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SUPPORT Tools for Evidence-informed policymaking in health

6. Finding and using local evidence

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Abstract

Background: This article is number 6 in a series of 21 articles on tools for evidence-informed health policy making. Local evidence is evidence that is available from a specific setting or settings in which a policy decision and action will be taken. Such evidence is always needed, alongside other forms of evidence, to inform health policy decisions. *Global evidence* is the best starting point for judgements about effects, and factors that modify those effects, as well as for insights into ways to approach and address problems. But *local evidence* is needed for most other judgements about what decisions and actions should be taken.

Objectives: The objective of this article is to outline how local evidence can be used to inform policy decisions with regard to health issues.

Key messages:

- The following five questions may help to identify and appraise local evidence that is needed to inform a policy decision:
  1. What local evidence is needed to inform a policy decision?
  2. How can the necessary local evidence be found?
  3. How should the quality of the available local evidence be assessed?
  4. Is there important variation in the availability, quality or results of local evidence?
  5. How should local evidence be incorporated with other information?
- Local evidence may inform all stages of the policy process – from influencing the policy agenda through to shaping programme choices and monitoring programme sustainability
- Local evidence may be obtained from routine health information systems, from surveys or studies that can be disaggregated, or from studies that have collected or analysed data on a local level. The evidence needed and the evidence available will depend on the nature of the policy question under consideration and the context
- As with other forms of evidence, the quality of local evidence needs to be assessed. Policymakers should be cautious about using local evidence alone to assess the likely impacts of policy options. Local evidence may be more directly relevant than studies conducted elsewhere, but it may be less reliable due to the important limitations of studies that are undertaken locally

Background

This article is number 6 in a series of 21 articles on tools for evidence-informed health policy making [1]. It is also the 3rd of 3 articles in this series on identifying potential policy and programme options and finding evidence about them. Its purpose is to suggest questions to guide those who wish to find, assess and incorporate local evidence into health policymaking.

Local evidence is always needed, alongside other forms of evidence, to inform health policy decisions. *Global evidence* – the best evidence from around the world – is the best starting point for judgements about the effects of programmes and factors that modify those effects [1], and for insights into ways to approach and address problems. *Local evidence* is needed for most other judgements about what decisions and actions should be taken.

Local evidence is evidence that is available from the specific setting or settings in which a policy decision and action will be taken. The word 'local' in this instance can refer to district, regional or national levels, depending on the nature of the policy issue being considered. Such evidence might include information on the presence of factors that modify the impacts of a policy (or *modifying factors*), such as: the characteristics of an area and those who live or work in it, the need for services (prevalence, baseline risk or status), views and experiences, costs, and the availability of resources such as staff, equipment and drugs. Local evidence might be obtained from routine data (e.g. on the prevalence of diseases, on healthcare utilisation, on service costs); survey data (e.g. on household conditions, health and demographics); and data from one-off studies (e.g. trials conducted locally, studies of consumers views regarding a particular health issue, and cost-effectiveness evaluations).

There are a number of ways in which local evidence may be useful (see Box 1 for a list of some of these). For example, policy makers need local evidence on the prevalence or magnitude of a health issue in order to contextualise, and make relevant, evidence from global reviews or studies conducted elsewhere [2]. (Box 2 discusses this issue in the context of malaria treatment in Tanzania and Brazil.) Evidence based on information from the global, regional or national levels may not adequately describe a local situation. Local information on delivery, financial or governance arrangements for healthcare will also be needed to inform decisions. The views and experiences of local stakeholders, such as health professionals or consumers, regarding a particular policy decision constitutes another important form of local evidence [3, 4]. (Box 3 provides examples of using local evidence in assessing needs regarding general practice in Australia and views regarding the use of insecticide-treated nets in South Africa.) Finally, information on the local costs of an intervention and the availability of resources is essential in taking decisions regarding implementation and in planning the delivery of interventions [5-7] (see Boxes 4 and 5 for examples related to this issue in South Africa, Chile and the United States).

