Transforming Community Well-Being Through Patients' Lived Experiences

Abstract

The purpose of this article is to (1) explicate micro-to-meso linkages of well-being, (2) provide a theoretical framework to guide research on connecting patient experiences to community well-being, and (3) offer guidelines to policymakers. We develop a conceptual framework establishing connections between micro and meso levels through the expansion of patients' lived ecosystems. We introduce the concept of patient ecosystem management (PEM), an organizational process that focuses on treating patients differently in terms of assessing, managing, and expanding resources to achieve patient health and well-being goals. This process establishes a foundational perspective that is necessary to connect patients' ecosystems and to facilitate community well-being. Theoretically, this research creates ties between micro-level interactions and a collective measure (community well-being). Policymakers and healthcare professionals should take a PEM perspective, which will require new roles and behaviors, and leverage technology to expand and overlap patients' individual service ecosystems (intra-alignment), thus enlarging community well-being (inter-alignment).

Transforming Community Well-Being Through Patients' Lived Experiences

1. Introduction

The health and well-being of individuals and communities has received intense scrutiny from academics, policymakers, and practitioners (Diener et al., 2009; Goldman et al., 2016; Lee, Kim, & Phillips, 2015b). However, a model that explicitly connects micro- to meso-level health is currently lacking (e.g., Frieden, 2010; Smedley, Stith, & Nelson, 2008), thus creating difficulties in understanding how service encounters may be connected to a larger community (Graffigna et al., 2017). To address this issue, the purpose of this article is threefold: (1) to explicate the micro (patient)-to-meso (community) linkages that allow patients' lived experiences to establish a foundation for improving community well-being, (2) to provide a theoretical framework to guide future research in this area, and (3) to offer guidelines to policymakers aimed at driving positive outcomes for individuals and communities. To anchor this effort in reality, we utilize a true story[1] to illustrate barriers that prevent progress in improving community well-being and to show how barriers to improved health and well-being can be overcome. This patient narrative is delivered in three parts and woven throughout the manuscript. The first part demonstrates some of the issues and obstacles that patients, providers, and caregivers face. The second part illustrates how improved communication and connections to resources can expand individual patient service ecosystems. The third part shows how connections among expanded patient service ecosystems can be aggregated to improve overall community well-being.

> *Justine, a 72-year-old woman living in Chicago, was being helped by home health professionals after having a hip replacement in the hospital. Her plan of healing included at-home nursing care (to manage wound care and pain) and physical therapy (to help restore a range of motion and ambulation). Justine's nurse and physical therapist (PT)*

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[1] The names have been changed to ensure anonymity. This true story comes from the research experience of one of the authors and is used for illustration purposes only.

instructed her to stretch and exercise between visits. One suggestion included a request to walk around the block once a day, a recommendation that both the nurse and PT believed was a relatively easy task. During each visit, her nurse and PT would inquire as to whether or not she had complied. Justine's answer was always the same: "No," with an unwillingness to discuss it further. Justine's nurse and PT communicated frequently about her case, and knew that if she was not compliant with their orders she would not fully recover her range of motion. What was holding her back? Why wouldn't or couldn't she just walk around the block once a day?

This narrative is a powerful example of what occurs regularly in healthcare: a lack of meaningful communication about patient resources and capabilities, possible misalignment of patient and service provider goals, and the challenge of working together to cocreate high levels of value. This case highlights an assumption that Justine was not engaged in her own recovery. However, she was engaged (by talking to her daughter about the walking and her desire to get better), just not in the way healthcare providers often view engagement, as fundamentally equated to compliance (Bynum, 2018; Dellande, Gilly,& Graham, 2004; Schupbach, Chandra, & Huckman, 2016). Clearly, the patient's experience was less than desirable. The providers experienced frustration with the patient, which eroded the quality of the relationship. The nurse and PT, as with many health professionals, were left wondering how they could identify barriers to engagement and involve resources that would support Justine in her healing? Furthermore, as healthcare professionals and organizations are increasingly being incentivized to improve community health and well-being (Hussein & Collins, 2016), an additional question arises: What relationship, if any, exists between helping Justine and improving the health and well-being of the community around her?

The emerging field of patient experience (c.f., McColl-Kennedy et al., 2017a) has begun to explore what constitutes a favorable experience across a variety of health domains and how patient experiences are tied to resource utilization, safety, and health outcomes (Agency for

Healthcare Research and Quality, 2016; LaVela & Gallan, 2014; O'Hara & Lawton, 2016).

Despite a shift in the community health literature from a focus on risk factor epidemiology to an increased consideration of the social determinants of health, many community-based interventions still favor an individual focus (Gray et al., 2006; Krieger, 2001). The emerging research has started to engage with the structural determinants of health, such as health disparities, access to healthcare and issues of power, control, and bias experienced in healthcare encounters (Bailey et al., 2017; Eggleston & Finkelstein, 2014). How these two fields, one micro and one meso, are connected remains an underexplored area that is important to healthcare providers, organizations, employers, and policymakers (Baciu & Sharfstein, 2016; Butler, 2015).

Addressing the social determinants of health is critically important when attempting to improve community well-being, a construct more inclusive than health (Koh, 2016). Although many examples of good practices could be provided, some community-based interventions have limited impact due to various factors, including over-reliance on individual behavior change strategies, limited community participation, the short lifespan of programs, the limited awareness of community assets as resources, and the poor understanding of the levers of change (McLeroy et al., 2003; Merzel & D'Afflitti, 2003). Our stance is that those who endeavor to improve community health and well-being need to consider how to harness the power of individual relationships (micro-level interactions; bottom up/patient driven) to connect people with similar issues and concerns, in an effort to impact collective measures (top down/policy driven).

The central purpose of this research is to utilize theory to develop a novel conceptual model that forges a new understanding of how micro-level interactions (patient-provider relationships) may lead to meso-level effects (community well-being). By doing so, we contribute to discussions in the transformative consumer (and service) research communities. We

investigate the following research questions: (1) What are the underlying configurations/mechanisms linking patient lived ecosystems with community well-being? and (2) What are the implications for health policymakers and practitioners that arise from a realization that individual patient experiences can be leveraged to improve a community's well-being?

We view this research as providing three major contributions. First, we reconcile and integrate the bodies of literature on customer experience and patient experience to better understand the drivers of person-centered care. Second, we advance the view that traditional patient-centered care is insufficient for fully driving community well-being; new roles, skills, capabilities, and technologies will be needed to deeply understand and impact a patient's reality such that it can influence the well-being of a community. Indeed, a patient ecosystem management (PEM) perspective, an organizational process that focuses on treating patients differently in terms of assessing, managing, and expanding resources to achieve patient health and well-being goals. This process offers a foundational perspective that is necessary to connect patients' ecosystems and facilitate community well-being. A PEM perspective aligns with larger goals and policies, demonstrated by the World Health Organization's definition of health as "a state of complete physical, social, and mental well-being and not merely the absence of disease or infirmity" (World Health Organization, 2017).

