Nutrition and the Homeless Person

Judith A. Strasser, RN, DNS, Shirley Damrosch, PhD, and Jacquelyn Gaines, RN, MS, CRNP
University of Maryland School of Nursing

Homeless persons include men, women, and children who are among the poorest of America's poor. A review is provided of the eating patterns of the homeless, their special nutritional problems, and controversial nutritional issues involving them. Also discussed are ways in which community health nurses (CHNs) can (a) help upgrade the nutritional standards of community-based shelters and other facilities which feed the homeless, and (b) provide suggestions to such food providers to improve the social climate during mealtimes.

A recent recommendation of the National Academy of Sciences' Institute of Medicine (1988) reads, "Providers of food to the homeless, such as operators of shelters, soup kitchens, and food pantries, should be educated in and encouraged to follow principles of sound nutrition and the special nutritional needs of the homeless" (p. 152). This statement implicitly reflects the fact that many such food providers are well-meaning laypersons with little or no nutritional expertise. CHNs, as respected health-care professionals, have the potential to influence such community-based providers of food in terms of nutritional standards and meeting special needs. A prototype program which nurses may use or adapt to assist interested persons in nutritionally upgrading meals is described later in this article.

WHO ARE THE HOMELESS?

The homeless have emerged as America's central symbol of poverty. The problems of homelessness are everywhere, in our cities, suburbs, towns, and rural areas. The National Governors' Association (cited in Select Committee on Hunger, 1987, p. 7) has defined a homeless person as "an undomiciled person who is unable to secure permanent and stable housing without special assistance." Bassuk (1985, p. 46), a Harvard psychiatrist who has done extensive research with homeless families, added that for the typical homeless person, "the lack of a home is symptomatic of profound disconnection from supportive people and institutions."

Prior to the 1950s, most homeless persons were alcoholic men confined to skid-
row neighborhoods. Today's homeless people are much more heterogeneous, comprising several different subpopulations. Changes in the composition of the homeless are attributable to such factors as deinstitutionalization policies, which saw the discharge of thousands of formerly hospitalized mentally ill persons into the community; noninstitutionalization policies, affecting those who are currently mentally ill but who will never be committed (unlike in earlier times); declining economy; family instability; increasing rates of drug addiction and lack of treatment facilities; and shortages of low-income housing due to gentrification of neighborhoods and other causes.

The number of people who are homeless in this country remains something of a controversial guessing game, with estimates ranging from 360,000 (Freeman & Hall, 1987) to between 2 and 3 million (Hombs & Snyder, 1982). Although experts disagree on the exact figure, there is consensus that the numbers are large and on the rise.

Fischer and Breakey (1985–1986)—aware of the heterogeneity of today's homeless—provided a useful fourfold classification of some major subgroups: (a) the chronically mentally ill (according to Lamb & Talbott, 1986, about 40% of the homeless are estimated to suffer from a major mental disorder); (b) the chronic alcoholics; (c) the street people (i.e., the “bag ladies” and “grate men”); and (d) the situationally distressed (including many classified as the “new poor” because of such factors as unemployment). An alarming trend is the fact that families may currently be among the fastest growing subgroups of homeless persons (Partnership for the Homeless, 1987).

These typologies, although useful, fail to capture the unique configuration of problems of the homeless individual, and, of course, a given homeless person may fall into more than one category. For example, advocates for the homeless have become increasingly aware of the importance of alcohol and drug addiction as causes of homelessness. Just as we lack precise figures on how many Americans are homeless, there are no exact data on what percentage of homeless people are addicts. However, many experts currently agree that drug and/or alcohol addiction is one of the major reasons for the homelessness of men, women, and families (Kolata, 1989).

WHERE DO THE HOMELESS GET THEIR FOOD?

Until recently, there was scant valid information about how the homeless were fed. For example, a 1987 survey of 140 shelters by the Select Committee on Hunger, U.S. House of Representatives, has been criticized because of its “skewed” sample (p. 101). Fortunately, the Urban Institute (1989) recently completed an evaluation of how the homeless are fed in cities of 100,000 or more using a nationally representative sample.