Local evidence may inform all stages of the policy process. For example, local evidence may place an issue on the policy agenda and so help to set policy goals (see Box 2). Local evidence may also be used by different stakeholders and interest groups to lobby for particular policies. For example, the Shack Dwellers Federation of Namibia, an organisation of local shack dwellers associations in Namibia, provides support to local groups for the collection of information on the socio-economic status of their members and other residents, and on the availability of local essential services. This information has been used to help identify local needs and also to provide local groups with a voice in government policy debates. Local

groups are also able to use this information to lobby municipal officials and politicians so as to improve the quality of service provision in their area and to make more land accessible [8].

In addition to informing policy decisions directly, local evidence may be useful in monitoring the effects of a programme or policy option over time so as to ascertain whether it is continuing to deliver the anticipated impacts [9]. (Box 6 discusses the use of local evidence in monitoring and evaluation in the context of antiretroviral treatment in South Africa.) Where data are collected routinely, some level of retrospective analysis may be possible and can provide a baseline against which new programmes can be evaluated. Local evidence may also be useful in demonstrating trends in the effects of a programme across small geographic areas, such as neighbourhoods and districts, and in highlighting differences in implementation or uptake. Policy makers may also be concerned with the impacts of a programme on particular groups, such as vulnerable populations or minority groups. Local evidence may be useful in examining whether programme resources have been distributed equitably and if a programme is being implemented in ways that promote equity (see, for example, [10]).

Policymakers should be cautious about using local evidence alone to assess the likely impacts of policy options. Local evidence may be more directly relevant than studies conducted elsewhere, but it may be less reliable due to important limitations in the studies that were done locally. In addition, even when reliable local evaluations are available, they may be misleading because of random errors. Judgements about whether to base a conclusion on a subset of the relevant evaluations (which happen to have been undertaken locally) or on the overall evidence (including relevant studies undertaken in other settings) are better informed if made in the context of a systematic review of *all* of the relevant evaluations [1]. When a systematic review is unavailable and it is not feasible to conduct or commission one, local evidence alone may be used to inform policy decisions [11]. In these circumstances policymakers should be aware of the risks of doing this, particularly if the local evaluation has important limitations (risk of bias) or is small (and therefore the results are imprecise). However, in (the relatively uncommon) circumstances where rigorous, directly relevant and large local impact evaluations are available [12], such evidence may be optimal for informing decisions.

Like all other forms of evidence, the reliability of local evidence needs to be appraised. In this paper we suggest five questions that can help to identify and appraise local evidence that is needed to inform a policy decision.

Questions to consider

The following five questions can be used to guide policymakers and others in identifying potential policy and programme options and finding related evidence:

1. What local evidence is needed to inform a policy decision?
2. How can the necessary local evidence be found?
3. How should the quality of the available local evidence be assessed?
4. Is there important variation in the availability, quality or results of local evidence?
5. How should local evidence be incorporated with other information?

1. What local evidence is needed to inform a policy decision?

A range of local evidence may be needed to inform a policy decision (Boxes 1 to 8 provide examples). The evidence needed will depend on the nature of the policy decision or question under consideration, the context, and the availability of different forms of local evidence (see Table 1).

2. How can the necessary local evidence be found?

Local evidence may be obtained from routine health information systems, from larger surveys or studies that can be disaggregated, or from specific studies that have collected or analysed data on a local level. We discuss each of these in more detail below.

As with global evidence of effects [13], the process of searching for, including, and assessing local evidence should be systematic and transparent. The selective use of local evidence, for example to demonstrate the usefulness of a particular policy option, should be avoided as this may result in important data or information being omitted or overlooked during the decision making process. For example, including only the largest estimates of the size of a problem, such as the proportion of children who do not complete their vaccination schedule, will result in a poor understanding of the problem of incomplete vaccination. It may also result in scarce resources being allocated to interventions that are not needed, that do not respond to local needs, or that are not needed to the extent to which they are provided. Using the largest estimates of the proportion of children who do not complete their vaccination schedule to inform a policy decision may result in more resources being allocated to the vaccination programme than are needed in practice.