Finally, we generate a conceptual model that captures how individual patients can be served to impact community well-being. We provide real-life examples to further illustrate how the elements of the model play out in healthcare. Patient relationships can be leveraged to expand a patient's service ecosystem with additional resources that then connect patients with one another (intra-alignment); these connections then fuel community well-being (inter-alignment).

2. Conceptual Foundations

In the second part of Justine's story, we highlight the criticality of identifying obstacles that hinder progress and argue that solutions need to be codesigned by everyone involved.

Justine's nurse and PT came up with a plan: they would co-visit with Justine and her daughter to determine what issues exist that currently inhibit her from walking around the block once a day. During the meeting, the nurse and PT asked pointed questions in a caring manner. They followed up with additional questions, and told Justine and her daughter that they were there to help. Finally, Justine opened up. She told them that her own daughter had told her not to walk around the block. Why? The sidewalks were uneven, presenting the risk of a fall. Moreover, occasionally Justine and her daughter heard gun shots in the neighborhood, and felt that going out without supervision would be dangerous. Finally, shockingly, the nurse and PT had heard the truth from the patient's perspective. Their recommendation never had a chance of compliance. There were factors beyond the patient's motivation and ability that dampened Justine's desire to walk around the block. The next challenge was to determine the best course of action for Justine, and then to assemble the resources necessary to develop a new, co-designed plan of action.

What we learn from Justine's perspective is eye-opening and in contrast to the view that she was a noncompliant patient. The reality for Justine was not initially in the consideration set for the nurse and PT. They had not realized that Justine's own family could be giving her contradictory advice. Justine was in fact quite motivated to regain her ability to walk. She desired to get back to shopping and spending time with her family and friends. What existed was a lack of proper communication. The healthcare providers were unable to see healing as a process experienced by the patient embedded within a larger system. What was needed was an injection of additional resources into Justine's service ecosystem, the domain where Justine experiences life.

Conceptually, the chain of connecting micro-level interactions to macro-level policy is based on the following logic: Patient experiences significantly impact relationships that patients have with their providers and health systems (Hoff & Collinson, 2017). In turn, relationships at

the micro level largely determine the types of interventions and policies that providers and patients may design to address health and well-being goals and the quantity of resources that may be brought to bear to support future plans. We advance that an excellent patient experience alone is insufficient to impact community well-being. By itself, it does not transform the health and well-being of the patient, let alone connect the patient to a community. Additional efforts, developed and exemplified here, are required to connect patient experience to community well-being. This logic can be seen in Justine's case, and each of these links in the chain are explicated in the next section. Thereafter, the concepts will be brought together into a framework that ultimately impacts community well-being.

2.1 Customer/Patient Journeys and Experiences

Among both health and marketing scholars is the emerging recognition that a holistic understanding of the experiences of individuals is critical to enhancing service offerings. This is exemplified by Lemon and Verhoef (2016), who argue that customer experiences are complex and dynamic and transcend the narrow notion of direct encounters with service providers to include a variety of touchpoints that shape customer experiences and journeys. While the patient experience community has debated definitions (LaVela & Gallan, 2014), Wolf et al. (2014) highlight the need for healthcare practitioners and policymakers to recognize that patient experience goes well beyond satisfaction and engagement involving several individuals, as its nature is fundamentally broad and integrative (Sabadosa & Batalden, 2014). The necessity to understand patient experience is critical, as it is increasingly considered a valid indicator of healthcare quality and performance (Doyle, Lennox, & Bell, 2013). A patient experience is shaped by all the factors that contribute to care, including expectations, "hotel" factors (e.g.,

comfort, hospitality), interpersonal factors, and clinical outcomes (Lee et al., 2013). What is lacking in the definitions is the notion that patient experiences are embedded within service ecosystems (Frow, McColl-Kennedy, & Payne, 2016). Patient narratives often show that patient experience is intrinsically related to community structures (education, transportation, and traffic), environmental factors (pollution and green space), economic factors (income, social class, and employment), and social factors (community safety, cohesion, and trust) (Corbin & Strauss, 1988; Evans & Stoddart, 1994; Magnan et al., 2012).

It is widely recognized that patients cocreate their own experiences (McColl-Kennedy et al., 2016; Vargo & Lusch, 2004, 2008), a concept also recognized in the patient activation literature (Hibbard & Greene, 2013). Since a patient cocreates their experience through a lived experience (McColl-Kennedy et al., 2012), healthcare experiences also involve self-generated activities, such as positive thinking, reframing, and sense-making (Sweeney, Danaher, & McColl-Kennedy, 2015). McColl-Kennedy et al. (2017a), drawing on the work on customer experiences, highlight the notion that patient experience is a multidimensional construct combining physiological and behavioral responses that requires an understanding of the social, emotional, cognitive, and sensorial responses of a patient. The services marketing literature has defined customer experience as a multidimensional construct including the customer's cognitive, emotional, behavioral, sensorial, and social responses to a firm's offerings during the customer's entire purchase journey (Bolton et al., 2018; Lemon & Verhoef, 2016), which we adopt and adapt for this research.

A patient experience is holistic in nature and should be understood as unfolding over time through what is commonly called a patient journey (Tax, McCutcheon, & Wilkinson, 2013). Given that customers make sense of their experiences in a nonlinear iterative fashion and taking

into account other related services, past, future, or even imagined experiences (Helkkula, Kelleher, & Pihlström, 2012; Holbrook, 2000), patient experience is not easily managed. Patients may have multiple touchpoints within a typical healthcare journey, providing many opportunities to create exceptional experiences and meaningful relationships (McColl-Kennedy et al., 2017a).

Taking a systems approach, which includes continuity of care based on relationships, information, and connected management strategies, is critical. Physicians and other providers can network and learn about a patient's experience. A patient may draw on a network of resources that extend well beyond the focal firm to include interactions with representatives from other firms (Arnould, Price, & Malshe, 2006) and with private sources, such as peers, family, friends, and even other patients (Black & Gallan, 2015; McColl-Kennedy et al., 2017b; McColl-Kennedy et al., 2012). Thus, touchpoints within a patient journey are distinct opportunities for healthcare providers to partner more deeply with patients to better understand any issues that inhibit progress toward goals.

INSERT TABLE 1 ABOUT HERE

2.2 Relationships in Healthcare

At the heart of healthcare are interactions among physicians, nurses, patients, families, and others (Black & Gallan, 2015; Hoff, 2017). These interactions provide the basis upon which trusting, healthy relationships may emerge (Beach, Inui, & Network, 2006). Collaborative partnerships, which represent higher-order connections among individuals and organizations across sectors, represent a potentially powerful lever for improving community well-being (Goldberg, Feng, & Kuzel, 2016; Roussos & Fawcett, 2000). Traditionally, medicine has been

disease focused rather than patient or person focused (Green, Carrillo, & Betancourt, 2002). In a review of 10 different healthcare models, McColl-Kennedy et al. (2017b) state that a traditional medical model focuses on a disease and not a person, and the patient is viewed essentially as a passive recipient of care. More recent approaches, such as patient-centered care, have focused on coordinating and integrating care, communication, education, emotional support, and physical comfort (Robbins, 2017).

