A Comparative Evaluation of the Structure of Primary Care

In the United States and the United Kingdom

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The condition of the United States (US) health care system is currently at the center of national debate; and attempts to reform a flagging system are underway (Rutenberg & Calmes, 2009; Stolberg & Herszenhorn, 2010). The American health care system is in distress. An estimated 43.8 to 46.3 million individuals in the US are uninsured (Centers for Disease Control and Prevention [CDC], 2009; DeNavas-Walt, Proctor, & Smith, 2008; U.S. Census Bureau, 2008). The majority of health coverage in the US is provided through employer-based insurance (Blumenthal, 2006; Congressional Budget Office [CBO,] 2007); but with the current economic crisis and a resulting rise in unemployment rates, concerns over existing health care coverage are escalating (Blumenthal, 2006; Brown, 2008; Sessions & Detsky, 2009). The cost of health care in the US is nearly twice as much as other developed countries, and costs continue to rise faster than personal incomes and the economy (CBO, 2007; Commonwealth Fund, 2008; Marmot & Bell, 2009). Health care spending currently exceeds $2 trillion dollars a year or 16.2 percent of the Gross Domestic Product (GDP) (Centers for Medicaid and Medicare Services [CMS], 2007). Furthermore, the US remains the only industrialized country in the world that fails to provide universal health care for its residents (Davis et al., 2007; McIntosh, 2002).

Despite substantial health care expenditures, the US has not achieved the health outcomes and benchmark performances of other countries (Commonwealth Fund, 2008; Marmot & Bell, 2009). The United Kingdom (UK) has a GDP comparable to the United States, yet annual expenditures on health care are far less than those of the US (Anderson & Frogner, 2008; Berkman, 2009). Despite this difference, the UK has better health outcomes than the US (Berkman, 2009). For example, the prevalance of diabetes among the highest earning and most educated persons in the US was 9.5 and 8.2 (Berkman, 2009). In comparison, the prevalance of

diabetes in the UK among similar socio-economic groups was 5.7 and 4.4 (Berkman, 2009). The death rate, or probability of dying before the age of 16, in the US is 83 per 1000 for women and 144 per 1000 for men; while the death rate for women in the UK is 69 per 1000 and 109 per 1000 for men (Jenkins & Runyan, 2005). Furthermore, the US has an infant mortality rate of 6.22 per 1000 live births, while the UK has a rate of 4.85 per 1000 live births (Central Intelligence Agency [CIA], 2009). Such divergent health outcomes suggest a fundamental difference in the quality of health care in the US and the UK.

In 2001, the Institute of Medicine remarked, "Quality problems are everywhere, affecting many patients. Between the health care we have and the care we could have lies not just a gap, but a chasm" (p. 1). Despite this oft quoted truth, quality in the US remains an issue (Commonwealth Fund, 2008). Studies indicate that there is great variability in the quality of care delivered in the US (Jha, Li, Orav, & Epstein, 2005; Schuster, McGlynn, & Brook, 2005). Researchers suggest that uninsured Americans, especially the older working poor, are less likely to use preventive care services than those with insurance coverage (Ross, Bernhelm, Bradley, Hsun-Mel, & Gallo, 2007). Coordination of care is another problematic area. Researchers have identified poor transfer of information from hospitals to the primary providers of patient care as a challenge; these deficits in communication present adverse risks for patients (Kripalani et al, 2007; Schoen et al, 2006). Additionally, US primary care physicians report a lack of information flow from patient referrals to other doctors, further complicating care coordination efforts (Schoen et al., 2006). Chronic care management, coordination of care activities, and preventive care are all areas of health care typically addressed by a primary care provider (Bodenheimer, 2006; IOM, 1996).

Primary care is essential to the health of a country (Pan American Health Organization/World Health Organization [PAHO/WHO], 2007). Studies suggest that strong primary health care systems result in healthier citizens (American College of Physicians [ACP], 2008; Commonwealth Fund, 2008; Jenkins & Runyan, 2005; Starfield, Shi, & Macinko, 2005; Sutherland, Fisher, & Skinner, 2009). Considering the variability in quality within the US health care system, one questions how the primary care system in the US compares to that of other countries. A meaningful comparison of the health care systems of different nations can provide valuable contributions and increased knowledge on variation of performance in quality, thus providing assistance and guidance on future reform strategies (Murray & Frenk, 2000; Starfield 2005). This paper addresses the following research question: How does the primary care structure in the United States compare to the primary care structure in the United Kingdom?

Background

Overview of the US Health Care System

The US health care system is unique when compared to the health care systems of other countries. The majority of non-elderly Americans are provided with health insurance through employer-sponsored programs; while public insurance (e.g., Medicaid, Medicare) or the government, pays for approximately 46% of all health care costs (ACP, 2008; Blumenthal, 2006). Most of the physicians in the US are paid for individual services on a fee-for-service basis (Nuwer et al., 2008). The US health care system has a larger percentage of specialists when compared to primary care providers, and overall, tends to focus more on specialty care than primary and preventive care services (ACP, 2008; Colwill, Cultice, & Kruse, 2008; Macinko, Starfield, & Shi, 2007; Sandy, Bodenheimer, Pawlson, & Starfield, 2009). The US health care system is shaped by American principles which place a high value on individual

choice leading to resistance to any limitation of care or rationing (Nuwer et al., 2008). The US has decentralized decision making in health care that tends to place choice of treatment in the hands of individual practitioners and thus limits cost containment attempts (ACP, 2008; Nuwer et al., 2008).

Overview of the UK Health Care System

The UK provides health care to every resident. Health care services are provided by a program known as the National Health Services (NHS) which is fully funded by the government through taxes (Darzi, 2009). The UK's health care system is catagorized as a single payer system, meaning that the government organizes the health care system and pays the cost (Nuwer et al., 2008). Individuals in the NHS have the added option of purchasing private medical insurance (PMI) which allows residents not only the benefits of the NHS, but also the advantage of shorter wait times and a wider choice of specialists, treatment options, and facilities (Foubister, Thomson, Mossialos, & McGuire, 2006). For the past 20 years, around 11 percent of individuals in the UK have used PMI to augment the services of the NHS (Foubister et al, 2006; Nuwer et al., 2008).

