Has the ACA Impacted Charity Care and Bad Debt?

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Abstract

Objective: To investigate whether the Affordable Care Act (ACA) had an impact on the amount of charity care and bad debt by type of healthcare providers (investor-owned vs. community hospitals), academic affiliation (teaching hospitals vs. non-teaching hospitals) and by size of hospitals (small/rural vs. the rest) since 2010.

Study Design: This study tests hypothesis that the amount of charity care, bad debt and uncompensated care has decreased as a result of the ACA especially for those states with expanded Medicaid programs. This study uses the secondary data source (2010 to 2015) from California’s Office of Statewide Health Planning and Development (OSHPD). This study divided the study period into two categories; preparatory period (2010 to 2013) and impact period (2014 to 2105) as the ACA was not fully implemented until 2014.

Methods: Simple independent t-test and multivariate regression methods were used to test the hypothesis.

Results: Total charity care, bad debt and uncompensated care amount decreased substantially since the ACA. Teaching hospitals and investor-owned hospitals benefitted much higher rates than their counter-part providers.

Conclusions: This study explored unchartered areas in the ACA on charity care, bad debt and uncompensated care. Findings are based on California data, which expanded Medicaid coverage as a part of the ACA. It would be an interesting similar study on states that have not expanded Medicaid coverage for uninsured population to observe whether the ACA has a similar impact on charity care, bad debt and uncompensated care.

Keywords: Charity care; Bad debt; Uncompensated care; Affordable care act; Multivariate regression analysis

What this Study Adds

• Most studies addressed how the ACA changed/improved the number of uninsured people since 2010. • This study investigated the impact of the ACA on providers’ financial statements in uncompensated care (charity care and bad debt).
• This study also shows that the investor-owned hospitals received better outcomes than not-for-profit hospitals and teaching hospitals are larger beneficiaries than non-teaching hospitals.

Introduction

Background

The Affordable Care Act (ACA) was signed into law in March 2010. It was designed to extend health insurance coverage to millions of uninsured people. Lower income families can qualify for extra savings on health insurance plans through premium tax credits and cost-sharing reductions.

It is claimed that the ACA has had well-documented effects on levels of insurance coverage in the United States, “reducing the numbers of uninsured persons to historically low levels and facilitating increased access to health care services, especially among low-income persons and persons of color” [1].

The most striking provisions in the ACA include prohibiting discrimination against preexisting health conditions and extending health insurance coverage to dependents until they reach 26 years of age. Combined with the individual mandate and insurance-market regulations guaranteeing access to coverage, these reforms are projected to result in coverage of up to 33 million uninsured people by 2022 [2].
After 10 years since the ACA was implemented, literature starts to appear on the impact of the ACA on health insurance and related health outcomes. For example, in 2010, 48.6 million lacked health insurance [3]. It was projected by the Congressional Budget Office that the ACA would lower the number of uninsured persons to 23 million by 2019 [4]. The actual number of the uninsured population in 2018 was 27.5 million [5]. Miller et al. (2019) [6], also found a reduction of mortality among low income adults (age 55 to 64) in states with Medicaid expansion program in place. The authors stated that decisions by states not to expand Medicaid program resulted in 15,600 avoidable deaths. A similar result was reported for the infant mortality rate [7].

Most studies, however, address only insurance coverage via the Medicaid expansion program. If the intent of the ACA was to reduce the number of uninsured populations thereby improving healthcare utilization, it is expected that the amount of charity care and bad debt would decrease as more people now have the means to pay for their services. Accordingly, added health insurance coverage through the ACA would improve providers’ financial statement and improve health status over time [8].

The purpose of this paper is to investigate whether the ACA indeed had an impact on the amount of charity care and bad debt since 2010. We hypothesize that the ACA reduces the providers’ total amount of charity care and bad debt.

This paper is organized as follow. A literature survey on the ACA, charity care and bad debt will be presented in Section 2. Study design including data sources and analytical methods will be discussed in Section 3. Discussion on statistical outputs will be presented in Section 4 which is followed by conclusions, study implication and limitation of the study in Section 5.

Literature review

Most literature addresses amount of charity care that the providers experienced since the ACA in 2010 but few on bad debt. It is important to distinguish these two financial parameters since they are different legally and in an accounting sense. The American Hospital Association (AHA) [9], defines bad debt as any bill submitted for payment by a third-party payer or patient which is not paid in full. On the other hand, charity care is defined as care provided to consumers at no cost with any expectation of payment. Increase in bad debt probably is caused by under-insured people [10]. Some providers combine these two categories into one, called uncompensated care.

