

**Assessment Report of the Applied Research Center's
Kern County First Five Evaluation Reports:
2001-2005**

Submitted to:

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First Five Kern County Evaluation Assessment Report

This report is provided in response to a request for review of the California State University, Bakersfield Applied Research Center's (ARC) First Five Kern County evaluation efforts from 2001 to 2005. In particular, this review included an examination of the methodology, fidelity to the stated methodology, quality of baseline measures, and the usefulness in general of the evaluation materials in providing outcomes to the First Five Kern County Commission of the impact of their initiative. Specifically, I was requested to evaluate the Applied Research Center's Kern County First Five Report 2001-2005 to assess the quality of the data and the data collection methodologies. More specifically, the aims were to determine whether:

- a. Baseline data have been collected and are present and exist for each of the results indicators contained in the Commission's strategic plan.
- b. The data collection processes designed and implemented by ARC have been done in an appropriate manner to permit use in ongoing analysis of the outcomes.
- c. The data collected reflect an appropriate methodology in evaluating the goals of the Commission reports.

Methodology of Current Review

This review was based largely on the myriad of reports generated by ARC throughout the contract period. The following documents were used in the preparation of this report:

- Contract between Kern County Children and Families Commission for 2001, 2002, & 2006
- Correspondence between Stephen Schuett and CSUB
- Quarterly Progress Report 2002
- Kern County Children & Family Report 2002
- Charts and Baseline Maps 2003
- Charts and Baseline Maps 2004
- Charts and Baseline Maps 2005
- Annual Report 2003
- Annual Report 2004
- Annual Report 2005
- Trends & Comparisons 2006

In addition, the evaluation included discussions with Dr. Horace Mitchell, President California State University, Bakersfield and Dr. Soraya Coley, Provost and Vice President for Academic Affairs, California State University, Bakersfield, Dr. David Cherin, Interim Vice President of Grants, Research, and Sponsored Programs, California State University, Bakersfield, Dr. B. A. Jinadu, Chairman of the First Five Kern Commission and Kern County Health Officer, and Steve Ladd, Executive Director of First Five Kern County. Finally, a review of the First Five Kern County website was conducted to assess historical documents and current goals.

Assessment of the Evaluation Methodology

The evaluation methodology employed by ARC was extremely comprehensive and represented a multilevel approach in the assessment of outcomes related to First Five Kern County. It encompassed several levels of data collection ranging from the patient to the organizational to the county levels. Further, the evaluation included a cost effectiveness analysis, a very ambitious and challenging outcome to measure.

Patient-level data were derived from data collected and entered at each First Five Kern-funded site. These data are largely descriptive in nature but provide the following formative and outcome information to the Commission:

1. Demographics of those being served—Specifically provides data that attest to whether or not the population targeted by these funds is actually being reached and served by the funded programs.
2. Frequencies of risk factors—Provide data describing the areas and the extent of the need (the portion of those served with each risk factor).
3. A proxy for longitudinal data— Used patient-level data for Results Indicators when no county-level data source is available (discussed in greater length below).

Organizational level data collected among program participants included:

1. Process measures of numbers participating in each activity--These data provide information as to the ability of the program to recruit and retain target population members.
2. Pre/post changes in knowledge, behavior and/or attitudes—In some cases data were collected to measure the impact of the program on these variables. This is an important factor in determining the program's effectiveness on impacting key areas and the overall effectiveness of achieving the desired outcomes for those receiving services. It is important to note that the evaluation report also revealed agencies that either did not produce data or did not address the Results Indicators.

The county-wide data collected by First Five Kern provide the ultimate measure of First Five's ability to improve the health and wellness of its youth. These data provide trends and point to areas of need. While we may not be able to directly infer causality, analysis of trends help to determine if results indicators are moving in the desired direction. Reductions in risk behaviors and improvements in health outcomes are the aim of First Five Kern, thus these county-wide data provide an extremely useful measure of the impact of First Five programs and information on Results Indicators.

Quality of the Data

Patient & Organizational-Level Data. The patient-level data were limited to descriptors while the organizational-level data, i.e., data on the impact of the individually-funded programs, included both process measures and oftentimes a pre-post design that assessed changes. These measures were oftentimes inconsistent with the Results Indicators. That is, the data collected by some of the agencies were insufficient in addressing the Result Indicators associated with each program.

ARC was reliant on funded organizations for both patient-level and organizational level data. Specifically, it appears that the organizations were responsible for collecting and entering data into electronic data systems developed by the Corporation for Standards & Outcomes or ARC. Patient-level data were transferred electronically to ARC by the Corporation for Standards & Outcomes, which appears to have been not without difficulties. There were several indications in the ARC reports of delays in obtaining this data. However, the quality and accuracy of this data are dependent upon the entry conducted by each organization and the reports they generated on the clients served.

ARC provided technical assistance to organizations to assist each site in identifying and developing meaningful process and outcome measures. However, ARC was reliant on each organization for the collection of complete and accurate data, which was not consistently provided. In fact, each annual report clearly indicates the organizations that have not produced data as well as provides a review of the process outcomes and the outcome data, as available to ARC. After a thorough review of the contractual agreement, it is unclear to what extent ARC was responsible for the selection of the outcome variables employed to measure the impact of each program. Program-level data collected were not consistent with the associated Results Indicators listed for each program. In some cases, it would not be reasonable to collect these data through pre-post surveys, however, in other cases, the level of impact of the program on the Results Indicator(s) could have been achieved through improved development of pre/post measures. Again, there is no clear indication of the responsible agency in determining the measures.