The administrative costs of health care delivery in the UK are limited by a single payer system, and cost of care is further contained by the rationing of health care and centralized decision making (Nuwer et al., 2008). Common critiques of the NHS include delays in treatment and demands for care that exceed the supply of available resources (Nuwer et al., 2008). The NHS is built on a foundation of primary care (Appendix A). General practitioners (GPs) function as the gatekeepers to NHS services; in other words GPs are the first contact for patients referring them for any additionally needed services (NHS, 2009). The NHS has evolved from a

social context that values continuity, fairness, and frugality which is achieved through centralized control (Dixon et al., 2004).

The Importance of Primary Care

Primary care is care provided by health care professionals that is both preventive and restorative in nature (MedicineNet, 2000; Merriam-Webster). Primary care providers are the initial contact point for patients and play a pivotal role in the coordination of care over time and across locations (Schoen et al., 2006). Research suggests that countries with a strong foundation of primary care services have better health care outcomes and lower cost of care when compared to countries with weaker primary care systems (Jenkins & Runyan, 2005; PAHO/WHO, 2007; Starfield et al., 2005; Sutherland et al., 2009; Wilson, Roland, & Ham, 2006). Studies have also shown a positive relationship between the number of PCPs and health care outcomes in the population; these health care outcomes include infant mortality, life expectancy, and certain chronic diseases (Macinko, Starfield, & Shi, 2007). A strong primary care system is an important influence on the health of nations (PAHO/WHO, 2007).

Quality in Health Care

Definition of Quality

Quality in health care is a difficult concept to define (Donabedian, 1966). The IOM (2001) defines quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (p. 232). While this is a comprehensive definition of quality and one that is frequently found in published literature, defining and evaluating quality remains complex because of the value judgment associated with the determination; these complexities necessitate the use of a dependable framework in the measurement and evaluation of quality.

Measurement of Quality

Avedis Donabedian (1966) established a framework for evaluating quality in health care; he observed that the manner in which quality is defined effects its evaluation. As a result, he developed the Structure-Process-Outcomes Framework for the evaluation of quality (Donabedian, 1966). Broadly defined, *Structure* is the location in which health care transpires as well as the means by which care is accomplished (Donabedian, 1966). In the context of primary care, examples of structure measurements might include the payment structure for PCPs, the average length of a visit with the PCP, or the ratio of primary care physicians in relation to the population (Donabedian, 1966; PAHO/WHO, 2007). *Process* is concerned with process of care itself, not the end result but rather the extent to which the best standard of care was applied in practice (Donabedian, 1966). *Process* measures in primary care might entail whether a PCP adheres to national standards of practice in the treatment of congestive heart failure or other conditions with evidence-base practice (EBP) guidelines for care and treatment (Donabedian, 1966; PAHO/WHO, 2007). Finally, *Outcomes* are considered the ultimate confirmation of effective and high quality health care (Donabedian, 1966). *Outcomes* are based on such items as survival, restoration, and recovery. These measures are, for the most part, concrete measures (Donabedian, 1966). Examples of *Outcome* measures in primary care might include patient satisfaction levels or hospital readmission rates (Donabedian, 1966; PAHO/WHO, 2007).

Much attention in health care is given to *Outcome* and *Process* measures, but one might argue that both outcomes and processe*s* in any health care system are integrally related to the existing health care structure (Donabedian, 1966; Kurtzman & Buerhaus, 2008; Nelson, et al.,

2008; Pringle & Doran). To that end, this paper will focus on the comparative evaluation of the *Structure* of primary care in the US and the UK.

Stakeholders

Stakeholders in the US

There are multiple stakeholders invested in health care reform efforts in the US (Blendon, Hunt, Benson, Fleischfresser, & Buhr, 2006; Stevens, 2008). The diversity of stakeholders in the US has much to do with the complexity of the health care system (Ham, 2005). The US public is a primary stakeholder in the future of US health care. American ideals and values tend to shape a variety of public opinions; but as a whole Americans tend to be distrustful of the government and place a high value on individual choice (Ham, 2005). Public opinion on health care is further complicated by a pervasive view that the US has some of the best health care in the world and that any changes to the current structure might result in rationing of health care, a concept that is often met by objections and strong emotions (Brown, 2008; Docteur & Berenson, 2009). While the US public does not believe that the current health care system is in crisis, there is a prevailing dissatisfaction with the status quo (Blendon et al., 2006).

Other stakeholders in the US are physicians and especially physician groups such as the American Medical Association (AMA) who represent a powerful lobby on behalf of physician interests (Jonas, 2003; Rittenhouse & Shortell, 2009; Stevens, 2008). The AMA has been a major player in American health care since the 1940s when talks of health care reform first began (Stevens, 2008). Although the US government is not the sole provider of health care, there is much government involvement in health care and much politicization of the health care arguments with firm opinions and political posturing on a subject that can be very polarizing (Blendon et al., 2006; Bodenheimer et al., 2009; Iglehart, 2009; Stevens, 2008). The insurance

and pharmaceutical industries, as well as the businesses that provide health insurance also represent additional special interests (Blumenthal, 2006). By no means is this a comprehensive list of all stakeholders in health care reform debates; but this listing gives insight into the diversity of stakeholders as well as the complexity involved in any changes to the current health care system in the US (Stevens, 2008).

Stakeholders in the UK

The UK does not have the same diversity of stakeholders as the US, most likely because of the relative stability of the NHS (Ham, 2005). The primary stakeholders in the UK are policy makers and British society (Ham, 2005). The British government acknowledges the key place of the public by conducting surveys to illicit public opinion before any changes are implemented to the NHS (Coulter, 2005). The power of any one stakeholder group is balanced by the centralized control and existing structure of the NHS.

