Administrative Complexity and Waste in US Healthcare

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Abstract

The purpose of this essay is to articulate challenges and the key factors influencing the administrative complexities and waste associated with expenditures in the United States healthcare system. Understanding why healthcare organizations in the industry incur high administrative costs due to complexity provides healthcare administrators better insight on opportunities to eliminate waste and control the costs of healthcare in America. A literature review of books and peer-reviewed journals identified through Google Scholar and Baylor OneSource was conducted to complete the research. The results of the research outline the major contributing factors of administrative complexity on the costs associated with the functions of finance, delivery, payment, and reimbursement of healthcare; the process factors influencing administrative complexity; and process waste associated with the administrative complexity in the US healthcare system.

Keywords: healthcare, administrative cost, administrative complexity, waste in healthcare

Administrative Complexity and Waste in the US Healthcare System

Over the past few decades, healthcare costs in America have risen sharply. The degree to which healthcare spending consumed the economy in terms of Gross Domestic Product (GDP) doubled from 8% to 16% between 1975 and 2007, and is expected to reach 20% of GDP by 2016 (Orszag & Ellis, 2007). Administrative costs alone represent a significant portion of healthcare costs and accounted for an estimated $156 billion in 2007 and are on a trajectory to reach $315 billion by 2018 (Yong, Saunders, & Olsen, 2010). In terms of value, administrative costs incurred by health care organizations which do not positively influence quality may present healthcare administrators opportunities to improve their operations. Therefore, it is important for healthcare administrators to understand how administrative complexity influences administrative costs associated with healthcare delivery, finance, reimbursement, and payment and be able to identify wasteful business processes that increase administrative costs.

Healthcare administrators face challenges in balancing the three vertices of William L. Kissick's *Iron Triangle* defined as quality, cost, and access; Kissick's model suggests that the vertices of the triangle often compete with one another (Kissick, 1994). For example, improving quality or access often results in cost increases. However, if healthcare administrators can find ways to decrease costs without negatively impacting quality or access, they can improve their operations. The significant portion of healthcare costs associated with administrative overhead may present opportunities to make such improvements. Healthcare administrators must be able to determine which administrative costs add value to care and which are purely wasteful. Eliminating administrative waste is a possible method of decreasing costs of healthcare without negatively impacting quality or access.

Muda is the Japanese word for "waste" and the types of waste identified in lean thinking include transportation, inventory, motion, waiting, overproduction, over-processing, and defects (Womack & Jones, 2010). Correlating administrative overhead costs with these types of waste can assist healthcare administrators to identify which business processes can be streamlined or eliminated to maximize value and contain growing healthcare costs within their organizations. For example, patients must sometimes make appointments with multiple physicians in many different locations and experience separate scheduling, check-in, consultation, and diagnostic procedures for each physician in the coordination of their care (Kaplan & Porter, 2011). By conducting a review of current and relevant literature, this paper assesses the degree to which research has identified the contributing factors of administrative complexity on the costs of healthcare and how administrative complexity correlates with the forms of waste. The literature review may help to reveal potential areas in which healthcare administrators can reduce *administrative muda* while maintaining the same level of quality and access to care their organizations provide.

Administrative costs

In order to understand administrative complexity and waste in the US health system, we must first explore the nature of the most prevalent administrative costs. International research conducted supports the high administrative costs associated with health insurance and all studies conclude that the United States has unusually high administrative costs as compared to other similar countries (Marmor, Oberlander, & White, 2009). The processes that incur administrative costs in the US health system exist within the functions of finance, delivery, insurance and payment of healthcare services; these processes include enrollment management, provider contracts, claims processing, denial appeals, as well as marketing and promotional expenses (Shi

& Singh, 2009). A review of current literature reveals the processes which generate administrative costs are prevalent in both private and public sectors of healthcare. For example, Medicaid and insurance plans provided by employers both require considerable and costly administration and these processes should be addressed when improving or reforming healthcare (Fuchs, 2009). Research also indicates significant variance exists in administrative procedures with the US healthcare system. For example, every insurance plan offers a multitude of products and will have varying authorization requirements, billing specifications, claims processes, and adjudication procedures (Morra et al., 2011). The interactions between providers and health insurance companies are a major contributor to administrative costs and account for approximately $31 billion in annual healthcare expenditures (Morra et al., 2011). A review of existing literature for this research indicates some of these interactions add little value to the quality of care provided and quality would not suffer should these interactions not occur.

