blue of california
foundation

community clinic case studies

methodological appendix

LFA Group
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Established in 2000, LFA Group: Learning for Action provides highly customized research, strategy, and evaluation services that enhance the impact and sustainability of social sector organizations across the U.S. and beyond. They engage deeply with organizations as partners, facilitating processes to draw on strengths, while also providing expert guidance. Their high-quality services are accessible to the full spectrum of efforts, from grassroots, community-based organizations to large-scale international initiatives. To learn more, visit: www.LFAgroup.com

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introduction

In 2010, Blue Shield of California Foundation (BSCF) engaged LFA Group: Learning for Action to study the extent to which specific core capacities (collaboration, financial health, and professional development) affect access to care and quality of care in California's community clinics. Results of this study are presented in three case studies (one addressing each core capacity), and an executive summary that presents results across the cases. (The case studies and executive summary are available online.)

The purpose of this methodological appendix is to provide detailed information about the case study design and methods. This appendix first provides some background on the study and an overview of the study design. It also describes the central factors studied (core capacities, access to care, and quality of care), case selection, data collection methods, and the basis from which inferences are drawn. Finally, limitations of the study are discussed.

background

In March 2009, LFA group administered a survey to grantees of BSCF's Community Clinic Core Support Initiative. The survey yielded broad information about the current landscape of community clinics and the challenges those clinics face. Based on themes that stood out from the survey findings, BSCF engaged LFA to conduct a series of case studies to gather in-depth qualitative information and probe on those themes of interest.

study design

These studies are designed to explore a hypothesis put forth by BSCF: Clinics functioning at high levels of capacity in several critical ways – engaging in meaningful collaborations, maintaining good financial health, and providing robust professional development opportunities – provide high levels of access and quality to their patients.

The effect of each capacity area on access and quality is explored separately, using a small sample case study method. There are two defining characteristics of this method: (1) purposeful sampling, in which cases are selected for a specific research purpose, rather than selected randomly; and (2) each case is studied qualitatively and in-depth in order to investigate how and why certain factors are correlated (rather than using statistics with large samples to show that they are correlated).

For these case studies, 54 staff were interviewed at 21 clinics, with some clinics included in more than one study.

- Seven clinics were included in the collaboration study (plus an additional four that were interviewed regarding Health Information Technology).
- Ten clinics were included in the financial health study.
- Five clinics were included in the professional development study.

For each capacity area, clinics were purposeful collected to include clinics that are "low" and "high" along the dimensions under investigation. By developing the sample in this way, and collecting in-depth qualitative data from each clinic about the relationship of capacity types to quality of care and access to care, the study can investigate the hypothesis that high capacity is related to quality and access.

core capacities, access to care, and quality of care

The hypothesis on which the three case studies are based stipulates that two dependent variables (access to care and quality of care), are positively related to three independent variables (collaboration, financial health, and professional development). Each of these is defined below.

- **Access to care:** The timely use of personal health services to achieve the best health outcomes.

- **Quality of care:** The extent to which care is effective, safe, timely, patient-centered, culturally competent, equitable, and efficient.

- **Collaboration:** A process in which two or more people or organizations work together to realize shared goals, by sharing knowledge and learnings, and by building consensus. Collaboration among clinics occurs in a variety of ways. Community clinics collaborate with other clinics, local health departments, public and private hospitals, other safety net and non-safety net providers, and also participate as members of clinic consortia.

- **Financial health:** A measure of a clinic's financial viability. Clinics with good financial health are able to maintain a balanced budget, sustain an adequate reserve fund, and meet debt and expense obligations on time. While many factors contribute to financial health, this case study focuses on two key components: financial capacity (systems and knowledgeable staff in place to implement financial planning and review) and payer mix (the proportions of a clinic's annual revenue that are composed of different revenue sources: Medi-Cal, Medicare, commercial insurance, foundation funding, and sliding-scale fee for service).

- **Professional development:** Facilitated learning opportunities designed to impart skills and knowledge for both personal development and career advancement. These range from college degrees and formal coursework to conferences and informal learning opportunities situated in clinic practice.

case selection

Participating clinics were selected using a purposeful sampling process. Purposeful sampling allowed LFA to select clinics with a specific purpose in mind, with that purpose being driven by: (1) the research question or hypothesis; and (2) whether there is a goal of generalizing to a population beyond the specific case(s).[1]

With two goals (testing a hypothesis about a relationship between factors and the desire for generalization), a case study requires the use of two types of purposeful sampling: typical case and diverse case.

