

How to profile the population's use of health care and social care in one district

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Abstract

Background This study describes a method for combining health and social services data on service provision to develop a framework for monitoring eligibility and service criteria as an aid to development and joint care planning in an inner city area.

Methods The population studied was all residents of the London Borough of Wandsworth aged 18 and over in receipt of social services and/or community health services on one 'snapshot' day. Data matching and linkage was undertaken between social services data and community health services data for Wandsworth. Residents receiving social and community health services and joint packages of care were profiled by age, sex, description and intensity of service.

Results Community health services input is high among women aged 25–34 and the over-65s. Social services input is provided mainly to the over-65s, who are three times more likely to receive a social service than a community health service. Eleven per cent of individuals receiving a social care package also received community health services. These joint care packages were mainly for home care and district nursing services.

Conclusions This is the first time this technique has been applied to health and social services. The exercise highlighted problems of data quality, indicating the relevance of adopting a person-based system for health in the longer term to obtain a more accurate picture of activity.

Keywords: data linkage, information sharing, joint care planning, needs assessment methodology

Introduction

The development of care in the community requires the effective directing of resources to individuals in need, and adequate information about the needs of the population as a whole, to facilitate service development and planning. Central to the guidance on joint commissioning and continuing care is the expectation that both local authorities and health authorities will have data on population needs, service provision and service uptake.¹ Most community care plans are restricted to socio-demographic profiles of the population they serve, with little evidence of effective service planning for future needs linked to resources. With this objective in mind, this project combines health and social services data on service provision with a view to informing needs assessment for joint

commissioning, community care plans, eligibility criteria and continuing care guidance. Without this baseline of shared data it is hard to see how authorities can undertake a planning role.

This technique has not previously been applied to health and social services data; there is no literature in this area or established method for data linkage and sharing. The study aimed to demonstrate whether health and social data from individuals could be linked and used to profile the health and social service use of the population.

Methods

Sample frame

A retrospective analysis was carried out on a study population consisting of all residents of Wandsworth Local Authority aged 18 and over in receipt of social services on one 'snapshot' day. Wandsworth is an inner city area in London with a population of just over 265 000 residents and high pockets of deprivation.

Data sources

Social services data were for all residents in Wandsworth who had received a Community Care assessment and registered as in receipt of a social service on one specific 'snapshot' day, namely 30 November 1994. These data were compiled from a social services database, the Budget Management System, which holds details of all clients receiving a service. Variables extracted were postcode, sex, date of birth, name, address, identification number, provider code, number of units, price per unit, weekly cost and description of service.

Community health service data were for contacts from community health trusts over a two-week period, one week forward and one week backward from the snapshot date, to capture all Wandsworth residents in receipt of a community health service. Whereas the snapshot date captured all residents in receipt of social services, because of the different method of

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recording health service provision as 'contacts', a longer time frame was required to capture all clients in receipt of health services on that date. Confining health services contacts to the snapshot date would lose people in receipt of health services as part of their care package on a different day of the week. These data are held by the Regional Health Authority, in the Basic Community Set. Variables collected were postcode, sex, date of birth, name, programme code and description of service, the community trust, date of the contact and whether this was the initial contact or not.

Health and social services linkage

The aim was to create a person-based record of health and social care linking health and social services records to combine data items derived from independently created (computerized) files and to create person-based records bringing together all service data. Matching and linking can be described in this context as follows: 'Matching is the process of comparing pairs of records to determine whether they should be linked, in this case matching records for different contacts which relate to the same person. Linking is the process by which pairs of correctly matched records are brought together in such a way that they may be treated as a single record for one individual.'²

Data items

The data items described under 'Data sources' were downloaded and 'cleaning' was undertaken, so that the variables selected for the matching and linking were in an identical format with common coding. For matching purposes, these were the postcode, sex, and date of birth variables.

Linkage was undertaken by identifying 'person markers', assuming that if more than one record shared the same postcode, sex and date of birth, all such records could be aggregated and designated as belonging to one person.

Analysis

Analysis was undertaken on the community health and social

services data sets separately to profile the population receiving services by age, sex and type of services received. Following data linkage, the same analysis (see above) was undertaken for the subsample which had received both health and social services, i.e. combined packages of care.

Results

Social services sample

Profile of sample by age and sex

There were 5310 Wandsworth residents identified as receiving social services on 30 November 1994. Table 1 shows the service profile by age and sex. Seventy-eight per cent of people receiving services were aged over 65.