Local collected data obtained from the routine health information system:
National, district or other local health authorities or other parts of the health system often collect data routinely on a wide range of issues, including [14]:

- Mortality and burden of disease: this includes health outcomes such as child mortality, TB treatment outcomes, peri-operative deaths, infectious disease and cancer notifications
- Health service coverage:
  - Coverage for clinical interventions or services such as childhood vaccinations or cervical screening rates
  - Health service utilisation information such as length of hospital stay, number of outpatient visits for specific health conditions, and prescription drugs dispensed
  - Patient satisfaction with care such as routine surveys of patient satisfaction
- Risk factors: such as nutrition and blood pressure
- Health systems resources:
  - Healthcare expenditures according to various cost centres and programmes
  - Human resource data such as numbers and grades of staff in different facilities and programmes, delivered staff development programmes, and staff absenteeism
  - Clinical performance data such as post-surgical infection rates, time to treatment for people with myocardial infarctions
  - Guidelines used for care delivery
  - Adherence to guidelines for care delivery
- Inequities in healthcare and health outcomes

For some of these sources, it may be possible to disaggregate data by specific groups, such as gender or age, or by specific local area, such as a neighbourhood or town [1].
Good starting points for identifying local sources of routine data are the health information departments of the Ministry of Health, the National Statistics Office, and local health authorities. Increasingly, these organisations are publishing lists of the range of data that they capture and analyse on the internet, and many also regularly produce summary statistics. For example, the City of Cape Town Health Department in South Africa publishes information on their website by sub-district for a small range of health indicators, such as number of live births, number of infant deaths, infant mortality rate, and TB case loads and treatment outcomes (see: http://www.capetown.gov.za/en/cityhealth/Pages/CityHealth.aspx). The Association of Public Health Observatories also provides data on key health indicators for each local authority in England (see: http://www.apho.org.uk/default.aspx?QN=P_HEALTH_PROFILES). Local research institutions, health NGOs, or the offices of bilateral or multi-lateral agencies, such as WHO country offices, may also be able to advise on local sources of routinely collected data. Some commercial databases may include useful local evidence related, for example, to local prices for drugs, their availability, and the use of other technologies. In general, local health authorities should maintain an overview of local sources of routinely collected data. Policymakers may want to familiarise themselves with these.

Data from larger surveys or studies that can be disaggregated to local level
Important data sources include large surveys or studies such as national censuses, regional surveys of access to basic facilities, and national demographic and health surveys. For some of these sources, disaggregation to the provincial or city level may be possible or may already have been conducted. For example, the Neighbourhood Statistics site of the United Kingdom Office for National Statistics (see: www.neighbourhood.statistics.gov.uk/Dissemination) allows users to find statistics for an area by entering the name or postcode of an area. Data on a wide range of topics are available, including access to services, crime and safety, general health, and teenage pregnancies. Similarly, the website of Statistics South Africa includes information on a wide range of topics disaggregated to the provincial level, including health insurance coverage and health service consultations by province, based on data from a national household survey (see: http://www.statssa.gov.za/).

For other datasets, analysis to the appropriate local level may not be conducted routinely, but may be feasible if data are tagged by geographic area. The agency that conducted the survey or the agency housing these data should be able to advise on whether further disaggregation to the local level is possible. This process of further analysis is more complex and statistical support is therefore generally recommended. Some health data, such as the use of treatment services for sexually transmitted infections and HIV/AIDS, are considered to be of a sensitive nature. It may therefore not be possible to obtain these data disaggregated to local level because the agencies housing these data need to ensure that specific individuals cannot be identified from the information released into the public domain.

Specific studies that have collected and analysed data on a local area
Large numbers of research studies collect, analyse and report data focused on a local area such as a province of a country or a city. Such studies can be located in several ways:

- By searching (ideally with the help of an information specialist) global databases of published research papers, such as Pubmed, the Cochrane Library or the WHO regional databases (e.g. the Latin American and Caribbean Health Sciences Database [LILACS]), using geographic terms such as ‘Caracas’ or ‘Buenos Aires’. PubMed includes a *hedge*, or

preset search strategy, that allows users to search for administrative databases studies, community surveys and qualitative studies (which may be helpful in providing information on views and experiences, for example). This is available at: http://www.nlm.nih.gov/nichsr/hedges/search.html

