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Needs Assessment Sine Qua Non for Planning Effective Health Service

Needs assessment is the bedrock of planning effective health service. An extensive search into the literature revealed no comprehensive account of this for large and small population. The present report aims at bridging this gap. Findings are that, regardless of the size and nature of the population, the principle is the same, i.e. a systematic approach. This involves setting a clear goal. This may be the provision of an entirely new service or improving on an existing one for a particular stratum of a population or its entirety. Needs assessment must be on the platform of good grasp of the knowledge of background information of the target group such as pre-existing services, available resources, both human and material, as well as evidence of good or bad practice elsewhere to be carried forward or avoided, respectively. The actual process involves the constitution of a 'Need Assessment Team' representative of all stakeholders. The team should be well coordinated by an able leadership of a health professional. Public participation is of paramount importance to ensure ownership, consequently uptake and accountability. However, caution is needed to safeguard against raising false hope, as well as succumbing to public felt or perceived needs that may be out of tune with reality of prioritisation in resource allocation. As a safeguard against raising public false hopes, needs assessment should only be done when there is clear intention and resources to implement its findings. Consequently, it should be followed by an action plan for the design, commissioning, monitoring and evaluation of the service provided. This is a cyclic process to ensure fine-tuning for effectiveness of the service provided.

Key words: action plan; cyclic process; evaluation; health service planning; implementation; large population; monitoring; needs assessment; needs assessment team; prioritisation; public participation; small population; systematic approach.

Introduction

In the United Kingdom (UK), the National Health Service (NHS) was established in 1948 to promote the health of her population by providing health services, and to ensure equity of such services.^{1,2} Until recently, most formal health service planning took place at health board level.³ For an effective health service delivery to any population – small or large the trend now is emphasis on prior needs assessment to establish its health needs.⁴ This calls for the systematic assessment of needs to inform prioritisation in the purchase of services to ensure effective and adequate care for patients as well as minimising duplication of facilities.^{5,6}

It is difficult to define 'need' for the fact that it is a dynamic concept meaning different things to different individuals. While the patient thinks in terms of felt (perceived) or expressed (demanded) need, his doctor or other experts see it as normative.⁷ In his definition, Frankel (1991)⁸ simply puts it as 'the ability to benefit from an intervention'. The NHS and Community Care Act define 'needs' as 'the requirements of

individuals to enable them to achieve, maintain or restore an acceptable level of social independence or quality of life.⁹ However, in light of the differing views between patient and doctor, it remains to define what an acceptable quality of life is. It is also essential to acknowledge the diversity of needs namely: normative needs defined by the health professionals, felt needs perceived by the patient, expressed needs demanded by the patient and comparative needs in comparison with what others have.

Regardless of definition, health needs assessment of a population is ‘a systematic process of measuring health needs in the population so that services can respond to them’.⁷ This could be done for a small population comprising, for example, just a General Practice (GP) catchment area or for a large population such as a local authority, a state within a country or an entire country. While it is obvious to expect differences in the individual components of the various steps involved in needs assessment between these two types of population, the protocol is essentially the same, i.e. a systematic approach. Because need itself is not absolute but relative and dynamic, the process of needs assessment is a continuous cyclic one in order to match the relationship that exists between need, demand and supply.¹⁰ This is because a service that is a need today to a particular population may become obsolete to the same population with time.

This paper outlines from a health service planning perspective the scenario of the process of health needs assessment, highlighting the advantages and disadvantages of planning for a small population compared to a large population.

I. Why needs assessment?

Health needs assessment for any population is necessary for the following reasons:

- To build a detailed picture of the health needs peculiar to the population in question in the light of existing information about the population.
- To facilitate an evidence-based prioritisation to plan effective interventions to match available resources to needs to maximise health gains.¹¹⁻¹⁸
- To encourage teamwork involving community, health service providers and other agencies in health service planning; to encourage ownership of service provided and liaison with other agencies.
- To facilitate effective implementation, monitoring and evaluation of intervention services provided.
- To encourage accountability by both service providers and consumers.
- To provide information for strategy for future planning of health services.

