ORGANIZATIONAL SCIENCE AND HEALTH CARE

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Our article reviews research on "organizational science and health care," defined broadly as research focusing on topics commonly studied in the organizational and management literatures and conducted in health care settings. Using almost 700 articles published in leading organizational science (OS) and health care (HC) journals over the past decade, we first apply network methods to map this burgeoning field of research, highlighting topics that appear more in the foreground (and background) of the field. We then conduct an in-depth review of recent and influential articles, studying the five most prominent topics: organizational change, learning, coordination/cooperation, teams/ structure, and performance. Next, we synthesize this research, highlighting the patient-centered, dynamic, and specialized nature of health care work, and detailing disciplinary distinctions across studies published in OS and HC journals. Whereas research in OS journals tends to emphasize broad generalizability and organizing processes, research in HC journals tends to emphasize contextualized problems and the role of organizational structures and practices in solving them. We conclude by articulating the need for a broader coordination that integrates both of these disciplinary orientations in ways that could allow scholars to advance organizational science and health care with future research that is both rigorous and relevant.

Research on topics of organizational science in health care settings has proliferated in recent years across both organization- and health-focused disciplines. This interest is understandable for many reasons, including that the health care sector is among the largest in the economy—health spending in the United States accounted for 17.7% of the nation's GDP in 2019 (Centers for Medicare & Medicaid Services, 2019), while global health spending accounted for 10% of the global GDP in 2019 (World Health Organization, 2019)—so, by proportion alone, health care should be a core setting for much research published by organizational scholars. At the same time, the health care industry comprises a complex web of organizations wherein failures of management or coordination have the potential for dire consequences (Institute of Medicine, 2001; Kohn, Corrigan, & Donaldson, 2000; Ramanujam & Rousseau, 2006b). Consequently, better understanding of organizational challenges and solutions should be of core interest to health care scholars.

Yet, as research in this multidisciplinary field has grown in volume, it has remained loosely connected, hampering scholars' abilities to identify, systematically contribute to, and cultivate a comprehensible body of research. In this article, we review the past decade of research on "organizational science and health care" (OSHC)—which we define broadly as research focused on topics of study in organizational science (e.g., topics related to management, organizational theory, organizational behavior, and organizational psychology)[1] and conducted in a health care setting. We do so in order to map the landscape of this developing field, review the findings from its most prominent areas of study, synthesize these findings to identify what is broadly known about organizing dynamics in health care, and chart future

[1] In a later section, we describe our scoping of the relevant topics for the purposes of this review.

directions for more systematically coalescing and advancing this important field of research and organizational scholars' contribution to it.

EVOLUTION OF A GROWING FIELD

Interest in connecting organizational science and health care extends back to at least the 1980s, with the publication of a few early articles that bridge these domains (e.g., Argote, 1982; Barley, 1986). This interest accelerated in the late 1990s and early 2000s, with the publication of several pivotal articles (which we find to be commonly cited in the literature we review below) conducted in health care and on topics of learning and psychological safety (Edmondson, Bohmer, & Pisano, 2001), relational coordination (Gittell et al., 2000), and institutional change (Scott, Ruef, Mendel, & Caronna, 2000). This growing interest in understanding organizational issues in health care coincided with two landmark and oft-cited reports published by the U.S. Institute of Medicine—"To Err is Human" (Kohn et al., 2000) and "Crossing the Quality Chasm" (Institute of Medicine, 2001)—each providing prominent recognition of the importance of human and organizational behavior for health care outcomes. Concomitant with this growing body of research was the expansion and launch of several professional associations and conferences that offered spaces for scholars to convene around research in the emerging OSHC field. These included the Health Care Management division of the Academy of Management in the mid-1990s, the Organization Theory in Health Care Association (formerly the Healthcare Organizational Research Association) and its annual conference in 1998 (an outgrowth of an Academy of Management meeting), and Academy-Health in 2000 (formed from a merger of the Alpha Center and the Association for Health Services Research, founded in 1976 and 1981, respectively).

In the ensuing years, propelled in part by these new organizations and conferences and the increased visibility and interest afforded by the Institute of Medicine reports, the corpus of influential articles in the field of OSHC expanded, covering topics such as coordination (Faraj & Xiao, 2006), learning (Edmondson, 2003; Nembhard & Edmondson, 2006), and innovation (Ferlie, Fitzgerald, Wood, & Hawkins, 2005). Though these early years of the new millennium clearly marked the incipience of OSHC as a new field of scholarship—and have yielded their own reviews and integration efforts (e.g., Gilmartin & D'Aunno, 2007; *Journal of Organizational Behavior* special issue

("Healthcare: The Problems Are Organizational Not Clinical") guest-edited by Ramanujam & Rousseau, 2006a)—the passing of the Affordable Care Act (ACA; formally, the Patient Protection and Affordable Care Act) in the United States in 2010 marked a turning point in the relevance of, and interest in, OSHC scholarship. The decade following the passage of the ACA has seen tremendous shifts in the fundamental organization, coordination, and provision of health care in the United States (see, e.g., the *Health Affairs* special issue—"The Affordable Care Act Turns 10"—edited by Weil, 2020), and brought the research interests of OSHC scholars to the forefront of public policy and leadership decision-making in health care.

Reviewing a Decade of OSHC Research

It is against this backdrop that we review the significant body of research that has accumulated in the past decade—the "post-Patient Protection and Affordable Care Act era" (Beauvais, Richter, & Kim, 2019)—to explain, predict, and control the functioning of health care organizations. During this period, health care financing has shifted toward outcome-based models that provide increased attention to the managerial and organizational drivers of care outcomes. Meanwhile, health care organizations have been subject to increasing consolidation as well as decentralization and the associated complexity that can make it more difficult to achieve those outcomes. We would be remiss if we did not also acknowledge that the decade started by the passage of ACA has ended amid an immense crisis facing the health care industry due to the COVID-19 pandemic, which will no doubt also have fundamental and lasting effects on how health care is organized in the future (Cutler, Nikpay, & Huckman, 2020). Thus, given the rapid growth of OSHC research across domains, and the coming challenges initiated in part by the COVID-19 pandemic, we argue that, if ever there was a time to take stock of what has been learned in recent research about what can help improve the management and organization of health care, it is now.

Three aims. Our review contributes to the OSHC literature by addressing three distinct (but interrelated) aims regarding the state of research on organizational topics in health care settings, as well as articulating potential paths forward for this evolving field of scholarship. Our first aim is to establish the bounds of this flourishing, but (as we find it) disconnected, research field. To do this, we review nearly

700 research articles published in leading organizational science (OS) and health care (HC) journals over the last decade to provide a fundamental mapping of the landscape of OSHC research. Our broad view reveals the topics that have been prominent and central in the past decade (e.g., organizational change), topics that are peripheral or understudied (e.g., trust), and clusters of topics that are likely to be studied together (e.g., safety, culture, and stress/strain).

Our second aim is to develop a rich, integrated understanding of the research findings in the most active areas of the OSHC literature. Here, we focus on the five most prominent topics of OSHC research—those frequently studied in research published in *both* OS and HC journals in the past decade (namely, organizational change, learning, coordination/cooperation, teams/structure, and performance). The insights that emerge—often from previously disconnected research streams—range from understanding the motivators, mechanisms, and outcomes of change, to the varied causes and consequences of learning in health care, the ways individuals coordinate within and across organizations (and when that coordination is beneficial), the structures and team processes that enhance health care outcomes, and the dozens of predictors of multidimensional performance in health care organizations.

Our third aim is to step back and holistically take stock of these prominent streams of OSHC research to better understand emergent themes and points of disconnection that can inform a productive path forward. A synthesis of the research reviewed reveals several key themes and insights about organizational work in health care settings. First, improving the quality of patient care is the near-unquestionable goal of any new practice or intervention (whether organizational or clinical). Second, the work is fundamentally dynamic in nature (constantly evolving in not only clinical knowledge, but also organizing structure). Third, individuals and organizations are highly interdependent, but fundamentally specialized (i.e., across roles or care domains). In addition to acknowledging these emergent themes, we highlight differences in how scholars across disciplines within OSHC have approached these topics. For instance, research published in OS journals is largely focused on the development of generalizable theories of organizing (i.e., underlying processes of action that contribute to effective outcomes across any organizational setting), whereas research published in HC journals is largely focused on solving contextualized problems of health care organizations (i.e., applying organizational structures and devices to understand and guide the resolution of specific challenges in a particular health care setting).

A path forward. Building from our general mapping and review, we conclude with ideas for future research that hold promise for enhancing and expanding the impact of OSHC work. Specifically, we argue that the discipline-specific approaches to OSHC are each (on their own) limited, and the disconnection between them stymies the progress and impact of OSHC research. The common approach observed in OS outlets results in a focus on universally generalizable theory that happens to arise from research in a health care setting (what we term an "OS *in* HC" perspective), while the common approach observed in HC outlets results in a focus on deploying organizational concepts to model and resolve specific problems of health care settings (what we term an "OS *of* HC"). In contrast, we advocate for OSHC scholars to consider a broader, more integrative "OS *and* HC" orientation to their research. This broader approach entails considering both the generalizability and contextualization of OSHC research (e.g., adopting a mid-range view of "bounded generalizability" by considering how findings from research conducted in one domain of health care might apply to other health settings), while also attending to both the top-down structures of organizations *and* the bottom-up organizing practices of individuals and collectives within these organizations (e.g., adopting meso-level models, employing cross-level research tools, and investigating the interplay of structures and processes over time). Adopting this framing would not only guide scholars in exploring new domains of OSHC research (i.e., the less-studied areas revealed in our field mapping), but also in revisiting and enhancing research on prominent OSHC topics by applying this new perspective. Advancing this framing will no doubt require broader changes to field norms and practices, including a careful (re-)consideration of the types of research pursued and where this research is published, in order to develop OSHC as a more integrated, systematic field of study. We call for organizational science and health care scholars to heed and adopt these necessary changes in the coming years.

The rest of this paper proceeds as follows. In the section below, we begin with our first aim: mapping the landscape of OSHC research in the past decade. We then turn to our in-depth review of prominent OSHC topics (our second aim), and our efforts to generate a more holistic integration of insights in OSHC research (our third aim), before concluding with a

discussion of a path forward for enhancing the quality and impact of OSHC scholarship.

MAPPING THE LANDSCAPE OF OSHC RESEARCH

Search Criteria

To map the landscape of this emergent and inherently dispersed field of OSHC, we established boundary conditions that were broad and inclusive (Elsbach & van Knippenberg, 2020), while, at the same time, consistent and disciplined. We limited our review by time, restricting the selection of articles to those published in the past 10 years (2010–2019; in print, excluding online-only or in-press articles), dating back to the passing of the ACA as described above. Additionally, reflecting the multidisciplinarity of OSHC, we constrained our search to include specific journals commonly accepted as high-quality outlets in either OS or HC disciplines. To incorporate research from OS traditions (including management, organizational theory, organizational behavior, and organizational psychology), we reviewed research in management journals that are commonly accepted as "top" publication outlets (and frequently included in prior review articles in management; see Table 1).[2] To incorporate research from HC traditions (including health policy, health services research, and medicine), we drew on recent rankings of publication

quality and relevance (Borkowski et al., 2018), and also solicited expert opinions from scholars in the health services research field. For the purposes of this review, we included an outlet if it ranked in the top 10 for either quality or relevance (the two dimensions of the Borkowski, Williams, O'Connor, & Qu, 2018, ranking), was included in the top 30 for the other ranking (e.g., if top 10 for quality, at least top 30 for relevance), and was identified by experts as a high-quality journal (see Table 1 for final list).[3]

We further bounded our review to a set of organizational science topics on which we would focus. Specifically, we started with the list of topics identified by Heath and Sitkin (2001) as core concepts in their seminal article on organizational research. To ensure that our search process would appropriately capture relevant articles, we augmented this list by considering additional terms that reflect variants of these organizational topics as they are used or applied in the domain of health care. Specifically, using the journal *Health Care Management Review* as a benchmark for organizational research published in health care, we reviewed all 2019 *Health Care Management Review* articles to identify additional terms that seemed to align with those of the topics in Heath and Sitkin (2001)—and that, if not included, would lead us to overlook an article that seemed to fit our definition of OSHC. For example, we added the term "coordination" and bundled this with the Heath and Sitkin (2001) term "cooperation." The full list of topics used as search terms is presented in Table 2.

Article Selection and Analysis

Applying this set of search criteria (i.e., time, journal, and topic), we then identified articles for review using the following procedure. For organizational science journals, we assumed that the topics of each article would consistently relate to organizational science, but the research settings would vary; thus, we first sought to narrow down to research conducted in health care settings. Consequently, we searched for

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[2] We recognize that the search conducted, like any, has inherent limitations, and that there is OSHC research in journals beyond those selected for our review. We based our selection of OS journals on existing, commonly shared views of quality and relevance (e.g., journals frequently featured in review articles in management, promotion criteria, etc.) and believe that the set of OS journals used here is a highly relevant and representative sample. However, for robustness, we replicated our search with additional journals that might be categorized as related to OS—journals adjacent to organizational science and focused on sociology (*American Journal of Sociology* and *American Review of Sociology*) and human resources (*Human Relations*, *Human Resource Management*, and *Personnel Psychology*). This search yielded an additional set of 67 articles. We coded the topics covered in these additional articles, and we did not observe any clear shifts in the rates at which topics were studied relative to our primary set of OS articles. The most prominently studied topics that we explore in this paper were also among the most prominent topics appearing in these additional articles. We do not include the articles identified in this robustness search in our overall review.

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[3] *Journal of Health Economics* met our criteria, but we excluded it, given its focus on economics rather than management, organization theory, organizational behavior, and organizational psychology. Moreover, as noted earlier, we acknowledge that there is OSHC research published outside of these outlets, but basing our inclusion criteria on these established rankings and expert opinion gave us confidence that our set was representative and reflective of high-quality outlets in HC disciplines that publish work on organizational topics.

TABLE 1
Journals Included in Literature Search

Domain	Journals
Organizational science	*Academy of Management Journal, Administrative Science Quarterly, Journal of Applied Psychology, Journal of Management, Journal of Organizational Behavior, Management Science, Organizational Behavior and Human Decision Processes,* and *Organization Science*
Health care	*Health Affairs, Health Care Management Review, Health Services Research, JAMA: Journal of the American Medical Association, Medical Care, Medical Care Research and Review, Milbank Quarterly,* and *New England Journal of Medicine*

the following keywords (and their permutations) in the text of the articles: "health care," "hospital," "medicine," "surgery," "physician," and "nurse." We then screened these articles and selected only those that reported (a) empirical studies conducted in (b) a health care setting, and (c) that studied at least one of the topics identified in our search criteria. To do so, the first author and a research assistant qualitatively coded each article's title and abstract based on our set of identified topics.

