April 2016

Trends in Clinical Billing by Local Health Departments

J. Mac McCullough
Arizona State University, mccullough@asu.edu

Follow this and additional works at: https://uknowledge.uky.edu/frontiersinphssr

Part of the Health Services Administration Commons, and the Other Public Health Commons

Recommended Citation

This Article is brought to you for free and open access by the Center for Public Health Systems and Services Research at UKnowledge. It has been accepted for inclusion in Frontiers in Public Health Services and Systems Research by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.
Trends in Clinical Billing by Local Health Departments

Abstract

**Background:** Billing for clinical services is perceived to be increasingly important for local health departments (LHDs). Yet very little evidence exists regarding the frequency and relative financial importance of clinical billing revenues.

**Purpose:** The purpose of this study is to report on trends in the frequency and financial scope of clinical billing by LHDs from 2008 to 2013.

**Methods:** The study used data from the 2008, 2010, and 2013 National Association of City and County Health Officials Profile report surveys. Per capita revenues from clinical billing and percent of total LHD revenues from clinical billing were calculated.

**Results:** Clinical billing became significantly more common between 2008 and 2013, with approximately three quarters of LHDs receiving revenues as of 2013. The mean amount received also significantly increased. The net increase in clinical billing revenues per capita ($2.82) was greater than the overall increase in total revenues per capita from 2008 to 2013.

**Implications:** Clinical billing revenues provided a backfill against erosion in funding for LHDs. While certain regions (e.g., Northeast) have consistently seen smaller clinical billing revenues and other regions (e.g., Southeast) have consistently seen large clinical billing revenues, other regions (e.g., West) are increasingly billing as well. While increasing reliance on clinical billing revenues may present longer-term challenges, these revenues represent a tremendously important source of financial stability during the Great Recession. Current trends indicate that in spite of declines in individually-focused services, revenues from clinical billing are increasing.

**Keywords**
Clinical services, local health departments, billing, revenue

Cover Page Footnote
Dr. McCullough has ongoing employment at the Maricopa County Department of Public Health (MCDPH) as Health Economist. MCDPH played no role in the conduct, analysis, or presentation of results. Findings do not necessarily reflect the position of MCDPH. No competing financial or editorial interests were reported by the author of this paper.
INTRODUCTION

Billing for clinical services is a strategy commonly employed by local health departments (LHDs) to generate revenue to support provision of essential services within a jurisdiction. The 2014 National Association of County and City Health Officials (NACCHO) Forces of Change survey found that nearly 90% of LHDs currently bill for at least some services provided by the department; more than 80% of LHDs report plans to expand their billing activities or establish new billing activities.¹

Reported motivations for billing included an expanding pool of insured patients, increases in input costs, grant requirements, and declines in revenues from other sources.¹,² Practice-based reports have clearly described the need for and benefits of clinical billing.³ Moreover, especially in light of declines in overall funding for local health departments during the Great Recession, revenues generated from clinical services billing may represent an important source of stability to support departmental activities.⁴

Yet at the same time, LHDs are moving away from providing individually-focused clinical services in favor of population-based services.⁵ The trend away from direct provision of clinical services may impact clinical billing by LHDs. Specifically, LHDs may see an erosion of clinical revenues as their portfolio of clinical services diminishes in scope. The potential financial impact of this shift is unknown as little evidence on exists at the national level regarding the dollar amounts earned by LHDs through clinical billing, including whether these amounts are growing or declining over time. The purpose of this study is to report on trends in the financial scope of clinical billing by LHDs from 2008 to 2013.

METHODS

All data for this study came from three national surveys of LHDs performed by NACCHO. Conducted approximately every 3 years, the NACCHO Profile Surveys have been used extensively in public health services and systems research and represent a rich source of data on a range of LHD financial, service, personnel, and other characteristics. Specifically, data used in this study included clinical revenue, total LHD revenue, LHD’s state, and total population count for each year. The 2008, 2010, and 2013 Profile surveys were used for this study as they are the only 3 years for which specific clinical revenue data are available.

In 2008 and 2010, “clinical revenues” were calculated based on responses to survey questions on revenues from four separate sources: Medicare, Medicaid, private health insurance, and patient fees. In 2013, a survey methodology change meant that “clinical revenues” were calculated based on LHD responses to two separate survey questions on revenues from Medicare/Medicaid and other clinical sources (including private health insurance and patient fees). LHDs were excluded from analyses if data were missing for total annual revenues (n = 400, 428, and 459 in 2008, 2010, and 2013, respectively). Complete financial data were available from 1932 in 2008, 1557 in 2010, and 1340 in 2013.
Several outcomes of interest were calculated. First, to analyze frequency of billing, a dichotomous measure was created for LHDs with no revenue ($0) from clinical sources versus those with any revenue ($≥0.01). Next, to analyze financial scope of billing by LHDs, two measures were used: (1) per capita revenues from all clinical sources—revenues from Medicare/Medicaid and other clinical sources were totaled for each year and then divided by the jurisdictional population for the corresponding year; and (2) clinical revenues as a percent of total LHD revenues—revenues from Medicare/Medicaid and other clinical sources were totaled for each year and then divided by the LHD’s total revenues for the corresponding year. The statistical significance of year-over-year changes was tested using t-tests and chi-square tests. Data coding and analysis were performed using Stata version 13.1.

