

# Healthcare Accounting Research: An Analysis, Review, and Suggestions for Future Work

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**ABSTRACT:** This paper analyzes and reviews healthcare-related accounting literature, with a focus on research published between 1990 and 2020. We systematically collect a global sample of 413 papers and categorize each paper along several dimensions, including accounting sub-discipline, research methodology, journal quality, and geographic origin. We find that high-quality accounting journals publish healthcare-related research throughout the period, but publication in the most elite (i.e., “top 3”) journals is declining. Further, we find that archival accounting research in healthcare is primarily a North American undertaking, while field studies and case studies are more popular internationally. We review the sampled research along with additional (pre-1990 and post-2020) literature in an inclusive summary of extant healthcare-related accounting research, organized by topic and focused on identifying avenues for additional research. We then discuss several healthcare-related public data sources.

**Keywords:** government; health care; healthcare; nonprofit; policy.

## I. INTRODUCTION

Healthcare-related accounting research is uniquely positioned to contribute to governmental and nonprofit literature. Although healthcare facilities make up only 2.2 percent of U.S. public charities, they generate about half of public charity revenues and expenses, and they control more than one-third of the total assets in the sector. With the next largest subsector (i.e., education) accounting for only 17 percent of revenues and expenses, healthcare facilities represent an inescapable concern for researchers who develop and communicate knowledge related to U.S. nonprofit organizations (NCCS 2020). Further, U.S. nonprofit providers tend to

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dominate markets that include for-profit and government-owned facilities (e.g., 70 percent of bed capacity in the U.S. is maintained by nonprofit hospitals [KFF n.d.]), making the study of U.S. healthcare delivery inextricably linked with the study of nonprofit organizations.

Governments worldwide aim to preserve the rights of their citizens, and access to high-quality healthcare is increasingly viewed as a basic human right. In developed countries, governments spend heavily on healthcare facilities and national insurance programs (e.g., U.S. Medicare), giving them unparalleled influence on the exchange of healthcare services. Governments use legislation, regulation, and policy to direct spending, control costs, and safeguard citizens' access to high-quality healthcare services.<sup>1</sup> Healthcare-focused accounting scholars can inform evidence-based healthcare policy, and governmental leaders have a responsibility to consider the available scientific evidence when creating legislation and implementing regulations related to public health objectives (Burris et al. 2010). Thus, healthcare research in accounting is directly associated with governmental objectives to preserve human rights via evidence-based policymaking.

The economic and social significance of healthcare services attracts an important subset of accounting researchers who examine accounting-related questions in healthcare settings. This paper highlights the healthcare-focused work conducted by accounting scholars over the past three decades (1990–2020). We take a global perspective, reviewing research that (1) is published in a broad set of accounting journals, (2) is focused on a wide range of accounting topics, and (3) employs diverse research methods. Our inclusive approach benefits accounting researchers, especially prospective and current Ph.D. students, who seek a starting point for engaging with healthcare-focused accounting research.

The remainder of the paper is structured as follows. In Section II, we describe our method for collecting and categorizing the sample. We then provide descriptive statistics and trend analyses related to publication outlets, research methods, geographic regions, and research topics. In Section III, we review healthcare-focused accounting literature, organized by accounting sub-discipline (e.g., managerial, financial, etc.) and topic. Informed by the quantitative analysis, we highlight many contributions and identify fruitful areas for additional research. In Section IV, we discuss some healthcare-related public data sources, and we briefly summarize in Section V.

## II. SELECTION PROCESS, SAMPLE DESCRIPTION, AND TREND ANALYSIS SELECTION PROCESS

In contrast to existing domain- and theory-specific reviews of healthcare-related research in accounting (Cardinaels and Soderstrom 2013; Eldenburg, H. Krishnan, and R. Krishnan 2017; Oppi, Campanale, Cinquini, and Vagnoni 2019), we aim to provide a broad review of the literature.<sup>2</sup> In this vein, we use the 2019 Australian Business Deans Council (ABDC) Journal Quality List as a starting point for selecting research. We limit our selection to papers published in accounting

<sup>1</sup> About 25 percent (\$1.2 trillion) of U.S. Federal spending in 2019 is attributable to healthcare programs (e.g., Medicare and Medicaid) (CBO 2020, Table 3). In addition, about 10 percent of expenditures at the state and local levels are healthcare related (Urban Institute 2020). Still, the U.S. relies relatively little on public financing compared to other developed countries, where both healthcare providers and payers are more likely to be affiliated with government entities (OECD 2020).

<sup>2</sup> Although we touch briefly on the journals that have accepted healthcare-related accounting research, this review also differs from Forgiione, Liu, Smith, and Liu (2018), which provides a review on the perceptions of journals that publish healthcare financial management research.

journals with an ABDC rating of “B” or better.<sup>3</sup> We exclude journals with an accounting-education-, accounting-history-, or practitioner-focus. We searched several databases (including EBSCO, Web of Science, OCLC, Google Scholar, and publisher-provided online databases) for applicable articles published between 1990 and 2020.<sup>4</sup> Depending on the tools provided by the database/content provider, we searched for healthcare-related terms in a combination of the following fields: (1) abstract (2) subject matter (3) title, and (4) author-provided keywords. In total, we identified, downloaded, and cataloged 413 articles (from 45 different journals) along 19 dimensions, which include authors and university affiliation, journal information (e.g., impact and rank metrics), and information related to the research method, topic, and research question. We also documented the theoretical, institutional, and geographic setting of each study.<sup>5</sup>

### **Publication Frequencies and Trends by Journal and Journal Quality**

Table 1 shows the top 25 publication outlets for healthcare research in accounting, including each journal’s quality categorization according to the Australian Business Deans Council (ABDC), byuaccounting.net (BYU), and scimagojr.com (SJR). *Financial Accountability & Management* (n = 99) is the leading publication outlet, with only one fewer paper than the next four journals combined. More generally, Table 1 shows that healthcare accounting research is accepted by a wide variety of high-quality journals, including several premier journals according to BYU and ABDC (i.e., “top 5” and “A\*”). Notably, *Accounting, Organizations, and Society*, which is recognized as a “top 6” journal and likely to have significant influence on tenure and promotion decisions (Summers and Wood 2017), is among the leading outlets for healthcare-related research, with 23 papers published between 1990 and 2020.

Figure 1 shows the trend in publications by ABDC ranking (Panel A) and BYU ranking (Panel B) over time.<sup>6</sup> Over the last 15 years, journals with an “A” ranking on the ABDC list show a slight decreasing trend; however, the trend in “A” journal publications is more stable than the trends for those ranked “A\*” or “B.” For instance, “A\*” publications increase by 39 percent over the same period, suggesting that healthcare accounting research is gaining acceptance in premier journals (as defined by ABDC). Using a narrower focus, we assess the trend in publications in BYU-ranked journals and find that “top 3” journal publications decrease over the most recent 15 years, while papers in all other groupings increase. This suggests that, although healthcare accounting research does not publish as frequently in the top 3 journals, it continues to publish in well-respected journals. Overall, Figure 1 shows that healthcare accounting research is accepted at

<sup>3</sup> We exclude one journal that is unaffiliated with the top-seven content providers (i.e., American Accounting Association, Elsevier, Emerald Group, Sage, Springer International, Taylor & Francis, and Wiley-Blackwell). All journals fall under ABDC research code 1501 except *Management Science*, which we include because it publishes accounting research. Only papers accepted by *Management Science* accounting editors are included. Prior to 2004, when the accepting editor’s field is not identified, we include only papers written by authors whose names appear in other research listed in BYU’s accounting research database.

<sup>4</sup> Specifically, we employed the following Boolean search expression: “hospitals OR hospital OR healthcare OR health care OR medical OR Medicare OR Medicaid OR medical care OR health policy OR healthcare policy OR physicians.”

<sup>5</sup> We downloaded 528 articles as a result of the search process; however, 113 were discarded as irrelevant because a searched term was found in one of the fields of interest (e.g., abstract), but the study was not based in a healthcare setting. The full list of papers is available from the lead author upon request.

<sup>6</sup> “B” journals have no publications during the period 1990–1994; however, “B” journals are less likely to be indexed (compared to journals categorized “A” or “A\*”), and several “B” journals did not exist during that period.

**TABLE 1**  
**Top 25 Accounting Journals for Healthcare Accounting Research**  
**(1990–2020)**

Journal Ranking			Journal	Publications
BYU	SJR	ABDC		
—	1.078	A	<i>Financial Accountability &amp; Management</i>	99
—	0.187	B	<i>Journal of Public Budgeting, Accounting &amp; Financial Management</i>	28
—	1.125	A	<i>Journal of Accounting and Public Policy</i>	25
—	1.975	A*	<i>Management Accounting Research</i>	24
4	1.924	A*	<i>Accounting, Organizations and Society</i>	23
—	1.459	A*	<i>Accounting, Auditing, and Accountability Journal</i>	18
—	1.823	A	<i>Critical Perspectives on Accounting</i>	18
—	0.953	B	<i>Accounting Forum</i>	13
—	1.184	B	<i>Journal of Intellectual Capital</i>	13
—	0.973	A*	<i>The European Accounting Review</i>	12
9	1.17	A	<i>Accounting Horizons</i>	11
—	0.413	A	<i>Qualitative Research in Accounting &amp; Management</i>	11
2	5.446	A*	<i>The Accounting Review</i>	11
—	0.393	B	<i>Journal of Accounting &amp; Organizational Change</i>	10
8	1.106	A*	<i>Journal of Management Accounting Research</i>	10
5	2.207	A*	<i>Contemporary Accounting Research</i>	9
—	0.405	A	<i>Advances in Management Accounting</i>	8
—	0.445	A	<i>Abacus</i>	5
3	6.996	A*	<i>Journal of Accounting Research</i>	5
—	0.299	B	<i>Accounting and the Public Interest</i>	4
—	0.386	B	<i>Australian Accounting Review</i>	4
—	1.103	A*	<i>British Accounting Review</i>	4
—	0.494	B	<i>International Journal of Accounting and Information Management</i>	4
—	0.619	A	<i>International Journal of Accounting Information Systems</i>	4
1	5.821	A*	<i>Journal of Accounting and Economics</i>	4

highly respected outlets despite the very highest ranked journals (i.e., BYU top 3) publishing healthcare accounting research less frequently in recent years.

