

Measuring PSS Outputs for Adults

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RESEARCH
SUMMARY

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BACKGROUND

There is increasing pressure to devise a means of reflecting the outputs of social care in ways that can be used to reflect changes in productivity and efficiency. Currently, for National Account purposes, Personal Social Service (PSS) outputs are measured by weighting activity (for example, home care hours purchased or provided) by the unit cost of that activity. To adequately reflect changes in government output and productivity we need an index that reflects the benefit or welfare generated by the activity.

The Office for National Statistics (ONS) review on the future development of government output, productivity and associated price indices led by Professor Sir Tony Atkinson (2005) followed Eurostat guidance that countries should be developing direct measures of government services that are individually consumed. As part of this review and with the longer-term objective of improving measurement and understanding of PSS output and productivity in social care, the Department of Health funded work to develop new measures of personal social services (PSS) output and productivity, reflecting best available practice. This paper summarises the results of that work, which is reported in detail elsewhere (Netten et al 2005a; 2005b; 2006).

AIMS

The aims of the project were to develop an approach to measuring the outputs of PSS interventions that:

- With sufficient data would fulfill the requirements of National Accounts
- Has a wider applicability for measuring changes in productivity, efficiency and the impact of policies and practice
- Is capable of reflecting changes in quality and quantity of provision over time
- Is capable of reflecting current practice and future developments in PSS

- Is theoretically sound
- Is feasible to operationalise using currently available and potential future data sources.

APPROACH

The role of PSS interventions

Social care interventions for adults are primarily concerned with the consequences of long-term physical, mental or emotional impairment. We define three types of output:

- Increased individual/care network productivity
- Increased individual knowledge and information
- People helped.

Individuals' increased productivity would be the expected output of services that have the objective of improving individuals' health, functional capacity and prevention of deterioration. Such interventions are usually characterised by relatively short-term one-off expenditures that have benefits that may well extend beyond the year of expenditure. This would include equipment services and adaptations to property as well as intermediate care. Services that involve training carers both to cope personally and to care effectively may also be expected to generate such outputs.

Increased knowledge and information will be the expected output from advice and information services but may also be an important output of the assessment process. The benefit may be experienced through access to other (non-PSS) services, knowledge of sources of support that could be drawn on in the future or simply a better understanding of entitlements and the care system.

While there is increasing policy emphasis on these first two types of output, the bulk of PSS expenditure and benefit generated from this expenditure is about meeting needs. While it will be important in the future to

address the measurement of productivity and knowledge outputs, for the remainder of this paper we focus on measuring the outputs of interventions that are primarily concerned with helping people.

Helping people

The basic unit of measurement is number of people helped. We need to weight this to reflect the:

- Frequency of help
- Amount people are helped and
- Quality of help provided.

For frequency we use the number of weeks that people have been helped by any specific intervention, drawing on routine statistical sources. For the amount people have been helped we use an indicator of *Capacity for Benefit* (CfB). This is the level of output per week that the intervention could deliver if it were perfect. In order to reflect what is in fact delivered we incorporate an indicator of quality. Thus the element of the output index that reflects people helped is the sum for each intervention of:

$$\boxed{\text{Capacity for Benefit}} \times \boxed{\text{Quality}} \times \boxed{\text{Weeks' help}}$$

For national accounts purposes we need to adjust this to reflect the level of output that is due to government expenditure. To reflect the fact that many individuals receiving LA funded social care also fund part of the cost through charges, the output measure is reduced by the proportion of expenditure met by fees.

Capacity for benefit reflects both *what* the intervention does and *how much* it does. *What* an intervention does depends on the domains of outcome that are addressed. *How much* it does depends on how much service users rely on that intervention.