Including all American cities of 100,000 and over, there is a total of nearly 3,000 providers of services to the homeless: 1,164 soup kitchens (53% of which are church
affiliated), 348 shelters without meals (including welfare hotels and missions), and 1,356 shelters providing meals. Thus, almost 80% of the 1,704 shelters provide food. Over half (54%) of the 1,356 shelters providing food, and only 3% of the soup kitchens serve three meals a day. Almost three quarters (72%) of the soup kitchens serve only one meal daily, but only 11% of the meal-serving shelters restrict their offering to one meal. In summary, in these cities of at least 100,000, more than twice as many meals are served by shelters as by soup kitchens. Average cost per meal varied between $.36 and $.58, in 1987 dollars. (Food from U. S. Department of Agriculture [USDA] commodities, food banks, and donations lowers the average cost.)

It is noted that none of the welfare hotels (n = 41) provided meals. Typically, welfare hotels fail to furnish even rudimentary cooking or refrigeration facilities, thus creating barriers to good nutrition.

The Urban Institute's (1989) evaluation study included in-person interviews with randomly selected providers of services to the homeless (n = 381) and homeless clients (n = 1,846) in 20 cities of 100,000 and over. The interviews were supplemented by observation of the variety and nutritional content of served meals. (Note that observations involved meals as they were served, rather than what was consumed.)

Variety was assessed by the presence of 10 food groups, 5 of which are considered the core of an adequate diet (milk and milk products, grain products, fruits and fruit juices, vegetables, meat and meat alternatives) and 5 of which primarily add variety and calories (fats and oils, baked goods, sweets, sweetened beverages, salty snacks). The researchers concluded that the observed meals provided "substantial variety."

Over 50% of lunches and dinners contained at least 4 of the 5 core groups, and 80% of these meals had at least 1 of the "additional" 5 food groups. However, breakfasts contained less variety, with only 28% including 4 core foods (Urban Institute, 1989, p. x).

The report (p. x) included the following conclusions about the nutritional adequacy of meals:

The average meal provided over 50 percent of the Recommended Dietary Allowance (RDA) for both men and women for 7 of 11 nutrients studied: protein, vitamin C, thiamin, riboflavin, niacin, vitamin A, and phosphorus. Of the other four nutrients, 50 percent or less of the RDA for men and women was provided for three: calcium, vitamin B-6 and magnesium. The final one, iron, was available at 70 percent of the RDA for men, but only 39 percent of the RDA for women. It should be noted that the average American has a low dietary intake of vitamin C, calcium and iron. For vitamin C, however, meals for the homeless appear to be higher than average. The average caloric content per meal was 1,023—38 percent of the 2,700 calories a day recommended for men and 51 percent of the 2,000 a day recommended for women.

Although the observed meals were deemed to have relatively good variety and nutrition, the Institute's interviews with homeless clients (n = 1,846) indicated that many do not eat often enough to achieve an adequate diet. The average number of daily meals was only 1.9, and 36% of the respondents reported they typically go
one day or more per week without food. Reports of what had been consumed the
day before the interview revealed 65% lacking milk or milk products, 43% without
fruits or vegetables, 30% without grain products, and 20% without meat or meat
alternatives.

Moreover, experts (Winick, 1985) have used different criteria in evaluating the
menus for the homeless used (e.g., by New York City). Winick objected to inclusion
of foods high in cholesterol and/or salt such as luncheon meats, hot dogs, pickled
foods, and potato chips. Finally, a recent survey of 200 migrant farm families in Vir-
ginia and Florida (Rich, 1989) indicated that they suffered from high parasitic infes-
tation and serious nutritional deficiencies, especially in iron, calcium, and Vitamin A.

Not all homeless persons have access to soup kitchens or meal-providing shelters;
instead, many are forced to resort to dumpsters and other free food sites (Select
Committee on Hunger, 1987). Alternatively, money obtained by panhandling may
be spent in fast-food places which admit people regardless of the way they are
dressed. Such places, however, are likely to serve food low in variety and high in
cholesterol, fat, and/or salt.

The mental illness of some homeless persons may prevent them from using avail-
able food services, due either to their condition, lack of ability, or fear. For exam-
ple, Breakey and Fischer (1985) described the behavior of one mentally ill woman
brought to the court’s attention because she refused the regular food offered to her,
preferring to forage among the garbage for her meals. It was decided that rummaging
in trash cans was insufficiently dangerous as grounds for commitment, and the
woman was allowed to continue this practice.