II. General principles of need assessment

Although, different methods may be used for needs assessment for various sizes of population, the approach is the same i.e. a systematic approach as outlined below.⁷

1. Clear aims

Irrespective of the size of population, clear aims for embarking on needs assessment for the population must be stated. It may be to provide an entirely new service or to improve on an existing one for the whole population or one of its strata. For example, immunisation programme for pre-school children, social and educational services for teenage mothers, circumcision for male children of ethnic minority groups, water supply for an entire community or state, education for visually handicap children. In addition to ensuring the set goals are achieved, this helps in preventing any side-track.

2. Definition

Because of the many definitions of 'need', from the beginning it is important to bring 'need' into context with the instant setting.

3. Knowledge of already existing services

This is in terms of availability, accessibility, utilization, within and outside the population in question, of other health services. It also embraces the knowledge of how the needs being assessed have been met elsewhere.

4. Use of available sources of information

Need assessment could be compared to a jigsaw built with pieces from many sources in order to give a comprehensive picture. Sources of information include data from: General Practice, hospital, local authorities, vital registration, census, health departments and publications. Raw data collected directly from the population in question to reflect its unique characteristics are ideal. More than one source of information may be required to achieve the desired results. However, any supplementary data should reflect the characteristic of the population in question to justify their use. Information gathering should not stop at the level of needs assessment only but should also include planned intervention and evaluation.

5. Choice of an appropriate method

There are many methods for needs assessment. No one single method may be suitable enough in a particular case. Consequently, more than one method may be required in one case.¹⁹ The best method or combination of methods is one that ensures the aims of the exercise are achieved, hence the necessity to select the most appropriate method(s) in context of the particular situation right from the beginning. This is further highlight later.

6. Constituting a Needs Assessment Team

In general, needs assessment is teamwork. Success largely depends on choosing the right 'Needs Assessment Team', as the team may be called. The composition of the team should reflect the population in questions, knowledge, skills, expertise and other resources required, and the planning system in which the outcome of the exercise would be used so as to ensure a good team spirit and ownership. It should include, for example, General Practitioners (GP) from the population in question, members of its Primary Health Care Team (PHCT), local authorities, health boards, agencies and experts from allied areas. There should be a team leader to co-ordinate the team. Members should be informed in good time and given a clear job description. Because of the multi-disciplinary nature of the team, it is important the principal investigator

bears in mind right from the beginning the possible negotiations that may be necessary with the different interest groups if change must be achieved at the end.

7. The actual process

This is a multi- staged exercise. Each of the stages is highlighted later under ‘approaches’.

8. Commissioning

Health need assessment is not an end in itself but a means to the end, that is, the outcome of any needs assessment should be health gain. Consequently, no need assessment should be carried out without intention or resources to implement its results.²⁰ Since it is possible to unveil other needs during the exercise for a particular need, caution is required to ensure there is no side-track with regard to prioritisation.²¹ Since in most cases, resources both human and material are always scarce, the issue of prioritisation plays a vital role in commissioning.

9. Audit

Even the most foolproof service provided following a need assessment exercise could fail to meet such need. Consequently, need assessment should be a dynamic exercise incorporating periodic evaluation in order to plug in good time any loopholes that could compromise the effectiveness of the service provided.

III. Resources for needs assessment

1. Routine data

These are already collected data devoid of influence by the researcher. They include the followings:

1.1. Centrally held data

These are data from more than one practice and could come from as few as practices within a post code to a whole country. They include:

1.1.1. Census data

They are a reliable source of quantitative data that can be useful in understanding the social context of the population in question. But they give poor information on morbidity and less reliable the further away the date of usage is from the date of collection. They may, however, be more useful in planning for a large population than for a small population because they are available in post-code sectors which may not coincide with practice or locality populations. Furthermore, small changes, however small, have greater potential for significant impact on a small population than a large one.

