The Boston Health Care for the Homeless Program: A Public Health Framework

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During the past 25 years, the Boston Health Care for the Homeless Program has evolved into a service model embodying the core functions and essential services of public health. Each year the program provides integrated medical, behavioral, and oral health care, as well as preventive services, to more than 11 000 homeless people. Services are delivered in clinics located in 2 teaching hospitals, 80 shelters and soup kitchens, and an innovative 104-bed medical respite unit. We explain the program's principles of care, describe the public health framework that undergirds the program, and offer lessons for the elimination of health disparities suffered by this vulnerable population. (*Am J Public Health.* 2010;100:1400–1408. doi:10.2105/AJPH.2009.173609)

Homelessness remains a bewilderingly complex public health challenge that has long thwarted simple solutions. Homelessness magnifies poor health, exposes those in crowded shelters to communicable diseases, complicates management of chronic illnesses, and uncovers deep fault lines in our health care system. For those who are homeless, the relentless daily struggle for safe shelter and a warm meal overshadows health needs, leaving common illnesses to progress and injuries to fester. A vast array of obstacles exasperates clinicians serving the homeless and confounds delivery systems intended to help this population. As many as 13.5 million Americans are estimated to have been homeless at some point in their lives,[1] and the nation's homeless population on any given night ranges from 250 000 to 3.5 million.[2,3]

Many studies have found evidence of premature mortality among homeless persons.[4,5] In Philadelphia, the mortality rate in a cohort of homeless adults was 3.5 times higher than in the general population.[6] A Boston study found that homeless men aged 18 to 44 years were several times more likely to die than were their housed counterparts.[7] In a bitter urban irony, homeless persons sleep neglected in the long shadows cast by towering academic medical centers that offer sophisticated health care to persons from throughout the country and the world.

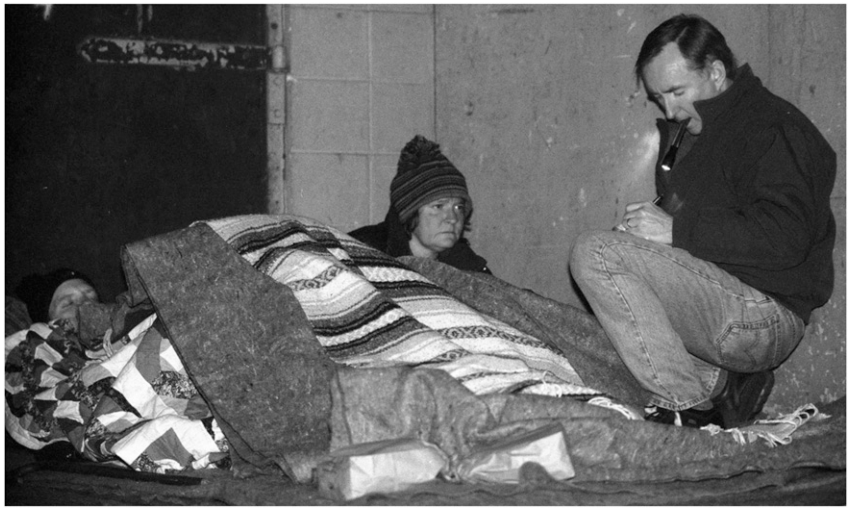
No study has previously articulated a public health framework designed to capture the dimensions of prevention, treatment, and continuity of care necessary for a patient-centered, multisector service delivery model for homeless populations. We begin to address this deficit by analyzing the country's largest and most comprehensive freestanding health care for the homeless program, the Boston Health Care for the Homeless Program (BHCHP). We analyze BHCHP's history and evolution from a public health perspective by using the 3 core functions and 10 essential services of public health identified by the landmark Institute of Medicine report *The Future of Public Health*.[8] To do so, we reviewed: (1) BHCHP's original 1984 grant proposal to the Robert Wood Johnson Foundation (RWJF), (2) annual reports to RWJF and then to the Health Resources and Services Administration's (HRSA's) Bureau of Primary Health Care, (3) publications and articles in the BHCHP archives, and (4) interviews with key clinicians and administrators. On the basis of this review, we describe a public health framework for improving the health of homeless persons that is generalizable to other programs working to eliminate health disparities among marginalized populations.