In contrast, we assumed that the research setting of those articles published in health care outlets would almost always be a health care setting, but the topics of interest would vary and not always relate to organizational science. Consequently, we searched for articles that included one or more of our identified topics in the article's title or abstract. We then screened these articles using the same inclusion criteria noted above, selecting only those that (a) reported empirical research, (b) were conducted in a health care setting, and (c) studied at least one of our topics (again, coded qualitatively by the first author and a research assistant).

This two-part approach yielded a total of 685 empirical research articles (158 in organizational science journals and 527 in health care journals) that met our criteria. For each article, we noted the journal type (i.e., organizational science ("OS") or health care ("HC") outlet), the topic(s) studied (from the list in Table 2, allowing each article to be coded for multiple topics), and the number of times the article had been cited (as recorded on Google Scholar). All 685 articles are listed in the Appendix (https://journals.aom.org/doi/suppl/10.5465/annals.2019.0115) and identified by topic(s).

To structure our review, we aggregated the articles by topic to identify which topics were most frequently covered in the reviewed research (see Table 2), and we then mapped the network of these topics and their relationships to one another. Specifically, we created a network diagram wherein each node represents a particular topic, node size corresponds to the number of articles studying the topic, and ties reflect the degree of co-occurrence of topics within a single article. We also conducted a clustering analysis (using the R function *cluster_optimal*) based on those ties and imposed colors onto each node to reflect those clusters. A cluster, in this way, indicates a group of topics that were likely to be studied together in the overall set of papers. All told, we found 15 distinct clusters of topics among the set of articles (though many were composed of only one topic). Figure 1 depicts this empirically driven visualization of OSHC research conducted in the past decade.

A Map of the Field

This visualization of the field allows us to identify the bounds and contours of recent OSHC research, revealing what is foreground and what is background. Specifically, the size and clustering of topic nodes in Figure 1 show significant variation in the extent to which these various organizational topics appear and co-occur in recent OSHC research.

Several topics have received a significant amount of research attention and dominate (e.g., learning) or are the only topic (e.g., organizational change) in their clusters. Of note, among these oft-studied topics, we observe variation in the extent to which OS versus HC journals publish research on these topics (as evident in Table 2). Some topics (e.g., performance, organizational change, learning, and cooperation/coordination) are prominent in research appearing in both OS and HC journals—and are discussed further in our in-depth review below—whereas the study of other

TABLE 2
Occurrence of All Topics in Articles, By Outlet Domain[a]

Heath and Sitkin (2001) Terms with Added, Related Terms	OS Articles	OS Articles (%)	HC Articles	HC Articles (%)
Performance	29	18.4	79	14.9
Organizational change, Change, Implementation	21	13.3	85	16.1
Incentives / Pay / Reward	3	1.9	74	14.0
Safety	6	3.8	67	12.7
Team / Group	21	13.3	51	9.6
Learning, Innovation, Adapt, Knowledge transfer, Knowledge sharing	33	20.9	35	6.6
Culture, Climate	6	3.8	47	8.9
Structure, Routine, Role, Specialization, Diversity, Status, Power, Hierarchy, Standardization	21	13.3	32	6.0
Cooperation, Coordination, Collaboration, Boundary-spanning	14	8.9	39	7.4
Communication / Communicate, Voice, Speak up	4	2.5	43	8.1
Turnover, Retention	7	4.4	26	4.9
Job satisfaction	7	4.4	25	4.7
Stress / Strain, Workload	9	5.7	21	4.0
Leader / Leadership	4	2.5	29	5.5
Strategy / Strategic / Strategies	4	2.5	26	4.9
Decision-making / Decision	12	7.6	15	2.8
Relationship	6	3.8	17	3.2
Network	7	4.4	15	2.8
Burnout	4	2.5	18	3.4
Emotion / Affect	14	8.9	5	0.9
Participation, Engagement	1	0.6	17	3.2
Trust	6	3.8	11	2.1
Identity, Identification	10	6.3	2	0.4
Commitment	1	0.6	11	2.1
Absenteeism / Attendance	6	3.8	4	0.8
Motivation	3	1.9	5	0.9
Goals / Goal setting	3	1.9	5	0.9
Conflict	7	4.4	1	0.2
Control	4	2.5	2	0.4
Supervisor / Supervision	4	2.5	2	0.4
Alliance	1	0.6	5	0.9
Performance evaluation	3	1.9	2	0.4
Interdependence	1	0.6	4	0.8
Norm	2	1.3	3	0.6
Organizational citizenship	4	2.5	1	0.2
Family	4	2.5	1	0.2
Justice / Fairness	3	1.9	2	0.4
Feedback	2	1.3	3	0.6
Personality	3	1.9	1	0.2
Self-efficacy	1	0.6	2	0.4
Influence	0	0.0	3	0.6
Negotiation / Bargaining	1	0.6	1	0.2
Politics	2	1.3	0	0.0
Risk	0	0.0	1	0.2
Cross-cultural	0	0.0	1	0.2
Socialization	1	0.6	0	0.0
Legitimacy	1	0.6	0	0.0
Psychological contract	0	0.0	0	0.0
(Over-)confidence	0	0.0	0	0.0

[a] Organizational science (OS) and health care (HC).

topics is more limited to research published in one domain or the other. For example, the majority of the research on incentives, pay, and rewards appears in studies published in HC journals (largely focused on the impact of outcome-based payment models; e.g., Kristensen et al., 2014); only three studies of incentives, pay, or rewards were published in OS outlets. Similarly, the topic of communication, which we might expect to see frequently across both domains, primarily appears in HC outlets. This includes a large emphasis on physician–patient communication (e.g., White et al., 2018), as well as communication between care providers (e.g., Pesko, Gerber, Peng, & Press, 2018; Richter, McAlearney, & Pennell, 2016) and/or across organizations (e.g., Mello, Armstrong, Greenberg, McCotter, & Gallagher, 2016). We discuss this divergence between OS and HC research further below, when we explore the fragmentation revealed in our review.

In addition to clusters dominated by a single topic like those discussed above, Figure 1 also reveals several clusters comprising multiple topics that each receive substantial attention in the literature. For example, the topics of teams and structures are both frequently studied topics, and they are often studied together, consistent with the nature of teams as a ubiquitous structure for organizing in modern health care organizations that increasingly rely on multidisciplinary work (Hughes et al., 2016). Similarly, the topics of stress/strain, safety, and culture each receive substantial attention and cluster together, aligning with research demonstrating that stress/strain and culture can contribute to safety outcomes (Mohr, Benzer, & Young, 2013; Steyrer, Schiffinger, Huber, Valentin, & Strunk, 2013), and that organizations might exhibit a "safety culture" or "safety climate" that has implications for important outcomes such as readmissions (Hansen, Williams, & Singer, 2011).

In other cases, several topics—each studied to a lesser extent on their own—form meaningful clusters of co-occurring concepts (at least as coded in our set of articles). This includes the cluster comprising the topics of turnover, absenteeism, burnout, emotion, risk, and job satisfaction (what we might loosely characterize as work focused on "job satisfaction and turnover," based on these being the most frequently studied topics in this cluster). Though each of these topics is individually less frequently studied than those mentioned above, as a unit, this cluster represents a substantial component of OSHC research (forming the fourth largest cluster in our data) with important implications for our understanding of

individuals' experience working in health care, such as the nature and consequences of burnout among health care workers (e.g., Leiter, Laschinger, Day, & Oore, 2011; Meeusen, Van Dam, Brown-Mahoney, Van Zundert, & Knape, 2011; Moller, Jager, Williams, & Kao, 2019).

Finally, several clusters of topics that are more peripheral indicate areas of research that appear to be in the "background" of current OSHC scholarship. These include an "identity" cluster (including studies of identity, socialization, self-efficacy, family, and organizational citizenship—again, named for the most studied topic in the cluster); another cluster emphasizing "relationships and trust" in health care (including the topics of relationships, trust, networks, influence, personality, and justice); a third cluster exploring questions related to "leadership" (including topics of leadership, decision-making, participation, control, and alliances); and, finally, a cluster that might be characterized as research on individual "motivation and conflict" (including topics of motivation, conflict, feedback, supervision, and performance evaluation).

REVIEWING PROMINENT TOPICS IN OSHC RESEARCH

After generating the map of the OSHC landscape (depicted in Figure 1), we sought to more thoroughly review the set of topics within this landscape that were both prominent (suggesting they reflected robust literatures suitable for review) and situated squarely at the intersection of OS and HC. As seen in Table 3, six topics rose to the level of top 10 most studied topics in research published from 2010 to 2019 in OS journals *and* HC journals we reviewed: organizational change, learning, cooperation/coordination, teams, structure, and performance. Given that teams and structure emerged in a single cluster (i.e., the topics are likely to be studied together), we combined these two topics to arrive at a set of five prominent topic areas for review. For each of these five topic areas, we selected a subset of articles from the full set of 685 articles identified in our initial search, following recent guidance to read "broadly but selectively" when conducting a literature review, in recognition that often "less is more" (Alvesson & Sandberg, 2020), and in line with approaches prioritizing work that is more impactful or recent within a domain of research (e.g., Raveendran, Silvestri, & Gulati, 2020).

Specifically, we curated a subset of articles to review in depth within each of the five prominent

FIGURE 1
Map of the OSHC Field
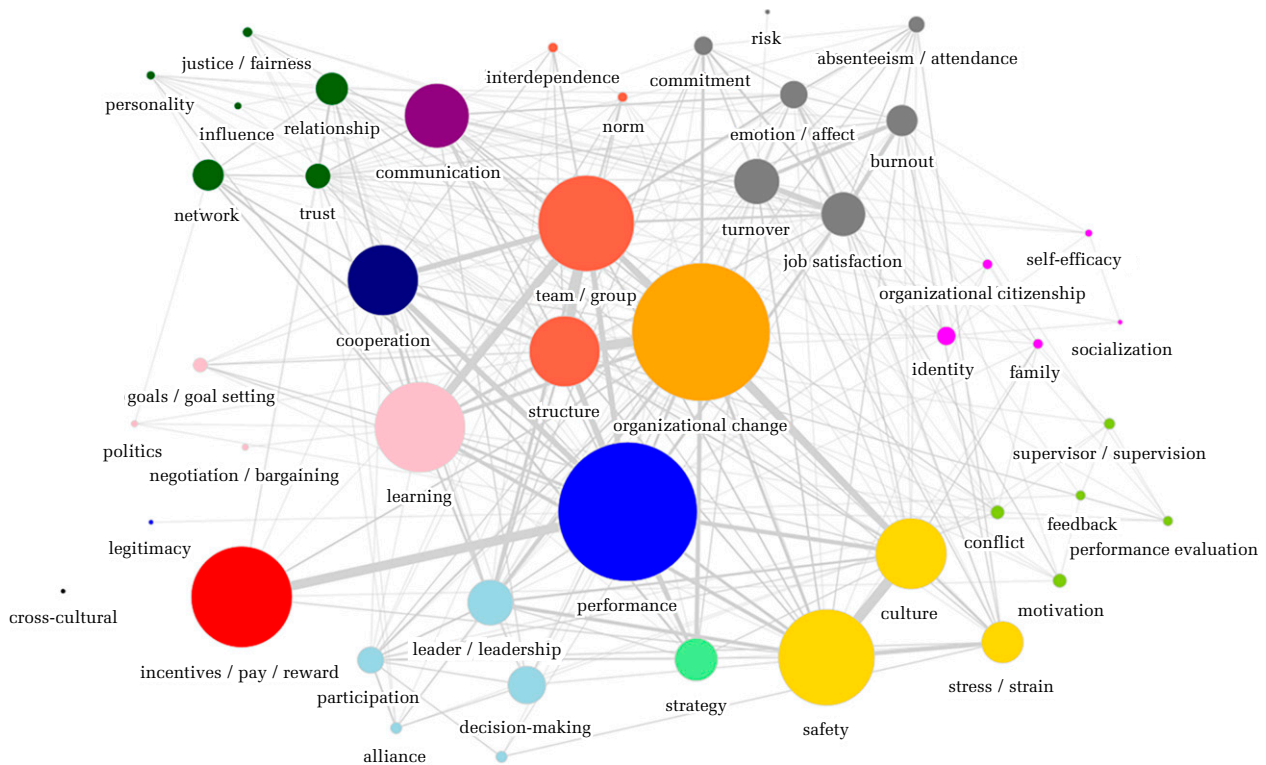
Notes: Topics are represented as circles. Circle size reflects the number of articles in which the topic was studied (includes topics from 685 articles published between 2010 and 2019). Ties between circles reflect co-occurrence of topics studied in the same article; tie width reflects the strength of the tie (i.e., number of co-occurrences). Colors reflect clusters (clustering done using R, with the function cluster_optimal in the package igraph). Note that node positions do not necessarily reflect their centrality and the layout has been edited to help highlight the clustering of topics.

topics by, first, selecting the top 15 most cited articles for a given topic within our entire identified set; then, adding any of the top 10 most cited articles in the five-year period between 2014 and 2018 (chosen to match the five-year impact factor timespan used in 2019) that were not already captured by the overall top cited articles in step 1; and, finally, including all articles in a topic area that were published in 2019, to ensure that the most recent work (that may not have had time to accumulate citations) was reflected in our subset. This process yielded between 25 and 33 articles to be reviewed for each of the five prominent topic areas. Articles could repeat across topic area (for instance, an article might have been coded as studying both learning and cooperation/coordination; e.g., Nembhard & Tucker, 2011), such that we reviewed a total of 114 articles (51 in organizational science journals, 63 in health care journals), with 90 articles pertaining to a single topic

area, 20 articles pertaining to two topic areas, and four articles pertaining to three topic areas.[4]

Aggregating the many individual studies published across the disparate journals and research traditions that make up OSHC makes clear that the field's understanding of the functioning of health care organizations has advanced significantly, particularly in the key areas of research we reviewed. The accumulated insights of each of these domains, discussed below, demonstrate how the field has advanced knowledge, in particular regarding the motivators, mechanisms, and outcomes of *organizational change* in health care, the causes and consequences of *learning* within and among health care organizations, how individuals enact *cooperation/coordination* across roles and health professions

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[4] All 114 articles included in this more in-depth review are identified with an asterisk in the Appendix.

TABLE 3
Prominent Topics, by Domain

Topic	Rank in OS[a]	OS Articles (%)[b]	Rank in HC[a]	HC Articles (%)[b]
Performance[c]	2	18.4	2	14.9
Organizational change (includes change, implementation)[c]	3	13.3	1	16.1
Learning[c]	1	20.9	9	6.6
Team / Group[c]	3	13.3	5	9.6
Structure (includes Routine, Role, Specialization, Diversity, Status, Power, Hierarchy)[c]	3	13.3	10	6.0
Cooperation (includes Coordination, Collaboration, Boundary-spanning)[c]	6	8.9	8	7.4
Incentives / Pay / Reward	26	1.9	3	14.0
Safety	12	3.8	4	12.7
Culture	12	3.8	6	8.9
Communication	20	2.5	7	8.1
Emotion	6	8.9	23	0.9
Decision-making	8	7.6	19	2.8
Identity	9	6.3	32	0.4
Stress / Strain	10	5.7	15	4.0

Note: The table lists only the topics that were among the top 10 most studied topics in either organizational science (OS) outlets or health care (HC) outlets.
[a] Rankings of most to least studied topics in OS and in HC outlets.
[b] Percent of articles in the domain that study the topic.
[c] Top 10 in both areas; these six are also the only topics covered by more than 5% of articles in both areas.