- By searching (ideally with the help of an information specialist) sources of 'grey' or unpublished literature, such as Google Scholar, the WHO Library Information System (http://dosei.who.int/uhtbin/cgisirsi/Mon+May++4+21:00:46+MEST+2009/0/49) and OpenSIGLE (System for information on grey literature in Europe: http://opensigle.inist.fr/)
- By contacting local researchers in universities, research institutes or health departments or local research networks for relevant information.
- By contacting or searching the resources of health observatories such as the European Observatory on Health Care Systems (http://www.euro.who.int/observatory), the International Observatory on Mental Health Systems (http://www.cimh.unimelb.edu.au/iomhs) or the Africa Health Workforce Observatory (http://www.afro.who.int/hrh-observatory/)

3. How should the quality of the available local evidence be assessed?

Like other forms of evidence, the quality of local evidence needs to be assessed. Where data quality is poor, interpretation can be difficult and there is a danger that faulty conclusions may be drawn. A number of factors may compromise the quality of local evidence, particularly where this is based on routinely collected data. For example, healthcare workers who collate and enter data may be trained poorly in this task, data entry may compete with a large number of other care tasks in clinics or hospitals, and central quality control may be inadequate [15].

Most local evidence that is used to inform policy making is *descriptive* (i.e. it includes simple summaries of the sample and measures or outcomes included in the data) rather than *comparative* (i.e. it is based on the comparison of one set of data with another, for example by area or over time). There are some exceptions, such as evidence about inequities which relies on comparison.

The descriptive nature of most local evidence has implications for assessing its quality. In the case of comparative studies, the assessment of quality is focused primarily on the risk of bias (i.e. the risk of "a systematic error, or deviation from the truth, in results or inferences" [16]). In contrast, key questions in assessing the quality of local evidence (adapted from [9], see also Table 2) include the following:

- *Is the evidence representative?* This question focuses on whether the evidence correctly represents the wider population from which it is drawn or to which the findings are generalised. There are several components to this question: firstly, is there a clear description of the source of the evidence? Secondly, if the evidence is drawn from a sample of the population of interest, is there a clear description of how the sampling was conducted, and was the sampling approach used appropriate? Thirdly, is there a description of how any inferences or generalisations were made to the wider population?

- *Is the evidence accurate?* This question is concerned with whether the available data match, or are likely to match, the actual value of the outcome measured. In addressing this question, the user may want to consider whether there is a clear description of the process

through which the data were collected, including: who collected the data and whether they were appropriately trained and supported in this task, the tools used for data collection, when the data were collected, whether the quality of the data collected was monitored, how any analysis was done (and whether the method of analysis was reported clearly), and whether the limitations of the data are discussed

- *Are appropriate outcomes reported?* This question focuses on whether the measures reported in the data (such as treatment outcomes or health utilisation measures) are suitable for addressing the question for which the data will be used. In addressing this question, the user may want to consider whether there is a clear description of the outcome or outcomes measured, and whether these outcomes will provide a reasonable assessment of the health issue. For example, if policy makers are considering how to improve quality of care for people with TB, routinely reported TB treatment outcomes may be a useful measure. This is because the completion of TB treatment is likely to be related to the quality of care received by patients

4. Is there important variation in the availability, quality or results of local evidence?

In assessing and using local evidence, it is important to be aware of variations in its availability, quality or results, as discussed below.

Availability: Large variations always occur in the range or depth of local evidence available across geographic areas, jurisdictions or population groups. In many instances, this variation may simply reflect differences in the policies or capacity of health authorities or other agencies across different jurisdictions or areas. In some cases, however, variations in the availability of local evidence across groups or areas may reflect other underlying inequities, such as poor access by certain groups to health facilities or the failure of surveys to include 'hard to reach' groups such as migrant populations or those living in remote areas. Consequently, those using these data need to explore the reasons for variation in its availability and consider these in the decision making process.