**NUTRITIONAL DEFICIENCIES IN THE HOMELESS**

Disorders that most nurses only read about in texts or would expect to find only in a
third world population may be prevalent in Americans who are homeless. Because
the homeless are usually the poorest of the poor, their nutritional and vitamin dis-
orders are:

- magnified by disordered living conditions, lack of heat and protection from the ele-
ments, lack of sleeping accommodations, and overcrowding in shelters. These factors
are exacerbated by stress, psychiatric disorders, and the consequent sociopathic behav-
ior patterns of many of the people. The problems of alcoholism and drug abuse are
added to this picture. (Brickner et al., 1984, p. 243)

Myron Winick (1985), a Columbia University professor who is a nationally rec-
ognized expert on the nutritional problems of the homeless, provided a useful sum-
mary of the effects of low-calorie intake, nutritional imbalances, and the
relationships between chronic disease and diet. Table 1 outlines nine selected
nutritional/vitamin deficiencies and imbalances along with problems likely to ensue
that were discussed by Winick. For example, poor nutritional status (including lack
of Vitamin C) impairs the healing of wounds. This presents a special problem for
TABLE 1
Selected Nutritional/Vitamin Deficiencies Commonly Found in the Homeless

<table>
<thead>
<tr>
<th>Deficiency</th>
<th>Potential Concomitant State/Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein-Calorie Malnutrition</td>
<td>Depletion of fat and muscular tissue; water leaves body cells and accumulates between them; reductions in heart rate, blood pressure, and temperature; immune system is weakened. Client becomes apathetic, moves slowly. There is increased susceptibility to infections, which are widespread among the homeless.</td>
</tr>
<tr>
<td>B Vitamins</td>
<td>Adversely affects central nervous system.</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>Poor wound healing (note that animal and insect bites, muggings, assaults, and other causes of bruises, lacerations, and broken bones are common among the homeless).</td>
</tr>
<tr>
<td>Zinc</td>
<td>Zinc is essential for cell division, so its lack can lead to birth defects and poor growth and sexual development in children/adolescents. It can also lead to skin rashes. It blunts taste (which may lead, e.g., to extremely high intake of salt or to other abnormal eating patterns).</td>
</tr>
<tr>
<td>Calcium</td>
<td>Osteoporosis (brittle bones); this condition is the 12th leading cause of death; vertebral or hip fractures are common; 10 times more frequent among women than men.</td>
</tr>
<tr>
<td>Thiamine</td>
<td>Beri-beri, which can take two forms: (a) Cardiovascular effects, which may culminate in heart failure; and (b) nervous system effects, which may result in weakened hands and feet (e.g., classic symptoms of wrist and foot drop).</td>
</tr>
<tr>
<td>B6</td>
<td>Depression.</td>
</tr>
<tr>
<td>Folic acid</td>
<td>Slower rate of cellular division; bone marrow is especially vulnerable, leading to macrocytic anemia.</td>
</tr>
<tr>
<td>Folic acid/ vitamin B12/iron</td>
<td>Anemia.</td>
</tr>
</tbody>
</table>

Note: See Winick (1985) for a fuller discussion of some of these deficiencies.

the homeless because open wounds and lacerations are often among the most frequent diagnoses in such persons seeking medical care (Lindsey, 1989). (The homeless are vulnerable to criminal acts such as assault and rape; their alcoholism may lead to fighting or falling down while drunk, thereby incurring bruises, lacerations, or broken bones; street people may suffer from burns due to sleeping on hot grates; dog and rat bites are common; confusion in the mentally ill may lead to debilitating accidents.)

Stotts and Whitney (1990) surveyed patients (N = 19) recovering after discharge from the hospital from open surgical wounds; their data showed almost all subjects consumed insufficient calories to support healing, and over half had inadequate intake of protein. Note that this 1990 sample involved only those with a home, so one can surmise that the nutritional status of homeless persons with wounds would be even more deficient.

OTHER NUTRITIONAL ISSUES

Winick (1985) decidedly favored giving supplementary vitamins and minerals to the homeless, although he recognized that this is not common practice among food providers. Many food providers are reluctant to dispense any kind of pill, even over-the-counter preparations, because of such factors as cost, lack of appropriate storage facilities, potential inappropriate use by the mentally ill or drug addicts, and fear of lawsuits.

Electrolyte imbalance can lead to death in homeless people. Drinking too much or too little water, or erratic consumption of salt, sugar, and water combined with
extremes of heat or cold and lack of toilet facilities can lead to serious health calamities in homeless persons.

Judith A. Strasser has witnessed the consumption of cups of salt or sugar at one sitting at shelters or soup kitchens. People who use such amounts, those who drink no water, or those who drink gallons of water during a short period of time need monitoring and referral to a health-care provider for follow-up and teaching. The question of whether or how much salt and sugar should be freely available is the decision of each food provider.

