

Title

GIS and Human Services Program Management in San Diego County of San Diego

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Abstract

Generally, local governments utilize GIS for applications in planning and land use, environmental services, or public works but rarely apply it in social service departments. This paper presents the use of GIS and geographic methods in the Health and Human Services Agency of San Diego County. We address the effectiveness of using geographic and spatial methods in not only research and planning, but also systemic process, frontline implementation and performance measurement. We discuss the specific areas of application and how geographic awareness and knowledge improves the services offered by the County.

Introduction

Until recently, local governments primarily employed geographic information systems in the areas of land use, the environment, and public works. However, in the last several years, county human and social service departments have applied GIS and geographic concepts to assess existing demographic characteristics and service delivery models. For the most part, GIS services are utilized as a research and planning tool; they are only an ancillary component to the daily operations of county services. As GIS has become more prominent and important in county government, GIS services and activities and spatial concepts are extending beyond this historical role and are used throughout the business components of county government.

In this paper, we discuss the expanding role of GIS in the Health and Human Services Agency (HHSA) of the County of San Diego. We contend that GIS and geographic concepts should not be limited to purely a research analysis tool but rather they have relevant applications throughout the business components of an organization including: strategic planning and operational planning, frontline operations, monitoring and control, and functional cross threading between departments. Below, we offer examples of how GIS has been applied under the General Management System (GMS) in the County of San Diego to address comprehensive planning and specific program operations, including Child Welfare Services. Included are examples and a discussion of how spatial concepts influence the operations of HHSA.

Agency GIS and San Diego County General Management System

The San Diego County General Management System (GMS) is the framework utilized by the County to conduct business and manage County operations. The GMS describes how the County plans, implements, and monitors all County functions that affect the services we provide to County residents, businesses, and visitors. The basic philosophy behind the GMS is that the County can provide superior services by setting sound goals and applying strong management principles. By adhering to this philosophy, the County provides the best possible services by

continuously developing and implementing plans, monitoring the progress of operations and plans, and the renewing the process in an ongoing management cycle.

The GMS has five overlapping components that form the management cycle including:

- Strategic Planning - long-range (five-year) planning that addresses where the County wants to be and how it gets there, anticipates significant challenges, risks, and opportunities which allows for the development of goals and action plans to meet upcoming needs
- Operational Planning - the allocation of resources to specific programs and services to implement the Strategic plan.
- Monitoring and Control – the periodic evaluation process to measure our progress on our goals and budgets and to make necessary adjustments.
- Functional Threading – the process of working together as a team to achieve the important goals we share on projects and issues that cut across organization lines.
- Motivation, Rewards, and Recognition – the recognizance that the workforce is a critical resource of the County and defines what is expected of the workforce, how the workforce accomplishes its tasks, and outlines the provision of incentives for workers.

In the last two years, GIS in the County's HHSA has become an effective tool for each of the components of GMS. Despite the use of GIS in various health departments in HHSA, the Agency decided to implement an enterprise-wide geographic information system. In 1999, HHSA hired a GIS Coordinator to implement a GIS in the Agency. By 2001, most of primary components of an enterprise GIS (Agency GIS) were established including personnel, hardware, software, data, and connectivity to other spatial data warehouses. HHSA is divided into six service regions that cover the County's 4,200 square miles. Primarily the GIS infrastructure serves the health and human services programs in the six service regions including: CalWORKs, Countywide Child Welfare Services, and Public Health Centers.

Initially, the new GIS personnel's role in the activities of the Agency was limited to mapping existing resources of county services and locations of particular clients and events. Soon the GIS work effort included the analysis of demographics and the anticipation of where to locate services based on the results from demographic and social service variable distributions. In time, management and business planners have grown familiar with GIS and spatial analysis results, and recognize the need to consider the spatial distributions of not only their clients but also the demographics of the County population to better serve the client populations. This recognizance is evidenced by the following examples of use and influence of GIS throughout the business components of the GMS.