Methods

Methods for Comparison of the Primary Care Structures in the US and the UK

An evaluation of the primary care structure in the US and the UK was conducted using the following criteria: integration, accessibility, accountability, and partnership. These criteria were derived from the IOM (1996) definition of primary care which states that "primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community" (p. 32). *Integration* is defined as a seamless approach to care, the extent to which care is coordinated, comprehensive, and continuous (IOM, 1996). *Accessibility* is the extent to which a patient is able to access care, as well as the ease and timeliness of care. Accessibility includes the elimination of barriers such

as financial or administrative obstacles (IOM, 1996). *Accountability* is the extent to which providers of primary care are responsible to both the patient and the community to provide high quality care in an organized and efficient manner (IOM, 1996). Finally, *Partnership* refers to the relationship between the patient and the primary care provider and the maintenance of the relationship over time (IOM, 1996).

A matrix framework was developed for comparing the structure of primary care in the US and the UK (Appendix B). This framework was built on the primary evaluation criteria of *Integration*, *Accessibility*, *Accountability*, and *Partnership*. The concept of health systems structure was further classified into types of structure: provider, practice, financial, and coordination of care.

Literature and Internet searches were performed to identify peer-reviewed, scientific literature and government supported statistical reports (Table 1). Identified sources of data were reviewed; and, data that matched any of the evaluation criteria and types of structure were abstracted. Abstracted data were classified first by structure type and second by evaluation criteria. Comparisons were made between the US and UK based on available data. For the evaluation criteria of *Integration*, the comparison between the primary care structure in the US and UK was conducted with data in the areas of practice structure and coordination of care. The *Accessibility* of primary care was compared with data in the areas of provider structure, practice structure, financial structure, and coordination of care structure. For the evaluation criteria of *Accountability* in primary care, data in the categories of practice and financial structure was used. Lastly, the *Partnership* of primary care in the US and UK was compared from available data on the coordination of care structure.

Findings

The Integration of Primary Care — Comparisons between the US and UK

Practice structure in the integration of primary care.

The use of Electronic Health Records (EHR) and more advanced information systems has the potential to improve patient outcomes as well as the coordination and integration of care across locations (Adler-Milstein & Bates, 2010; Bates, Ebell, Gotlieb, Zapp, & Mullins, 2003; Schoen et al., 2009). The US lags behind the UK in the use of EHRs in primary care practices, as well as the utilization of more advanced EHR systems (Arnold, Wagner, Hyatt, & Klein, 2007; Schoen et al., 2009). In one data comparison, 96% of primary care practices in the UK used EHRs compared to 46% of US primary care practices (Schoen et al, 2009). Additionally, primary care practices in the UK tend to use EHRs with a higher functionality, defined as the number of available EHR functions, than those used by US primary care practices (Schoen et al., 2009). In the UK, 92% of practices reported using high functionality EHR systems compared to only 40% of US primary care practices (Schoen et al., 2009). Additionally, 53% of primary care providers in the UK receive computerized alerts to prompt the provider to share results of tests with their patients compared to only 15% of US primary care providers (Davis et al., 2007). In both countries, the use of higher functioning EHR systems was related to the size of the practice, with larger practices utilizing more high functioning systems (Schoen et al., 2009).

The UK has established, agreed upon standards for the utilization of EHRs; while the US is still working on the development of similar standards (Arnold et al., 2007). The utilization of EHRs in the US is further complicated by the diversity of EHR vendors compared to the limited choices in other countries (Schoen et al., 2009). While there is US government support for the use of EHRs, there is no government mandate for their use (Adler-Milstein & Bates, 2010,

Arnold et al., 2007). The Obama administration has set aside a portion of funds for EHRs, yet funding still remains a sizeable barrier to full-scale implementation of EHRs (Adler-Milstein & Bates, 2010; Arnold et al., 2007). The costs of EHRs are not prohibitive, yet they are costly (Adler-Milstein & Bates, 2010). In the UK, the NHS provides the funds for EHRs and, along with the rest of the British public, reaps the rewards (Arnold et al., 2007, Adler-Milstein & Bates, 2010). In comparison, individual US primary care practices are the primary payer for EHRs, but may not be the primary beneficiaries of the electronic system thus impacting the wide-spread adoption of such systems (Adler-Milstein & Bates, 2010; Wasson et al., 2008).

Coordination of care structure in the integration of primary care.

Evidence suggests that the US does a better job in the integration of care between hospital and primary care offices; while the UK does a better job in the integration of care between primary care offices and patients, as well as the integration of care between primary care offices and specialists offices (Davis et al., 2007; Schoen et al., 2006). A survey of comparative performance on different measure showed that in the US, 40% of primary care physicians report that they have regular access to their patient's hospital records; and 73% report that they receive a discharge report within two weeks from their patient's hospital discharge date (Davis et al., 2007; Schoen et al., 2006). In comparison only 19% of primary care physicians in the UK report that they have regular access to their patient's hospital records and 48% report that they receive a hospital discharge report within two weeks of the patient's date of discharge (Davis et al, 2007; Schoen et al., 2006). At the same time, hospitals in the UK do a slighlty better job than the US in ensuring that patients have a follow-up appointment with their health care provider prior to their discharge from the hospital (Davis et al., 2007). Hospitals in the UK failed to make patient follow-up appointments with the patient's health care provider in only

19% of cases; while the US failed in the same area in 27% of the cases reviewed (Davis et al., 2007). Primary care practices in the UK perform better than US practices in reminding patients of their needed preventive care services. In the US, 32% of primary care practices send manual reminders and 18% of practices send electronic reminders to their patients (Schoen et al., 2006). In the UK, 83% of practices send manual reminder, while 14% of practices send electronic reminders (Schoen et al., 2006). Additionally, UK primary care practices report consistent communication with specialists when referring their patients for needed services; 75% of primary care providers report that they routinely receive information from these referrals compared to only 37% in the US (Schoen et al., 2006).

The Accessibility of Primary Care — Comparisons Between the US and UK

Provider structure in the accessibility of primary care.

