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SPECIAL VERSION

FOR UCLP VALUE IN HEALTH CARE DELIVERY PROGRAM
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University College London Hospital, a leading hospital on North Central London, was providing care for a growing number of homeless people, who involved long stays and were often repeatedly admitted and discharged. Nurse Trudy Boyce and Dr Nigel Hewett had developed a new model for homeless care that was introduced in October, 2009. The hospital's board and The London Pathway charity was evaluating the program to date and considering how to improve the model and expand it.

Homelessness and Health

In 2010, an estimated 40,500 people in England were homeless (defined as "rough sleepers" - those sleeping on the streets - plus those in hostel accommodation).[1] Local authorities were responsible for ensuring shelter for homeless people and every year, tens of thousands of people applied to their local authority for homelessness assistance. To be legally defined as homeless, an individual had to either lack a secure place in which they were entitled to live, or were not reasonably able to stay in their current accommodation. For a local authority to have a duty to find an individual housing, further strict criteria had to be met. With increasing financial constraints for local authorities, fewer people were deemed eligible. In practice, without dependent children (known as 'single homelessness'), a homeless person was seldom entitled to housing support.

The experience of homelessness could have seriously detrimental effects on physical and mental well-being. This was especially true for rough sleepers, who had an average life expectancy of 40.5 years compared with the U.K. national average of 74 for men and 79 for women.[2] Poor physical or mental health, along with dependency on drugs and alcohol, were problems for the entire homeless population, whether they were sleeping rough on the streets, in hostels, or in overcrowded or temporary accommodation.

A survey of homeless people living in hostels showed that more than two-thirds were suffering from physical health problems, including conditions such as trench foot, frostbite, wound infections, respiratory problems (asthma, bronchitis and pneumonia), cardiovascular problems (poorly controlled blood pressure and diabetes), and other conditions that have a high correlation with the lifestyle factors associated with homelessness.[3]

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Homeless people accessed healthcare services differently than the general population, if at all. The homeless were 40 times less likely to be registered with a General Practitioner (GP) than the general public.[4] Emergency services, such as Accident and Emergency (A&E), were often used instead of a GP. Homeless people not registered with a GP often had untreated medical conditions that could easily escalate and require urgent medical attention.[5]

Investigations by the Office of the Chief Analyst had shown that the homeless population had almost three times the average length of stay than the national average.[6] This resulted in secondary care costs that were considerably higher than the general population. These costs were not the result of bed-blocking (where patients cannot leave the hospital because they have nowhere to go to), but because of the admitting condition. In other words, homeless patients stayed three times longer in hospital because they were three times sicker.

Homeless Care at University College London Hospital (UCLH)

University College London Hospital (UCLH), located in central London, was one of the largest acute trusts in the NHS, providing secondary and tertiary services including Neurosciences, Cardiac, Cancer, Women's Health, and Gastrointestinal. UCLH had 1,000 beds and an annual turnover of £800m.

In 2009, UCLH admitted 263 homeless people a total of 446 times. Homeless patients were repeatedly readmitted and discharged without proper planning of discharge and little, if any, coordination with other agencies. Homelessness was often not recognized as a condition of interest to clinicians despite the impact it had on fitness for discharge or its relation to mental disorders and addiction. An overview of the admitting reason for homeless patients is shown in **Exhibit 1**.

Homeless patients seen in UCLH often had no address, which created difficulty in coordinating follow up care. They were unable to register with a GP because an address was required to be added to the patient register, and they had no way of receiving letters about follow up appointments from the hospital. Discharge letters and outpatient clinical letters were being sent, quite literally, nowhere as the address used was “no fixed abode”, and the clinical teams had no way of finding patients once they had left the hospital.

In 2008 and 2009, 13% of admitted homeless patients stayed for over 10 days and 5% for over 20 days. Reimbursement levels often did not reflect the costs incurred to treat these patients with long lengths of stay. The Payment by Results program was structured so that a hospital received a reimbursement rate for the admission to cover the primary treatment or procedure the patient received. Each condition or procedure had an anticipated length of stay, which reflected the typical number of days a patient with that condition should stay in hospital. Days beyond the anticipated length of stay (“excess bed days”) were reimbursed with a small daily income that was significantly less than the cost of a hospital bed. For example, excess bed day income was between £138.60 and £240.00 depending on the reason for admission, whereas the cost of running a hospital bed was approximately £500 and could be higher depending on the acuity of the ward. In addition, from April 2011, hospitals no longer received payment for patients readmitted within 30 days of discharge. This presented further financial risk for hospitals caring for homeless patients.