(and when that coordination is most beneficial), the use of *teams and other structures* that enhance health care organizations' ability to deliver high-quality outcomes, and the variety of predictors and multidimensional nature of successful *performance* in various health care settings.

Organizational Change

Research on change, development, and innovation has flourished over the past 50 years across all scientific disciplines (Van de Ven & Poole, 1995), and these topics continue to attract scholarly attention in both OS and HC. In fact, it is hard to imagine a context to which the idea "change never starts because it never stops" (Weick & Quinn, 1999: 381) better applies. Health care has been described as a context in which change has been slow, in part because of its complexity but also its competing and contradictory pressures and demands (Chreim, Williams, Janz, & Dastmalchian, 2010; Engle, Lopez, Gormley, Chan, Charns, & Lukas, 2017); it has also been described as a context in which change has been constant because of advances in scientific evidence, regulatory changes, and a host of other issues related to health care economics, costs, and financing (Hoff, Sutcliffe, & Young, 2016). Indeed, health care has created its own change-

related scientific specialty—implementation science—which aims "to better understand, explain, and address problems associated with translating explicit and implicit intentions into desired changes" (Nilsen, Ståhl, Roback, & Cairney, 2013: 4).[5]

We review 25 change-related empirical studies split almost evenly between organizational science and health care outlets. Although the majority of studies focus on some aspect of planned change at the organizational level, the levels of analysis range from the more micro study of individuals to the study of change in teams and units (such as primary care practices), to the more macro study of systems' change. For example, Battilana (2011) used data gathered from 93 change projects initiated by clinical managers at the National Health Service in the United Kingdom to examine how social position (within the field/profession and within the organization) affects an individual actor's likelihood of initiating organizational changes that diverge from the institutional status quo. Rutledge, Romaire, Hersey,

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[5] Implementation science as an area of research within health care research was fueled by the 2006 launch of the journal *Implementation Science*, devoted to publishing translational research that focuses on advancing the uptake of research into practice.

Parish, Kissam, and Lloyd (2019) used a mixed methods design to understand both the challenges of implementing "accountable care organizations" (ACOs) in four states in the United States and the effects on health care quality, costs, and utilization. This body of research reports the study of change in a variety of settings (cancer centers, primary care teams, pharmacies, hospitals, and hospital units) and in a variety of countries, including Canada, France, Germany, Israel, Italy, the United Kingdom, the United States, and an unnamed European country.

Motivators of change. Declining performance is often considered to be a central reason why decision-makers (often considered to be a single entity; e.g., CEOs) undertake organizational change (Cyert & March, 1963). Yet, empirical findings supporting this idea are mixed (Desai, 2016: 876), and decision processes in most complex organizations are frequently governed by coalitions or groups (e.g., CEOs and boards of directors) that have competing and conflicting interests. What happens then? Drawing on longitudinal panel data for a set of for-profit hospitals operating in California, Desai (2016) found that features of corporate boards influenced how organizations responded to performance downturns; hospitals governed by large boards with substantial equity ownership were less likely to enact change in response to faltering performance. One implication of this finding is that competitive forces between coalitions, such as disagreements among board members with management regarding precise changes to be made, can be consequential to change processes more generally. This is both important and problematic because, as noted earlier, health care organizations (and particularly hospitals) have been accused of being slow to change and of changing only when prodded by regulators or other external pressures. Given the vast knowledge and expertise internal to health care organizations, might not other professional groups motivate change efforts? In a longitudinal case study of a German hospital group's strategic change formulation processes, Ridder and Schrader (2019: 18) found that successful strategy formation was fostered by the coexistence of planning and emergence, with boards of directors communicating the strategic intent top down, and medical experts introducing promising medical themes bottom up. Yet, this work also suggests that medical expertise is often neglected in the strategy formation process.

Extending our earlier observation that individuals in particular social positions are more likely to drive change, a study of institutional change in French cancer centers (Castel & Friedberg, 2010) revealed that the structural position of change entrepreneurs matters. They found reformers to be at once insiders and outsiders—centrally placed in power structures because of their leadership roles as heads of cancer centers, but marginally placed because they were experts in a not yet dominant medical specialization. Compagni, Mele, and Ravasi (2015: 268) studied the diffusion of robotic surgery and similarly found that a combination of central and peripheral actors both promoted (and adopted) new practices early on, but for very different reasons. Central actors wanted to preserve their revered position while peripheral actors wanted to improve their social standing. Still, these dynamics changed as innovation diffused and gained ground; early adopters' implementation experiences influenced decisions of late adopters by gradually reducing uncertainty regarding how to implement.

Although some research points to actors in particular social positions as more likely to initiate change, this is not always the case. For example, Chreim et al. (2010) found that change leadership is more of a collective enterprise involving a variety of actors dispersed across the system. Lockett, Currie, Finn, Martin, and Waring's (2014) study of sensemaking and change also raised questions about the homogeneity of particular actors' network and dispositions to seize change opportunities. And Battilana and Casciaro (2012: 381) found that it is not necessarily position that matters for change initiation and adoption, but, rather, the structure of a change agent's network, such that "low levels of structural closure (i.e., 'structural holes') in a change agent's network aided the initiation and adoption of changes that diverged from the institutional status quo but hindered the adoption of less divergent changes."

Three additional studies (published in OS outlets) suggested that time, space, and support also act as motivators of planned change. For example, clinicians are more likely to adopt changes to clinical processes when they have time and space to engageśin deliberate efforts to alter their abstract understanding of why and how they are to alter their routine practices, and when they also have time and space to experiment with and practice new routines (Bucher & Langley, 2016). The importance of liminal spaces and time for reflection and experimentation is also prominent in a study of a merger of health care organizations conducted by Howard-Grenville, Golden-Biddle, Irwin, and Mao (2011). Another study (Kim, Hornung, & Rousseau, 2011) added nuance to this idea, demonstrating that having time

to understand and anticipate the benefits of change may fuel adoption early on in a change effort but may become less important as change progresses. That is, as change initiatives progress, it is harder to get individuals to buy in because the anticipated benefits of change lose their novelty and their motivational currency; in contrast, as time progresses in implementation efforts, the quality of the employment relationship becomes a more significant driving factor (Kim et al., 2011).

Mechanisms of change. The question of how change occurs is addressed in many of the change studies we reviewed. We noted earlier the role particular positions play in motivating change, but several studies suggest that it also occurs through relational mechanisms such as influence and commitment processes. For example, Birken, Lee, Weiner, Chin, Chiu, and Schaefer (2015) studied 120 U.S. health centers that initiated an intervention to reduce health disparities, and they found that top managers directly influenced middle managers' commitment through a particular set of actions. That is, when top managers both conveyed the criticality of implementing the innovation and provided middle managers with a set of implementation tools (e.g., training, funding, and other human resource-related tools such as performance reviews and incentives), middle managers' commitment to enacting innovation increased. Engle and colleagues (2017) similarly found that middle manager commitment, enacted through their various actions and interactions, is critical to successful transformation. Additionally, Wise, Alexander, Green, Cohen, and Koster (2011) studied primary care practices in Michigan seeking to implement the infrastructure and processes of the "patient-centered medical home" (PCMH), and found that commitment to change (as well as perceived capability to undertake and accomplish operational requirements) was critical to the process. Indeed, as their results indicated, while "appropriate incentives are important … they are not sufficient to bring about changes in primary care" (Wise et al., 2011: 421).

In addition to relational mechanisms, a key theme in several studies is the importance of implementation toolkits as means through which change is facilitated (e.g., Birken et al., 2015; Kellogg, 2011). As Kellogg (2019) found in her study of PCMH implementation in two U.S. hospitals, managers are more likely to realize micro-level changes in practice when they "activate" lower-status subordinates and provide them with particular tools to use in their work with other higher-status professionals.

Beyond middle managers' commitment, actions, interactions, and relational mechanisms that build change readiness and commitment, the research we reviewed suggests that change is more likely when units, teams, or organizations have a strong climate for innovation, as Somech and Drach-Zahavy (2013) found in their study of 96 primary care teams.

Outcomes of change. The idea that most change initiatives fail (often estimated in the prescriptive literature at 50–70%; see Burnes, 2011) has been repeated for over 40 years, although scholars have challenged this ongoing narrative (Hughes, 2011). Thus, it was not surprising to find that six studies, all published in HC outlets, investigate change outcomes. Most of these studies are descriptive. Some studies explore change in particular practices; for example, the adoption of team huddles in a set of Department of Veterans Affairs' PCMHs (Rodriguez, Meredith, Hamilton, Yano, & Rubenstein, 2015), the ways in which clinicians (physicians and nurses) use electronic health records (EHRs) seven years post adoption (Rathert, Porter, Mittler, & Fleig-Palmer, 2019), the adoption of a checklist to help in birthing practices and its effect on maternal and infant mortality (Semrau et al., 2017), and the adoption of patient-reported outcomes (Jensen et al., 2015). Other studies explore change more broadly at the organizational or institutional levels, such as the effects of ACOs and the ACA on care delivery and patient outcomes after the ACA's enactment (Lewis, Schoenherr, Fraze, & Cunningham, 2019; Rutledge et al., 2019), the outcomes of value-based payment reform initiatives (Conrad, Grembowski, Hernandez, Lau, & Marcus-Smith, 2014), and organizational identity change during the merger of former rival health care organizations (Clark, Gioia, Ketchen, & Thomas, 2010).

In sum, studies of change in health care settings reaffirm the fact that change programs *do* produce change and transformation, although not always in the ways in which the change initiative is envisioned or intended. Moreover, there are well-known barriers and constraints to change and successful adoption of particular initiatives. These include limited time, increased workload, insufficient training, inadequate resources and other operational constraints, confusion and lack of clarity around goals and benefits, and relational conflict and mistrust.

Learning

Understanding how learning unfolds in health contexts has been of significant interest to

researchers across both organizational science and health care disciplines over the past decade. Given the nature of health care as a domain of unending change (as reviewed above), this interest in the processes and consequences of learning in and among health care organizations is perhaps not surprising. Indeed, health professionals are engaged in highly knowledge-intensive work with critical consequences for failure, and so developing, sharing, and applying knowledge in pursuit of high-quality patient care outcomes is essential, giving rise to a robust, multifaceted body of research on individual, team, and organizational learning in health care. The 30 articles on learning that met our review criteria (20 of published in organizational science journals and 10 in health care journals) report on a broad range of qualitative and quantitative research efforts, including surveys, archival data analysis, in-depth observations and interviews, simulations, and experimental interventions. Across these studies, researchers explore the benefits of learning at multiple levels of analysis and across a variety of important outcomes, including the types of performance studied in non-health contexts (e.g., supervisor-rated job performance; Wolfson, Mathieu, Tannenbaum, & Maynard, 2019; Wolfson, Tannenbaum, Mathieu, & Maynard, 2018), but also a range of more health care-specific outcomes, such as improvements in patient mortality or reduced adverse events (e.g., Diwas, Staats, & Gino, 2013; Nembhard & Tucker, 2011; Vashdi, Bamberger, & Erez, 2013), improvements in care quality benchmarks and evaluations (e.g., Nembhard, 2012; Noël, Lanham, Palmer, Leykum, & Parchman, 2013), or improvements (generally reductions) in key temporal metrics such as operative time in surgery or "door to balloon" time for ST-segment elevation myocardial infarction patients (e.g., Nembhard, Cherian, & Bradley, 2014; Vashdi et al., 2013).

This research has also considered health care domain-specific forms of learning, focusing in particular on the antecedents and consequences of particular knowledge and practice innovations in hospitals and other care settings. Work in this tradition has explored the diffusion of novel health technologies and practices, such as electronic medical records (Angst, Agarwal, Sambamurthy, & Kelley, 2010), telehealth (Singh, Mathiassen, Stachura, & Astapova, 2010), or medications used in addiction treatment (Heinrich & Cummings, 2014), as well as the learning processes and knowledge resources involved in transitioning to new forms of care delivery (such as the PCMH care model) or new

geographic locales (e.g., Gupta & Khanna, 2019; Lanham et al., 2016). Notable within this stream of research is a focus on the impact of robotic technology on learning and professional practice among health occupations, with research demonstrating, for example, how the presence of an innovative drug-dispensing robot can alter the routines and interprofessional interaction dynamics among pharmacists, technicians, and assistants in a hospital pharmacy in ways that require significant reconfiguration of professional boundaries and skillsets (Barrett, Oborn, Orlikowski, & Yates, 2012). In a recent study of robotic surgery, Beane (2019) similarly observed that the use of robotic surgical techniques (compared to older "open" surgical practices) significantly alters the traditional roles and learning practices of surgical trainees, requiring them to engage in norm-challenging "shadow learning" to compensate for the loss of participative learning opportunities that would normally be present in the more traditional open surgery.

Sources of learning in health care. More broadly, research on learning in health care has considered a variety of different sources of knowledge or improvement opportunities, ranging from incidental accumulation of experience to more deliberate learning efforts. Studies of the role of accumulated experience (all published in OS journals, at least among the articles reviewed here) have modeled the impact of surgeons' past experiences on their performance in a current surgery. For instance, Ramdas, Saleh, Stern, and Liu (2018) found that the use of a particular medical device (e.g., a particular brand or type of hip replacement device) that the surgeon had not previously used, or had not used recently, could increase the length of time needed to complete a surgical case, introducing additional cost and potential risk for a patient. Other work has focused on the role of surgeons' prior successes and failures, finding that surgeons seemed to learn more (i.e., have lower patient mortality) from their own cumulative successes (relative to their own failures), but more from others' (i.e., peers') cumulative failures (Diwas et al., 2013). Diwas and colleagues (2013) noted that this pattern is consistent with psychological research on attribution (i.e., the fundamental attribution error), such that surgeons discount the learning value of their own failures and others' successes as being due to uncontrollable external factors such as luck (although the authors also explored the interactive effects of these different forms of experience as complements to one another). Similar arguments about the role of experience have been advanced at the

organizational level of analysis. In our review, two studies with hospitals demonstrate that hospitals learn from their accumulated experience in a particular task (such as negotiating the purchase of a particular medical device; Grennan, 2014) and are more likely to learn from failures when these failures are more distributed (i.e., hospitals are more likely to systematically improve surgical patient mortality when prior deaths are distributed more evenly across surgeons vs. being more concentrated in a small number of surgeons; Desai, 2015).