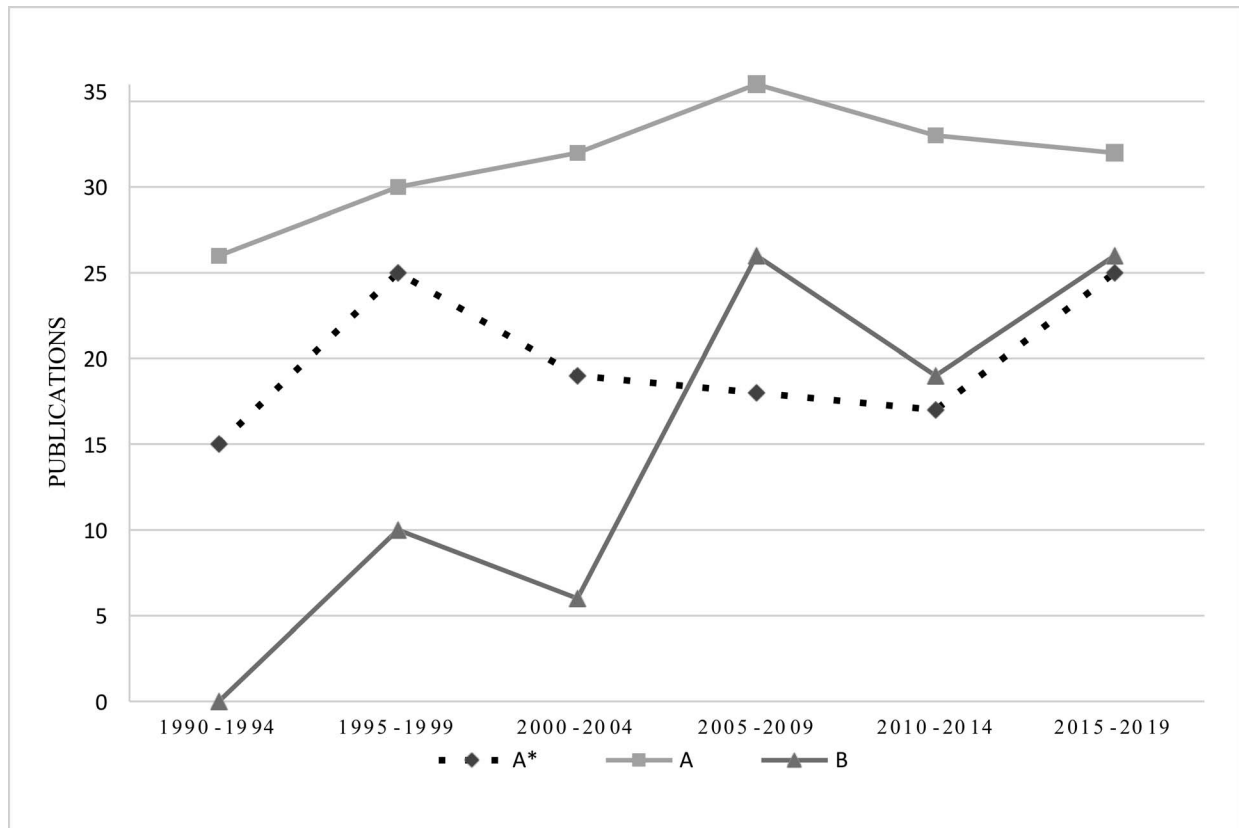
### **Publication Frequencies and Trends by Accounting Sub-Discipline and Research Methodology**

In Table 2, we summarize the sample according to mainstream accounting sub-disciplines and research methods.<sup>7</sup> Regarding accounting sub-disciplines, managerial research topics are most common (63 percent), followed by “other” topics (19 percent), and financial topics (11 percent). “Other” topics include policy analysis, literature reviews, and commentary papers. Healthcare research in accounting is not as prevalent in the AIS, audit, and tax sub-disciplines. Regarding research *methods*, the “other” (e.g., case studies and field studies) category dominates, indicating that healthcare-related

<sup>7</sup> We use the BYU framework for categorizing research. We note, however, that BYU’s categorization is not often used for specific papers, as most of the articles are classified as “other” and published in journals that are not tracked by BYU.

**FIGURE 1**  
**Publication Trends by Journal Ranking**

**Panel A: Trends by ABDC Ranking**



(continued on next page)

researchers in accounting tend to use methods outside of the mainstream groupings (i.e., analytic, archival, experimental). In Table 2, we show publication frequencies for the mainstream methodological groupings along with the specific methods employed by papers classified as “other.” The dominant techniques within “other” research methods are field studies, case studies, and surveys.

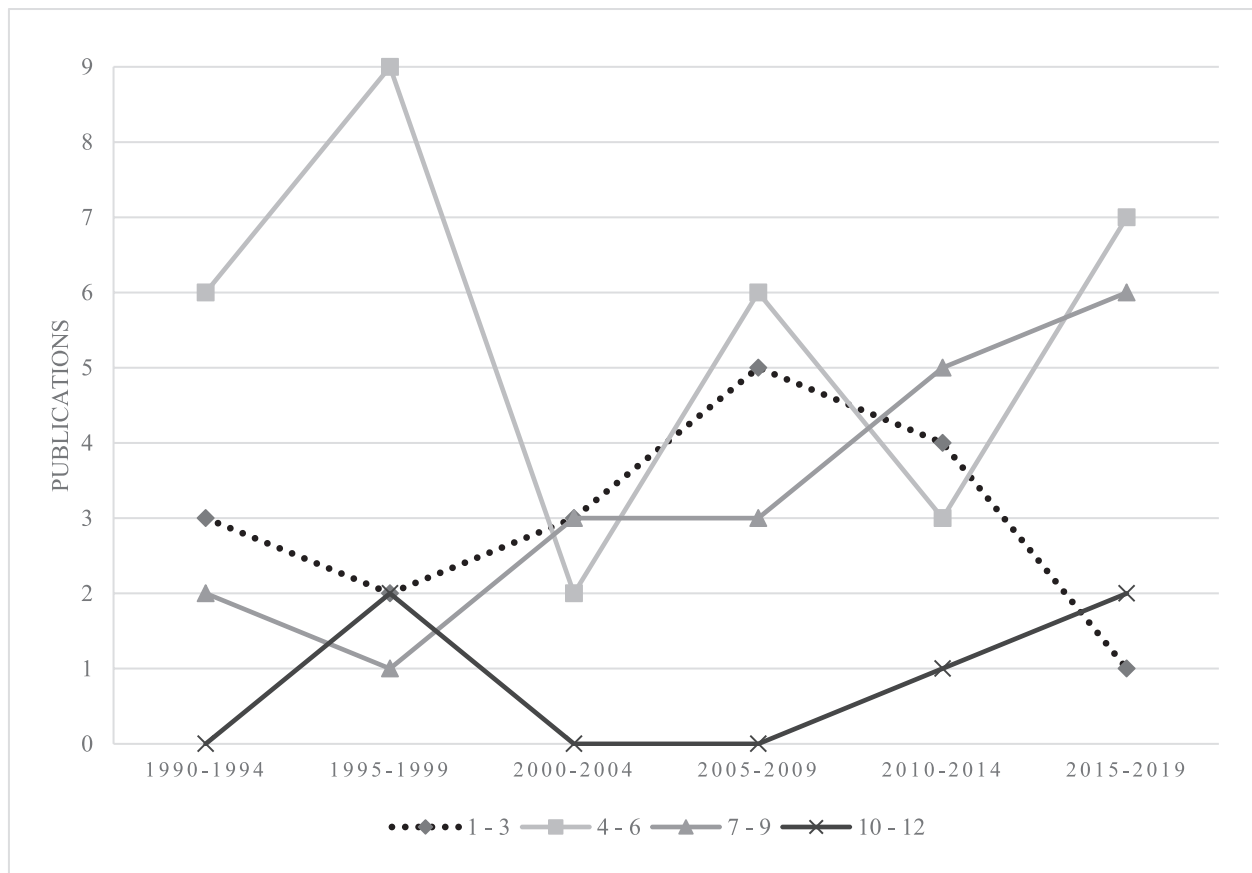
In Figure 2, Panel A, we display the U.S. methodological trend. We find an equal number of “other” and archival studies published at the start of the sample period. However, by the end of the sample period, 21 archival studies are published while only four “other” methodology studies are published. This divergent trend is consistent with [D. Oler, M. Oler, and Skousen \(2010\)](#), who show that archival-based accounting research gains increasing dominance during our sample period. In Panel B, we display the (contrasting) non-U.S. trend in research methodology. While the U.S. has moved toward archival methods and away from “other” methods, we find that healthcare researchers abroad have increasingly favored field studies over all other research methods.<sup>8</sup>

In Table 3, Panel A, we show publication frequencies by method and geographic region. Healthcare-focused archival accounting research is largely a North American (U.S. and Canada)

<sup>8</sup> Appendix A details the top publication outlets by method. *The Journal of Accounting and Public Policy* is the leading destination for archival research, whereas *Financial Accountability and Management* is the leading outlet for non-archival research.

**FIGURE 1 (continued)**

**Panel B: Trends by BYU Ranking**



undertaking, with North American settings accounting for about three-quarters of the total published papers. Led by studies in the U.K./Ireland, field studies and case studies tend to be the preferred research methods to investigate issues outside of North America.<sup>9</sup> In Table 3, Panel B, we show publication frequencies by topic and region. Managerial publications dominate the landscape abroad. For example, the U.K./Ireland and the Nordic countries are the second and third leading regional settings for healthcare accounting research, and managerial publications constitute 85 percent and 68 percent of publications set in the U.K./Ireland and the Nordic countries, respectively. In contrast, North American publications are more evenly distributed, with about half of the research set in North America investigating non-managerial topics.

The analysis of publication frequencies and trends illustrates the work of an active group of accounting researchers who have leveraged healthcare settings. Healthcare-focused accounting research addresses a variety of topics using diverse research methods, and the methods used

<sup>9</sup> Consistent with Bloomfield, Nelson, and Soltes (2016), we define “field studies” as investigations that gather data through direct observation, interviews, and the collection of internal documents. We define case studies as research that relies on descriptive quantitative data and qualitative historical information to make inferences (e.g., Preston et al. 1997; Samuel et al. 2005).

