Jones and Loveman, 1994). According to one study, most loyal customers - the top 20% of total customers - not only provide all the profit but also cover losses incurred in dealing with less loyal customers (Heskett *et al.*, 2011). On the other hand, loss of repeat patients is a costly problem. According to one study, seven to ten percent of patient attrition represents as much as \$100 million in lost revenue opportunity per hospital (Walker, 2018). Reichheld and Sasser estimate that a 5% increase in customer loyalty can produce profit increases from 25% to 85%. They conclude that quality of market share, measured in terms of customer loyalty, deserves as much attention as quantity of share. Using service-profit chain model, Heskett et al. (2011) established relationships between profitability, customer loyalty, and employee satisfaction, and productivity leading to a conclusion that patient loyalty improves the provider’s profitability. Hallowell (1996) further illustrates a sequential relationship of customer

satisfaction to customer loyalty, and customer loyalty to profitability. He concluded that increase in customer loyalty via satisfaction could measurably improve profitability. It has been reported in other industries that trust-based collaboration among supply chain partners tends to stay together for extended period that reduces the transaction cost (Vaidya *et al.*, 2012). On the other hand, loss of trust with loyal customers cost Chrysler \$24 billion profit over 12 years (Henke, Stalkamp and Yeniyurt, 2014).

Literature review cited above provides a framework to explore a pathway to create patient loyalty under telehealth environment.

A PATHWAY TO PATIENT LOYALTY IN TELEHEALTH FRAMEWORK

Relationship between patients and providers has been undergone a dramatic change during the pandemic period. Face-to-face interaction was curtailed and eliminated in many areas except emergency services during the pandemic period. Patients were rerouted to telehealth platform for consultations that caused subsequent delayed treatments. Many patients, especially those who were not equipped with technologies such as older patients and those living in the areas where broadband is not readily accessible, endured a great deal of confusion, anxiety, isolation and frustrations. Under such circumstance, it is highly unlikely to create environment where intimate and confidential patient-provider relationship to be developed and nurtured. Healthcare services almost always involve in-person interactions, which creates opportunities to engage with patients in a way that fosters a pathway to building trust, allows for personalizing intimate information exchange and opens the door for necessary care for patients. This idea of trust is essential, as healthcare is deeply personal and requires a supportive relationship between patient and provider. More specifically, for patients, trust is the strongest motivator to build sustainable relationship with providers. In commercial area, this single factor alone drives loyalty for 43% of consumers, and trust factor is involved in decisions to switch to another source (e.g., retailer, brand, provider) 50% of the time (Healthcare Financial Management, 2019).

Telehealth, however, poses a great deal of challenge for patients and providers in creating sustainable and trustful relationship. Under the telehealth environment, providers are deprived of patient's emotional expression (Pollack, 2019) that forms as an important treatment option. Among many factors listed as determinants of patient loyalty, trust and commitment are listed as the most important and relevant attributes creating sustainable network among patients and providers (Chang, Tseng and Woodside, 2013; Zhou *et al.*, 2017; Moreira and Silva, 2015; Ramli and Sjahruddin, 2015). In addition, Patawayati, Setiawan and Rahayu (2013) argue that trust and commitment are mediators of service quality and its impact on loyalty. According to their study, among the eight cited determinants, trust and commitment appears to be the most important factor in bringing in patients and providers into intimate relationship making process. Ultimate purpose of trust is to achieve a state of commitment where two parties (patient and provider) execute the agreed tasks (explicitly or implicitly) to achieve the prescribed goals (Ghijsen, Semeijn and Wang, 2009). The fundamental construct that leads to trust that opens a state of commitment is information sharing among the patients and providers; information that is credible, unambiguous and easy to follow and understood, especially for those who are not in the stage of using technologies.

