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Impact of the Closure of a Hospital on the Surrounding Community and Residents

By: Lissette Vilarchao*, Scott Spreat*, Mike Clark*

*Cross Sector Partnerships Manager, Alliance for Health Equity
*Vice President for Evaluation and Research, Woods Services
*Social Impact Consultant and Policy Director, Convenient Care Association

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Abstract

After the Brandywine and Jennersville Hospital closures in 2021 and 2022, the Greater Coatesville Community experienced a drastic decrease in access to healthcare. Along with acute care, the closures took with it primary care practitioners, some broad-based social services, and critical connections to the continuum of care. In response to the events, the Alliance for Health Equity (The Alliance), a health conversion foundation, convened The Health Equity Group to develop strategies to mitigate the effects of the closures. In mid-2022, with the partnership of Chester County, The Alliance surveyed greater Coatesville to map out the impact on the community and the current status of its health. After collecting the initial responses, it was clear that the survey did not represent the community members who needed a voice. In partnership with community partners and leaders, a survey expansion garnered responses from two latter groups, including the least engaged by no fault of their own. With the receipt of a grant from the American Rescue Plan, The Alliance launched a response by creating **The Equity Health Center** and the **Anchor Strategy:** ***A Place-Based Approach for Health Equity in Greater Coatesville***. This article focuses on the impacts of the more proximal Brandywine Hospital.

Introduction

Brandywine Hospital was a general-purpose hospital that largely supported individuals living in the area of Coatesville in Chester County, Pennsylvania. The parent organization of Brandywine Hospital, Tower Health, made the decision to close the hospital as of 1/31/21. Notably, Chester County is generally an affluent area (median family income of $110,000 and only 6.6% of residents living in poverty), while Coatesville remains an outlier. Concern was expressed that the impact of the closure might more significantly impact persons and families who face greater economic challenges. This paper will summarize the results from three surveys that sought to objectify the impact of this closure on the residents of Coatesville and the surrounding area. To effectively assess the impact of the Brandywine Hospital closure, three distinct surveys were employed to capture the voices of three distinct populations. Different sampling procedures, different data collection procedures, and different researchers led to three heterogeneous samples. Sample 1 (N=397), despite being comprised largely of Coatesville residents, primarily reflected the composition of the more affluent Chester County. Only 8.0% of this sample lived in poverty. Sample 2 (N=604) and Sample 3 (N=136) reflected increased economic stressors, with

51% and 82% of the two samples falling below the poverty level – the heterogeneity of the three samples required the researchers to treat them as distinct samples in the analysis. The different economic characteristics of the samples were associated with different impacts of the Brandywine closure. We will focus on five specific key indicators.

Community Survey Impact on Three Different Populations

Impact of Closure on Subjective Healthcare Experience – This question, asked in each survey, invited respondents to rate their healthcare experience prior to and after the Brandywine closure. Prior to the closure, Sample 1 and Sample 2 each reported more favorable subjective healthcare experiences than did the more economically challenged Sample 3. Closure of the hospital was associated with the subjective healthcare experiences of Samples 1 and 2 falling to that of Sample 3. Conversely, the community experienced healthcare equity by lowering the experience to the lowest common denominator.

Emergency Room Use – Respondents in each sample were asked to indicate the extent to which they had used the Brandywine emergency room prior to the hospital closure. 48% of Sample 1 had used the emergency room at least once in the year prior to closing, and 71% of Sample 2 reported at least one use of the Emergency room during this time period. Sample 3, however, reported a significantly lower use pattern, with only 29% of respondents reporting use of the emergency room in the year prior to closing. The data from Sample 2 reflect the common observation of overuse of emergency rooms by economically challenged individuals, but this pattern was not evident for the even more economically-challenged members of Sample 3.