1.1.2. Vital registration data

This gives information on population growth and available by postcode. The information is usually up to date, but data are readily skewed by any unusual change. Furthermore, they are more relevant for planning for large population than for practice populations because they are also in postcode sectors rather than practice population.

1.1.3. Hospital activity data

They give information such as hospital admission rates and referral rates by speciality, waiting times, admission by diagnosis and operative procedures. They could be used to assess quality and uptake of services. The data are reliable and up to date and available for individual practices. But for planning for practice populations, they are less reliable for the fact that they are episodic and are easily skewed by unusual cases. They are more useful for planning for larger populations.

1.1.4 Hospital cost data

These data concern the cost involved in hospital management of patients. They are up to date and readily available from Health Trust finance officers. However, there may be variation from Trust to Trust with regards to cost, hence additional burden for harmonisation when used for planning for a large population. Furthermore, they include overheads thus not reflecting cases not admitted. They are more relevant for planning for large populations than for small ones.

Centrally held data are informally readily available without extra cost to all practices and information can inform both local and national health service planning.^{22,23} They include people not registered with a GP, and are strong in morbidity and mortality. However, they may be out of date, inaccurate and out of tune with qualitative information.²⁴

1.2. Practice data

The general trend now is that most practices hold information on a database.²⁵ Information include demographic data for the practice population, consultation rate, screening and immunisation data, child surveillance, breast-feeding rates, epidemiology data such as incidence, prevalence and risk factors on specific diseases. The data are individualised and more relevant to planning for the practice population. Their collection can also encourage team-building. Because their quality varies from practice to practice, they are limited for use to compare practices. Furthermore, using them for planning for a larger population would mean pooling together and harmonisation of data from all the practices within the population. This could make analysis cumbersome and expensive. They are also limited in that they contain information on only registered patients, hence not giving a true picture of the overall population.²⁴

2. Published data

These are published surveys of morbidity of the population in question. They are useful reference points in forecasting, for example, morbidity pattern and can show potential unmet needs while assessing health needs of the population in question, small or large. However, they cannot be applied directly to another population used as a baseline for evaluating interventions.

3. Continuous Morbidity Recording in General Practice

Information here is from sampled practices representative of the practices of a larger population. Information is coded for uniformity. This gives useful morbidity pattern that could be applied in assessing needs of another practice. Since they are from practices within a larger population, the impact of their variation from one practice to the other would have less effect while planning for a large population than for a practice population.

IV. The process of need assessment

1. Stages

1.1. Stage One

This is critical to the entire exercise. It involves making preliminary decisions on who is to be involved. A leader with good management skills, who knows the community well and is enthusiastic about the project, would be ideal. The group should have the right mix of required representation and skills. It is also necessary at this stage to define the scope of the project – for a community or a country. Is it for a particular service or for overall health improvement? It is also important to know the resources, both human and material, that are available for both the assessment, and the implementation of the outcome of the exercise. This helps to decide if the exercise is worth the efforts. Following this a start date and a project management time table should be worked out in light of planning, data collection and analysis, preliminary report, consultation on results and production of final report. A pilot study may be necessary before the full process. This may be useful in plugging any potential loopholes. Sufficient time bank should be allowed for unforeseen disruption to ensure there is enough time for anticipated results and for policy makers to make decisions.

1.2. Stage Two

An appropriate approach should be chosen. This should be informed by the reason for the assessment. The aim here is an approach that helps to achieve the aims of the project.

1.3. Stage Three

This is step by step building of a picture of the problem using appropriate method(s), each of which is highlighted below.

2. Approaches to need assessment

The various methods for need assessment are highlighted in this section in terms of what they are, their advantages and disadvantages.