Building on previous work and through further consultation (Netten et al 2005b) we have identified eight domains of outcome that are covered by PSS. These are intended to address all interventions and all client groups

and carers:

- *Personal cleanliness and comfort* The individual is personally clean and comfortable, presentable in appearance and is in bed or up at appropriate times of the day.
- *Social participation and involvement* The individual is content with their level of emotional support, general social contact and level of community participation
- *Control over daily life* The individual can choose what to do and when to do it, having control over their daily life and activities
- *Meals and nutrition* The individual has a nutritious, varied and culturally appropriate diet with meals at regular, timely intervals.
- *Safety* The individual feels safe and secure. We are taking concerns about safety to include fear of abuse, falling or other physical harm and fear of being attacked or robbed as social care interventions are put in place to address these issues.
- *Accommodation cleanliness, order and accessibility* The environment is clean and comfortable and is easy to get around
- *Employment and occupation* The individual is sufficiently occupied in meaningful activities whether these are formal employment, unpaid work or leisure activities
- *Role support (as a carer or parent)* The individual is able to care for their dependant(s) as much as they wish without becoming overburdened.

In addition we need to allow for the fact that some care options result in people living in institutional settings and that for the most part people prefer to live in their own homes whenever possible. An important policy objective is to maintain people in their own home so we need to include another domain that reflects whether people are living in their own homes. In applying this in practice it is easier to identify when people are *not* living in their own homes rather than that services have succeeded in keeping people at home.

Clearly not all services or interventions will address all domains. For example, we would not expect meals-on-wheels to have much impact on personal cleanliness and comfort. Interventions might impact on more than one individual. For example, day care might provide occupation and social participation for the service user and facilitate a carer to be employed and provide them with role support. The outputs for all individuals should ideally be included in our Cfb measure.

How much people are helped also depends on their expected levels of need in the absence of the intervention. For each domain we define four levels of need. For the most part these are no need; all needs met; low level needs and high level needs. High and low level needs are distinguished in terms of whether in the long or short term there could be physical or mental health consequences of these needs not being met.

Capacity for benefit is a descriptor of the intervention that reflects the difference between the expected welfare state of service users without the intervention and if the intervention were perfect. Ideally this measure should reflect the relative importance of the domains and welfare states reflected in different levels of unmet need. For this we need information about population and/or service user preferences for these welfare states.

We know that in practice all the potential capacity for benefit will not be met by the services. The indicator of *quality* measures the degree to which services are in practice meeting needs in each domain and delivering process outcomes such as dignity and continuity of service.

PUTTING THE APPROACH INTO PRACTICE: SERVICES FOR OLDER PEOPLE

We demonstrate the application of the approach to measuring outputs of care services for older people. In this we draw on:

- Regularly reported data in the public domain (PSS EX1, HH1, RAP and older home care User Experience Survey (UES) 2002/03)
- The results of an extension to the UES (Netten et al 2004)
- Data on care standards in care homes supplied by CSCI
- Data on 384 care home service users and 540 publicly-funded admissions to care homes collected as part of a recent study undertaken to feed into the Formula Spending Share (FSS) review (Darton et al 2005)
- Data on over 2000 publicly-funded admissions to care homes in 1995 (Bebbington et al 2001)
- Previous research on older people's preferences (Netten et al 2002)

Capacity for Benefit

A key element of the approach is Capacity for Benefit (Cfb) from services. For home care packages we asked respondents in the FSS home

care service user survey about seven of the domains of outcome (excluding role support). (A follow-up study of 23 respondents explored responses in more depth including some apparent anomalies and inconsistencies.) For each domain we established their current level of need, whether services helped thin this aspect of their lives, if so which services and their expected levels of need in the absence of the intervention.

These data were used to estimate expected Cfb. Capacity for benefit for home care (Cfb_{hc}) showed the expected increase with number of hours received. A model using a count of activity of daily living (ADL) problems and whether or not the service user lived alone was estimated to predict the Cfb for care homes (Cfb_{ch}). One measure assumed all domains were of equal importance. Three measures were based on OPUS (Older Persons' Utility Scale, see Netten et al 2002) weights, which reflected the relative importance to older people of five of the domains. (They were Personal comfort, Social participation, Control over daily life, Meals and Safety. The remaining two domains were assumed to be of equal, relatively low importance (equivalent to that of Safety)). The three measures reflected different assumptions about the relative importance of living in one's own home.