Problems with accessibility to health care services in the US are well reported; and much needed attention has focused on the growing rate of uninsured Americans (CDC, 2009; Commonwealth Fund, 2008; DeNavas-Walt et al., 2008; U.S. Census Bureau, 2008). While the future of health reform efforts is in question, other areas of accessibility to primary care services can and should be addressed. Accessibility to primary care is influenced by multiple variables, one of which is the supply of available primary care providers (Hall et al., 2008; Macinko et al., 2007; Steinbrook, 2009). While there are not tremendous differences in the current supply of primary care physicians in the US and the UK, 49% of UK physicians are general practitioners compared to 32% of US physicians (GAO, 2008; Royal College of General Practitioners, 2006); a greater percentage of resident physicians in the UK plan a future in primary care in comparison to resident physicians in the US (GAO, 2008; Lloyd & Leese, 2006). Medical experts fear the current US health system is incapable of handling a dramatic shift from the present specialty-

focused system to one more grounded on primary care (ACP, 2008; Garoll, Berenson, Schoenbaum, & Gardner, 2007; Rittenhouse & Shortell, 2009; Stevens, 2008). Year after year, fewer medical students choose to pursue a career in primary care; rather, the majority of graduates choose a sub-specialty, and this trend shows no sign of slowing (Bodenheimer, Grumbach, & Berenson, 2009; Rosenblatt & Andrilla, 2005; Steinbrook, 2009). The average income of general practitioners in the UK is comparable to those in the US, but the average debt levels of medical school graduates in the UK is approximately $36,509 compared to average debt levels in excess of $100,000 for graduates of US medical schools (British Medical Association, 2009; Dorsey, Nincic, & Schwartz, 2006; Merritt Hawkins & Associates, 2007; NHS, 2009; United States Department of Labor, 2009).

Practice structure in the accessibility of primary care.

While there is a comparative shortage in the supply of primary care providers in both countries (GAO, 2008; Royal College of General Practitioners, 2006), primary care physicians in the UK indicate a greater willingness to work with and current utilization of non-physicians to provide primary care services in their practices than US primary care physicians (Schoen et al, 2006). Evidence suggests that nurse practitioners (NPs) provide competent, high quality care with minimal patient-observed differences in care (Bonsall & Cheater, 2008 Laurant, Reeves, Hermens, Braspenning, Grol, & Sibblad, 2007); yet there are significant barriers and stakeholders in the US that stand in the way of more extensive use of NPs in the delivery of primary care services (Hansen-Turton, Ritter, & Torgan, 2008; Mullinix & Bucholtz, 2009). This is counter-intuitive when one looks at the dwindling supply of primary care physicians with fewer residents interested in primary care (Bodenheimer, Chen, & Bennett, 2009; Brotherton, Rockey, & Etzel, 2005; GAO, 2008).

The operating hours of primary care practices are similar in both countries; but a greater proportion of practices in the UK have after hour arrangements for their patients that do not necessitate the use of the Emergency Room (ER) (Schoen et al., 2009; Schoen et al., 2006). Similarly, more patients in the US report difficulty accessing primary care outside of normal business hours without using the ER (Davis et al, 2007).

Financial structure in the accessibility of primary care.

The financial structure for reimbursement currently in place in the US may further contribute to the shrinking supply of primary care physicians, as well as residents' intent to pursue a future career in primary care (Rosenblatt & Andrilla, 2005; Steinbrook, 2009). In the UK, the reimbursement structure is a mixture of capitation and incentives for performance on various measures of quality (Schoen et al., 2009). In the US, primary care providers are generally reimbursed on a fee-for-service basis with an ever growing gap between the fees paid to primary care providers versus the fees paid to specialists (Bodenheimer et al., 2009). The reimbursement rates for specialists far exceed those of primary care practitioners thus stunting the earning potential of individuals who choose a career in primary care (Bodenheimer et al., 2009; Sandy, Bodenheimer, Pawlson, & Starfield, 2009; Steinbrook, 2009). Furthermore, insurance companies tend to reimburse preventive and proactive care at lower rates than other services, and some insurance policies do not cover these services at all. In fact, primary care physicians report spending as much as 20% of their time on unreimbursed services (ACP, 2008). Few primary health care outcomes are tied to monetary incentives, thus precluding pay-for-performance as a motivation for better patient outcomes (ACP, 2008; Garoll et al., 2007; Ham, 2005).

The US Census Bureau (2008) reports that 46.3 million Americans are uninsured. In turn, primary care providers in the US report spending a greater amount of time obtaining needed services for their patients than primary care providers in the UK; and reportedly more patients in the US have difficulties paying for medications or other needed supplies (Schoen et al., 2009). In contrast, the UK provides comprehensive health care coverage with very little to no cost sharing incurred by individuals; this may help to explain why providers in the UK spend less time obtaining needed services for their patients (Schoen et al., 2006; Schoen et al., 2009).

Coordination of care structure in the accessibility of primary care.

Primary care providers reported patient delays for specialist appointments and specialty tests to a similar extent in both countries; but the reported wait times for diagnostic tests and elective surgery for patients are significantly shorter in the US (Schoen et al., 2006). In the UK, primary care providers report that their patients have long wait times for diagnostic procedures 57% of the time, and long wait time for elective surgeries 62% of the time. In contrast, US primary care providers report that their patients have long delays for diagnostic procedures and elective procedures 9% of the time (Schoen et al., 2006). Appointments with primary care providers in the UK are relatively easy to obtain; 84% of patients report that they were seen by their doctor within 48 hours (Department of Health, 2009). Patients in the US, on the other hand, have longer primary care appointment delays. In some metropolitan areas, the average wait time was 14 or more days for an appointment (Hall, Lemak, Steingraber, & Schaffer, 2008; Merritt Hawkins & Associates, 2009).

The Accountability of Primary Care Providers — Comparisons between the US and UK

In the recent past, reimbursement rates of primary care providers in the UK were tied to the number of patients seen by each practitioner; but during Tony Blair's leadership, sweeping

changes were made to the NHS, with regard to reimbursement practices (Klein, 2007; Marshall & Smith, 2003). These new changes in reimbursement practices resulted in contracts focusing on patient quality outcomes of care rather than the volume of patients seen by each practitioner (Marshall & Smith, 2003; Wilson et al., 2006). As a result, primary care providers are now rewarded based on quality indicators through pay-for-performance incentives (Darzi, 2009; Marshall & Smith, 2003; Wilson et al., 2006). In the United States, pay-for performance has gained increasing momentum; more insurance companies, as well as the Centers for Medicare & Medicaid (CMS), are beginning to use this incentive to promote desirable patient outcomes (Jacobson Vann, 2010; Pearson, Schneider, Kleinman, Coltin, & Singer, 2008; Rosenthal, Landon, Normand, Frank, & Epstein, 2006). Pay-for-performance not only has the potential to increase the future earnings of primary care providers; but also and more importantly, pay-for-performance has the potential to improve patient outcomes (Campbell et al., 2007).