"One Place" for Services Prior to Brandywine Closure – Asked whether they had "one place" to go for specific services before the closure of Brandywine, respondents in the larger Sample 1 (which primarily reflected Chester County) reported having the most significant access to resources. For example, 84% of Sample 1 indicated that they had someone to go to for healthcare "advice," but only 33% of Sample 2 and just 11% of the most economically challenged Sample 3 answered affirmatively. Chi-square analysis revealed that while Samples 2 and 3 were similar, both had less access than the members of Sample 1. A similar pattern of results was also evident with regard to the more specific question about mental health.

Use of Contemporary Healthcare Settings – Urgent care settings and healthcare services offered within retail settings have become increasingly common. Economic viability again was correlated with the use of these settings. Sample 1, which reflected larger Chester County, reported that 71% of the respondents used both Urgent Care settings and Retail Healthcare Services. 60% of Sample 2 used Urgent Care settings, but only 34% of this sample had used retail healthcare settings. The most economically challenged, Sample 3 reported that only 31% had used urgent care and only 15% had used retail healthcare services. Statistical analysis suggested an underuse of urgent care by Sample 3 and an underuse of retail clinics by both Samples 2 and 3.

Ease of Healthcare Access – When asked about the ease of accessing healthcare services, respondents once again had a differential pattern of responses. Members of Sample 2 reported

greater difficulty levels than Samples 1 and 3. Notably sample 3 notably did not report great difficulty despite increased barriers. It suggests that increased transportation time/cost for healthcare services did not appreciably impact the wealthier Sample 1. Sample 3 appeared to be less affected because of reduced patterns of seeking service.

Discussion

Interpretation of these findings is all based on the general assumption of relatively equal levels of healthcare needs. If one assumes relatively equal healthcare needs, these data suggest that members of the smaller, less wealthy samples have lesser access to healthcare supports and services. The reduced access is more pronounced in Sample 3. Of course, the assumption of relatively equal healthcare needs lacks empirical verification concerning these samples. It would be reasonable to suggest that members of the two less wealthy samples (Sample 2 and Sample 3) might experience more significant healthcare needs based mainly on various negative social determinants of health associated with poverty. Analysis of the wealthier and less wealthy members of the larger Sample 1 suggests that, the wealthier respondents (over median income) self-reported to be healthier than the less wealthy members of that larger sample (Chi-square[3]=40.19, $p \leq .000$.). Comparable data were not available from the two less wealthy groups.

Given the apparent inequity of access to healthcare supports and services, the challenge must be to identify both systemic and individual factors that may contribute to the inequity. It is essential to consider that different explanations and corrections might pertain to the two less wealthy samples. Systematic factors, such as cost, scheduling, and transportation, are likely hypotheses. Still, it is reasonable to consider that the smaller Sample 3 gives evidence of a depressed investiture in their own healthcare. Outreach programs that educate and incentivize healthcare use must support equitable access to healthcare. Using a different method with Sample 2, highlighting actual barriers to access might prove beneficial. In contrast, the data suggest that members of the wealthier Sample 1 will find services if they are available.

Community Impact: ***What happened as a result of the survey analysis?***

In response to community feedback, survey results, and in-depth analysis, The Alliance for Health Equity convened The Health Equity Group (Group) to develop its Anchor Strategy: *A Place-Based Approach for Health Equity in Greater Coatesville* post-hospital closure. The cross-sector group developed the place-based approach, structure, performance, and evaluation process to achieve greater health-related access, engagement, and quality outcomes in Greater Coatesville. The primary strategy is to engage and train clinical and social support organizations to incorporate healthcare screenings and referrals to underserved populations and engage those furthest from optimal health. The secondary strategy ensures that care is of the highest quality, defined by an integrated and coordinated care service among and between all providers.

The Group also recognized the importance of the Social Determinants of Health (SDoH) to achieve a healthier community, understanding that stable housing, living wages, and access to parks and healthy and affordable food are essential for residents to live healthy lives. Members

of the Group developed Key Performance Indicators (KPIs) to evaluate progress towards integrated health, engagement and access, and economic stability for Greater Coatesville. While early, this approach has demonstrated initial success, and elements of this place-based approach could be replicated well in other communities facing healthcare-related closures.