At the same time, a substantial body of research—across both OS and HC journals—has explored the use of more deliberate learning practices and interventions (i.e., "deliberate activities to create, acquire, or transfer knowledge"; Nembhard & Tucker, 2011: 907) in health care organizations. This includes the study of individual efforts to seek out feedback, expert advice, and new experiences or opportunities in order to improve performance (Wolfson et al., 2018), as well as team practices and interventions to improve reflection on team members' experience ("team reflexivity"), which can help the team generate innovative solutions, collaborate effectively, and improve patient care outcomes (e.g., Schippers, West, & Dawson, 2015; Vashdi et al., 2013). Research by Nembhard and colleagues demonstrates that health care professionals' efforts to engage in this deliberate learning within their unit or organization (i.e., efforts to solicit creative problem-solving ideas or generate solutions internally) benefit patient care outcomes and performance in the long run (Nembhard, 2012; Nembhard et al., 2014; Nembhard & Tucker, 2011). Yet, this work also reveals important caveats to the deliberate learning and performance relationship; the long-run performance benefit might only emerge after a short-run performance decline from engaging in these efforts (i.e., a "worse-before-better" trend; Nembhard & Tucker, 2011), and these internal learning efforts appear better suited to later stages of performance improvement (whereas more externally focused efforts to import others' best practices are more helpful in early stages; Nembhard et al., 2014).

Other research in this area has added further nuance regarding the different manifestations of, and influences of, these deliberate learning practices in health care organizations. For instance, using reports from a sample of health care managers, researchers found that women and men receive different types of deliberately developmental work experiences (e.g., men are more likely to report receiving developmental training experiences related to managing major incidents and emergencies, whereas women are more likely to report receiving training on health and safety; King, Botsford, Hebl, Kazama, Dawson, & Perkins, 2012). Additionally, research in health care journals has highlighted the potential benefit of including patients as key actors in these learning practices, examining the value of patients' (and their families') accounts and perceptions of events as inputs to learning and quality improvement efforts (e.g., Etchegaray et al., 2016; Grob et al., 2019). And, while deliberate learning may manifest in different ways, its effects may also hinge on the context; for instance, formal leadership focused on patient safety is associated with learning from adverse events, particularly in smaller hospitals (Ginsburg et al., 2010).

Health care learning in context and with others. Integrating the different views and conceptualizations of learning in health care organizations evident in these studies, we noted several trends that seemed to be emerging in this area of research. The first is a recognition and treatment of learning as a contextually situated, multilevel phenomenon in health care organizations. Recognizing the importance of contextual influences, many of the studies in this area explore the impact of various situational, structural, or cultural elements in moderating the upstream causes and downstream effects of learning. These studies have shown, for example, how task complexity, work demands, and the physical work environment moderate the effects of team reflexivity on innovation and performance among primary care and surgical teams (Schippers et al., 2015; Vashdi et al., 2013), how hospital size moderates the effects of failure concentration and formal leadership on learning (Desai, 2015; Ginsburg et al., 2010), and how staffing levels, unit climate, and job characteristics moderate engagement in and performance benefits of individuals' informal learning in health care organizations (Wolfson et al., 2019; Wolfson et al., 2018). Moreover, consistent with Edmondson's (2002) notion of the "local and variegated nature of learning in organizations," this body of research has considered not only organization-level learning practices, but also has probed more deeply the individual-, team-, and unit-level processes of learning that unfold in health care organizations (as evident further above), as well as their impact on higher-level outcomes. For instance, some research in this area has modeled how individual characteristics and behaviors influenced team- or unit-level outcomes (e.g., examining how individual personality

and background impact team creativity and implementation of innovation in primary care teams; Somech & Drach-Zahavy, 2013). Other research has used in-depth qualitative methods to illuminate the interpersonal actions and interactions that underlie learning and performance of care delivery teams (e.g., how care team members update their understanding of and handle an unexpected difficulty during simulated patient care; Christianson, 2019), organizations (e.g., how learning is synchronized across different groups through changes to the hierarchy and role obligations; Valentine, 2018), and broader health systems (e.g., how differences in power dynamics and outcome assessments of individuals from various organizational subunits drive organizational learning during the integration of a large health care system; Van de Ven, Bechara, & Sun, 2019).

A second emerging trend evident in these studies is a recognition of learning in health care as a socially influenced process that involves others' experiences, rather than only an actor's own. Organizational research has long been interested in this notion of vicarious learning (see Myers, 2018), and research on learning in health care, across multiple levels of analysis, further reinforces the importance of this social learning process. At the organizational level, studies of the diffusion of new innovations, practices, and standards frequently recognize the social nature of diffusion, demonstrating how hospitals and other organizations are influenced by the behavior of others in choosing whether to adopt electronic medical records (Angst et al., 2010), using particular drugs in treating addiction (Heinrich & Cummings, 2014), or pursuing recognition as a "Magnet" hospital (Lasater, Richards, Dandapani, Burns, & McHugh, 2019). Other work directly examines the benefits of organizations learning vicariously from their peers (i.e., as part of quality improvement collaboratives) and finds that these interorganizational learning efforts have unique impact on patient care outcomes and performance (above and beyond internal learning efforts; Nembhard, 2012; Nembhard et al., 2014). At the individual level, research explores how surgeons learn from others' failures and successes (as described earlier; see Diwas et al., 2013), and specifically examines vicarious learning as part of individuals' informal, field-based learning efforts, demonstrating the conditions under which this vicarious learning can be more or less beneficial for individual performance (Wolfson et al., 2019; Wolfson et al., 2018). Finally, consistent with broader trends toward viewing learning as a more relational,

co-constructed process at work, the reviewed research points to the value of interpersonal learning relationships (e.g., mentoring) and reciprocal learning among care team members (Noël et al., 2013; Snoeren, Raaijmakers, Niessen, & Abma, 2016). Qualitative, ethnomethodological research (LeBaron, Christianson, Garrett, & Ilan, 2016) also details how care providers can flexibly engage in handoff routines to exchange information and co-construct a common understanding about the care of a given patient (consistent with the notion of handoffs as "conversations" rather than "telegrams"; Cohen, Hilligoss, & Kajdacsy-Balla Amaral, 2012).

Cooperation/Coordination

Consistent with the observations of cooperative interpersonal learning, individuals coming together to engage in more general cooperative, coordinated action in service of providing high-quality care has been essential in health care organizations. Indeed, it seems to have taken on even greater importance in the wake of changing regulations and financial incentives for coordinated care stemming from the ACA, particularly in the research we reviewed from HC journals. This work has frequently examined the cooperative behaviors and coordination strategies adopted by health care providers as part of broader structural changes to health care organizations, such as the shift in primary care to the PCMH model (Wagner, Sandhu, Coleman, Phillips, & Sugarman, 2014) or as part of the move to ACO models that financially incentivize organizations to coordinate care and reduce costs (Anderson & Chen, 2019; Lewis et al., 2019).

Results of these different studies generally support the idea that greater coordination among health care providers is performance enhancing. For instance, a randomized trial revealed that care coordination for patients with multiple chronic illness could lead to significantly better medical outcomes, satisfaction with care, and quality of life (Katon et al., 2010). Other work offers complementary perspectives; for example, highlighting the beneficial role of specific behaviors involved in cooperative care within surgical teams (e.g., workload sharing and interpersonal helping) as drivers of surgical quality (mediating the effect of team learning on surgical duration, particularly in highly complex cases; Vashdi et al., 2013). Similarly, research has demonstrated a positive impact of teamwork and coordination on provider satisfaction in primary care (Song et al., 2017). Yet, research has also suggested a need to temper these

performance benefits claims, demonstrating in particular that the beneficial effects of greater coordination may not be evident immediately (Rodriguez, Poon, Wang, & Shortell, 2019), as improvements in patient care outcomes due to increased interdisciplinary collaboration can take multiple years to emerge (Nembhard & Tucker, 2011).

Coordination at multiple levels in health care. Across the studies reviewed, we observed the use of a variety of different specific conceptualizations and measures of coordination. They most generally focus on different levels or patterns of cooperative role-based behavior, enhanced communication, and/or sharing of information and goals among the actors engaged in a patient's care (whether part of a team within one particular arena of care, or working across care settings; e.g., Kolbe et al., 2014; Vimalananda, Fincke, Qian, Waring, Seibert, & Meterko, 2019). One particular conceptualization of this cooperative dynamic among care providers that was frequently studied in our review set was that of "relational coordination," which focuses on coordination among individual health care professionals through "frequent, high-quality communication supported by relationships of shared goals, shared knowledge, and mutual respect" (Gittell, Seidner, & Wimbush, 2010: 491–492). A variety of studies, across different health care settings, have demonstrated that greater relational coordination among providers from different professional backgrounds (i.e., physicians, nurses, social workers, pharmacists, etc.) working as part of a care team is associated with increased quality of care (e.g., Cramm & Nieboer, 2012; Gittell et al., 2010; Noël et al., 2013).

In addition to these studies of interpersonal coordination (i.e., among individual care team members representing different functional or professional backgrounds), research has also considered the causes and consequences of greater coordination at the organizational level (e.g., involving coordination between different hospitals or units of a broader health system, or among multiple health service organizations). For example, inter-hospital collaboration and cooperation can lead to patients being transferred from lower- to higher-capability hospitals to receive higher-quality care (Lomi, Mascia, Vu, Pallotti, Conaldi, & Iwashyna, 2014), while innovations such as publicly posting emergency department (ED) wait time estimates can enhance coordination among multiple hospitals in the same care network by allowing patients to select lower-wait facilities (Dong, Yom-Tov, & Yom-Tov, 2018). Similarly, greater interorganizational collaboration

between health care organizations and other social service organizations (i.e., aligning strategy and coordinating current work between these different types of organizations in a region or area; Brewster, Tan, & Yuan, 2019) has been shown to improve patient care outcomes, with evidence indicating that the presence of denser multisector collaborative networks of health care and social service organizations in a given community is associated with reduced health care spending and preventable deaths (Brewster, Yuan, Tan, Tangoren, & Curry, 2019; Mays, Mamaril, & Timsina, 2016).

Drivers of coordination in health care. Though much of the research on coordination in health care organizations has emphasized the beneficial outcomes of cooperative behavior, we noted a trend in this area of work (and particularly among studies published in OS journals) of exploring antecedents and processes of coordination in organizations. For instance, researchers have examined how broader contextual characteristics such as organizational support and emphasis on patient-centered care (Weinberg, Cooney-Miner, Perloff, Babington, & Avgar, 2011) or the demographic and professional characteristics of a unit (e.g., the extent to which members belong to higher- or lower-status professions within health care, and the intersection of professional differences with demographic group memberships; DiBenigno & Kellogg, 2014) influence the degree and quality of collaboration in health care settings. Other work has considered how specific actions or interventions influence coordination and subsequent performance, such as implementing deliberate learning practices (which have been shown to influence care outcomes through their effect on collaboration; Nembhard & Tucker, 2011), or leaders communicating clear vision and values (finding that visions imbued with stronger imagery and a more manageable number of values predict hospital care outcomes, an effect shown in a nonhospital context to be mediated by shared goals and coordination; Carton, Murphy, & Clark, 2014).

Finally, research in this area has also begun to unpack the different ways that cooperation and coordination can manifest in health care settings—recognizing, for instance, that different organizational structures deployed to provide health care services can generate correspondingly different areas of emphasis for coordination (e.g., the particular service line structure dictates the nature of the coordination problem to be solved; Louis, Clark, Gray, Brannon, & Parker, 2019). Often drawing on qualitative methods, research in this area has also probed

the way various norms, structures, and practices (such as the presence of different clinical and non-clinical leadership roles or the use of handoffs for transferring care among providers over time) influence the focus and enactment of collaborative behavior among health professionals (LeBaron et al., 2016; Mitra, Hoff, Brankin, & Dopson, 2019), as well as how the changing nature of health care structures and practices (and specifically the introduction of robotic technologies) alter existing patterns of collaboration (Barrett et al., 2012; Beane & Orlikowski, 2015), helping to build a robust understanding of the micro-dynamics of cooperative behavior in health care settings.

Teams and Other Structures

The question of how to structure work dates back to the beginning of the field of organizational science (March & Simon, 1958; Simon, 1957; Taylor, 1911). Moreover, as noted above, the study of structures in health care is motivated by the potential for those structures to support effective cooperation and coordinated action. Yet, challenges to structuring work abound in health care, given the increasingly specialized nature of the context, wherein care must be integrated across sometimes-wide knowledge and status boundaries (DiBenigno & Kellogg, 2014; Rosen et al., 2018). Furthermore, it can be difficult to impose a particular structure on the requisite multidisciplinary groups, as a lack of consensus around who should be involved in patient care can lead individuals to act with discretion to involve (or not) other professions and specialties (Kim, 2020). Compounding that uncertainty is the short-lived nature of many interactions. Shift-based work and training rotations can lead to the constant reconstitution of groups, and an individual's contributions to a patient's care may be fleeting (Bedwell, Ramsay, & Salas, 2012).

Despite the dynamic nature of health care, the research reviewed here includes 28 papers (16 in organizational science outlets, 12 in health care) that explore the role of basic organizational structures ("descriptions of and templates for ongoing patterns of action"; Barley & Kunda, 2001) as well as specific team structures, in settings ranging from primary care to long-term care and operating rooms, EDs, and medical-surgical units in hospitals.

Basic structures for organizing work. Much of the research in this area sheds light on basic structures for facilitating coordination, including routines, roles, and hierarchy. The research reviewed on routines has tended to focus on the potential benefits of standardized routines in the form of checklists, and, while using checklists alone has mixed effects (Arriaga et al., 2013; Cavalcanti et al., 2016), using checklists coupled with training may be more beneficial in improving care outcomes (Neily et al., 2010). Still other research highlights the role of emergent and implicit patterns of behavior that can distinguish between higher- and lower-performing groups (Kolbe et al., 2014). Importantly, these established ways for working (whether explicit or implicit) need not be static, as has been found in the case of individuals within surgical clinics who intentionally change their treatment routines (Bucher & Langley, 2016). Given the rapid pace at which best practice evolves in health care, the updating of routines is likely critical.

In addition to routines, roles are a nearly constant structure for organizing work in health care, but those roles can be ambiguous and overlapping. For example, research has documented the disagreement across professions (nurse practitioners and physicians) about the role of nurse practitioners, particularly in response to policy changes to the allowed behaviors of nurse practitioners (Donelan, DesRoches, Dittus, & Buerhaus, 2013). To this end, research has emphasized the importance of clarifying roles (Donelan et al., 2013) and negotiating roles over time—for example, as an organization shifts to using multidisciplinary teams (Chreim et al., 2010).

Hierarchy, a final basic structure covered in the research reviewed, is a ubiquitous feature of health care organizations, whether derived from informal status or formally assigned authority, and can serve to establish roles that impact coordination. For example, Leroy et al. (2012) found that a team's leader (head nurse) "walking the talk" regarding safety increases team prioritization of safety and subsequently leads to fewer reported errors; but, simultaneously, this behavior leads to more team psychological safety and subsequently more willingness to admit errors when they do happen.