Healthcare relationships among providers, patients, caregivers, and others need to be transformed to have the potential to impact community well-being (Hoff & Collinson, 2017). Healthy relationships in general and productive healthcare relationships are two-way, reciprocal, dialogue based, passionate and compassionate, trusting, connected, and open (Thorne & Robinson, 1988). Optimal clinical relationships may be defined as mutualistic (Black & Gallan, 2015). Shared decision making is a start (Elwyn et al., 2012) and illustrates that more communication is not the key; *better* communication is. This has been a significant challenge for the healthcare industry, and it is not easily addressed, particularly given the calls for increased productivity and efficiency (Hoff, 2017). Personalized strategies need to be developed to affect patients deeply enough to motivate behavioral change and connect them with supportive communities (Dale, Mate, & Compton-Phillips, 2017). Our assertion is that healthcare organizations need to develop the ability to be managers of resources that can be brought to bear to expand patient capabilities.

This shift toward community assets, including relationships, networks, structures, and the engagement of individuals in value cocreation, reflects increased attention to the interactive relationship among individuals, communities, and the wider social environment (Graffigna et al., 2017; Merzel & D'Afflitti, 2003). Consistent with this view, relationships are considered key

resources for health and well-being, and particular attention has been focused on social capital

and the nature of relationships (support, bonding, and cohesiveness) (McCrea, Walton, &

Leonard, 2014; Poortinga, 2006). For example, participatory action research has shown that

developing relationships with actors who are well embedded in community networks is central to

building capacity for community health programs (Bryant et al., 1998; Ozanne & Anderson,

2010). This is illustrated clearly in our example. Once Justine, her caregivers, and home health

providers established a trusting relationship, they were able to engage more fully in codesigning

a plan of action that would work for both Justine and her daughter. The next challenge was to

identify resources that would enable Justine to develop a plan of action to get walking again.

2.3 Individual Service Ecosystems and Communities

To better understand the embedded nature of patient experience, we draw on the concept

of a patient ecosystem, which is comprised of actors and their respective resources, interlinked

through value propositions in a network of relationships (Frow et al., 2014; Frow et al., 2016).

Vargo and Lusch (2016, p. 2958) define a service ecosystem as "a relatively self-contained, self-

adjusting system of resource-integrating actors connected by shared institutional arrangements

and mutual value creation through service exchange." A service ecosystem is dynamic and

evolving (Vargo & Lusch, 2011), as actors employ and share resources to correct resource

deficiencies and improve resource density (Normann, 2001). These types of resource exchanges

have been categorized as practices that are fundamental in shaping the ecosystem (Frow et al.,

2016; Gherardi & Nicolini, 2002) and that help explain its dynamic nature. For instance,

practices such as linking, bridging, and bonding aimed at building social capital facilitate

growing the ecosystem of patients (Frow et al., 2016). Despite an emphasis on patient

involvement in the development of healthcare services, most interventions, including self-management education programs, are initiated and implemented by healthcare professionals with limited or no involvement with lay participants (e.g., Ong et al., 2014).

In service research, the adoption of an ecosystem concept has been instrumental in explaining the role of interactions between multiple actors that influence the cocreation of value in complex services. A strong focus is on the role of actors and resources—including actors as resources—within processes that are critical for the emergence of value over time (Frow et al., 2016). For example, hospitals increasingly collaborate with community organizations, consistent with an inclusive view of external actors, practices, and processes that contribute to a service's value proposition. An example of this is the "hotspot" strategies that involve hospital collaborations with neighborhood organizations for more efficient regional healthcare systems (Baciu & Sharfstein, 2016; Butler, 2015). These examples of good practice stand out but have not been widely adopted. It is suggested that while the current ecosystem concept enables managers to see complex service organizations in a wider social context, it is not enough to galvanize the mainstream to invest resources widely. Critics argue that a problem with current managerial framing of a service ecosystem is that it leads to a practical imbalance in how value is realized (Verleye et al., 2017) because adjacent ecosystems frequently compete for resources to ensure outcomes, and this may also result in value co-destruction for beneficiaries.

Although a normative view of service-dominant logic (Vargo & Lusch, 2008, 2016) is that interactions should be designed to ensure "balanced centricity" (Gummesson, 2007, 2008) and mutual benefit, competition for value often occurs in practice that impedes collaboration. Efforts to collaborate between adjacent ecosystems are less effective when ecosystem actors cannot identify the appropriate focal beneficiary from collaborative interventions. Identified by

Butler (2015) as the "wrong pockets" issue, this describes the perceived challenge to the sustainability of a healthcare service ecosystem if its resources are diverted to adjacent ecosystems. Justine's case illustrates that patients face barriers to cocreate well-being, which is acknowledged by a need for research into how to improve community structures that can support these processes (Ozanne & Anderson, 2010).

Counterintuitively, we suggest that reluctance to invest resources in individual patient ecosystems provides an instructive example of how adjacent ecosystems influence the well-being of other ecosystems. By the same token that industrial farming's effluents enter ground water and run off into the sea and coral reefs are decimated, the difficulties patients experience in their ecosystems affect the productivity of healthcare service ecosystems. Acknowledging this relationship of influence among adjacent ecosystems is a critical first step toward managing culture change that potentially transforms patient ecosystems for community well-being. It is in the interest of the healthcare service ecosystem to consider the well-being of adjacent patient and community ecosystems. We view the patient and the community as different layers nested within a service ecosystem. This allows us to conceptualize their interdependencies and adaptations. By acknowledging the plurality of coexisting ecosystems, we advance a realistic model of culture change for healthcare by improving *both* patient experience and community well-being.

The extant literature distinctly lacks attention on the specific types of networks that may transform healthcare, the nature of relationships supporting care and well-being, and social networks that tend to be narrowly defined in health studies (Vassilev et al., 2011). The community health literature indicates a limited perspective on patient experience and cocreation, especially in practice (Fotaki, 2011). An emerging body of literature on patient experience indicates that health professionals fail to engage with the life worlds of patients and that new

models are needed to connect self-management to the clinical settings and to facilitate access to the ecosystem resources (Graffigna et al., 2017; Ong et al., 2014).

A patient's ecosystem is important to improving the patient experience and creating well-being. For example, ecosystem-focused therapy (EFT) in treating post-stroke depression aims to develop a collaborative approach to motivate the patient and assist the patient and family in developing a rehabilitation plan that includes drawing on community resources (e.g., support groups and recreational services for physically challenged individuals) (Avari & Alexopoulos, 2015). The importance of supporting patients by expanding their ecosystem includes the involvement of family and friends, other patients, access to care and services, and transition and continuity (Gerteis et al., 1993; Jenkinson et al., 2002; Rathert, Brandt, & Williams, 2012). Many barriers to an ecosystem approach exist, including a fragmented healthcare system (Mair & May, 2014; Patel & Rushefsky, 2014; Yip & Hsiao, 2014).