Practice structure in the accountability of primary care providers.

Primary care physicians in the UK report higher rates of clinical outcome reviews on their patients as wells as routine reviews of data on patient experiences and satisfaction with the primary care practice (Schoen et al, 2009). Such routine reviews of data are important in order to assess whether clinical targets are met, to promote improvement in clinical care, and to ensure that the care delivered is patient centered (Bray, Cummings, Wolf, Massing, & Reaves, 2009).

Financial structure in the accountability of primary care providers.

In the UK, 84% of primary care physicians reported that they received or have the possibility of receiving payment incentives for achieving clinical care targets. In comparison, only 17% of US primary care physicians reported the receipt or potential receipt of such incentives (Schoen et al., 2009).

The Partnership of Primary Care Providers with Patients — Comparisons between the US and UK

Coordination of care structure in the partnership of providers with patients.

Primary care providers in both countries have room for improvement in their ongoing partnership with patients. Only 30% of primary care providers in both countries routinely give written care instructions to their patients (Schoen et al, 2009). This failure of primary care physicians to provide written instructions for patients on the management of their care may explain why nearly 50% of US patients leave their primary care appointments with confusion over what they were told by their doctor (Bodenheimer, Chen, & Bennett, 2009). Physicians in the UK did outperform their US counterparts in providing written lists of perscribed medications to their patients. In the UK, 83% of physicians reported routinely giving their patients written medications lists compared to 30% of physicians in the US (Schoen et al., 2009).

All patients utilizing the services of the NHS in the UK are required to register with a general practitioner or primary care physician, while the majority of patients in the US do not register with a primary care physician (Schoen et al., 2009). Despite this difference, 96% of patients in the UK and 84% of patients in the US report having a regular health care provider (Davis et al., 2009; Schoen et al, 2009). At least half of these patients have been with the same physician for more than 5 years (Davis et al., 2009). A majority of patients in the UK report seeing their general practitioner within the last 6 months and report a generalized, high degree of satsifaction with the visit (Department of Health, 2009).

Discussion

Based on this analysis of the structure of primary care in the UK and the US, the UK has a relatively stronger structure of primary care than the US. Both systems have areas of needed

improvement. But the UK, overall, has structural elements in place that the US system of primary care lacks. The superior performance of the UK in the primary care areas of *Integration, Accessibility,* and *Accountability* provides the US with an opportunity to gain valuable insights and recommendations in the pursuit of a stronger structure of primary care within this country.

Recommendations for Improved Integration of Primary Health Care

The implementation of high-functioning EHRs must be a high priority for policy makers and primary care providers. The US faces certain challenges in moving forward in this area. However, policy makers especially, should use their influence to promote more widespread adoption of these systems. The American Recovery and Reimbursement Act of 2009 directed federal money to aid in the development of the health care information technology infrastructure (Center for Medicare & Medicaid Services [CMS], 2009). Some of these funds will aid primary care practices in the implementation of EHRs (CMS, 2009), but more than these efforts will be needed in order to promote wide-spread use of high functioning EHR systems by primary care practices. The US, similar to the UK, should work to create agreed upon standards for the use of EHRs (Arnold et al., 2007). Based upon evidence that EHRs may improve patient outcomes in primary care (Bates et al., 2003; Adler-Milstein & Bates, 2010; Schoen et al., 2009), policy makers and regulatory agencies should consider mandating a minimum standard for the use of EHRs in practices as well as a deadline for meeting this standard. Incentives, such as tax breaks and payouts from CMS, may also promote the use of these tools to improve the integration of services in primary care.

Recommendations for Improved Accessibility of Primary Health Care

In order to improve the accessibility of primary care in the US, there is a need for an increased number and proportion of primary care providers. Policy makers should work to pass

legislation that utilizes non-physicians such as nurse practitioners. Stakeholder groups such as the American Nurses Association must work to make the case for wider use of nurse practitioners in primary care. Furthermore, researchers need to examine the relationship of non-physicians and the delivery of primary care with the purpose of influencing primary care physicians, policy makers, and stakeholder groups to utilize these trained professionals in the delivery of primary care. Like the UK, policy makers should consider rewarding US primary care practices that choose to utilize non-physicians in the provision of primary care services (Schoen et al., 2009).

In addition to expanding the labor pool of primary care providers, greater effort should be made to alter the current reimbursement structure for primary care physicians. Evidence suggests primary care physicians provide cost-effective, high quality care to patients (Bodenheimer, Chen, & Bennett, 2009). Reimbursement practices must be changed to reflect these findings. Services of specialists and primary care providers often overlap; these services should not be reimbursed at different rates. Policy makers must be pursuaded of the value of primary care provider services and the need for comparable reimbursement rates for the same services provided by both specialists and primary care providers.

Recommendations for Improved Accountability in Primary Care

While the US has begun to use pay-for performance to promote quality outcomes, there is a need for a more concerted use of quality incentives for primary care providers. The UK provides an example for the US to model in future efforts. By offering these added incentives, primary care providers might have an opportunity to further increase their earning potential, and patients could potentially reap the invaluable benefits of improved quality of care (Campbell et al., 2007).