**TABLE 2**  
**Papers by Topic and Method**  
**(1990–2020)**

Methodology	Sub-Discipline/Topic						Total (%)
	AIS	Audit	Financial	Managerial	Tax	Other Topics	
Analytical	—	—	1	6	—	—	7 (2%)
Archival	1	9	33	70	1	19	133 (32%)
Experimental	—	—	—	3	—	—	3 ( $< 1\%$ )
Other							
Case Study	1	1	7	45	—	22	76 (18%)
Discourse Analysis	—	—	—	2	—	3	5 (1%)
Expert Commentary/Analysis	—	1	1	3	—	8	13 (3%)
Field Study	5	—	3	90	—	18	116 (28%)
Questionnaire/Survey	—	1	1	31	—	3	36 (9%)
Questionnaire/Survey—Path Analysis	5	—	—	9	—	—	14 (3%)
Review Papers	—	—	—	2	—	8	10 (2%)
Totals	12 (3%)	12 (3%)	46 (11%)	261 (63%)	1 ( $< 1\%$ )	81 (20%)	413 (~100%)

tend to be associated with the region studied, where archival (non-archival) studies tend to favor North American (international) settings. We provide more in-depth commentary on healthcare-focused accounting research in the following literature review.

### III. LITERATURE REVIEW

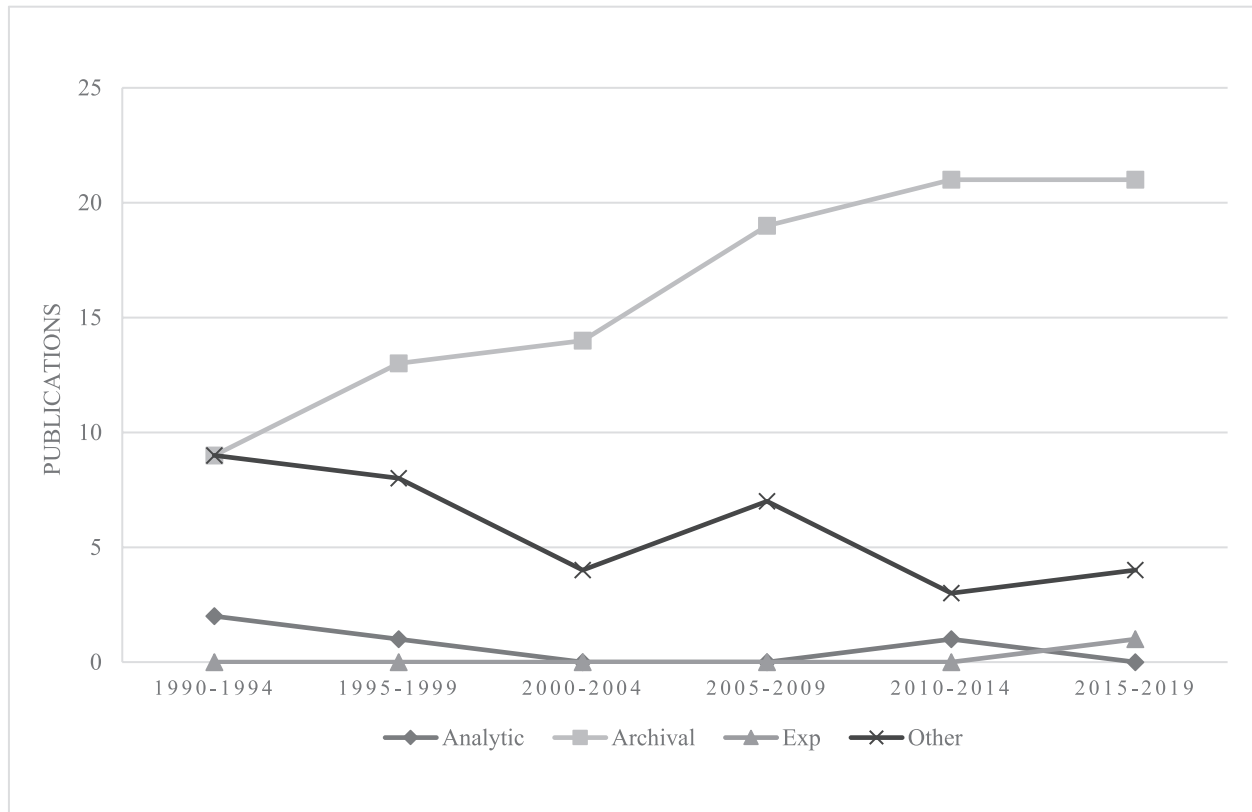
In this section, we review healthcare-related literature organized by sub-discipline and topic. We restrict our search to the journals identified in Table 1; however, to provide additional context, we expand the scope of the review to include several influential papers published outside of the 1990–2020 period.

#### Management Accounting

The healthcare industry offers relatively convenient access to a highly homogenous and institutionally rich setting, which makes it ideal for studying the key concepts of management accounting such as cost behavior and cost control (Eldenburg et al. 2017). Research in this area

**FIGURE 2**  
**Publication Trends by Methodology**

**Panel A: U.S. Methodological Trends**



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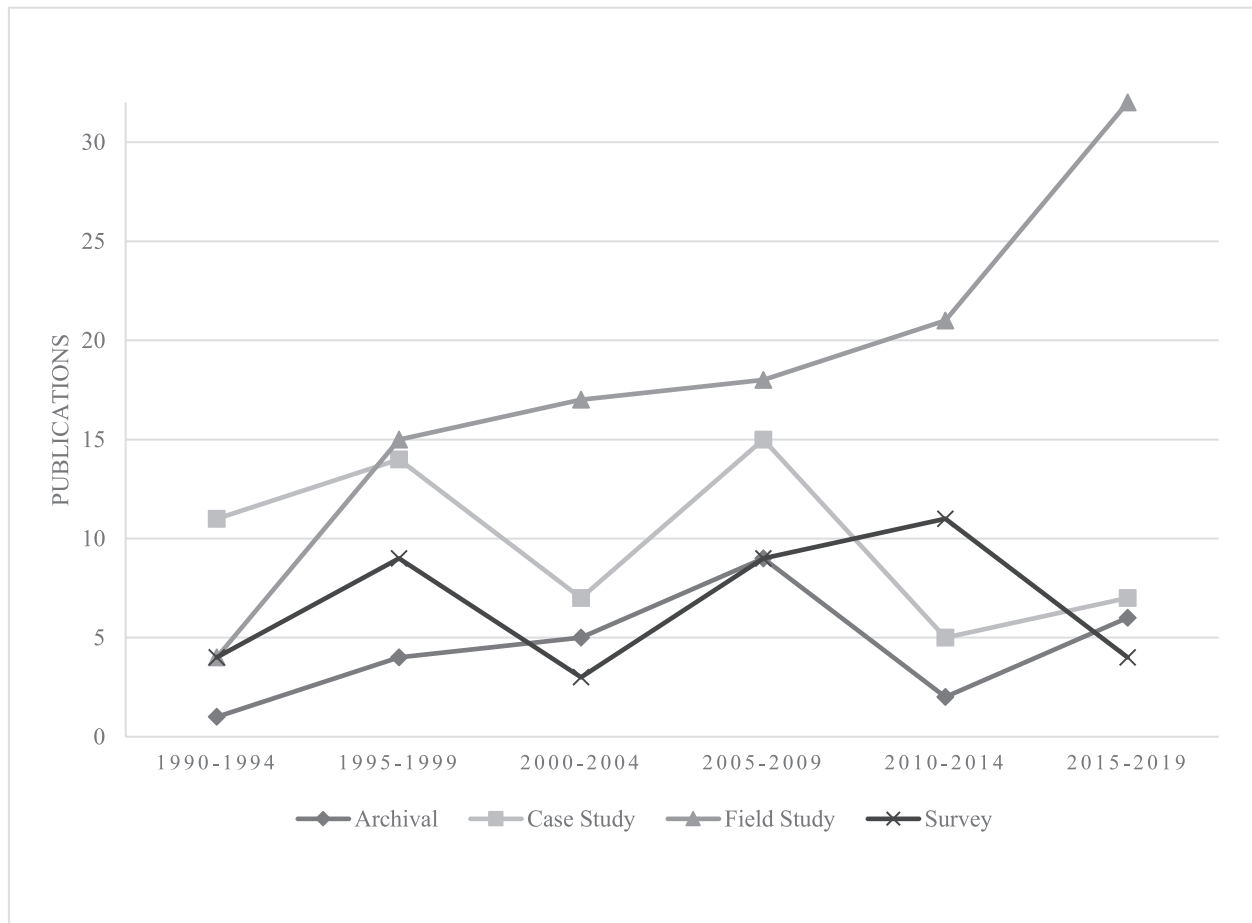
has the power to inform both the management accounting concepts taught in accounting classes and the cost behavior assumptions made in practice. For example, [Noreen and Soderstrom \(1994\)](#) use Washington State hospital data to test if overhead costs are strictly proportional to activity. Although cost accounting systems often assume strict proportionality, [Noreen and Soderstrom \(1994\)](#) reject this assumption. Extending the original study, [Noreen and Soderstrom \(1997\)](#) find that the assumption of proportionality can create extreme cost distortions even in relatively refined costing systems (i.e., activity-based costing systems). Relatedly, [Balakrishnan and Gruca \(2008\)](#) examine data from Ontario hospitals and provide initial evidence of intra-firm variation in cost stickiness, where hospital costs display greater (less) stickiness in areas related to core (ancillary) business functions.<sup>10</sup> The findings of [Noreen and Soderstrom \(1994, 1997\)](#) and [Balakrishnan and Gruca \(2008\)](#) inform practitioners regarding cost behavior and reinforce the concepts taught in introductory management accounting classes (e.g., [Brewer, Garrison, and Noreen 2019](#)). Further, this research provides key evidence to guide cost accounting system refinements for improved management decisions.

<sup>10</sup> Cost stickiness refers to the asymmetrical change in total cost caused by changes in activity levels.



