

## Chapter 9

# Healthcare Delivery as a Service System: Barriers to Co-Production and Implications of Healthcare Reform

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### **ABSTRACT**

*Both during and after the recent reform efforts, healthcare delivery has been identified as the key to transforming the U.S. healthcare system. In light of this background, we borrow from systems engineering and business management to present the concept of service co-production as a new paradigm for healthcare delivery and, using the foresight afforded by this model, to systematically identify the barriers to healthcare delivery functioning as a service system. The service co-production model requires for patient, provider, insurer, administrator, and all the related healthcare individuals to collaborate at all stages – prevention, triage, diagnosis, treatment, and follow-up – of the healthcare delivery system in order to produce optimal health outcomes. Our analysis reveals that the barriers to co-production – the misalignment of financial and legal incentives, limited incorporation of collaborative point of care systems, and poor access to care – also serve as the source of many of the systemic failings of the U.S. healthcare system. The Patient Protection and Affordable Care Act takes steps to reduce these barriers, but leaves work to be done. Future research and policy reform is needed to enable effective and efficient co-production in the twenty-first century. With this review, we assess the state of service co-production in the U.S. healthcare system, and propose solutions for improvement.*

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## **INTRODUCTION**

Even with the passage of the Patient Protection and Affordable Care Act (hereafter referred to as PPACA), the U.S. healthcare system faces the enduring challenges of increasing access, improving quality, and lowering cost. By 2020, 23 million Americans are estimated to still lack health insurance coverage (Congressional Budget Office [CBO], 2010) and healthcare costs are expected to rise to 21.1 percent of gross domestic product (Center for Medicare and Medicaid Services [CMS], 2010). From 2000 to 2008, U.S. per capita healthcare expenditures grew annually by 3.5 percent, somewhat less than a 4.2 percent average annual growth rate for the 30 industrialized nations included in the Organization for Economic Cooperation and Development (OECD) database (OECD, 2010). These rising healthcare costs, while part of a larger global trend (see Table 1), hold significant consequences for employees, business, and government alike.

In the United States, between 2000 and 2008, health insurance premiums grew by 119 percent - three to four times faster than wages or inflation (Rowland, Hoffman, & McGinn-Shapiro, 2009). With rising healthcare costs and an aging population, the Congressional Budget Office (2009) anticipates future fiscal deficits to be directly linked to increased Medicare and Medicaid spending. Many experts question whether this increased expenditure has provided concomitant improvements in quality, raising questions of value. In addition to these challenges, preventive health and public health initiatives to stem future disease burdens have not received the required attention. Chronic diseases, such as diabetes, heart disease, and renal failure, currently account for 70 percent of healthcare costs and are expected to continue to dominate future U.S. disease profiles, particularly with childhood obesity rates reaching all-time highs (Agency for Health Research and Quality [AHRQ], 2002). Given the cost associated with the increased incidence of chronic disease and

neuropsychiatric disorders affecting the elderly, the increasingly aging population will further aggravate the problem.

In light of these systemic failings, the healthcare delivery system has been identified as the key to transforming U.S. healthcare. At present, ideas, rather than precise models, for redesigning the healthcare delivery system exist; as a result, the Patient Protection and Affordable Care Act authorizes demonstration projects and pilot programs to experiment with delivery reform, laying the foundation for another round of healthcare reform. With this background, this chapter builds upon our previous work and borrows from systems engineering and business management to present the concept of service co-production as a paradigm to analyze the current U.S. healthcare system, evaluate demonstration projects, and provide a comprehensive and consistent approach to future reform efforts (Parasher, Tien, & Goldschmidt-Clermont, 2010a; Parasher, Tien, & Goldschmidt-Clermont, 2010b).

Unlike the “goods” sector, service industries, like healthcare delivery, require producers and consumers to collaborate at the point of production and delivery to jointly produce an outcome, i.e., co-production (Tien and Goldschmidt-Clermont, 2009). In healthcare, service co-production requires patient, provider, insurer, administrator and all the related healthcare individuals to collaborate at all stages – prevention, triage, diagnosis, treatment and follow-up – of the healthcare delivery system in order to produce optimal health outcomes and to ensure sustainability of the delivery system. Yet, healthcare delivery has traditionally failed to optimize this collaboration, even though healthcare outcomes have increasingly been linked to a number of patient-dependent factors such as healthcare literacy, socioeconomic status, and education level (Pappas, Queen, Hadden, & Fisher, 1993; Pamuk, Makuc, Heck, Reuben, & Lochner, 1998; Wolfson, Kaplan, Lynch, Ross & Backlund, 1999).

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