Many providers erroneously assume that every patient in telehealth platform understand and follows information and subsequent instruction displayed in their website and dashboard. There is a great deal of digital divide and information imbalance among age group especially older population. According to one study, between 57 and 61 percent of clinicians believe that older populations cannot receive effective care through telehealth (Wardlow, Roberts and Archbald-Pannone, 2022). Considering, for example, that among the top five percent of Americans on healthcare spending, the vast majority of these individuals were 65 years or older. As described earlier, although this population shares only 16% of the total population, they consume 36% of total healthcare spending (Sawyer and Claxton, 2019). An important research question is, “can a platform be created for sustainable patient-provider relationship under the telehealth environment?” In addition, opinions are divided in trust-building process through telehealth between providers and patients. One study report that while 31% of patient respondents indicated it was “easier” or “much easier” to build a relationship with their provider via telehealth compared to in-person platform, 37% of providers surveyed said it was more difficult to build a relationship with patients via telehealth (Zocdoc Reports, 2022). One study even warns that greater reliance on digital tools has the potential to increase healthcare disparities between those who have skills and access to digital tools and those who do not, thereby perpetuating health disparities (Sieck *et al.*, 2021).

FRAMEWORK FOR DEVELOPING CUSTOMER LOYALTY UNDER THE TELEHEALTH PLATFORM

Business success has always been driven by a company’s ability to build a positive emotional connection between its customers and its brand. Enhanced customer loyalty has the power to set winning brands from the rest. What has changed in the digital era, however, is the means that each player uses to create and maintain loyalty. Exploring digital tools to create and sustain relationship with patients face additional challenge and barriers as parties interacting each other are deprived of sense of “emotional display” in search for rewarding relationship through telehealth experiences. It is important to understand the dynamic of building loyalty. Loyalty is two-way preposition with equal partnership. “White coat” does not have power to demand patient loyalty as much as patient cannot demand loyalty from the “white coat”. The weight of power between these two players should be equally distributed. Otherwise, the relationship built under the digital environment will never reach to a potential that both parties could harvest the success.

Nevertheless, it is important to accept that digital health will stay and grow (J.D. Power, 2022) as an alternative care management in spite of doubts many people raised on efficacy and sustainability of this technology-based health management (AP-NORC Center for Public Affairs Research, 2022). Furthermore, there is a growing debate that digital competency should be a part of social determinants of health (Sieck *et al.*, 2021). In order to take advantage of telehealth platform, healthcare providers should consider the following attributes as means of creating positive patient-provider relationship that leads to a sustainable patient loyalty under the telehealth environment.

Hybrid Approach

Given the lack of relevant theoretical model, this study proposes a hybrid approach. The best and workable way to start building patient loyalty is a conventional face-to-face consultation at the initial information gathering stage. “Chit-chat” approach is known to have a positive impact

on patients in building trust and relationship with providers. Intimate setting gives providers opportunities to “get to know” patients better in the areas that impact patient’s overall health status. Family dynamics, living conditions, community involvement, food (in)security, daily transportation needs, are some of the important social determinants of health contributing to patient’s overall health (Kwon, Kim and Martin, 2021). This initial face-to-face “chit-chat” meeting also provides an opportunity to assess patient’s digital literacy in general and patient’s digital health literacy in particular that patient’s ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or managing patient’s health issues. Just as providers screen for patient’s health literacy, they should also screen patient’s digital health literacy. Low digital health literacy could result in health inequities, leaving some people reaping the benefits of patient engagement technologies while others left behind. It also can deepen health inequities in an increasingly digitized healthcare landscape (Barnett *et al.*, 2022; Rodriguez, Shachar and Bates, 2022). Worse yet, neglecting patient’s low digital health literacy may create permanent health inequity for some patients (Sieck *et al.*, 2021). A recent study by the Ohio State University shows that it’s not just broadband access stymying connectivity for marginalized groups. Rather, digital health literacy and language access will be necessary to support digital health equity (Cohen *et al.*, 2022)

Broadband

Broadband is an essential tool in communicating vital health information between providers and patients without physical contact. A lack of broadband deprives speedy information transfer that is vital in managing patient’s health. Telehealth depends on assumption that patients have or access to broadband technologies at their disposal. However, according to the FCC report, still 19 million people in this country lacked access to broadband at the end of 2021. Situation is even worse in rural area where only 70% of household access to broadband as opposed to almost 81% in urban setting (Zahnd, Bell and Larson, 2021). A lack of broadband makes it very difficult in creating digital inclusion that necessary to ensure equitable access to and use of information and communication technologies such as (1) affordable broadband internet service, (2) internet-enabled devices, (3) access to digital literacy training, (4) quality technical support, and (5) applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration (National Digital Inclusion Alliance, 2019).

