

Impact of a Multi-Disciplinary Serial Inebriate Program (SIP) on Emergency Care Services in San Diego

June 5, 2001
ISP Proposal

Abstract

The purpose of this study is to determine the impact of a multidisciplinary community outreach program, aimed at rehabilitation of chronic alcoholics, on emergency care services in San Diego, on usage of support services, and on long-term rehabilitation of these individuals. This will be accomplished by studying data such as: frequency and costs of emergency medical services (EMS) transports and emergency department (ED) visits; incidence of sobriety and homelessness; and usage of supportive services before enrollment in the program, with longitudinal measurement at one year after enrollment and two and one-half years after enrollment. The outreach program to be studied was initiated by the San Diego Police Department to attempt to rehabilitate a growing population of homeless inebriates in San Diego. The impact of this program on emergency health care services, on which these subjects rely on most, has not been studied.

Background

In 1999 the San Diego Regional Task Force on the Homeless projected the urban homeless population at 8000 (1). National statistics estimate that 35 to 40 percent of homeless individuals abuse alcohol, with a smaller portion of them abusing drugs. The U.S. Department of Health and Human Services has identified substance abuse and mental health as two of its 10 leading major health priorities for the Nation (2). There are approximately 3000 homeless substance abusers in San Diego. These individuals generally have limited access to (or knowledge of) shelters, primary health care, and social and rehabilitation services. As a result, they tend to utilize health care services episodically, often encountering law enforcement, emergency medical services, and local emergency departments.

The use of local hospital emergency departments for primary care and non-medical needs is expensive and ineffective (3). Chronic inebriates make up a large percentage of patients labeled as “the chronic ED patient” or the “frequent ED patient”- terms defined as those patients making between five to twelve or more visits to the ED, depending on the study. These individuals make up a small percentage of the total ED population yet they make a markedly high percentage of the total ED visits (4-7). An analysis of the medical charges incurred by fifteen randomly selected homeless clients of the San Diego Police Department's Homeless Outreach Team (HOT) during the period July 1, 1997 – December 31, 1998 demonstrated a total of nearly \$1.5 million at two regional medical centers (8). In addition, chronic inebriates disproportionately consume other community resources, creating sources of significant frustration for businesses, public safety personnel, and health-care providers. Solutions to the problems of ED overcrowding due to frequent, and often inappropriate, use of ED vs. other medical and social resources are currently being sought nationally as well as worldwide (5, 9).

A recent study looked at the impact of case management of frequent ED users on hospital service use and costs, homelessness, substance abuse, and psychosocial problems. The study showed that case management was a cost-effective way of decreasing hospital service use and psychosocial problems among these individuals (10).

The San Diego Police Department (SDPD) frequently employs a strategy of “problem-based policing” to address difficult issues. In recognition of the current difficult situation, the SDPD recently developed two pilot programs.

In 1998, the Homeless Outreach Team (HOT) was created with a mission of case-managing homeless individuals in the downtown region of the city. The HOT team is composed of dedicated police officers, county social service and psychiatric emergency response team (PERT) personnel. The team attempts daily contact with clients to establish rapport and facilitate access to the shelter, routine and mental health, rehabilitation and other services available to this population.

In 1999, the SDPD initiated its pilot Serial Inebriate Program to interrupt the cycle of such individuals between jail, emergency departments, and a local inebriate reception center by implementing a multidisciplinary case management based program. Key stakeholders in the development of the Serial Inebriate Program (SIP)-in addition to the San Diego Police Department-included the San Diego Superior Court, Office of the City Attorney, Office of the Public Defender, County Alcohol and Drug Services, San Diego County Sheriff's Department and Mid-Coast Counseling. Individuals arrested for repeated episodes of public drunkenness are offered the option of attendance at rehabilitation in lieu of jail sentences up to 180 days.

The SIP pilot program represents the only model of its kind currently in the country. Its purpose is long-term rehabilitation of chronically inebriated individuals. By employing rehabilitation vs. incarceration, the program attempts to persuade chronic alcoholics (average duration of chronic untreated alcoholism 10 or more years) to choose treatment. Therefore, SIP is potentially of significant benefit to the individuals enrolled as well as the current support services on which they rely. This study will assess the effectiveness of SIP at decreasing arrest rates for public intoxication, emergency medical services ambulance transports, and use of emergency departments for episodic care. Secondary end points will include charges and collections for ambulance transports and emergency department use, costs for housing and medical care in jail, rate of sobriety, frequency of homelessness, and use of appropriate primary care and psychosocial services. These end-points will be analyzed over two and one-half years from initial enrollment to determine the program's enduring effectiveness.

Definition

What are the goals of the project?

The goal of this project is to determine if a multidisciplinary community outreach program aimed at chronic alcoholics (SIP) can reduce arrest rates, use of 911 resources and emergency department visits. Likewise, it will attempt to determine if the use of a rehabilitation alternative to long-term incarceration provides an incentive for previously recidivist alcoholics to enter rehabilitation and more correctly utilize medical and psychosocial resources. The longevity of the program's effectiveness (if any) will be determined two and one-half years after the initial assessment. These effects of SIP on health care usage have yet to be determined.