Historically, homeless patients received support from a housing liaison officer, a non-medical role responsible for working with the local boroughs to identify available housing support for the patient. The patient would be reviewed and, if eligible, gain access to emergency or permanent hostel beds. If the homelessness was deemed intentional, the patient would gain no further support.

There was one housing liaison officer for UCLH, working 9-5 on weekdays only. The role was funded by the local Primary Care Trust (PCT), the organisation that was responsible for commissioning care on behalf of their population. There was little visibility of the liaison officer to the medical and clinical staff, and within the borough system, the role was often too junior to be able to find solutions for individual patients quickly.

The New Homeless Care Delivery Model

In 2009, Nurse Trudy Boyce and Dr Nigel Hewett were invited by the UCLH Board to improve homeless services at the hospital, which would be supported by non-recurrent funding from UCLH Charity. The previous standard of care for homeless people had involved only a meeting with a housing coordinator on admission to assess eligibility for housing support from the local authority. Boyce and Hewett set out to develop a more clinically-based, patient-centred care model led by a General Practitioner (GP) and a Homeless Health Nurse Practitioner.

The new model encompassed a new team of a GP (40% time) and a Homeless Healthcare Nurse Practitioner (full-time), a "homeless ward round", and a weekly multidisciplinary meeting. The model aimed to ensure homeless patients were able to access the right care and that their holistic needs were met, both the presenting complaint that led to the admission as well as the broader physical, mental and social conditions. The approach to homeless healthcare is summarised in **Exhibit 2**.

The homeless ward round consisted of regular visits by a GP and a Homeless Healthcare Nurse Practitioner to homeless patients who had been admitted to the hospital, usually through A&E. All admitted homeless patients were visited, regardless of the ward they were admitted to. The team reviewed the patient's clinical condition, provided input into the patient's clinical care, and began planning for discharge. The conventional clinical accountability structure was maintained, whereby the admitting consultant was accountable for the patient during their time in hospital. The GP liaised with, and ensured access to, other clinical specialties and support for the patient, which was particularly important given the "tri-morbidity" of physical ill-health, mental ill-health and addiction often prevalent in homeless patients. The GP also brought expertise in the common co-morbidities of homeless patients and clinical knowledge of the effects of combinations of medications and the impact of proposed medications with other treatments and addictions. The GP wrote in the patient's hospital notes, bringing new information to clinical teams. The GP also had knowledge about how to access other support systems, including support from social care within boroughs.

UCLH employed one full-time Homeless Health Nurse Practitioner, who joined the GP on homeless ward rounds and liaised with medical staff across the hospital and with all other agencies involved. The nurse practitioner provided daily support to homeless patients, including plans for discharge and life after hospital as well as care within it. Often the majority of time was spent on providing non-clinical support to the patient. For example, in order to get access to housing benefits, homeless people needed national insurance numbers, medical certificates, birth certificates and other forms of identification. The homeless health nurse sourced duplicates of these documents, which could be pivotal in accessing housing support on discharge. Since homeless patients seldom had visitors, the homeless health nurse spent time with them, built relationships, and acted as an advocate for the patient in the system.

In addition to the clinical teams, the model involved a "care navigator" role. Formerly homeless people themselves, care navigators guided homeless patients through their time in hospital, and assisted in the post-discharge follow-up care. They supported the Homeless Healthcare Nurse Practitioner's work in the hospital and maintained contact with patients following their discharge

from hospital to help in accessing appropriate follow up care. The care navigators received bespoke training and were in post for 6 months with honorary contracts with the hospital, and as paid employees of voluntary sector organisations (Thamesreach and Street League). The role helped formerly homeless people seeking to rebuild their lives by giving them work experience and the opportunity to develop a valued role in society. For hospitalised homeless patients, the role provided support from people who had experienced homelessness and who understood the patients' fears and concerns.

For the most unwell homeless patients, there was a weekly Multidisciplinary Team (MDT) meeting, or "paper ward round," which took place every Thursday at UCLH. The meeting was run by the GP lead, and normal participants included homeless nurses from the hospital, housing representatives and social service leads from Camden, hospital liaison psychiatry,[a] community drug and alcohol misuse workers from the Camden statutory and voluntary sector, and street outreach workers and hostel key workers by invitation. Participants agreed on care plans and confirmed actions needed for housing support, social care and medical treatment on discharge.