Digital Education

According to the National Institutes of Health All of Us Research Program, digital health literacy is “the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem”. Low digital health literacy can carry with it several consequences. Primarily, it can deepen health inequities in an increasingly digitized healthcare landscape. Patients with poor knowledge to use digital health tools, don’t see the importance of those tools, or can’t access those tools in their preferred language, ultimately shay away from using this technology. It is, therefore, imperative for providers to assess the patient’s level of digital literacy during the initial face-to-face meeting. Each patient is different on literacy level and it is highly desirable to design digital apps specifically for “a” patient. Most telehealth technologies are designed for those who have fairly good knowledge in using technologies. However, many seniors especially those who live in rural areas have been discouraged from using technology due mainly to complexity of technology for those not equipped with the ever-changing technologies. Among many technologies, a simple interactive conversational device would give seniors and those who are

not technology savvy a confidence and a platform to engage with healthcare providers in remote settings. In case that patients are unable to afford devices, the providers may consider to provide free of charge simple device for patients (Kim and Kwon, 2022). Patients may also need assistance with setting up email and patient portal accounts. In addition, it is critical to provide ongoing support for patients, reduce medical jargon, and provide interpretive resources, and ensure that technology and training are offered equitably to all patients, not just to those who are confident enough to request help (Grossman *et al.*, 2019). When healthcare organizations set digital healthcare as their strategic goals, digital apps promoted for their patients should be aligned with their corporate strategic goals. A recent survey indicates that nine out of ten healthcare executives believe a well-designed, patient-facing mobile app would help their organization achieve its digital strategy goals. However, just only 22% have an app that is custom-built for their organization (Chatham, 2022). Under such circumstance, many potential users may be discouraged and turned away from using this technology.

Understanding the Digital Markets Start Here

The effective strategy to expand the digital market should target the areas and population in the community who are less inclined toward using this technology. There are many market segments where digital intervention opens untapped markets. Many studies have shown differences in telehealth access and usage among racial minorities, older age groups, and those living in rural areas. Older adults and black and Hispanic patients were less likely to utilize telehealth tools than their white and Asian peers. Similarly, research conducted more recently found that compared to white people, black and Hispanic people were 35 percent and 51 percent less likely to use telehealth, respectively (Luhn, 2022). If we do not properly address this issue, digital health may hinder quality healthcare delivery across the entire healthcare spectrum in improving population health (Barnett, 2022).

It is important to understand that though telehealth may provide various benefits to adults over 50, only 16 percent of this cohort group said they are highly likely to continue using the care modality after the pandemic. In contrast, 22 percent of adults between the ages of 18 and 49 said they would continue to receive care virtually (AP-NORC Center for Public Affairs Research, 2022). In addition to geographical challenge (e.g., urban vs. rural), we have also challenge to educate the older population who consumes healthcare resource more than any other age groups. Healthcare market for older population is growing and understanding of this market is imperative to capture their loyalty.

Effort should be also addressed specifically for the rural market. Millions of rural residents remain without access to broadband which is a critical requirement for effective telehealth deployment. A lack of broadband and other information technology infrastructures created a digital divide in rural population as they are seeking affordable healthcare. People in rural areas consider personal and intimate relationships with care providers as one of the most important attributes in selecting and a maintaining healthcare provider in general and physicians in particular. The process of building a long-term relationship and create “repeat” customer environment requires patient loyalty (Kim and Kwon, 2021).

