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Surveillance Recommendations for Developing Effective Tobacco Prevention and Control Interventions for Low-SES Populations

Galen Louis, PhD

On October 6 and 7, 2005, a diverse panel of experts was invited to Atlanta, Georgia by the Centers for Disease Control and Prevention, Office of Smoking and Health to discuss, explore, and share their ideas on how to identify and subsequently plan effective interventions with low socioeconomic status populations in regard to tobacco prevention and control. The invited participants had expertise in three areas: surveillance and evaluation, program planning, and health communications. This article summarizes the methods, processes, discussions, and recommendations that emerged from the surveillance and evaluation group. Current surveillance systems have had success at identifying high-risk populations, but usually at the national or state level. Interventions occur at the local level, and current data are woefully inadequate in providing direction as far as programming planning. It is recommended that an eight-step approach be used for surveillance and monitoring that includes qualitative data collection and participatory planning models.

Keywords: *tobacco-related health disparities; Low SES; surveillance; program planning; community-based interventions; CDC Office of Smoking and Health; evidenced-based recommendations; community model*

► INTRODUCTION

The Office of Smoking and Health (OSH) is housed within the Centers for Disease Control and Prevention (CDC). It is charged with reducing the morbidity and

mortality of the American public as a result of the use of tobacco.

OSH has cooperative agreements with all 50 states to address tobacco prevention and control through four programmatic goals:

1. To prevent initiation of smoking
2. To eliminate secondhand smoke
3. To promote smoking cessation
4. To identify and eliminate tobacco-related health disparities among populations

Although “best practices” have been identified for the first three program goals, CDC and its partner states are still trying to find ways to systematically address Goal 4—identifying and eliminating tobacco-related disparities among populations (Centers for Disease Control and Prevention, 1999).

Substantial efforts have been initiated by OSH including the funding of a national network of organizations to work specifically with populations identified at risk. In the course of the past 7 years, many groups have been identified as those of higher risk for tobacco use. These include, but are not limited to, Native Americans, the gay, lesbian, bisexual, and transgendered population (GLBT), 18 to 24 year olds, and certain sectors of the Asian American and Latino communities and women. A cross-cutting variable for almost all these populations is that of low socioeconomic status (SES) (Chen, Martin, & Matthews, 2006; Franks, Muennig, Lubetkin, & Jia, 2006).

On October 6 and 7, 2005, a diverse panel of experts was invited to Atlanta, Georgia to discuss, explore, and share their ideas on working with low-SES populations in regard to tobacco prevention and control. There were three groups of participants, with specific expertise in the areas of surveillance and evaluation, health communications, and program and policy.

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This article will summarize the methods, processes, discussions, and recommendations that emerged from the surveillance and evaluation group.

► **THE CASE STUDY**

The goal of the expert working groups was to increase the capacity of individuals, researchers, organizations, and programs to assist in the reduction of tobacco use among populations with tobacco-related disparities—specifically low-SES populations.

We began by asking questions, recognizing that it is not likely that one answer would ever be sufficient to serve the complexity of which the poor or low SES or uninsured are comprised (e.g., race/ethnicity, work status, age, acculturation). It was acknowledged that definitive answers might not be possible—not in 2 days of meetings or in 2 weeks (Adler, Boyce, Chesney, Folkman, & Syme, 1993). Nevertheless, the goals of the conference were to seek both depth and breadth whenever possible.

Although this process was also intended to evoke discussion and “thinking outside the box,” it was structured to translate the findings into actionable tasks for implementation by states. To attain the conference goal of increasing individual, researcher, organizational, and programmatic capacity to reduce tobacco use among low-SES populations, these seven overarching goals were identified by an OSH work group.

1. To identify tools or a conceptual framework to identify and prioritize intervention populations.
2. To gather information about promising tobacco control interventions targeting the processes for the “poor.”
3. To identify all the critical stakeholders in reaching and developing planning processes for the “poor.”
4. To identify key communication questions and strategies in reaching the “poor.”
5. To identify all the critical issues to avoid (“NOT TO DO”) when planning an intervention to serve the “poor.”
6. To identify all the key messages for policy makers to facilitate prioritization of the “poor” in the contest of tobacco prevention and control.

7. To identify recommendations for surveillance, planning, and interventions for CDC and state health departments.

To achieve the stated goal of the project—the OSH work group had structured the conference to accomplish two outcome objectives. The first was to establish a common base of knowledge, vocabulary, and background for all participants. This was necessary because of the diverse educational, experiential, and professional backgrounds of the workshop participants. Second, three primary areas were identified for exploration—surveillance and evaluation, health communications, and program and policy. Questions to be addressed were developed by the OSH work group members within their respective disciplines. This article focuses on the proceedings and findings of the surveillance and evaluation group.