- In *typical case sampling,* cases are selected based on their similarity to other cases that take on average or median values for the population as a whole. Because they are "typical," they are the best available cases to represent the population as a whole. This representativeness allows for generalization to the larger population.

- In *diverse case sampling,* cases are selected because they vary on the specific dimensions under investigation. Cases are chosen because they are "low" or "high" (or "weak" or "strong") on specific factors. This variation allows for testing hypotheses which theorize that variation along these dimensions leads to variation in specific results.

- In *a combination of typical and diverse case sampling,* cases are selected because they are typical of the sub-populations that are low or high on the dimensions in question. When both typical and diverse case sampling is used, investigators have additional confidence in drawing inferences about the hypothesis and generalizing them to the population.

[1] The most commonly known approach to testing hypotheses is the use of a large random sample. When a random sample is used, researchers are able to generalize confidently from the sample to the population in question. This is due to the fact that with random sampling, the sample is not biased in any way, and thus likely to be representative of the population from which is it drawn. A less well-known approach to testing hypotheses is a method that uses a small number of carefully selected cases. Rather than using random sampling, these studies use purposeful sampling.

This study has the dual goal of testing a hypothesis and generalizing findings. The hypothesis posits that high clinic capacity in specific areas contributes to a high quality of care and access to care. The study also has the goal of providing information relevant to the broader field of California clinics. Therefore, the study uses both typical and diverse case sampling.

In order to see the connection between the independent and dependent variables, it is also important that the study make an effort to "control for" other factors that may affect the dependent variables. This was done by collecting other relevant data on the case study clinics (e.g., budget size), and then selecting cases that varied on these other measures within the subgroups with low and high values on the independent variable. This type of case selection allows researchers to more confidently rule out alternative explanations.

The ways that these three sampling approaches (typical case sampling, diverse case sampling, and sampling that allows researchers to "control for" other factors) were used in this study are discussed in more detail below.

typical case sampling

The clinics in the study are likely to be typical of other cases in the broader population, which is defined for this study as licensed California community clinics that provide at least 60 percent primary care services. The appearance of specific clinics in the case study sample is the result of a several-step process. Within the total population of California community clinics and health centers, those that are licensed by the state of California and provide at least 60 percent primary care services are eligible for a grant from BSCF; a subset of these applied for and were awarded grants from BSCF; clinics were surveyed and a subset responded; and a subset of clinics was selected into the case study from survey respondents. The reasons for confidence that the case study sample clinics are typical are outlined below:

- **Community clinics apply for BSCF Community Clinic Core Support grants and most are funded.** The BSCF grantmaking process is extremely inclusive: a grant is provided to nearly all clinics that apply. The main stipulations are that the clinic must meet licensing requirements, provide at least 60 percent primary care, and not be delinquent on reporting requirements for a prior BSCF grant. It is also the case that the number of BSCF grantees is a large proportion of the total number of community clinics. The total number of licensed clinics that

provide at least 60 percent primary care is approximately 200. Last year, BSCF provided grants to all 192 clinics that applied for funding or approximately 96 percent of the 200 clinics in the state. This also increases confidence that the clinics with BSCF grants reflect the total population of California clinics that meet licensing requirements and focus on providing primary care.

- **BSCF grantees who responded to the 2009 Clinic Core Support Survey are similar to clinics that did *not* respond.** The survey was sent to every BSCF grantee, and 77 percent replied. The LFA team compared responders to non-responders on budget size and percent of insured patients, and found no statistically significant differences.

- **Clinics selected from the survey respondents are similar to other clinics *not* selected.** Over the past several years, LFA has conducted phone interviews with 24 clinic executive directors to complement survey findings. Any clinic who had previously participated in a phone interview with an LFA consultant was not included in the sample of the case studies, because researchers did not want to burden those clinics with additional interviews again. Once those clinics were removed from the possible sample, LFA chose low capacity and high capacity clinics at random, meaning that the low capacity clinics that were not chosen to participate in the case study do not differ meaningfully from those clinics that were chosen as part of the sample.

diverse case sampling

Cases were selected using information collected on the clinics during the 2009 Clinic Core Support Survey. Survey data was available on collaboration, financial health, and professional development.

