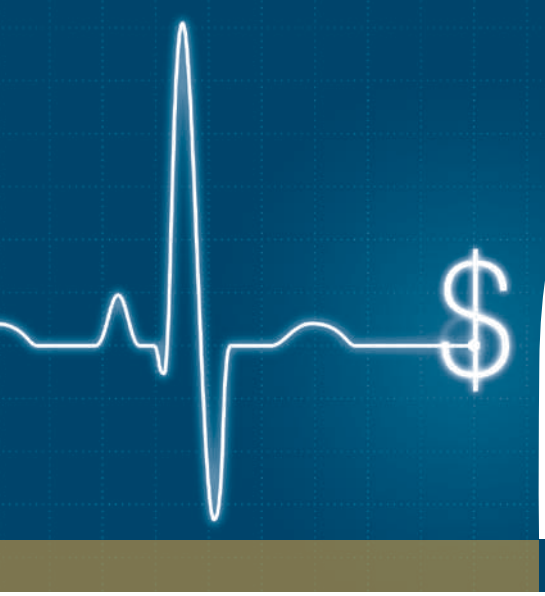

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Return on Investment Analysis: A Key to Nonprofit Health Organizations

Issue 1, 2011

This issue of *HealthVoices* examines how health care organizations providing free or nearly free primary care in their communities can use return on investment analysis to effectively demonstrate and communicate to stakeholders the economic returns on their resources expended.

What is Return on Investment (ROI) Analysis?

When considering the investment of limited resources to deliver primary and tertiary health care, decision makers are often required to study the "business case" associated with their decision. For examining the "business case" or financial impact of a new delivery of care system, return on investment (ROI) analysis has been gaining popularity in health care. By definition, ROI is the incremental economic gain of a program or intervention divided by the cost of that program or intervention:

$$\frac{\text{(Economic Gains – Investment Costs)}}{\text{Investment Costs}}$$

Economic gains can be defined narrowly as business-specific financial or fiscal impacts, or more globally as local economic gains or social impacts. Either way, investors are particularly interested in knowing the value of their resources expended.

For example, an organization providing free or nearly free health care to uninsured and underinsured individuals would, in an ROI analysis, move beyond the assessment of program inputs, outputs, and outcomes - to quantitatively (and sometime qualitatively) value those outcomes in terms of economic gains, however defined.

Program inputs include the resources, and the monetary value of those resources, required to run the health care clinic, such as paid and volunteer personnel, paid and donated physical space for the clinic, and all paid and donated materials and supplies needed for delivery of services. In an ROI analysis, these program inputs are compared to the value of the program's outcomes, such as reductions in the utilization of non-urgent care for a population now receiving primary care services. Economic gains defined more broadly might include improvements in health-related quality of life for the population now receiving appropriate health care.

Why is ROI Analysis important for providing nonprofit health organizations providing primary health care in a community?

Because nonprofit organizations serving uninsured and under-insured populations have fewer resources and typically serve sicker patients, it is vital for these health care clinics to understand and empirically evaluate the economic impact of effectively delivering primary care in their clinic population in order to best allocate scarce resources. Funders of these organizations, such as foundations, local business or hos-

Program Inputs
Resources (and the value of those resources) required to implement a program, incliuding personnel, space, supplies, and materials.

1

Program Outputs
Tangible process related results of a program, including number of patients served and the number of clinic visits per year.

2

Program Outcomes
Impacts fo the program on the population being served, including reduced use of non-urgent health care services, better health and quality of life.

3

Program Value
Quantifying program outcomes in monetary terms. For ROI, compares program values to program inputs.

pitals serving the same community, may also ask for (or require) information on how their resources are spent and the economic returns for those resources expended.

Hospitals have a particular interest in the economic impact of having free clinics in a community to offset the overuse of emergency departments (ED) for non-urgent medical treatment. For the uninsured and indigent, EDs may be the only source of medical care available because of federal laws prohibiting EDs from refusing care based on ability to pay. However, the economic impact of these wasted resources can be enormous, placing a substantial drain on hospitals and local communities which must absorb the costs. In response to this, many hospitals, communities, legislators, and non-profit organizations are exploring different avenues for providing primary care to the uninsured. One hypothesis is that as access to primary health care increases, utilization of emergency services and hospitalizations for non-urgent events decreases. Given that a considerable amount of ED care is uncompensated, hospitals stand to benefit from a reduction in inappropriate use of these services. Thus, a free or nearly free health care clinic's delivery of primary care could result in a positive economic return to the hospitals serving the same clinic population. For the nonprofit organization, ROI analyses can provide the needed information to justify and sustain funding from such donors as hospitals. These data allow nonprofit organizations to economically value their outcomes to operate and compete in the for-profit world, where the bottom line is valued.

What is the evidence for investing in clinics that provide free health care within a community, particularly from the perspective of local hospital providers?

An ROI Analysis of Clinics Providing Free Health Care

In 2009–2010, Healthcare Georgia Foundation provided funding to the College of Public Health at the University of Georgia to conduct a study to estimate the return on investment in clinics providing free health care in a community.

