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Measuring the Outputs of Information and Advice Services: Initial Report

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1. Background

Information and advice is increasingly being seen as an important area of activity and has been prioritised in a number of recent policy papers (Department of Health, 2006; Department of Health 2007; Department for Communities and Local Government, 2008). Information and Advice (I&A) services are particularly important in the social care field, where such services are critical to enabling people to access mainstream services (Baxter et al., 2006) and increasing emphasis is being put on people drawing on more mainstream resources and assuming a greater role in organising their own support (Department of Health. 2008). The importance of information in the current policy context is illustrated by the introduction of 'Information Prescriptions'. These will contain a series of links or signposts to sources of information about individuals' health and care, including information about conditions and treatments, care services, benefits advice and support groups. A pilot project was conducted in 20 local authorities in 2007, and from 2008 Information Prescriptions are to be offered to everyone with a long-term condition or social care need, in consultation with a health or social care professional. The aim is to help people 'feel more in control and better able to manage their condition and maintain their independence' (www.informationprescription.info).

Third Sector plays a critical role in the provision of I&A generally, and in social care in particular. In a recent review, the Department of Health (2007) estimated that among social care Third Sector Organisations (TSOs) 42 per cent provide advice or counselling services and in healthcare 47 per cent of TSOs provide services around information and advice. Of all health and social care information 37 per cent is provided by the Third Sector and 36 per cent by the public sector. While a lot of organisations (around 50,000) provide at least some information , often this consists of occasional leaflets or websites, the bulk of information is produced by a core group of around 2000 organisations, about half of which are TSOs[1].

While the value of information and advice (I&A) services is acknowledged in general, Third Sector I&A services themselves often find it difficult to get secure funding. In part this is associated with it being difficult to demonstrate the value of these services when competing for scarce resources. In their report on the challenges and opportunities for the voluntary advice sector Williams and Griffith (2007) identify that it is becoming increasingly important for Third Sector I&A organisations to be able to demonstrate the value of their work.

[1]www.dh.gov.uk/en/Healthcare/PatientChoice/Choice/BetterInformationChoicesHealth/Informationaccreditation/DH_076460

The Quality Measurement Framework (QMF) project[2] aims to create new mechanisms for more effective and efficient measurement and monitoring of third sector provision of public services, reducing the burden on the third sector while releasing cash through more efficient use of public funds to provide public services. The purpose is to develop methods for measuring and assessing the value added of public services that will allow service commissioning authorities to assess and monitor the performance of public services delivered by third sector organisations in a way directly comparable with performance of public or private sector providers. PSSRU are conducting four pieces of work under the programme. Two projects are currently focusing on the measurement of outputs from low-level interventions and care homes. A preference study is planned for the final year of the project. This paper describes the theoretical basis and proposed fieldwork for the project focusing on the measurement of Information and Advice (I&A) services.

The aim of the project is to identify a way of measuring and monitoring the value of information and advice services. Given the embryonic nature of work in the field the emphasis is on establishing and testing the acceptability of a feasible approach. This paper starts by clarifying definitions, concepts and scope before briefly summarising the literature and discussing the measurement of value, outputs and outcomes in the field of information and advice. Drawing on this we develop a model of I&A linking inputs, process and outcomes based on work by Saxton et al., (2007) and identify the implications of this for measuring outputs for individuals discussed. The paper concludes by proposing the next steps for developing an approach to measuring outputs in this complex field.

2. Definitions, concepts and scope

There is an enormous literature on the economics of information reflecting the central role that information plays in the economy (Braman, 2006). This ranges from macroeconomic perspectives on the 'information economy' to microeconomic studies of individual decision making in situations of uncertainty. There are considerable problems in defining what we mean by information. Definitions can change depending on the context and perspective taken. Marschak (1968), defined the economics of information as the economics of services of inquiring, communicating and deciding. Repo (1989) followed this approach and suggested that economists define information as a phenomenon to reduce uncertainty. Braman (1989), proposed a fourfold typology: information as a resource, as a commodity, as perception of pattern and as a constitutive force in society. Raban (2007) describes information as a private good, public good, a raw 'material', intermediate or final product,

[2] The Quality Measurement Framework (QMF) project is funded by the Treasury under Invest to Save and led by the Office of National Statistics (ONS).

and in each form could be tangible or intangible. Raban also suggests that information can be represented as an *experience* good. Experience goods engage people and create memorable events. The 'experience' can be as limited as reading and absorbing a piece of information. Experiences are inherently personal and perceived differently from person to person.

Given this diversity of definition we need to be clear about what we mean by I&A services and their value. Raban (2007) distinguishes different facets of information, identifying advice as an example of information transfer. However, advice implies further 'added value' in that the information is tailored to the needs of the individual service user and that, potentially, the service assists in, or, when acting in an advocacy role on behalf of individuals, even substitutes for the application of that information. Before we consider approaches to valuation, therefore, it is important to identify the scope of activities with which we are concerned.

Information and advice covers a wide spectrum of activities and can often form an important part of ensuring that a treatment or service is effective (for example, improving adherence rates, providing user feedback on services). Businesses also have need of advice, and information services are often targeted at enabling business to access information more efficiently and improve the efficiency of their organisations. For our purposes here we are restricting the definition of information and advice services to those where the principal objective is the provision of information and advice to individuals for their own purposes rather than the objectives of an agency or organisation.

While initially we are considering I&A for individuals in general, a specific focus of interest is the role of information and advice in social care. In the capabilities framework described elsewhere (Forder et al., 2007), for an individual to make use of resources that compensate for, or enhance, their personal ability, there needs to be an understanding of how to use those resources in order to have the capability to achieve a functioning. For example, if someone is isolated as a result of physical impairment, knowing about accessible places to meet people and social events is as important as them being available. Once an individual has the information they may or may not increase their social participation (functioning) but they have the capability to do so.

In traditional service provision models the requirements on the individual are very limited: simply knowing who to ask for help, when someone will be coming to help and how to complain may be all that is required. At the opposite extreme, Direct Payments require that an individual has either knowledge themselves or among his or her supporters on how those financial resources can be translated into the type of support he or she wants. By increasing

the possibilities of choice and control, current policies have also increased the need for information and advice in the process of care. Changes in any sphere may give rise to an increase in demand for I&A in order for consumers (and sometimes providers) to understand their implications. For example, the introduction of a new financial benefit would temporarily increase the demand for welfare rights advice from those likely to be affected. In the instance of current social care policies the result is likely to be a long term shift in demand for I&A, requiring a higher level of output, rather than a temporary increase reflecting a cost of implementing change.