Teams. In addition to research on basic organizational structures, a growing set of studies has been focusing on teams in health care (see also Rosen et al., 2018), often citing increasing attention to the use of team-based care as a rationale for the given study. Despite this acknowledged trend, some research continues to question the efficacy of team-based models of care on the basis that their value is "not yet firmly established" (Reiss-Brennan et al., 2016). Using this rationale, Reiss-Brennan and colleagues (2016) tested the efficacy of using a team-based

model of care to integrate physical and mental health care, and found it to be associated with improved quality of care, less utilization of primary care, and lower cost of care. Of note, the authors highlighted that some facilities in their study faced challenges to adopting team-based care, in that many insurance systems lacked a mechanism for billing for collaborative services, effectively disincentivizing collaborative work. This impact of the larger system on the adoption of a team structure is echoed in research that describes efforts around increasing team-based care as a part of a broader structural change within accountable care organizations (Lewis et al., 2019).

Related to understanding the systems within which teams are embedded, a substantial amount of the reviewed research explores boundaries around teams and other team-like collaborations. Team boundaries are commonly prescribed to be clear and stable (e.g., see Valentine & Edmondson, 2015), and, although the research we reviewed reveals an exploration of the perhaps more realistic fuzziness of boundaries, a common theme emerging from the research is an emphasis on instilling some kind of stability. For example, research exploring the boundaries both between and within organizations demonstrates that performance is better when hospitals clarify organizational boundaries by hiring hospitalists (vs. using non-employee physicians who are encumbered by logistical challenges), and when they bound those employed physicians in a multidisciplinary service (vs. using groups of specialists that must constantly negotiate their roles and interdependencies; Louis et al., 2019). Similarly, research finds that, when individuals of varied professions are assigned to a single, clearly defined team, unit-level performance is greater than when boundaries are blurred by individuals contributing to multiple teams at once (Crawford, Reeves, Stewart, & Astrove, 2019). To coordinate in the midst of short-lived, role-based work in EDs, Valentine and Edmondson (2015) again found value in imposing a boundary: "pods" (or de-individualized sets of specific roles: physicians and nurses) can effectively bound a group and were found to facilitate both teamwork (within the interprofessional pods) and ED throughput, despite rapid turnover in the individuals filling each role within the pods (Valentine & Edmondson, 2015). Additionally, and again consistent with the theme that boundaries are beneficial, research has found that clearly bounding the set of teams involved in a multi-team system can enhance coordination within and between those teams (Jones et al., 2019).

Group composition—and, specifically, group diversity—is another team feature prominently explored in the research reviewed. Group diversity can harm a variety of outcomes due to related social categorization and status differences (e.g., white and male primary care physicians receive higher patient satisfaction ratings than their nonwhite and female counterparts; Hekman, Aquino, Owens, Mitchell, Schilpzand, & Leavitt, 2010), cognitive gaps that give rise to conflict (e.g., a supervisor's perceived cognitive dissimilarity with a subordinate is associated with more relationship conflict, worse performance evaluations, and more abusive supervision; Tepper, Moss, & Duffy, 2011), or both (aligned demographic and occupational differences can reinforce status differences and thereby impair collaboration; DiBenigno & Kellogg, 2014). At the same time, professional diversity has become elemental to health care, offers the potential for integrating specialized expertise and varied perspectives, and can enhance creativity (Somech & Drach-Zahavy, 2013) and performance (Compagni, Armeni, & Tasselli, 2019). To make sense of diversity's mixed effects, research has turned to not only asking whether diversity is helpful, but how and when. For example, Compagni and colleagues (2019) found that professional diversity in an overall health care team improves performance when it is associated with more frequent (but not too frequent) communication within a core subgroup of physicians. Others have highlighted the contextual factors that determine the effectiveness of diversity, such as the role of open-mindedness in tilting the effects of diversity from negative to positive (Mitchell & Boyle, 2015), and the role of demographic compilation across subgroups that determines the effectiveness of a professionally diverse group (DiBenigno & Kellogg, 2014; King, Dawson, West, Gilrane, Peddie, & Bastin, 2011).

The teams research reviewed here also included a focus not on the structure of teams, but the team processes that can yield beneficial outcomes. These processes included team learning that can reduce the duration of procedures (Vashdi et al., 2013) and reflexivity that can enhance innovation (Schippers et al., 2015), emergent patterns of behavior that support updating in response to surprises (Christianson, 2019), and general teamwork that follows from a culture of compassionate love (Barsade & O'Neill, 2014). In line with work reviewed on both learning and cooperation/coordination, these team processes are typically found to be beneficial, though their effects can hinge on contextual features such as the

work climate (Schippers et al., 2015; Somech & Drach-Zahavy, 2013).

Lastly, scholars have examined "team trainings" that can provide individuals with the skills needed to work effectively within a team structure (see also Shuffler, Diazgranados, Maynard, & Salas, 2018, for a broad review of team development interventions). In the work reviewed, team trainings are shown to enhance individual and team processes as well as patient and organizational outcomes such as mortality rates and time of procedures (Hughes et al., 2016; Neily et al., 2010). Moreover, these findings are robust to the training strategy, physical fidelity of simulations, and whether the targets are clinicians versus students and working in interprofessional versus homogeneous groups (Hughes et al., 2016). The content of team trainings, however, is shown to alter effectiveness; the inclusion of feedback, which may increase anxiety, can detract from effectiveness (Hughes et al., 2016), whereas the inclusion of briefings along with training about communication strategies may be particularly beneficial to improving proximal collaboration processes and outcomes (Neily et al., 2010).

The shifting structures of dynamic health care contexts. We uncover several trends in our review of research on teams and other structures. First, there is an emerging undertone of appreciation for the instability of health care structures. For example, the reviewed research suggests that routines can and perhaps should evolve (Bucher & Langley, 2016), that occupational roles evolve (Chreim et al., 2010), and that individuals actively manage boundaries around their unique occupational roles as work becomes more integrated (Compagni et al., 2019). Researchers are also acknowledging the importance of frequent team membership changes (Valentine & Edmondson, 2015; Vashdi et al., 2013). In short, organizing work in the stable and bounded structures known to support effective performance (e.g., Hackman, 2011) may not be feasible in many health care contexts, which raises new questions. For example, the instability of health care teams calls into question the benefits of organizing work in teams at all, and the general approach to understanding and cultivating teamwork may require new theory. To this end, research has begun to explore new theory for understanding learning in short-lived teams (Vashdi et al., 2013), the "meso-level structures" of de-individualized role sets that can support teamwork in the absence of formal team structures (Valentine & Edmondson, 2015), and the team training that creates individual capabilities that can be

transferred from team to team (Hughes et al., 2016). Overall, the research we reviewed reflects a trend toward appreciating what Langley, Lindberg, Mørk, Nicolini, Raviola, and Walter (2019) would call "boundary work" to manage the unstable boundaries around professions (e.g., Compagni et al., 2019), teams (e.g., Valentine & Edmondson, 2015), and organizations (e.g., Epané et al., 2019)—a trend critical to understanding organizational challenges in health care and developing theory that will generalize across health care settings and to other highly dynamic industries. In doing so, this work begins to address the need to understand more fluid ways of organizing (Traylor, Tannenbaum, Thomas, & Salas, 2021).

A second trend is an emerging multilevel view of providing care. This trend is evident in research that examines variables at multiple levels at once (Hekman et al., 2010; Hughes et al., 2016) and that takes account of the interdependencies of the *system*. For example, research has explored personnel interdependence between teams as individuals contribute to multiple teams simultaneously (Crawford et al., 2019), task interdependence as multiple teams must work together to provide patient care in a multi-team or multi-unit system (Jones et al., 2019), and the interdependence between an organization and non-employee physicians contracted to provide care within the organization (Epané et al., 2019; Louis et al., 2019).

Performance

Embedded in the research highlighted in the preceding sections is a shared assumption that these organizational concepts and efforts (e.g., engaging in greater learning or deploying a new team structure to better coordinate action in the face of ongoing change) are valuable insofar as they enhance individual or collective performance in health care. Correspondingly, our mapping of the OSHC field reveals that performance features squarely as one of the most prominent OSHC topics—of the 685 papers identified in our search, 16% (18% in OS outlets; 15% in HC outlets) focus on the study of performance. The research that we examined in depth and review here includes 33 papers (11 in OS outlets, 22 in HC outlets). This research reports on, nearly exclusively, quantitative research (cf. Dixon-Woods, Leslie, Bion, & Tarrant, 2012) exploring a variety of performance metrics in health care. The empirical measures employed range from financial outcomes and costs—typically, for an organization or patient—to

general assessment of an individual's job performance (e.g., supervisor ratings; Colquitt, LePine, Piccolo, Zapata, & Rich, 2012), to a host of metrics thought to capture the "quality" of care. Measures described as indicating quality care include efficiency (e.g., length of stay; Gittell et al., 2010), care provider adherence to evidence-based practices (Compagni et al., 2019), and both objective patient outcomes (e.g., mortality rates; Jha & Epstein, 2010) and subjective ratings (e.g., patient satisfaction; Reilly, Nyberg, Maltarich, & Weller, 2014).

Unlike other topic areas reviewed (e.g., the work on teams and other structures reviewed above) that tend to focus on units of analysis within an organization, the research on performance also examines interorganizational dynamics and community-level assessments of performance (Brewster, Tan, & Yuan, 2019; Brewster, Yuan, et al., 2019), as well as including assessments for which the patient is the unit of analysis (e.g., performance metrics include cost per patient, patient satisfaction, patient health outcomes, and patient length of stay; Gittell et al., 2010; McWilliams Hatfield, Chernew, Landon, & Schwartz, 2016; Zhou, Kanter, Wang, & Garrido, 2010).

While, in some research, the different measures of performance are lumped together within a single measure (King et al., 2011), other researchers include multiple facets of performance in a single study, even exploring the relationship between them (e.g., how a measure of patient outcomes and adherence to best safety practices relates to hospital profitability, Beauvais et al., 2019; how objective performance measures relate to patient satisfaction, Hekman et al., 2010).

Drivers of performance. The reviewed research points to a multitude of performance drivers, which we organize into three overarching groups: (1) system-level features, (2) organizational design, and (3) organizational behavior. First, research suggests that system-level features of health care organizations can impact organizational performance. Research (notably all published in HC outlets) has explored the effect of shifts to the types of value- or outcome-based payment models promoted by the ACA's passage. These programs have been shown to increase adherence to best practices, reduce subsequent hospitalization, and decrease costs, with mixed effects on patient perceptions of care (Bonfrer et al., 2014; McWilliams et al., 2016; Soeters, Peerenboom, Mushagalusa, & Kimanuka, 2011). Further, research has suggested the possibility of positive spillover effects both from incentivized to non-incentivized care practices

within an organization, and from incentivized to non-incentivized organizations (Kristensen et al., 2014). That said, there are varied means for rewarding performance, and pay-for-performance models are not uniformly effective (Bonfrer et al., 2014; Kristensen et al., 2014), suggesting a need for greater attention to what is being incentivized and the latitude of the incentivized individuals to make relevant changes. In addition to payment models, the systems' workforce flow—hiring, transfer, and voluntary turnover rates—can alter performance by affecting job demands both in the near and long term (Reilly et al., 2014), whereas duty hour reform that does not change the overall workforce pool, but does restrict hours worked by residents, might *not* impact patient outcomes and resident examination performance (Rajaram et al., 2014).

Organizational design is a second key feature to emerge in the reviewed research as a predictor of performance. In accordance with our earlier review of work on teams and other structures, the research on performance suggests that it is associated with the structure of work units. For example, earlier assignment of ED patients to physicians, along with dedicated nurses and beds, can reduce patient wait times and lengths of stay (Song, Tucker, & Murrell, 2015). In contrast, in primary care, care provided by individuals assigned to multiple teams at once (as opposed to a clear and stable team) is associated with subsequently more visits to EDs and urgent care (Crawford et al., 2019). Further supporting the idea that clear boundaries can improve performance, the employment of hospitalists (vs. the use of contracted physicians from outside of the hospital) is shown to be more costly, but this cost was outweighed by revenue gains such that using hospitalists is associated with better organizational financial performance (Epané et al., 2019). Finally, the compositional makeup of a work unit relative to its patient population can affect how care providers behave, and thus impact performance. For example, demographic representativeness of hospitals was shown to affect the extent to which patients are treated civilly, and thereby impact ratings of the quality of care and the extent to which resources were used effectively (King et al., 2011).

Lastly, individual and collective behaviors throughout the health care system can support performance. Leadership, particularly at the top of the organizational hierarchy, emerges in the literature we reviewed as a strong predictor of organizational performance. Multiple studies demonstrated that hospital board and managerial practices that emphasize quality are associated with better hospital

adherence to established evidence-based practices (Jha & Epstein, 2010; Tsai, Jha, Gawande, Huckman, Bloom, & Sadun, 2015). Management practices that focus on succession management (e.g., top management team engagement, selection, and onboarding practices) have also been linked to organizational performance in terms of patient satisfaction and costs (Groves, 2019). Similarly emphasizing the role of leadership at the top of organizational hierarchy, CEO rhetoric (strong imagery and a small number of values) has been found to reduce readmissions (Carton et al., 2014). Additionally, top management practices (e.g., clearly defining strategy, providing feedback, encouraging knowledge sharing, and involving department heads in decision-making) are associated with better hospital performance, which may be explained by department heads' increased awareness of organizational goals (Vainieri, Ferrè, Giacomelli, & Nuti, 2019). General top-down directives (e.g., encouragement to report errors) are also linked to reduced hospital mortality (Toffolutti & Stuckler, 2019), and the effect of leadership permeates throughout levels of an organization—the perception that one's supervisor is more just is associated (via trust, commitment, and uncertainty) with better job performance ratings from that supervisor (Colquitt et al., 2012).

In addition to leadership, practices related to the use of technology and communication can have substantial effects on performance. For example, the adoption of EHR systems has been shown to relate to better process adherence and patient satisfaction (Adler-Milstein, Everson, & Lee, 2015), and secure patient–physician emailing through an EHR is associated with better performance, as assessed by measures of adherence to best practices (e.g., screenings for glycated hemoglobin) and patient outcomes (e.g., glycemic control; Zhou et al., 2010). More broadly, Senot, Chandrasekaran, Ward, Tucker, and Moffatt-Bruce (2016) found, in research in a hospital setting, that the specific type of caregiver–patient interaction has important implications. The authors found that caregivers engaging in meaningful conversations with patients is beneficial, complementing efforts to adhere to evidence-based practices. Yet, caregivers responding to specific patient needs seems to compete for resources with adherence to best practices, thus fueling a trade-off between reducing readmissions and decreasing costs. The communication among care providers, too, is important. Professional diversity in a primary care team can (when there is some but not too much communication within a subgroup of general physicians) increase adherence to

practices deemed part of the "optimal care" for diabetic patients (Compagni et al., 2019).

Further suggesting the importance of communication, a series of studies examines multifaceted measures that are made up of a variety of elements—including communication (e.g., information sharing, teamwork)—that are combined in a single measure and that predict performance (e.g., high-performance work practices, Gittell et al., 2010; Leggat, Bartram, Casimir, & Stanton, 2010; patient safety culture, Li, Cen, Cai, & Temkin-Greener, 2019; and civility climate, Oppel, Mohr, & Benzer, 2019). As noted in our earlier review of research on learning, we also find here that individuals' engagement in informal learning can enhance individual job performance (as rated by supervisors; Wolfson et al., 2019), while, at the unit level, deliberate learning can enhance unit performance (Nembhard & Tucker, 2011). As also noted previously, these positive effects may hinge on contextual factors such as time pressure (Wolfson et al., 2019), and may take time to manifest (Nembhard & Tucker, 2011).