Profile of sample by service type

Table 2 shows the breakdown of services; 5310 identified clients received 6054 social services (some people received more than one service). Home care and day care accounted for the majority of care packages (81 per cent), and nursing home care accounted for 2 per cent and residential care 13 per cent of care packages.

Community health services sample

Profile of the sample by age and sex

There were 3134 Wandsworth residents receiving community health services. Table 1 shows high rates among women aged 25-34 and the over-65s.

Profile of the sample by service type

Table 3 shows the age distribution of community health services. Health visiting services are the main services provided to women of child-bearing age, whereas district nursing services are concentrated in the elderly. Community psychiatric input is high in the very elderly and in the middle years.

Table 1 Profile of Wandsworth residents receiving social services and community health services respectively by age and sex

Age band	Clients receiving social services				Wandsworth residents community health sample			
	Male	Female	Total	%	Male	Female	Total	%
18-24	58	29	87	2	14	144	158	5
25-34	148	99	247	5	109	584	693	22
34-44	100	98	198	4	84	267	351	11
45-54	109	137	246	5	72	120	192	6
55-64	141	188	329	6	96	101	197	6
65-74	241	514	755	14	126	199	325	10
75-84	453	1332	1785	34	187	420	607	19
85+	303	1360	1663	31	117	494	611	20
Total	1553	3757	5310	100	805	2329	3134	100
%	29	71	100		28	74	100	

Table 2 Social service utilization on snapshot day by age (numbers of services)

Age band	Home care	Respite	Nursing	Residential	Day care	Other	Total	%
18-24	5	29	1	40	34	11	120	2
25-34	31	52	1	111	146	29	370	6
34-44	72	22		55	96	15	260	4
45-54	114	18	1	63	102	16	314	5
55-64	210	9	7	51	120	12	409	7
65-74	602	1	18	53	152	9	835	14
75-84	1518	4	35	143	221	7	1928	32
85+	1315	3	54	250	190	6	1818	30
Total	3867	138	117	766	1061	105	6054	100
%	64	2	2	13	18	2	100	

Homecare includes homecare services (e.g. meals on wheels, laundry, personal care, shopping), respite care, nursing care and residential care include private and voluntary nursing; daycare includes in-house meals, transport; other includes unique care packages, external equipment, education fees, outreach, etc.

Combined packages of care

Profile of joint packages by age and sex

Table 4 shows that after linking health and social services data, 589 people were identified as being in receipt of health and social services. This represents 11 per cent of the social services sample. Those aged over 65 account for 86 per cent of the joint packages.

Profile of joint packages by service type

Table 5 shows that the main joint packages are for home care and district nursing services. District nursing accounts for 87 per cent of community health service input and homecare accounts for 87 per cent of social service input.

Service rates

Table 6 shows that uptake of use of both community health services and social services increases sharply with age as would be expected, with the heaviest users of both services in combination being the elderly age groups. Those aged over 65

are three times more likely to receive a social than a health service.

Discussion

Community health services show high utilization rates among women (of child-bearing age) aged 25-34 and those over 65. Social services are provided mainly to those over 65. Those aged over 65 are three times more likely to receive a social service than a community health service. At any one time at least 11 per cent of individuals receiving a social care package are also in receipt of community health services. These joint care packages are mainly for home care and district nursing input. This is a useful baseline for those working on joint commissioning for joint health and social services input. Unfortunately, without data on dependence levels and health and social care needs, the population cannot be estimated and compared.³ It would have been useful to look at frequency and length of service, but these variables were not readily available for either health or social services.

We have shown how it is possible to link health and social services data and are currently extending this work to

Table 3 Community health service utilization by age (numbers of services)

Age band	CPN	DN	HV	Other	Total	%
18-24	25	8	123	2	158	5
25-34	140	41	507	14	702	22
34-44	108	43	192	11	354	11
45-54	107	67	9	13	196	6
55-64	71	119	3	8	201	6
65-74	57	265	2	9	333	10
75-84	91	515	5	10	621	19
85+	58	555	2	6	621	19
Total	657	1613	843	73	3186	100
%	21	51	26	2	100	

CPN, Community psychiatric nurse; DN, district nurse; HV, health visitor; Other, other specialist nurse.