The extent to which patients are actively involved in developing and growing their ecosystem varies greatly and depends on a multitude of factors, including personal characteristics (McColl-Kennedy et al., 2012). For instance, for patients incapable or limited in actively engaging in their self-care, family members or friends often take on a more active role in the care of their loved ones (Norton, 2000). Our definition of a service ecosystem, however, also implies that services are exchanged, and thus services flow back toward other members at the micro or meso level. This can include patients offering emotional assistance to each other in support groups or family members offering help at the local community level, which in turn have the potential to increase community well-being.

2.4 Community Well-Being

"A community is a group of people who have common characteristics or interests. Communities can be defined by geographic location, race, ethnicity, age, occupation, a shared interest of affinity (such as religion or faith) or other common bonds such as health need or disadvantage" (National Institute for Health and Care Excellence (NICE), 2017, p. 11). A patient may be a member of multiple communities or none at all (social isolation). Thus, resources derived from various communities may be limited or quite extensive. Community (or citizen) participation "refers to the social process of taking part (voluntarily) in either formal or informal activities, programs and/or discussions to bring about a planned change or improvement in community life, services and/or resources" (Bracht & Tsouros, 1990, p. 201). Patients who are motivated to change, such as Justine, may want to participate in a community, but may not have the ability to connect to one.

Community well-being has been conceptualized as "the combination of social, economic, environmental, cultural, and political conditions identified by individuals and their communities as essential for them to flourish and fulfil their potential" (Wiseman & Brasher, 2008, p. 358). It is a state of being with others and the natural environment that arises where human needs are met, where individuals and groups act meaningfully to pursue their goals, and where they are satisfied with their way of life (Armitage et al., 2012; Brown & Westaway, 2011). This conceptualization recognizes well-being as a multidimensional construct including a subjective dimension, a relational dimension, and a material dimension (Armitage et al., 2012). The link between individual experience and community is central to contemporary conceptualizations of well-being, and there is recognition that individual and collective levels are inherently interconnected. Subjective well-being at the individual level has been defined as a broad category of phenomena that includes people's emotional responses, domain satisfactions (e.g.,

health, work, and social relationships), and global judgments of life satisfaction (Diener & Ryan, 2009), which correlate with many objective measures (Lee et al., 2013). Scholarship built upon Aristotle's eudaimonic tradition holds that well-being goes beyond evaluations (e.g., life satisfaction) and experiences (e.g., happiness yesterday) and is associated with the ability of individuals to flourish, find meaning, and fulfill their potential. Crucially, it recognizes that these aspects of well-being are affected by collective social relationships (Dolan, Layard, & Metcalfe, 2011; Sen, 1985; Wiseman & Brasher, 2008).

Well-being in public policy and more recently in health has drawn increasing interest (Armitage et al., 2012; Diener et al., 2009; Wiseman & Brasher, 2008). The Ottawa Charter for Health emphasizes a strong interconnectedness between individual health and the environment and advocates for a broader perspective where health promotion extends healthy lifestyles to well-being (World Health Organization, 2017). A shift toward community well-being reflects the need for new approaches that accommodate an interactive relationship between individual health, communities, and the wider social environment (Goodman, Bunnell, & Posner, 2014).

Measuring and assessing community well-being has also attracted increasing interest (McCrea et al., 2014; Mills & Harvey, 2003). Emerging work advocates assessing health outcomes, not only in terms of the management and treatment of isolated conditions but also in relation to a range of other dimensions of community health and well-being, such as population components, family, lifestyle, personal relationships, and access to support structures (Mills & Harvey, 2003). Others propose the use of subjective well-being to measure the quality of healthcare (Lee et al., 2013). A focus on well-being allows for generalizability across conditions and patients, and it places health conditions in context and captures the "epidemiology of experience" (Lee et al., 2013).

Scholars have not only defined community well-being as *a state* but also as *a process* of development. In Lee, Kim, and Phillips's (2015a) recent literature review, community well-being is recognized as a dynamic concept that takes an asset approach and connects to the concept of flourishing and community development. This perspective encourages a holistic view of the context in tandem with relational and collective processes that lead to improvements within communities (Armitage et al., 2012). The multiple factors that community well-being perspectives seek to understand include community structures, services, infrastructure (e.g., neighborhood, transportation and traffic, and community services), environmental factors (e.g., climate, parks, and environmental quality), economic factors (e.g., income sufficiency and employment and business opportunities), social factors (e.g., personal safety, community spirit, cohesion, participation, social interaction, and family and home), health (e.g., health services and healthy, safe, and inclusive communities), political factors (e.g., decision making and citizen voice, political leadership, and governance), and attachment and a sense of belonging (e.g., place and community attachment) (Forjaz et al., 2011; McCrea et al., 2014; Morton & Edwards, 2012; Sirgy et al., 2010).

The population/community health community has developed robust literature evaluating the impact of various interventions. We respect these efforts and propose a model that attempts to find synergy with this community. While community health interventions (e.g., chronic illness management; diabetes education; smoking cessation efforts; obesity reduction; and drug, substance, and alcohol dependence treatment programs) are popular, they are effective to varying degrees (e.g., Fry et al., 2018; Lobstein et al., 2015). A factor that may boost the effectiveness of community health programs is to identify and engage individual patients in ways that connect them to community well-being. In one highly utilized framework for community health, well-

being is a central construct (Evans & Stoddart, 1994). The model "introduces the category of 'well-being,'" or the sense of life satisfaction of the individual, which "should be (we postulate) the ultimate objective of health policy." The ultimate test of such policy is "whether or not it adds to the well-being of the population served" (Evans & Stoddart 1994, p. 47). The authors continue, "In this extended framework, the relationship between healthcare and the health of a population becomes even more complex. The sense of self-esteem, coping ability, powerfulness, may conceivably be either reinforced or undermined by healthcare interventions" (Evans & Stoddart, 1994, p. 52).

We propose rethinking health programs to incorporate a "subjective view" that accounts for the interactions and the relationships of individuals/patients at different levels of the ecosystem to allow more comprehensive and tailored efforts to improve the cultural, social, and environmental realities of the individual (Bauer et al., 2014; McLeroy et al., 2003; Ong et al., 2014).

3. Development of Our Conceptual Framework

In the third and final part of Justine's story, we see that by expanding and connecting personal service ecosystems, improved community well-being can result. By using this patient narrative, we attempt to realistically represent how our conceptual framework can come to life.

> *Justine's nurse and PT reached out to a social worker to help co-develop a plan of action and harness the resources essential to carry it out. With the cooperation of Justine and her family, the following plan was executed: Three times a week, a van from a local church would pick up Justine, as well as other seniors, and take them to the track at the local high school. There, they can walk around a flat track, with supervision, and socialize with one another. The van would bring Justine home, and see her into her home. Justine's daughter was delighted. Not only did it make her feel that Justine would be safer, but it would also prevent her from having to leave work as frequently to help her mother with physical therapy. It also allowed her to spend more enjoyable time with her*

children and her mother. After a few weeks, Justine was thriving. Her gait and flexibility was much improved, delighting her PT. Her wound was healed, satisfying her nurse, and her daughter saw an improved quality of life for her mother. Most importantly, Justine felt connected to a community in ways that she had not in many years. She was now capable of doing many of the things she had done prior to the surgery; additionally, she had made a new circle of friends that continued even past her rehabilitation and discharge from home health.

