

Chapter 5. Context: Taking situation analysis seriously

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1. Why is context important?

Traditional scientific experimentation typically involves (a) articulation of a plausible theory and (b) testing that theory under carefully controlled conditions to determine if predicted outcomes are observed. We can define 'carefully controlled conditions' as efforts by the experimenter to exclude every factor that could plausibly influence those observed outcomes to an extent that would be of concern, given the objectives of the experiment. For example, in attempting to estimate the acceleration of a falling body due to gravity an experimenter would have to decide whether to conduct the experiment in a vacuum to eliminate the influence of air friction. Their decision would depend on the type of falling body and the required precision of the measurement of its acceleration. Similarly, a chemist intending to measure the heat dissipated in a chemical reaction would have to consider the degree of purity of the chemical compounds involved. Would the measurements be significantly affected if they were only guaranteed to be 99.8 per cent pure as compared to 99.9 per cent? Note that there will be a multitude of other factors – for example the colour of the falling object or the age of the laboratory assistant mixing the reagents – that the experimenter may regard as obviously not relevant to the outcome of the experiment and therefore not needing to be controlled, though as scientific knowledge progresses there is always a possibility that one of these assumptions will later be proved incorrect.

The clinical trials of a new pharmaceutical will also typically involve the use of a range of controls that attempt to isolate the association between application of the drug and observed outcomes, in terms of physiological or psychological changes in a patient, from other factors that might 'confound' that association. As above, the purity of the drug will be carefully assessed. There will be procedures that aim to ensure that patients take their medicine in the prescribed doses, at the appropriate time and in the manner – for example before or after meals – laid down by those organising the trial. Typically, a placebo treatment will often be used to 'control' for the potential effects on patients of simply being involved in a trial, often with neither patients nor providers aware of which patients are receiving the placebo and which the drug until the trial is ended (an approach known as 'double blinding' ([Shultz and Grimes 2002](#))). Somewhat more controversially, the patients will usually be carefully screened before recruitment. They will generally be within a predetermined age range, have no pre-existing relevant health conditions and not be using other medications that may influence the outcome of the trial. They may also be excluded on the basis of a variety of other factors such as their weight, alcohol consumption, smoking habits or other lifestyle behaviours.

Interestingly, many practising physicians have expressed a concern ([Zwarenstein and Treweek 2009](#)) that the vast majority of clinical trials can be described as 'explanatory' (designed to test a hypothesis in a highly controlled context), rather than 'pragmatic' (designed to identify treatments that are likely to produce beneficial outcomes across the broad spectrum of patients routinely encountered by healthcare providers). They argue that by adopting 'laboratory' conditions and excluding patients with attributes that might confound the relationship between treatment and outcome, explanatory trials often produce findings that may be of scientific interest but are of limited practical value to clinicians working 'in the real world' and having to make difficult decisions about the best course of treatment for the large number of their patients who do not or will not conform to the rigid guidelines laid down by the drug manufacturers.

2. Context in health systems research

In the health systems interventions with which we are concerned there is almost no possibility of controlling for potentially confounding factors. “In laboratories scientists create artificial conditions in which those causal mechanisms which they conjecture to exist will be activated. In the natural world, potential causal mechanisms will only be activated if the conditions are right for them” ([Tilley 2000:5](#)). Interventions take place within a specific context, and implementation successes and failures can often be linked to uncontrolled and often uncontrollable mediating factors that derive from that context ([Belaid and Ridde 2015](#)). In a small minority of relatively simple interventions it may be possible to adopt a version of the placebo approach indicated above by randomly allocating individuals in the targeted population to intervention or ‘control’ groups.ⁱ In other cases ‘cluster randomisation’ may be possible, where whole facilities, villages, health districts, etc. in a targeted region are randomly allocated to receive or not receive the intervention. More often, when random allocation is not seen as a feasible option, the intervention population may be compared with ‘similar’ populations (with similarity based on the values of a range of socioeconomic and other indicators) that have not received the intervention, in what are usually described as ‘quasi-experimental’ implementation designs ([Gasparri and Bernal 2015](#), [Harper et al. 2015](#)). In each case the argument (which may or may not be convincing) is that the contexts in the intervention and control groups are sufficiently alike that different outcomes can be attributed to the intervention.

Whatever the intervention design, the implementation team will obviously wish for a successful outcome. To increase the likelihood of achieving this, given their inability to control contextual factors, they should: (a) determine what the most important of those factors are and how and to what extent they might influence outcomes; and (b) find ways to embrace those which are supportive and mitigate those which pose a threat to the implementation process. For the implementation researcher, as discussed in Chapter 1, the tasks are similar but even more challenging. In addition to the above, they would have to: (c) review the extent to which similar factors might need to be addressed in scaling up or relocating the intervention; (d) consider the implications for contexts where some positive factors may be less influential, absent or even negative; and (e) assess the possibilities for using approaches similar to those adopted in the current implementation for the mitigation of negative factors in other contexts.

To take a simple example, those implementing a mother and newborn child health (MNCH) intervention might find that a large majority of their target population have mobile phones (a potential positive factor) but also that a substantial number live in areas where road access is much more limited than expected (potential negative factor). The implementation team might decide to modify their operational procedures to make maximum use of mobile phone communications and to substitute motorcycles for ambulances to overcome the lack of road access. The implementation researcher would also need to consider: the extent to which these factors might be important in other regions; whether implementation performance might be less impressive in locations with more limited communications; and whether motorcycles would be a plausible solution to similar road access limitations in other parts of the country.

