

ZIP CODE MAPPING is a community level intervention that utilizes public records and health department statistical data to create a 'map' of HIV hot spots within a specific geographic area. By collecting and mapping STD, arrest, housing, pregnancy, and school drop-out data, outreach programs are able to estimate needs for services and identify specific locations for services. The key characteristics of Zip Code Mapping are: the documentation of needs for services across broad communities and populations; the establishment of relationships with key community stakeholders; and the ability to target HIV outreach, prevention education, counseling, testing, and referral services to specific areas where HIV+ people live and gather.

CURRENT ACTIVITY SETTING

Nondenominational Community Church, Outreach Prevention services program for HIV+ people

- ✓ **Directly links the client to medical care**
- ✓ **Gets the client in a conversation about starting medical care**
- ✓ **Brings the agency closer to where HIV+ people are so that the conversation can begin**

I. Description

OBJECTIVES

- ▶ To collect and review current census tract data to identify "pockets" of unmet service needs within the community
- ▶ To identify specific neighborhoods where people living with or at risk for HIV reside and gather
- ▶ To provide HIV+ people outside of the health care service system with information about HIV related services and bring them into the community service networks to receive the health care they need
- ▶ To connect community service providers with HIV+ people who are not in regular HIV related health care

TARGET AUDIENCE

- ▶ Individuals participating in high-risk behaviors for HIV infection
- ▶ Families residing in areas with low service provision
- ▶ Neighborhoods statistically shown to have high rates of HIV infection, such as low-income neighborhoods

ACTIVITY DESCRIPTION

By using zip code mapping, agencies can geographically locate "hot spots" or high risk areas and cross-tabulate STD infection, HIV infection, AIDS diagnoses, arrest records, and school drop-out rates by demographic characteristics.



QUICK NOTES:

“We target mothers, grandmothers, elder members of the community because of their respected place within that community, and because they then give the condoms to their kids and grandkids.”

— OUTREACH PROGRAM DIRECTOR, NASHVILLE, TENNESSEE

- ▶▶ To begin this activity, the outreach staff contacts the local health department and police department in order to collect and review current data about their identified program area.
- ▶▶ The most useful data for strategic planning purposes include specific information about STDs, teenage pregnancy, HIV infection, school districts with high drop-out rates, drug-related arrests, drug trafficking, and commercial sex. Usually the epidemiological data is available by specific geographic boundaries, such as neighborhoods, counties, boroughs, or metropolitan areas.
- ▶▶ Additional information is gathered from the local public records office which includes ethnic and racial breakdowns, income and educational levels, and other demographic information about the residents of the different communities within the geographical scope of the program. Sometimes a nominal fee is charged for the requested information.
- ▶▶ After the data is collected, reviewed, and aggregated, it is integrated into a computer mapping program and plotted on a map of the agency’s service area by postal zip codes. Each data set is plotted on a separate map and the maps are overlaid to find the concentrations of at-risk behavior and activity.
- ▶▶ This information is reviewed by the outreach staff and program director in order to verify pockets and hot spots within program service area.
- ▶▶ Once the zip code areas are identified and determined appropriate for the outreach staff to include on the map for high density risk behavior and activity, these areas are acknowledged to have “unmet service needs.”
- ▶▶ The staff then looks for locations like public housing, commercial strips, public parks, public transportation thoroughfares, etc., to determine where it is possible to target services and their “walks.” “Walks” are the paths that the individual outreach workers take as part of their “outreach” in an attempt to reach as many HIV+ and at-risk individuals as possible.
- ▶▶ The targeted area and “walks” are then identified as possible areas for outreach, HIV and risk reduction education, condom distribution, HIV testing (using rapid HIV tests), and referral to clinical services.
- ▶▶ The outreach staff walks the area, making note of “pockets” and “hot spots” on the combined unmet need service area map in order to determine the accuracy of the mapping strategy.
- ▶▶ The outreach staff maintains a record of all interactions with individuals and families encountered during the outreach walks in order to provide referral and follow-up services.
- ▶▶ On-going monitoring of effectiveness and successful service intervention is reviewed during weekly outreach program staff team meetings and case conferences.

The mapping activity can be used to document and execute specific population-based assessment of recent immigrant, African American, white, and Latino communities. It can also be used for geographically based assessments such as concentrated commercial districts, public housing projects, and entire jurisdictions.

- ▶▶ The data collection steps, similar to the previous steps, include: collecting the most recent census data by zip codes for the entire county or densely clustered geographic areas where culturally similar people (e.g. Latinos, gays and lesbians, African Americans, recent immigrants, parolees, and new arrivals) may live. The specific information can include location, population density, average household income, educational level, labor market trends, etc.
- ▶▶ Next, the project staff collects health information, specifically looking at HIV and STD data for the geographic area or specific population (from the county health department). The staff also collects arrest rate data (gathered from the local police office), specifically examining it for drug trafficking, drug possession, drug paraphernalia possession, and drug usage by zip codes. In some jurisdictions, it is necessary to purchase all of the arrest data and extract the specific drug arrest data.
- ▶▶ The staff overlays the detailed zip-code maps containing all of the selected data on the specific population or area to form a single map. The zip code areas that have high concentrations of STD infection, drug use and arrest, and HIV infection are then identified as potential target community level service intervention areas.
- ▶▶ After the outreach program staff has reviewed the community level data, the program director invites all of the agencies who work within the targeted geographic area to a meeting to review the map and discuss the community level service needs.

- ▶▶ During this meeting, they identify the sub-areas with high levels of service needs and discuss individual agency strategies to respond to these needs. The meeting also serves as an update about what services are being offered by the participant agencies and what areas those services cover.
- ▶▶ Participants then identify possible community level strategies (e.g., multi-agency HIV education fair, monthly community testing day) that can be developed and coordinated together.
- ▶▶ Follow-up community level, service intervention meetings are scheduled on a quarterly basis. This is an informal community level meeting.
- ▶▶ Through this activity and the follow-up community level meetings, the areas with the greatest need are put on the social and health service need map.