Recommendations for Future Research

The structural components that comprise the primary care system of a country are multi-faceted, yet worthy of study. Much attention in primary care has focused on the quality outcomes of care, perhaps more future attention should be given to the structural elements of primary care and how structure impacts both the processes and the outcomes of primary care (Donabedian, 1966). Health care systems are complex and the system of primary care delivery is no different (Litaker, Tomolo, Liberatore, Stange, & Aron, 2006). Simplistic fixes will, most likely, not result in improved outcomes. Rather, more complex, multi-method approaches to improvement are more likely to result in lasting progress. Donabedian's (1966) structure-process-outcome framework provides a robust conceptualization of quality; further research might benefit from uniting this framework with relevant theory (Hearld, Alexander, Fraser, & Jiang, 2008). Future research should also focus on which structural components of primary care most impact quality outcomes. Lastly, more advanced and tested methods for evaluating the structure of primary care should be developed and validated.

Limitations

This comparative evaluation, in large part, concentrated on population level data. The British government sponsors many studies on patient experiences in the NHS and with primary care providers in particular; the same wealth of data is more difficult to access for the same measures in the US. Many small scale studies of patient experience with primary care providers were available in the US; but fewer studies of a large scale were identified by the author. Additionally, it is challenging to compare data from different countries, by different authors because of the variations in study methods such as variable definitions, data collection procedures, and other methodological issues. In order to counteract that bias, the author heavily

relied on multi-country studies that collected data in the same way with the same methods (Davis et al., 2007; Schoen et al., 2009; Schoen et al., 2006).

Conclusion

This paper has sought to provide a comparative evaluation of the structure of primary care in the US and the UK. In the analysis of data, both countries have areas that are similar as well as very different. Overall, the UK demonstrated better performance in the structural areas of integration of primary care, accessiblity of primary care, and accountability for primary care. The US can learn and benefit from implementing elements of these structural components such as the wide-spread implementation of more advanced EHR systems in primary care offices, a more extensive use of nurse practitioners and other non-physicians in the delivery of primary care, an overhaul of the current reimbursement structure, and greater incentives for quality initiatives and health outcomes. Future reform efforts in the area of primary care may benefit from in depth study and application of the structure-process-outcome framework developed by Donabedian (1966).

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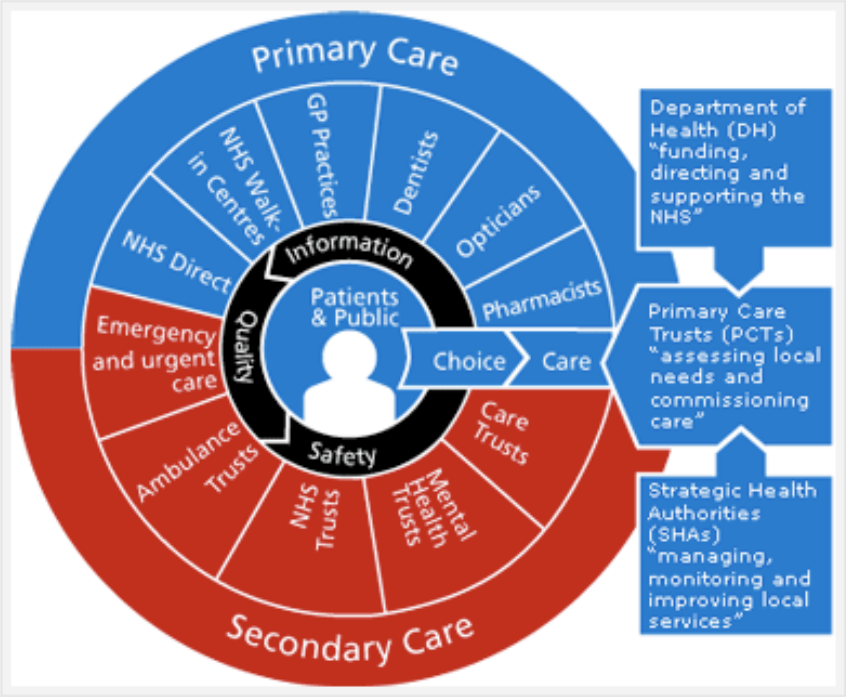
Appendix A

NHS structure

NHS structure

As can be seen on the diagram (right) the NHS is divided into two sections: primary and secondary care. Primary care is the first point of contact for most people and is delivered by a wide range of independent contractors, including GPs, dentists, pharmacists and optometrists.



Secondary care

Secondary care is known as acute healthcare and can be either elective care or emergency care. Elective care means planned specialist medical care or surgery, usually following referral from a primary or community health professional such as a GP.

Primary care trusts

Primary care trusts (PCTs) are in charge of primary care and have a major role around commissioning secondary care, providing community care services. They are central to the NHS and control 80% of the NHS budget.

(NHS, 2009, p 1)

Appendix B

Evaluation Criteria	Structural Category	Items for Comparison Under Each Structural Category
Integration A seamless approach to care. The extent to which care is coordinated, comprehensive, and continuous. The provider is responsible to meet the majority of a patient's health care needs.	• Practice Structure	• Use of high functionality electronic health records (EHRs), stratified by size of the primary care practice
	• Coordination of Care Structure	• Use of EHRs by primary care practices • Coordination of care from hospitals to primary care offices • Promotion of preventive care by the primary care provider • Communication between specialists and primary care providers
Accessibility The extent to which a patient is able to access care, the ease and timeliness of access. Accessibility includes the elimination of barriers such as finances or administrative obstacles.	Provider Structure	• Current and future supply of primary care providers
	Practice Structure	• Use of and support of non-physicians to assist with management of primary care • Ability of primary care practices to meet patient need to be seen without the use of the ER
	Financial Structure	• Ability of patients to afford needed services • Payment structure for primary care providers • Health care coverage for individuals • Health care expenditures per capita
	Coordination of Care Structure	• Delays in access for treatments and services

Accountability The providers of primary care are responsible to both the patient as well as the community to provide high quality care in an organized, efficient manner.	Practice Structure	• Monitoring of outcomes from the primary care practice to improve care
	Financial Structure	• Promotion of quality care through financial incentives
Partnership The relationship between the patient and the primary care provider. The maintenance of this relationship over time.	Coordination of Care Structure	• Patients with a regular physician • Communication between the primary care provider and the patient

(Institute of Medicine, 1996)