We define four different types of knowledge or information that are required in social care. These are knowledge of:

- What services/support options might be potentially available (for example, at the broadest level social services and within this: type of service, Individual Budgets, Direct Payments, care homes, personal assistance)
- The system, that is how to access these options (for example, how to contact social services, eligibility criteria)
- The potential benefits that any service/activity or support option might generate (see below)
- Operational characteristics of the service or support (for example, how to complain, when a worker is going to be late and so on)

The third type of knowledge is important in order that an individual can make informed choices. People will often need support in this process. This can be at the level of deciding what it is he or she wants to achieve through an Individual Budget, and by inference what they might aspire to in terms of functionings in a number of areas of his or her life and what could be put in place to achieve these. Alternatively, this could be part of a good quality service that ensures that an individual with profound learning difficulties has experience of enjoyable social activities so, when offered an opportunity, is able to decide whether they want to join in on an informed basis. While of interest and important in the provision of quality services this last example and the final bullet point above fall within the area ensuring that the service is effective in delivering outcomes and thus outside the scope of our interest here. To a greater or lesser degree all of these types of information could be characterised as ‘intermediate’ goods, i.e. goods that are used as inputs in the production of other goods, in this case social care.

To summarise, we are concerned with identifying the value of services that provide tailored information relevant to individuals’ circumstances, assist in interpretation of available sources of information, identify options and help people understand systems and access these

options. We would include in this advocacy, activities that help people in accessing services, benefits and so on. For the most part we would expect such services to involve personal contacts but, for some service users, interactive websites and software could potentially provide such I&A services.

3. Outputs, quality and outcome measurement of I&A

Much of the economic literature focuses on the value and role of information per se rather than services providing information and advice. However, a literature search (see Appendix A) identified a developing literature on performance, quality, value and outcome measurement of library and information services (Kettinger et al., 1995; Saracevic and Kantor, 1997a; Cram, 1999; Debono, 2002; Thebridge and Dalton, 2003; Pung et al., 2004). A driving force in this is the need for libraries to justify public expenditure and be able to demonstrate value for money. This is particularly relevant to libraries because of the 'global digital revolution' and the emergence of the 'virtual university supported by the virtual library' (Cullen, 2001).

At the advice end of the spectrum there is a relatively sparse literature on the value of advice services. In particular there is a paucity of evidence about I&A in the field of social care. Bebbington and Unell (2003), evaluated Care Direct, a pilot telephone help-line service targeted at older people in six local authorities which provided advice about social care, financial benefits, health services and housing. Baxter and colleagues (2006), examined access to information and advice about social care and identified key aspects of information that are important in ensuring access (timely, easy to find and use, in an appropriate format, personalised and good quality). However, this does not identify any work on estimating the *value* of these services.

In terms of related fields, there are a number of studies examining the impact of welfare rights advice in a primary care setting (Abbott et al., 2005; Greasley and Small 2005; Mackintosh et al., 2006). Munro and colleagues (2000; 2001; 2005) evaluated the pilot sites and roll-out of NHS Direct. Bekker and colleagues (1999), identified 547 studies evaluating interventions that may affect informed patient decision making in terms of health or health related outcomes. There have been some small scale studies of housing advice (Hawkey, 2003; Sefton and Wishart, 1998). Williams (2004), reviews the area of debt advice as background to a major evaluation (Pleasance et al., 2006) and concludes that prior to these studies there was little research or evidence of routine recording of outcomes. In their development of a model for identifying the benefits and costs of 2-1-1 information and

referral services[3], Saxton and colleagues (2007), include a literature review of USA published and grey sources including the library and information service literature. They too identify a dearth of outcome measurement in practice.

The importance of and need for guidance in measuring outcomes in the field of I&A has also been identified in the practice field (for example, Robson and Ali 2004; Bhavnani, 2005). For the most part, however, monitoring and ensuring quality of I&A tends to be through accreditation schemes that focus on input and process factors. For example, Community Legal Services quality mark (Community Legal Services, 2000) and the development of the Information Accreditation Scheme Standard (VEGA Group and Department of Health, 2007) to support the introduction of Information Prescriptions for health and social care.

We draw on this literature to consider first different approaches to assigning value and models of I&A. We then identify domains of outcome that have been proposed and used and specific approaches to measurement before proposing a model and an approach to measuring outputs in a way that reflects changes in quality and outcome in I&A.

4. Approaches to measuring value

In developing a theoretical framework of the value of library and information services Sarcevic and Kantor (1997) draw on Repo, (1989) in distinguishing between *exchange value* and *value-in-use*. Exchange value is a monetary value based on prices resulting from market interactions. Lack of a market and thus prices, together with the diverse definitions and characteristics of information (see above), mean that exchange value is both difficult and too limited a measure of value for information and advice services. Value-in-use is the most relevant for our (and their) purposes.

Ahituv and Neuman (1986), identified three principal approaches to identifying the value of information and of information services:

- *Normative* – applying rigorous models such as expected utility where the value of information is based on probabilities and formal probabilistic reasoning.
- *Realistic* – measuring the effect of information services, for example through a 'before and after' approach

[3] 2-1-1 has been introduced in North America as a free, easy to remember number for finding human services answers. By February 2007, 2-1-1 was being used in five areas in Canada, all or part of 41 USA states, plus Washington DC and Puerto Rico. Each service provides information about a wide range of services and resources in the local area including: basic human needs (e.g. food banks); health services; employment support; support for older and disabled people; support for children and families; and volunteer opportunities.

- *Perceived value* – based on subjective valuation by the users of the service of the value or benefits of the information provided.

More recently Raban (2007), in her discussion of user-centred evaluations of the valuation of information classifies approaches as descriptive, rational, behavioural and social and traces the relationship between different theories of value. For our purposes here, however, Ahituv and Neuman's classification is helpful in clarifying different types of approach observed in the literature.

Normative

The normative approach is a development from traditional economic theory in which rational individuals make decisions to maximise their utility depending on the information that is available to them. Current decisions that affect the future are based on expected utility in situations of uncertainty. Information is presented as improving the basis on which decisions are made, reducing levels of uncertainty. The value of information in this approach results from improved decision making (in this context usually economic decisions).

There are a number of important restrictions and caveats. Bounded rationality refers to the fact that there is a limited amount of information that is available (Simon, 1957) and people do not always use all that information (Lamberton, 1994). The information itself is often uncertain and difficult to process (Ellig and Lin, 2001) and psychological and cognitive factors affect what information is identified and used (Pau, 2002). As a result of uncertainty and differing attitudes to different types of uncertainty (e.g. uncertain losses versus uncertain gains (Kahneman and Tversky, 1979)) decisions that are made in practice often do not follow what we might expect of a 'rational' individual. These 'rational expectations' problems (Muth, 1961) make 'improvements' in decision making hard to observe.

While the theoretical constructs and the probabilistic reasoning used in identifying relationships and value make this a very rigorous approach, we have not identified any applications of this to information and/or advice services. A number of observers have identified its limited applicability in valuing information or information services in practice (Repo, 1989; Sarcevic and Kantor, 1997; Raban, 2007). This is due to data requirements that often require a-priori estimates of probabilities that are not available and difficult to establish, caveats about factors affecting decisions, and restricted approach to the attributes of information.