County-Level Data. Review of all data sources for the county-level variables revealed that all of the variables presented were derived from reliable data sources, ranging from the California Department of Health & Human Services to The Rand Corporation to the March of Dimes. These data provide the best overall indication of the county-wide trends, although the data do not lend to inferring causality. That is to say, while positive trends are found, it cannot be directly associated with the First Five Kern efforts. This does not mean that these data are not the most appropriate indicators of the county-wide impact of First Five Kern efforts. The issue of causality, as measured through the evaluation process, requires greater controls than was possible in a community-wide project of this type, and is discussed further below.

Accuracy and Usefulness of Data Interpretation

As a framework for this review, it is important to address issues of causality. In statistics, it is generally accepted that observational studies (like counting cancer cases among smokers and among non-smokers and then comparing the two) can show relationships, but can never establish cause and effect. The gold standard for causation in statistical analysis is the randomized experiment, i.e., randomly selecting and dividing an equal group into two and applying a treatment or intervention to only one group and observing the impact on both. This approach is not typically applied in community-based work due to the ethical issue surrounding the withholding of treatment or intervention.

Causal direction can be implied in the use of pre-post designs and longitudinal data, such as those used in the First Five Kern reports, where there are two points of time (before and after). The addition of time as a variable, though not proving causality, is helpful in supporting a pre-existing theory of causal direction. While the use of these statistical models cannot definitively

prove causality, they provide an excellent measure of the directions of trends in health outcomes, which are the primary concern of First Five Kern.

Baseline Data for Results Indicators

Review of the Results Indicators as listed on the First Five Kern website revealed that baseline data were not available for all of the indicators. Again, it is not clear from this information if these Results Indicators were identified at the onset of the project or were added later. In addition, I cannot attest to the availability of these data from state, county, or local sources. These missing variables include the following Results Indicators:

- Results Indicator 9: Number and percentage of children completing mental-health treatment and demonstrating improvement in positive behavior and emotional response as reported by parent, caregiver or childcare provider.
- Results Indicator 10: Number and percentage of children who receive the recommended number of well-baby and child checkups by age two.
- Results Indicator 12: Number and percentage of children with identified disabilities who receive developmental services by the time of kindergarten entry.
- Results Indicator 14: Number and percentage of families using alcohol, tobacco and other drugs

For those indicators that did have baseline and outcome data, the source of the data, however, varied, ranging from county level data to Outcomes Collection, Evaluation and Reporting Services (OCERS) data representing First Five Kern youth participants. Inquiry was made as to the representativeness of the OCERS sample to the general Kern County population. These data represent those that are served by First Five Kern agencies, thus the OCERS sample is not representative of the Kern County population as a whole, rather this sample is a purposive sample, those targeted by First Five efforts, and should represent the portion of Kern County at greatest risk. Therefore, baseline and outcome data for Results Indicators which are based on OCERS data do not represent Kern County trends, but rather the individual characteristics of the high-risk sample being served by First Five Kern.

While the County wide data provide a clear baseline of the level of need among all Kern County youth, all Results Indicators may not be available in existing county-wide measures. Thus the use of other “proxy” variables may be necessary to track the trends. It is important to note the source of each data and the ability of each variable to “represent” the whole of the Kern County community.

Specific Comments

Additional questions asked of this evaluation:

1. What is the statistical significance of First Five Kern expenditures and programs to county-wide changes in the Result Indicators since the inception of First Five Kern to the present?
2. Is there a statistical correlation between First Five Kern expenditures and programs to county-wide changes in the Result Indicators since the inception of First Five Kern to the present?

Response: The nature of aggregate data, such as those used in the county-wide data, precludes the use of statistical testing. Therefore, the most appropriate reporting of this data is in the report of trends, as reflected in all of the First Five Kern annual evaluation reports. Further, given the aims of this program, it may be more meaningful to examine “clinical significance” of the change rather than statistical significance. For example, it is clinically meaningful to reduce Kern County childhood exposure to cigarette smoke by nearly 53% from 2003 to 2005 (Data obtained from page 5 of the 2006 Trends & Comparisons Report), regardless of the statistical significance of the finding.

Overall Summary

The evaluation of the First Five Kern programs and their impact appear to be an evolving process, very much reflective of the overall experience of the First Five Kern Planning Committee. While retrospective examination of these measures indicates areas that could be improved and implemented sooner, I found the existing data extremely useful in assessing the impact of First Five Kern’s funded programs, as described above.

Areas of particular weakness include (1) the lack of county-wide baseline variables available to address the Results Indicators identified by the Commission, (2) inconsistencies in agency measures in demonstrating their impact on the associated Results Indicators. While the evaluation is reliant on the existing county-wide data and thus must rely on the proxy variables obtained from the patient-level data collected through the OCERS CDE report, the latter can be strengthened by improving the requirements of the funded agencies and linking subsequent agency funding to performance and the ability to impact the Results Indicators. This suggestion was also noted by ARC in its annual reports.

Further, the organization of the data could also be improved, tying outcomes to the Results Indicators as well as presenting clearer outcomes for each of the individual agencies and programs.

The data collection methodology was strong, especially in its integration of individual, program and county-wide measures. This is a particular strength of the evaluation as it allows funders to assess the ability of the agencies to reach their target population, to meet their goals and improve health outcomes, and to assess their larger impact from these combined efforts on the county at large.

Recommendations for Ongoing Evaluation

From this assessment comes several clear recommendations for the ongoing evaluation of First Five Kern programs. The following recommendations are provided:

1. Consultation from evaluators to improve the outcome measures gathered by each funded organizations to improve the linkages between the program outcomes and the relevant Results Indicators
2. Improved accountability of funded organizations in producing identified outcome measures.

3. Clearer organization of evaluation reports to explicitly link outcomes to each Results Indicators for all levels (person, organization, and county) of data.