Some researchers question whether the ACA makes any difference in charity care. According to this argument, hospital charity care and financial aid policies are not new; they have long played an important role in the U.S. Healthcare safety net by forgiving the medical bills of the poor and uninsured [11]. Legislation like the ACA mandating hospitals to have financial assistance policies that are already in existence understandable will not have a significant effect on charity. Opposing to this argument, Chen [12], states that simply having a financial assistance policy will not necessarily increase the amount of charity care provided.

Hospitals subsidize care to medically indigent people through both direct funding from public sources; tax revenue, uncompensated care pools, and Medicare and Medicaid disproportionate-share adjustments, and private philanthropy, as well as indirectly by shifting the costs of uncompensated care onto other payers. The value of uncompensated care costs was estimated to total between $46 and $51 billion in 2012 [13]. The ACA anticipates that insurance expansion will increase safety-net hospitals’ revenues and will reduce Disproportionate-Share Hospital (DSH) payments accordingly. Neuhausen [14], examined the impact of the ACA’s Medicaid DSH reductions on California public hospitals’ financial stability by estimating how the total DSH costs (uncompensated care costs and Medicaid shortfalls) will change as a result of insurance expansion and the offsetting the DSH reductions. They concluded that decreases in uncompensated care costs resulting from the ACA insurance expansion may not match the Act’s DSH reductions because of the high number of people who will remain uninsured, low Medicaid reimbursement rates, and medical cost inflation.

Dranove, Carthwaite and Ody’s [15], study indicates that the uncompensated care burdens fell sharply in Medicaid expansion states between 2013 and 2015 from 3.9% to 2.3% of operating costs. A similar study shows that uncompensated care in Connecticut was roughly one-third lowers than what it would have been without early Medicaid expansion [14].

Medicaid expansion also is known to be the most cost-effective investment in mortality rates. An analysis of mortality changes after Medicaid expansion suggests that expanding Medicaid saves lives at a societal cost of $327,000 to $867,000 per life saved [16]. Traditional safety-net providers such as public hospitals and community health centers in Medicaid expansion states witnessed a drastic reduction of uncompensated care compared with non-Medicaid expansion states [17].

Herzlinger and Krasker [18], contended that neither society as a whole nor individual patient’s benefit from the subsidies accorded to the not-for profit providers. Raja [19], on the other hand, investigated whether tax exemption provided to hospitals taking care of indigent patients produced a positive rate of return. They used the Hill–Burton Act to create a safety net for underprivileged Americans with the idea of “charity care”. This paper explores the efficacy with which eligible hospitals accomplish this goal by calculating a benefit-to-cost ratio relative to the socio-demographic characteristics (population density, rate of poverty, and diversity) of the hospital’s county. Eight states (CA, FL, GA, MN, MT, RI, TX, and WI) and 893 hospitals were
included using data from 2007. The study concluded that for every dollar of exemption, the public received $0.11 of charity care. The investment in the charity care system is providing a very low rate of return and improvements. Alternatives on the national scale should be considered, according to their study.

Nikpay and Ayanian [20], went further to review Section 501(r) of the Internal Revenue Code, a part of ACA which now requires each hospital to establish a written financial-assistance and display the policy in the areas that patients readily notice. Through these policies, hospitals must strive to ensure that patients who qualify for fully or partially subsidized charity care can apply for and receive it, are charged reasonable amounts, and are not subject to extraordinary bill-collection practices when they have outstanding medical debt. It is speculated that the amount of charity care will increase as providers now have to make patients aware of their right for free care.

Most studies, however, have not addressed whether change in uncompensated care since the ACA differ by ownership of healthcare organizations (for-profit vs. community hospitals) and type of organizations (government-owned vs. private). In addition, it would be interesting to see whether the uncompensated care amount differs by provider’s academic affiliation (teaching vs. non-teaching providers).

Methods

Study hypothesis

Literature is divided on change in the uncompensated care amount since the ACA. This study hypothesizes that the amount of uncompensated care has decreased as a result of the ACA especially for those states with expanded Medicaid programs. In addition, this study argues that the total amount of uncompensated care since the ACA differs by type, ownership, size and academic affiliation of providers.

Data Source

Data came from California’s Office of Statewide Health Planning and Development (OSHPD) (http://www.oshpd.ca.gov/HID) from 2010 to 2015 (most recent data). The data contains 443 hospitals on variables such as charity care, bad debt, number of staffed beds, hospitals by ownership (community vs. government owned), by type (non-profit vs. private own), by size (small/rural vs. large community hospitals) and by academic affiliation (teaching vs. the rest). Since the full impact of the ACA started in 2014, this study divided the sample period into two sub-periods; from 2010 to 2013 (preparatory period) and 2014 to 2015 (impact period).