While acknowledging these problems, Sarcevic and Kantor (1997), identify this approach as underpinning in their Acquisition-Cognition-Application (A-C-A) model of information use.

Acquisition reflects the process of getting information as related to the intentions for acquiring this; *cognition* the process of absorbing, understanding and integrating the information and *application* the process of potential use of the information. This links closely with the capabilities approach in that the range of possible options available at the application stage are wider than before (the capability set is extended) but these additional options may not be taken up (functionings may remain as before).

Realistic

Practical evaluations provide examples of the realistic approach. These include evaluations of debt advice and welfare rights advice in the primary care context. Pleasence et al., (2006) conducted four complementary studies of debt advice that used quantitative and qualitative before and after interviews, secondary analysis and a randomised control trial. Greasley and Small (2005), undertook a retrospective study of a service that provided a range of advice (including housing and immigration) and found an effect in terms of take-up of financial benefits. In an evaluation of benefits advice in seven GP practices, Abbott et al., (2005) used a longitudinal design, interviewing people at baseline (shortly after the advice session), six and 12 months later. Mackintosh et al., (2006) used an RCT to examine the impact of welfare benefits advice on health in four GP practices in Newcastle. In all these cases a variety of outcome indicators are used to identify the impact of the advice on individuals including increases in income, indicators of health states and aspects of quality of life such as relationships (see below). The attribution of effect is established through the research design, usually incorporating comparison groups.

While this realistic approach can deliver valuable information about the effectiveness and cost-effectiveness of services they are too costly and burdensome to apply on a routine basis. However, this type of evaluation might provide a helpful validation or triangulation to confirm the findings from routine measures.

Perceived value

Raban (2007), distinguishes between subjective value, described as expected value-in-use and experienced value represented as perceived value-in-use. The concept of experienced value links to the definition of information as an experience good: information can only be valued by users after they have experienced it. In the case of I&A services, advice extends the experience by building on and personalising the information and, as we suggest above, in instances where advisors act in an advocacy role, will assist in the application of that information.

Studies that aim to establish the perceived value of information and advice include contingent valuation, for example Pung et al.'s (2004) valuation of the British Library. Khattak et al., (2003) also identified willingness to pay for a travel information service around San Fransisco. These studies require individuals to make choices or ascribe particular monetary valuations (for example how much they would be prepared to pay additionally in tax for this service to exist).

Alternatively, approaches to perceived value use questionnaires to establish users' views of quality and satisfaction with services (for example Bebbington and Unell, 2003). There is a substantial literature around developments of instruments such as an adapted version of the framework for measuring service quality, SERVQUAL. This adapted version, IS SERVQUAL, is used in the field of library and information services (Kettinger and Lee, 1997).

Sarcevic and Kantor (1997), present their Reasons-Interaction-Results (R-I-R) model for identifying the value of information services as a continuation of the perceived value approach. This draws on the A-C-A model described above but is developed for a pragmatic study to reflect user assessed value of information services in the development of a taxonomy:

> ..*value of a library and information service is an assessment by the users (or user-surrogates) of the qualities of an interaction with the service and the worth or benefits of the results of interaction as related to the reasons for using the service.* (p540)

Using this approach the three broad dimensions that need to be measured are:

- *Reasons* – providing context for assessing other dimensions or facets – covers causes, motives, bases, purposes, expectations and rationale – what do users want to get out of a service?
- *Interactions* – the assessment of users of the qualities, problems and other aspects of the service process (including advice)
- *Results* – covers the users assessment of outcomes

5. Defining and measuring quality and outcome

Unsurprisingly, measures of quality and outcome tend to be specific to the service and the context that is being evaluated. We have identified a few studies above that used contingent valuation, but for the most part studies have used measures that focus on the experience in terms of the process or outcomes, identified by service users themselves or observers.

Satisfaction and process quality

Organisations often use reports of satisfaction to monitor the quality of their services and evaluations include such indicators to identify user perceptions of the service. However, a number of problems have been identified with the use of such measures. In the field of library and information services Applegate (1993), uses the concepts of material and emotional satisfaction from the marketing and psychology literatures to identify the phenomenon of the 'false positive' emotional satisfaction. Because people believe libraries are a good thing they express more satisfaction than is warranted by their actual experience. We might expect that Third Sector organisations, regarded as an independent and trustworthy providers, could also be recipients of such 'false positive' reports of satisfaction. Moreover, Hernon and Altman (1998), (in Cullen, 2001 pp 664-665) identify that if people have a good transaction they may express high satisfaction even though they did not achieve their goal. Similarly they may get what they wanted but if the transaction is not good may express low levels of satisfaction.

Nevertheless, process quality is an important aspect of people's experience. The SERVQUAL approach attempts to deal with over-reporting of quality by distinguishing between expectations (in one development distinguishing between ideal and adequate (Kettinger and Lee, 2005)) and experience. The gap between expectations and experience is used as an indicator of quality and the approach allows services to identify changing expectations. This approach has a great deal of practical relevance for those in the field (Jiang et al., 2002) but has been criticised on conceptual and psychometric grounds (Van Dyke et al., 1999; Cullen, 2001).

The SERVQUAL domains are focused on user experiences of the service and include reliability, empathy, responsiveness, assurance. More 'objective' approaches to identifying service quality include peer review. Paterson (2007) examined the quality of legal aid services using peer review for quality assurance. This approach is capable of monitoring/ ascertaining:

- Accuracy, appropriateness, timeliness of advice
- Client care
- Adherence to professional standards
- Strategy formation and execution
- Staff supervision and assessment.

Moorhead and Paterson (2003), compared lawyers and non-lawyers on costs quality and outcome of advice employing a variety of methods including mystery shopper, questionnaire, peer review and outcomes of cases[4].

[4] In all instances they found that non-lawyers performed better than lawyers.

Some observers have used qualitative approaches in identifying the value of services. For example, Usherwood and Linley (1998) describe a qualitative approach to measuring the performance of public libraries. Bird (1998), describes a qualitative study of the use of Citizen Advice Bureau (CAB) general and specialist services by people with mental health problems. Urquhart et al., (2003) used critical incident technique (CIT) and explication technique use in identifying the value and quality of electronic information services for professional users (Urquhart et al., 2003).

This type of approach is good at identifying aspects of services that are important to people. Saracevic and Kantor (1997b) used CIT to develop a taxonomy to describe the value of library and information services based on their Reasons-Interaction-Results approach described above. Interactions were classified in terms of:

- Resources (e.g. availability of items)
- Use (e.g. convenience)
- Operations and environment (e.g. fairness of policies, level of facilities, performance of staff and equipment)

Outcome

When identifying the dimensions or aspects of the value of library and information services observers identify benefits both at the level of society and individuals although these are not sometimes clearly distinguished. Debono (2002), reviewed the measurement of the social impact of libraries and, through the literature identified a wide range of types of impact from basic literacy through health and well-being, empowerment to social cohesion and imagination/creativity.