How is the project relevant to a career in medicine?

This project will provide exposure to several aspects of medicine including emergency medicine and county emergency medical services, and to many political issues associated with public health. This exposure will facilitate both a general understanding of emergency medical services and a specific knowledge of several aspects of emergency medicine and public health. An example is the treatment, rehabilitation, and enrollment in social services of chronic inebriate individuals.

What is the student's role in and time commitment to the project?

The student will be responsible for collecting data from the area hospitals, San Diego Police and Sheriff's Departments, San Diego Medical Services Enterprise, the County of San Diego and various participating rehabilitation and housing agencies. The data will then be compiled and analyzed to determine the impact of SIP on San Diego health care services. Related experiences will be available, including attendance at SIP and HOT meetings. In addition, "ride-alongs" with SIP and HOT teams will provide experience in real-life scenarios. Observation in the UCSD emergency department, ride-alongs with San Diego paramedics and fire personnel, visits to Volunteer of America Detoxification Center, San Diego County Central jail and attendance at relevant meetings with the City EMS Medical Director will be expected. The student will work full time on the project for three months during the summer and at least one month during the student's fourth year.

Methods

This study will be a retrospective cohort study of client subjects participating in the SIP pilot project. Data for all 183 subjects enrolled from January 1, 2000 - December 31, 2000 will be compared with baseline data from calendar years 1998 and 1999. Arrest data for "public intoxication" will be obtained from the San Diego Police Department; data regarding frequency of ambulance use and charges will be obtained from the City of San Diego paramedic provider, the San Diego Medical Services Enterprise. Number of visits to emergency departments, outpatient clinics, admissions and hospital charges will be obtained from the billing departments at UCSD Medical Center, Scripps-Mercy Medical Center and Sharp Memorial Hospitals. Costs of incarceration will be obtained from the San Diego County Sheriffs Department. Housing and psychosocial data will be obtained from the County of San Diego and various participating rehabilitation and housing agencies. The study will maintain strict confidentiality, and no medical information will be shared regarding specific individuals with law enforcement. To obtain access to City of San Diego pre-hospital medical records, a confidentiality agreement will be signed with the City of San Diego EMS Program Manager.

The primary data points will include:

- Number of arrests for public intoxication
- Emergency medical services ambulance transports
- Visits to emergency departments
- Hospital admissions

- Charges for ambulance transports, emergency department visits and hospitalizations
- Costs associated with incarceration

The secondary data points will include:

- Frequency of sobriety at six and 12 months
- Incidence of homelessness
- Use of support services and primary care
- Frequency of insurance coverage

Statistical analysis will be performed comparing data before and after enrollment in the SIP program using a statistical software package (Stata 6.0). The research protocol for this study has been approved by the UCSD Human Subjects Committee, protocol # 001185X (date approved: October 19, 2000).

Evaluation

The ISP chair and committee members will guide the student throughout the course of the project including research design, IRB guidance, provision of contacts and participants, data access and analysis, manuscript preparation, and clinical opportunities. The success of the project will be determined upon final collection of necessary data and analysis of that data. The final intent for this data is that it be written up and submitted for publishing in a respected journal.

References

1. Regional Homeless Profile. An update on homelessness throughout San Diego County and its 18 cities. Regional Task Force on the Homeless. August 1999
2. U. S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U. S. Government Printing Office, Nov. 2000
3. Little GF, Watson DP. The homeless in the Emergency Department: a patient profile. *Journal of Accident and Emergency Medicine* 1996; 13(6): 415-17.
4. Purdie FRJ, Honigman B and Rosen P. The Chronic Emergency Department Patient. *Ann Emerg Med*. 1981; 10(6): 298-301.
5. Hansagi H, et al. Frequent Use of the Hospital Emergency Department Is Indicative of High Use of Other Health Care Services. *Ann Emerg Med*. 2001; 37(6): 561-567.
6. Andren KG and Rosenqvist U. Heavy Users of an Emergency Department: Psycho-Social and Medical Characteristics, Other Health Care Contacts and the Effect of a Hospital Social Worker Intervention. *Soc Sci Med*. 1985; 21(7): 761-770.

7. Kne T, Young R and Spillane L. Frequent ED Users: Patterns of Use Over Time. *American Journal of Emergency Medicine* 1998; 16(7): 648-652.
8. Dunford, J. March 3, 1999 personal communication to Victor Saldamando, San Diego Police Department.
9. Derlet RW and Richards JR. Overcrowding in the Nation's Emergency Departments: Complex Causes and Disturbing Effects. *Ann Emerg Med.* 2000; 35(1): 63-68.
10. Okin, et al. The Effects of Clinical Case Management on Hospital Service Use Among ED Frequent Users. *American Journal of Emergency Medicine* 2000; 18(5): 603-608.