Fast, easily stored, and prepared foods are not always the best nutritionally. Such items are often high in salt, fat, preservatives, and empty calories (i.e., calories with little or no nutritional value), and low in variety, fiber, and protein (Winick, 1985). CHNs can be influential in helping food providers for the homeless minimize or avoid such problems.

ADDITIONAL PROBLEMS OF HOMELESS PERSONS

In addition to the consequences of trauma, homeless persons must often contend with infestation from scabies and lice (due to crowded, unsanitary facilities); peripheral vascular disease, cellulitis, and leg ulcers (attributable to having to keep their legs in dependent positions for long periods of time); in addition to “all the standard medical disorders, including cardiac disease, diabetes mellitus, hypertension, acute and chronic pulmonary disease, and tuberculosis” (Brickner et al., 1984, pp. 243–244). Table 2 outlines a selected list of 17 at-risk statuses that may make a given homeless person especially vulnerable to nutritional disorder(s) (Brickner et al., 1984; Winick, 1985). (Naturally, a given individual may show any number of these special conditions.)

Brickner et al. (1984) estimated that hypertension may be present in 40% to 50% of the homeless. It is also to be noted that Blacks, who are at greater risk of high blood pressure, are overrepresented among the homeless. Thus, hypertensive homeless clients are at special risk from diets high in salt, fat, and cholesterol, that is, the kind of diet that is likely to be offered at the local shelter or soup kitchen.

Research also shows high rates of clinically active tuberculosis among selected homeless populations, ranging from 1.6% to 6.8%; rates that are 150 to 300 times higher than in the general population (Tuberculosis Control, 1987). Because tubercular clients are in need of the best possible nutrition, it is important to note that their medication (see Table 2) may interfere with metabolism of certain nutrients. It is also to be noted that Professor Winick (1985, p. 107) considered any homeless woman who is pregnant at high risk and concluded that she “probably ought to be hospitalized for a major part of her pregnancy.”

Providers of food to the homeless need to give high priority to meeting the special nutritional needs of their clients. CHNs can help play an important role in furnishing any necessary education and expert assistance to these providers, many of
### TABLE 2
Selected At-Risk Groups Among the Homeless

<table>
<thead>
<tr>
<th>Homeless Client’s Status</th>
<th>Potential Concomitant State/Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholic</td>
<td>Deficiencies of water soluble vitamins and certain minerals are likely. For example, alcohol interferes with absorption of thiamine, B₁, and folic acid (see Table 1).</td>
</tr>
<tr>
<td>Diabetic</td>
<td>Stress due to instability of homelessness may aggravate glucose levels. Inability to coordinate scheduling of meals with insulin dosage may result in poor control of serum glucose. Renal/ocular damage, increased susceptibility to infections are possible.</td>
</tr>
<tr>
<td>Hypertensive</td>
<td>High salt, saturated fat, and cholesterol, which commonly abound in food available to the homeless, can exacerbate hypertension (or indeed predispose the previously unaffected to the condition).</td>
</tr>
<tr>
<td>Pregnant</td>
<td>Pregnancy imposes major special demands, with need to: monitor weight gain; provide food supplements, including multivitamins and multiminerals; and furnish foods rich in calcium and iron.</td>
</tr>
<tr>
<td>Lactating</td>
<td>See above regarding nutritional supplements, calcium, and iron.</td>
</tr>
<tr>
<td>Menopausal</td>
<td>Special dangers of osteoporosis due to dramatic loss of calcium from bones (see Table 1).</td>
</tr>
<tr>
<td>Growing child</td>
<td>Even short-term periods of hunger can cause physical or mental disabilities for a growing child.</td>
</tr>
<tr>
<td>Elderly</td>
<td>Specific nutritional needs and requirements usually not met by diet available to the homeless; osteoporosis is a major problem.</td>
</tr>
<tr>
<td>Lactose intolerant</td>
<td>This intolerance is prevalent in adult Blacks, Orientals, and some Whites with Mediterranean backgrounds. Inactive lactase enzyme results in undigested lactose (from milk and dairy products), leading to diarrhea and gas pain. Foods rich in calcium must be found to replace milk and dairy foods.</td>
</tr>
<tr>
<td>Taking diuretics</td>
<td>Depletion of potassium reserves.</td>
</tr>
<tr>
<td>Taking antacids</td>
<td>Imbalance in absorbed aluminum or magnesium.</td>
</tr>
<tr>
<td>Taking tranquilizers</td>
<td>Depressed appetite.</td>
</tr>
<tr>
<td>Taking isoniazide</td>
<td>This drug (for treatment of tuberculosis) interferes with Vitamin B₁₂ metabolism.</td>
</tr>
<tr>
<td>Taking dilantin</td>
<td>This drug (for treatment of epilepsy) interferes with folic acid metabolism.</td>
</tr>
<tr>
<td>Taking aspirin</td>
<td>Microscopic bleeding may lead to anemia.</td>
</tr>
<tr>
<td>Eating from dumpsters</td>
<td>Food poisoning, food-borne parasites, malnutrition.</td>
</tr>
<tr>
<td>or other sources of refuse</td>
<td></td>
</tr>
<tr>
<td>Taking street drugs</td>
<td>Various interactions with the diet may lead to myriad nutritional deficiencies.</td>
</tr>
</tbody>
</table>