2.1. Global information based needs assessment

In this approach information from many sources is used to build a picture of health related problems of a well defined population. No assumption of where the needs lie before the exercise. The data collected are used to pin down areas of potential unmet needs and to define priorities for more detailed investigation. The limitation of this method is that it measures only what is measurable and may result in a large amount of data such that interpretation becomes difficult. To overcome this it is important to know what is needed from the data before collection.

2.2. Focused need assessment

The emphasis is on the needs of a specific interest group.²⁵⁻³² A specific area of potential need, for example, a client group, a service or a disease condition in the population is identified for detailed investigation. This is often used to study identified priorities, but it has potential to ignore other related needs. It uses both routine data and data specifically collected from the population in question. It is advantageous as it prevents straying into other potential needs, consequently problem with prioritisation.

However, in another way, such ‘concealed’ needs may be more important than the needs under investigation. Another disadvantage is that it is often professionally focused and works best where there is evidence of effectiveness.

2.3. Guideline based approach

Needs assessment here aims at measuring changes required to implement a guideline. It uses baseline audit of current practice to see the extend of variation between current practice and the guideline. The assumption here is that the guideline is correct and relevant to the needs of the population in question, whereas the guideline may not be appropriate for the population.

2.4. Community development approach

This uses qualitative approach and primarily involves the local community in assessing their needs and priorities. Working with the local people is advantageous in that it has a high potential of ensuring ownership, consequently use of service provided. This is time consuming and may require special training. Again, there may be differing views between the community and the health professionals.

2.5. ‘Healthy’ Alliances approach

The focus here is on health not sickness. This is in recognition of other determinants of health other than health services such as, environment, education, occupation, employment and lifestyle. It involves alliance with agencies outside the NHS, for example, the police, environmental protection, local authorities and local employers. The advantage is recruitment of resources outside the NHS to promote health. However, the diversity of agencies involved may make it a difficult task. Also, the priority of the people may not be health.

2.6. Advocacy approach

This aims at assisting vulnerable groups to identify their needs and to represent the needs to influence decisions. Examples of vulnerable groups include teenage mothers, homeless people, ethnic minority, mentally handicapped and HIV patients. The advantages here are that the service provided is tailed to the group in question. Effectiveness of the service is enhanced by the high potential for ownership by the users. The negative side is the possibility of stigmatisation; which can make reaching the group difficult.

2.7. Economics approach

This provides information with regards to cost effectiveness of different interventions thereby addressing the questions of feasibility and effectiveness. It could be a tasking exercise because of the large amount of data required. In addition there may be more questions than answers.

V. Need assessment for a small population

1. General consideration

Until recently health service planning was done at the Health Board level which involved specific well defined geographic areas or communities.³ Today the emphasis is assessment of practice populations in order to match the present focus on primary care,²⁴ as this is the key to attaining the World Health Organization (WHO) Alma Ata declaration of ‘Health for All’.³³ For about 90% of the population of UK that need health

care, the first port of call is the GP because he is the key health provider in the UK primary health care. Yet very few GPs do needs assessment to inform their purchase.³⁴ This is largely because of lack of adequate training and time. This makes it the more reason why in addition to the GP other health professionals should constitute the needs assessment team. The membership of such a multi-disciplinary team would depend on the particular need being assessed. They could include the PHCT, public health physicians, environmental health officers, officials of the local authority, representative of the residents of the community where the practice is located.³⁵ The objective here is to ensure the principal stakeholders in healthcare delivery are brought to play.³⁶ This broad participation ensures proper definition of the health needs of an entire population or its stratum and planning intervention and audit measures through the exercise.