Data on admissions to care homes in 1995 and 2005 were used to estimate Cfb changes over time. Estimates depend on the weighting used but they all showed that there had been higher increases in Cfb_{ch} in residential homes compared with nursing homes during that period. It was interesting to note that Cfb_{ch} for all homes in 2005 was estimated as equal to or exceeded that of nursing homes in 1995.

Quality

The indicator of home care quality was based on responses to the general satisfaction question in the older home care user UES, which councils are required to carry out every three years. Responses to this were weighted on the basis of relative scores of an overall quality measure derived from items in an extended questionnaire that encompassed service process quality, care worker quality and outcome.

Two measures of care home quality were derived based on care home standards. As for Cfb measures one assumed that all domains were of equal importance and the other reflected OPUS weights. Using 2004/05 data provided by CSCI, estimates

based on OPUS weights were found to be more sensitive to change in prices than the equally weighted measure. Between 2002/03 and 2004/05 care home quality had improved at an average of about 2 per cent per year. This annual rate of improvement was assumed for the previous period where data were not available.

Estimated outputs and trends over time

Activity data or estimates were available for the period 2000/01-2004/05. The number of care weeks provided, used as the activity basis for our index, fell by 4.3 per cent over the period. The number of care home weeks increased by 9.7 per cent, much of this apparent growth due to the transfer of responsibilities for preserved rights residents. This rise was more than offset by the reductions in people receiving home care, which fell by 12.9 per cent. It should be noted, however, that the number of hours of home care purchased or provided rose over the period (average hours per week among those using home care increased by 36 per cent).

Weighting this activity by CfB and quality, using equally weighted estimates; overall PSS outputs for older people were estimated to have increased by 9.9 per cent over the five-year period. Incorporating changes in impairment among publicly funded admissions and quality improvements meant the level of care home output was estimated to have increased by 35 per cent. Rises in intensity of home care services meant that increasing CfB_{hc} compensated for much of the reduction in home care weeks. However, there were no data on which to base any changes in quality so there was still estimated to be a 6.2 per cent reduction in home care outputs. Using these base assumptions and including an adjustment to reflect the proportion of expenditure met through fees the net rate of growth in PSS outputs was higher at 13.3 per cent over the five years.

Using OPUS weights to reflect the relative importance of the domains of

outcome affected estimates of growth, the level depending on the importance assumed for living in one's own home. The lower the importance assumed the *higher* the rate of growth (11.6 per cent for the estimate based on the assumption that living at home was equivalent to the least important domains). This was because a lower weight was deducted to reflect the loss of welfare associated with moving into a care home so the estimated level of outputs from care homes was higher. Indeed in general, measures of growth were most sensitive to assumptions about the level of outputs from care homes as this was where most growth in activity had been over the five-year period.

CONCLUSIONS AND NEXT STEPS

The aim of the work was to use currently available data and data that could be collected in the context of other ongoing research to investigate the applicability of an approach to measuring PSS outputs. Inevitably there are major gaps and questions raised by the process but the results do provide us with some insight into how such an approach might be applied in practice. We have focused on applying the approach to services for older people and limited ourselves to the provision of care home placements and care packages with a home care component. The estimates must be regarded as very provisional as in each area, activity, quality and capacity for benefit, there are more data due to come on stream shortly.

While the initial motivation for commissioning the study was for the purposes of measuring outputs for national accounts, there are wider interests in measuring the impact of changes in policy and practice on the productivity of PSS activity. A pilot study has been commissioned to feed into the Care Services Efficiency Delivery programme that is investigating the preferences of the public for a valuation of output measure. This should provide us with estimates of the relative importance of the domains and

levels of outcome including living in one's own home. Major issues remain, however, including:

- Applying the approach across client groups
- Validating and developing measures
- Development and continuity of data sources
- Reflecting other aspects of PSS output: increased productivity and knowledge

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The **PERSONAL SOCIAL SERVICES RESEARCH UNIT** undertakes social and health care research, supported mainly by the Department of Health, and focusing particularly on policy research and analysis of equity and efficiency in community care, long-term care and related areas — including services for elderly people, people with mental health problems and children in care. Views expressed in PSSRU publications do not necessarily reflect those of funding organisations. The PSSRU was established in 1974, and from 1996 it has operated from three branches:

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