Existing literature shows that administrative tasks assigned to physician can incur costs disassociated with providing care to patients. According to Casalino et al (2009), physicians must spend considerable time coordinating and interacting with health insurance plans to facilitate payment for services rendered which appears to represent a large percentage of administrative costs incurred by physicians. Tasks associated with the administrative costs incurred by physicians and other administrators include gaining prior authorization, working with formularies for medication, processing insurance claims, maintaining their credentials and contracting prices with a multitude of insurers (Casalino et al., 2009). Research published in recent literature also reveals that physicians spend an average of 43 minutes per day interacting with healthcare plans (Cutler, Wikler, & Basch, 2012). In a survey of physicians and administrators, Casalino et al (2009) found physicians reported spending approximately 3 hours

per week, or three weeks per year, interacting with health insurance plans. Additionally, The Institute of Medicine hosted a round table on value and science driven health care where Lawrence P. Casalino of Weill Cornell Medical College cited additional research where the average US physician must dedicate approximately 3.8 hours per week on administrative tasks to coordinate with payers (IOM, 2010). When the hours spent interacting with health plans are converted to administrative dollar cost, practices spent an average of $68,274 per physician per year on health plan interactions; spending an average of $64,859 per physician annually, primary care practices spent nearly one-third of the total compensation package for primary care physicians in health plan interactions (Casalino et al., 2009).

In comparison with primary care physicians, research discussed in the literature suggests specialists and surgeons spend significantly less time interacting with health plans than do primary care physicians. Primary care physicians report spending an average of 3.5 hours per week – nearly half a day – interacting with health plans; whereas specialists and surgeons report spending 2.6 hours and 2.1 hours per day, respectively (Casalino et al., 2009). See the below table for an illustration of data collected from the survey. The results of this survey suggest that as internal shifts occur in the US health system from specialized care to primary care, administrative costs will continue to escalate. Although a disparity exists between the physician types in time spent interacting with health plans, all physicians report spending a greater amount of time at 1.7 hours per week dealing with formularies compared to all other health plan interactions (Casalino et al., 2009).

Although the time physicians spend conducting administrative tasks appears to be of greatest concern in the literature, research reveals nursing and clerical staff also spend significant time performing administrative tasks interacting with health plans. In the aforementioned

survey, nursing staffs report spending an average of 19.1 hours per week per physician performing administrative tasks interacting with health plans and clerical staffs report spending an average of 35.9 hours per week per physician (Casalino et al., 2009). Figure 1 outlines the empirical data used in the survey. Casalino et al. (2009) found that nursing staff spent a majority of their administrative time (13.1 hours per week) coordinating authorizations and clerical staff spent most of their administrative time (27.1 hours per week) processing claims for payment. By combining all costs associated with health plan interactions, one survey estimates total administrative costs of interacting with health plans in the US to be $31 billion per year (Morra et al., 2011). And based on a 2006 mail survey of physicians and administrators, more than 75% of respondents indicated the situation is worsening with the increasing cost of coordinating with health insurance; 41% indicated the costs are "increasing a lot" (IOM, 2010, pg. 153).

A review of existing literature also reveals that high administrative costs inherent in the US health system can be associated with managed care and the multi-payer system. As health insurance plans attempt to manage care, interactions between physician practices and the health plans increase (Morra et al., 2011). Research available in the literature relating to healthcare costs often compares the US health system with Canada's health system to provide contrast between a multi-payer system and a more standardized, single-payer system. When comparing US healthcare costs to Canada's healthcare costs, research indicates the largest proportion of the difference is due to administrative costs (Pozen & Cutler, 2010). A recent study published in the "Health Affairs" journal, compared the administrative costs of the US managed care and multi-payer system with that of Canada's single-payer system. When compared to that of Canada's single-payer system, the US spends $82,975 on health plan interaction per physician per year whereas Canada spends approximately $22,205 for the same interactions (Morra et al., 2011).