Performance as a multidimensional construct. An important trend we observed among these studies is a grappling with what characterizes effective performance, broadly, and "quality" care, more specifically. We perceived two key issues. The first concerns the growing list of ways to measure performance or quality; researchers have taken to including explicit caveats about the uncertain generalizability of their findings about one measure of performance to others not included in the study (e.g., see Nembhard & Tucker, 2011). The second issue relates to the rise in using subjective measures such as patient or provider ratings of care quality. The subjective nature of such ratings may be problematic due to their bias (Hekman et al., 2010), but other research has also called into question the precision of "objective" measures of performance. For example, Dixon-Woods and colleagues (2012) used an ethnography to explore what organizations do when they calculate and report central venous catheter bloodstream infections. They found that "the definitions for classifying infections used were seen as subjective" and, "despite being given explicit and widely used definitions, the participating units were not counting the same things in the same way" (Dixon-Woods et al., 2012: 548, 580).

Perhaps in response to the seemingly increasing ways of measuring performance and the lack of an ideal single metric, research we reviewed calls for treating quality (or performance, broadly) as a multidimensional construct, and also demonstrates the

value in so doing (e.g., see Senot et al., 2016; Vainieri et al., 2019). These explicit calls align with a general trend to include multiple measures of quality within a single study, either as a composite measure (King et al., 2011; Vainieri et al., 2019), or as separate indicators (Brewster, Yuan, et al., 2019; Gittell et al., 2010; Groves, 2019; McWilliams et al., 2016; Senot et al., 2016; Soeters et al., 2011). Given that payment models are shifting to performance-based models of payment, a more sophisticated appreciation of (a) the multiple facets of performance and (b) which levers affect which specific performance metrics is both apt and should enhance our ability to cultivate more effective health care organizations.

TAKING STOCK OF OSHC RESEARCH

We have mapped the general landscape of the OSHC field and reviewed key findings from its prominent topics, shedding light on the breadth of knowledge that has accrued at the intersection of organizational science and health care research. We now step back to more broadly synthesize the research we reviewed. In the next section, we articulate several related themes that emerged—specifically, that organizational dynamics in health care are patient centered, dynamic, and highly specialized—and also identify important points of difference and fragmentation across research published in OS versus HC outlets.

Emergent Themes

Patient centered. A first clear theme emerging in our review of OSHC research is that this work commonly interprets the outcomes of organizational efforts with respect to patients' (or the population's) satisfaction and health outcomes, privileging an overarching view of performance as the delivery of effective patient care in health care settings. Although researchers acknowledge performance as a multifaceted construct (as noted earlier), when they study performance metrics other than patient health outcomes, they justify the inclusion of those metrics as indicators of performance by suggesting a relationship with patient care (e.g., surgery lengths are a relevant outcome to study in that they are associated with better patient outcomes; Nembhard et al., 2014). This tendency to explore organizational work and associations with patient outcomes is consistent across the research reviewed on organizational change (e.g., Rathert et al., 2019), learning (e.g., Nembhard & Tucker, 2011), cooperation/coordination

(e.g., Katon et al., 2010; Vashdi et al., 2013), as well as teams and other structures (e.g., Crawford et al., 2019; Song et al., 2015).

Though this emphasis on patient outcomes is perhaps not surprising (particularly to scholars in health disciplines), it reflects a distinct approach within organizational research. While organizational science frequently emphasizes outcomes in terms of finances, this emphasis is often tempered in OSHC research—for instance, by examining both costs and patient outcomes in a single study (Adler-Milstein et al., 2015) or combining the two in a composite performance measure (Groves, 2019; King et al., 2011; Vainieri et al., 2019). Additionally, although a significant body of research in organizational science examines outcomes such as customer satisfaction, the role of the customer more generally in organizational research is not manifest to the same degree as that which we observed in our review (where we might consider the patient to be the primary "customer" of a health care organization's work). Although some scholars claim that the role of the patient is likely to remain "more [one] of victims than partners" (Wears & Sutcliffe, 2019: 193), other scholars recognize efforts to integrate the patient into the work of health care (Etchegaray et al., 2016; Grob et al., 2019), highlighting the unique role the recipient of care services plays in these organizational settings (in ways that may generate organizational dynamics not seen in other industry settings). Furthermore, the criticality of patient outcomes and satisfaction in health care settings may breed an intolerance to poor "customer satisfaction." That is, interventions or experiments that improve financial performance at the expense of customer satisfaction or product quality might be acceptable in another setting but would likely not be tolerated in a health care organization. This encapsulates the view, evident throughout OSHC research, that the organizational work done in health care carries serious consequences for patients, correspondingly placing great importance on the application of organizational findings for patient care and other related measures of performance (as well as a need for understanding connections among different performance metrics).

Dynamic. The high-stakes nature of much of the work in health care settings may also yield a sense that existing knowledge is never good enough, producing an assumption that there is always a need to change and improve. Indeed, the hope for improved patient care underlies constant changes in health care organizations as structures and practices shift (driven both from the top down and bottom up). The result

(and our second key theme) is a highly dynamic context in which the work of patient care unfolds. This dynamism is pervasive, spanning organizational levels, including macro-level changes to organizational forms (e.g., introduction of PCMHs; Lanham et al., 2016), regulations (e.g., expansions of nurse practitioner scope of practice; Donelan et al., 2013), and incentive structures (e.g., shifts to value-based payments; Bonfrer et al., 2014; Kristensen et al., 2014; McWilliams et al., 2016; Soeters et al., 2011). Likewise, at a "meso" level, research points to changes in team structures (e.g., introduction of team-based care, Reiss-Brennan et al., 2016; and frequent reconstitution of team membership, Valentine & Edmondson, 2015; Vashdi et al., 2013), routines (e.g., changes in treatment practices; Bucher & Langley, 2016), and the integration of new technologies (e.g., the introduction of robots conducting pharmaceutical or surgical tasks; Barrett et al., 2012; Beane, 2019) as key features of the organization of health care. Other research has also noted micro-level changes to individual's roles (Chreim et al., 2010; Donelan et al., 2013). Overall, both the reality of this dynamism in health care as well as its attendant challenges for organizing and enacting high-quality patient care underscore the importance of research on organizational change and learning in these settings.

Specialized. Navigating this dynamic context is challenged by the fact that the work of health care organizations is also highly specialized—commonly enacted through de-individualized roles or professions (e.g., see Donelan et al., 2013; Valentine & Edmondson, 2015) and dispersed across functional units (e.g., Richter et al., 2016), organizations (Lomi et al., 2014), and even sectors (e.g., Brewster, Yuan, et al., 2019). As noted in a recent review (Singer, Kerrissey, Friedberg, & Phillips, 2020), this specialization and dispersion (our third key theme) occurs both within organizations and across them, and it creates a critical need for integration to facilitate the provision of care. For example, different factions of professionally diverse teams, units, or clinics must develop and adapt structures and organizing practices that support learning and effective coordination (Compagni et al., 2019; Cramm & Nieboer, 2012; DiBenigno & Kellogg, 2014; King et al., 2011; Mitchell & Boyle, 2015; Noël et al., 2013; Vimalananda et al., 2019). This need also extends beyond organizational walls, highlighting the nature of health care organizations as part of a larger system of work coordination that can span hospitals and industry sectors (Brewster, Tan, & Yuan, 2019; Brewster, Yuan, et al., 2019; Dong et al., 2018; Lomi et al., 2014). Overall,

the specialized nature of organizing in health care creates a need for (often highly complex) integration and coordination processes, highlighting the importance of research on teamwork, cooperation, and the structures that support these behaviors.

Disciplinary Distinctions

Despite unearthing the above-noted themes, we observed significant variation across the research published in OS and HC journals—both in terms of the particular organizational topics that were more prevalent in each set of outlets, and in the approach taken to conducting OSHC research. As noted in our initial mapping of the OSHC landscape and cross-domain comparison of the topics studied, some topics are covered disproportionately by one discipline or the other. For example, though the topics of incentives and communication have been frequently studied in articles published in HC outlets, these topics are largely absent from research reported in OS outlets. In contrast, the topics of emotion and decision-making emerge among the top 10 most studied topics in research published in OS outlets, but are rarely covered in the reviewed research that was published in HC outlets. This siloing of attention (particularly on topics that seem fundamental to the effective functioning of health care organizations) risks the creation of echo chambers, and could impede the development of more nuanced, robust knowledge that might arise from integrating perspectives on these topics across disciplines.

However, even among topics that we found had received attention in both OS and HC outlets, we observed several consistent differences in the way research on these topics was approached in the work published in OS versus HC journals. Though not universal or exclusively applicable, these differences seem to point to two general disciplinary orientations to the study of OSHC arising within each domain of scholarship, differing in their emphasis on (a) generalizable theory (OS) versus contextualized problems (HC), and in their emphasis on (b) organizing (OS) versus organizations (HC).

Generalizable theory versus contextualized problems. The first difference in the research studies we reviewed was in the emphasis on generalizability (more prevalent in OS journals) versus contextualization (more prevalent in HC journals). Research in HC outlets has tended to emphasize the contextualized problem being studied in a particular type of health care setting (e.g., ACOs, Lewis et al.,

2019; nursing homes, Li et al., 2019), belying an assumption of a lack of generalizability across different health care settings (though notably assuming generalizability within a particular type of setting). For example, Cramm and Nieboer (2012: 301) motivated their study by emphasizing the importance of understanding coordination in a primary care setting, specifically noting:

> Previous studies have shown that relational coordination is positively associated with the delivery of hospital care, acute care, emergency care, trauma care, and nursing home care. The effect of relational coordination in primary care settings, such as disease-management programs, remains unknown.

As this quote illustrates, we found the research reported in HC outlets often uses concepts and approaches from organizational science (in this case, relational coordination) to address specific problems in what researchers identify as unique settings within health care (in this case, primary care settings). These specific settings tend to feature prominently in the positioning and description of the research, often appearing directly in the title of the article. In contrast, in the research we reviewed from OS outlets, we found that the context of the study is typically absent from the article title, and even (in some cases) the paper's abstract. Rather than motivate the work around a contextualized problem, we found these OS articles tend to primarily emphasize the theoretical phenomenon and to relegate mention of the health care setting to the description of the methods. Many of the OS articles went so far as to describe the health care context as a significant limitation of the work, suggesting the necessity of future research in other contexts to affirm the generalizability of the study's findings (as examples, see Somech & Drach-Zahavy, 2013; Van de Ven & Poole, 1995; Wolfson et al., 2019).

Similarly, although we observed a general trend toward patient-relevant performance measures (as noted above), research examining performance by directly assessing costs (e.g., costs per patient in a particular setting), patient outcomes, patient satisfaction, or adherence to established best care practices—notably all fairly contextualized measures—appears relatively more frequently in HC outlets. In contrast, the performance measures studied relatively more frequently in OS outlets tend to align with general measures used across industries, such as measures of productivity (e.g., efficiency, for instance captured as length of hospital stay; Gittell et al., 2010) or general, supervisor-rated performance

measures (e.g., Wolfson et al., 2019; Wolfson et al., 2018).

Organizing versus organizations. The second disciplinary difference is what we perceived to be a fundamental difference in the meaning of "organizational" in the study of organizational science in health care. Research published in OS journals appears to more often focus on underlying mechanisms and processes of *organizing*—how individuals and units behave and interactively shape individual, unit, organizational, and patient outcomes (e.g., how individuals change routines, Bucher & Langley, 2016; or how teams develop new processes for their work, Schippers et al., 2015). Broadly, by favoring organizing, this research explores the agentic actions of—and patterns of interaction among—individuals and units, which give shape to what we think of as the organization (e.g., the emergent patterns of interaction within a team can delineate subgroups and shape team outcomes; Compagni et al., 2019). In contrast, the research published in HC journals more often explores the direct effects, at the organizational level, of various structures, characteristics, or practices of *organizations* (e.g., standardized checklists, Cavalcanti et al., 2016; staffing a hospital with hospitalists or non-employee physicians, Louis et al., 2019; or the imposed use of teams vs. no use of teams, Reiss-Brennan et al., 2016). In this way, research in HC outlets tends to explore the consequences of formal features that comprise an organization and what causes organizations to have the features they do (e.g., Jensen et al., 2015; Wise et al., 2011).

This differentiation aligns with longstanding perspectives on the different—but potentially complementary—ways of modeling or studying organizations, such as Scott's (1981) notion of viewing organizations as natural systems (aligned with the *organizing* orientation we observed in OS journals) versus rational systems (aligned with the *organizations* orientation in HC journals). For example, a closer look into the clusters of work that emerged from our broad review of the field of OSHC (the set of topics that frequently co-occurred in the articles found in our data set)—such as the cluster encompassing the topics of safety, culture, and stress/strain—reveals varying research questions, designs, and conclusions across disciplines. The research focusing on safety and culture—topics that are more geared toward understanding the effects of an organization's practices and characteristics[6]—was

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[6] Though we recognize that units and groups within an organization certainly can and do develop their own

more commonly found in HC journals, with OS journals publishing relatively more work on stress/strain—topics that are more amenable to being modeled and understood at lower levels of the organization. In this way, the two domains may be studying different sides of the same coin, but with different approaches, resulting in the use of different levels of analysis (e.g., organizational vs. individual) or analytical approaches (e.g., variance vs. process models) across HC and OS research.

A Fragmented Field

Beyond these differences in conceptualization or orientation toward studying OSHC, our review also revealed empirical evidence of the fragmented, disconnected nature of research in OS versus HC disciplines. Specifically, this fragmentation of the field was evident in the citation patterns of the 114 papers reviewed in depth across the five prominent topics that emerged from our mapping of the field of OSHC. We compiled the 7,024 total references appearing in those 114 articles, and specifically identified references to articles in one of the 16 key journals we included in our field-level review (excluding journal self-citations), coding the reference's domain as OS or HC accordingly. To examine the diffusion of ideas across domains, we used this set of cross-journal references to create a network and applied a clustering analysis (using the R function *cluster_optimal*). This revealed three clusters of journals based on likelihood of cross-journal citation (see Figure 2). One cluster reflects the eight health care journals included in our review, while the organizational science outlets split into two clusters that we refer to as "organizational psychology journals" (*Journal of Applied Psychology*, *Journal of Organizational Behavior*, *Organizational Behavior and Human Decision Processes*, and *Journal of Management*) and "management journals" (*Academy of Management Journal*, *Administrative Science Quarterly*, *Management Science*, and *Organization Science*).