BHCHP'S EVOLUTION AND PRINCIPLES

In 1984, Boston mayor Raymond Flynn and Massachusetts governor Michael Dukakis convened a community coalition of more than 80 people representing shelters, homeless service agencies, hospitals, community health centers, nursing and medical schools, and state and city governments, as well as homeless persons and advocacy groups. The coalition conducted an extensive community needs assessment, identified gaps in existing health care services, and wrote a grant proposal for a 4-year RWJF pilot grant ($300 000 annually). In 1985, Boston was 1 of 19 cities nationwide to receive this grant (subsequently matched by an additional $250 000 annually from the state of Massachusetts). As reflected in the first annual report to RWJF, the new program began offering clinical services on July 1, 1985, with a staff of 7.

Most homeless persons were uninsured at that time, and primary and preventive care were mostly inaccessible to them. The coalition insisted that health care be embraced as a matter of social justice rather than charity, and they defined the program's mission to ensure that the highest-quality health care would be available to all homeless men, women, and children in Boston. The coalition, wary of Boston's medical establishment and fearing the creation of a second-tier system of charitable care, initially viewed volunteers as anathema and challenged the new program to serve as a viable professional career for health professionals. Continuity of high quality, accessible care was envisioned not only horizontally across the community (e.g., shelters, soup kitchens, day programs, detoxification units, and housing programs) but also vertically within the health care system (from shelter and street clinics, to emergency rooms and hospitals, to respite care).

Following are 6 guiding principles that were articulated in the original grant proposal and the first annual report to RWJF, and that were refined during the early years of the program:



A trusting relationship between patient and provider is a critical part of the care delivered by Boston Health Care for the Homeless Program. Providers seize every opportunity to engage patients and to earn trust through consistency and patience.

1. Continuity of care from street and shelter to hospital requires an enduring and trusting relationship between the doctor or clinician and patient.
2. Multidisciplinary teams should deliver care.
3. BHCHP should act as a catalyst within the mainstream health care system to ensure that the special needs of homeless persons are addressed.
4. BHCHP should serve as the "glue" linking hospitals and health centers with the community of shelters and homeless service providers.
5. BHCHP should strive to bridge medicine and public health.
6. BHCHP should create and implement "respite care."

These 6 principles have served as the foundation of BHCHP's philosophy of care over the subsequent 25 years. Today, BHCHP is 1 of more than 200 health care for the homeless projects funded by HRSA's Bureau of Primary Health Care, with an accompanying mandate to serve persons who meet the federal definition of homelessness. The BHCHP service delivery model includes daily primary care clinics at 2 academic medical centers as well as direct care clinics in more than 80 outreach sites throughout metropolitan Boston. A 104-bed medical respite program uniquely bridges the continuum of care between hospitals and the shelter or street.

In 1996, BHCHP implemented the nation's first electronic medical record system for homeless programs. BHCHP has also helped homeless persons navigate complex health insurance and disability systems. By 2005, slightly more than 75% of all BHCHP patients were insured through either MassHealth (Massachusetts Medicaid), Medicare, or both. In 2008, major renovation of a historic building adjacent to the Boston Medical Center campus resulted in a state-of-the-art facility housing a comprehensive clinic with integrated medical, behavioral, and dental health care; full pharmacy services; and an expanded respite care program.[9] With more than 350 full- and part-time staff, BHCHP's annual budget grew to $30 million in 2009. Figure 1 provides a detailed timeline of milestones in BHCHP's history, and Figure 2 illustrates BHCHP's growth in annual operating budget and number of unduplicated patients.

A PUBLIC HEALTH FRAMEWORK FOR HEALTH CARE FOR HOMELESS PERSONS

BHCHP now represents a public health system that fulfills the 3 core public health functions of (1) assessment, (2) policy development, and (3) assurance, as well as the 10 corresponding essential public health services (Table 1).

Assessment

Essential service #1: Monitor health status to identify community health problems. Monitoring health status first requires estimating the extent of homelessness, a process complicated by the geographic and temporal transience of the homeless population and by logistical difficulties with sampling techniques. In response, BHCHP has worked closely with the mayor's Emergency Shelter Commission, which hosts an annual single-night census in December that represents the most accurate point-in-time count of all persons without permanent housing in Boston. The count on December 15, 2008, identified 7681 homeless individuals sleeping in emergency shelters, on the streets, and in transitional programs, an increase of 11% over the previous year.[10]

In 1996, BHCHP also became the country's first health care for the homeless program to implement an electronic medical record system. Prior to this development, paper-based documentation of patient visits to any given shelter was inaccessible at other care-delivery locations. The fully computerized electronic medical record system now allows immediate access to more than 60 000 BHCHP records from 80-plus Boston hospital and shelter sites.[11,12] The electronic medical record can aggregate all patient clinical data, allowing monitoring of health outcomes, reporting on quality measures, and assessment of benchmarks in chronic disease management. The electronic medical record also facilitates identification of emerging health problems, e.g., allowing shelter clinics and area emergency departments to participate in the Boston Public Health Commission flu surveillance program.