**FIGURE 2 (continued)**

**Panel B: Non-U.S. Methodological Trends**



Regarding cost control, early and seminal work by [Covaleski and Dirsmith \(1983, 1986\)](#) investigates the budgeting process. This work is the first to examine budgeting as a social behavior that occurs within complex environments. [Covaleski and Dirsmith \(1983\)](#) reveal that budgets are the product of complex negotiations between middle and upper management that can be used to facilitate the upward (middle-to-upper management) flow of information, and [Covaleski and Dirsmith \(1986\)](#) consider budgets as tools for exercising political power and legitimizing action within organizations. [Blanchard, Chow, and Noreen \(1986\)](#) extend the work on hospital budgeting to encompass the impact of regulation. Specifically, [Blanchard et al. \(1986\)](#) study the budgeting behavior of hospital managers operating under Washington State revenue regulations that set total hospital revenue limits equal to an amount that is a function of budgeted costs, budgeted volume, and actual volume. [Blanchard et al. \(1986\)](#) show that hospitals submit budgets that contain biased forecasts that serve to maximize total hospital revenues given the regulatory constraint. Their study further highlights the complex social nature of budgeting and demonstrates the influential role of regulatory authorities in healthcare cost-control practices. Following [Blanchard et al. \(1986\)](#),

**TABLE 3**  
**Publication Methods and Topics by Region**

Panel A: Methodology by Region (1990–2020)												
Region	Analytic			Case Study			Discourse			Expert Analysis		
	Archival	Field	Survey	Path	Analysis	Review	Field	Study	Survey	Analysis	Review	Total
Africa/Mid-East	—	—	—	1	—	—	—	—	—	—	—	7
Asia	—	—	—	4	1	—	—	—	3	2	—	13
Australia/NZ	1	—	—	3	9	—	—	—	17	1	—	41
EU—Western/Central	1	—	—	12	3	—	—	2	17	5	—	45
Multi-Region	—	—	—	2	6	—	—	—	5	—	1	14
None	1	—	—	1	—	—	—	—	—	—	7	10
Nordics	—	—	—	—	3	—	3	—	37	—	—	47
North America	4	—	—	103	15	—	1	—	4	—	—	149
U.K./Ireland	—	—	—	7	39	—	1	—	29	4	1	87
<b>Total</b>	<b>7</b>	<b>133</b>	<b>76</b>	<b>5</b>	<b>3</b>	<b>13</b>	<b>36</b>	<b>14</b>	<b>10</b>	<b>413</b>	<b>413</b>	<b>413</b>

Panel B: Topic by Region (1990–2020)												
Region	AIS			Audit			Financial			Managerial		
	Tax	Other Topics	Total	Financial	Managerial	Audit	Financial	Managerial	Tax	Other Topics	Total	
Africa/Mid-East	—	—	—	—	—	—	—	—	—	—	7	
Asia	—	—	—	1	8	—	—	—	—	—	13	
Australia/NZ	—	—	—	3	30	—	—	—	—	—	41	
EU—Western/Central	—	—	—	4	29	—	—	—	—	—	45	
Multi-Region	—	—	—	—	13	—	—	—	—	—	14	
None	—	—	—	—	3	—	—	—	—	—	10	
Nordics	—	—	—	2	40	—	—	—	—	—	47	
North America	—	—	—	32	74	—	—	—	—	—	149	
U.K./Ireland	—	—	—	4	60	—	—	—	—	—	87	
<b>Total</b>	<b>12</b>	<b>81</b>	<b>1</b>	<b>46</b>	<b>261</b>	<b>12</b>	<b>46</b>	<b>261</b>	<b>1</b>	<b>81</b>	<b>413</b>	

a significant stream of accounting research reveals the extensive influence of healthcare regulations on management behavior.

### The Effects of Regulations and Public Policies

Healthcare is highly regulated due to the substantial portion of the industry's services and infrastructure that is government-financed. In addition, management decisions related to capacity and access-to-care have important public health implications. Thus, healthcare-related management accounting researchers often examine the effects of regulations and public policies, such as U.S. Medicare's Prospective Payment System (PPS). Introduced in 1983 to increase hospital efficiency and control costs, the PPS changed Medicare's reimbursement system from a cost-based scheme to a fixed-fee scheme. Influential studies examining the effect of the PPS's implementation demonstrate how the system influences cost allocation, cost containment, and cost structure choices (Eldenburg and Kallapur 1997, 2000; Kallapur and Eldenburg 2005; Hsu and Qu 2012). In addition, the change to a fixed-fee system influences the incentive schemes for upper hospital management (Lambert and Larcker 1995). Accounting research uncovers several unintended consequences related to the PPS. For instance, Soderstrom (1993) finds that certain hospital managers respond to the policy change by altering admissions and reporting practices to extract money from the federal government. Most recently, Barnes and colleagues (Barnes and Harp 2018; Barnes, Buchheit, and Parsons 2017) investigate the PPS's Disproportionate Share Hospital program and find that managers alter bed capacity decisions (a real operations effect) and opportunistically report patient demographic information (a reporting effect) to secure the windfall payments that the PPS awards for serving low-income populations.

As U.S. Medicare was implementing the PPS, The U.K.'s publicly funded National Health Service (NHS) was facing similar pressure to maximize efficiency and control costs. Spurred by the Griffiths Report (NHS and Griffiths 1983), the NHS implemented a series of efficiency-centric management accounting policies consistent with the New Public Management (NPM) philosophy of public service.<sup>11</sup> Accounting journals published commentary that foreshadowed the issues associated with introducing managerial accounting practices to clinicians (Bourn and Ezzamel 1986; Pollitt, Harrison, Hunter, and Marnoch 1988). This commentary led to several influential studies, which show how some medical professionals resist the introduction of management accounting practices (Broadbent, Jacobs, and Laughlin 2001; Kurunmäki, Lapsley, and Melia 2003; Jacobs 2005) whereas others integrate these practices into the profession (Kurunmäki et al. 2003; Kurunmäki 2004). Extensions to this line of research show that country-level differences in the accounting profession (Kurunmäki et al. 2003), institutional differences (Jacobs 2005), and differences in organizational strategies (Lehtonen 2007) influence the degree that NPM-inspired management accounting practices are adopted.

When examining how healthcare professionals react to new policies and regulations, accounting research may affect policymaking. For example, Fischbacher and Francis (1998) conduct a field study in Scotland to examine the relationship between purchasers and providers in the context of fundholding, a politically contentious NPM policy that created an internal marketplace where general practitioners acted as the purchasers of secondary care for their

<sup>11</sup> While the Griffiths Report was very broad in nature, it laid the groundwork for a series of New Public Management (NPM) reforms. Under NPM, public health services (e.g., the U.K.'s National Health Service) turned to private sector management concepts to improve healthcare delivery, especially in terms of efficiency. NPM motivates several policies that are of interest to accounting researchers, including the purchaser-provider split, diagnostic related groups (DRGs), accrual-based accounting practices, and management budgeting practices.

patients. Through a series of interviews and observed meetings, [Fischbacher and Francis \(1998\)](#) found that general practitioners and secondary care providers share common ground in areas such as service design. Their study urged policymakers to “optimize the collaborative potential” identified in their paper ([Fischbacher and Francis 1998](#), 296), and the findings may have affected subsequent European reform efforts, which prioritized collaboration between general practitioners and secondary care providers. For example, Scotland established Managed Clinical Networks, which brought general practitioners and secondary providers together to work on service redesign ([NHS Scotland 2003](#)).

### **Management Characteristics and Decision Making**

Several healthcare-related management accounting papers examine the association between managerial characteristics and organizational outcomes. These papers are rooted in upper echelons theory, which holds that the characteristics of the “top management team” drive organizational outcomes ([Hambrick and Mason 1984](#)). [Naranjo-Gil and Hartmann \(2006, 2007\)](#) examine the influence of management characteristics on the use of management accounting systems. Specifically, they find that the experience and professional background of management influences the use of management accounting systems ([Naranjo-Gil and Hartmann 2006](#)) and the organization’s strategic plans over time ([Naranjo-Gil and Hartmann 2007](#)). Subsequent research in this area finds management heterogeneity (differences in educational background, tenure, and professional background) is positively associated with successful organizational planning ([Morelli and Lecci 2014](#)), and that CFO age and tenure affect the innovative use of accounting systems ([Naranjo-Gil, Maas, and Hartmann 2009](#)). In addition to examining how managerial characteristics affect the use of management accounting systems, papers in this area examine operating outcomes such as profitability and performance. In a study of executives in the for-profit setting, [Maiga and Jacobs \(2009\)](#) find that the leadership orientation of senior executives influences hospital profitability through process and clinical quality, patient satisfaction, and cost improvement.