Examining the cross-domain citation patterns among these journals, we found that, among the 51 OS articles we reviewed in depth (across our five prominent topics), only 2% of the references were to articles published in one of the eight HC journals that we examined in our review (vs. 26% of references to articles appearing in one of the eight OS

journals we reviewed). Similarly, when examining the 63 HC articles in our in-depth review, only 6% of the references were to research published in one of the eight OS journals that we focused on (vs. 17% of references to articles appearing in one of the eight HC journals).
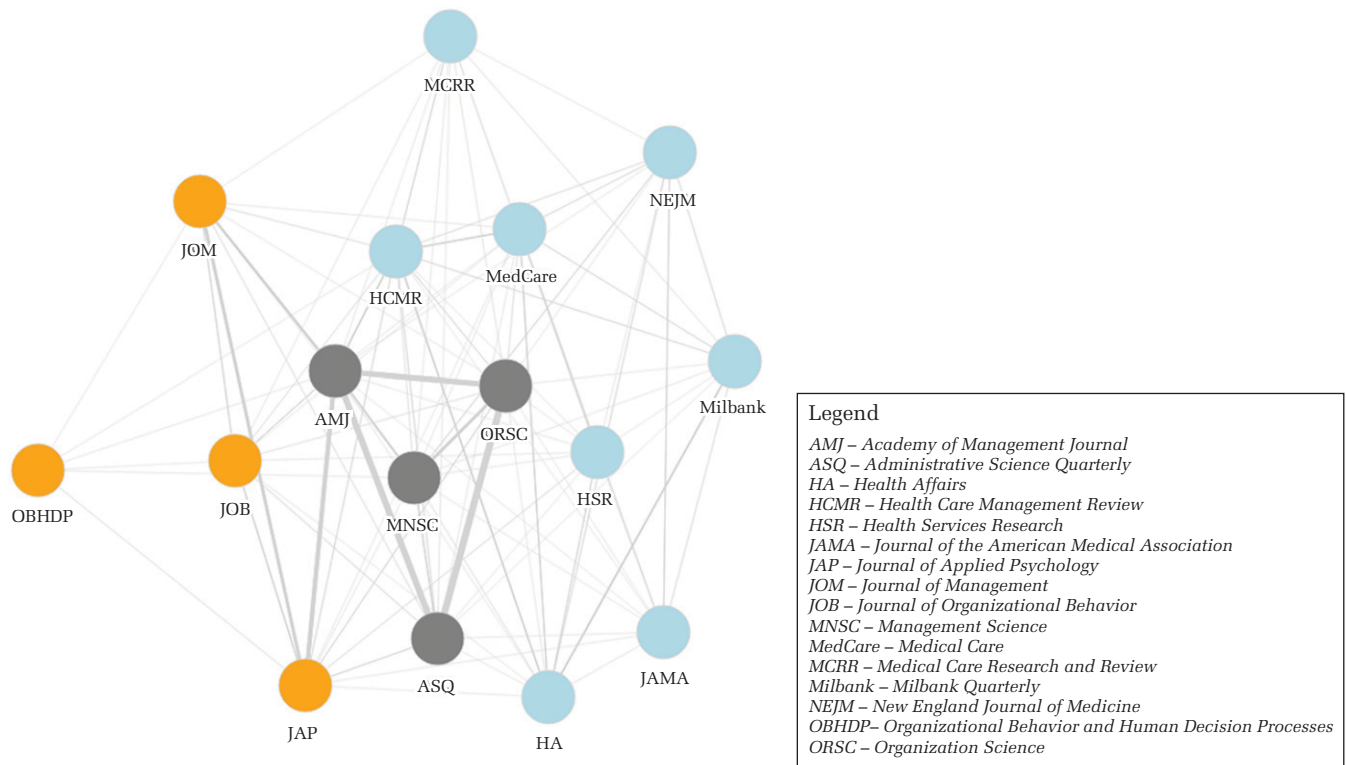
This relative insularity in citation patterns (likely reflecting a corresponding lack of idea diffusion across disciplines) also extends to the common "roots" and theoretical underpinnings of this research. For example, among the 114 articles we reviewed in depth, Edmondson's (1999) article on psychological safety and learning behaviors, published in *Administrative Science Quarterly*, is the second most commonly cited reference (the most cited being a statistics book; Aiken & West, 1991) with 11 citations by the 114 articles. Yet, these 11 citations are not evenly distributed across domain: nine of these citations appear in OS articles (i.e., in 18% of the 51 OS articles we reviewed in depth), while only two appear in HC articles (i.e., 3% of the 63 HC articles we reviewed in depth). Similarly, Gittell et al.'s (2000) article on relational coordination, published in *Medical Care*, is the fifth most commonly cited reference (with a total of seven citations among the 114 articles), but was cited in six of the 63 health care articles (10%) and only one of the 51 organizational science articles (2%). In short, we observed that articles published in one discipline tended to cite articles in other journals in that same discipline. This dispersion naturally makes it difficult for the field to advance in a systematic way, if only because scholars in one discipline potentially work without knowledge of the similar and relevant work being done elsewhere.

CHARTING A NEW PATH FOR OSHC RESEARCH

We turn now from the three specific aims of our review of OSHC research over the past decade to considering how the field might productively advance research on these important topics in the future. We argue that our observation of different and fragmented approaches to the study of OSHC suggests that, as the field continues to mature, it will be necessary to develop a more common set of views and perspectives to studying organizational topics in health care settings, lest we risk continuing to build a bifurcated field of inquiry. Moreover, the disciplinary approaches to this field of research suggest that the path ahead for future work in OSHC involves more than just expanding the set of topics studied in the

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cultures, individuals do not, such that these concepts lend themselves to a more organizational focus.

FIGURE 2
Journal Citation Network

Legend

AMJ – Academy of Management Journal
ASQ – Administrative Science Quarterly
HA – Health Affairs
HCMR – Health Care Management Review
HSR – Health Services Research
JAMA – Journal of the American Medical Association
JAP – Journal of Applied Psychology
JOM – Journal of Management
JOB – Journal of Organizational Behavior
MNSC – Management Science
MedCare – Medical Care
MCRR – Medical Care Research and Review
Milbank – Milbank Quarterly
NEJM – New England Journal of Medicine
OBHDP– Organizational Behavior and Human Decision Processes
ORSC – Organization Science

Notes: Undirected graph. Clusters depicting sets of journals likely to cite one another are identified by distinct colors.

field. Rather, this will require adopting a "both–and" mindset[7]—a broader, integrative orientation to OSHC scholarship—with critical implications for not only future research topics, but also for the methods and outlets considered valuable and impactful in the OSHC field.

For Want of a Preposition: Toward a Broader "OS and HC" Orientation

Summarizing the disciplinary differences identified in the preceding sections, we have characterized work published in OS outlets as reflecting an "OS *in* HC" orientation, reporting research focused on

developing generalizable theory about organizing that happens to be studied *in* the context of health care. In contrast, we characterize research in HC outlets as reflecting an "OS *of* HC" orientation, reporting research focused on solving contextualized problems *of* health care organizations. Critically, while the OS *in* HC and the OS *of* HC orientations are both important, they are each also incomplete, and there is significant potential in stepping back and reorienting—using a broader frame to consider organizational science both in and of health care. Much like Weick's (1979) *The Social Psychology of Organizing*, which provided a new and broad orientation that advocated for examining both organizing and organizations, and ushered in a new era of organization studies (see, e.g., the *Journal of Management Studies* special issue commemorating the 50th anniversary of *The Social Psychology of Organizing*; Tsoukas, Patriotta, Sutcliffe, & Maitlis, 2020), we suggest that OSHC scholars from both OS and HC traditions broaden their thinking about their work in terms of "OS *and* HC." Specifically, we advocate for

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[7] This notion of a "both–and" mindset is consistent with research on paradoxical mindsets or paradoxical frames that facilitate individual and organizational management of tensions—for example, between strategies or identities (Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2018; Smith & Besharov, 2019; Smith & Lewis, 2011; Smith & Tushman, 2005).

considering issues of generalized theory *and* contextualized problems, and of organizing *and* organizations. We propose that framing organizational research in health care as OS *and* HC could facilitate a broader view that yields a more conceptually integrated and systematic progression of OSHC research.

Generalizing and contextualizing. A pure emphasis on either generalizability or contextualization is likely problematic, as both approaches come with significant limitations. An overemphasis on contextualization, without consideration of generalizability, which we found to be more common in the research published in HC outlets, can lead to unnecessary redundancy and "reinventions of the wheel." For example, the passage that we quoted earlier, from an article seeking to test the efficacy of relational coordination in a primary care setting, offers little consideration of why we should (not) expect the consistent findings of a positive effect of relational coordination in "hospital care, acute care, emergency care, trauma care, and nursing home care" to generalize to primary care or elsewhere (Cramm & Nieboer, 2012: 301). At the same time, an overemphasis on generalized theory, which we found to be more common in the research reported in OS outlets, can limit scholars from asking questions that have "real-world value" (Mathieu, 2016: 1138).

Relatedly, this overemphasis on generalizability appears to go hand in hand with characterizing health care contexts as limitations or boundary conditions—at times, even seemingly apologizing for conducting a study in the context of health care—which is not only limiting, but also perhaps a self-fulfilling prophecy that may hamper organizational scholars' ability to have impact in the health care domain. If researchers downplay the context of research appearing in OS outlets, or relegate it to the methods section, it will be more difficult for HC scholars to find and draw on the work. This may result in further "recreating of the wheel," not necessarily from a lack of theory, but simply because of a lack of cross-domain awareness. Moreover, as health care continues to rise on the list of largest industry sectors by many different economic and labor metrics (at least in North America), the health care context is, by definition, among the most representative work settings scholars could study, making this downplaying of context increasingly ironic. Critically, we do not find fault in framing a manuscript as many OS articles do, presenting a problem as broadly existing across industries before narrowing to the context of health care. Rather, we suggest that,

counter to some claims, sampling from within a health care context to study such broad phenomena is not a limitation. Instead, it creates a need (as we would argue is true of any context) to theorize directly about the specific context so that one can better appreciate what will and will not generalize, and to what settings—particularly to which other domains of health care. Yet, because neither the OS or the HC approach leads to both impact in a specific context and rich development of generalizable theory, the research spread across disciplines is perhaps less likely to be integrated. The resulting redundancies or echo chambers could limit organizational scholars' ability to have an impact in one of the largest organizational settings in the economy.

Encouragingly, our review revealed some hopeful emerging evidence of a broader orientation that combines both contextualization and generalization. Indeed, much of the research that touts the development of generalizable theory—mostly appearing in OS outlets—is also inherently exploring contextual effects and contingencies (e.g., moderating effects of physical work environment, Schippers et al., 2015; or task complexity, Vashdi et al., 2013). OSHC scholars can embrace and extend these trends—for example, by heeding prior calls for problem-driven research (Davis & Marquis, 2005) steeped in real-world problems, before moving to generalizable theory (Mathieu, 2016). Crawford and colleagues (2019: 342) offered an exemplary model in their description of their research approach:

> Our research efforts were thus initiated by observing an organizational problem that led to an iterative process of abduction wherein we simultaneously analyzed data and developed theory to understand and explain the higher-level effects of multiple team membership.

These authors both address a real organizational problem for which their findings have meaningful significance and theorize about the conditions under which their findings will generalize. Our understanding of generalizability is actually enhanced by these efforts to better contextualize research, such that boundary conditions are better appreciated, as many others have noted (Johns, 2006; Maloney, Bresman, Zellmer-Bruhn, & Beaver, 2016; Rousseau & Fried, 2001). OSHC scholars' knowledge of organizational concepts *and* the unique features of various health care settings positions them uniquely to offer value in this way, offering nuanced insights that can fuel broad theory development and inform practice and policy in the health care industry.

Organizing and organizations. The different disciplinary approaches we observed across OS and HC outlets using theories focused primarily on organizing *or* organizations is also problematic, largely because these two orientations are potentially quite complementary. For example, while HC examines the outcomes of the use of teams, OS research examines the processes by which teamwork practices are enacted and improved. Consequently, together, these insights could generate a robust understanding of teams and a valuable set of recommendations for improving their use in health care organizations. Yet, this accumulation of knowledge is unlikely to emerge if one were to read only (or primarily) in OS *or* HC journals, as we posit is likely based on the results of our citation analysis reported earlier. Although this challenge could, in part, be rectified by reading and citing more broadly (or through systematic reviews that integrate across domains, as we aimed to do here), this cross-domain integration seems to be more the exception than the rule (as we demonstrated). Moreover, to truly adopt an organizing *and* organizations approach would mean to investigate cross-level effects (e.g., Coleman, 1990; House, Rousseau, & Thomas-Hunt, 1995) and the interplay of agency and structure, yet current investigations tend to focus on either micro-dynamics *or* organizational phenomena, and either agency *or* structure, such that even reading broadly will not be sufficient.

Notwithstanding these trends, we did observe a small number of papers in both OS and HC exploring cross-level effects, such as the impact of *subgroup* communication on *group* performance (Compagni et al., 2019) or the effects of an individual's creative personality on team innovation in primary care (Somech & Drach-Zahavy, 2013). Similarly, we observed instances of a combined agentic and structural view. For example, although teams research published in HC outlets has continued to ask a structural question of whether to use teams, and OS research has focused more on the organizing processes of how teams can behave more effectively, some of the most impactful work (as indicated by citations) has examined both—for example, by exploring how "meso-level structures" affect coordination processes (Valentine & Edmondson, 2015). Similarly, Bucher and Langley's (2016) research demonstrated the value of blending the two by examining the agentic ways in which individuals can change the structure of routines. Though it may not be possible to incorporate multiple levels of analysis or both agency and structure in every single research

endeavor, OSHC scholars are well positioned to draw on methods and perspectives from more traditional OS or HC approaches to adopt this more multifaceted perspective to organizational research in health care settings.

Future Directions for OSHC Research

We next propose a range of directions for research in the field of OSHC, including research addressing gaps in the field revealed by our review that suggest promising avenues, as well as opportunities to apply an OS *and* HC perspective to inform future research questions and methods.

Addressing research gaps. Most directly, our mapping of the OSHC landscape revealed several key gaps and overlooked topics of research that deserve more attention in order to develop a broader understanding of the functioning of health care organizations. For example, building from the observation that teams, cooperation, and communication are fairly frequently studied topics, we note the relative absence of research on negotiations and conflict. Just as the broad organizational research—spanning industries—on teams and negotiations can be integrated to develop new insights (Beersma & De Dreu, 2005), we suggest the same is likely true in health care, where there are common within-unit negotiations to divide up tasks and cross-unit negotiations related to a variety of matters such as the acceptance of, or agreement to consult on, a patient. Moreover, delivery of care is often a negotiated process between the patient and care providers, rife with the kinds of misunderstandings, miscommunications, or biased perceptions that negotiation and conflict management scholars have studied for decades. Although individuals may not know they are negotiating in these processes, they most likely are doing just that, and therefore conducting research on these negotiation practices in health care could be beneficial to the field's contextualized understanding of health care coordination, as well as to a more generalized understanding of negotiation.