Availability may be limited in other ways. Firstly, evidence may be available from only one source, making it difficult to cross-check the reliability of this information. Secondly, information may be available for a large area that includes the area of policy interest but in a form that does not allow this local area information to be separated from the wider dataset. Thirdly, policy makers may have access to good quality data from an area neighbouring the local area of interest and may then have to assess the extent to which this can be generalised to the area of interest. Finally, local evidence may be available only for an indicator assessing a related health issue. For example, policymakers in Colombia required data on the number of hospitalisations for meningitis but this information was not available routinely. However, the number of deaths due to meningitis in Columbia was available from the WHOSIS information system (http://apps.who.int/whosis/database/mort/table1.cfm). In addition, data on meningitis mortality rates were available from a local source (http://www.scielo.br/pdf/rsap/v8s1/v8s1a04.pdf). From these two sets of data, it was possible to estimate the total number of cases of meningitis in the country.

Quality and results: Different sources of local evidence may differ in quality. In addition, the quality of local evidence may differ from that of other forms of evidence used in decision making. For example, a study of routine malaria data in Mozambique compared paper-based district records of adult inpatient malaria cases and deaths with digital data captured at the

provincial level. Large discrepancies between these sources of data were identified (62% for cases and 48% for deaths). The authors suggest that these variations may be related to errors in the data entry process at the provincial level [17]. Where such differences in data quality exist, these need to be made explicit and taken into account in the decision making process.

Variations in the results of local evidence on a particular health issue across sources of local evidence may occur for a number of reasons including:

- Differences in the way in which the issue was defined and measured across the sources
- Differences in the individuals, groups or other entities regarding whom data were collected across the sources
- Differences in the comparators used
- Differences in the interventions delivered, where applicable
- Differences in the way in which data were collected and analysed across the sources

In considering such variations, users of these data should explore the following questions:

- Is the variation potentially important from a clinical or policy perspective?
- If the variation is important, is a reasonable explanation clear from the data sources, or can a reasonable explanation be hypothesised (e.g. differences in recruitment, measurement, analysis etc.)?
- Are there other sources of information against which the local evidence can be triangulated?

Users of data should document any decisions they take regarding the interpretation of the evidence and should note any uncertainties, as discussed below.

5. How should local evidence be incorporated with other information?

Policy decisions require a *combination* of global evidence (the best available evidence from around the world) – ideally from systematic reviews – and different types of local evidence, assumptions and judgements. For local evidence that is key to a policy decision (i.e. that might influence a decision in one direction or another) it is important to:

- Describe the approach used to *identify* the local evidence. Ideally a systematic approach to accessing this evidence should be used
- Describe the approach used to *assess* the local evidence. As noted earlier, it is recommended that a systematic approach to assessing this evidence be used. When it is necessary to take short cuts, to make assumptions or to use informal observations, this should be transparent
- Describe clearly what local evidence was used, and where the evidence was obtained. This should include detail related to the specific groups or communities from which the evidence was drawn. As far as possible, documents and other sources should be cited and made available to others involved in the decision making process
- Describe any important gaps or uncertainties in the evidence due to the lack, or poor quality, of local information. For example, a study of the use of data available from the national Australian Childhood Immunization Register found that there were challenges in using the Register to measure adequately immunisation rates and outcomes in specific populations, such as remote indigenous groups [11]. Similar uncertainties have been reported from LMICs [18, 19]. There may also be uncertainties in the evidence due to conflicting findings between different sets of local evidence. For example, hospital

- Finally, it is important to identify and discuss any differences between the findings obtained from global evidence and those obtained from local evidence. For example, the global evidence suggests that lay health workers can be effective in improving the uptake of immunisation in children [22]. However, local evidence of strong local views that lay people are inadequately qualified to provide health advice and promotion might suggest that this cadre would be less effective locally. This might lead to less confidence (that is, more uncertainty) about the applicability of the global evidence on lay health workers for immunisation uptake, although this review would still provide the best available estimate of effectiveness.