- **Collaboration.** Clinics were selected based on their answer to the following survey question: "Is your organization a member of a Community Clinic Consortia or other networks that participate in advocacy/policy-related activities?" Four clinics were consortium members; three were not.

- **Financial health.** Financial health is composed of financial capacity and payer mix.[2]

- **Financial capacity.** In the 2009 survey, clinics answered questions on the following dimensions: (1) the ability to accurately budget and predict revenues and expenses; (2) staff knowledgeable in the areas of financial planning and accounting; (3) financial management and accounting systems in place; and (4) the production and review of financial reports on at least a quarterly basis. Each item was measured on a five-point scale, and an average of these items was calculated. A clinic is considered "low financial capacity" if it has a score that is between 1 and 2.0; it is considered "high financial capacity" if it has a score that is between 4.1 and 5.0. Those that fall between 2.1 and 4.0 are "medium financial capacity." Of the six clinics that were chosen on the basis of financial capacity one is low capacity,[3] three are medium, and two are high capacity.

- **Payer mix.** In the 2009 survey, clinics answered questions about the percentage of annual revenue from different sources. These sources are Medi-Cal, Medicare, commercial insurance, foundation funding, government funding, in-kind support, and sliding-scale fee for service. Because Medi-Cal is a primary revenue source for Federally Qualified Health Centers (FQHC), FQHC look-alikes, Rural Health Centers, and Indian Health Centers, clinics in those categories were selected based on the percentage of annual revenue comprised by Medi-Cal. Clinics with at least 40 percent Medi-Cal were categorized as "high Medi-Cal" clinics, and clinics with 25 percent Medi-Cal or lower were selected as "low Medi-Cal" clinics. Clinic type was also included in selection criteria: Two clinics included in the case studies were FQHCs, one was a Rural Health Center, and another was an Indian Health Center. Of those four clinics, two were "high Medi-Cal" clinics, one was a "low Medi-Cal" clinic, and the fourth had 27 percent Medi-Cal, putting it on the border of low and medium. Since free clinics do not depend on Medi-Cal reimbursements but rather on grant funding, donations, and in-kind support, two free clinics were also included in the case studies.

- **Professional development.** In the 2009 survey, clinics were asked whether they offered employees the opportunity to participate in employer-sponsored professional development or continuing

[2] While there are many factors that contribute to financial health, the two explored in these case studies are financial capacity and payer mix. Clinics were selected separately for the financial capacity and payer mix interviews. Only two clinics participated in interviews for both topics.

[3] Only one clinic in the sample met the criteria of "low capacity". However, two of the "medium capacity" clinics included had scores on the border of low and medium.

education, and whether they provided paid educational leave. Clinics answered this question about the following types of personnel: doctors, nurses, nurse practitioners, physician assistants, social workers, counselors, case managers, senior administrative staff, non-management administrative staff (including outreach workers/ promotoras), chief executive officers (CEOs), chief financial officers (CFOs), chief information officers (CIOs), and chief operations officers (COOs). For clinics offering professional development opportunities for any of these personnel, they were asked the follow-up question of how much time these employees could take for professional development annually. Clinics that do not offer professional development to all staff positions, and offer two days or less per year to those positions that do receive professional development time, were categorized as "low commitment" clinics. Clinics that offer professional development to all staff positions and provide at least a week of professional development time were categorized as "high commitment." Of the five clinics selected for the professional development case study, two were rated "low" on professional development, and three were rated "high."

control for other factors

There are other important factors that could affect access to care and quality of care. In order to have greater confidence in the results, it is necessary to be able to rule alternative explanations out. In other words, the study must also look at whether other factors explain access to care and quality of care, at the same time as it investigates the independent variables of interest.

In this case, BSCF and LFA determined that two other factors that could affect access to care and quality of care are clinic type (FQHC, non-FQHC, FQHC lookalike, or free clinic), and budget size (small is ≤ $5 million; medium is between $5 million and $10 million; large is ≥ $10 million).[4] In order to control for these factors, clinics were selected with variation on these dimensions as well. For each capacity dimension, the clinics rated "low" had at least one clinic each with a small and large budget and a range of clinic types – and the same was true for the clinics rated "high."