As another example, we found that there is scant research on the topics of networks and interdependence, particularly within health care organizations (cf. research on cross-organization networks; Brewster, Yuan, et al., 2019). This is, in some ways, surprising. Given the increasing specialization and dispersion of work within and among health care organizations, it follows that there should be a related need to understand how those component parts are then integrated to facilitate the broader

system's functioning, which may benefit from more attention to both networks and emergent interdependence (e.g., see Humphrey & Aime, 2014).

In addition to overlooking certain topics, our review suggests that extant OSHC research may be focused narrowly on particular communities, professions, or geographic locations, at the expense of broader, cross-boundary studies. For instance, we coded only a single study that focused on the topic of "cross-cultural" organizational dynamics, and the vast majority of samples in the papers we reviewed on the five prominent topics consisted of U.S. or European settings (although this was no doubt influenced, at least in part, by our journal search strategy, as highly regarded journals often feature more Western-centric samples; see Rad, Martingano, & Ginges, 2018). Indeed, we acknowledge that our own orientation and framing of this manuscript was highly U.S.-centric (e.g., in our choice to focus on the past decade due to the impact of the ACA on U.S. health care, or in our assumptions regarding the organization and funding of health care organizations, which we based on typical practices in the United States). We note this as a limitation in our perspective, and encourage further review efforts of OSHC in other geographic and sociopolitical environments, in addition to additional primary research exploring organizational topics in these different health care settings.

Moreover, we observed that certain professional populations (e.g., nurses, physicians) tend to be studied more than others in the health care setting, and these differences may intersect with different topics of research. For instance, research on the topics of turnover and burnout was largely conducted among nurses, relative to other health care professions, suggesting that future research among other professions might be particularly relevant for uncovering potential professional variation within health care on this key topic. Indeed, the topic of turnover demonstrated a high level of centrality in our network analysis of the topics in the OSHC landscape (higher than even some of the more frequently studied topics), indicating that it is studied with many other topics of OSHC research, and thus likely has important implications for a wide range of professional populations and organizational challenges in health care.

Applying an OS and HC perspective. Beyond this need for exploring new topics or targets of OSHC research, the OS *and* HC perspective we advance here can also inspire new promising directions for research on commonly studied topics within OSHC,

with implications for the nature of questions scholars should be asking and the types of studies that should be designed in pursuit of answers to these questions.

First, scholars could consider both organizing *and* organizations in understanding the dynamics of health care by asking more meso-level research questions and harnessing the influence of both organization- and individual-level theories (as well as the cross-level analytical tools to test them). Returning to the example of the cluster of research on stress/strain, culture, and safety given earlier, if stress/strain and culture/safety are two sides of the same coin (or at least related domains, as our clustering analysis seems to suggest), future research might benefit from exploring the interplay of organizational safety protocols and espoused culture and their individual- and unit-level enactment (e.g., Singer & Vogus, 2013; Vogus, Sutcliffe, & Weick, 2010), or the cross-level effects of organizational safety culture and individual stress/strain on both individual and organizational outcomes (e.g., McClelland & Vogus, 2014; Vogus, Cooil, Sitterding, & Everett, 2014). As evidence of the potential of such endeavors, Kuntz, Mennicken, and Scholtes's (2015) examination of how individual *stress* from high workloads affects an organization's *safety* outcomes (in terms of hospital mortality rates) is the 27th most cited OS article in our 10-year review (out of 158 OS articles; it is the fifth most cited OS article, out of 87 articles published in 2015 or later in our set).

Earlier, we noted how the organizing versus organizations distinction aligns with prior perspectives of organizations as natural versus rational systems (Scott, 1981). Yet, Scott (1981) also discussed an open systems perspective, suggesting that both rational and natural systems can be closed or open, with research on the latter emphasizing the influence of the external environment on organizational behavior (a perspective emerging more recently in the history of organizational science). In the domain of OSHC, this recognition invites scholars to think about the role of the broader ecosystem of health care organizations, such as the influence of hospitals' physical structures and resource-use decisions on environmental (and patient care) outcomes (e.g., Johnson, Kwakye, Myers, & Ghaferi, 2021), the impact of retail health clinics' emergence (as part of the broader health care ecosystem) on the boundaries and tensions between physician and nursing professions (e.g., Galperin, 2020), or the relations between health care and academia over time (Dunn & Jones, 2010). Historically, health care has tended to be studied as a

closed system (Weick, 2009), but these recent articles highlight the value of attending to the broader environment surrounding health care organizations (e.g., the natural, social, political, or competitive environment) in order to develop a more robust view of health care ecosystems in future OSHC research.

Additionally, our review suggests a need to examine the interplay of structures and processes *over time*, given the critically dynamic nature of organizational work in health care settings. In the work we reviewed, we find little work that theorizes about and studies phenomena over time (cf. Christianson, 2019; Nembhard & Tucker, 2011). Future work will likely benefit from incorporating a temporal lens to their theorizing and research designs, employing, for example, qualitative methods, as well as quantitative longitudinal studies, and the collection, even unobtrusively, of rich process data (e.g., Knight, 2018).

Second, beyond these efforts to think about varying forms of organizations and organizing practices, future research will benefit from more nuanced contextualization of research (Johns, 2006) and considering generalizability in more gradational terms. For instance, research appearing in OS outlets that does discuss generalization often jumps from the specific health care context to very broad considerations of generalizability, such as to any knowledge-based work (e.g., Lockett et al., 2014), to the service economy (Vashdi et al., 2013), or to other "high-risk environments" (Kolbe et al., 2014). At the same time, however, research in HC outlets has tended to center questions of generalizability on highly focused extensions to other health care settings of precisely the same nature (e.g., from one primary care practice to other primary care practices; Wise et al., 2011). When compared side by side, there is a conspicuous gap between these very wide and very narrow (respectively) approaches that might invite reconceptualizing what is meant by "generalizability" in OSHC scholarship. More specifically, we suggest considering the generalizability of OSHC research findings within and across the range of health care settings, rather than bounding them to only the context studied (as seen in much HC research) or immediately abstracting outside of the health care industry to more distant settings (as often seen in OS research). Settings within the health care industry are incredibly varied in their designs, and so, as the OSHC field grows, scholars' abilities to appreciate which dimensions of their research settings are meaningful for the generalization of their findings to other settings within the health care industry would allow for a more meaningful progression of research.

Indeed, this mid-range approach of "bounded generalizability" could help avoid unnecessary redundancies that arise from conducting essentially similar studies in all of the various subdomains of health care, while also giving necessary attention to health care industry-specific influences and boundaries for particular findings, without making untenable assumptions of their universality across industries.

Broader Implications for Shaping the Landscape of OSHC

As we consider how to move forward with a more integrative OS *and* HC orientation, adopting the future research directions advocated above will be a necessary, but insufficient, step toward building a coherent body of OSHC scholarship that could be used as valid, reliable, replicable evidence to guide practice. Achieving this goal will require additional changes at the field level, beyond the research undertaken by any one study or scholar, including both a reevaluation of where OSHC work is published and what kind of work is considered valuable as evidence in the study of organizational topics in health care.

First, in terms of where OSHC work is published, we noted (above) the stark fragmentation in citation patterns, in addition to differing research orientations, across OS and HC journals. This may be, in part, a consequence of differing publishing practices, academic incentives, and professional norms across the OSHC subdomains. In their consideration of top journals, organizational scholars rank—and thereby reward reading, citing, and contributing to—journals focused generally on organizational work, and they largely ignore outlets specific to health care (e.g., Ormans, 2016). This aligns with the tendency in organizational science to emphasize general theory. In contrast, health scholars identify journals specific to health care as top quality for publishing, and they rarely consider general organizational science journals in their rankings (Borkowski et al., 2018; Brooks, Walker, & Szorady, 1991; Williams, Stewart, O'Connor, Savage, & Shewchuk, 2002), suggesting that health care may be perceived as is its own contextualized domain of scholarship to which theory from other domains will not automatically apply. These disciplinary differences in publishing norms and rewards may thus underlie and reinforce the disconnect between OS and HC research through a lack of attention and awareness of research outside of one's "home" field, leading to fragmented idea development. This raises the question of where to publish

multidisciplinary OSHC work, particularly given its importance for scholars' career advancement. To achieve the future directions for which we advocate, we may also need structural changes to publishing incentives—and what "counts" toward promotion—to allow for the reward of multidisciplinary, OS *and* HC approaches. Just as other disciplines, such as economics, reward publication in field journals, so too should business schools begin recognizing the "field journals" of OSHC, while schools of public health, nursing, medicine, and other health professions should recognize the more general, "mainstream" management journals as valuable outlets for publishing OSHC work.

Second, in addition to differing disciplinary publishing norms, it is worth noting general discipline-based differences in what is thought to constitute "evidence," which could have serious implications for the ability to coherently advance OSHC research. In the context of health care research, we found that a "cornerstone of [evidence-based medicine] is the hierarchical system of classifying evidence" (Burns, Rohrich, & Chung, 2011). In this ranking, the "gold standard" is a randomized controlled trial (RCT) conducted across multiple sites, or, better yet, a meta-analysis of such studies, while qualitative research tends to be considered as offering among the least strong evidence, above only expert opinions (Daly, 2005). Health care is often criticized for its "methodological monism"—the idea that valid knowledge can only be achieved by using positivist-based quantitative methods (particularly a randomly assigned and controlled trial; see Daly, 2005; Mowat, Subramanian, & Kawachi, 2018; Wears & Sutcliffe, 2019). Although recent work has suggested that this emphasis on RCTs is waning (Barends, Ten Have, & Huisman, 2012), we note that the articles we reviewed in what are widely considered to be the top medical journals—*New England Journal of Medicine* and *Journal of the American Medical Association*—tended to report RCTs rather than research using other methodologies, suggesting a continued and lasting influence of the hierarchical ranking of evidence.

Yet, "evidence" may mean something different in the context of organizational science. Organizational scholars tend to embrace a methodological fit perspective, suggesting that the state of the literature drives when to use qualitative, quantitative, or mixed methods (Edmondson & McManus, 2007). This framework suggests that qualitative research that can help to develop a rich understanding of phenomena is particularly well suited for nascent areas

of scholarship. Indeed, there is demonstrable value in the use of qualitative research in health care. For example, great advances in safety research and practice were spawned by qualitative research (e.g., event analysis, process tracing) in anesthesiology (Wears & Sutcliffe, 2019). Similarly, many of the insights gleaned in our review of OSHC research came from qualitative research. At the same time, the methodological fit perspective acknowledges that, when there is more extant research on a phenomenon, there is great value in shifting to quantitative methods, including correlational studies and experiments in both field and lab settings (Edmondson & McManus, 2007). Accounting for a more complete range of methods, organization scholars have called broadly for "evidence-based management," whereby the evidence derived from studies using multiple methods is combined and translated for implementation in practice (Rousseau, 2006). In this way, while this perspective is built on the model of evidence-based medicine, this push for evidence-based management also calls for avoiding the methodological monism of medicine (Barends et al., 2012).

If the OSHC field, and the organizational scholars working within it, aim to both have impact and to systematically advance scientific knowledge, we suggest that the field will likely need to wrestle with these different frameworks for assessing the value of different types of evidence, perhaps developing a clear sense of what would count as evidence in "evidence-based health care management." To this end, we encourage OSHC scholars to once again consider a "both–and" approach. By taking the best of both "evidence-based medicine" and "evidence-based management" perspectives, we might reconsider the role of different methodologies and what constitutes reliable findings that would underlie effective prescriptions for practice. To adopt this "both–and" approach, it may be helpful to build on the idea of full-cycle research, wherein different methods are employed in a cyclical approach to move back and forth between discovery and testing (Chatman & Flynn, 2005). The "evidence-based medicine" emphasis on RCTs, coupled with the importance of application and informing practice, might lead to an emphasis on testing the impacts of new interventions or specific organization structures. Yet, drawing on the idea of full-cycle research, we posit that, if scholars avoid jumping straight into experimental testing, they could pursue deeper theoretical exploration and development that would inform more precise, effective interventions. Ultimately, this could even enable a more efficient use of

scarce research resources and accelerate the development of scientific knowledge related to these organizational concepts in health care.

Additionally, an overemphasis on RCTs might constrain insights in some ways by this method's implicit emphasis on linear models. If we take seriously that work in health care settings is dynamic, and if we strive to account for the interplay of organization structures and organizing processes, then there is an important role not only for experimental quantitative methods, but also for rich quantitative process data (see examples in Christianson, 2019; Kolbe et al., 2014), longitudinal methods, natural language processing, simulations, and qualitative methods, which could offer rich insights into the dynamics characteristic to health care (Kerrissey, Satterstrom, & Edmondson, 2020). Overall, we suggest there is reason to question the treatment of RCTs as the gold standard; there is a clear need for additional methods, as discussed, and we would also argue that a significant body of knowledge built on research utilizing methods other than RCTs (methods that are, of course, applied rigorously) should be worthy of informing practice.

At the same time, we can use the notion of full-cycle research to revisit "evidence-based management" prescriptions. For example, as highlighted in the methodological fit perspective, qualitative methods can be particularly apt when studying less well-understood phenomenon. Yet, tying into our suggestion for more bounded generalizing, a methodological fit perspective implies that we should avoid "starting from scratch" with qualitative work in each new setting, which could lead to recreating the wheel. Rather, we need to theorize and develop hypotheses based on a consideration of how work in other health care settings may (not) apply in the setting under study, and allow these findings to guide the choice of appropriate method. This entails thinking carefully about when it is time to move to more quantitative testing (i.e., if there is a significant body of insight from related health care settings that can guide a quantitative examination), while being willing to cycle back to more qualitative and inductive methods when needed (i.e., when a truly novel or unique process or issue is uncovered).

In sum, we encourage OSHC scholars to continue to weigh what should constitute an "evidence-based health care management" perspective, and where this perspective should be published to both advance researchers' careers and develop coherent, integrated recommendations for practice. We suggest that this should entail making choices about the research questions and designs to pursue with a strong awareness of the OSHC's field's goals of both advancing scientific knowledge and having impact, which will require scholars to give careful thought to how best to move through cycles of discovery and testing as they pursue future streams of research on organizational concepts in health care.

CONCLUSION

Reviewing 10 years of work published in the field of OSHC, we have provided a "map" of this multidisciplinary field, identifying its broad contours, prominent features, and unexplored domains. Within this broad mapping, we have also reviewed five prominent bodies of OSHC research to identify core insights and revelations about change, learning, coordination, teaming, and performance in health care; and we have integrated across these domains to take stock of the state of the field—both identifying emergent themes as well as uncovering problematic points of divergence and fragmentation of the field. Drawing on this three-part review, we have offered several suggestions for future directions and a path forward toward a more integrative perspective that attends to both organizational science *and* health care in OSHC research, with implications for not only the pursuit of novel research ideas, but also for the field's determination of where that research should be published and how to evaluate it when considering the state of "evidence" in the field. In doing so, this work highlights how scholars can more systematically advance the OSHC field—a field ripe with opportunity for organizational scholars to meet the goal of conducting rigorous research that both has meaningful impact and develops valuable theory.

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