So-called "rough sleepers," who live on the streets and assiduously avoid shelters, are among the highest utilizers of emergency department and hospital services, and they pose formidable challenges to the health care system. Since 1994, BHCHP's Street Team has participated in monthly meetings led by Boston's Emergency Shelter Commission (which includes police, emergency medical personnel, neighborhood groups, outreach workers, and other medical, mental health, and substance abuse specialists from hospitals and human

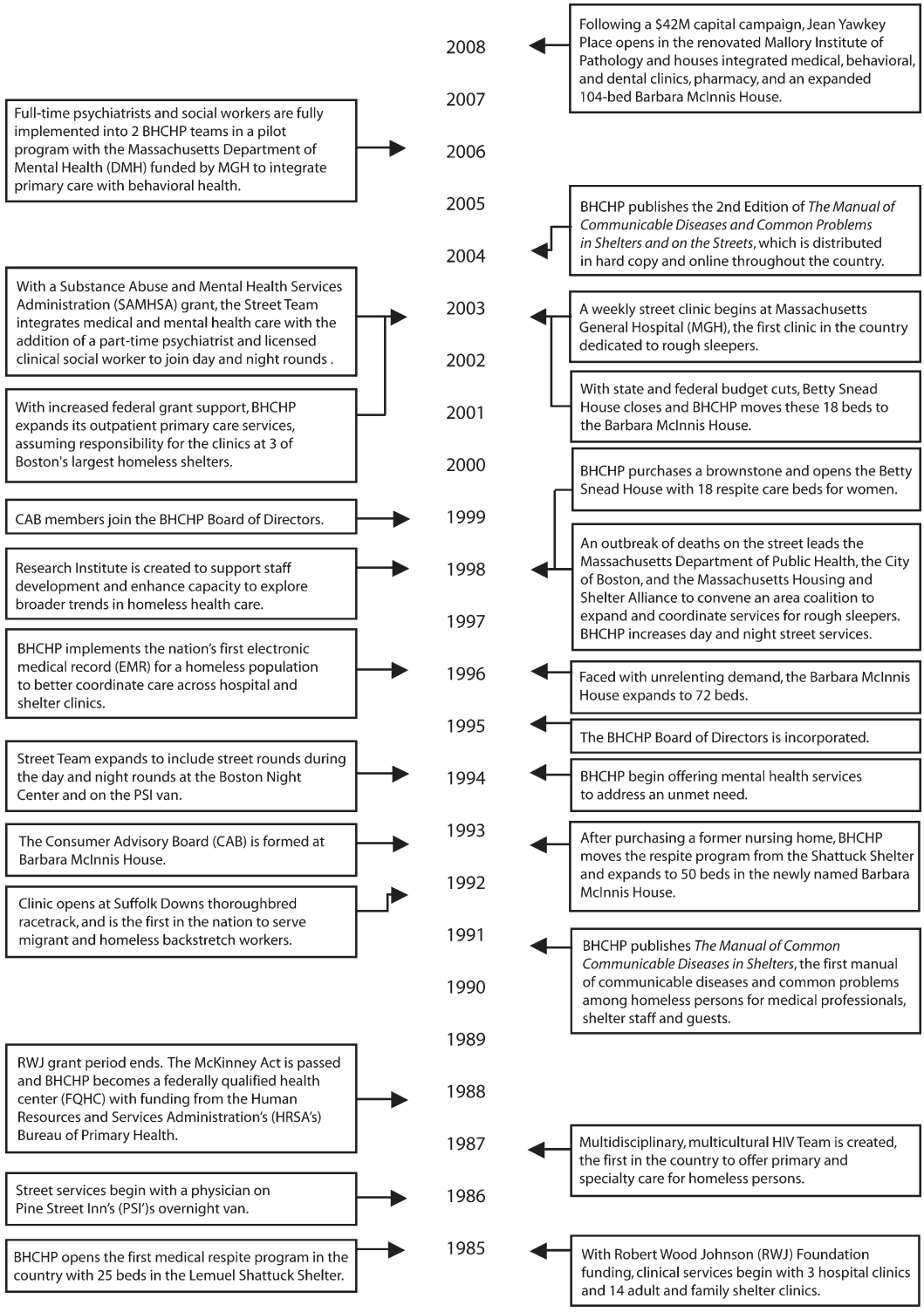


FIGURE 1—Timeline of milestones achieved by the Boston Health Care for the Homeless Program (BHCHP): 1985–2008.