Statistical measurement

In addition to simple illustrative graphs on trends on investigative variables (charity care, bad debt and uncompensated care), the bi-variate test on selected independent variables between preparatory (2010 to 2013) and impact period (2014 to 2015) was conducted to see whether there are some significant differences on investigative variables between these two periods. Finally, this study used a multivariate regression model to measure the interaction effects between and among independent variables on investigative variables.

Results

Frequency by type of providers

There are 2,653 samples (providers) over a 6-year sample period. General hospitals (84.5%), non-teaching hospitals (92.73%) and not for profit hospitals (51.82%) dominate the sample space as shown in table 1.

<table>
<thead>
<tr>
<th>Types</th>
<th>Numbers</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General hospitals</td>
<td>2,242</td>
<td>84.51</td>
</tr>
<tr>
<td>Special providers</td>
<td>411</td>
<td>15.49</td>
</tr>
<tr>
<td>Total</td>
<td>2,653</td>
<td>100.00</td>
</tr>
<tr>
<td>Teaching</td>
<td>193</td>
<td>7.27</td>
</tr>
<tr>
<td>Non-teaching</td>
<td>2,460</td>
<td>92.73</td>
</tr>
<tr>
<td>Total</td>
<td>2,653</td>
<td>100.00</td>
</tr>
<tr>
<td>Investor</td>
<td>773</td>
<td>29.14</td>
</tr>
<tr>
<td>Not for profit</td>
<td>1,401</td>
<td>52.81</td>
</tr>
<tr>
<td>City/County</td>
<td>178</td>
<td>6.71</td>
</tr>
<tr>
<td>District</td>
<td>250</td>
<td>9.42</td>
</tr>
<tr>
<td>State</td>
<td>53</td>
<td>2.00</td>
</tr>
<tr>
<td>Total</td>
<td>2,653</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 1: Sample distributions by providers’ characteristics.

Amount of charity care, bad debt and uncompensated care

The amount of charity care started to decrease from 2012 and such decline was more noticeable from 2013 when the full impact of the ACA was expected; from $18.49 million per hospital in 2013 to $11.37 million in 2014. However, the bad debt has an interesting behavior; it increased steadily from 2010 to 2012, and then started to decline from 2014; from $16.42 million per
provider in 2013 to $8.97 million per provider in 2015. The total uncompensated care amount followed a similar pattern as bad debt; increased steadily from 2010 to 2013, then declined sharply from 2014 as shown in table 2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Charity Care</th>
<th>Bad Debt</th>
<th>Uncompensated Care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>N</td>
</tr>
<tr>
<td>2010</td>
<td>306</td>
<td>16.47</td>
<td>360</td>
</tr>
<tr>
<td>2011</td>
<td>316</td>
<td>19.22</td>
<td>361</td>
</tr>
<tr>
<td>2012</td>
<td>319</td>
<td>18.75</td>
<td>365</td>
</tr>
<tr>
<td>2013</td>
<td>314</td>
<td>18.49</td>
<td>362</td>
</tr>
<tr>
<td>2014</td>
<td>306</td>
<td>11.37</td>
<td>357</td>
</tr>
<tr>
<td>2015</td>
<td>298</td>
<td>8.46</td>
<td>351</td>
</tr>
</tbody>
</table>

Table 2: Mean value of charity care, bad debt and uncompensated care ($million).

Testing variables for two periods (preparatory and impact periods)

As shown in Table 3, it appears that there have been noticeable changes of charity care, bad debt and uncompensated care amounts during the study period. Such change is noticeable since 2014 when the full impact from the ACA was expected. In order to verify whether such a change between two periods is statistically reliable, a simple independent t-test was performed on three investigative variables as shown in table 3.

<table>
<thead>
<tr>
<th>Variables</th>
<th>2010-2013</th>
<th>2014-2015</th>
<th>t-value</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average staff bed per hospital</td>
<td>171.44</td>
<td>161.25</td>
<td>1.419</td>
<td>-5.94</td>
</tr>
<tr>
<td>Average Charity Care Amount per Hospital ($ million)</td>
<td>18.25</td>
<td>9.94</td>
<td>-7.26***</td>
<td>-45.53</td>
</tr>
<tr>
<td>Average Bad Debt amount per Hospital ($ million)</td>
<td>14.89</td>
<td>9.63</td>
<td>-6.39***</td>
<td>-35.33</td>
</tr>
<tr>
<td>Average Uncompensated Care amount per Hospital ($ million)</td>
<td>25.15</td>
<td>14.46</td>
<td>-8.151***</td>
<td>-42.50</td>
</tr>
</tbody>
</table>

** P < 0.01

Table 3: Independent mean value test.

