

Using Electronic Health Records and Data Warehouse Collaboratively in Community Health Centers

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EXECUTIVE SUMMARY

The organization Community Partners HealthNet (CPH), Inc. is a so-called Health-Center-Controlled Networks (HCCNs) that provide health information technologies, in particular Electronic Health Records and Data Warehouse, to participating community health centers (CHC) and rural health clinics (RHC). All 16 member organizations (CHCs and RHCs) in CPH are non-profit health care organizations providing primary health care to individuals in medically underserved areas. To provide quality and accessible health care to those medically needed, CPH and member organization rely heavily on funding from federal and state governments as well as charitable foundations. The investment in system-wide Health Information Technologies has been financially limited given the nature of the organizations. CPH and member organizations, through visionary leadership and cost-effective execution, have been able to adopt and implement advanced information technologies like EHR and data warehouse since early 1990s. There has been software updates and EHR upgrades, but the original design of the system still serve the information needs of the organization. This case study describes CPH in the health care environment, discusses the collaboration of six original individual CHCs to create CPH, the EHR and Data Warehouse projects at CPH, and then explains CPH's on-going operations and new challenges in the context of meaningful use and big data movement.

Keywords: *Business Intelligence, Community Health Center (CHC), Data Warehouse, Economy of Scale, Electronic Health Record, Health-Center-Controlled Network (HCCN), Scalable, Succession Planning, Transformational Leadership*

ORGANIZATION BACKGROUND

Community Partners HealthNet, Inc. (CPH) is a non-profit, federally-funded, health-center-controlled network (HCCN) headquartered in Snow Hill, NC, United States. The federal Health Resources and Services Administration (HRSA) defines an HCCN as: "A group of safety-net providers (a minimum of three collaborators/members) collaborating horizontally or vertically to improve access to care, enhance quality of care, and achieve cost efficiencies through the redesign of practices to integrate services, optimize patient outcomes, or negotiate managed care contracts on behalf of the participating members....HCCNs ... exchange information and establish collaborative mechanisms to meet administrative, IT [information technology], and clinical quality objectives" (HRSA, n.d., n.p.). Benefits of being an HCCN include federal financial incentives and favorable status in the awarding of federal grants (HRSA, What are the benefits, n.d.). CPH's member organizations began with six community health centers (CHCs) in North Carolina. By 2011, it had expanded to include 8 multi-site CHCs (including three of the original members), one FQHC LookAlike, and 7 rural health clinics (RHCs) in Connecticut, Missouri, North Carolina, and Texas (Community Partners HealthNet, n.d.). Together, CPH members provide primary health care services at 41 sites to 118,833 patients each year.

Health Care Environment

CPH's member organizations are ambulatory "core safety net providers" [also known as "essential community providers" and "providers of last resort" (Lewin & Altman, 2000, p. 54)]. The Institute of Medicine (IOM) has defined "core safety net provider" as a set of

providers that organize and deliver a significant level of health care and other health-related services.... These providers have two distinguishing characteristics: (1) by legal mandate or explicitly adopted mission they maintain

an "open door," offering services to patients regardless of their ability to pay; and (2) a substantial share of their patient mix is uninsured, Medicaid, and other vulnerable patients. (Lewin & Altman, 2000, p. 21)

Examples of core ambulatory safety-net providers are CHCs, RHCs, migrant clinics, free clinics, public health department clinics, and emergency rooms of public and teaching hospitals. They are mostly funded by governments and charitable foundations and are critical to provide needed care to medically uninsured, underinsured, and underserved population.

CHCs and RHCs have a 50-year history in the U.S health care system. Early roots of CHCs were in the Migrant Health Act of 1962 and the Economic Opportunity Act of 1964 (Bureau of Primary Health Care, 2008; Lefkowitz, 2005). These acts provided federal support for medical care delivered in migrant health centers and neighborhood health centers. In the mid-1970s neighborhood health centers became known as CHCs (Bureau of Primary Health Care). RHCs were established under the Rural Health Services Act of 1977 (Office of Rural Health Policy, 2006). In the 1980s and 1990s, Congress expanded the concept of CHCs to cover care provided to homeless people and residents of public housing under the McKinney Homeless Assistance Act of 1987 and the Disadvantaged Minority Health Improvement Act of 1990, respectively (Bureau of Primary Health Care). The Federally Qualified Health Center (FQHC) program is an extension of the migrant and CHC programs. The FQHC program was established under the Omnibus Budget Reconciliation Act (OBRA) of 1989 and expanded under the OBRA of 1990. Under these acts, FQHCs receive specially enhanced Medicare and Medicaid reimbursements (Office of Rural Health Policy). The Health Centers Consolidation Act of 1996 consolidated four federal primary care programs (community, migrant, homeless, and public housing) under section 330 of the Public Health Service Act (Bureau of Primary Health Care).

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