Corporate Culture, People and Organizations

Technology is a tool that enhances the corporate goals. It is never meant to be the final goal. Misconception on the roles of technology led to wasteful investments. It is people and corporate

culture that drive technology-based healthcare strategy to achieve the corporate goals. For example, of 2,135 CEOs survey on global companies on the reasons that digital implementation failed, with multiple answers allowed, 36 percent cited a lack of positive corporate culture in understanding of digital technology in general (Nikooyeh, 2022). Addressing organizational culture might also improve the trust of clinicians whose patients have high trust in them (Linzer et al., 2021).

An emphasis on technology in patient management often tends to downplay an importance of soft skill in communicating relevant information with patients. A recent study, for example, warns that among the 51 percent of clinicians who participated in a worldwide survey raised concerns that telehealth would adversely affect their ability to show empathy to their patients (Clinician of the Future Report, 2022). The same study further reports that 82% of clinicians agreed that soft skills such as listening and being empathetic have become increasingly important among clinicians in the last decade. Patients who attempt to use technologies for simple task such as making an appointment have been discouraged and turned away from using this technology as they have to go so many “prompts” to reach the final destination. Situation becomes even desperate if and when tele-conversation is abruptly disconnected without prior warnings. Most patients especially elderly and/or those who are not quite knowledgeable on re-navigating the process are discouraged and most likely return to the face-to-face consultation.

SUMMARY AND CONCLUSIONS

Literature reveals that customer loyalty leads to sustainable revenue stream with reduced operating cost. Borrowing the commercial model on loyalty and profitability, researchers in the healthcare fields explored the relationship between patient loyalty and revenue/profit stream. Although it is still infancy to establish such relationship between patient loyalty and revenue stream through empirical investigation in telehealth environment, theoretical argument is well established and it is promising.

Patient loyalty under the telehealth environment, however, raises different sets of challenges theoretically as well as empirically. Literature review reveals a complex and emotional decision-making process to establish patient's commitment to providers (institution and or individual provider). Patient is searching for information on providers through various channels where they feel comfortable and more importantly capable of navigating the complex channels.

A journey to creating patient's commitment to an institution can be summarized in Figure 1 below. Patients are looking for commitment from providers that they receive the best care through telehealth platform while the providers seek for commitment from patients that they elect to remain with the providers so as to stablish a long-term relationship. Literature reveals that such commitment is possible only if each party enters into understanding based on mutual trust. Trust implies an expression and exchange of opinion without fear that other party would not take advantage of other's vulnerable situation. It has been reported that information sharing is the best way to create mutual trust. “Chit chat” has been known as the best way opening up a dialogue with participants. This approach opens the areas not directly related to patient's health, nevertheless it creates an environment conducive for building trust among the

players. Social determinant of health is as important as medical intervention and it opens up the areas where x-rays and lab tests may not reveal (Kim and Kwon, 2020).



Figure 1: Road Map to Patient Loyalty

However, trust building process is only half the journey to creating a successful patient loyalty environment. A lack of digital infrastructure especially for those who consume the most of healthcare spending and minority population poses the greatest challenge to creating patient loyalty. In addition, a lack of soft skill for both, patients as well providers, has hampered in creating patient loyalty. Access to broadband (hardware) and education (soft skill) are two pressing needs to create patient loyalty under the telehealth environment. When we overcome these two obstacles, it is entirely possible to create a pathway where commitment to “stay together” (loyalty) is not only possible but also feasible.

References

Anand, P., Coe, E., Cordina, J., and Rivera, S. (2016). Understanding consumer preferences can help capture value in the individual market. *Healthcare Systems and Services Practice*, McKinsey and Company, 1-12.

AP-NORC Center for Public Affairs Research (2022). Americans' Readiness to Emerge from the Pandemic and Changes to Daily Life. *Long-Term Care and Aging*, June. Available at: <https://apnorc.org/projects/americans-readiness-to-emerge-from-the-pandemic-and-changes-to-daily-life/>.

Barnett, KG., Mishuris, RG., Williams, CT., Bragg, A., Semenya, AM., Baldwin, M., Howard, J., Wilson, SA. and Srinivasan, J. (2022). Telehealth's Double-Edged Sword: Bridging or Perpetuating Health Inequities? *Journal of General Internal Medicine*, 37 (11): 2845-2848.