Once a homeless patient was discharged from hospital, the hospital homeless team worked to follow up on progress through whatever means was available. They worked closely with and provided support to the care navigator.

Care plans for homeless patients were documented and held on a computerised database, which could be accessed by UCLH's A&E staff. This supported continuity of care for homeless people and ensured that they received consistent care throughout their interactions with UCLH.

Results

A study in January 2010 examined the impact of the service on patient outcomes and service costs. The evaluation compared a cohort of patients that had been managed by the housing coordinator during April and June of 2009 to a cohort of patients managed in the new model by the GP and Homeless Health Nurse Practitioner during October and November of 2009. Compared to the old model, 10 times as many patients were leaving the hospital with multiagency care plans in place under the new model, an increase from 3.5% to 35%. Continuity of care and compliance with the care plan also increased. The number of homeless inpatients being discharged with the official documents and other information required by local authorities to provide help with housing, finding a GP, and entering community methadone treatment plans also increased. The experience of homeless patients also improved. Quotes from patients about the service are included in **Exhibit 3**.

The average length of stay of homeless persons in hospital fell by 3.2 days, from 12.7 days to 9.5 days. Over the course of a year, with 250 admissions, this equated to a reduction of 800 bed days. Using £500 as an estimate of the cost of a bed day,[b] this translated into a total saving of £400,000, and a net saving of £300,000 once the cost of running the service was deducted.[8] The reduction in overall bed days was due to the reduction in patients staying longer than 30 days, which fell from 14% to 3%. Further time series data from UCLH hospital covering 2008, 2009 and 2010 for patients with "no fixed abode" or resident in a hostel confirmed this length of stay trend (see **Exhibits 4 and 5)**.

[a] Hospital liaison psychiatry was a branch of psychiatry that specialised in the interface between medicine and psychiatry. Liaison psychiatry had areas of overlap with other distinct disciplines including psychosomatic medicine, health psychology and neuropsychiatry. The role of the consultation-liaison psychiatrist was to see patients admitted as general medical inpatients at the request of the treating medical or surgical consultant or team.

[b] This was the standard daily cost of an acute admission charged by the hospital to overseas visitors

Future Challenges and Opportunities

The homeless care model was expanding along several dimensions. First, there was a plan to develop a community care approach and a strategic partnership to identify patients sooner. This included plans for a community "Sanctuary" unit to provide medical care for homeless patients in a community setting, aiming to further reduce patient hospital stays and re-attendances. A strategic alliance was also under development with the tuberculosis (TB) "find and treat" team. This service operated a mobile diagnostic service van, which sought out populations at high risk of TB but less likely to access services, including people in prisons, homeless hostels and those living in areas where homeless people congregate in London. The homeless pathway team was working with the TB service to support holistic care for homeless patients, to help find patients that discharge themselves against medical advice, and to help identify patients before they approach A&E.

The Health Foundation awarded The London Pathway charity a grant to further develop the care navigator role at UCLH and to support expansion of the model across the NHS. A key requirement of the grant was ongoing measurement of the performance of the homeless care model, noted in **Exhibit 6**. Expanding the model to the Royal London Hospital in Whitechapel in London's East End and Sussex University Hospital Trust in Brighton on the South Coast of England, was also under discussion. A key challenge in moving to other geographies was to create an equally committed team. The selection and recruitment of staff as the model was scaled would be essential as would oversight of the ongoing management of the services to ensure that the culture of the service was sustained.

Another operational challenge was the recruitment of care navigators. Because the role was paid for, UCLH required individuals to have employment contracts with the hospital and to satisfy standard pre-employment checks. These included conducting Criminal Record Bureau (CRB) checks, collecting national insurance numbers, and conducting identity checks. As previously homeless individuals, candidates often had difficulty meeting the criteria; many had criminal records and few had the standard administrative documents. As the model was expanded to other hospitals, challenges concerning pre-employment checks would need to be overcome to ensure care navigators could be appointed in a timely fashion.

The number of homeless people needing access to support was increasing due to financial challenges. Boroughs, also financially challenged, had decreased the number of funded hostel beds and had begun enforcing more stringent screening criteria to homeless applicants. Both of these factors were leading to an increase in the number of rough sleepers.