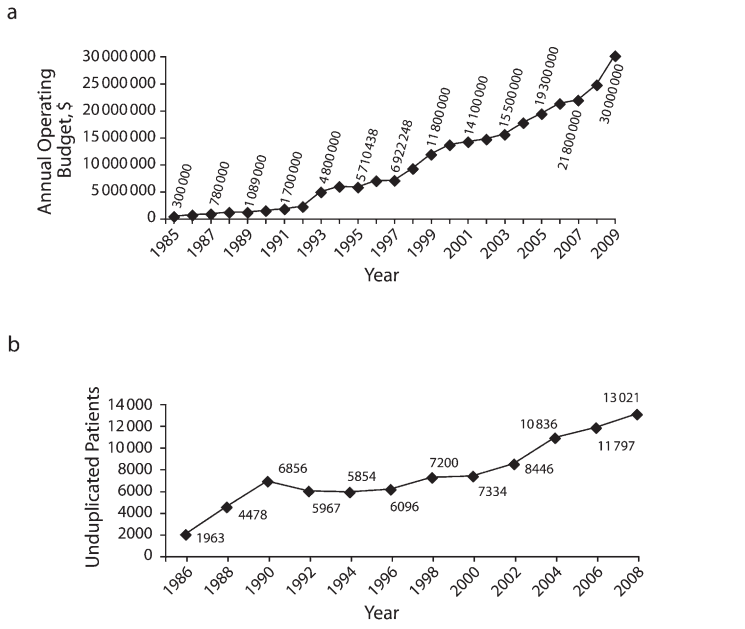


FIGURE 2—Boston Health Care for the Homeless Program's (BHCHP's) increases in (a) annual operating budget (1985–2009) and (b) number of unduplicated patients (1986–2008).

service agencies) to monitor and plan for the care of these rough sleepers. BHCHP has been conducting a 10-year prospective observational study of a cohort of 119 rough sleepers since January 2000.[13] In the first 5 years, this group had 18 364 emergency room visits, and the group's crude mortality rate exceeded 40%.[14] The disproportionate health burden that BHCHP has documented for rough sleepers has stimulated discussions on better coordination of primary and preventive care for this high-risk subpopulation.

Essential service #2: Diagnose and investigate health problems and health hazards in the community. Since its launch, BHCHP has responded to community and provider feedback about poor coordination between shelters and medical communities. A 1984 survey of 2 adult shelters found that virtually all homeless persons lacked dental care, with several experiencing acute pain that required immediate attention.[15] The commitment to continuous care that is coordinated with shelters underscores BHCHP's guiding principles #1 and #4.

BHCHP uses the electronic medical record system to document health hazards that have been shown to be more prevalent among homeless persons and to include common conditions exacerbated by persistent poverty[16–18] as well as traumatic brain injury and violence,[19,20] common skin diseases that trigger hospital admissions for cellulitis resulting from inadequate foot care (which is associated with limb-threatening and life-threatening infections),[21,22] hypothermia and frostbite, and conditions otherwise rare in contemporary America (e.g., diphtheria, pellagra, and endocarditis caused by *Bartonella quintana* carried by lice).[17,21]

Another key strategy used to provide essential service #2 relates to minimizing public health threats in vulnerable shelter communities through case tracking, surveillance, outreach and education, and broad-scale treatment. For example, an intense collaboration by state and city public health departments, homeless shelters, and BHCHP uncovered an epidemic of almost 100 cases of non-HIV-related multidrug-resistant pulmonary tuberculosis in 1985, which precipitated aggressive outreach efforts to deliver a full 18-month course of treatment.[23] Subsequently, tuberculin skin testing twice yearly for staff and patients (with prophylactic treatment of those testing positive) has become routine, reflecting BHCHP's commitment to bridge medicine and public health (guiding principle #5).

When the AIDS epidemic overwhelmed Boston's homeless community in 1987, BHCHP dedicated a multicultural, multilingual team to work directly with Boston City Hospital's newly formed AIDS Clinic, the country's first team to offer primary and specialty care for HIV-positive homeless persons. BHCHP providers offered care not only in the shelters and soup kitchens but also in the AIDS Clinic, in areas including oncology, infectious disease, psychiatry, dental care, and social services.[24]

Most recently, BHCHP has been working closely with the Boston Public Health Commission to actively monitor homeless persons for signs and symptoms of swine flu (H1N1).

Policy Development

Essential service #3: Inform, educate, and empower people about health issues. BHCHP's education-related efforts encompass several strategies. First, BHCHP has sought to integrate homelessness into medical, nursing, and social work school curricula (in accordance with guiding principle #3), including a primary care clerkship rotation for third-year students at Harvard Medical School as well as electives for medical residents in Boston's teaching hospitals. Local nursing and social work students participate in regular shelter clinics and in the medical respite program. All BHCHP physicians have faculty appointments enabling mentorship of Harvard University and Boston University medical students.