The average bad debt per provider decreased from $14.89 million to $9.63 million (-45.53%, p < 0.01). The average charity care per hospital declined almost by 46% from $18.25 million to $9.94 million (p < 0.01). The average uncompensated care amount noticeably declined from $25.15 million to $14.46 million (-42.50%, p < 0.01).

Table 3 seems to indicate that there has been a significant change in the amount of charity care, bad debt and uncompensated care between these two time periods. It would be interesting to examine whether such a change has been across the type of hospital ownership (investor vs. not-for-profit hospitals). By the law, not-for-profit hospitals have to provide healthcare for indigent and/or underinsured. On the other hand, investor owned hospitals are not under such obligation. Therefore, investor-own hospitals may not benefit from the ACA as much as not-for-profit hospitals. Our statistical tests on these three areas (charity care, bad debt and uncompensated care) between these two groups of hospitals are shown in table 4.

(A) Average Charity Care per Hospital ($ million)

<table>
<thead>
<tr>
<th>Time frame</th>
<th>Investor owned</th>
<th>Not for Profit</th>
<th>Non-Teaching</th>
<th>Teaching Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep</td>
<td>8.54</td>
<td>21.98</td>
<td>8.54</td>
<td>77.51</td>
</tr>
<tr>
<td>Impact</td>
<td>3.96</td>
<td>13.08</td>
<td>3.96</td>
<td>34.26</td>
</tr>
<tr>
<td>t-value</td>
<td>3.725**</td>
<td>5.775**</td>
<td>-3.725**</td>
<td>-4.333**</td>
</tr>
</tbody>
</table>
Among three areas of measurement, decline in charity care for investor-owned hospitals has been noticeable. The amount of charity care per hospital for investor-owned hospitals decreased from $8.54 million to $3.946 million, over almost 54% decrease whereas the same for not-for profit hospitals from $21.98 million to $13.08 million, 40.49% decrease during the impact period.

It is to some degree unexpected, however, to see that the investor own hospitals benefit more than not for profit hospitals in charity care (-53.63% vs. -40.49%). Further research may be needed to uncover this unusual finding.

Another area of interest is to study whether the ACA impact on these three areas by academic affiliation (teaching vs. non-teaching providers). Most teaching hospitals are located in inner cities where many patients either have no health insurance or under-insured. Therefore, it is assumed that the average amount of bad debt, charity care and uncompensated care for teaching hospitals are assumed to be higher than those non-teaching hospitals. Teaching hospitals, therefore, would have benefited more than others from the ACA. Table 4 shows statistical results in three areas by academic affiliations.

As we hypothesized, teaching hospitals seem to have benefited more than non-teaching providers in all three categories. The difference is especially visible in uncompensated care area (50.75% decreases for teaching hospitals vs. 40.35% for non-teaching hospitals).

Testing relative impact on charity care, bad debt and uncompensated care: Multivariate regression model

The purpose of the multiple regression approach is to estimate the interaction affects among independent variables. The results are in table 5A (charity care), table 5B (bad debt) and in table 5C (uncompensated care).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable: Log10 Charity Care (A)</th>
<th>Dependent variable: Log10 Bad Debt (B)</th>
<th>Dependent variable: Log10 Uncompensated Care (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regression coefficients</td>
<td>Regression coefficients</td>
<td>Regression coefficients</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.38 (-2.619**)</td>
<td>-0.246 (-2.475*)</td>
<td>4.454 (35.077**)</td>
</tr>
<tr>
<td>Investor=1, Non-profit=0</td>
<td>-1.12 (-10.607**)</td>
<td>-0.023 (-0.305)</td>
<td>-0.341 (-9.815**)</td>
</tr>
<tr>
<td>General=1, Special=0</td>
<td>4.99 (35.466**)</td>
<td>5.781 (59.105**)</td>
<td>2.074 (13.303**)</td>
</tr>
<tr>
<td>Teaching=1, Others=0</td>
<td>-0.86 (-3.771**)</td>
<td>-0.512 (-3.209**)</td>
<td>-0.315 (-4.030**)</td>
</tr>
<tr>
<td>Small/Rural=1, Others=0</td>
<td>1.10 (6.118**)</td>
<td>0.804 (6.469***</td>
<td>0.164 (3.274**)</td>
</tr>
<tr>
<td>Average staffed bed</td>
<td>0.01 (17.063**)</td>
<td>0.005 (15.664***)</td>
<td>0.004 (26.180**)</td>
</tr>
<tr>
<td>R-square</td>
<td>0.503</td>
<td>0.690</td>
<td>0.436</td>
</tr>
</tbody>
</table>