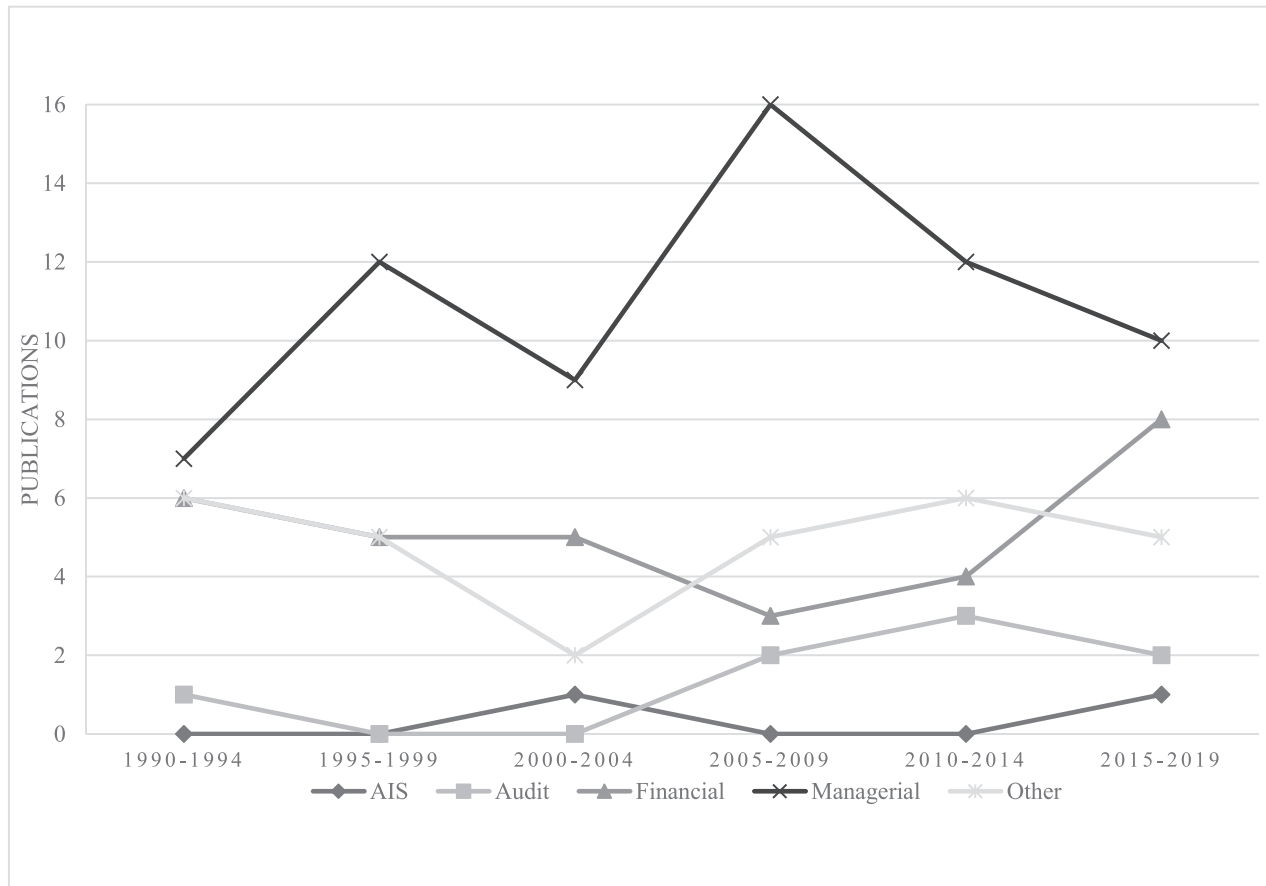
Accounting researchers sometimes examine the decision-making processes of managers within the healthcare industry. Examples include [Roodhooft and Warlop \(1999\)](#), who examine the influence of transaction costs and sunk costs on Belgian hospital managers’ “make or buy” decisions. They find that sunk costs in the “make” scenario and asset-specific investments in the “buy” scenario influence managers’ decisions. Using physician participants, [Lourenço, Greenberg, Littlefield, Bates, and Narayanan \(2018\)](#) conduct a field experiment to study the link between feedback and performance in the presence of negative incentives. They find that feedback has a detrimental effect on physicians that are in danger of failing to reach a performance benchmark, but that the effect is mitigated for physicians that actively seek performance feedback. Research on management characteristics and decision processes is relevant to a wide audience, as it highlights phenomena that are expected to persist across non-healthcare settings. Furthermore, the existing results add to the literature on transaction cost theory and the sunk cost fallacy, which appeal to researchers in both accounting and economics.

### **Future Research Possibilities in Management Accounting**

As noted in Figure 3, the quantity of healthcare-related research in management accounting is declining. Fewer studies examine U.S. Medicare’s change to fixed-fee reimbursement (i.e., the implementation of U.S. Medicare’s PPS), and this partially accounts for the decrease. Enacted in 1983, analysis of the policy change is likely nearing the end of its useful research life; however, there are still unexplored avenues of research that could use the U.S. Medicare reimbursement system as a setting. For example, Medicare grants special statuses to some rural providers (e.g.,

**FIGURE 3**  
**Publications Trends by Topic**

**Panel A: U.S. Topical Trend**



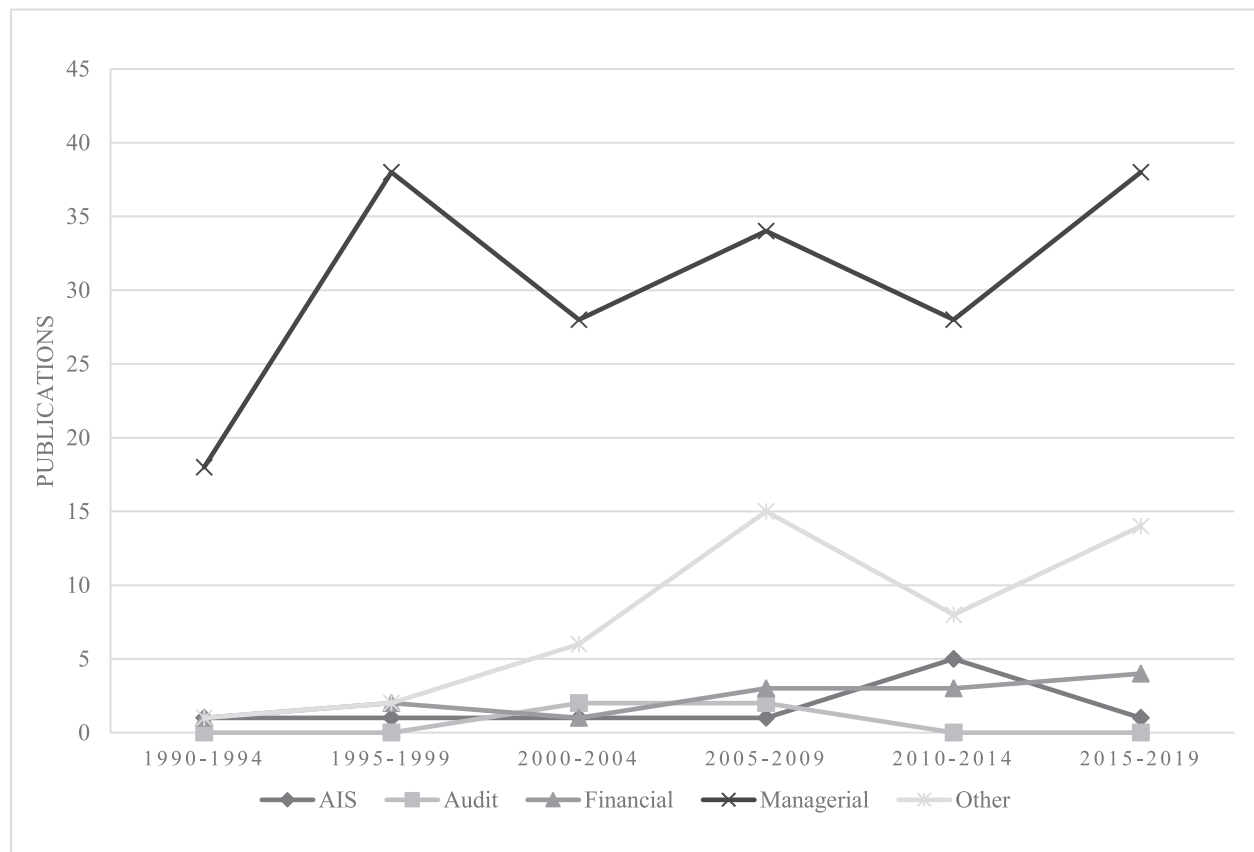
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“Community Hospitals,” “Critical Access Hospitals,” and “Medicare-Dependent Hospitals”) based on hospital location and bed capacity. Although these special statuses can carry significant advantages, we did not identify any research that examines their impact on hospital location, bed capacity, reporting, or operations. Future managerial accounting research can examine the extent that incentives to gain special hospital statuses influence decisions and, more broadly, the extent that Medicare’s special payment designations serve public health objectives (e.g., access to services) in rural U.S. communities.

Future research can examine policy changes spurred by legislative developments such as the Affordable Care Act, which changes the way Medicare reimburses providers in certain settings. For example, the Affordable Care Act allows healthcare providers to collectively band together to form Accountable Care Organizations, which are subject to alternative Medicare payment models. Through the Shared Savings Program, Accountable Care Organizations are eligible to keep some or all (depending on the amount of risk accepted by the provider group) cost savings generated from patient treatment. Initial research in this area, which finds no increase in costs when incentives are tied to quality indicators (Evans, Leone, and Nagarajan 2005), can be extended to

FIGURE 3 (continued)

## Panel B: Non-U.S. Topical Trend



investigate whether there are any predictable outcomes related to patient selection, quality of care, or aggressive reporting practices.<sup>12</sup>

Given the COVID-19 pandemic, management accounting researchers should consider extending work that examines the interplay between public policy and capacity planning decisions in healthcare settings (e.g., [Barnes and Harp 2018](#)). Hospital capacities were inadequate during the COVID-19 pandemic, and policy decisions may have contributed to the capacity shortfall. U.S. healthcare policy has generally promoted capacity decisions that maximize day-to-day hospital efficiency, however, there is renewed interest in the value of excess capacity to provide service during catastrophic events (e.g., worldwide pandemics). Accounting research on capacity planning in healthcare settings may serve a fundamental role in defining “optimal” capacity going forward, informing both policymakers and healthcare executives worldwide while extending knowledge about a fundamental managerial accounting problem (i.e., the capacity-planning problem).

<sup>12</sup> This observation echoes [Thibodeau, Evans, and Nagarajan \(2014\)](#), who point out that research into the effects of cost- and quality-based payment models, the effects of reporting quality outcomes, and the effects of changing payment models on organizational performance incentives offer interesting settings for accounting researchers in healthcare settings.

Healthcare-related research in accounting can make additional contributions to research on management characteristics and organizational outcomes. Healthcare organizations tend to include detailed profiles of their executives on websites, many executives maintain LinkedIn profiles, and IRS Form 990 provides compensation information for the highest paid employees at nonprofit hospitals. These data sources may be useful for learning about the personalities of people who manage healthcare organizations, and healthcare industry measures—with public disclosures of both financial and non-financial outcomes—may be particularly sensitive to the personalities of management. Executive narcissism stands out as a characteristic that may be worthwhile for healthcare accounting researchers to explore. [Young, Du, Dworkis, and Olsen \(2016\)](#) document an increasingly narcissistic population and call for research to examine how narcissism interacts with management accounting control systems. Given the unique advantages of the hospital setting to test theories related to the design and effectiveness of management accounting control systems ([Eldenburg et al. 2017](#)), healthcare accounting researchers may be uniquely qualified to examine several interesting research questions related to management characteristics. Specifically, what is the impact of management characteristics (e.g., narcissism) on financial performance indicators, nonfinancial performance indicators, patient satisfaction, service quality, and the implementation of strategic goals and initiatives?