At the social level Poll and Payne (2006), cite the International Federation of Library Associations (IFLA, 2005) as identifying benefits of libraries as:

- Democracy
- Intellectual freedom
- Information literacy
- Reduction of poverty and
- Cultural diversity

At an individual student and professional level Poll and Payne identify the outcomes of libraries as:

- Knowledge
- Information literacy
- Higher academic or professional success

- Social inclusion
- Individual well-being

Thebridge and Dalton (2003), review and examines the measurement of performance and outcomes in academic libraries in the context of the Higher Education Funding Council for England (HEFCE) funded eVALUEd project which is seeking to produce a toolkit for evaluating electronic information services in UK academic libraries. The authors cite Bertot and McClure (2003 pp 11-12), who produced a summary of issues surrounding outcomes assessment in networked environments. The outcome types they identify are

- Economic
- Learning
- Research
- Information exchange
- Cultural
- Community

Durrance and Fisher-Pettigrew (2002), describe an ongoing project using a 'context-centered' approach to measuring the benefits of public libraries and community information networks in the USA. Context centred appears only to mean that the focus is on the communities and citizens who benefit rather than the institutions. They report on preliminary indicators of impact which seem to be just topics rather than indicators. They identify personal and family benefits, connectedness between people and groups and contributions to neighbourhood improvement. The distinction they found was between information about a service or advice about a process and information that would connect them with other people and organisations such as self help groups.

In the field of information and referral services Saxton et al., (2007) identified frequent calls for outcome measurement but a dearth of actual measurement in practice. They develop a matrix of three levels of outcome: individual, organisational and societal each of which can be short, intermediate or long term. They identify difficult to measure but important outcomes in terms of social capital and quality of life, and economic benefits, for example savings to other agencies through the provision of an informational infrastructure that aids other organisations and individuals in understanding abut the availability of assistance in an area. The NHS Direct evaluations focused on these organisational outcomes, identifying reduced demand for primary and emergency care services as key outcomes (Munro et al., 2000; 2005).

The organisational level is important as there is an argument that a good quality organisation can affect the performance of other organisations *reducing* the need for its own services. For example, if people are having problems in claiming benefits, an independent advice service could provide a catalyst for improving the performance of the local agency and reduce the need for individual level support for claimants.

At the individual level much advice can be seen from a legal perspective, which identifies different levels of information and advice as part of a spectrum of solutions to justiciable problems with outcomes identified in terms of whether the problem was resolved or not. For example, the Civil and Social Justice Survey presents outcomes in terms of whether resolution was reached through a court/tribunal, through agreement, the problem resolved itself or the individual 'gave up' (Pleasence et al., 2006).

In 'realistic' evaluations the focus tends to be on aspects of quality of life or indicators that are assumed to relate to improvements in people's quality of life. For example, in the studies of debt advice (Pleasence et al., 2006) outcomes were conceived of in terms of both reduction in debt and broader quality of life impacts such as health, housing, relationships and perceptions of coping. The results indicated benefits in terms of people's levels of anxiety, general health, relationships and housing stability.

Links found between the receipt of benefits and health (Abbott and Hobby, 2000) have led to various studies identifying health as a direct or indirect outcome. As we identify above a number of studies have been conducted of welfare rights advice in a primary care setting. Greasley and Small's (2005) study was justified through anticipated health improvements, although outcomes were measured in terms of increased income from benefits. Abbott et al., (2005) and Mackintosh et al., (2006) used a well established measure of health, the SF36, as a measure of outcome. While Abbott and colleagues found some outcomes in the psychologically related domains: pain, emotional role and mental health, Mackintosh and colleagues' RCT did not find any statistically significant effect. The authors attributed this to the size of sample, timing of follow-up and nature of the measures. A qualitative study that went alongside this (Moffatt et al., 2006) identified the types of outcome that the authors suggest might be more relevant including 'maintaining independence' and 'peace of mind'.

In their R-I-R approach to assessing value Saracevic and Kantor (1997b) outcomes were conceived of as results. Their development of a taxonomy based on this for library and information services explored library and information service users' perceptions. They classified results in terms of:

- Cognitive (e.g. learning something)

- Affective (e.g. sense of confidence)
- Accomplishments (e.g. contribution to a task)
- Expectations (e.g. getting what was needed)
- Time (e.g. saving time)
- Money (e.g. monetary estimate of value of results)

6. A model of I&A services

Saxton et al., (2007) developed a model as part of as study which explored the benefits that users receive from 2-1-1 information and referral services that were distinct from the social assistance provided by the various service agencies. The wide ranging nature of 2-1-1 services provides a very helpful starting point although we develop it to reflect the wider application in terms of types of I&A service and approach to outcome measurement. The model shown in figure 1 identifies the *inputs, activities, reach, outputs* and *outcomes* (short-term, intermediate and long-term) for individuals, organisations and society as a whole. In the context of 2-1-1 services, Saxton and colleagues maintained that important economic benefits would result though increasing the efficiency of those agencies that received increased referrals as the result of the service, and that at the broadest level 2-1-1 services would build an information infrastructure that would potentially both increase social capital and create relationships between organisations, reducing overlap and increasing co-operation. While acknowledging the wider benefits that advice and information services can provide for society and organisations, our focus is on the benefits to individuals and the measurement of the outputs of associated activities.

Activities

At the individual level information and advice services can include a wide range of activities. We draw on the framework developed by the Community Legal Services (CLS) which formed the basis of a quality mark (Community Legal Services, 2000). In this, organisations were classified in terms of whether they provided:

- *Self-help information* (could be website, leaflets etc) Service staff have little or no interaction with the client when obtaining information
- *Assisted information*: providers will assist clients in finding information. May not be sole purpose of the organisation e.g. library or benefits agency
- *General help:* providing advice relating to personal circumstance usually person to person (telephone or face to face) bringing in a new perspective, giving information and explaining options, identifying further action clients can take. Includes basic assistance e.g. filling in simple forms

- *General help with casework*: includes negotiation on a client's behalf with a third party/ representing someone through writing on their behalf.
- *Specialist help*: in law is for organisations that provide legal help on complex matters in specific areas of law.

An alternative (but very similar) classification used in the Scottish National Standards for Housing Information and Advice Services is:

- Type I – Active Information and Signposting
- Type II – Casework
- Type III – Advocacy, Representation and Mediation.