The use of routine data could give good insight with regard to the practice population. The most useful source of data is the practice population for the fact that the data are more specific to the population. They define its specific characteristic with regards to age, sex, activity; information with regard to consultation, use of existing services such as such as uptake of immunisation, morbidity and other local services such as cervical smear, maternity services, family planning. Such data may be obtained from local health boards. Currently such data are increasing becoming more reliable for the fact that the use of computers has made their collection during visits to the GP easier, in addition to the fact that every GP is required to make an annual return of data held in their practice to the local health authority. Also data from other members of the PHCT such as health visitors, community nurses feed data from the practices to the local health board from where relevant data for the specific practice could be retrieved. Other sources of data, for example, census could be used to create for the practice population a socio-economic and epidemiological profile with regards to parameters such as, age, sex, marital status, household composition, housing, ethnicity, education, employment status and disease pattern. Such data are also useful in comparing neighbourhoods served by the practice or other practices. Local authority data are useful for the fact that they are more current than those from census since they are more frequently updated. They also help in identifying particular needs peculiar to the specific strata of the practice population, for example, domestic violence among the low socio-economic groups.

In general, the advantages of using practice data include the fact that they are specific to the population. Again, much of such data is held by the PCHT which makes them more accessible for needs assessment. Furthermore, since their compilation involves a lot of the members of the need assessment team, their compilation could build a good team spirit that could enhance the multi-disciplinary approach required for the needs assessment. However, their use has some limitations. Their use may be restricted by confidentiality. Also, there may be variation in their quality. Again, they are often from small and unstable number of events. Not the least, they concern only patients who present to the GP, hence not a true reflection of the morbidity pattern of the practice population. Because of the workload on GP whose primary objective is provision of services, they may not have the time and enthusiasm for collection of such data. There is also lack of true community involvement for the fact that the data are often collected during consultation for services rather than on ground of needs assessment.

Other limitations in the use of other sources of data include, for example, census data may be stale at the time of use as the current time elapse for census is 10 years. The further away they are from the date of collection the staler they are. Furthermore, retrieving data for the practice population in question from general data such as hospital activity, census, vital statistics and private practice could be strenuous.

2. Use of Survey Methods

This is a more practical and direct involvement of the local community in the needs assessment exercise.^{37,38} It can be carried out by interviews, postal survey or both. A postal survey could initially be used for screening for subsequent interview of those, for example, with positive findings from the analysis of the postal survey. A representative sample of the local population should be selected in this exercise. Information that would inform service provision would include, for example, morbidity, perceived needs, utilisation of and satisfaction with existing services. One problem here is the fact that respondents may be less informed about existing services consequently, poor response. Again, participants may come with individual or perceived needs rather than needs that would serve the whole community. Also, surveys are time consuming. The question of research is that of the researcher rather than the community's and this restricts community involvement, consequently, low response rate.

3. Use of qualitative methods

This could be used to measure the quality of need. It complements information collected by quantitative survey methods. It also allows more community participation both in assessing needs and prioritisation. Again, it helps to meaningfully exploit people's privileges and values. Information collected is also more valid than that from quantitative survey.

4. Use of focus groups and in-depth interviews

Usually this is used to assess needs of a specific stratum of a population. All the respondents express a general concern without restriction to researcher's question. It is also a strong tool to identify needs that would not have been otherwise identified by other methods. Again, it may unveil other needs not previously recognised. This causes the danger of raising expectations that might not be met.