Resources

Useful documents and further reading

- WHO. World Health Statistics. Indicator compendium (Interim version). Geneva: World Health Organisation. 2009. Available at: http://www.who.int/whosis/indicators/WHS09_IndicatorCompendium_20090521.pdf

- The 'Creating Excellence' network in the United Kingdom has produced a short local evidence guide and a toolkit on gathering and analysing local level data. Available at: http://www.creatingexcellence.org.uk/regeneration-renewal-news262.html

- Department for Education and Skills. Using local evidence. A leaflet for service managers, planners and commissioners. Available at: www.dcsf.gov.uk/everychildmatters/_download/?id=5728

Links to websites

WHO Statistical Information System (WHOSIS): http://www.who.int/whosis/en/

African Index Medicus: http://indexmedicus.afro.who.int/

The Cochrane Library: http://www3.interscience.wiley.com/cgi-bin/mrwhome/106568753/HOME?CRETRY=1&SRETRY=0

Pubmed: http://www.ncbi.nlm.nih.gov/pubmed/

Health Metrics Network: http://www.who.int/healthmetrics/en/

Box 1: Uses of local evidence in informing policy decisions

Local evidence can be used to:

- Estimate the magnitude of the problem or issue that the policy aims to address
- Diagnose the likely causes of the problem [23]
- Contextualise evidence from global reviews of the effects of interventions
- Describe local delivery, financial or governance arrangements for healthcare
- Inform assessments of the likely impacts of policy options (i.e. due to the existence of modifying factors)
- Inform judgements about values and preferences regarding policy options (i.e. the relative importance that those affected attach to possible impacts of policy options) and views regarding these options
- Estimate the costs (and savings) of policy options
- Assess the availability of resources (including human resources, technical capacity, infrastructure, equipment) needed to implement an intervention
- Identify barriers to implementing policy options
- Monitor the sustainability of programme effects over time
- Examine the effects of a policy option on particular local groups
- Examine the equity impacts of a programme following implementation

Box 2: Using local evidence to estimate the magnitude of the problem or issue that a policy aims to address

A number of countries amended their malaria policies to replace chloroquine with sulfadoxine-pyrimethamine as the first-line drug for malaria treatment, due to growing levels of parasite resistance to chloroquine. In Tanzania, the impetus to amend treatment policies was based in part on evidence of a cure-rate failure of approximately 60% for chloroquine, compared to a cure rate of 85-90% for sulfadoxine-pyrimethamine. This local evidence of the magnitude of the problem was drawn from sentinel sites across the country, and was linked to the growing burden of malaria morbidity and mortality observed in the country [24].

In some Latin American countries, there is concern regarding the extent to which the pneumococcal vaccine includes the serotypes that are common in the region. In order to estimate the size of this potential problem, information from local sentinel sites was used to evaluate the match between the serotypes included in the vaccine and the ones prevalent in the region. For example, in Brazil it was estimated that, for the seven valent pneumococcal conjugate vaccine, 67.5% of the cases of invasive disease in children under 5 years of age were produced by serotypes included in the vaccine [25].

Box 3: Using local evidence to inform judgements about values and views regarding policy options

The importance of involving consumers and communities in decisions regarding their healthcare is recognised widely. In Australia, the Consumers' Health Forum undertook a series of consultations with consumers and consumer organisations to explore their needs and expectations regarding general practice and general practitioners. This evidence was gathered to inform policy development and analysis for the delivery of general practice services and the improvement of relations between the key stakeholders. This evidence was fed into a number of Australian policy processes, including the government's General Practice Reform Strategy, the General Practice Strategy Review, and the development of coordinated care as proposed by the Council of Australian Governments (COAG) [26].

The local acceptability of community-based malaria control interventions provides another example of consumer and community involvement. Indoor residual spraying (IRS) and insecticide treated nets – the two principal strategies for malaria prevention – are similar in cost and efficacy. The acceptability of these interventions varies across settings. In South Africa, both research and routine programme monitoring has highlighted community dissatisfaction with the insecticide DDT used for IRS due to the residue it leaves on house walls and because it stimulates nuisance insects such as bedbugs. In areas of Mozambique, there are concerns that specific sleeping habits – for example, people sleeping outside due to the heat – might also negatively influence the uptake of nets [27, 28].