*Note.* See Winick (1985) for a fuller discussion of some of these problems. See Brickner et al. (1984) for a fuller discussion of diabetes and hypertension.

whom are already valiantly struggling with less-than-adequate funding and other resources to meet the day-to-day survival needs of their homeless clients.

### SOCIAL ASPECTS OF EATING IN SHELTERS OR SOUP KITCHENS

Mealtimes in shelters or soup kitchens are often silent. People usually eat quickly with little or no social interaction. Homeless people are hungry and may fear that others will take their food. Often there is competition to be first in line, because many food sites do not always have enough food for everyone.

The following suggestions may enable food providers to facilitate a more positive climate during mealtimes: The area should be clean, airy, and well (but not brightly) lighted; staff should be respectful, caring, and courteous; facilities should be provided for hand washing and toileting; soft music and plants can help create a relaxing environment; smaller tables seating three or four will help decrease the
“institutional” aspect and encourage conversation and warmth; family units should be seated together; and in addition to the basic menu, guests should have several other options to choose from (e.g., a jar of peanut butter with bread at each table allows the guest to make an extra healthy meal for later).

ACCESS TO SUPPLEMENTAL FOOD PROGRAMS

Today, eligibility for food stamps is based on assets and income. Although a fixed residence and cooking facilities are no longer required for food aid, and despite the fact that homeless persons are eligible for expedited aid, they still often need help in negotiating the system. Getting to the right place at the right time with the necessary information about assets and income is a complex task which may require the help and presence of a concerned person, such as a CHN or other care provider.

Homeless persons are entitled to food stamps, the special supplemental food program for women, infants, and children (WIC), and child nutrition programs including school breakfast and lunch and summer feeding programs. Estimates are that 95% of all public schools and 25% of all private schools participate in the school lunch program (Interagency Council, 1989). Getting children into a school lunch program requires getting them into a school, which necessitates proof of up-to-date immunizations.

AN EDUCATIONAL PROGRAM FOR FOOD PROVIDERS

Health Care for the Homeless, Inc. of Maryland (a nonprofit agency funded by federal, state, and private contributions) has developed an educational program which provides practical information on how food providers can upgrade the nutritional content of meals and meet the special nutritional needs of the homeless.

Each year, staff from the agency conduct a 2-hr workshop at the invitation of an annual conference of central Maryland agencies providing food services to the homeless. The workshop consists of both lecture and discussion and includes a 10-page handout of recommended low-cost menus as well as quick and practical suggestions to improve food services. Last year’s workshop was attended by approximately 100 food providers. In addition, the agency funds community health outreach nurses, based in shelters and soup kitchens throughout central Maryland, who also present the material on an agency-by-agency basis.

The program stresses the importance of working within the limits of a given agency, whose services may be restricted by funding, staffing, or space constraints. The educational content aims to help food providers optimize the nutritional content of their offerings and meet the special needs of their homeless clients who are alcoholic, diabetic, pregnant, or have some other special condition. The material also highlights the importance of food in terms of the homeless person’s general health and stresses the advantages of a congenial social atmosphere at mealtimes.
Throughout, the focus is on down-to-earth suggestions that can benefit even agencies with low budgets. (Those wishing more information about this educational program should contact Jacquelyn Gaines, Executive Director, Health Care for the Homeless, 232 North Liberty Street, Baltimore, MD 21201.)

REFERENCES