Advocacy potentially leads us into a wider field of activity. Rapaport et al., (2005) summarise core advocacy typologies as *Legal* (e.g. skilled individuals engaging in welfare rights tribunals); *Class* (e.g. MIND representing the rights of people with mental health problems); *Self-advocacy* (e.g. developing skills of people with learning disabilities to advocate on their own behalf); *peer* (where people with similar experiences speak for each other) *Citizen* (e.g. where a person with learning disabilities is linked with a volunteer to act on their behalf, often long-term). Of these only *legal* advocacy appears directly relevant to I&A services. However, the dividing line is not clear. We propose to exclude non-individual and long-term advocacy (where an aim is to develop a relationship with the individual). In the former instance the interventions fall out of our scope as we are focusing on individual beneficiaries of services. In the latter instance such interventions would have objectives beyond the I&A function so might more appropriately be categorised as a low-level interventions or mainstream service where we would expect to evaluate through our ASCOT outcomes framework. However this is clearly debatable and something that needs to be agreed before the work goes forward (see section 8 below).

Reach

In Saxton and colleagues' model Reach at the individual level covers the nature of advice and information: whether it relates to child care, employment, health and so on. It seems helpful to be able to classify a service in terms of areas of advice covered in a way that makes sense to providers of these services. We could use the areas of advice based on those used by the Citizen's Advice Bureau (CAB):

- Financial
  - Benefits and tax credits
  - Debt
  - Other financial issues (child support, legal etc)
- Housing

- Employment
- Immigration nationality and asylum
- Health and community care
    - Health
    - Adult social care
    - Child care
- Education

In addition to the scope of information, in our model Reach is taken to include the information needs of the individual in the absence of the service. Initially we may simply classify individuals' information and advice needs as 'general' or 'additional'. General needs would be the equivalent of the general population. Additional needs might include people with learning disabilities, people with communication difficulties and those who have problems in understanding English and other difficult to reach/ socially excluded groups. Given the diversity of such problems it could be argued that finer distinctions might be needed if we are to accurately reflect the impact of services.

Outputs and outcomes

The objective of this work is to identify a way in which we measure outputs in a way that reflects changes in quality and incremental contributions to outcome. We discuss this in more depth below. For the purposes of the model we use the same general basis for measuring outputs. When we are interested in outputs for individuals then number of people helped is the basic unit. One person helped will often be the result of a number of contacts and activities. The definition of a 'case', which covers each 'episode' of advice, is used by CLS when asking organisations to report on their activity is helpful in this context. We need to be aware, as we identify below, that more than one individual might benefit from one 'case'.

Figure 1: Model of Information and advice service inputs, outputs and outcomes (adapted from Saxton et al., 2007)

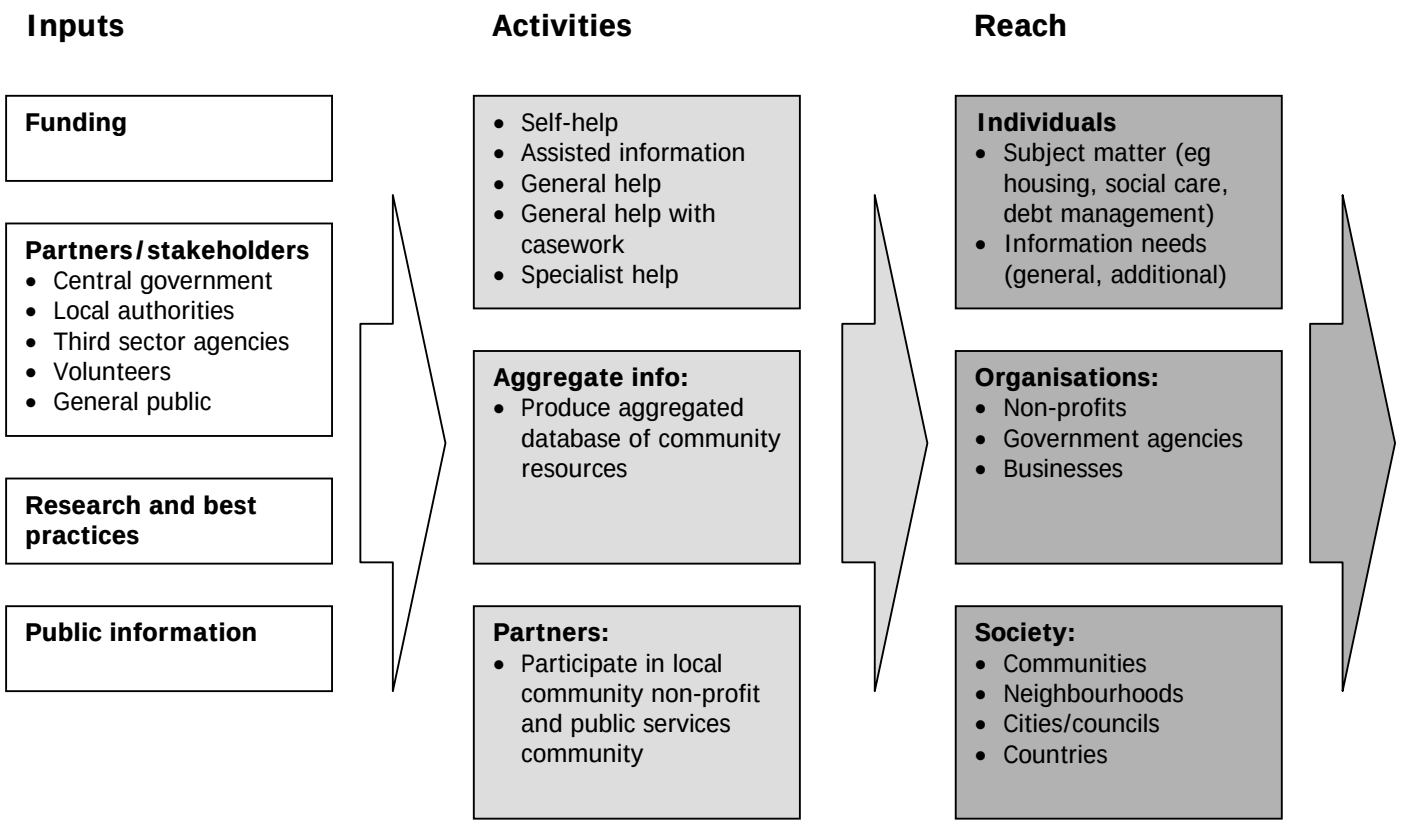
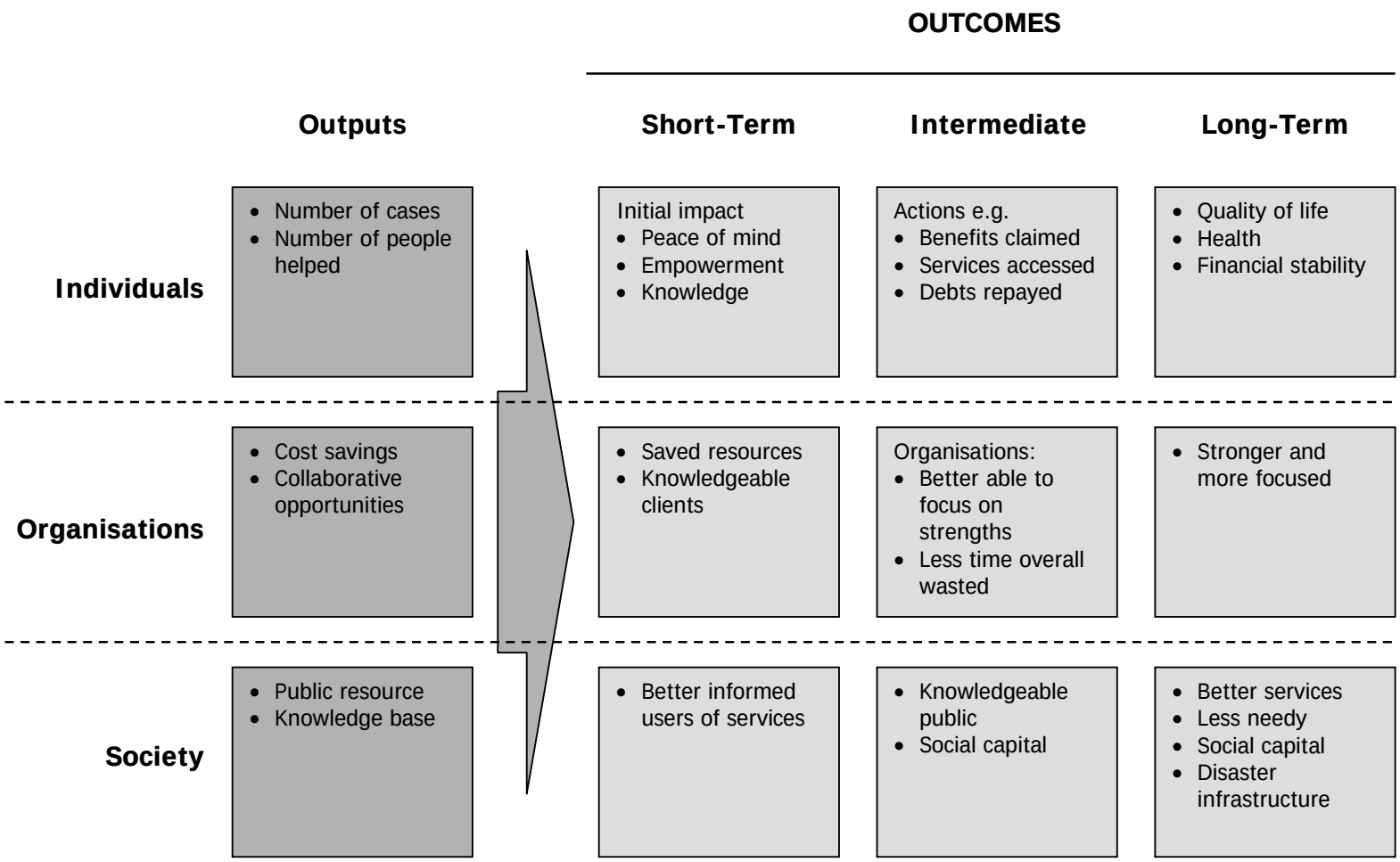