Table 1

Evaluation Criteria	Structural Category	UK or US	Source (reference, year, *type*)	Key Findings
Integration	Practice Structure	UK	Schoen et al., 2009 *Peer-reviewed, scientific literature*	Size of primary care practice effects utilization of high functioning Electronic Health Records (EHR): - 2 Doctors or less in practice: 83% of practices had EHR's - 2-5 Doctors in practice: 89% of practices had EHR's - More than 5 Doctors in practice: 92% of practices had EHR's
Integration	Practice Structure	US	Schoen et al., 2009 *Peer-reviewed, scientific literature*	Size of primary care practice effects utilization of high functioning Electronic Health Records (EHR): - 2 Doctors or less in practice: 7% of practices had EHR's - 2-5 Doctors in practice: 25% of practices had EHR's - More than 5 Doctors in practice: 40% of practices had EHR's
Integration	Coordination of Care Structure	UK	Davis et al., 2007 *Peer-reviewed, scientific literature*	• 53% of primary care physicians receive a prompt to share test results with their patients.
Integration	Coordination of Care Structure	US	Davis et al., 2007 *Peer-reviewed, scientific literature*	• 15% of primary care physicians receive a prompt to share test results with their patients.
Integration	Coordination of Care Structure	US	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 46% of primary care practices use EHR's
Integration	Coordination of Care Structure	UK	Schoen et al., 2006 *Peer-reviewed, scientific literature*	- 19% of primary care practices have routine access to hospital records - 83% of practices send manual reminders to patients for preventive care services - 14% of practices send electronic reminders to patients for preventive care services - 75% of primary care physicians reported receiving information back on almost all of their patients they referred to specialists.
Integration	Coordination of Care Structure	US	Schoen et al., 2006 *Peer-reviewed, scientific literature*	- 40% of primary care practices have routine access to hospital records - 32% of practices send manual reminders to patients for preventive care services

				- 18% of practices send electronic reminders to patients for preventive cares services - 37% of primary care physicians reported receiving information back on almost all of their patients they referred to specialists.
Integration	Coordination of Care Structure	UK	Davis et al., 2007 *Peer-reviewed, scientific literature*	- At discharge, hospitals failed to make patient follow-up appointments with the primary care physicians 27% of the time
Integration	Coordination of Care Structure	US	Davis et al., 2007 *Peer-reviewed, scientific literature*	- At discharge, hospitals failed to make patient follow-up appointments with the primary care physicians 19% of the time
Accessibility	Provider Structure	UK	Royal College of General Practitioners, 2006 *Report*	- 31,993 primary care physicians in the UK - 32,738 specialist physicians in the UK * This means that roughly 49% of UK physicians are in Primary Care
Accessibility	Provider Structure	US	United States Government Accountabiity Office [GAO], 2008 *Congressional Testimony*	- 264,086 primary care physicians in the US - 553,451 specialist physicians in the US * This means that roughly 32% of US physicians are in Primary Care
Accessibility	Provider Structure	UK	The NHS Information Centre-Workforce and Facilities *Report*	67 GPs per 100,000 population
Accessibility	Provider Structure	US	GAO, 2008 *Congressional Testimony*	90 primary care physicians per 100,000 (includes family practice, internal medicine, and pediatric physicians)
Accessibility	Provider Structure	UK	NHS, 2009 *Report*	Average yearly income of GPs in the UK is: £55,790-99,436 per year. Based on current exchange rates (as of 2/2010), this equates to an average salary range of $89,000 to $150,00 per year
Accessibility	Provider Structure	US	United States Department of Labor, 2009 *Report*	Mean Salary for GPs in the US is: $161,490
Accessibility	Provider Structure	US	Merritt Hawkins & Associates, 2007 *National Survey*	Avg. starting salary for a family practice physician is $145,000 vs. $489,000 for a starting specialist (e.g. neurosurgeon)
Accessibility	Provider Structure	UK	British Medical Association, 2009 *Report*	Avg. level of total debt upon graduation from medical school is £22,821 (approximately $36,509 based on current exchange rates as of 2/10)
Accessibility	Provider Structure	US	Dorsey, Nincic, & Schwartz, 2006 *Peer-reviewed, scientific literature*	Avg. medical school indebtedness exceeds $100,000

Accessibility	Provider Structure	UK	Lloyd & Leese, 2006 *Peer-reviewed, scientific literature*	76% of GPRs (trainees) plan to pursue a career in primary care
Accessibility	Provider Structure	US	GAO, 2008 *Congressional Testimony*	39% of US residents intend to pursue a career in primary care Based on the following information: - 40,982 primary care residents in the US - 63,897 specialty residents in the US - 104,526 total residents in the US
Accessibility	Practice Structure	UK	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 89% of primary care practices report having after hour arrangements for patients outside of using the ER - 98% of primary care practices use non-physician staff to manage care in the primary care practice
Accessibility	Practice Structure	US	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 29% of primary care practices report having after hour arrangements for patients outside of using the ER - 59% of primary care practices use non-physician staff to manage care in the primary care practice
Accessibility	Practice Structure	UK	Schoen et al., 2006 *Peer-reviewed, scientific literature*	- 41% of physicians report they definitely support expanding the role of non-physicians to deliver primary care within their practice - 44% of physicians report that they somewhat support expanding the role of non-physicians to delivery primary care within their practices - 33% of practices report opening before 8:30 AM - 39% of practices report staying open after 6:00 PM - 5% of practices report having some weekend hours
Accessibility	Practice Structure	US	Schoen et al., 2006 *Peer-reviewed, scientific literature*	- 21% of physicians report they definitely support expanding the role of non-physicians to deliver primary care within their practice - 47% of physicians report that they somewhat support expanding the role of non-physicians to delivery primary care within their practices - 40% of practices report opening before 8:30 AM - 38% of practices report staying open after 6:00 PM - 47% of practices report having some weekend hours
Accessibility	Practice Structure	UK	Davis et al., 2007 *Peer-reviewed, scientific literature*	39% of patients report that it is somewhat or very difficult to get care on weekends or at night without using the ER
Accessibility	Practice Structure	US	Davis et al., 2007	61% of patients report that it is somewhat or very difficult to get care on weekends or at night without using the ER