The conclusion of this narrative is testament to the ability of all involved to have a say regarding Justine's plan of action. Once her nurse and PT identified the issues that deterred Justine from walking around the block, they were able to co-develop a plan of action that alleviated the concerns of all involved. Moreover, it facilitated the goals of all involved, particularly Justine's. In this case, not only did the solution improve Justine's experience, it also had profound effects on a variety of constituents and the community. This example shows how improved patient experiences, including a trusting communicative relationship, can lead to expansion of personal service ecosystems, which can overlap with other members of the community for beneficial outcomes.

Each individual's ecosystem was expanded with additional resources, allowing them to overlap; cocreated value emerges in different forms. The plan, and its successful execution, had a significant and positive impact on Justine's family, allowing everyone to increase their work productivity and family time. Those who walked with Justine around the track also experienced positive effects, expanding the social network in which they all flourished. Furthermore, the church community felt fulfilled as a result of helping those who needed it most in their community. Finally, the nurse, the PT, and the social worker all derived a heightened level of job satisfaction, having experienced success despite some challenges. Justine's case shows how an improved individual patient experience can have significant effects on community well-being through the expansion and connection of individual service ecosystems.

We identify this ability to identify opportunities, muster resources, and inject them into Justine's service ecosystem as PEM. We define this term as an organizational process, enacted by providers and staff, that focuses on treating different patients individually in terms of assessing, managing, and expanding the available resources to achieve patient health and well-being goals. This skill is not typically embedded within healthcare organizations and represents a new capability that may involve establishing and acquiring new roles, skills, personnel, and technology (e.g., Calma, 2017; Redford, 2018).

In Table 2, we highlight the strategies and mechanisms necessary to (a) help patients develop and expand their individual ecosystems (intra-alignment) and (b) connect individual patient ecosystems in such a way as to facilitate the expansion of community well-being (inter-alignment). We focus on the cognitive, emotional, and social aspects emphasized in Lemon and Verhoef's (2016) conceptualization of customer experience in explaining how connections among patients can enhance community well-being. We suggest that community well-being can be heightened through two strategies at the level of patient ecosystems. First, expanding patient ecosystems refers to the development of new linkages among different factors within a single patient ecosystem (i.e., intra-alignment). Connecting patient ecosystems refers to linkages between factors across patient ecosystems (i.e., inter-alignment). Those strategies offer ways of reconciling the overriding interest in collective well-being that institutionally overlook the importance of individual (subjective) patient experiences.

INSERT TABLE 2 ABOUT HERE.

3.1 Expanding Individual Ecosystems (Intra-Alignment)

We propose the concept of PEM to denote how patient ecosystems enlarge in scope by creating new interactions among actors. For instance, this means aligning expectations, interpersonal factors, and clinical outcomes in patients' ecosystems (Lee et al., 2013). This we term *intra-alignment*, representing the resources that coexist within an individual's service ecosystem that need to be coordinated in ways that facilitate her goals. In the case of Justine, transportation, an appropriate physical environment in which to walk, and social connections and support, all synergized to expand her personal ecosystem. This was done only because her experience, based on a trusting relationship with her healthcare providers, allowed them to engage in PEM. Justine's service ecosystem can be represented by a balloon that can expand to accommodate additional resources, such as transportation services, coaching and counseling, and emotional support. The ecosystem is filled by additional resources as a result of the relationships she has with her healthcare providers. The foundation upon which this is built is an experience that contained a touchpoint when Justine's healthcare providers paused to engage her and her daughter in meaningful discussion about her sense of well-being, health, and perceived obstacles to achieve her stated goals.

Technological empowerment draws on using digital possibilities for enhancing patient experiences (Bolton et al., 2018). As such, it expands patient ecosystems. Consider, for instance, the example of using telemedicine to address an opioid epidemic in rural Maryland, USA (Felix, 2017). Infrastructural embeddedness refers to using existing infrastructures to enhance patient ecosystems. Illustrations of this include addressing housing insecurities (Butcher, 2017) and reducing gun violence (Van Dyke, 2017), an issue that would help Justine. Both of these mechanisms enable healthcare providers and systems to expand their patients' service

ecosystems. Examples that are illustrative of the concepts discussed here can be seen in more detail in Table 3.

INSERT TABLE 3 ABOUT HERE

Transposed onto patient experiences, we can start to discern how expanding patient ecosystems (discussed in the preceding section) enables connecting patient ecosystems. Together, the expansion and connection of patient ecosystems translate into enhanced community well-being.

3.2 Connecting Individual Ecosystems into a Larger Ecosystem that Improves Community Well-Being (Inter-Alignment)

Importantly, as discussed earlier, community well-being is a dynamic and interactive process (Merzel & D'Afflitti, 2003) that builds on relationships within a community (McCrea et al., 2014; Poortinga, 2006). Therefore, when patient ecosystems expand, they provide greater touchpoints among individual patient experiences. This greater connectivity, in turn, allows for developing these critical relationships that underlie community well-being.

In this section, we outline three mechanisms that exemplify how connecting patient ecosystems affect community well-being: (1) cognitive, (2) emotional, and (3) social (See Table 2). These mechanisms are not meant to be exhaustive, but rather reflect the convergence in the bodies of literature on customer experience and patient experience around the multidimensionality of the experience construct. We chose these three mechanisms to move the discussion to a conceptually more abstract and generalizable level, going beyond the context to

build theory. When individual ecosystems are interconnected and aligned, the overlaps are what fuels community well-being. We call this *inter-alignment*.

Figure 1 represents a circle of patients who are engaged in a single community. This represents the people with whom Justine walked. Although the overlaps between people are dyadic in nature, they are interconnected across and among people in reality. Although this figure represents a single community, patients may be members of multiple, overlapping communities. Nonetheless, our figure is an attempt to begin to conceptually model connections among patient experiences, clinical relationships, individual ecosystems, and community well-being. Each patient's ecosystem is represented by a different balloon, filled with various resources recommended through relationships with healthcare providers (intra-alignment), shown in the inner ring of the figure. When ecosystems overlap, new energy is created that fuels the expansion of community well-being (green section), which we term inter-alignment. In Figure 1, this is represented by the white section among the overlaps that enhance community well-being.

INSERT FIGURE 1 ABOUT HERE

We conceptualize community well-being as a nexus of expanded, interconnected patient ecosystems. This conceptualization allows unpacking the concept of community well-being by breaking it down to manageable factors. Those factors can be diverse, and prior research has outlined environmental, health, and economic factors (Forjaz et al., 2011; McCrea et al., 2014; Morton & Edwards, 2012; Sirgy et al., 2010). Patient social responses may be dependent on the level of interactivity, interaction style, and social norms; patient cognitive responses are also

more complex, involving instances of competence building, the constant assessment of risk in decision making, the perception of empowerment, and patient agency in the treatment. Emotional responses may involve a patient's overall emotional health, the level of engagement with the treatment, and emotional ties with healthcare providers (Berry et al., 2017).