Other educational efforts have underscored prevention, particularly with regard to communicable disease outbreaks in crowded shelters. In 1991, BHCHP collaborated with the Bureau of Primary Care and the National Health Care for the Homeless Council to publish the first manual of communicable diseases and other problems that are common among homeless persons for medical professionals, shelter staff, and shelter guests.[25] The second edition, strengthening the bridge between medicine and public health (per guiding principle #5), was published in 2004.[26] Since then, 5000 copies of the manual have been distributed nationally, with particularly high utilization in emergency shelters in the aftermath of Hurricane Katrina. An electronic version of

TABLE 1—The 3 Core Functions and 10 Essential Services of Public Health: Boston Health Care for the Homeless Program (BHCHP)

Essential Service	BHCHP Actions
Assessment	
Essential service #1: Monitor health status to identify community health problems.	• Assess the number of homeless persons in Boston. • Introduce electronic medical records for individual assessments. • Launch a prospective study of a "rough sleeper" cohort.
Essential service #2: Diagnose and investigate health problems and health hazards in the community.	• Respond to community feedback on the basis of needs assessments. • Identify and monitor health conditions of concern to homeless populations by using electronic medical records, case tracking, and surveillance.
Policy development	
Essential service #3: Inform, educate, and empower people about health issues.	• Develop professional education resources about homeless health care issues.
Essential service #4: Mobilize community partnerships to identify and solve health problems.	• Develop innovative and nontraditional partnerships.
Essential service #5: Develop policies and plans that support individual and community health efforts.	• Receive Federally Qualified Health Center designation, and shift to sustainable payment mechanisms. • Expand space and reimbursement capacity.
Assurance	
Essential service #6: Enforce laws and regulations that protect health and ensure safety.	• Ensure access to entitlements and benefits.
Essential service #7: Link people to needed personal health services and assure the provision of health care when otherwise unavailable.	• Bring on-site services to people on the streets and in shelters. • Provide dedicated medical respite care. • Develop specialty services to address unmet needs. • Provide home visits.
Essential service #8: Assure a competent public health and personal health care workforce.	• Utilize a multidisciplinary team approach to care. • Promote health care for the homeless as a dedicated career choice.
Essential service #9: Evaluate effectiveness, accessibility, and quality of personal and population-based health services.	• Employ governance bodies to inform services and structure. • Identify divergent needs of homeless individuals and families.
Across all functions	
Essential service #10: Research for new insights and innovative solutions to health problems.	• Develop internal research department and future research aims. • Establish partnerships with schools of medicine and public health.

Source. The 3 core functions and 10 essential services of public health were taken from the Institute of Medicine, Committee for the Study of the Future of Public Health, Division of Health Care Services.[8]

the manual has been made available online (http://www.bhchp.org/BHCHP%20Manual/pages/chapters.html).

Several BHCHP studies have affected policies and services. A 1985–1986 study documenting that deaths on the street occurred throughout the year and not just during the cold winter months (J.J. O'Connell et al., unpublished data, 1987) led to year-round funding for an overnight van. A subsequent study of a cluster of 1998–1999 deaths on the streets resulted in state and city funding for a second overnight van, a critical resource that continues to be used today.[13] BHCHP's prospective study of the mortality and morbidity of rough sleepers, noted above, has helped to stimulate local and national efforts to launch low-threshold "housing first" programs.[27]

Essential service #4: Mobilize community partnerships to identify and solve health problems. BHCHP has developed an array of innovative, nontraditional partnerships. One example involves addressing the needs of more than 400 migrant and homeless workers living and working in the stables of a local racetrack. These workers were concerned that if they left the track to seek medical care, they might lose an entire day's wages. BHCHP created a primary and preventive care team that conducts rounds in the racetrack's stables and holds 2 weekly clinics for racetrack workers in a trailer adjacent to the barns, near the racetrack's back stretch—the first such team in the United States. This effort has brought attention to similar needs at other thoroughbred racetracks nationwide.[28]

BHCHP similarly coordinated a unified network of clinics throughout 80-plus Boston shelters and soup kitchens (guiding principle #4) and now coordinates health care throughout this network.