More broadly, healthcare-related management accounting research in the U.S. would benefit from a more diverse range of research methods. For example, although field studies are the leading method used by healthcare-focused management accounting researchers internationally, they are rarely used in the U.S.<sup>13</sup> One recent and noteworthy exception is [Malmose and Fouladi \(2019\)](#), which examines the impact of global budget policies on Maryland hospitals. [Malmose and Fouladi \(2019\)](#) document both the intended and unintended consequences of this policy. Through discussions with key personnel, they find that management shifts costs in order to subsidize the cost of physicians who are no longer covered under the revised reimbursement scheme. On the other hand, the authors find that key personnel focus on patient care quality (as intended). Thus, the study provides a balanced view and useful insights on the impact of global budgets during the early years of implementation. Because field studies in the U.S. are sparse, U.S.-based management accounting research is vulnerable to weakness where field studies provide advantages (e.g., timeliness of analysis). Future research using field studies in U.S. settings can provide balance to the literature and timely insights on policy issues (before sufficient data are archived for analysis).

Similarly, experimental accounting research can strengthen the literature in this area. As [Eldenburg et al. \(2017, 68\)](#) point out, “many universities have medical schools and researchers can obtain access to medical professionals.” Building on this premise, accounting researchers may also have access to healthcare administrators. With relatively convenient access to the population of interest in certain universities, future experimental research can make substantial contributions to healthcare-focused management accounting research. Experiments that use hospital-manager participants are uniquely able to provide externally valid insights into proposed

<sup>13</sup> Although seminal U.S.-based field studies ([Covaleski and Dirsmith 1983, 1986](#)) provide the foundation for much of the existing healthcare-focused accounting research, archival research methods quickly became dominant. The geographic break between research methods is evident in the difference between the PPS (in the U.S.) and NPM (non-U.S.) research streams. In the U.S., archival methods were largely employed to explore the quantifiable effects associated with the PPS (e.g., [Lambert and Larcker 1995](#); [Eldenburg and Kallapur 1997](#); [Eldenburg and Kallapur 2000](#); [Kallapur and Eldenburg 2005](#); [Hsu and Qu 2012](#)). However, research abroad employed field studies to examine the issues surrounding the implementation of NPM (e.g., [Broadbent, Jacobs, and Laughlin 2001](#); [Kurumäki, Lapsley, and Melia 2003](#); [Jacobs 2005](#); [Lehtonen 2007](#)).

healthcare policy changes. Such insights can help to minimize the unintended negative consequences associated with healthcare policy.

### **Financial Topics and Research Opportunities**

Although healthcare researchers historically focus on management accounting topics, 46 papers (11 percent of our collected sample) cover phenomena more focused on financial accounting. Financial-accounting-focused papers are typically set in the U.S. (32 of 46 papers), where the number of healthcare-focused financial accounting publications has grown considerably (167 percent since 2009), making financial accounting the second most researched sub-discipline by healthcare-focused U.S. accounting researchers (see Figure 3, Panel A). Early financial-focused studies examine the usefulness of hospitals' financial information. For example, [Sherman \(1986\)](#) finds that—due to diverse ownership structures—financial information alone is of little use for determining hospital performance. [Chu, Zollinger, Kelly, and Saywell \(1991\)](#) and [Mensah and Chiang \(1996\)](#) find that additional financial disclosures (working capital flow and payments to physicians, respectively) are informative to external users of hospital financial statements. [Watkins \(2000\)](#) finds that hospital creditworthiness is best modeled using a collection of financial and nonfinancial data. Thus, early work in financial accounting highlights the inadequacy of standard financial statements as a comprehensive source for information about hospital performance and creditworthiness.

More recent work focuses on reporting incentives and the techniques used to satisfy the pressures faced by nonprofit hospital managers, who operate in a unique institutional environment where they face pressure to avoid both deficits *and* large surpluses. Deficits may signal poor managerial quality and threaten the viability of the facility; however, large surpluses may draw the scrutiny of regulators (which can revoke tax advantages) and third-party payers (which may seek payment discounts). Consistent with institutional pressures to manage earnings toward zero, evidence from the U.S. and Taiwan shows that nonprofit hospital managers avoid deficits and large surpluses through real earnings management ([Eldenburg, Gunny, Hee, and Soderstrom 2011](#); [Wen, Huang, Shen, and Zhang 2019](#)). Similarly, studies of U.K. hospital trusts find that managers use accruals-based earnings management to manage earnings toward zero ([Ballantine, Forker, and Greenwood 2007](#)).

In addition to facing pressure to minimize both earnings and losses, U.S. nonprofit hospitals face societal and regulatory pressure to report adequate levels of charity care as a way of justifying the significant tax advantages that come from nonprofit status. [Plante and Ragland \(2018\)](#) find that hospitals in New Hampshire provide enough charity care to cover tax exemptions; however, many hospitals do not meet proposed federal charity care requirements. Recent accounting research ([Ragland and Plante 2021](#)) finds that hospital boards of directors create more liberal charity care policies (which result in higher levels of charity care provided by the hospital) if they include medical doctors and healthcare administrators as board members. This suggests that hospitals can strategically assemble boards to align nonprofit missions, board objectives, and public health. More often, however, accounting researchers reveal how managers opportunistically report charity care levels. For instance, [Eldenburg and Vines \(2004\)](#) show that hospital managers forgo debt collection by reclassifying bad debt expense as charity care when cash levels are high; [Vansant \(2016\)](#) documents how hospital managers use income increasing discretionary accruals when charity care levels meet external expectations.

Charity care reporting can also be affected by the regulatory environment, and accounting researchers study the effects of different state-level charity care reporting requirements. In five



U.S. states, tax exemptions are partially dependent on nonprofit hospitals providing minimum levels of charity care; however, accounting studies reveal some interesting unintended consequences related to charity care mandates. For instance, after Texas passed a law mandating minimum charity care levels, nonprofit managers in hospitals with sufficient pre-mandate charity care levels responded by decreasing charity care levels to an amount closer to the mandated minimum. Thus, although some hospitals increased charity care, the law had an insignificant effect on the total amount of charity care provided in the state (Kennedy, Burney, Troyer, and Stroup 2010). Moreover, additional evidence from Texas suggests that nonprofit hospitals that increased charity levels did so through price increases rather than providing more services to those who could not afford to pay (Zeidan and Khumawala 2014). The research on charity care regulations demonstrates how public policies can have unintended consequences that may or may not benefit the stakeholders of the healthcare system.

Driven by research on earnings management and charity care, financial accounting research has increased over the sample period. Recent developments (i.e., The Coronavirus Aid, Relief, and Economic Security [“CARES”] Act) may create additional research opportunities for financial-accounting-focused researchers interested in studying earnings management strategies. Distributions from the CARES Act depend on the financial losses and changes in operating expenses reported by hospitals during the pandemic, and it would be interesting to examine the effect of the CARES Act on managers’ financial reporting strategies. In addition, we see substantial opportunities in the study of financial figures reported outside of the audited financial statements (e.g., voluntary and mandatory non-financial-statement/regulatory disclosures and reporting). For example, 31 states require hospitals to submit a “Community Benefit Report” to maintain valuable tax exemptions (Hilltop Institute 2021). Community benefit reports exhibit variations in format and content at the hospital-level, and future research can examine the reporting strategies reflected in these disclosures.<sup>14</sup> Because such reporting requirements are often the result of public policy decisions, research on disclosure of non-financial-statement performance information lies at the under-studied intersection of accounting and public policy (McConville and Cordery 2018). Further, differences in disclosure requirements across state and local boundaries may present research opportunities to examine the effect of disclosure differences on community outcomes such as health, patient satisfaction, or community engagement.

### **Audit Topics and Research Opportunities**

We find 12 papers that cover audit topics. Eight of these papers are set in the U.S. and seven were published in the second half of the sample period (Figure 3, Panel A). Topics examined include the characteristics of nonprofit hospital audit committees, the influence of external auditors on internal control quality, and the spillover effects of the Sarbanes-Oxley Act (SOX). Specifically, Vermeer, Raghunandan, and Forgione (2006) find that the audit committees of nonprofit hospitals are more likely to have financial experts and are less likely to be completely independent as compared to other nonprofit organizations. In a follow up study, Vermeer, Raghunandan, and Forgione (2009) find that audit committees meet more frequently with external auditors when revenues are derived from government grants, when the organization maintains a high restricted fund balance, and when the external auditor is large (i.e., Big 4).

<sup>14</sup> Relatedly, the ACA requires the preparation and disclosure of community health needs assessments every three years. Future research can similarly examine these disclosures.

Vermeer et al. (2009) conclude that nonprofit audit committees adopt external auditor interaction strategies in response to monitoring demands. Pridgen and Wang (2012) and López, Rich, and Smith (2013) find that hospitals with Big 4 auditors are associated with better internal control quality and are less likely to disclose internal control weaknesses. Finally, McGowan, Chan, Yurova, Liu, and Wong (2018) find an increase in audit quality after the passage of SOX, suggesting spillover effects from SOX on nonprofit hospitals (which are not subject to SOX regulations).

Healthcare-related audit research remains sparse, and the questions examined closely follow those examined in non-healthcare accounting research (e.g., the consequences of engaging a Big 4 auditor, the effects of SOX), leaving future research to explore a variety of topics. Non-financial-statement disclosures and regulatory reporting requirements may offer interesting and unique avenues for future research. For example, in 2017, nonprofit hospitals reported (via Form 990) over \$100B in benefits provided to communities. Although the reported figure “incorporates the Catholic Health Association (‘CHA’) general principles for community benefit rules and regulations” (Withum 2021), it is unclear what level of assurance is provided regarding the reporting of community benefits relative to the CHA standard, and a descriptive study on community benefit reporting assurance in practice is needed.

Governmental audit program findings and outcomes offer additional areas for future research. The Office of Audit Services (OAS) provides the results of audits conducted on behalf of health care programs (e.g., Medicare, Indian Health Services) that often detail findings related to healthcare facilities. The reports disclose important decisions related to audit sampling techniques and extrapolation of findings. Such information may be of interest to governmental-audit-focused researchers. Further, archival audit researchers can leverage OAS findings to hypothesize and test the determinants of fraud that was undetected by the external auditors.

Potential questions include (1) is the OAS less likely to audit facilities with Big N external auditors? and (2) when audited, are these facilities more likely to avoid unfavorable audit outcomes? Further, the offending healthcare facilities (which can be university-affiliated) may provide the basis for interesting case/field studies that shed light on the interactions between external, internal, and governmental auditors.<sup>15</sup>

### **AIS Topics and Research Opportunities**

We find only 12 AIS papers between 1990 and 2020. The most influential paper in this group finds that physician use of accounting information systems is positively associated with cost consciousness (Abernethy and Vagnoni 2004). We find two papers that follow the introduction of new technologies (such as e-medical records) to reveal the changing role of technology in the healthcare industry (Wickramasinghe and Mills 2002; Vikkelsø 2007). Recent research examines the influence of health-information-technology investments on operating outcomes and finds that these investments are positively associated with hospital productivity and return on assets, and negatively associated with bad debt (T. Wang, Y. Wang, and McLeod 2018; Y. Wang, T. Wang, and Cook 2021b).