While the expansion of patient ecosystems results from deepened relationships between healthcare providers and patients, connecting patient ecosystems are shaped by the enabled interactions of patients with their wider social environment. These enabled wider interactions (i.e., connections) can bear out greater community well-being by enhancing learning capabilities and outcomes around health and well-being. One cognitive mechanism explored in the literature is health literacy and knowledge. We know that health literacy is a critical need in creating and sustaining healthy and "happy" communities. For example, older community-dwelling individuals report greater happiness when also feeling more capable of dealing with medical forms (Angner et al., 2009). Furthermore, health literacy effects are particularly salient for lower-income patients and ethnic minorities for improving medication adherence (Heath, 2017; Miller, 2016), which is a central factor in improving population health according to the World Health Organization (Sabaté, 2003).

Community well-being is particularly enhanced when linkages among patient ecosystems allow the development of support and empathy, as social networks allow for positive experiences and attitudes to spread among their members (e.g., Fowler & Christakis, 2008). For example, Anderson et al. (2016) illustrate how online peer forums can create a supportive and empathetic community that allows patients to shoulder the burden of increasing responsibilization in the healthcare domain (c.f., Dent, 2006). Linking patient ecosystems and allowing greater social support can also help overcome existing negative social dynamics. For example, for

socioeconomically disadvantaged patients, drugs often play a role in family settings that elicit problems in managing health regimens (Spanjol et al., 2015). Connecting patient ecosystems can lead to individual patients gaining access to additional support in formal (e.g., counseling) or informal (e.g., friendships) ways. In turn, peer support has been identified as a potentially powerful lever in enhancing both informational and psychological outcomes (e.g., in diabetic patients; Dale, Williams, & Bowyer, 2012). One particular form that demonstrates the power of expanding and connecting patient ecosystems is the shared medical appointment, where a group of patients participates in structured interaction with one or more healthcare providers. A systematic review (Edelman et al., 2012) indicates that both medical and quality of life outcomes are generally improved for patients who participate in shared medical appointments.

By connecting patient ecosystems, social linkages are enabled to improve community well-being. The Robert Wood Johnson Foundation's "Healthy Communities" initiative highlights the social community well-being mechanism by profiling towns that are making these connections happen (Robert Wood Johnson Foundation, 2018). Since social relationships can enhance health through behavioral, psychosocial, and physiological explanations, connecting ecosystems are likely to be effective translators of community well-being (Umberson & Karas Montez, 2010). Social ties may be unique in their ability to affect a wide range of health outcomes and to influence health (thus cumulative health outcomes) throughout an entire life course. Moreover, interventions and policies that strengthen and support individuals' social ties have the potential to enhance the health of others connected to those individuals. For example, reducing strain and improving health habits of a partnered person may benefit the health of both people, as well as any children for whom they care.

4. Discussion

The central purpose of this research was to connect the bodies of literatures on customer experience and patient experience (micro level) with community well-being concepts (meso level). To the best of our knowledge, this is the first paper to do so. We argue that individual service ecosystems are enhanced through intra-alignment efforts. Each individual service ecosystem connects with other ecosystems through the processes of inter-alignment, which fuels community well-being.

4.1 Theoretical Contributions

Our article contributes to marketing, services, and TSR literature in three important ways. First, we reconciled and integrated the bodies of literature on customer experience and patient experience to better understand the drivers of patient-centered care. We proposed that the intersection of these studies focused on a multidimensional view of patient experience, consistent with Lemon and Verhoef (2016). Additionally, we outlined the gaps in understanding between the marketing and patient experience communities that can be reconciled through collaboration.

Second, we advanced the realization that traditional patient-centered care is insufficient to fully drive community well-being, arguing that new roles, skills, capabilities, and technologies will most likely be needed to more fully understand a patient's reality and to foster actions that improve not only the patient's reality but also the well-being of a community. We provide illustrative transformative examples in Table 3. Further, we argue that a PEM perspective is necessary to expand patient resources, connect patient ecosystems with those of others, and facilitate community well-being. Our research establishes a bridge between providing an exceptional patient experience and improving community well-being. Prior research has shown

how community well-being can be improved by interventions at the community level. We are the first to show how the effective management of exceptional patient experiences adds to the effectiveness of community level interventions by expanding patients' ecosystems and connecting individuals to one another. Theoretically, this research creates ties between micro-level interactions and a collective measure (community well-being).

Finally, we generate a conceptual model that captures how individual patients can be served in a way that impacts community well-being. As a result, this research advances theories of value cocreation, well-being, and service ecosystems. Managerially, this research provides managers, clinicians, and policymakers with directions on how to improve community well-being by expanding and connecting patients' personal ecosystems.

4.2 Practical Implications

Our research provides practical implications for healthcare organizations and policymakers. These implications are twofold. First, we call attention to the reciprocal connection between patient lived experiences and community well-being and establish a manageable, structured link between a patient ecosystem and community well-being. Second, we offer a framework that connects and expands patient ecosystems, aimed to achieve reciprocal well-being improvement on the individual and community levels. The immediate practical implications of this research are for meso levels (this level incorporates hospitals, health agencies, and community service centers) but are also relevant for policymakers and healthcare organizations (Lewis, 2017).

We challenge healthcare providers to engage in PEM, a concept that involves more than patient-centered care to engage a wider variety of resources that support the patient's health and

well-being goals. Our emphasis on improving community well-being should help healthcare executives link their work to this measure through structured, manageable components. First, a patient-centered model of care, accepted as a policy imperative at the governmental and organizational levels in the United States, the UK, and Western Europe (Barry & Edgman-Levitan, 2012; Davis, Schoenbaum, & Audet, 2005), could be expanded further, beyond the patient and family, to incorporate an ecosystem view, encompassing nonlinear, continuous interactions among patients and families, healthcare providers, the community, peers, and technology providers. Second, healthcare executives should consider employing and involving non-healthcare stakeholders and support services within communities to help expand patient ecosystems to draw on more resources to improve condition management (i.e., municipalities, transportation services, volunteer centers, and food organizations) (e.g., Seattle Children's Hospital, 2017). Third, training healthcare professionals to work as interdisciplinary teams to understand, assess, and make use of patient ecosystems could improve patients' lived experiences in hospitals, at home, and at work. Such an approach has already been applied in the United States on a local, condition-specific level. For example, Oak Forest Health Center in suburban Chicago provides diabetes treatment that encompasses the collaboration of teams consisting of medical assistants, clinicians, lab personnel, care management practitioners, and educators (Henry, 2017).