Essential service #5: Develop policies and plans that support individual and community health efforts. BHCHP has focused heavily on sustainable payment mechanisms. As the RWJF health care for the homeless program neared completion in 1987, the Stewart B. McKinney Homeless Assistance Act, public law 100–77, included BHCHP and the 18 other pilot projects in a national Health Care for the Homeless program funded by HRSA's Bureau of Primary Health Care under section 340 of the Public Health Service Act. This program, now organized and funded as part of the Consolidated Health Centers Act, serves more than 700 000 homeless persons annually through 205 projects in every state and the District of Columbia, Puerto Rico, and the US Virgin Islands.[18] This development endowed BHCHP with federal qualified health center status, which permits cost-based reimbursement for services rendered by specified

clinicians to persons covered by Medicaid or Medicare.

Approximately 75% of BHCHP's revenue portfolio now comes from third-party Medicaid and Medicare payments, reflecting sustainable operations within the mainstream health care system (guiding principle #3).

Assurance

Essential service #6: Enforce laws and regulations that protect health and ensure safety. Ensuring access to entitlements and eligible benefits (guiding principle #3) is especially relevant to homeless persons. Despite the heavy burden of co-occurring illnesses among this population, the process of documentation for disability determination is complicated by inaccessible medical records, the obscurity of the Social Security Administration's guidelines in the listing of impairments,[29] and doctors' reluctance to complete onerous forms for little or no reimbursement. BHCHP teams realized that helping eligible patients navigate the system to obtain Supplemental Security Income or Social Security Disability Insurance benefits to which they were entitled would be essential to assurance. Working closely with Greater Boston Legal Services and the National Health Care for the Homeless Council, BHCHP has worked to simplify this process and educate health care for the homeless clinicians nationwide.[30]

BHCHP has also participated in Massachusetts's vanguard efforts to expand health insurance for the homeless poor. Chapter 58, the state's 2006 universal health care legislation, extended earlier reform efforts under the 1115 Medicaid waiver of 1996 to cover individuals without recent work histories and with incomes of less than 100% of the poverty level,[31] which includes many homeless persons.

Benefits eligibility alone does not assure benefits enrollment, so in 1996, BHCHP and other advocates successfully encouraged MassHealth to collect and update demographic information on housing status to facilitate enrollment of persons without addresses. BHCHP now serves as a point of contact between homeless individuals and MassHealth, helping the agency to locate, enroll, and periodically re-verify the eligibility of homeless individuals, who rarely have stable contact information. In 2005, when federal law mandated a higher standard of primary documentation of identity and citizenship to obtain Medicaid coverage, BHCHP worked with others to assist homeless individuals in obtaining state-issued identity cards and both in-state and out-of-state birth certificates. Except for those unable to produce required documentation, virtually all of Boston's homeless are now eligible to receive MassHealth, and about 75% of BHCHP patients manage to keep these crucial benefits without interruption.[32]

Essential service #7: Link people to needed personal health services and assure provision of otherwise unavailable health care. At the request of the community coalition, BHCHP has never used a more traditional outreach-and-referral system; instead, BHCHP has brought comprehensive services directly to patients. Anticipating that health care needs will often be acute, intensive, and unpredictable, teams are designed with flexible schedules and smaller panels, allowing them to better engage with individuals who have eschewed traditional care. Multidisciplinary teams also ensure that patients receive needed care from familiar clinicians in familiar settings (guiding principles #1 and #2).

Since 1986, BHCHP has developed the concept of "street medicine," which entails directly delivering primary and continuous care under bridges, in parks and encampments, down back alleys, on grates, and in doorways. Reflecting guiding principle #1, a physician, nurse practitioner, and physician assistant regularly accompany an overnight van bringing soup, sandwiches, blankets, clothing, and health care to homeless people, and earning their trust through a reliable presence. After an outbreak of street deaths during the winter of 1998–1999,[13] the BHCHP Street Team expanded and began making rounds 4 days a week, combing the downtown area and other areas of the city frequented by rough sleepers. In 2002, the team initiated a unique weekly clinic at Massachusetts General Hospital (caring for 40–60 individuals per session) to address the street population's more intensive needs. Patients' initial fear of hospitals was overcome by a welcoming waiting room, meal vouchers, and especially by direct access to familiar, trusted clinicians.