This results in an estimated difference of approximately $60,000 per year per physician. Although the chances of the US adopting a single-payer system seem very unlikely, standardization of interaction processes could be a solution to reduce administrative healthcare (Cutler et al., 2012).

Table. Mean Hours Per Physician Per Week Or Per Year For All Types Of Interactions, By Practice Specialty, Type Of Staff, And Practice Size, 2006

	Hours per week			
	1-2 MDs	3-9 MDs	10+ MDs	Weighted Mean
Physicians				
PCPs	4.3	3.3	2.8	3.5
Medical Specialists	3	2.7	2.3	2.6
Surgical Specialists	1.9	2.3	2.1	2.1
Nursing Staff				
Primary Care	14.1	22	22.5	19.5
Medical Specialists	11.6	25.4	21.7	19.7
Surgical Specialists	11.7	23.1	17.9	17.5
Clerical Staff				
Primary Care	45.4	31.3	25.7	34.4
Medical Specialists	39.6	46.5	28.2	37.7
Surgical Specialists	40.1	41.8	27.5	38.2
All Practices	**Hours Per Week**			
Physicians	3.5	2.95	2.6	3
Nursing Staff	13	22.9	21.55	19.1
Clerical Staff	43	36.5	26.8	35.9

Note. Hours indicated for nursing and clerical staff are in terms of hours per physician per week for the entire staff. Adapted from "What does it cost physician practices to interact with health insurance plans?", by L.P. Casalino, S. Nicholson, D.N. Gans, T. Hammons, D. Morra, T. Karrison, and W. Levinson, 2009, *Health Affairs*, *28*(4), p. w536. Copyright 2009 by Project HOPE – The People-to-People Health Foundation.

Administrative complexity and muda

As researchers continue to stratify and quantify the types of administrative costs prevalent in the US health system, healthcare administrators can begin to dissect the processes in

terms of value added and non-value added steps to begin to standardize interactions and eliminate administrative muda from their healthcare operations. The Institute of Medicine estimates the US spends $361 billion on healthcare administration and half of those expenditures are wasteful (Cutler et al., 2012). According to the literature reviewed, there are several types of waste in the US healthcare system. These types of waste account for approximately 34% of total healthcare expenditures and include failures of care delivery, failures of care coordination, overtreatment, pricing failures, fraud/abuse, and administrative complexity (Berwick & Hackbarth, 2012). The Institute of Medicine (2010) discusses two categories of waste associated with interactions: *unnecessary interactions* and *inefficient interactions*. Unnecessary interactions are those where the marginal cost exceeds the marginal benefit of the interaction, are non-value add, and need not be performed; whereas, inefficient interactions are the tasks performed in a manner that do not realize maximum net benefit and, therefore, create waste (IOM, 2010). However, the literature does not specifically define what parts of these interactions are add value and which are administrative muda.

In their article "Eliminating Waste in US Healthcare", Donald Berwick and Andrew Hackbarth (2012) define administrative complexity as the waste that results from complicated processes and imprudent procedures introduced by payers, government, accreditation agencies, and other entities. Berwick and Hackbarth (2012) estimate administrative complexity represents 31% of total waste and can be as much as $389 billion in wasteful spending per year. The Institute of Medicine concluded significant over-processing and inefficiencies arise from administrative procedures with the personnel, costs, and time required to devote to "billing and insurance-related (BIR) activities from contracting to payment validation on the provider side and the needs of payers to process claims and credential providers" (IOM, 2010, pg. 141).

According to available evidence, James G. Kahn of the University of California-San Francisco estimated that $183 billion of spending directly related to BIR activities in the United States may be a result of inefficiency, or waste (IOM, 2010). A review of the available literature suggests considerable waste exists in the US health system in terms of administrative costs and the complexity presented by interactions between healthcare personnel and health plans. Research discussed in the literature presents possible opportunities for healthcare administrators to positively impact the *Iron Triangle* of their organizations by reducing administrative muda in their organizations to decrease costs while not adversely impacting quality or access.