About the Study

The study was conducted using data provided from free health care clinics targeted at the uninsured in two Georgia communities:

- **Brunswick, GA**: The Henri C. Woodman Free Clinics in Brunswick and St. Mary's provides access to free primary care for community members as part of the Coastal Medical Access Project (CMAP).
- **Gainesville, GA**: The Good News Clinics (GNC) in Gainesville offers free medical care to the indigent, homeless, and low-income people in Hall County who have no health insurance and cannot afford medical care.

The study sought to demonstrate that the clinics could reduce preventable utilization of hospital services, since access to primary care would cause the utilization of non-urgent ED care to be used less often as a source of treatment of last resort. Hospital data for the population served by GNC came from the Northeast Georgia Medical Center and hospital data for the population served by CMAP came from the Southeast Georgia Health System.

Using linked data from the two free clinics and their corresponding regional hospitals on a sample of newly enrolled clinic patients, patients' hospital costs in the year prior to clinic enrollment were compared to those in the year following enrollment.

Key Findings

In both communities, the costs associated with non-urgent ED care decreased 14%-20% for a sample of patients in the year after they enrolled in the free health care clinic compared to the year before enrollment in the clinic. This suggests that patients are going to the free clinic instead of using costly ED resources in non-urgent situations. Moreover, costs related to in-patient care declined by 20% to 34% in both communities. This evidence suggests that the free clinics may halt the escalation of health problems such that in-patient hospitalization use is reduced or avoided all together.

In addition to determining the reductions in preventable hospital services due to enrollment in the free clinic, the College of Public Health at the University of Georgia conducted an ROI analysis from a societal perspective at the Good News Clinics. The

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analysis calculated investment costs for the clinic services provided to the population under consideration, and compared them to the economic gains that result from having a free clinic in the region, regardless to whom the savings benefit. Thus, the ROI takes the societal perspective on whether the clinic is worth its cost. Following Oriol et al.[1], the economic gains we include are derived from the clinic providing more inexpensive delivery of primary healthcare services compared to the regional hospital, and from the clinic services which resulted in the decreased utilization of non-urgent ED care in the hospital. The time frame for assessing investment costs and economic gains was one year.

We used a micro-costing methodology to determine the costs for all services provided in the clinic. Service utilization was summarized from chart records and the value of the services was determined from several national datasets and the literature providing service-level charge data. From these data analyses, we computed a total clinic investment cost per visit of $151, including the value of donated services. To estimate economic gains, we calculated the difference in costs associated with receiving care in the clinic ($151) compared to care received in the ED ($416), as $265. From Oriol et al.[1], the study estimated that if the population did not have access to the free clinic, 80% of their clinic visits would have resulted in utilization of non-urgent ED care. This percentage was estimated by Oriol et al.[1] to account for only those clinic visits that are highly correlated with ED utilization. For the 207 patients in our sample, we calculated the annual costs of ED care avoided, $259 435, by multiplying the number of avoided ED visits, 979, by the savings per visit, $265. Thus, the overall societal net benefits of the GNC were $74 344, representing a 40% return on society's investment in the clinic.

Investment Costs	
Annual costs for n=207 new patients	**$185,091**
Total annual clinic visits for n=207 new patients	1,224
Clinic costs per visit	$151
Economic Gains or Benefits	
Costs of an ED visit (from hospital data)	$416
Number of ED visits prevented (Clinic visits discounted by 20%[1])	979
Costs avoided (or savings) per prevented ED visit ($416 - $151)	$265
Annual projected costs avoided (or savings)	**$259,435**
Societal Benefits – Costs (for n=207 clinic population)	$74,344
ROI (Economic Gains – Investment Costs) / Investment costs	**40%**

A good source for learning how to conduct ROI analyses specifically for nonprofit organizations is: Tom Ralser's ROI for Nonprofits: The New Key to Sustainability (John Wiley & Sons, 2007).

Conclusion

Overall, these findings suggest that there is a positive return on investment or a cost savings to both the hospitals and society that support free clinics in their communities. The major benefit to society may be the reduced cost of care delivered at the clinic compared to the cost of non-urgent care delivered in the ED, despite the fact that the clinic population is typically sicker than the average population and may require an increase in both the utilization and costs of "other" hospital services (like imaging services and lab tests) post-clinic enrollment. While this study only examines cost savings one year after clinic enrollment, it is likely that even greater savings would be achieved over time as the long-term health benefits of access to primary care are realized.

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Endnotes

1. Oriol NE, Cote PJ, Vavasis AP, Bennett J, DeLorenzo D, Blanc P, Kohane I. "Calculating the return on investment of mobile healthcare." BMC Medicine 2009. 7(27).

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Through strategic grantmaking, Healthcare Georgia Foundation supports organizations that drive positive change; promotes programs that improve health and health care among underserved individuals and communities; and connects people, partners and resources across Georgia.

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HealthVoices is available online at **www.healthcaregeorgia.org**. For further information, please contact Toni Almasy, Avatar Communications, 404-688-9005 or **toni@getavatar.com**.

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Healthcare Georgia Foundation is a statewide, private independent foundation whose mission is to advance the health of all Georgians and to expand access to affordable, quality health care for underserved individuals and communities.

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