5. Participatory methods

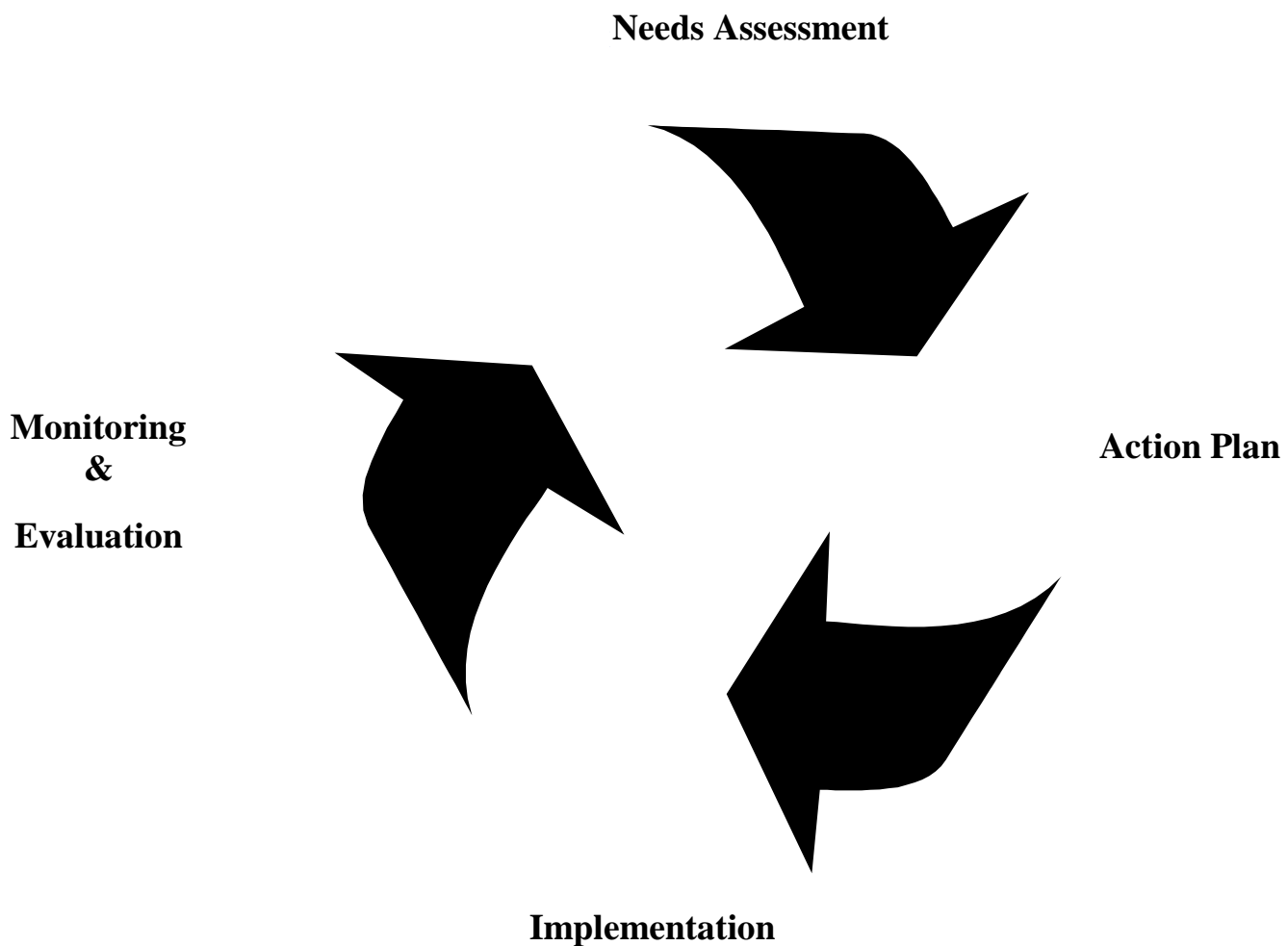
Each of the individual participatory methods has already been considered. This summarises their common advantages and disadvantages. They constitute a strong instrument for involving the community in assessing needs, prioritisation in providing solutions, implementation and evaluation. This is largely because the community sees itself involved rather than merely used as a beneficiary.³⁹⁻⁴¹ Consequently, they would be committed to the success of the exercise, particularly the eventual utilisation of the service provided. This also helps to raise the awareness of the local community that may lead to practical solutions to local problems and more realistic expectation from service providers. In addition, it corrects public view of being sidelined as 'supermarket model' whereby the community are only being sold the service without being empowered to take control over it. Furthermore, they give a broad perspective on needs, resources and priorities.²⁵ Not the least, the data are valid for the fact that they come directly from the community and help to establish its identity.