Service Planning and GIS

The initial steps in the GMS are the planning efforts undertaken by the Agency. To strategize and plan effectively, it is crucial to understand the current situation internally in the Agency but also externally in the social environment. It is also crucial to understand what you need and want to accomplish as an Agency and to anticipate future trends that may affect the implementation of services.

As part of the latest Strategic Planning process from late 2002 through the Spring of 2003, the six regions of HHSA conducted environmental scans to give perspective to the managers and staff charged with the planning process. In the past, environmental scans have been conducted using static data that are difficult to compare and contrast with others in the socio-spatial environment. However, GIS makes this process much more enlightening to planners when they are able to visually explore the data with overlays that can elucidate how different demographic variables affect one another in services areas.

For the environmental scan, GIS personnel incorporated not only socio-economic and demographic data but also program data that included information on the clients of Agency programs. By combining this data and analyzing the relationships between the social environment and the client information (including population density, female headed households, change in population, race, ethnicity, child welfare removals, CalWORKs clients, domestic violence cases, unemployment rates, health status and burden of disease), planners were able to understand the environment in which the Agency was operating, and aided in answering the questions of the strategic planning tasks. By visualizing the spatial distribution of the socio-environmental data in conjunction with the program data, planners were able to see how their clients are spatially distributed and the issues they face as they plan to organize services for these clients.

As we mentioned above, San Diego County occupies a vast area with substantial variations in socio-spatial distributions. To best serve clients, the Agency at times targets clients in specific communities or mobilizes large portions of staff to unique regions in the county. By employing the regional model, the Agency understands that, at times, specific communities need specialized services.

With the information gathered in the environmental scan the resulting decisions based on strategic planning process, each region and program is tasked with operationalizing the strategic plan, or how each region plans to offer services to their unique service area. This occurs during the operational planning process where management and staff focus their attention in areas of greatest need based on the assessment and findings from the environmental scan. By isolating those areas through the use of GIS with program data and demographics, planners focus their approach to certain communities. Planners also identify the resources that the Agency can draw upon in those areas including schools, churches, businesses, and community based organizations. This is critically important to partner with other organizations as the Agency is faced with the current poor fiscal situation.

An example of this operational planning process was the realization of a clustering of child welfare services (CWS) removals and referrals in the North Central Region. As a result of mapping and cluster and time-series analysis, GIS personnel found that a majority of the CWS issues in the region originated from four specific areas. After some detailed community analysis, it was found that these specific areas, although similar in the number of referrals and removals, they were uniquely different for various demographic reasons. To respond effectively to these challenges it was necessary to tailor operations to address the specific issues. By taking the community or geographic approach, acknowledging the assets and challenges of a specific community, the Agency addressed the issues in an effective manner.

Re-Shaping Service Delivery and GIS

In 2001, the HHSA implemented the Family-Centered Neighborhood-Based (FCNB) Initiative, commonly known as Family-to-Family (F2F), created by the Annie E. Casey Foundation. The Initiative provides the opportunity for states and counties to redesign and reconstruct their foster care systems to achieve system-wide goals. The underlying philosophy of Family-to-Family recognizes that the best place for children is in their own homes and communities, unless the situation requires the child is separated from his or her family. If the appropriate support, guidance, and help are given, families can often safely care for their child, maintaining the child's kinship and social networks in their school, neighborhood, and community. In cases where the child must be separated from the family, the next best alternative for a child is in a family foster home rather than an institutional setting. Preferably, this foster home should be located in the child's community to maintain the child's daily life as much as possible.

As the six administrative regions of HHSA started to implement the FCNB initiative, each designed their plan according to their unique community needs. In the East Region, HHSA management has a standing relationship with several schools since the shooting and suicide incidents at Santana, Granite, and Grossmont high schools. The schools came to the County for help and the result was the placement of social workers at some of the schools, enabling families and children to access resources and also engage in preventive measures for suicides, drug use, and child abuse.