			Peer-reviewed, scientific literature	
Accessibility	Financial Structure	UK	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 14% of the time patients have difficulty paying for medications or other out-of-pocket expenses per PCP reports - 6% of surveyed PCPs report that the amount of time the PCP or other staff spends getting patients needed treatment due to coverage issues is a major problem - Payment structure for PCPs is mix between capitation and incentives
Accessibility	Financial Structure	US	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 58% of the time patients have difficulty paying for medications or other out-of-pocket expenses per PCP reports - 48% of surveyed PCPs report that the amount of time the PCP or other staff spends getting patients needed treatment due to coverage issues is a major problem - Payment structure for PCPs is fee-for-service with very few incentives
Accessibility	Financial Structure	US	Bodenheimer, Grumback, & Berenson, 2009 *Peer-reviewed, scientific literature*	- Medicare and most insurance companies use the resource-based relative value scale for reimbursement - There is an ever widening gab between payments to PCPs vs. Specialists
Accessibility	Financial Structure	UK	Schoen et al., 2006 *Peer-reviewed, scientific literature*	UK provides comprehensive health care coverage with little or no patient cost sharing for primary care services
Accessibility	Financial Structure	US	U.S. Census Bureau, 2008 *Government Report*	46.3 million Americans are uninsured
Accessibility	Financial Structure	UK	Davis et al., 2007 *Research Study*	Health care expenditure per capita: $2,546
Accessibility	Financial Structure	US	Davis et al., 2007 *Peer-reviewed, scientific literature*	Health care expenditure per capita: $6,102
Accessibility	Coordination of Care Structure	UK	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- PCPs report that their patients have long wait times for specialists 22% of the time - PCPs report that their patients have difficulty getting specialized tests 16% of the time
Accessibility	Coordination of Care Structure	US	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- PCPs report that their patients have long wait times for specialists 28% of the time - PCPs report that their patients have difficulty getting specialized tests 24% of the time

Accessibility	Coordination of Care Structure	UK	Schoen et al., 2006 *Peer-reviewed, scientific literature*	- PCPs report that their patients have long wait times for diagnostic tests 57% of the time - PCPs report that their patients have long wait times for elective surgery 62% of the time
Accessibility	Coordination of Care Structure	US	Schoen et al., 2006 *Peer-reviewed, scientific literature*	- PCPs report that their patients have long wait times for diagnostic tests 9% of the time - PCPs report that their patients have long wait times for elective surgery 9% of the time
Accessibility	Coordination of Care Structure	UK	Department of Health, 2009 *Data Report*	84% of patients were able to be seen by their GP on the same day or within 48 hours
Accessibility	Coordination of Care Structure	US	Merritt Hawkins & Associates, 2009 *Data Report*	- Average wait times were 14 or more days in 8 out of 15 Metropolitan areas surveyed - Wait times exceeded 21 days in 5 of those Metropolitan areas
Accessibility	Coordination of Care Structure	US	Hall, Lemak, Steingraber, & Schaffer, 2008 *Peer-reviewed, scientific literature*	- 43.7% of patients in the study were able to get an appointment with a primary care provider in less than a week
Accountability	Practice Structure	UK	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 89% of primary care practices report they routinely review data on clinical outcomes - 96% report they routinely review data on patient satisfaction and experience - 32% of practices report that the amount of time spent reporting clinical information or meeting regulations is a major problem
Accountability	Practice Structure	US	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 43% of primary care practices report they routinely review data on clinical outcomes - 55% report they routinely review data on patient satisfaction and experience - 27% of practices report that the amount of time spent reporting clinical information or meeting regulations is a major problem
Accountability	Financial Structure	UK	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 82% of primary care physicians reported they receive or have the potential to receive extra financial support/incentives based on managing patients with chronic disease or complex needs - 84% report the financial incentive for achieving clinical care targets - 26% report financial incentive for adding non-physician clinicians to the practice - 89% report having an financial incentives

Accountability	Financial Structure	US	Schoen et al., 2009 *Peer-reviewed, scientific literature*	- 17% of primary care physicians reported they receive or have the potential to receive extra financial support or incentives based on managing patients with chronic disease or complex needs - 28% report financial incentive for achieving clinical care targets - 6% report financial incentive for adding non-physician clinicians to the practice - 36% report having an financial incentives
Accountability	Financial Structure	UK	Maynard & Bloor, 2008 *Peer-reviewed, scientific literature*	- New GP contract in 2004 began to reward performance using explicit financial incentives to improve performance.
Accountability	Financial Structure	US	Reuben, 2007 *Peer-reviewed, scientific literature*	- Most MD payment structures encourage more, not efficient or better care - Telephone calls or e-mail that might prevent an office visit are uncompensated
Partnership	Coordination of Care Structure	UK	Schoen et al, 2009 *Peer-reviewed, scientific literature*	- 83% of primary care physicians routinely give patients a written list of their medications - 33% of PCPs report that they routinely give chronically ill patients written instructions on managing care at home - Patients are required to register with a primary care physician
Partnership	Coordination of Care Structure	US	Schoen et al, 2009 *Peer-reviewed, scientific literature*	- 30% of primary care physicians routinely give patients a written list of their medications - 30% of PCPs report that they routinely give chronically ill patients written instructions on managing care at home - Patients are not required to register with a primary care physician
Partnership	Coordination of Care Structure	UK	Davis et al, 2009 *Peer-reviewed, scientific literature*	- 96% of patients report that they have a regular MD - 69% report having a regular MD and have been with the same MD for more than 5 yrs
Partnership	Coordination of Care Structure	US	Davis et al, 2009 *Peer-reviewed, scientific literature*	- 84% of patients report that they have a regular MD - 50% report having a regular MD and have been with the same MD for more than 5 yrs
Partnership	Coordination of Care Structure	UK	Department of Health, 2009 *Data Report*	- 78% of patients have seen a GP within the last 6 months - 90% of patients say their doctor spends enough time with them - 95% of patients have confidence and trust in their MD
Partnership	Coordination of Care Structure	US	Bodenheimer, Chen, & Bennett, 2009 *Peer-reviewed, scientific literature*	- 50% of patients leave a primary care visit without understanding what the doctor told them