Table 4 Joint health and social services packages by age and sex

Age band	Male	Female	Total	%
25-34	4	4	8	1
34-44	7	5	12	2
45-54	9	15	24	4
55-64	14	22	36	6
65-74	25	53	78	13
75-84	47	161	208	35
85+	28	195	223	38
Total	134	455	589	100
%	23	77	100	

Table 5 Community health services and social services inputs for the 589 joint packages of care by age

Age band	Individuals receiving community health services				Individuals receiving social services					
	CPN	DN	HV	OTH	Home care	Respite	Nursing	Residential	Day care	Other
25-34		7	1	1	3	2			3	
34-44	1	9		2	10				1	1
45-54	5	17		2	18			1	4	1
55-64	10	25		2	31				5	
65-74	8	70		3	64			2	12	
75-84	27	186		2	181		1	4	20	2
85+	12	211	1		203	1		3	16	
Total	63	525	2	12	510	3	1	10	61	4
%	10	87	1	2	87	1	0	2	10	1

CPN, Community psychiatric nurse; DN, district nurse; HV, health visitor; OTH, other specialist nurse. Homecare includes homecare services (e.g. meals on wheels, laundry, personal care, shopping); respite care, nursing care and residential care include private and voluntary nursing; daycare can include in-house meals, transport; other includes unique care packages, external equipment, education fees, outreach, etc.

incorporate other data sets including hospital in-patient episodes and nursing and residential home data. Our aims will be to monitor the use of hospital services and the impact of continuing care criteria and eligibility criteria on access to care for local residents. The implementation of the National Health Service (NHS) number should make the process of data linkage easier and increase the accuracy and completeness of the data.

This work also draws attention to some of the structural problems which now result from the implementation of the NHS and Community Care Act. In the absence of a national community data set, community trusts have been left to develop and implement their own community information systems, usually without regional or district health authority guidance. The failure to standardize data items and data definitions will increasingly be a problem when profiling the population's use of services. Second, now that general practitioner (GP) fundholders can hold the budget for community based services, many are choosing to by-pass the community trust for services, and are buying in care from the private sector or from other

trusts and/or providing care directly from primary health care. GP systems are not standardized and many do not collect community based service data. This can result in a loss of service contacts and details on residents, especially in those areas where a large proportion of residents are covered by fundholders. Third, community trusts and GP fundholders are providers. The abolition of regions has resulted in the loss of the ability to centralize community data sets profiling the population. Health authorities increasingly experience difficulty in retrieving data on the whole population and inter health authority comparisons are also difficult. Social services, which have traditionally had far less investment in the information and technology infrastructure than the NHS, have similar problems to those described above. Where social services contract with private providers using block contracts, individuals' packages of care and total service provision can be difficult to monitor. Furthermore, as local authorities faced with financial constraints increasingly restrict access to care using eligibility criteria and stringent charges, clients may be forced to buy in their own care. This is also true in the NHS. There are no data

Table 6 Comparison across age groups – by number (*n*, in parentheses) and rate per 1000 population

Age band	Social service	Joint packages – social services and community health services	Community health service
18-24	(87) 2		(158) 4
25-34	(247) 3	(8) 0	(693) 10
35-44	(198) 5	(12) 0	(351) 10
45-54	(246) 9	(24) 1	(192) 7
55-64	(329) 16	(36) 2	(197) 10
65-74	(755) 42	(78) 4	(325) 18
75-84	(1785) 156	(208) 18	(607) 53
85+	(1663) 381	(223) 51	(611) 140
Total	(5310) 20	(589) 2	(3134) 12

collected on the private payers, the amount they pay, nor the type and number of services purchased. Ironically, we appear to be further away than ever from a coherent national information strategy capable of monitoring the access to and use of community based health and social services across the whole population.

Conclusion

It is possible to link data to profile the population's use of health and social care. However, the increasing fragmentation resulting from the implementation of the NHS and Community Care Act will limit the accuracy of these population profiles. There is a need for a national strategy on community information. Such a strategy should include generic minimum data sets with measures of need capable of being used across all community based sectors.⁴ Part of the information strategy needs to focus on how to obtain information on the 'self pays', perhaps using survey techniques. The NHS number should facilitate multi-agency tracking and data linkage, particularly if the unique identifier number were also adopted by social services departments. A data linkage tool would be a useful development. Security, confidentiality and the willingness of agencies to share data are all issues which need to be resolved but were not a problem in this study.

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