A Place-Based Approach Strategy

Access and quality were selected as the primary goals for the Anchor Strategy, as the survey analysis indicated that realizing a healthier community is only possible through the community's engagement in healthcare and the removal of access barriers. The primary strategy is to engage and train clinical and social support organizations to incorporate healthcare screenings and referrals to underserved populations and engage those furthest from optimal health. The secondary strategy ensures that care is of the highest quality, defined by an integrated and coordinated care service among and between all providers. To engage the community, a trusted group composed of government, private sector, not-for-profits, and community leadership came together to evoke a sense of hope despite the hospital closure while establishing community dignity through equitable access to all residents.

The Group also recognized the importance of Social Determinants of Health (SDoH) to achieve a healthier community, understanding that stable housing, living wages, and access to parks and healthy and affordable food are essential for residents to live healthy lives. The Group, through a democratic process and infrastructure support of The Alliance, achieved immediate results, including:

- Educated the community, through a campaign that included direct mailings and outreach partnership sites, on where and how to get care for different health needs and where and how to receive low-cost or free health insurance if needed;

- Leveraged $2.3 Million of the American Rescue Plan Act over four years to address the health gaps resulting from the hospital closure and remote access (i.e., transportation, technology) barriers; and

- Identified additional essential access barriers and engagement gaps that, if not addressed, would not move residents into preventive and formal healthcare, resulting in a healthier community.

A Place-Based Structure

The Group has a tri-chair structure composed of the County Director of Health, County Director of Human Services, and CEO of The Alliance for Health Equity.

Within the governance structure are five subgroups (Integrated Health, Access and Engagement, Affordable and Stable Housing, Living Wage, and Healthy Environments), each co-chaired by a community leader and government representative tasked with delivering upon the key performance indicators of the Group.

The Group meets every other month to visit population baseline data, report on group progress on efforts, and develop further action steps to achieve key performance indicators. The meetings also ensure that each subgroup is informed about the activities of the other subgroups, allowing for cross-subgroup collaboration while preventing siloed efforts. Each subgroup meets, as needed, between meetings to follow up upon agreed-upon action steps. Staff are responsible for supporting the Group chairs to ensure the achievement of goals between meetings. Finally, the Group stressed the importance of community ownership; for this reason, each subgroup, led by a co-chair, represents community and government levels of participation.

Place-Based Performance and Evaluation

Members of the Anchor Strategy group developed Key Performance Indicators (KPIs) to evaluate progress toward integrated health, engagement and access, and economic stability for Greater Coatesville. The KPIs are separated between the three impact areas and outline the Anchor Strategy's data priorities.

The Alliance for Health Equity annually evaluates its programs and initiatives based on community impact. As a result, The Alliance is considered a thought partner and strategic-direction setter to the community. The Group will actively engage with continual feedback, community input, and evaluation of Anchor Strategy and capacity-building opportunities throughout the network. The Alliance will serve as the centralized thought collector and partner. Program evaluation is at the core of the Group's work.

Partners with trusted ties to the community execute the data collection included in the program evaluation, allowing authentic responses from an accurately representative community. From the initial phases of the Anchor Strategy work, an evaluation consultant ensures the work is based and sustained on data. The Equity Health Center, an initiative generated from the Group, also contracts with West Chester University's Health Department to monitor and evaluate each core provider in the integrated health ecosystem that serves as the foundation for the youth mental health network of care. The key performance indicators above outline the Anchor Strategy's data priorities.

Conclusion

We must recognize that while equity of access is certainly important, the larger issue must remain the equity of healthcare outcomes. Key outcome indicators are mortality, duration of hospital stays, and perhaps costs (broadly defined to include social costs). What was not addressed in any of the surveys was the issue of outcome equity. Critically important, too, is that access does not imply a gatekeeper barring access; it simply documents access. While the place-based approach to improving health access, engagement, and quality outcomes in Greater Coatesville is still in its early days, promising initial results and learnings are already in place. This place-based approach, structure, and performance/evaluation process will continue to assist in refining the process and the emergence of data-driven and community-led insights. This model could solve similar issues faced by communities facing healthcare gaps.

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