Following the research of Wang and colleagues (Wang et al. 2018; Wang et al. 2021b), future AIS research can focus on the technology adoption rates and outcomes associated with emerging technologies. Healthcare facilities are beginning to adopt blockchain technology to improve patient

<sup>15</sup> For example, the University of Miami recently agreed to pay \$22M to settle allegations of Medicare fraud (Department of Justice 2021).

record keeping (Guo, Walton, Wheeler, and Zhang 2021), and field studies can explore the issues and outcomes associated blockchain implementations. Another emerging area in AIS is the use of big data and analytics to improve decision making and fraud detection. AIS scholars may have unique opportunities to collaborate with nonprofit and governmental organizations to develop useful processes with immediate practical applications. For example, van Capelleveen, Poel, Mueller, Thornton, and van Hillegersberg (2016) develop an algorithm that detects outliers and the possibility of fraud in Medicaid dental claims. Additional collaborations with healthcare facilities and governments could create opportunities for publication while also serving the public interest.

### Other Topics

Several healthcare-focused accounting research papers fall outside of or significantly overlap the mainstream sub-disciplines (i.e., managerial, financial, auditing, and AIS). Indeed, the nature of healthcare research inspires scholars to push the traditional boundaries of accounting research to address important policy issues from a societal perspective. Further, the unique mix of ownership structures operating in the U.S. hospital industry (including for-profit, nonprofit, federal government, and state/local government) allows healthcare-focused accounting scholars to examine the wide array of outcomes that are theoretically (e.g., Jensen 1983) and often empirically associated with ownership type.

### **Ownership<sup>16</sup>**

In the U.S., healthcare providers operate under differing ownership structures (i.e., for-profit, nonprofit, and governmental) and these ownership structures compete in the same marketplace. Hospital ownership influences how hospitals can respond to incentives, and Eldenburg et al. (2017) provide a thorough description of the complex institutional challenges faced by each ownership type. Empirically, accounting researchers have shown that ownership structure is related to an expansive list of organizational outcomes. From a management perspective, ownership is associated with hospital efficiency (Carter, Massa, and Power 1997; K. Chang and G. Chang 2017), the extent to which hospitals engage in outsourcing (Balakrishnan, Eldenburg, Krishnan, and Soderstrom 2010), the association between charity care and compensation (Eldenburg, Gaertner, and Goodman 2015), and differences in incentive schemes (Eldenburg and Krishnan 2003). From a financial perspective, Wang, Y. Li, and J. Li (2021a) find that both for-profit and nonprofit hospitals engage in lobbying to decrease uncompensated care (charity care plus bad debt expense) while government hospitals do not. From an information systems perspective, Eldenburg and Krishnan (2008) investigate the influence of ownership type and incentive contracting on accounting information expenditures. They find for-profit and nonprofit hospitals are more likely than government hospitals to utilize performance-based incentives. In addition, they find that nonprofit hospitals invest in general accounting to improve efficiency and reduce costs

<sup>16</sup> Our search process yields just one tax-focused paper (Yetman 2001); thus, we do not dedicate a section to the tax sub-discipline. However, we note that studies focused on ownership/control are closely related to income, property, and sales tax exemptions (i.e., control, ownership, and tax-exempt status are one and the same for nonprofit facilities), which are extremely important to nonprofits' business models. However, at the state-level, there are variations in the level of tax exemption offered. Future research can explore how varying levels of tax exemption influence nonprofit hospital operating outcomes. Further, governments often turn to nonprofit hospitals to make voluntary tax payments, and future research can investigate variation in voluntary tax payments made by nonprofit hospitals.

whereas for-profit hospitals invest in accounting information related to credit and collections as a way to enhance revenue.

Although the effects of ownership/control are regularly examined, many studies employ restricted samples which include only nonprofit facilities (e.g., [Vansant 2016](#)), or conduct case/field studies on a particular facility (e.g., [Robbins and Lapsley 2015](#)) or government agency (e.g., [Mellett, Marriott, and Macniven 2009](#)). We document a small number of papers set exclusively in the for-profit setting ( $n = 13$ , 3.15 percent); however, studies in the for-profit setting can complement, inform, and support government and nonprofit research. For instance, two recent papers examine the use of aggressive reporting and billing practices in the for-profit setting. First, [Heese \(2018\)](#) finds that for-profit hospital managers use real earnings management, accruals earnings management, and overbilling as substitutes, and he finds that use of these methods depends on the constraints associated with each method. This research complements the existing earnings management literature in the nonprofit setting by describing the earnings management tools used in the for-profit setting, where the incentives are similar but more salient. Second, [Koreff, Robb, and Trompeter \(2020\)](#) find that increased government oversight is associated with less aggressive reporting practices in for-profit hospitals. Thus, the findings shed light on how governmental entities can curb aggressive reporting practices in for-profit facilities. Further, although nonprofit hospitals were excluded from analysis due to data availability, it is reasonable to expect [Koreff et al.'s \(2020\)](#) findings to generalize to the nonprofit setting.

### **Broad Policy Criticism, Expert Commentary, and Analysis**

Although healthcare-focused research covers a wide expanse of accounting topics, most individual research papers (including many of those discussed thus far) focus on investigating the effects of a few key variables. Some accounting scholars, however, leverage the healthcare setting to promote viewpoints and offer more sweeping criticism of governmental policies. In contrast to most PPS-related research, which focuses on the quantifiable effects of the payment structure on hospital outcomes, [Preston, Chua, and Neu \(1997\)](#) provide commentary offering broad criticism of the policy change, its purpose, and its implications for shaping views on healthcare services. The authors argue that fixed-fee payments (a product of the PPS) allow the government to act from a distance by diffusing decision-making responsibility and introducing accounting control concepts to the medical field without giving the appearance of healthcare rationing. In complement, [Samuel, Dirsmith, and McElroy \(2005\)](#) argue that the fixed-fee payments are the product of university-supported concepts delivered via professional practice (primarily engineering, economics, and accounting). Ultimately, the authors argue that fixed-fee payments commoditize healthcare services, make “health a matter of wealth” ([Samuel et al. 2005](#), 271), and fail to contain costs as intended.

U.K.-based case studies tend to focus on broader outcomes of policy changes initiated by the National Health Service (NHS). These studies contribute to academic discourse related to the healthcare system, and the authors (informed by their observations) sharply criticize NHS policies for being unable to meet stated public health objectives. A representative stream of research exists on the Private Finance Initiative (PFI), where the NHS funds capital projects using private rather than public sources of financing under the premise that private markets are more efficient sources of capital. The case studies in this area, which offer both a prospective and retrospective view of PFI, argue that the policy serves the interests of private financiers rather than NHS stakeholders ([Mayston 1999](#); [Toms, Beck, and Asenova 2011](#)). Similar research explains how NHS policies designed to increase hospital capacity may result in *decreased* capacity ([Haslam 2005](#)) and how increases in NHS funding can fail to translate to favorable outcomes ([Haslam and Marriott 2006](#)).

### Future Research on Other Topics

The global pandemic caused by the outbreak of COVID-19 has further highlighted a healthcare gap in the U.S. driven by race and socioeconomic class (Khatana and Groeneveld 2020). Future healthcare-focused accounting research can examine policies and practices that exacerbate and/or mitigate this gap. An exemplary archival case study that highlights the healthcare gap is Jervis, Goldberg, and Cutting (2012), which examines the relocation of six nonprofit hospitals that moved from communities with higher minority and longer average length-of-stay times to more affluent communities with smaller minority populations and shorter average length-of-stay times. The analysis demonstrates that nonprofit hospitals may be more likely to close in areas where the community need for healthcare facilities is highest.

Finally, among the “other topics,” we document publications in our sample that we categorize as “expert commentary and analysis.” This includes policy commentary and opinion, discussion, and theoretical framework development. Policy commentary papers provide an outlet for academics to comment on policy and make informed recommendations. In the U.K., policy recommendations and critiques are typically embedded in larger case studies. In the U.S., such commentary is often included in archival papers. We find only a small sample of dedicated policy commentary papers. Nevertheless, healthcare experts in accounting can provide unique and meaningful insights on issues surrounding healthcare cost, quality, and access. Exemplary work includes Martens and Murphy’s (2000) essay on the misuse of government accounting information by politicians and others to stoke fear regarding the funding of Social Security and Medicare. This commentary provides unique insights into the government’s role and the responsibilities of politicians in promoting and maintaining public health institutions, and the essay’s compelling commentary effectively weakens misguided political rhetoric.

## IV. HEALTHCARE DATA

Notwithstanding the significant non-archival research opportunities available in healthcare-related accounting research, in this section we highlight the ever-increasing public data sources that continue to fuel the growth in healthcare-focused North American archival research. From a practical standpoint, Bloomfield et al. (2016) notes that archival research dominates the top 3 accounting journals, and our analysis of the healthcare accounting literature is consistent with this finding, as 95 percent (19/20) of the publications in the top 3 journals use the archival method. Further, because new faculty are often incentivized to publish in elite journals, accounting PhD programs train students to employ the methods regularly accepted by elite journals (Moser 2012), and an archival bias is likely to persist in the short run.

For researchers interested in audit topics, the U.S. government makes certain audit data available. All non-federal entities that expend \$750,000 or more in federal funds per year are required to complete the Single Audit. The audit reports from the Single Audit and audited financial statements are available through the Federal Audit Clearinghouse.<sup>17</sup> Publications that leverage this data include Pridgen and Wang (2012), López et al. (2013), Neuman, Omer, and Thompson (2015), and McGowan et al. (2018). Additionally, the U.S. Department of Health and Human Services and the Office of the Inspector General make available the findings from audits conducted on healthcare facilities via the Office of Audit Services.<sup>18</sup> Amazon Web Services provides a comprehensive set of IRS Form 990s filed by nonprofit healthcare providers; however,

<sup>17</sup> Available at: <https://facdissem.census.gov/>

<sup>18</sup> Available at: <https://oig.hhs.gov>

significant coding skills are required to harness this data. The IRS provides more accessible (pre-structured) datasets through its Statistics of Information (SOI) division. SOI datasets do not contain IRS Form 990 in its entirety; thus, the usefulness of the datasets will depend on the specific research question. Similarly, the National Center for Charitable Statistics (NCCS) and the National Bureau of Economic Research (NBER) have similarly limited pre-structured 990 datasets.