BHCHP embraces continuity of care, which is exemplified by the program's ability to follow a cohort of rough sleepers prospectively for the past 10 years, as noted earlier (guiding principle #1). The BHCHP Street Team has established that street rounds can also serve as a platform for primary and preventive care of chronic diseases. For example, people living on Boston's streets now receive annual flu vaccines, periodic skin testing for tuberculosis, regular blood pressure checks, and hemoglobin A1C testing. In 2007, 79% of the rough sleeper cohort received or were offered flu vaccinations; among eligible female patients, 45% received Papanicolaou tests, and 56% received mammograms.[33]

BHCHP has led the development of medical respite care for homeless persons, in accordance with the program's guiding principle #6. Medical respite care offers a safe alternative to hospitalization for homeless persons. Changes in the health care system during the past 30 years—including the advent of Medicare's diagnosis-related groups, with concomitant dramatic reductions in hospital lengths of stay; the proliferation of outpatient surgery; and the increase in provision of outpatient treatments—have increased the acuity and complexity of illness among those seeking respite care. To meet these growing needs, in September 1985 BHCHP opened the nation's first medical respite care program, with 25 beds nestled in a corner of the 125-bed Lemuel Shattuck Shelter, on the grounds of a state public health hospital. Currently, BHCHP's 104-bed Barbara McInnis House offers a wide variety of care—acute and subacute, pre- and postoperative, rehabilitative and recuperative, palliative and end of life—to almost 2000 homeless persons annually. Recent studies have shown that such respite programs not only broaden the care continuum but also may be cost-effective.[34,35]

The development of BHCHP's comprehensive dental services is another way in which the program provides essential service #7. In response to the city's 1984 needs assessment,[15] the provision of dental services began modestly, with a part-time dentist working in 2 shelters in 1985. The dental program grew to include portable equipment and served individuals at a soup kitchen, shelters, and motels (1990), a second dentist and permanent operatory at the Barbara McInnis House (1994), a shared dental clinic with the South End Neighborhood Health Center (2003), and now a 5-operatory dental clinic at BHCHP's new facility, in which 3 dentists

offer a full range of comprehensive oral health care services, assisted by students and fellows from area dental schools.

Current efforts to ensure continuity of care include BHCHP's efforts to make house calls to chronically homeless persons placed in housing throughout the metropolitan area. Recent federal policies to end chronic homelessness through low-threshold housing programs have challenged the traditional boundaries of health care for the homeless programs. Supportive home health care services are best delivered by teams of clinicians who have cared for these individuals for years, especially because many newly housed persons fear abandonment by longstanding providers. BHCHP has embraced the development of house calls and supportive health care services for chronically homeless individuals who are newly housed.

Essential service #8: Assure a competent public health and personal health care workforce. By utilizing multidisciplinary teams (guiding principle #2) of doctors, nurse practitioners or physician assistants, nurses, mental health clinicians, and case workers, BHCHP strives to deliver integrated, coordinated, and continuous care across BHCHP's varied hospital and shelter clinics as well as on the street, minimizing the need for referrals to other sites or institutions.

The complex, frequently co-occurring medical, mental health, and substance abuse problems of this population require special attention to all the clinical, emotional, and social dimensions of care (guiding principle #5). BHCHP has sought to build such expertise by engaging full-time staff committed to careers (guiding principle #3) in the care of poor and marginalized people. BHCHP believes that health care for homeless and poor urban populations should represent a viable, attractive career choice rather than a brief volunteer effort or a temporary diversion from more traditional career paths.

Essential service #9: Evaluate effectiveness, accessibility, and quality of personal and population-based health services. BHCHP's Consumer Advisory Board (CAB) helps identify and overcome obstacles to accessibility. Funded and instituted in the early 1990s, BHCHP's CAB represents homeless or formerly homeless individuals receiving care from BHCHP clinicians. The CAB meets monthly and functions autonomously, with BHCHP's administrators and staff attending by invitation only. Since 1999, CAB members have served on BHCHP's board of directors, thereby ensuring that consumers actively participate in program governance, evaluation, and service development.

Two examples illustrate the CAB's impact. In response to concerns about how best to approach persons sleeping under bridges and in the parks, who might view nightly physician visits as unwanted intrusions, the CAB convened a focus group of rough sleepers who urged the Street Team to awaken people night or day to assess health issues, a strategy that remains a core component of the Street Team's care model. Similarly, the CAB noted the stigma associated with hospital cards and MassHealth ID cards that identify individuals as patients of the Boston Health Care for the Homeless Program. As a result, BHCHP is now identified on these cards as the "McInnis Health Group," and the word "homeless" has been removed.

Other evaluative efforts include identifying divergent needs of homeless individuals and families. In contrast to unattached adults who could not identify a doctor or regular source of care other than an emergency room, homeless mothers usually identified a specific doctor or site of care for their children. In response, BHCHP collaborated with neighborhood health centers and pediatric clinics to ensure continuity of care for homeless families and to help provide care for families in motels.

