Hypertension Management in Health Care for the Homeless Clinics: Results from a Survey

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ABSTRACT

Background. With the exception of alcohol abuse, hypertension is the most common chronic physical health problem encountered among homeless persons. The material conditions of homelessness greatly complicate the management of this disorder. Some of the complications and their solutions are discussed here, based on the experiences of health clinics for the homeless in large US cities.

Methods. In 1988, the Stewart B. McKinney Homeless Assistance Act established health care clinics for homeless persons in 108 cities. We surveyed medical directors in these clinics, asking about the management of hypertension in this difficult-to-treat population; 65 responded.

Results. Comparisons between our survey data and those obtained in two recent surveys of clinicians in "normal" clinical practice provide interesting lessons in how medical practice is adapted to respond to the unique needs and problems of the urban homeless. Although therapeutic goals are similar, the means chosen to achieve them often are not.

Conclusions. The treatment of homeless hypertensives illustrates the problems inherent in strict biomedical models of disease and its alleviation. Preferred treatments, course of disease, and success of intervention are powerfully affected by social factors. (*Am J Public Health.* 1991;81:1163–1165)

Introduction

With the exception of alcohol abuse, hypertension is the most common chronic physical health problem encountered among homeless persons, afflicting between 14% and 25% of this population.[1–4] The management of hypertension in the homeless is complicated by material and existential conditions. Proper dietary practice is exceedingly difficult to maintain,[5] rates of alcohol abuse exceed 50%,[4] storage and administration of medicines are difficult, and the cost of medication can be prohibitive. Compliance and maintenance of contact with homeless hypertensives are also difficult, and the asymptomatic stages of the disease produce little or no motivation to seek or maintain treatment.

In 1984, the Robert Wood Johnson Foundation, sensing the widespread unmet medical needs of the nation's homeless, funded health care for the homeless (HCH) clinics in 19 cities. In 1988, the McKinney Homeless Assistance Act extended the system to an additional 89 cities. We surveyed these 108 HCH clinics to learn how medical practice is adapted to the unique needs of homeless hypertensives, using a questionnaire loosely modeled on two recent surveys of hypertension management in "normal" clinical practice.[6,7] One of the clinics served only children and was dropped from the sampling frame; responses were obtained from 65 (60.7%) of the remaining 107 clinics.

Results

Initiation of Therapy

The Joint National Committee for the Detection, Education, and Treatment of High Blood Pressure (JNC)[8] recommends initiation of drug therapy when diastolic blood pressure (DBP) exceeds 94 mm Hg or at somewhat lower pressures if other risk factors are present; nondrug therapies are recommended for DBP between 90 and 94 mm Hg. HCH physicians largely adhere to the JNC recommendations. For an otherwise asymptomatic 45-year-old homeless white male, nondrug therapy would be initiated at an average DBP of 90.5 mm HG or at an average systolic blood pressure (SBP) of 151 mm Hg. Likewise, drug therapy would usually be initiated at a DBP of 97 mm Hg and at an SBP of 161 mm Hg. In both respects, HCH physicians differ little from clinicians in Maryland and New York City. Therapeutic goals are also very similar in both settings, with DBP <90 mm Hg as the target for the overwhelming majority.

The importance of factors other than blood pressure in deciding to initiate therapy was rated on a 1 (not important at all) to 4 (very important) scale. The most important other factor is target organ damage (mean rating [MR] = 3.88). (In a sample of homeless hypertensives being treated in the New Orleans HCH clinic, 20% had concurrent heart problems, compared to 2% of the normotensives.[2]) The co-occurrence of diabetes mellitus (MR = 3.79), elevated blood cholesterol (MR = 3.39), and being a smoker (MR = 3.32) were also rated as important factors in the decision to initiate therapy.

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TABLE 1—Percentage of Physicians Performing Various Laboratory Tests in the Initial Diagnostic Evaluation of a Recently Diagnosed Hypertensive Man

Laboratory Test	New York City	Maryland	HCH
Aldosterone	5	NR	0
Blood Urea Nitro	95	NR	85
Chest radiograph	100	70	34
CBC	100	67	66
Electrocardiogram	100	89	63
Intravenous pyel	19	11	5
Plasma renin	0	7	2
Serum cholesterol	95	NR	89
Serum creatinine	90	84	92
Serum potassium	100	82	86
Triglycerides	67	NR	55
Uric acid	90	NR	60
Urine culture	24	NR	0
Urinalysis	100	NR	94

Note. HCH = Health Care for the Homeless; NR = not reported.
Sources: New York City[7]; Maryland[6]; HCH, authors' survey.

Laboratory Protocols

Initiation of therapy usually implies a detailed laboratory workup to assess other risk factors and to establish baseline values.[8] Table 1 compares laboratory protocols of HCH physicians with those in Maryland and New York. Urinalysis, serum creatinine, serum cholesterol, and serum potassium tests are the most common laboratory tests ordered in all three settings but all tests except serum creatinine and potassium tests are less likely to be ordered in HCH settings, apparently because most HCH clinics do not have their own laboratories. One respondent noted, "Obtaining initial lab tests in our program requires sending a homeless hypertensive patient to our central health center." Resistance to treatment and absence of a fee source often preclude sending homeless hypertensives off-site for laboratory work. Routine tests are seen as needless complications or unaffordable luxuries.