**p < 0.01, *p < 0.05 (Values in parentheses are t-values)

Table 5: Regression model for charity care, bad debt and uncompensated care (2010-2015).
Investor-owned hospitals appear to have benefited more than not-for-profit hospitals in both periods (p < 0.01). As expected, the amount of decrease in charity care for teaching hospitals is far greater than that for non-teaching hospitals (p < 0.01). Small and rural hospitals do not seem to benefit from the ACA as much as large hospitals. Special hospitals appear to have benefited more than general hospitals; general hospitals gave almost $5 million more per hospital compared to special hospitals indicating that community hospitals continuously share the blunt of charity care under the ACA program. The bigger the providers (measured by average staffed bed), the larger the amount of charity care provided. The size of changes (regression coefficients) and directions of changes between two periods are practically identical.

As to bad debt, a similar pattern seems to be true as in charity care (see B in Table 5). Investor-owned hospitals and teaching hospitals appear to have benefitted most compared with their counterpart hospitals (p < 0.01). Large hospitals benefit more than small/rural hospitals (p < 0.01).

Uncompensated care shows a similar pattern as those of charity care and bad debt. Investor owned hospitals and teaching hospitals seem to have benefited most from the ACA as shown in table 5.

**Discussion**

The purpose of the 2020 ACA was to reduce the uninsured population thereby improving population health. There is evidence that the total number of the uninsured population decreased from 40 million to 27.5 million by 2018 and that national’s health apparently improved measured by mortality rate. Our findings seem to support the study by Guth, Garfield and Rudowitz [21].

The less known impact, however, is whether the ACA also has any impact on the providers’ financial picture in charity care, bad debt and uncompensated care. Two different arguments have been raised. Since the ACA provides the uninsured population with insurance coverage, the providers would face less pressure to provide free care (charity) and less chance the charge would become uncollectible (bad debt) (Figures 1-3).

Another research agenda may be whether the ACA provides financial relief for providers. It is important to realize that expansion of healthcare insurance via the ACA should equally strengthen the financial posture of the providers. Otherwise, the impact of the ACA on the overall healthcare market would be vulnerable to financial stress and unable to sustain in providing affordable healthcare to general population.

Absence in public discussion has been whether such impact on charity care, bad debt and uncompensated care is uniformly applicable by type of providers. It is important from a policy standpoint to study the ACA impact by characteristics of providers. Otherwise, the ACA may be considered as discriminatory toward certain providers.

This study uncovers that the ACA impact on three financial areas (charity, bad debt and uncompensated care) appears to be uniform across the type of providers. However, this study also shows that the investor-owned hospitals and teaching hospitals received higher benefit than their counterpart providers. Small and rural hospitals did not do well compared to large urban hospitals in
reducing charity care, bad debt and uncompensated care.

This study shows that the ACA indeed has contributed to improving the provider’s financial picture. Although financial improvement was not the original intent of the ACA, it apparently has created a positive by-product in the provider’s financial areas.

Limitations

This study has two limitations; sample space and study period. This study is based on data compiled by California’s Office of Statewide Health Planning and Development. California is one of the states, which adopted the Medicaid expansion program. Accordingly, more uninsured people in California enrolled in the Medicaid sponsored insurance program compared with other states, which opted not to participated in a Medicaid expansion program. We do not claim that the findings in this study using California data will be applicable to all states.

Another limitation is that this study used only two years of impact period (2014 and 2015). Any conclusions based on two years of data may be too speculative to make a conclusive summary.

Summary of Article

The ACA reduced charity care and bad debt across the board since 2010. Such reduction is particularly evident for teaching hospitals and investor-owned healthcare facilities in Medicaid expanded states.

Take-Away Points

1. Overall, the ACA lowered hospitals’ charity care and bad debts especially Medicaid expansion states.
2. The charity care for investor-owned hospitals decreased by 53.6% vs. 40.5% decrease for not-for-profit hospitals while the bad debt decreased by 19.9% for investor-owned hospitals vs. 37.2% decrease for not-for-profit hospitals.
3. The charity care for teaching hospitals decreased by 55.8% vs. 53.6% decrease for non-teaching hospitals while the bad debt decreased by 40.4% for teaching hospitals vs. 35.4% for non-teaching hospitals.
4. Small-rural hospitals received less benefits in charity care and bad debt from the ACA.

References