Various healthcare data are available at both the U.S. federal and state level. Access to these data are often free; however, researchers may need to complete a training course and/or apply for access. At the federal level, several papers leverage U.S. Medicare Cost Reports available from The Centers for Medicare & Medicaid Services' (CMS) website (e.g., [Arnold 1991](#); [Liu, Jarvis, Younis, and Forgione 2011](#); [Noe and Forgione 2014](#); [Barnes et al. 2017](#); [Barnes and Harp 2018](#)). These reports contain a host of information including some detailed cost information for hospitals, nursing facilities, and hospices. A key feature of the cost report data is that they include all healthcare providers that participate in the Medicare program regardless of ownership type (i.e., nonprofit, for-profit, or governmental).

State-level information is often used to examine managerial topics that require detailed cost and/or budget information. Seventeen papers in our sample use data from The Office of State Health Planning and Development (OSHPD) in California. OSHPD provides information on California hospitals, regardless of ownership type, including patient mortality rates, quality ratings, select financial data, facility characteristics and utilization information. OSHPD data has been used to investigate the factors associated with cost shifting in nonprofit hospitals ([Krishnan and Yetman 2011](#)); the effect of governance on CEO compensation and its impact on financial performance ([Eldenburg and Krishnan 2003](#)); the influence of demand uncertainty and financial risk on management activities ([Holzhacker, Krishnan, and Mahlendorf 2015](#)); the influence of institutional constraints on outsourcing ([Balakrishnan et al. 2010](#)); and the effect of incentives on real earnings management decisions in nonprofit hospitals ([Eldenburg et al. 2011](#)). Although the California/OSHPD data are the most used state-level data source in our sample, substantial research is also based on data from Washington State (11 papers) and Texas (5 papers). Access to state-level data has important government policy implications, as the success/failure of specific policies can inform policymakers in states that are considering similar policies (see [Lee and Chamberlain 1998](#)).<sup>19</sup>

Several potentially informative public healthcare data sources remain unexplored by accounting researchers. For example, hospital outcome data are available through The Agency for Healthcare Research and Quality (AHRQ), but our analysis indicates that only one paper employs this data source. [Evans, Hwang, and Nagarajan \(2001\)](#) use the AHRQ data to examine the effects of physician profiling on reducing costs. They find that after a profiling system was introduced, patient length-of-stay decreases but the number of procedures performed per patient day increases, resulting in an insignificant decrease in cost. Their study has important social and policy implications. First, the research demonstrates that reducing patient length-of-stay does not

<sup>19</sup> In addition to federal and state data, several options are available from private sources. However, the use of data from private sources has declined significantly over the sample period. The most frequently employed (six papers) private data are a survey made available by the American Hospital Association (AHA). Three studies investigate the Texas law requiring minimum levels of charity care ([Holtzman and Averin 2003](#); [Kennedy et al. 2010](#); [Zeidan and Khumawala 2014](#)). Other studies examine the relationship between goal congruence and economic benefits ([Bouillon, Ferrier, Stuebs, and West 2006](#)), the efficiency of university hospitals ([Harrison and Lambiase 2007](#)), and the extent to which hospitals disclose financial information online ([Styles and Koprowski 2008](#)). In addition, four studies use data from Guidestar.org, a private provider of information about nonprofit organizations.

necessarily lead to cost reductions. Second, it provides empirical evidence to policymakers and practitioners considering appropriate incentive schemes and cost reduction policies. As hospitals face pressure to meet quality benchmarks while controlling cost, the AHRQ data should be especially useful to researchers who study incentives and their association with quality indicators. The data from AHRQ provide detail for hospital admissions, readmission rates, and hospital deaths, and they include various hospital and patient level surveys.

We find no research leveraging the Physician Payments Sunshine Act, a subsection of the ACA, which mandates the disclosure of payments made by pharmaceutical and medical device companies to physicians and teaching hospitals. However, future research can utilize this data to examine the characteristics of hospitals that receive payments and the related consequences. Similarly, data from the Hospital-Acquired Conditions Reduction Program (HACRP) and the Hospital Readmissions Reduction Program (HRRP) remains unexamined. The HACRP penalizes certain hospitals up to 1 percent of its Medicare reimbursement should the hospital fail to meet quality benchmarks regarding the rate of hospital-acquired conditions. The HRRP penalizes certain hospitals up to 3 percent of its Medicare reimbursement should the hospital fail to meet quality benchmarks regarding patient readmission rates. Future healthcare accounting studies can use this data to examine the antecedents and consequences of penalties imposed by these programs. Finally, on January 1, 2021, hospitals were required to disclose all prices for their services. The disclosure must include the prices for all services across different payers including cash prices, payer-specific negotiated charges, and the highest and lowest negotiated prices for a particular service. Furthermore, hospitals must also disclose these prices on their website using a “consumer-friendly display” and provide the disclosure in a machine-readable format. As this data becomes available, accounting researchers can study pricing decisions and document the effects of price disclosure.

## V. SUMMARY

This paper analyzes and reviews the literature from a diverse selection of accounting journals. Publication frequencies and trends indicate that healthcare-focused accounting research is published consistently by high-quality, and even premier, accounting journals. However, the “top 3” journals are publishing less healthcare-related research. For studies set in the U.S., we find that managerial studies have decreased over the last 15 years while financial studies have increased over the same period. With respect to methodology, we find that the use of archival and “other” methods, including field studies, case studies, and survey-based research, diverge over the sample period in the U.S. non-archival methods are favored abroad and—given the significant contributions outlined in this review—we encourage a more diverse range of methods to investigate healthcare accounting topics in the U.S.

Our review of the literature reveals several avenues for investigation. We summarize select topics from our discussion in Table 4. Overall, we are optimistic about healthcare-focused accounting researchers’ prospects for making continued contributions to the literature. A broad range of methodologies can be used to investigate several unexplored areas across each sub-discipline. Researchers interested in managerial topics can investigate topics such as the Shared Savings Program, hospital capacity planning, and the influence of management characteristics on operating outcomes. Financial accounting researchers can examine outcomes associated with the CARES Act, and both financial accounting and audit scholars may examine issues surrounding community benefit reporting. Finally, we identify several under-utilized data sources stemming

**TABLE 4**  
**Potential Research Opportunities**

Sub-Discipline	Topic	Potential Research Question(s)
Managerial	U.S. Medicare reimbursement system	How does Medicare's designation of special status influence decisions regarding hospital location, bed capacity, reporting, or operations?
Managerial	Shared Savings Program	Are there any outcomes associated with this incentive scheme such as patient selection, decreases in quality of care, or aggressive reporting practices?
Managerial	Hospital capacity planning	What is the optimal hospital capacity?
Managerial	Management characteristics	What is the impact of management characteristics (e.g., narcissism) on financial performance indicators, nonfinancial performance indicators, patient satisfaction, service quality, and the implementation of strategic goals and initiatives?
Financial	CARES Act	How has the CARES Act influenced managers' financial reporting strategies?
Financial	Community benefit reporting	What strategies do hospital managers use to create community benefit reports? What drives variation in the quality and presentation of the reports?
Audit	Community benefit reporting	What assurance is provided regarding the disclosure of community benefits relative to CHA standards?
Audit	OAS audit reports	What are the determinants of undetected fraud? Is the OAS less likely to audit facilities with Big N external auditors? When audited, are these facilities more likely to avoid unfavorable audit outcomes?
AIS	Blockchain technology	What are the issues associated with the adoption and use of blockchain technology?
"Other"	The Physician Payments Sunshine Act	What are the outcomes associated with disclosed payments to physicians and hospitals?
"Other"	Hospital Readmissions Reduction Program and Hospital-Acquired Conditions Reduction Program	Are these programs achieving objectives? Are there any unintended consequences associated with these programs?

from legislative policy, such as The Physician Payments Sunshine Act, The Hospital Readmissions Reduction Program, and Hospital-Acquired Conditions Reduction Program.

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**APPENDIX A**
**Top Publication Outlets by Leading Methodologies**

Journal Ranking		Journal	Archival	Field Study	Case Study	Survey
BYU	ABDC					
—	A	<i>Financial Accountability &amp; Management</i>	12	35	30	14
—	B	<i>Journal of Public Budgeting, Accounting &amp; Financial Management</i>	17	1	6	2
—	A	<i>Journal of Accounting and Public Policy</i>	21	—	1	1
—	A*	<i>Management Accounting Research</i>	2	14	3	4
4	A*	<i>Accounting, Organizations and Society</i>	5	3	6	7
—	A*	<i>Accounting, Auditing, and Accountability Journal</i>	—	10	2	2
—	A	<i>Critical Perspectives on Accounting</i>	1	4	7	—
—	B	<i>Accounting Forum</i>	—	7	5	1
—	B	<i>Journal of Intellectual Capital</i>	4	5	—	2
—	A*	<i>The European Accounting Review</i>	2	6	1	2
9	A	<i>Accounting Horizons</i>	6	—	2	—
—	A	<i>Qualitative Research in Accounting &amp; Management</i>	—	11	—	—
2	A*	<i>The Accounting Review</i>	11	—	—	—
—	B	<i>Journal of Accounting &amp; Organizational Change</i>	1	6	2	1
8	A*	<i>Journal of Management Accounting Research</i>	8	—	—	2
5	A*	<i>Contemporary Accounting Research</i>	8	1	—	—
—	A	<i>Advances in Management Accounting</i>	2	1	1	4
—	A	<i>Abacus</i>	—	2	3	—
3	A*	<i>Journal of Accounting Research</i>	4	1	—	—
—	B	<i>Accounting and the Public Interest</i>	3	—	—	1
—	B	<i>Australian Accounting Review</i>	—	4	—	—
—	A*	<i>British Accounting Review</i>	1	2	1	—
—	B	<i>International Journal of Accounting and Information Management</i>	—	—	1	3
—	A	<i>International Journal of Accounting Information Systems</i>	3	1	—	—
1	A*	<i>Journal of Accounting and Economics</i>	4	—	—	—

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