Figure 1: Model of Information and advice service inputs, outputs and outcomes (adapted from Saxton et al., 2007) continued



We define outcomes as short-term, intermediate or long-term with respect to how long it would be expected that it would take for them to occur rather than necessarily how long they are likely to last.

- *Short-term outcomes* for individuals are the initial impact in terms of reduction of anxiety or stress resulting from knowing more, a sense of empowerment and so on. These could be negative when the information is not good news.
- *Intermediate outcomes* for individuals are specific actions such as claiming financial benefits, accessing services and so on
- *Long-term outcomes* for individuals include the results of actions and decisions which might include better quality of life resulting from (for example) appropriate service/housing solutions, better health and so on.

A common situation in social care will be a relative, friend or neighbour contacting an I&A organisation on someone else's behalf. In such instances the short-term outcome might be for the individual contacting the service but the intermediate and longer-term outcomes could be attributable to the beneficiary of any resulting or subsequent activity.

7. Measuring outputs of I&A

When measuring the outputs of social care interventions we are using an approach in which we identify the potential of the intervention to deliver outcomes (capacity for benefit) and monitor the degree to which these outcomes are actually delivered (quality). The capacity for benefit (CfB) of an intervention depends on what outcome domains are relevant to the service and the degree to which service users are reliant on that intervention in those domains (see Netten et al., (2006) and Forder et al., (2007) for more detail). Similarly, in measuring the value of I&A services, we are less interested in an estimate of 'absolute' value that might be delivered through a contingent valuation exercise. Our aim is to devise an approach to measuring outputs that will reflect changes in the incremental impact on outcome of I&A services.

From the literature, our model and discussion above, we can identify three potential impacts or results of I&A:

- Improvements in sense of well-being resulting from a sense of empowerment, of knowing the options available (short term outcomes)
- Improved decisions, better founded actions (or non actions) (intermediate outcomes)
- Improvements in quality of life resulting from those decisions (long-term outcomes)

In terms of utility or welfare only the short and long term outcomes using these definitions result in an improvement in well-being as the decision or action of itself is neutral unless the

process itself (such as claiming benefits) has an impact. In Sen's terms capabilities may be influenced by the short term outcome, the degree these are translated into changed functionings would be reflected in long-term outcomes. In Saracevic and Kantor's terms each type of outcome is a result but we might expect short-term outcomes to be influenced particularly by the quality of the interaction.

Clearly the value of the service will be reflected in all of these outcomes but, as we identify above, frequently the information provided could be characterised as an 'intermediate' good, in that it contributes to the production of another good. In terms of National Accounts these outputs should not be included as that would amount to double counting. However, short-term outcomes such as improvements in well-being and capabilities resulting directly from the I&A service could be identified as separate 'experience' outputs that should be included.

In any measure of outputs we are unlikely to be able to pick up long-term outcomes but might look to infer these from known relationships with intermediate outcomes[5]. However, the degree to which a service delivers short and intermediate outcomes for individuals should be possible to monitor.

In order to reflect the incremental impact of the service we need an assumption or basis for estimating baseline – what the outcome would have been in the absence of the service. For this we could draw on what it is the service does in terms of the activities identified above. On the assumption that people do not seek more advice than they need we would hypothesise that a service that provides general help and casework is contributing more to the outcome than one that simply provides general help. This contribution might be, in terms of short term outcomes, that people who have received more advice and support (more interaction) have received a greater benefit in terms of empowerment. Intermediate outcomes or actions are much more specific to the I&A service. For these we would hypothesise the additional activity would increase the probability of the action or decision occurring. If we can establish a means or consensus about reflecting the relative input in each instance, we can use the activity itself as an indicator of capacity for benefit or 'reach' of a service.