Objective 1: Establish Common Base of Knowledge

To accomplish the first objective, the first half of Day 1 of the conference was dedicated to plenary speakers. The overall charge of the panel to arrive at actionable recommendations was given from the director’s office. The context of this low-SES conference was placed in the overall Tobacco Prevention and Control Program.

A statistical overview for smoking prevalence of low SES, the opportunity costs of smoking among this population, and critical issues regarding low-SES surveillance was presented by the surveillance group. Members of the program and policy group provided participants with some of the current activities being undertaken by states as well as national partners. The health communications group gave participants background information on the marketing tactics, techniques, and trends of the tobacco industry in their quest for increasing market share among the low-SES population.

Finally, a community model for working with low-SES populations was presented. This helped to provide a contextual framework for the conference participants. Most prior research on tobacco-related disparities has emerged through disease-centered models, focusing on risk behaviors of individuals. As an alternative paradigm, the group was introduced to a community model that emphasized strengthening capacity and infrastructure in communities, building supportive environments, and promoting political action and policies that could improve health. The model has three components: (a) community competence, (b) capacity and infrastructure, and (c) community prevention strategies that extend beyond traditional public health interventions. Facets of these components include understanding dimensions and impacts of history, culture, context, and geography (Robinson, 2005).

TABLE 1
Project Goals

<i>Surveillance and Evaluation</i>	<i>Health Communications</i>	<i>Program and Policy</i>
To identify recommendations for surveillance, planning, interventions for CDC and State Health Departments	To identify key communication questions and strategies in reaching the “poor.”	To gather information about promising tobacco control interventions targeting the processes for the “poor.”
To identify tools or a conceptual framework to identify and prioritize intervention populations.	To identify all the key messages for policy makers to facilitate prioritization of the “poor” in the contest of tobacco prevention and control.	To identify all the critical stakeholders in reaching and developing planning processes for the “poor.”
		To identify all the critical issues to avoid (NOT TO DO) when planning an intervention to serve the “poor.”
		To identify all the key messages for policy makers to facilitate prioritization of the “poor” in the contest of tobacco prevention and control.

Objective 2: Eliciting Discussion and Recommendations From Participants

The three areas that were identified by the OSH work group for exploration were for surveillance and evaluation, health communications, and program and policy. Each of the three OSH sub-work groups arrived at the pertinent questions they wanted answered for their respective areas.

1. How do we identify high-risk (i.e., poor, low education, and/or low income) smoking populations?
2. Is existing information (quantitative and/or qualitative) adequate to identify high-risk smoking populations?
3. Is existing information (quantitative and qualitative) adequate to intervene (prevention and cessation) among high-risk smoking populations?
4. What are the limitations of using poverty or low SES (income, education) in terms of tobacco use interventions?
5. Do states make policy/intervention decisions related to tobacco based on poverty or low SES?
6. What is the implication (for interventions) that poverty and low SES are dynamic (i.e., some people come in and out of poverty)?
7. What are the costs (i.e., food insecurity, others) of smoking among the poor?
8. What assets are available for high-risk (poor, low SES) smoking populations?
9. What protective factors do high-risk populations (poor, low SES) have?

CDC-OSH contracted with an external facilitator to facilitate these discussions with participants in concurrent but separate work sessions. Each topic session lasted 1.5 hours, for a total of four and one-half hours per topic area. The 65 conference registrants (which included OSH and other CDC staff) were assigned to participate in one of the three sessions. The three facilitators met prior to the conference to strategize the sessions.

Analysis Plan

For Objective 2, although the desired outcome was a list of recommendations from each three workgroups, the value of these inputs would have been lost if the spirit and context in which they were made were not captured. Therefore, the three 1.5 hr sessions for each work group were audiotaped for a verbatim record. As a working strategy, the three facilitators agreed a priori to structure findings in the following manner.

- First, discern any overarching themes that emerged from the conversations.
- Second, for the recommendations, think in terms of categorizing short- and long-term actionable items.
- And, third, direct and focus discussion but allow it to flow freely enough for new conceptual frameworks or typologies to emerge.

Although the specific questions from the OSH workgroups were listed, facilitators were mindful of the seven

overarching goals. These were loosely associated with specific sessions as depicted in Table 2. As depicted, they are neither mutually exclusive nor exhaustive. The facilitators operated knowing that overlapping would be a natural function of the exploratory process.

At the end of the conference, each facilitator presented his group's recommendations to the entire audience during a plenary session, and question and answers as well as additions or amendments to the recommendations were made.