As the East Region began to implement the FCNB, they recognized this strong relationship and the fact that a continued and increased relationship could improve the effectiveness and efficiency of HHSA services. Based on the community-based concept, GIS became a primary factor in the development of a geographic based service delivery model organized around the school feeder system. After conducting the cluster analysis of where child protective referrals and removals are located, a spatial model was built on the school feeder system. GIS personnel built the model based on the school catchment areas for each feeder system (elementary-middle-high) and calculated the statistics for each feeder system. GIS personnel had to build the boundaries for these catchment areas based on a collection of streets and addresses that each school district gave to HHSA. Once the statistics were calculated for each feeder system, staff is proportionally allocated to each school and feeder system to address the caseload.

As trends augment due to policy and demographic changes, the proportional model will be revised to reflect the most current caseload. The result of this community-based model is the

creation of a strong relationship between social workers and school staff to ease the difficult process of child welfare cases. The community members also benefit from the ability to become more aware of HHSA resources available to the public, which will increase the number of people receiving assistance. The model also increases the efficiency of the social workers and reduces the referral response time as they become closely tied with those specific communities. The staff and management are thinking more geographically and realizing the importance of spatial concepts such as the community based service model.

GIS and Performance Measurement

Performance measurement is increasingly becoming a standard for organizations and local government. The County of San Diego and HHSA have established performance measurement programs that monitor the progress of strategic and operational objectives. These measures are available to management and designated staff through the PBViews software application. The progress of selected measures is also reported through a periodic flash report distributed to Agency staff.

The regionalized philosophy of the Agency demands staff not only look at the measures for the county as a whole but also the distribution across the diverse geographic communities of the county. GIS is increasingly playing a role in the measurement of strategic and operational objectives enabling planners to focus on particular regions or operations units who are succeeding in accomplishing the objectives and disseminate those practices to other units. The geographic perspective also allows management to focus in on specific areas that may need extra support in accomplishing the Agency's objectives.

As a result of analyses conducted by GIS personnel on the Family Centered Neighborhood Based projects in the regions, GIS has become a critical component of the monitoring and control component of the GMS. On a program level, GIS personnel track and monitor the primary objectives of the FCNB Initiative but also self-defined regional objectives that are created to address the unique socio-spatial challenges in specific communities. Examples include the measurement of recruitment of foster homes in communities with high rates of child welfare referrals and removals, the number of placements per child, the average length of stay within communities, and the rate of children coming in out-of-home placement.

On an Agency level, geographic concepts have driven the creation of operational objectives and for staff motivation. Based on initial GIS analysis of the systemic movement of children within the Child Welfare System, executive management decided to create an objective that focused on increasing the percentage of foster children placed within their own communities. GIS personnel calculated the number of children placed within their HHSA service region from which they removed based on several systemic parameters. This measure is now a fixture within the Agency Strategic Plan as well the County employee benefit enhancement program. As data for the objectives grow, the Agency plans to increase the use of GIS for monitoring the strategic and operational objectives.

Functional Threading and Conclusion

Another result of the GIS activities in the Agency is the realization that support from various departments, who may have similar interest in types of spatial analysis of program data, aids in the success of service implementation. Although regional GIS staff is geographically dispersed, they work as a centralized unit on Agency-wide projects sharing ideas and findings with themselves but also various departmental staff. The Agency is an enormous organization with over 6,000 employees and tens and tens of separate departments whose programs, at times, service the same clients. GIS and the results of spatial analysis are bringing regions and departments together, opening the lines of communication that facilitates functional threading and sharing of techniques and methods.

As an example, the operational implementation of the FCNB initiative includes several self-evaluation committees at the regional and Agency level that share results, challenges, and discuss the methods of measuring the progress of the program. This resulted in the communication of the school-feeder based approach from the East Region to other regions that have implemented augmentations of that strategy to fit their own unique set of circumstances.

To conclude, the purpose of this paper is to exhibit the wide-ranging use of GIS and spatial concepts within the County of San Diego and local government. GIS and spatial thinking is not a set of tools limited to the confines of research departments. Geographic concepts are pertinent to the entire operations of local government and should be incorporated into the various components of a comprehensive management system. With management and staff in different departments thinking about the communities and the clients HHSA serves in San Diego County in spatial terms, we can provide more efficient and timely service that addresses the unique and diverse communities we serve.

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