In some instances however, there will be additional needs that would not be adequately reflected in any such weighting. For example services that are provided for people who do not speak English or with learning disabilities would potentially have a greater capacity for

[5] The practicality of doing this will depend on whether we are able to reasonably infer relative well-being consequences for a wide range of decisions.

benefit than those that deal with the general population. For this we would need to decide what groups we should include and a basis for reflecting this additional need[6].

Our measure of outputs would put these different indicators together:

$$O = \sum_{i=1}^{n}\sum_{j=1}^{m} A_{ij}\left[\left(R_{ij}^{s} - \bar{R}_{ij}^{s}\right)\Delta S_{ij} + \left(R_{ij}^{L} - \bar{R}_{ij}^{L}\right)\Delta W_{ij}\right]$$

Outcomes are found by summing over individual recipients/cases, subscripted *i* of the sum of activities of type *j* used by the individual. The intensity of use of activity *j* is A_{ij}[7]. Information and advice activities produce a change in people's decision-making (called reach) to the extent, $R_{ij}^{s} - \bar{R}_{ij}^{s}$ is the change in reach with and without the activity of type *j*. In turn the change in decision-making can be understood as a change in well-being and this measured as ΔS_{ij} for short-term outcomes and ΔW_{ij} for long-term outcomes.

This formulation assumes that reach is specific to activity types and different individuals, as is the change in well-being. But either reach or outcomes could be standardised to the average individual. Also, *A* might just be a binary variable (0 or 1) i.e. they get the I&A service or do not. We have not specified the aspect of 'reach' that reflects the subject area of the I&A service, closely related to the 'reason' for using the service from the user perspective. This could in theory be reflected in the ΔS_{ij} and ΔW_{ij} terms in as much as these changes in well-being are reflected in the specific subject of the I&A.

Clearly we would expect long-term outcomes to differ depending on the nature of the intermediate outcomes or activities. We also need to be clear that in ΔW_{ij}we should not attribute all of the effect of the intermediate outcome to the I&A service as this could result in double counting outputs of services. Ideally our measure needs to reflect the marginal attributable benefit. While this might be difficult to establish in practice, it may not be necessary to establish this empirically - we are most interested in reflecting relative importance of these outcomes rather than an absolute value. In estimating this weight we will also need to consider how we treat time (for both short and long-term outcomes) and deal with variability in the time over which these benefits might accrue.

An empirical question is how much short term outcomes in terms of reassurance or empowerment are equivalent across a wide range of I&A and whether these could be

[6] This assumes that we assess a mean effect for each group rather than reflecting individual characteristics. While this approach is a bit blunt the alternative would be whole menus of well-being consequences to tie to each type of reach.

[7] Different types of activity, as identified above as assisted information, general help and so on, can be represented as different levels of intensity of I&A.

equivalently weighted, regardless of the subject matter. While this might seem a strong proposition, we could hypothesise that an issue that drives people to seek I&A will be of primary importance to them at that point and that the difference in the value of the I&A will be adequately reflected in differences in terms of intensity of activity (associated with time spent by the individual) and weighting associated with long-term outcomes.

Any approach needs to build as far as possible on existing procedures. For their own purposes and in order to report to funders, I&A services will record activity and some will routinely record outcomes in terms of our 'intermediate' definition: for example whether financial benefits are claimed and their value. The Citizen's Advice Bureau (CAB) has a long list of such outcomes that it has identified. Many organisations will also routinely survey service users for quality assurance purposes. In addition to routine measures there is the process of accreditation whereby organisations that reach certain standards, usually in terms of organisational process, are certified. Such accreditation can provide confidence both for those using and funding services.

Such processes potentially provide useful platforms for a method of output measurement. Activity measures will record the number of individuals helped. The concept of a 'case' identified as used by the CLS above would appear to be an appropriate initial basis for output measurement. For monitoring purposes, to identify the type of people accessing the service, the characteristics of such individuals will often be recorded. This potentially provides us with a basis for categorising 'information needs'.

Other sources of data may also prove helpful. In terms of reflecting longer term outcomes, if we know the relationship between intermediate outcomes (such as receipt of a social care package of services) and outcome from other studies, at least in theory we can apply the change in well-being that results (ΔW_{tf}).

We have identified a number of different approaches that have been used in identifying quality or establishing value. These include:

- Contingent valuation
- Quality scales administered through face-to-face or telephone interview or self completion
- Peer review
- Mystery shopper
- Accreditation.

While our principal aim is the reflection of service user views there are aspects of quality that they may be less well placed to judge – for example accuracy of some information or whether they received appropriate levels of help. There may be an argument for applying some accreditation or audit process using peer review or mystery shopper processes that establish whether these aspects of quality are present. This could potentially be used to validate organisational aspects of our outcome indicator with ongoing quality indicators based on telephone or other surveys of people using the service.

8. Proposed next steps

While this approach provides us with a starting point there are clearly many challenges to meet before it would be possible to implement. We propose to focus on the short term outcomes in terms of measurement and restrict the investigation of longer term outcomes to scoping the potential for reflecting longer term outcomes through measures of intermediate outcome. We propose a two stage project in which the first stage would investigate the acceptability, plausibility and feasibility of developing measures of output based on the above approach. The second stage would investigate and hopefully illustrate how this might work in practice with a number of organisations. For both stages it would be important to involve an Advisory Group with experience and expertise in the field.

An important early role for this group would be to assist the team in defining the range of services that should be included in stages 1 and 2. There are two aspects of this range: activities and reach.

In terms of activities we need to clarify whether we want to include or exclude organisations that only provide I&A at the ends of the I&A spectrum. Thus do we want to exclude organisations that only provide self-help information? To what degree (if at all) do we want to include services which have an explicit advocacy role and those organisations providing advice to those involved in devising their support packages in personalised approaches to social care such as Individual Budgets?

In terms of Reach we have a number of options:

- Include all I&A organisations within the definition described in section 2 above
- Include organisations that provide I&A in social care and related fields such as health, welfare rights, housing and so on
- Restrict the study to organisations that provide I&A about social care (thus including generalist I&A services)
- Restrict the study to organisations that *only* provide I&A about social care.

The answers to these questions will probably differ between stages 1 and 2 for pragmatic reasons if nothing else, but it is helpful to identify how widely applicable we are aiming for the approach to be. As we move down the list, we trade scope for a gain in feasibility.