The findings of all of the sessions in regard to Objective 2 are summarized in this article. The audiotapes of all of the sessions as well as all the notes and brainstorming sheets from each session were sent to this author for compilation and reporting. Where appropriate, participant comments were paraphrased to provide further context.

► RECOMMENDATIONS AND DISCUSSION

The presentation of the recommendations for each topic area was followed by a discussion of the context in which they were made. As a preliminary note, all three sessions emerged with different themes, but one common theme was shared by all sessions.

That theme is that in working with the low-SES population, the issue is much broader than tobacco use alone. We as public health professionals have been schooled in using a risk factor-based approach to segmenting populations and creating interventions. Although this is a direct and often effective approach with many populations, it is not seen as a viable approach when solely used to develop effective programs and interventions with low-SES populations. The contexts of history, cultural, organization, and economic and social divisions serve not only to help define a *community* but also to provide clues toward creating effective interventions (Pearce, 1996).

Surveillance and Evaluation Recommendations

1. Maintain CDC's leadership role in quantitative data analysis using existing databases (Behavior Risk Factor Surveillance System, Adult Tobacco Survey, Youth Risk Behavior Survey, Youth Tobacco Survey, etc.) to provide guidance to states and communities in identifying potential high-risk populations.
 - a. Provide technical assistance to states on the databases that can be used and the type of analyses that can be performed using those databases.
 - b. Provide guidance on "common measures" to use such as proxy measures for low SES.
 - c. Point out limitations of existing data sets.

- d. Continue to develop annual or periodic reports to highlight latest research on low SES, including annotated bibliographies and journal articles.
 - e. Facilitate dialogue between other surveillance and evaluation agencies/organizations that improve our knowledge of the low-SES population.
2. State programs should expand the analysis of existing quantitative data sets (Behavior Risk Factor Surveillance System, Adult Tobacco Survey, Youth Risk Behavior Survey, Youth Tobacco Survey, etc.) to fine-tune descriptive analysis of smoking prevalence among low-SES populations. This may require aggregation of multiyear data sets to create a sufficiently large sampling frame. Areas for more intensive expansion include describing smoking prevalence of low-SES populations by
 - a. Race and/or ethnicity
 - b. Geographic distribution (county, density, region, etc.)
 - c. Age group
 - d. Health Insurance status (have or not have, public vs. private).
3. States should diverge from smoking prevalence as the primary variable for examination and seek to more holistically describe those populations that have been identified by quantitative analyses in #1 and #2. This "snapshot" is created through data sources that are not limited to tobacco use. The purpose is not to identify low SES; we have already done that in #1 and #2. The purpose now is to describe low SES. The focus is twofold. The first is on the individual or strata, and the second is at the local community level (see Table 2).
4. Incorporate qualitative research to better understand a community. It was recognized that most participants and their agencies were already doing #1 and #2 and possibly some components of #3. The component that is lacking is evidence that has the ability to inform the creation of appropriate interventions. Some of the methods would be through focus groups, key informant surveys, and observational techniques.

Data indicators or variables to consider are those that can lead to effective interventions. They include, but are not limited to

- Beliefs
- Values
- History
- Perceived barriers
- Perceived assets
- Routes of communications
- Trust
- Acceptability of messages
- Acceptability of messengers

TABLE 2
Key Indicators

<i>Individual, Family, or Strata Level</i>	<i>Community Level</i>
<ul style="list-style-type: none"> • Race/ethnicity/nativity • Gender/sexual orientation • Age • Educational attainment • Insurance coverage • Employment status • Language proficiency • Federal poverty levels • Wealth (beyond income) • General health and disability 	<ul style="list-style-type: none"> • Race/ethnicity/nativity • Home ownership • Health professional shortage areas • Medically underserved areas • Segregation index • Density (frontier, rural, urban) • Physical assets in community • Free and reduced lunch status • Types of retailers (tobacco, alcohol licensees) • Number and types of churches • Existing partnerships, coalitions, and/or community action groups

- Community priorities
 - Identified problems
 - Stage of readiness of community
 - Community perceived self-efficacy.
5. States should create evaluation protocols in conjunction with communities to ascertain the elements of program success. Findings should be examined for replication in other communities.
 6. CDC should invest in state and community partners, particularly those serving racial and ethnic minorities, who are committed to addressing the needs of low-income individuals, based on qualitative and quantitative data.
 7. It is critical that state programs establish relationships with community and demonstrate a commitment beyond the project period of an intervention.
 8. Capacity for planning, directing, assisting, and implementing community assessments should be strengthened for members of the community. CDC must invest time and dollars in participatory research.