Essential Service #10: Research for New Insights and Innovative Solutions to Health Problems

This essential service cuts across all 3 core public health functions. In 1998, recognizing the need for research and evaluation to guide quality improvement, BHCHP established a small research department to evaluate the program's service delivery model; educate the general public and policymakers about health care for the homeless; and support teaching, education, and research in this area. Members of the BHCHP team have contributed to a number of published studies,[24,36,37] and ongoing investigations in collaboration with area medical centers and universities are analyzing the effectiveness of medical respite care, the impact of housing on health, the integration of medical and mental health care, and health disparities borne by homeless populations.

ACCOMPLISHMENTS AND CHALLENGES

Previous descriptions of health care for the homeless programs have explicitly cited the need for a public health framework,[38–40] prevention,[41] the coordination of primary care with mental illness and substance abuse services,[42] or government programs addressing essential public health services.[43] In response, we offer the first comprehensive public health framework that conceptualizes care and prevention needs for homeless persons by using the lens of the core functions and essential services articulated by the Institute of Medicine. Despite variations in needs and resources throughout the country, we believe this overarching model and the individual service steps outlined within it could be applied in other programs aimed at reducing health disparities among homeless persons and other marginalized groups.

Six guiding principles have been the foundation for the development of BHCHP over a quarter century. The implementation of these principles has resulted in several notable achievements, including medical respite care that bridges the widening chasm between hospitals and shelters, an electronic medical record system that coordinates care and monitors quality measures across 2 hospitals and 80-plus shelter and street clinics, multidisciplinary teams that integrate medical and behavioral care and ensure continuity of care, and the inclusion of consumers in the program's governance and design of services. Other accomplishments include widespread insurance coverage, increased access to disability entitlements, consistent provision of preventive services (such as accessible care for homeless HIV-infected persons that facilitates antiretroviral therapy and monitoring of hemoglobin A1C levels), and progress in many primary care indicators (such as cervical and breast cancer screening) across a vigorous continuum of care.

The unique political and health care climate in Massachusetts undoubtedly accelerated the growth of BHCHP. The program's mission has

been supported not only by city and state officials, teaching hospitals, and community health centers, but also by a creative state Medicaid agency. Nonetheless, many components of the BHCHP public health framework have been adapted and improved upon by programs in other cities. For example, respite care programs have been implemented in more than 50 cities throughout the United States and Canada, growing numbers of centers utilize electronic medical records to improve quality and coordination of care, and the participation of consumers in governance is commonplace among health care for the homeless programs.

The societal goal of ending homelessness remains a Sisyphean task. The collapse of the economy in 2008 fueled more homelessness in shelters and on the streets, and dropping tax revenues in many states have forced dramatic cuts in health and human services. The high prevalence of co-occurring medical, psychiatric, and substance abuse conditions also poses major challenges. Integration of care across traditional "silos" of care delivery is constantly hampered by disparate regulations, eligibility rules, and payment methods. The paucity of evidence-based studies, inconsistent definitions of homelessness, a lack of consistent and comparable data collection, and difficulties with long-term follow-up are major challenges to the evaluation of effective models of care for homeless populations.

Low-threshold housing programs, such as "housing first" initiatives, are innovative approaches to ending homelessness for persons who chronically live in shelters and on the streets. Health care for the homeless programs across the country face the dilemma of whether to continue to care for these persons after they have been housed. The health care needs of newly housed individuals are legion, and BHCHP has chosen to embrace the challenge of creating flexible home health care services that include house calls, ensure continuity of care, and preserve long-standing doctor-clinician relationships. Challenges for the future include defining these supportive services, negotiating payment mechanisms, and developing long-term plans to integrate low-threshold housing programs with the BHCHP service model.

To improve the health of homeless persons, we must develop comprehensive public health systems that offer a continuum of care and prevention. Further improvements require an ever-expanding collaboration between health care providers, social service professionals, and other sectors, including education, health, environment, welfare, labor, justice, and housing. When our approach to helping the homeless is oriented toward public health and takes social determinants of health into account, we can better maximize attainable health for all.[44] ■

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Contributors

J.J. O'Connell and H.K. Koh conceptualized the article, led the writing of the article, and led all other aspects of the study process. S.C. Oppenheimer and C.M. Judge assisted with writing and data analysis. R.L. Taube, B.B. Blanchfield, and S.E. Swain provided data for analysis and critically reviewed the article.

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Note. H.K. Koh, former director of the Division of Public Health Practice, Harvard School of Public Health, is currently the Assistant Secretary for Health for the US Department of Health and Human Services. The article below was written prior to his appointment as the Assistant Secretary for Health and does not necessarily represent the views of the Department of Health and Human Services or the United States.

Human Participant Protection

No protocol approval was necessary because no human research participants were involved.

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