Box 4: Using local evidence to estimate the costs (and savings) of policy options

WHO policy recommends the use of direct observation of treatment (DOT) for treatment delivery for tuberculosis (TB). DOT can be delivered in a number of ways, including through primary healthcare clinics and in the community. An alternative policy option is for patients with TB to self-supervise their own treatment. A study was done in Cape Town, South Africa to assess the costs of the TB Control Programme and to measure the costs associated with each of the clinic, community and self-supervised options of treatment delivery. The study used local data to assess the resource input requirements of the three alternative options for implementing TB treatment supervision over the six month period of treatment. These data were then used to estimate the cost per patient treated for each of the three supervision approaches. The results indicated that the cost (in South African Rands) per patient in each of the supervision options was R3,600 for clinic supervision, R1,080 for self supervision and R720 for community supervision. The authors concluded that community-based DOT by a volunteer lay health worker may be less costly to the health services than either clinic-based or self supervision [29]. The information on costs influenced the decision within the city to expand the delivery of DOT by community-based lay health workers.

Policy makers in a Latin American country required information on the costs of cochlear implants to assess the potential costs and savings of interventions to treat hearing loss. A search for local literature using Google identified a report from the Ministry of Health of Chile in which the cost of the replacement of the various components needed for cochlear implants was outlined. These data were used to estimate the likely total cost of cochlear implants in the local setting. (The report can be found at: http://www.minsal.cl/ici/rehabilitacion/consentimiento_informado.pdf)

Box 5: Using local evidence to assess the availability of resources with a view to informing a policy decision

An increasing number of countries are adding, or are considering adding, the new human papillomavirus (HPV) vaccine to routine immunisation schedules. While the vaccine is highly effective against the strains of the virus responsible for approximately 70% of cervical cancers, and has been recommended for routine immunisation in adolescent girls in the United States, implementation across the country is thought to be uneven. A study was undertaken in an area of North Carolina in the United States with high rates of cervical cancer. The study explored barriers to vaccine delivery and uptake as perceived by healthcare providers. Medical practices noted a number of key concerns, including: inadequate reimbursement by insurance companies of the vaccination costs; the high cost of the vaccine given that many consumers who needed it did not have adequate health insurance; the burden on practices in ascertaining the availability of insurance cover for each patients, given the varying policies of different insurers; and the high up-front cost to practices of purchasing and storing the vaccine. The study authors note that these resource concerns may act as barriers to the implementation of the national vaccination policy [30].

Box 6: Using local evidence to monitor and evaluate policies

A national programme for the rollout of comprehensive HIV and AIDS care, including antiretroviral treatment (ART), has been implemented in South Africa. The Joint Civil Society Monitoring Forum – a local forum including a number of NGOs, research institutes and other stakeholders – was established to assist government with the effective and efficient implementation of the programme. A briefing document outlining the lessons from this process notes that: "Democracy may be portrayed by the public's ability to contribute to and influence the state's decisions and programmes. With regard to ARV rollout, it has been reported that access to information has been a major challenge. Reportedly not all provinces have been willing to provide information in this regard. This has made monitoring and development of appropriate resolutions difficult" ([31] p3-4) The report also highlights difficulties with obtaining disaggregated data on HIV and AIDS expenditure which, in turn, creates problems in monitoring how global HIV/AIDS budgets are being spent and, in particular, relative spending on treatment versus prevention, care and support [31]. This example highlights the need for local evidence to effectively monitor the implementation of a key health programme.

Box 7: Using local evidence to diagnose the likely causes of a health issue

An Australian study of the factors affecting recreational physical activity found that while people living in disadvantaged areas had similar levels of access to public open space as those in wealthier locations, the equipment and space available in the disadvantaged areas were of lower quality. The study suggested that this may explain lower levels of use of these spaces in disadvantaged areas [32].

A province in Argentina detected an increase in maternal mortality. In looking for information on the reasons for this, a recent local study was found that assessed the causes of maternal mortality and the aspects of healthcare that need to be modified to decrease mortality. This local study suggested that abortion was the most common cause of maternal death. (Report available from http://www.msal.gov.ar/htm/site/pdf/Resumen%20ejecutivo.pdf)

Box 8: Using local evidence to assess the likely impacts of policy options (i.e. the existence of modifying factors) and to identify barriers to implementing policy options

An evaluation was conducted in Argentina of a regulation regarding payment for obesity treatments, such as bariatric surgery. The national cardiovascular risk factors survey, conducted by the Ministry of Health, was used to assess the extent to which obesity was a problem in the country. This survey provided data on the proportion of people who were overweight or obese and could therefore be used to assess the likely impacts of making available different forms of obesity treatment.
(Survey available from: http://www.msal.gov.ar/htm/Site/enfr/resultados_completos.asp)