► DISCUSSION

A general theme that emerged from all topic areas was that when working with low-SES populations, it is important to recognize that tobacco may not be the key issue for the community. This is an important point for surveillance and evaluation researchers. As public health epidemiologists, we have been predisposed to approach research from a risk factor or disease-based model. We use smoking prevalence or exposure to secondhand smoke, for example, as a defining variable. Although this method has been invaluable in helping to identify populations at higher risk, it has not been sufficient to create

effective interventions. Although the ability to monitor prevalence over time has been an asset for tracking progress, it does not answer the questions of why these trends may or may not have occurred.

Using smoking prevalence or exposure to tobacco as a primary variable has the effect also of eliminating other sources of data that may not ask specifically about tobacco. Good data that incorporates tobacco use include the Behavior Risk Factor Surveillance System (BRFSS), the Youth Risk Behavior Survey (YRBS), the Adult Tobacco Survey (ATS), and the Youth Tobacco Survey (YTS). A data set that was discussed is the U.S. Census data. It is rich in detail and can be extracted down to a census tract or subdivision level. Yet these data are not associated with tobacco use and therefore most often overlooked. Likewise, in working with low SES, school records (obtainable from state education departments) on Free and Reduced Lunch can specify percentage of students qualifying for this low-income program by school and/or zip code.

We do not want to throw out the baby with the bath water. We have very good monitoring systems at state levels that have national comparability. We just need to build beyond that.

Another theme that emerged from this group of participants was that surveillance must not be looked at as a static effort. A purpose of data collection and analysis is to inform program managers and policy makers to improve effectiveness, and that effort is dynamic. As with evaluation research, which includes formative as well as summative components, we should approach

surveillance processes. We must expand surveillance to other than just quantitative measures. The process should be an iterative one—where results from one instrument inform the development of the next. Qualitative data collection should be an integral partner in the surveillance process and not an adjunct.

A final theme was that of the importance of community. Although generally seen as an agenda item for the program and policy group, the impact of community involvement is critical to surveillance and evaluation if we are to diverge from just existing quantitative approaches. Key informants, focus groups, in-depth interviews, and observational studies are outcomes that can inform the process. But even more important is that the planning and deriving the research questions should be a participatory effort between program planners, evaluators, and the community. Communities have traditionally been the subject, not instigator of projects. The relationships need to change.

We would like to be part of the planning process when the projects are just a “twinkle in the eye” of the state people. We resent being brought in as an afterthought or when plans have already been set into place.

Prioritizing which populations to work with, even within the low-SES sector remains problematic. The political realities of limited resources and greater needs posed real-world problems that were not resolved by our group. Although working with smaller sectors of the population, the “numbers game” is unavoidable when it comes to cost efficiency. If a population has been identified at significantly higher risk, but the number people in that group is small, how does one allocate limited resources?

I must confess that I am conservative when it comes to redistribution of funds. If my group, which has been funded, has a lower prevalence, but larger numbers than another group, I am reluctant to give up that funding.

A final charge for this group was “to [identify] . . . a conceptual framework to identify and prioritize intervention populations.” Although a prioritization criterion remains elusive, a loose framework for a surveillance model was arrived. It incorporates the use of existing data systems, but defines their purpose with more appropriate limitations. These are the items in #1 and #2 of the above recommendations. The primary purpose is for initial identification of groups and then for monitoring trends. Most are already doing this, but the process needs to be refined.

Recommendation #3 uses a descriptive portrayal of the low SES that is not bound by tobacco as the “issue.” This portrayal is at the individual and family level (or strata) and at the community level. It requires the use of both quantitative and qualitative methodologies. It is in effect an environmental scan.

Recommendation #4 is an extension of the environmental scan depicted under #3 and its defining feature is that data collected from there are to be used directly for planning interventions. Note that the indicators recommended are closely associated with many health behavior change theories (health belief model, theory of planned behavior, trans-theoretical model, etc.). These findings provide the theoretical basis for planning, measuring, and evaluating interventions.

Recommendations #5 through #8 are the milieu in which the proposed framework below would work in.

The surveillance framework that emerged from the surveillance expert panel for the identification and elimination of tobacco-related health disparities can serve as a model for developing data that can be used to create more effective community-specific interventions for other populations. Traditional surveillance systems need to take a more comprehensive approach for addressing community needs. Our panel of experts reinforced the conclusions drawn from the community model that was presented at the beginning of the conference.