Blizzard, Rick (2005). Dissecting Patient Loyalty. *Gallup News*, March 29.

Carman, K., Lawrence, W., and Siegel, J. (2019). The 'New' Health Care Consumerism. *Health Affairs Forefront*, March 5. Available at: DOI: 10.1377/hblog20190304.69786.

Chang, CW., Tseng, TH., and Woodside, AG.(2013). Configural algorithms of patient satisfaction, participation in diagnostics, and treatment decisions' influences on hospital loyalty. *Journal of Services Marketing*, 27 (2): 91-103. Chatham, Lea (2022). Conversation during October 5th webinar on telehealth on October 5th.

Chatham, Lea (2022). Conversation during October 5th webinar on telehealth on October 5th.

Clinician of the Future Report (2022). Clinician of the Future: a 2022 report. *Elsevier Connect*, March 15. Available at: <https://www.elsevier.com/connect/clinician-of-the-future>.

Cohen, JH., Maleku, A., Pyakurel, S., Suzuki, T., Raut, S., and Ishino, FAM. (2022). Exploring the Digital Divide among the Bhutanese Refugee Community during COVID-19: Engaged Research in Action. *International Journal of Environmental Research Public Health*, 19 (24): 16854, Available at: DOI: 10.3390/ijerph192416854.

Flavelle, Christopher (2015). Next health-care fight? Out-of-pocket costs. *Bloomberg View*, September 23. Available at: <https://www.bloomberg.com/opinion/articles/2015-09-22/next-health-care-fight-out-of-pocket-costs>.

Ghijssen, P., Semeijn, J., and Wang, A. (2009). Modern 3PL Services in China: The role of trust. *Journal of International Business and Economy*, 10 (2): 103-135.

Grossman, LV., Creber, RMM., Benda, NC., Wright, D., Vawdrey, DK., and Ancker, J. (2019). Interventions to increase patient portal use in vulnerable populations: a systematic review. *Journal of the American Medical Informatics Association*, 26 (8-9): 855-870.

Hallowell, Roger (1996). The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study. *International Journal of Service Industry Management*, 7 (4): 27-42.

Healthcare Financial Management Association (2019). Earning patient loyalty in the era of healthcare consumerism. December 10. Available at: <https://www.hfma.org/topics/finance-and-business-strategy/article/earning-patient-loyalty-in-the-era-of-healthcare-consumerism.html>.

Henke, JW., Stallkamp, TT., and Yeniyurt, S. (2014). Lost Supplier Trust, Lost Profits. *Supply Chain Management Review*, Digital Articles: 24-32.

Heskett, JL., Jones TO., and Loveman, GW. (1994). Putting the service-profit chain to work. *Harvard Business Review*, 72:164-170.

Heskett, JL., Jones, TO., Loveman, GW., Sasser, Jr., W., and Schlesinger, LA. (2011). Putting the Service-Profit Chain to Work. *Harvard Business Review*, 1-8.

J.D. Power (2022). U.S. Telehealth Satisfaction Study. Available at: <https://www.jdpower.com/business/healthcare/us-telehealth-satisfaction-study>.

Kim, SH. and Kwon, IW. (2022). Digital Divide in the Rural Healthcare Market in the United States: Health Equity and Inclusiveness. *International Journal of Business and Management*, 17 (7): 1-6. Available at: DOI:10.5539/ijbm.v17n7p1.

Kim, SH. And Kwon, IW. (2020). Population Health from Social Determinants of Health Prospects: A Global Comparison. *Journal of Hospital and Health Care Administration*, 4 (1): 1-9.

Kwon, IW. and Kim, SH. (2021). Digital Divide as a Barrier to Comprehensive Digital Health Transformation. *Academia Letters*, July.

Kwon, IW. and Kim, SH. (2022). A Note on Omnichannel in Healthcare Market: An Exploratory Roadmap. *American Journal of Biomedical Sciences & Research*, 15 (5): 531-536.