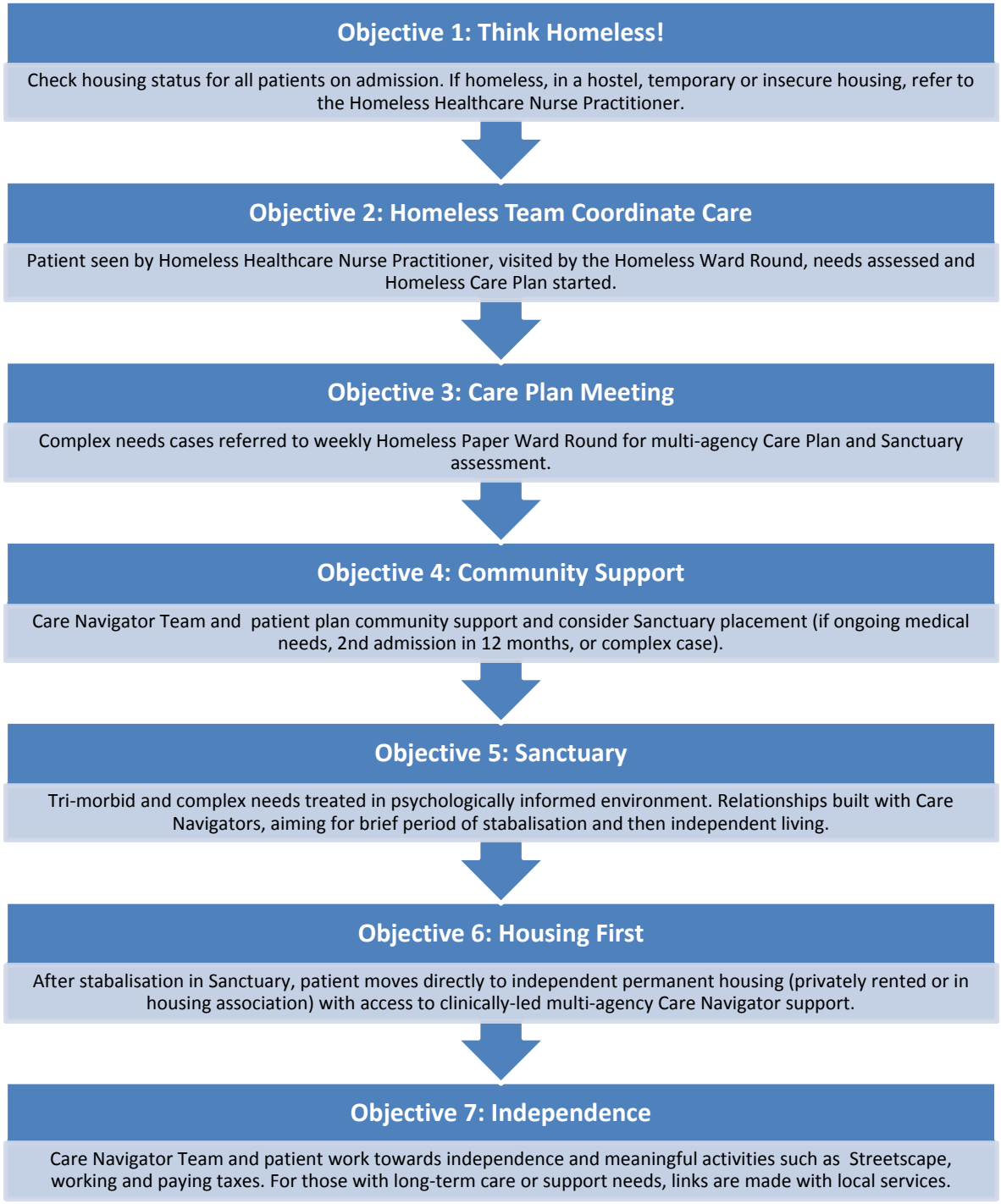
Exhibit 1. Reason for Admission of Homeless Patients at UCLH

(Audit of 114 patients admitted between August and December 2009)

Primary reason for admission	Number	Percentage
Alcoholic collapse or fit	20	17%
Korsakoff's, ataxiam alcoholic psychosis (neurological sequelae of alcohol)	7	6.5%
Trauma secondary to alcohol, head injuries, fractures	8	7%
Gastrointestinal consquences of alcohol (gastritis, du, oesophageal varices, cirrhosis, pancreatitis)	16	14%
Sub-total all alcohol related	51	44%
Infection secondary to IBDU (septicaemia, abscess, ulcer, endocarditis)	18	16%
HIV (of which 2 also had TB)	9	8.5%
Sub-total all drug related	27	24%
Other/miscellaneous	15	13%
Falls/trauma unrelated to drink or drugs	8	7%
Malignant disease	5	4%
Suicide attempt	4	3.5%
Chronic Obstructive Pulmonary Disease (smoking related)	4	3.5%
Total	114	**100%**

Source: Hewett, N., *Evaluation of the London Pathway for Homeless Patients*. 2010, UCL Hospitals.