Zip code mapping can help an agency and a community “map out” strategies to address unmet needs. Over time, zip code mapping can be utilized as an evaluation process to determine if the outreach, education, and referral strategies are effective.

PROMOTION OF ACTIVITY

- ▶▶ This is an internal planning activity; it is not “promoted” outside of the agency.
- ▶▶ When the staff completes the zip code mapping of the area, all local social and health services agencies with the relevant zip codes are invited to participate in planning for unmet needs.
- ▶▶ The outreach team continues to work closely with the chief of police and with the head of each relevant health department to form relationships and ensure that the data can be obtained in a timely fashion.

II. Logistics

STAFF REQUIRED

Eight staff members required: project director, administrative support person, data and evaluation team.

TRAINING & SKILLS

It is important to have staff with data manipulation skills and a very strong understanding of the local service area. The staff needs to be comfortable working with public records, have a keen understanding of census tract information, epidemiological profiles, and surveillance data. It is useful to have prior knowledge of geo-mapping software.

PLACE OF ACTIVITY

The zip code mapping of HIV risk target areas takes place in an office at the agency; however, the data is gathered from the local health department, local and county records office, and police department.

FREQUENCY OF ACTIVITY

The staff completes a review of this information every six months to update the data and re-evaluate target service areas.

OUTSIDE CONSULTANTS

- ▶▶ Health department staff and police force staff liaisons
- ▶▶ Local university to provide initial review of methodology

SUPPORT SERVICES

None

“You have to be prepared to serve whoever, whenever, whatever.”

— REVEREND, NASHVILLE, TENNESSEE

NECESSARY CONDITIONS

- ▶ The staff must have working relationships with the chief of police, the director of the local health department, and with community partners to target outreach and other service provider workers.
- ▶ Staff must be willing to gather the data first hand or find out how to get the data from secondary sources.
- ▶ Prior experience with handling data sets and geo-mapping software is critical.

III. Strengths and Difficulties

STRENGTHS

- ▶ Zip code mapping draws an HIV picture of the community.
- ▶ It also establishes a method to target services and reach those individuals in the community who are generally from underserved and disenfranchised populations.
- ▶ The activity serves as an indicator and allows service providers to know where to target and focus their outreach services.

WEAKNESSES

- ▶ Data can be hard to analyze in a timely fashion. (Data can be outdated quickly, even if it is only a year old.) Sex workers and drug traffickers can change locations very rapidly based upon arrest activities. Even if the data is analyzed quickly, it may be too late to reach mobile targets with outreach efforts.
- ▶ There is a danger of stigmatizing local residents. If people take the data as fact, it can impact populations and residents unjustly. Staff members have to be careful with this type of analysis and discreet about sharing the data.
- ▶ There is a risk of missing individuals in need of services because the targeted outreach areas (with zip code mapping) do not find all areas where HIV affected people live.

DIFFICULTIES FOR CLIENTS

None

DIFFICULTIES FOR STAFF

- ▶ It is labor intensive to analyze multiple sets of data and compose each map.
- ▶ The staff has to know local trends, new drugs that are entering into the community, and new sex oriented activities. The agency cannot rely on data and mapping alone to target services or it will miss other high risk activities.

OBSTACLES FOR IMPLEMENTATION

- ▶ If there is a lack of current and clean data from the health department or there are difficulties in obtaining confidential or non-identifying data from the police department, it can stall the whole process.
- ▶ An agency cannot successfully work alone in isolation; it is important to collaborate. Mapping is only effective if an agency can see many parts of the picture and fully collaborate with other agencies.

NON-APPROPRIATE CLIENTS

None

IV. Outcomes

EVIDENCE OF SUCCESS

- ▶▶ Over the past few years the agency has seen HIV rates decrease in the targeted outreach areas.
- ▶▶ The mapping allows outreach staff to direct time and resources to areas most impacted by HIV.
- ▶▶ Doing an analysis every six months helps to keep the program staff updated about substance abuse, drug trafficking, and sex work. This raises the likelihood of having current information about new “hot zones.”
- ▶▶ The information gathered draws the HIV picture of a city and can help shape a clearer and more textured picture of “the real” HIV epidemic.

UNANTICIPATED BENEFITS

- ▶▶ This activity provides documentation for grant writing and needs assessments.
- ▶▶ It helps to create community rapport between police, health department, substance abuse prevention workers, and HIV prevention workers.
- ▶▶ Zip code mapping is helpful in identifying areas where there is a high concentration of community HIV services.

“CONNECTING TO CARE” ELEMENT OF ACTIVITY

The mapping activities actually “reach” people who are not connected to the health care system and gets closer to them and to their community. It is the direct human contact that helps people come into care.

EVALUATION

The staff uses timely completion of the data analysis to allow for program planning activities.

KEEP IN MIND...

- ▶▶ The Ryan White planning consortia, as well as other service providers and funding sources might be interested in this activity.
- ▶▶ If there are areas of the city or specific zip codes with low HIV incidence, there is a potential for confidentiality breaches. (Local laws sometimes prevent an agency from obtaining data that is under a specific prevalence rate for this exact reason.)
- ▶▶ It is important to identify factors that affect HIV transmission. This agency chose drug arrest data and syphilis incidence, but it could have chosen heroin use or gonorrhea infection for other communities. It is important to select data that affect HIV transmission in the specific local areas selected.
- ▶▶ It is important to be open to using new data sources as new information about the service delivery area appears. No agency should always rely on the same information because people change their behaviors.