RESULTS

In total, 57.7% of LHDs reported any clinical revenue in 2008, 65.6% reported clinical revenue in 2010, and 74.0% of LHDs reported clinical revenue in 2013 (significant increases, p< 0.001).

As shown in Table 1, mean per capita revenues for LHDs oscillated between $49.84 in 2008, $57.59 in 2010, and $52.58 in 2013. Total mean revenue from clinical sources increased significantly between 2008 ($10.66) and 2010 ($14.04) (p<0.001). The decrease between 2010 and 2013 ($13.48) was not significant. Medicare/Medicaid and Other Clinical Sources of revenue each increased by approximately 27% from 2008 to 2013, although in absolute terms the $2.23 change in Medicare/Medicaid revenues was much larger than the change $0.60 change in other clinical revenues. The decline in per capita revenues and clinical revenues from 2010 to 2013 resulted from a decrease in mean total revenues ($9.7 million to $7.8 million) and an increase in mean population (148,000 to 154,000).

Table 1. Local health department total per capita revenues and clinical revenues, 2008–2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean LHD Per Capita Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>2008</td>
<td>$49.84</td>
</tr>
<tr>
<td>2010</td>
<td>$57.83</td>
</tr>
<tr>
<td>2013</td>
<td>$52.59</td>
</tr>
</tbody>
</table>

Figure 1 below shows state-level trends in clinical billing for 2008, 2010, and 2013 (Panels 1, 2, and 3, respectively). As of 2008, 15 states had a median LHD with no clinical billing revenues. As of 2013, only 11 states did. Billing revenues constituted 10% or more of total LHD revenues for many southeastern states consistently across all 3 years. In the northeast, median LHD billing revenues were closer to 0% of total LHD revenues.
Figure 1: Median Percent LHD Revenues from Clinical Sources, 2008-2013

Scale:
Red: 0.0%, Beige: 0.1% - 4.9%, Light Green: 5.0% - 9.9%, Dark Green: ≥ 10.0%
**IMPLICATIONS**

Billing for clinical services is a frequent and important revenue-generation strategy for LHDs. This paper provides empirical evidence that supports what many in the field are reporting: that billing for clinical services is both widespread and increasingly important. \(^3\) Previously, little empirical evidence existed to document these perceived trends.

Between 2008 and 2013, there was a significant increase in both frequency of clinical billing and mean dollar amounts of clinical billing revenues. Notably, estimates of frequency of clinical billing found here were lower than those reported previously (74% per 2013 NACCHO Profile and 90% per 2014 NACCHO Forces of Change survey). Differences in survey instruments may account for at least some of this gap.

This study found evidence that clinical billing is accounting for a larger share of LHD revenues from 2008 to 2013. For example, while per capita clinical billing revenues increased by $2.82 from 2008 to 2013, total per capita funding increased by only $2.75 during that period. Therefore, funding from nonclinical sources *declined* from 2008 to 2013, on average. These findings suggest that clinical billing revenues are critical in helping to backfill cuts in other funding sources.

Yet there may be risks to an increasing reliance on revenues from clinical services. It is not likely feasible to indefinitely continue to backfill funding cuts from other sources solely by generating additional clinical billing revenues. After all, there are a finite number of service lines for which clinical billing can be performed or for which additional revenues can be generated. Moreover many LHDs are discontinuing provision of clinical services due to changing departmental missions or priorities, \(^3\) meaning that existing clinical billing funding streams may diminish. The reliance on clinical services as a critical revenue source may change incentives for clinical service adoption or discontinuation decisions.

In spite of these potential threats, clinical billing plays an increasingly important role in for LHD revenues and has helped LHDs to sustain funding levels in spite of the Great Recession and other large reforms of the U.S. health care system from 2008 to 2013.
SUMMARY BOX:

What is already known about this topic? Billing for clinical services is perceived to be increasingly important for LHDs. Yet very little evidence exists regarding the frequency and relative financial importance of clinical billing revenues.

What is added by this report? Analysis of nationally-representative data from 2008 to 2013 reveals that clinical billing became significantly more common between 2008 and 2013, with approximately three-quarters of LHDs receiving revenues. The mean amount received also significantly increased. The net increase in clinical billing revenues per capita ($2.82) was greater than the overall increase in total revenues per capita from 2008 to 2013. Thus, clinical billing revenues provided a backfill against erosion in funding for LHDs.

What are the implications for public health practice, policy, and research? Some LHDs may be moving towards provision of population health services, but over the near-term LHDs are likely to be called upon to provide individual care for those in need. The need to fund these services will remain and billing will be part of the mix. Indeed, LHD reliance on clinical revenues as grown from 2008 to 2013. While certain regions (e.g., Northeast) have consistently seen smaller clinical billing revenues and other regions (e.g., Southeast) have consistently seen large clinical billing revenues, other regions (e.g., West) are increasingly billing as well. While increasing reliance on clinical billing revenues may present longer-term challenges, these revenues represent a tremendously important source of financial stability during the Great Recession. Current trends indicate that in spite of declines in individually-focused services, revenues from clinical billing are increasing.

REFERENCES