Nondrug Therapies

We asked HCH physicians how frequently they recommended various nondrug therapies; the Maryland survey asked a somewhat different question that, nonetheless, provides interesting comparisons. In the Maryland study, the most important nondrug therapies, in descending order of importance, were sodium reduction, weight reduction, smoking reduction, increased exercise, and alcohol reduction. Among HCH physicians, alcohol reduction is by far the most important, followed at some distance by sodium reduction, weight reduction, and fat restriction. Alcohol abuse is strongly associated with blood pressure levels in all patient populations[9,10]; the greater importance accorded alcohol reduction by HCH physicians doubtlessly reflects the exceptional rate of alcohol abuse, especially among homeless men.

Dietary control of hypertension is obviously problematic in any population that depends on soup kitchens and bread lines for its sustenance. As one homeless hypertensive in New Orleans put it, "You gotta eat what they put on the plate." Since the prospects of dietary control for homeless patients are dim, they are accorded less importance in HCH clinics than elsewhere. The same can be said of other nondrug therapies often employed in conventional settings. Relaxation therapy is obviously pointless when maintaining the most basic necessities of life is a daily struggle. Smoking reduction may be equally pointless when cigarettes are the only remaining pleasure in life. The barriers to managing homeless hypertensives with nondrug therapies usually mean that antihypertensive drugs are the treatment of first *and* last resort.

Drug Therapies

Most HCH clinicians (45%) consider diuretics the treatment of choice, followed by calcium channel blockers (26%), beta blockers (12%), acetylcholinesterase inhibitors (11%), and "all others" (3%). Cost and availability of medications are more important factors in treating homeless hypertensives because the regimen is often life-long and therefore expensive. Nearly four fifths of HCH physicians cited cost as an important factor. Said one, "Newer and often more effective medicines can't be initiated because the homeless and the agencies that care for them can't afford them. The older medicines, with frequent dosing intervals and side effects, are the only ones we have available." Cost is not usually cited as a critical factor in HCH clinics that provide free medication.

Treatment and Compliance

A recent study of homeless hypertensives in New Orleans found that 59% had their blood pressures under control at least once in the course of treatment and 40% were in control at the last visit[2]; 60% of the domiciled hypertensives in a San Francisco study had normal blood pressure readings at their last visit.[11] Thus, effective treatment of homeless hypertensives is difficult but not entirely hopeless.[1,12,13]

One difficulty in treating the homeless is noncompliance, but this is also a problem for domiciled hypertensives.[14,15] Still, 91% of HCH physicians felt that compliance was more difficult for the homeless. Perceived barriers to compliance are summarized in Table 2. Alcohol abuse and availability of medication require no further comment. In domiciled populations, "The amount of social support a patient receives is strongly correlated with adherence to treatment" (p 355)[14]; among the homeless, estranged and disrupted social networks are common.[16] Further, approximately one homeless person in three is psychiatrically impaired.[17] Homeless patients frequently have trouble keeping appointments because they lack the routines of family and work, and many have no sense at all of day, month, or even year.

Strategies

How do HCH clinicians cope with the many difficulties summarized above? As one noted, with "Perseverance, patience, and creativity." To reduce confusion about medication, many HCH physicians prescribe once-daily dosages; to maintain contact, they schedule more frequent appointments and write prescriptions for shorter periods. Most HCH clinics also employ outreach workers to monitor clients in the streets. At least one HCH clinic has a "no-wait" drop-in station to provide immediate blood pressure readings. Many HCH facilities provide in-clinic medication storage. When possible, medication is dispensed in weather-resistant packages. At least three HCH clinics have experimented with clonidine transdermal patches, which eliminate the storage and daily-dosage problems altogether.[12,13]

TABLE 2—Relative Importance of Nine Factors in Impeding Compliance among Homeless Hypertensives: HCH Physician Assessments

Factor	Rated Importance[a]
Alcohol abuse	3.79
Unavailability of medication	3.76
Lack of social support network	3.42
Psychiatric impairment	3.40
Difficulty keeping appointments	3.34
Resistance to life-style changes	3.24
No place to store medication	3.10
Inadequate understanding of the effects of hypertension	3.08
Side effects of medication	2.63

Note. HCH = Health Care for the Homeless
[a] On a 1–4 scale where 1 = not important and 4 = very important.

One powerful incentive for hypertensives to maintain contact is that other needs can also be addressed at the HCH clinic. Most clinics have social workers, case managers, substance abuse counselors, and other service workers as well as medical personnel. Many of these clinics have evolved essentially into "one-stop" social service centers. Professional nutritionists can help with dietary management; 23% of the HCH clinics had a nutritionist on staff and an additional one third had access to nutritionists via referral.

The biggest barrier to treatment of homeless hypertensives, of course, is that their overall physical and mental well-being is threatened by much more pressing concerns than elevated blood pressure. Given their lack of food, clothing, shelter, and money, there is little concern among the homeless with preventive health measures or health maintenance.

Comment

Homelessness is a social condition with profound consequences for physical well-being, including the effective management of chronic physical disorders such as hypertension. The treatment of homeless hypertensives illustrates the folly inherent in strict biomedical models of disease and its alleviation. The range of treatments available, the course of the disorder, and the success of intervention are all powerfully affected by social factors.

It is an unfortunate commentary that we invest as much in providing health services for the homeless as we do in eradicating the basic causes of homelessness. People cannot be socially, mentally, or physically healthy without first having a stable and secure place to live. Health care clinics help homeless people lead more comfortable, less degrading lives, but they do little to reduce the number of homeless persons. Health care for the homeless, however creative, sensitive, and professionally motivated, cannot and does not address the more basic problems. The ultimate folly would be to become so proficient in dealing with the health consequences of homelessness that we lose sight of the fundamental problem of homelessness. □

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