Method

Research for this paper was conducted by reviewing recent and relevant literature in an effort to describe administrative complexity and waste as it exists within processes incurring administrative costs in the US healthcare system. Literature reviewed for this paper included peer-reviewed journals and books identified through Google Scholar and Baylor OneSource searches based the on the key words *administrative costs in healthcare, administrative complexity in healthcare,* and *healthcare waste* from 2009 to present. The searches revealed 178 references from which the most relevant were chosen for review. The literature review intended to identify administrative complexity associated with rising administrative costs in the US healthcare system and to identify waste, or administrative muda, generated from administrative complexity.

Results

The administrative complexity associated with processes generating administrative costs in the US health system presented in recent literature revolve around the interactions of healthcare organizations and health insurance companies. The literature suggests the variation in

healthcare insurance products and reimbursement methods contribute significantly to the administrative complexity within the system. This variance increases the time required by physicians, nursing staff, clerical staff, and other healthcare personnel to process payments, receive authorizations, comply with formularies for medication, process credentials, process insurance claims, and contract prices with a multitude of different health plan providers (Morra et al., 2011). Due to these variances, research indicates significant redundancies and inefficiencies exist which increase healthcare expenditures.

Various forms of waste exist within the healthcare system and account for 34% of expenditures and administrative complexity accounts for 31% of total waste and can represent as much as $389 billion in wasteful spending per year (Berwick & Hackbarth, 2012). For example, physicians spend up to three weeks per year interacting with health plans and not treating patients; nursing staffs spend approximately 19 hours per week per physician performing tasks such as gaining authorizations; and clerical staffs dedicate almost 36 hours per week per physician interacting with health plans to complete administrative tasks such as processing claims for patients (Casalino et al., 2009). Wasteful expenditures in healthcare operations due to administrative complexity and process variance present considerable opportunities for healthcare administrators to eliminate redundancies and inefficiencies to improve healthcare.

Contributions

The research findings identified interactions between healthcare organizations and health plans that are redundant, inefficient, and require a considerable investment in time and human resources that are not always value-adding contributions to the provision of healthcare. The literature review identified six means by which waste contributes to administrative costs and identified administrative complexity as the largest proportion of waste (Berwick & Hackbarth,

2012). The research also outlined the approximate $60,000 cost disparity between complex multi-payer systems and single-payer systems, such as the National Health Insurance in Canada (Morra et al., 2011). This comparison highlighted that standardization of healthcare products and processes may present healthcare administrators a method to contain costs associated with administrative requirements and interactions between healthcare organizations and health insurance providers. Given the findings of the literature review, healthcare administrators can begin to focus efforts to address the redundancies, over-processing, and inefficiencies of the processes necessary to gain prior authorization, maintain credentials, process insurance claims, work with formularies for medication, and contract prices with a many health insurance providers.

Discussion and Conclusions

Current literature regarding administrative costs, administrative complexity and waste help to identify areas in which progress towards reducing and ultimately containing healthcare costs in the United States can be made. Although administrative processes and costs may be correlated with waste, interactions between health organizations that produce these costs may also provide value (Casalino et al., 2009). By focusing on the required interactions between various healthcare personnel and health plans to standardize processes and eliminate redundancies and inefficiencies, healthcare administrators may be able to make considerable reductions in excessive expenditures in their organization's healthcare operations. According to the Healthcare Efficiency Index, the Affordable Care Act implements measures to reduce unnecessary document processing and create standardized electronic procedures and rules to be utilized by Medicare, Medicaid, and private insurers; these improvements are estimated to save

insurance companies, healthcare organizations, and providers tens of billions of dollars per year (Orszag & Emanuel, 2010).

However, research in this area is stifled due to the vast array of administrative processes and largely undefined field of administrative costs (IOM, 2010). Research that attempts to clarify the definition of administration is pivotal to distinguishing between value added spending and wasteful expenditures (Pozen & Cutler, 2010). The topic needs further research to effectively define and stratify administrative costs in the US health system. Significant gaps in research linking administrative complexity to the various types of waste present in the US health system remain. Research providing empirical data from lean projects focusing on reducing or eliminating inefficiencies and redundancies in the spectrum of administrative complexity will assist healthcare administrators in their efforts to improve the US health system.

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