Kwon, IW., Kim, SH., and Martin, D. (2021). Integrating Social Determinants of Health to Precision Medicine Through Digital Transformation: An Exploratory Roadmap. *International Journal of Environmental Research and Public Health*, 1-8.

Linzer, Mark, Neprash, Hannh, Brown, Roger, Williams, Eric, Audi, Crystal, Poplau,

Sara, Prasad, Kriti, and Khullar, Dhruv (2021). Where Trust Flourishes: Perceptions of Clinicians Who Trust Their Organizations and Are Trusted by Their Patients. *Annals of Family Medicine*, 19(6):521-526.

Luhn, Bryan (2022). Racial and Ethnic Disparities in Telemedicine Usage Persist During Pandemic. *University of Houston*, April 13.

Moreira, AC. and Silva, PM. (2015). The trust-commitment challenge in service quality-loyalty relationships. *International Journal of Health Care Quality Assurance*, 28 (3): 253-266.

National Digital Inclusion Alliance (2019). Available at: <https://www.digitalinclusion.org/definitions/2019>.

National Hospital Ambulatory Medical Care Survey (2018). Emergency Department Summary Tables. Available at: https://www.cdc.gov/nchs/data/nhamcs/web_tables/2018-ed-web-tables-508.pdf.

Nikooyeh, Pooya (2022). It's digitized or die: McKinsey digital transformation expert. *The Korea Times*, June 21.

Patawayati., Zain, D., Setiawan, M., and Rahayu, M. (2013). Patient satisfaction, trust and commitment: Mediator of service quality and its impact on loyalty (An empirical study in Southeast Sulawesi Public Hospitals). *Journal of Business Management*, 7 (6): 1-14.

Pollack, Stuart (2019). Pay for relationship: A Novel Solution to the Primary Care Crisis. *New England of Medicine*, Catalyst. October 30.

Ramli, AH. and Sjahrudin, H. (2015). Building patient loyalty in healthcare services. *International Review of Management and Business Research*, 4 (2): 391-401.

Rapaport, Lisa (2019). U.S. health care industry spends \$30 billion a year on marketing. *Reuters*, January 8.

Rodriguez, JA., Shachar, C., and Bates, DW. (2022). Digital Inclusion as Health Care- Supporting Health Care Equity with Digital-Infrastructure Initiatives. *New England Journal of Medicine*, 386 (12): 1101-1103.

Sawyer, B. and Claxton, G. (2019). How do health expenditures vary across the population? *Health system Tracker*, Peterson-KFF, January 16.

Sieck, CJ., Sheon, A., Ancker, JM., Castek, J., Callahan, B., and Siefer, A. (2021). Digital inclusion as a social determinant of health. *NPJ Digital Medicine*, 4: 52.

Vaidya, K., Kwon, IW., Hamilton, JH., and Hong, SJ. (2012). Trust and Transaction Cost in Supply Chain Cost Optimization. *Inter-Organizational Information Systems and Business Management*: 70-82.

Walker, Brent (2018). Five ways healthcare organizations can boost patient's loyalty. *Patient Bond*, June 26. Available at: <https://www.patientbond.com/blog/5-ways-healthcare-organizations-can-boost-patient-loyalty>.

Wardlow, L., Roberts, C., and Archbald-Pannone, L. (2022). Perceptions and Uses of Telehealth in the Care of Older Adults. *Telemedicine and e-Health*, Available at: <http://doi.org/10.1089/tmj.2022.0378>: 1-9

World Health Organization (2020). World Health Statistics.

Zahnd, WE., Bell, N., and Larson, AE. (2021). Geographic, racial/ethnic, and socioeconomic inequities in broadband access. *The Journal of Rural Health*: 1-8.

Zhou, WJ., Wan, QQ., Liu, CY., Feng, XL., and Shang, SM. (2017). Determinants of patient loyalty to healthcare providers: An integrative review. *International Journal for Quality in Health Care*, 29 (4): 442–449.

Zocdoc Reports (2022). The Healthcare Experience: 2022. *The Paper Gown*, June 20.