Exhibit 2. Overview of UCLH Approach to Homeless Health Services



Source: *A Report on the first 12 months of service development*. 2010, London Pathway.

Exhibit 3. Quotes from Homeless Service Users

"You were the only ones that felt my life was worth saving. I am now back with my family. A family I have not seen for ten years."

"I've never stayed in hospital as long as this [2 weeks] but I know you are really going to help me, I trust you, that's why I'm staying."

"Why do you want to help me? No one has wanted to help our kind before. You saved me, thank you so much."

"With me being so ill, I was grateful there was someone to speak on my behalf when sorting out my housing. You always went that extra mile."

"I very rarely talk to people about my situation but I can talk to you. You give the time and you don't judge so it is a relief to be able to unburden some of my problems without a feeling of shame."

Source: *A Report on the first 12 months of service development*, 2011, The London Pathway.

Exhibit 4. Length of Stay in Days for Homeless Patients* Admitted to UCLH by Year, 2008 - 2010.

Length of stay (days)	2008	2009	2010
0	32%	27%	34%
1	23%	30%	34%
2	10%	9%	8%
3	6%	9%	5%
4	5%	3%	3%
5	3%	4%	2%
6	2%	5%	1%
7	4%	1%	1%
8	0%	1%	1%
9	3%	1%	4%
10 to 20	9%	7%	2%
More than 20	4%	5%	6%
Total number of admissions (100%)	285	280	229

***Homeless defined as those with "no fixed abode"**

Source: UCLH inpatient data

Exhibit 5. Total Bed Days and Average Length of Stay in Days for Homeless Patients* Admitted to UCLH by Year, 2008 - 2010.

	2008	2009	2010
Total bed days	870	772	683
Average Length of Stay (days)	3.61	3.18	3.21

***Homeless defined as those with "no fixed abode"**
Source: UCLH inpatient data

Exhibit 6. Performance Metrics

The London Pathway won one of eight grants from the Health Foundation to be part of their 'Closing the Gap' programme in April 2011. The grant of just under £400,000 over two years was to fund application of the model to other trusts in the NHS. Data for the below metrics was to be collected as part of the programme. These would be reviewed against "balancing measures" on costs, total bed days and the total number of homeless patients in London.

	Measure	Frequency
1	Time from admission to notification of London Pathway (LP) team	Weekly
2	Number of unplanned discharges (self-discharges against medical advice)	Weekly
3	Number of repeat admissions	Ongoing
4	Time from discharge to 2nd or subsequent admission	Weekly
5	Number of times LP staff called to assist in A&E (with a patient)	Weekly
6	Patient satisfaction at discharge	Weekly
7	Longer-term patient experience (post-discharge)	Weekly
8	Survey of broad clinical attitudes towards homeless people	Monthly
9	Number of LP-led training activities or events	Monthly
10	Patients helped with basic needs (clothes, etc.)	Six Monthly
11	Patient survey: "What things we did really made a difference during your time in hospital?"	Daily

Endnotes:

1. Hewett, N., Homelessness is a healthcare issue. Journal of the Royal Society of Medicine, 2010. 103(8): p. 306-307.
2. Hewett, N., A. Hiley, and J. Gray, Morbidity trends in the population of a specialised homeless primary care service. The British journal of general practice : the journal of the Royal College of General Practitioners, 2011. 61(584): p. 200-2.
3. Mungo's, S., SOS Sick of Suffering Briefing, 2002, St Mungo's.
4. Crisis, Critical Condition: Vulnerable single homeless people and access to GPs, 2002, Crisis.
5. Bilton, H., Homelessness: It makes you sick, 2008, St Mungo's.
6. Office of the Chief Analyst. Healthcare for Single Homeless People. London: Department of Health; 2010
7. Hewett, N., Evaluation of the London Pathway for Homeless Patients. 2010, UCL Hospitals

Further information about the Homeless Pathway is available at www.londonpathway.org.uk