For clinicians and other healthcare practitioners, we offer a set of practical guidelines centered on a structured framework of strategies (intra-alignment and inter-alignment) and mechanisms (technological, infrastructural, cognitive, emotional, and social) used to make connections within existing ecosystems of individual patients and expand those ecosystems to provide more patient-relevant care within the community-enabled setting set out in Table 2. We

term this approach as PEM, a concept albeit challenging to implement, given the fragmented

nature of most healthcare systems. As a first step in utilizing this framework, it is critical to

foster a patient-engagement strategy. Healthcare practitioners can rethink traditional approaches

used to treat frequent medical conditions. Examples include incorporating video consultations

with physicians (or e-visits) into a standard sequence of in-person clinic appointments for

diabetes patients; inviting engaged caregivers to share experiences with other patients and

caregivers in the same community; designing activities where multiple patients are invited to

participate simultaneously, such as midwife-facilitated pregnancy patient group meets; and

utilizing technology and distribution networks to enhance access and adherence to medications

(Kopf, 2018). Our framework requires a culturally competent model of care (Betancourt, 2004)

that considers the structural factors affecting the patient's experience. A PEM approach requires

health staff sensitivity training to assess a patient's experience and complete knowledge of

community resources. Consistent with this, the service logic literature highlights the idea that

learning goes beyond gathering, using, and analyzing information to include the ability of

organizations to "sense" ecosystem actors and identify ways to develop new knowledge (Lusch,

Vargo, & Tanniru, 2010).

Second, to engage patients, it is important to measure patient and caregiver levels of

engagement and to give them a voice. Third, clinicians need to be engaged too. This applies to

all parties, and the roles are likely to evolve. Additional roles may be necessary as well. An

example of this is the evolution of the function of a community health worker (CHW) to a

polyvalent CHW, defined as one who addresses "the needs of individuals who face barriers to

healthcare access due to cultural practices, race, ethnicity, language, literacy, geography, income,

ability, or other related factors" (Brooks et al., 2014, p. 5). These workers must be equipped with

sufficient knowledge to deal with a variety of people, symptoms, and resources—not an easy role

to fill, but one that is key component of taking a PEM approach. An example from the UK is

social prescribing (i.e., enabling general practitioners, nurses, and other primary care

professionals to refer people to a range of local nonclinical services (Kimberlee, 2013), which is

one form of community service collaboration.

Hiring additional service employees may represent an additional cost to healthcare

systems. However, some evidence suggests that certain roles provide substantial benefits to

patients and to organizations (Holton-Burke & Buck, 2017; Minemyer, 2018). For instance,

"service orchestrators" (case managers) have been shown to improve patients' perceptions of

their care as well as financial and operational efficiency (Breidbach, Antons, & Salge, 2016).

Helping connect patients who use the emergency department frequently with community-based

care options has shown great potential (Roy et al., 2018). Using medical-legal partnerships,

which are often paid for through volunteer hours and grants, healthcare organizations and

attorneys can partner to help patients address the significant social determinants of health

(Regenstein et al., 2018). These and additional examples (shown in Table 3) support the use of

case managers, community health workers, or social workers to identify patients with significant

needs, to expand their personal ecosystems, and to thereby improve individual and community

well-being (Flynn, 2018; Stempniak. 2013). These cases are exemplary of PEM.

It is important to note that as new technologies emerge, they present opportunities and

challenges in utilization to better understand patient realities, journeys, and experiences; they

also present opportunities and challenges as resources that can expand patient service ecosystems

(Bolton et al., 2018). Integrating technologies across various constituents is not currently easy.

However, this challenge presents a significant opportunity to be able to better understand patient

journeys across organizations and to establish the ability to fully resource patients when they need them most (Kindig & Isham, 2014). An example of how technology can impact patients' ecosystems and reduce readmissions is Concierge/Stat (2018), which coordinates care for patients prior to discharge (see Table 3). Finally, it is important to recognize that this is an ongoing process requiring continuous fine-tuning. This profound cultural change in the way healthcare services are designed and delivered means that only a multidisciplinary multi-stakeholder approach will enable it to become routinized in practice.

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Table 1. Construct Definitions & Potential Measures

	Construct	Definition	References	Possible Measures
1	Patient	The primary user of a health care service. We avoid using the term 'health care customer' as a synonym for patient, as there is some debate as to interchangeability of these terms. We believe that a person who is experiencing health care takes on various roles at different times, including but not limited to patient, customer, user, buyer, and payer.	Defined here for clarity	N/A
2	Provider	A health care service provider is any person who is in a formal role of health care delivery, including but not limited to physicians, nurses, pharmacists, and technicians.		
3	Caregiver	We use the term caregiver to indicate any non-professional person who provides support to the patient, including but not limited to family, friends, and neighbors.		
4	Community	A community is "a group of people who have common characteristics or interests. Communities can be defined by: geographic location, race, ethnicity, age, occupation, a shared interest of affinity (such as religion or faith) or other common bonds such as health need or disadvantage."	National Institute for Health and Care Excellence (NICE) (2016)	Unit of Analysis

Table 1. Construct Definitions & Potential Measures (continued)

5	Customer [Patient] Experience	Customer [patient] experience is a multidimensional construct focusing on a customer's [patient's] cognitive, emotional, behavioral, sensorial, and social responses to a firm's offerings during the customer's [patient's] entire purchase [health care] journey.	Lemon and Verhoef (2016)	Consumer Assessment of Healthcare Providers and Systems (CAHPS); Vendor surveys; Service Blueprinting; Customer Journey Mapping (Lemon & Verhoef 2016)
6	Customer [Patient] Touchpoint	Instances of direct contact by a customer [patient] either with a product or service or with representations of it by a company or its representatives.	Meyer and Schwager (2007)	
7	Customer [Patient] Journey	From the customer's [patient's] perspective, all of the touch points that comprise the steps necessary to help them achieve their [health] goal(s).	Tax, McCutcheon and Wilkinson (2013)	
8	Resource	Any tangible or intangible entity (e.g., physical asset and/or capability) available internal and available through other exchanges for use by an organization or customer.	Lambe, Spekman and Hunt (2002); Lusch and Vargo (2006)	
9	Service Ecosystem	A service ecosystem comprises of actors and their respective resources, interlinked through value propositions in a network of relationships.	Frow et al. (2014)	Unit of Analysis
10	Intra-Alignment	Coordination of activities and resources to facilitate the expansion of an individual's service ecosystem.	Developed for this research	N/A
11	Inter-Alignment	Coordination of activities and resources to facilitate the connection of different individual ecosystems.		
12	Patient Ecosystem Management	PEM is an organizational process, enacted by providers and staff, which focuses on treating different patients differently in order to assess, manage, and expand resources available in order to achieve patient health and well-being goals.		
13	Community Well-Being	A dynamic concept that takes an asset approach and connects to the concept of flourishing and community development: "The combination of social, economic, environmental, cultural, and political conditions identified by individuals and their communities as essential for them to flourish and fulfil their potential."	Lee and Kim (2015); Wiseman and Brasher (2008)	Community Well-Being Index (e.g., Forjaz et al 2011)

Table 2. Strategies and Mechanisms Necessary for Intra- and Inter-Alignment

Strategies	Mechanisms	Definitions	Example
Intra-Alignment	Technological Empowerment	The extent to which patients are linked to new technological capabilities	Increasing patient utilization of electronic medical records (EMR)
	Infrastructural Embeddedness	The extent to which patients are connected to resources	Increasing healthy food choices to urban residents
Inter-Alignment	Cognitive	Mental processing; thinking	Increasing health literacy and knowledge
	Emotional	Affective responses	Development of support and empathy for patient
	Social	Relating to other human beings	Disease-related groups that connect patients to one another