Stage 1 Exploratory and scoping work

During the first stage of the work the objectives would be to:

- Consult about the acceptability and enthusiasm for the type of approach proposed
- Investigate and devise a method of using activity measures an indicators of capacity for benefit or 'reach' of a service
- Investigate the need for and devise an approach to identifying the additional value associated with providing services for people with higher information needs (for example, people who do not speak English or with learning disabilities) and thus have a greater capacity for benefit than the general population.
- Investigate whether short term outcomes appear to be equivalent across a range of I&A services in terms of reassurance or empowerment and potentially could be measured with a common set of instruments
- Propose an approach to measuring short-term outcomes
- Consider the evidence for whether these short term outcomes need to be weighted to reflect the subject matter of the I&A service.
- Identify the range of intermediate outcomes that are specific to I&A services and establish the degree to which there is scope from other studies or sources for weighting for longer term outcomes.

In order to achieve these objectives we propose to:

- Undertake a consultation exercise with I&A organisations and other stakeholders including commissioners about:
    - Activities undertaken and their measurement
    - The short, intermediate and long-term outcomes as they define them
    - Differing 'need' levels for information among I&A service users
    - Their views about an appropriate basis for weights with respect to need for information
- Conduct up to six focus groups with users of a range of services about their experiences using I&A, short-term outcomes and quality domains
- Undertake a literature search to identify existing measures of relevant domains, for example empowerment
- Devise questions to reflect short-term outcome domains and cognitively test them with a sample of around 30 service users

- Map existing approaches to quality and outcome measurement, accreditation and regulation and evaluate the degree to which these might be built on for the purposes of measuring quality/outcome weighted outputs[8]
- Investigate potential sources of data for weighting outputs to reflect long-term outcomes
- On the basis of the findings of this stage design stage 2
- Recruit organisations to participate in stage 2 work.

Stage 2 Testing the approach

The overall aim of the second stage is to test out the approaches devised in stage 1 to feasibility and validity in practice. The objectives will be to:

- Identify a basis for estimating capacity for benefit of an I&A service that reflects service activities and characteristics of service users
- Establish a practical and valid approach to identifying short and intermediate outcomes
- Illustrate (if possible) how long-term outcomes might be used to weight intermediate outcomes.

Ideally in doing this we will:

- Propose a basis for the relative weights for each type of activity in order to use the activity itself as an indicator of capacity for benefit of a service
- Propose the service user groups and the basis for reflecting additional needs for short-term and intermediate outcomes
- Investigate the relationship between indicators of process quality and outcome
- Devise a simple measure of short term outcome from I&A
- Investigate the potential for using existing data to generate service specific indicators of I&A intermediate outcome and weighting these to reflect long-term outcomes.

As we identify above the method will depend largely on the outcome of the first stage but we would envisage that the second stage activities would include working with a small sample of organisations to apply the approach in practice. Depending on feasibility and potential value, this would include surveying recipients on their experiences of receiving information and advice. One approach to establishing weights to reflect the value of activities and/or service user needs would be a Delphi exercise. We would explore the scope and acceptability of this in the first stage and follow up in the second stage if it appeared appropriate and practical. If during stage 1 we identify I&A organisations that have data sets that appear amenable we

[8] One aspect of this mapping exercise would be to consider the potential for categorising intermediate outcomes, particularly in terms of whether the long-term outcomes would be delivered through other services so the output would be classified as an intermediate good.

would include a secondary analysis of these as part of this work to investigate the degree to which currently available data could be used to generate outcome weighted measures of output.

Timing

We would want to discuss with the Advisory Group a realistic timeframe for the proposed work. At this stage we envisage the first stage taking about nine months. If we can establish early co-operation with some I&A organisations during that period we might be able to set up key elements of stage 2 before the end of the first stage.

9. Conclusions

Measuring outcome weighted outputs is challenging in any area, but particularly so in the field of I&A. Our approach draws on different branches of the literature and thinking in this field, resulting in a hybrid approach. In part this is a result of our model, which provides us with a useful basis for distinguishing three types of outcomes: short, intermediate and long-term. In the short-term I&A is represented as an 'experience' good. In measuring such outcomes perceived value is clearly the most relevant and is recommended by many observers as a basis for valuing information and information services. However, for mid- and long-term outcomes we reflect 'normative' assumptions about improvements in mid-term decision making resulting in long-term improvements in quality of life. The degree to which long-term outcomes are delivered through other services will define the degree to which they would be defined as an intermediate good. In evaluating long-term outcomes, realistic approaches might be most appropriate for establishing the degree to which these are actually delivered in practice.

The R-I-R model suggests that we want to reflect reasons, interaction and results in any measure of value. Our proposed approach picks up on 'reasons' in terms of reflecting the 'reach' of each service: areas of I&A and differing levels of 'need' for information. At present we have not explicitly included any aspect of this in terms of measuring service user perceptions of quality and outcome, the planned exploratory work will help in challenging or confirming this approach. Interactions will be reflected in both activity measure and aspects of process quality that might be reflected through 'independent' accreditation and/or through our short-term measure of quality and outcome. Results are clearly reflected in each aspect of outcome.

The aim is to develop an approach that is of use to the organisations themselves and to those commissioning the services, allowing I&A services to demonstrate their value and quality.

However, whatever approach we develop we need to be aware of 'Goodhart's Law' (Paterson, 2007, p765) about quality measures: indicators lose the relationship they had with quality once we start to use them as an indicator of performance measurement. The more that we look to users themselves and independent sources of validation, the more confidence we will have in our measure.

The issue of scope is an important one in taking this work forward. There are arguments in favour of including a wide range of I&A services initially to explore the diversity in developing our approach. Alternatively, we could start with a relatively narrow focus and explore the wider applicability of the approach developed later on in the process.

Whatever we decide to do, necessarily there will be a number of unanswered questions at the end of the process. However, the proposed activities should take us forward in a field of growing importance in terms of government funded activity.

Appendix A

The literature searches included follow up investigations of items identified through electronic searches. The electronic searches included:

Web of Science (Social Science Citation Index)
Searched title, abstract and keywords combining search #1 AND #2
#1 = "information service$" OR "advice service$" OR "information and advice service$"
#2 = quality OR outcome$
245 hits

International Bibliography of Social Sciences (IBSS)
Searched all fields combining search #1 AND #2
#1 = outcome* OR quality
#2 = information service* OR advice service*
26 hits

PsycInfo
Searched Abstract field combining search #1 AND #2
#1 = outcome* OR quality OR impact*
#2 = information service* OR advice service*
80 hits

Academic Search Premier
Searched Title
Outcome* OR quality OR impact
AND
“information service” OR “advice service”
25 hits

Index to Theses
Searched All fields
“information service*” OR advice service*”
AND
quality OR impact* OR outcome*
34 hits
05/06/07

Pro Quest Digital Dissertations Searched 05/06/07
#1Title (information service?) OR (advice service?)
Within search results #1 Keyword (outcome?) OR (quality) OR (impact?)
18 hits

Social Care Online
Searched All fields
@p=("information service*" or "advice service*")and @p=("quality" or "outcome*" or "impact*")
71 hits weeded down to 21 results

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