Canadians stakeholders participating in a deliberative dialogue about how to improve access to primary healthcare in Canada were considering a variety of options, all of which included some form of transition from physician-led care to team-led care. An evidence brief, drawing on local evidence, was prepared to inform the dialogue. This identified four potential barriers to the implementation of these options:

1. Initial wariness amongst some patients of potential disruptions in their relationship with their primary healthcare physician
2. Wariness on the part of physicians (particularly older physicians) of potential infringements on their professional and commercial autonomy, in light of the private delivery component of the 'private delivery/public payment' arrangement with physicians
3. The organisational scale may not be viable in many rural and remote communities, and
4. Government willingness to extend public payment to other healthcare providers and teams while maintaining public payment to physicians in light of the public payment part of the 'private delivery/public payment' arrangement with physicians, particularly during a recession [33]

Table 1: Types of local evidence to address specific policy questions

Use of local evidence	Types of local evidence that might be relevant
To estimate the magnitude of the problem or issue that the policy aims to address	• Vital statistics data from routine sources, surveys such as the DHS • Morbidity data from routine sources at national, sub-national or institution (e.g. hospital) level
To diagnose the likely causes of the problem	• Local studies • Data on risk factors from surveys
To contextualise, and make relevant, evidence from global reviews of the effects of interventions	• Data from local health delivery agencies on the range of interventions currently implemented (for a particular health problem) and their outcomes, which can be compared with the programmes evaluated in global reviews • Data from local health delivery agencies on local coverage of these interventions
To describe local delivery, financial or governance arrangements for healthcare	• Ministry of Health and Ministry of Finance policies, guidelines and records • Regulations of professional organisations
To inform assessments of the likely impacts of policy options (e.g. due to the existence of modifying factors)	• Local studies of similar programmes
To inform judgements about values and preferences regarding policy options (i.e. the relative importance that those affected attach to possible impacts of policy options) and views regarding these options	• Local studies of stakeholder views • Information from stakeholder organisations, e.g. organisations representing the public and specific consumer groups, such as those living with particular health problems • Information from deliberative dialogues with stakeholders
To estimate the costs (and savings) of the policy options	• Local studies of costs and savings of programmes • Cost data held by health departments or programmes or by non-governmental delivery agencies
To assess the availability of resources (including human resources, technical capacity, infrastructure, and equipment)	• Resource data held by health departments or programmes or by non-governmental delivery agencies • Local studies of resource use by similar programmes
To identify barriers to implementing policy options	• Local studies of stakeholder views • Information from stakeholder organisations, e.g. organisations representing the public and specific consumer groups, such as those living with particular health problems • Information from deliberative dialogues with stakeholders • Local barrier studies
Monitor the sustainability of programme effects over time	▪ Routinely collected programme data
Examine the effects of a policy option on particular local groups	▪ Routinely collected programme data ▪ Local studies focusing on the group/s of interest
Examine the equity impacts of a programme following implementation	▪ Data that can be disaggregated by gender, age, area of residence, etc.

Table 2: Assessing the quality of available local evidence

Quality criterion	Example: Routinely collected data on TB treatment outcomes from TB Registers
Is the evidence representative?	• TB Registers should routinely record information on each patient diagnosed with TB. The information is not based on a sample of the population of interest and should therefore be representative of the demographics and treatment outcomes for people with TB in a particular setting, provided that it is completed for each person with TB
Is the evidence accurate?	• Most health authorities provide a manual, based on WHO guidance, for completion of the TB Register. This generally specifies what information should be collected and by whom. In using these data, policy makers need to check whether there is clear guidance on completion of the Register, whether TB programme staff have been trained in its use, whether there are mechanisms in place to check the quality of the data at clinic and district levels, and whether compilation of the data was done appropriately
Are appropriate outcome measures reported?	• A standard range of measures is generally included in TB Registers, based on WHO guidance. These are designed to assess the functioning of the TB programme. However, the data do not generally provide direct measures of issues such as patient satisfaction with the care provided by TB programme staff

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