Table 3. Illustrative Cases of Transformed Community Well-Being

	Illustrative Case	Reference	Resources Engaged			
			P	E	S	T
1	"Monitored independence" is allowing seniors to age in place with technological tools that help them with tasks and monitor their activity. Amazon Echo allows seniors to control lights and the thermostat, remind them to take medications, or to call relatives or even to call for help. LifePod, to be introduced later in 2018, takes voice-assisted technology a step further. It will allow users to engage with the device, much like Alexa, but will also periodically check in with them independent of a voice prompt, at preprogrammed intervals: "Good morning, Nancy. Did you remember to take your medication?"	Redford (2018)				X
2	"Dublin, Ireland-based Accenture's Liquid Studio in London has developed an artificial intelligence (AI) powered platform, called the Accenture Platform, that can assist with an older adult's daily activities, learn their behaviors and preferences, as well as suggest social activities to promote their overall physical and mental well-being." This involves placing an Amazon Alexa unit in the patient's home.	Calma (2017)			X	X
3	Seattle Children's Hospital has policies and resources in place to address food insecurity for the people they serve. SCH gives food bags, cafeteria vouchers, and gift cards to patients in need. In primary care, they have secured grant funding to give vouchers to farmers markets and grocery stores for fruits & vegetables, to families who are enrolled in SNAP. SCH teaches gardening/cooking classes to families, and are working on new programs such as shuttling inpatient families to local food banks, federally-reimbursed free lunches, and other important initiatives.	Seattle Children's Hospital (2017)	X	X	X	X

Table 3. [Continued]

4	"Medication adherence is certainly a very important part of taking care of patients today. That might sound simple, but the truth of the matter is that building patient trust is at the core of the elusive patient-provider relationship. The emergence of healthcare technology in making it easier to track and detect medication adherence challenges." A model of communication regarding medication adherence and obstacles is being promoted to help cancer patients.	Heath (2017)			X	X
5	"A pioneering team of clinicians is tearing down barriers that prevented opioid dependent patients in a rural community from receiving treatment. Their efforts—and those of leaders like them—are helping communities across the nation have an equal opportunity to lead healthier lives. A charity in rural Maryland, USA turned to "telemedicine"—using technology to tap into a network of physicians who could provide treatment remotely to help in prescribing and managing buprenorphine treatment for clients with opioid disorders."	Felix (2017)			X	X
6	"A trauma surgeon at San Francisco General Hospital, Rochelle Dicker, MD, grew tired of removing bullets from young patients only to see them return, repeat victims of street violence. The more she learned about the violence, the more she saw it as a chronic disease with treatable risk factors, including unsafe schools and joblessness. In 2006, she launched the Wraparound Project, which has reduced readmissions due to urban violence by approximately 40%."	Van Dyke (2017)	X	X	X	X

Table 3. [Continued]

#						
7	"Many health systems are working to address homelessness in their communities. In the era of population health management and value-based payment, housing initiatives can have a positive return on investment. That means proactively reducing inpatient capacity, selling part of the [hospital] campus to a developer to build low-income housing and opening an urgent care center and other outpatient facilities in the new development. In other places, provider organizations are donating cash. For example, five hospitals and a nonprofit health plan in Portland, Ore., are donating $21.5 million to help build nearly 400 housing units for homeless and low-income people. Still other health care organizations are building apartments that they own and operate themselves, and some are paying the rent for homeless people to have a place to live."	Butcher (2017)	X	X	X	X
8	Medical-legal partnerships represent a "collaborative intervention that embeds civil legal aid professionals in health care settings to address seemingly intractable social problems that contribute to poor health outcomes and health disparities...Financing and commitment from health care organizations are key considerations for sustaining and scaling up the medical-legal partnership as a health equity intervention" (p. 378).	Regenstein et al. (2018)	X		X	
9	Service orchestrators are "dedicated actors who facilitate and orchestrate resource integration, and thereby value cocreation, between other independent actors in human-centered service systems (HCSSs)" (p. 458). Case managers in health care help to coordinate activities, introduce the possibility of complementary therapies, or even redesign treatment plans to better suit the needs of the patient. Service orchestrators lead to higher patient satisfaction, higher productivity of medical staff, and better operational performance.	Breidbach et al. (2016)	X	X	X	X

Table 3. [Continued]

#	Description	Reference				
10	Some hospitals are implementing a community health worker program targeting patients who frequently utilize the emergency department (ED) for care. The service helps patients set followup appointments, fill prescriptions, obtain medications, and find other resources with the goal of keeping them out of the ED.	Stempniak (2013); Flynn (2018)	X	X	X	X
11	Healthcare for the Homeless-Houston (HHH) is a not-for-profit organization that provides health care, social, dental, and psychiatric services to those who don't have a permanent place to live. Their Patient Care Intervention Center (PCIC) utilizes analysis of medical and social integrated data to identify "superutilizers" of health care to address social needs of patients with complex medical issues. PCIC uses care coordinators to help patients expand their service ecosystems by connecting them with transportation, chaperones, counseling, and other resources. Initial results have shown a significant reduction in health care utilization, costs, and increases in patient functioning.	Holton-Burke & Buck (2017)	X		X	
12	"Patients who use high levels of hospital services are a costly burden on the healthcare system, but a new study suggests that pairing them with community navigators can help…the intervention reduced their encounters by 39%." Hospitals using this approach include Kaiser Permanente Northwest, University of Tennessee Health Science Center, Methodist Le Bonheur Healthcare, and Garrett Regional Medical Center in Maryland.	Minemyer (2018)	X	X	X	X
13	"A care management team was embedded in each of the six EDs to meet patients where they seek care and to create appropriate linkages to primary care and community-based services while reducing the need for subsequent acute care utilization. Early analysis indicates that patients who received our care management intervention had greater linkage to primary care services after an initial ED visit than those who did not."	Roy et al. (2018)	X		X	X

Table 3. [Continued]

			housing; neighborhood; education; leisure; transportation and traffic; community services	parks, environmental quality and sustainability	personal safety, informal interaction, community spirit; culturally rich and vibrant community, community cohesion and participation, social interaction, family and home	internet access, mobile phone accessibility, any technology that enables individuals to acquire knowledge and engage with others
14	"My name is Sophie and I'm an emergency department Concierge. I'm your patient navigator, consultant, and customer service representative all in one. Let me show you how our process works: At discharge, I arrange follow-up for treat-and-release emergency department patients, including ambulatory appointments, imaging, and post-acute care. I use Stat, our mobile software system, to match patients with appropriate resources. My job is to connect patients with resources within your health system's network, reducing patient "leakage," avoiding readmissions, and improving population health."	Concierge/Stat (2018)			X	X

Figure 1. A Conceptual Model of Connecting Patient Experiences to Community Well-Being

through Patient Ecosystem Management (PEM)