Epidemiologic methods of defining and measuring variables such as race/ethnicity and socioeconomic status must be overlaid with more focused assessment and analysis of relevant characteristics that may exist within at-risk populations. This increasingly detailed analysis, needing both quantitative and qualitative methods, requires additional resources both in funding and in personnel. (Robinson, 2005, p. 344)

The recommendations for the group have implications that strengthen and can indeed help integrate the efforts of national, state, and local health data-collection parties. It not only makes a case for partnerships between health agencies, academia, and the community but also operationalizes it by defining roles. The challenge still remains of fostering this type of integrated and multidimensional approach into practice. Although the mechanisms for creating this type of integrated system was beyond the scope of this 2-day conference, the findings from this expert panel has created an opening for more concrete discussion on surveillance and evaluation needs in working with low-SES populations.

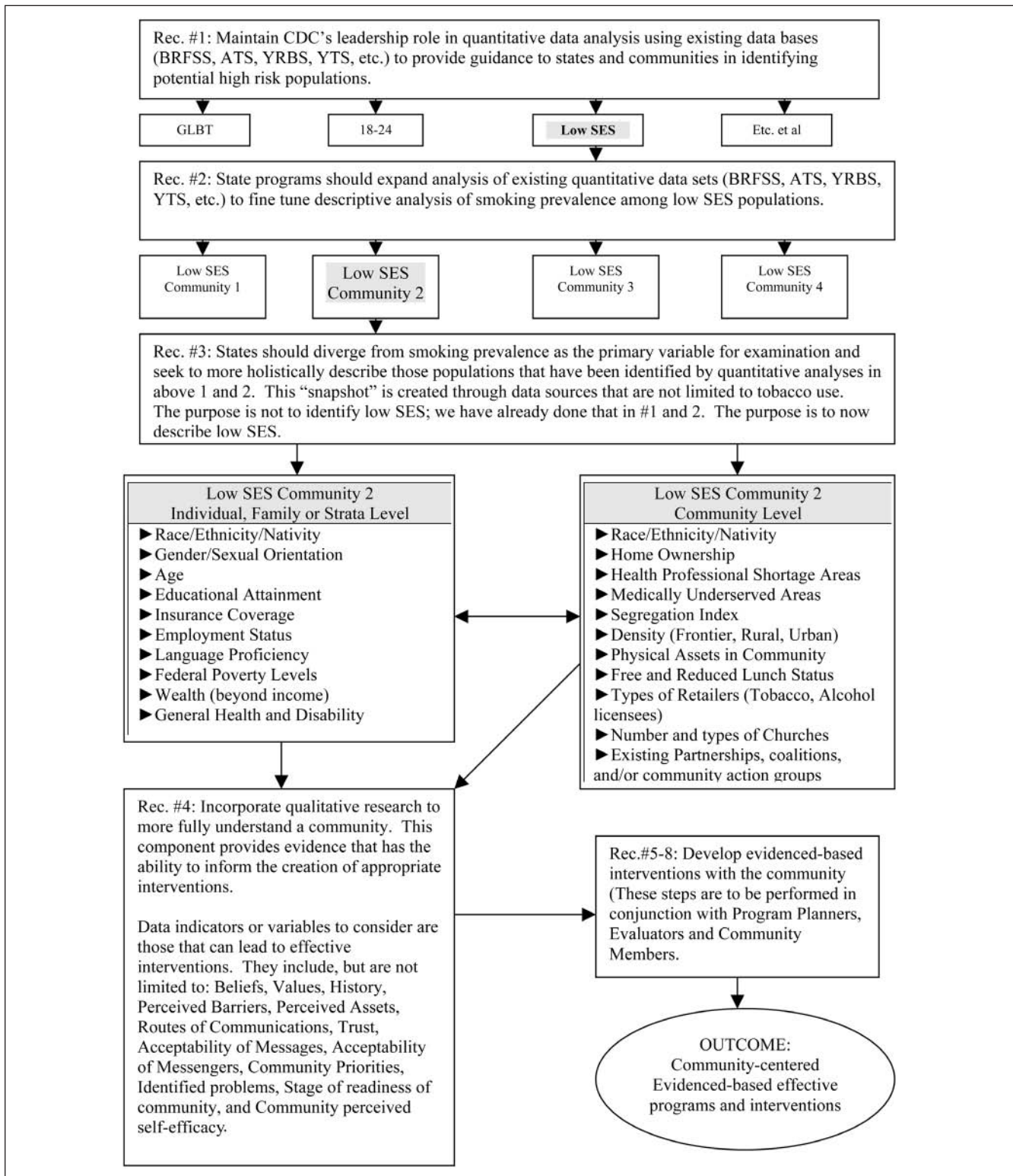


FIGURE 1 A Surveillance and Evaluation Process

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