However, the participatory methods are associated with disadvantages that may include the diversity of public views which makes reconciliation of such views difficult. Here identified problems should be ranked for prioritisation and working parties and professionals and residents asked to address priority needs. Raised expectations that could not be met may be a problem. There may be overlap of needs. Conflict between users and service providers could also arise. Work could be intensive, and logistics difficult in addition to the fact that the workers may require training which makes it time consuming and expensive. It also requires time and commitment from the community.

In addition to the fact that they are the fund holders, GPs have a broader understanding of the health problem of their practice community and could also play key roles in commissioning and auditing of any planned intervention. They also play a great role in the link between primary and secondary care. Involvement of the PHCT recognises the fact that they are accountable to the community. Furthermore, the PHCT are likely to have a good insight of the needs of the practice population, and also likely to be more involved in service changes.⁴² Because many needs are beyond the scope of health professionals, collaboration with other agencies may be required.⁴³ This would be useful when it comes to the issue of resources for providing services for identified needs.

Problems associated with needs assessment at the practice level (small population) include the fact that GPs are often hesitant to be involved. Conflicts may exist between traditionalist of medical ethics responding to demands of individual patients and populations. There may also be more needs identified than the available resources to meet them, consequently prioritisation. The heterogeneity of the population may make description of needs and prioritisation difficult. Again, minority groups and minority conditions stand the risk of being missing.⁴⁴ The small numbers of a practice make planning and management for identified needs difficult and cost may be high.

Once a need has been identified, an intervention and its potential for effectiveness should be worked out. It is important to prioritise by addressing the most salient needs to the community, usually best identified in consultation with the community.¹³ It is good ethics of needs assessment to address dare needs first, regardless of the relative benefit. Intervention follows an action plan for implementation and evaluation which follows a cyclic pattern.



VI. Needs assessment for a large population

Often a multiple approach is employed because of the fact that it is rarely possible for one method to adequately measure the needs of a large population.⁴⁵ Such a multiple approach involves the followings:

1. Epidemiological assessment

This uses standard criteria to measure the prevalence of a condition for which service is to be provided and the effectiveness of intervention.

2. Economic assessment

This estimates cost and cost effectiveness of the planned intervention for the informed need to be met.

3. Comparative assessment

This compares characteristics of different populations and services received.

4. Consultative assessment

The views of various interest groups such as the professionals and the public are sought regarding needs and interventions.

Just as for a small population, the needs assessment team should be multidisciplinary, involving, for example, the purchaser, service providers (PHCT), the community and professional experts.⁴⁶

5. Commissioning

The entire exercise for needs assessment is to inform commissioning. This is a dynamic cyclical process as has already been illustrated above.

Problems of needs assessment in a large population include the danger of speculation and unveiling felt and unmet needs without resources to meet them. Furthermore, areas of over supply may be defined but political difficulties may be faced in trying to reduce, relocate or stop such services. Another problem is that survey of morbidity at local level is rare, and where such data are available it would be a great task collecting them from all the practices within the population. This could be time consuming and expensive. Furthermore, since there may be no harmony in the methods used for the data collection by the different practices in the population, their analysis could be strenuous. Again, because of the variation of needs from one part of the population to the other, it is difficult to emerge with services that would be generally accepted as meeting the needs of every part of the population from the use of practice data. This problem could be addressed by providing services at regional level.

Conclusion

It is clear that some services are better planned for small population such as that for a general practice or a population such as a local authority, a state, a region, or in fact, an entire country. At whatever level, the prerequisite for effective planning is needs assessment. At any level involvement of the appropriate interest groups, and in particular the community, is vital to ensure ownership and consequently utilisation. As resources are often limited, prioritisation is essential. The whole exercise of planning is a dynamic cycle of events. While the GPs are the feeders for the secondary and tertiary level of health care, the latter two provide the base for the former. For this reason, planning at any level should bear this complementary role in mind and provide room for mobilisation of services either level. For effective healthcare service, prior needs assessment is uncompromising; and all stakeholders should be carried on board.

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