[4] Cases were also selected from various BSCF-defined regions of California: South, North, Central, Los Angeles, and Sacramento. The purpose of this type of variation, though, was not to rule out alternative explanations; it was to ensure broad geographic coverage. This helps with representativeness (e.g., not all clinics just from Southern California).

This allowed researchers to investigate the impact of other factors, with the goal of ruling out alternative explanations. For example, if we see that high collaboration clinics have high ratings on access to care no matter whether the budget size is large or small, it strengthens the conclusion that the critical factor is collaboration, rather than budget size.

data collection method

LFA consultants conducted extensive telephone interviews with staff from 21 clinics between August and September 2010. LFA consultants spoke with two to three people from each clinic, and a total of 54 interviews were conducted. Interviewees were primarily clinic executive directors/CEOs and medical directors. Other interviewees included CIOs, CFOs, and other staff relevant to the case study topic. Interviews with clinic staff yielded over 400 pages of notes and qualitative data. The LFA team coded the data for themes and pulled out especially relevant examples of how clinic activities had led to increased access to and quality of care. These themes formed the basis for the case study findings.

drawing inferences

LFA uses the data to draw two types of inferences. First, researchers make the claim that the BSCF hypothesis is borne out: High capacity in the areas of collaboration, financial health, and professional development in fact do contribute to quality of care and access to care. Second, these relationships are likely to hold in the population of California community clinics – not just those clinics included in the study.

The LFA team bases the claim about the importance of capacity based on interview data. The hypothesis is thus supported in two ways. First, subject matter experts (experienced clinic staff) can clearly describe the connection between capacity and outcomes of quality and access. As experts "on the ground," they provide particularly credible evidence. This credible perspective of field experts represents one of the advantages of qualitative data. By collecting qualitative data, researchers are able to dig into the "how" and "why" of connections between independent and dependent variables.

Second, although staff from low capacity clinics did not say "we have low quality and access," the narratives about quality and access differ systematically between these two groups. The LFA team found that those with high capacity could make cogent arguments about how this capacity contributes to quality and access, and could tell stories about how things used to be different (when these capacities were lower, quality and access were lower as well). Those with low capacity could not make these arguments, and did not tell stories about over-time improvements in quality and access.

The LFA team also found that these systematic differences between low and high capacity clinics held under a range of circumstances: varying clinic types and whether annual budgets were small or large. The fact that these core capacities have more influence than clinic type and budget size strengthens the conclusion that these core capacities are indeed critical factors in providing quality and access.

The extreme care with which clinics were selected into the study provides the basis for generalization to the larger population of California community clinics. First, clinics in the study are typical of the population as a whole (as explained above in the detail given around "typical case sampling" for this study). They are representative of the population, and thus the connections between capacity and outcomes seen at the study clinics are likely to hold at other clinics as well. In addition, these clinics represent other clinics that occupy the same position on the capacity dimensions. In other words, low capacity study clinics are representative of other low capacity clinics – and the same is true for high capacity study clinics.

limitations

There are limitations to this study design which mean that some caution is in order when making causal claims and when generalizing to the population as a whole.

- **The cases do not include every combination of additional factors (budget size and clinic type).** In the case selection process the LFA team made an effort to ensure that within these "low" and "high" subsamples, there were clinics that varied on other important factors. As discussed above, the team made this effort so that they could disentangle the effects of budget size and clinic type from the effects of capacity on quality and access.

- **The study did not directly measure clinics on quality and access.** With independent measures of quality and access, the study would have been better able to demonstrate how variation on the capacity dimensions correlates to variation on quality and access. Instead, the LFA team discerned narrative differences about how capacity contributes to quality and access between the low and high capacity clinics. High capacity clinics have clear narratives about high quality and access, and how capacities contribute to those dependent variables. Low capacity clinics do not have these clear narratives. While this evidence is quite suggestive, without a direct measure of the dependent variables, the study is much better at showing that high capacity clinics have high-perceived quality and access than it is at showing the low capacity clinics have low-perceived quality and access. This is evidenced by the fact that no low-capacity clinics interviewed said that their clinic had low-quality or limited access.

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