It is important to recognise that health system interventions are essentially *social* interventions, and that the diverse range of individuals who make up those societies may respond in very different ways depending both on their specific circumstances and on their perceptions of the intervention. They will often play the most important role in defining the context within which a given implementation takes place. Those contexts will also be strongly influenced by the nature of the communities within which those individuals live. For example, a child health promotion programme may aim to provide information, encourage trust in local services and empower mothers to take healthcare decisions. Programme implementation may trigger different processes depending on the characteristics of targeted individuals and households

(age, education, socioeconomic status, family circumstances, etc.), and various community and societal factors (community assets, local power structures, cultural norms, etc.). Across such varied contexts, the same programme components might in some cases result in increased knowledge and improved attitudes and behaviours, and in others promote conflicts between and/or within households that risk impacting adversely on children's health.

Developing a detailed understanding of the context within which an implementation takes place, and of the actual and potential consequences for implementation progress and outcomes, can thus be seen as one of the defining tasks of the implementation researcher. It may seem a daunting undertaking, given the range of potentially relevant contextual factors that will need to be considered and the limited resources that are typically available. However, remember that the definition of implementation research proposed in Chapter 1 assumes that the researcher will be an active member of the implementation team. This implies: (a) that the work can be shared across a number of individuals, all of whom will (or should) be equally concerned to understand the context within which they are working; and (b) that contextual knowledge can (and should) be acquired over an extended period, not in a 'one-off' exercise.

In practice, the problem faced by both researchers and the implementation team is rarely a lack of available data. As discussed in Chapter 3, even a cursory review of the literature or an elementary internet search will typically uncover a wealth of documentary material relating to the remotest regions and apparently most isolated populations. The difficult task is to identify the often small proportion of that material that provides data that is both relevant and trustworthy. There will also be a large number of individuals – colleagues, professional and social contacts, officials, journalists, etc. – who may be willing to provide key insights into areas that are less well addressed in the literature. For example, an anthropologist colleague assisted one of the editors of this volume by explaining that the design of a project could be relatively easily modified to avoid antagonising a local secret society that might otherwise have persuaded its members to hinder the implementation process. Such informal communications can be invaluable and often obtained with minimal effort – if the researcher has the initiative to seek them out and the ability to assess their reliability.

Whatever the available sources of data, it should be remembered that 'working hard' is no substitute for 'working smart'. It is very easy to lose sight of the primary objective, gathering and interpreting contextual information that is *likely to be relevant to the implementation process*, and to waste valuable time and effort on readily available and interesting, but at best marginally useful, sources. For example, it can be fascinating to investigate the various manuals available in most ministries of health setting out the precise regulations governing the activities of various types of health provider, but if those regulations are routinely disregarded and there is no prospect that they will be monitored or enforced within the lifetime of the implementation, the resources allocated to that investigation should be strictly limited. A useful concept from participatory methodology is that of 'optimal ignorance' – a state achieved when it is recognised that the value of the resources required to gathering additional information will probably exceed the likely benefits ([Longhurst 2013](#)).

Sensitive information

The 'secret society' example mentioned above raises an issue that is rarely addressed in textbooks but is often of critical importance – the extent to which potentially sensitive information on contextual factors should be disseminated. It will often be the case that the context within which an implementation is undertaken includes factors that may be acknowledged in private discussions but that would cause serious offence if made a matter of public record. For example, it might become evident that corrupt practices by providers were being tolerated by health authorities, or that some communities were willing to pay for healthcare for male children but not for girls. It would be a matter for the implementation team

as a whole to decide how to address such issues. In most cases, a confrontational approach, proclaiming their concerns and endeavouring to overturn long-established practices within a relatively short time frame, will not be seen as the most effective strategy. Typically, various mechanisms may be introduced into the implementation design, for example modifications to financial control systems or campaigns intended to encourage greater utilisation of services by girl children, and will be described as general project enhancements, without reference to the specific, sensitive problems that they are intended to address.

This situation will often pose a dilemma for the implementation researcher. As a member of the implementation team, it would be entirely inappropriate for them to widely disseminate sensitive information against the wishes of that team. However, given the broader objectives of implementation research as defined in Chapter 1, they clearly cannot ignore evidence that might have serious implications in terms of the potential risks and benefits associated with scaling up the intervention. As will be discussed in Chapter 12, one way to address this dilemma is to move from a focus on 'dissemination', which we commonly associate with academic research findings, to one on 'influencing', which is more relevant to research that is specifically intended to feed into policy decisions. This involves a recognition that the knowledge we have gained from our research is, to adopt a concept from economics, an *intermediate good*, of value only to the extent that we use it to influence policy debates in ways that can be expected to improve health systems and ultimately raise the health status of the population.

From this perspective, the use of sensitive information, just as with any other information, should involve: (a) rigorously determining that you really do have valuable evidence that can and should contribute to policy debates – it is always very tempting to believe that you have unique insights; and (b) presenting that evidence to the relevant audiences in ways that are most likely to influence those debate as intended. Again, direct confrontation will generally not be the most effective strategy in terms of persuading key stakeholders as to the value of your evidence and may well have the opposite effect. Remember that senior officials and politicians will often be well aware of the issues you are addressing and are typically very adept at 'reading between the lines'. In some cases, 'speaking truth to power' may be the best and most courageous option. But you have to be very sure that you are taking this line because it offers the best chance of achieving your ultimate goal and not because it offers the greatest personal satisfaction.

3. Frameworks for implementation context analysis

As indicated above, context analysis will often need to consider a wide range of factors, some in considerable detail, others simply to confirm that they are likely to be of at most marginal relevance in terms of their influence on the implementation process. In order to undertake a systematic analysis it is of considerable advantage to work within a predetermined framework. Such a framework is best compiled as a collaborative exercise. This should involve at least all members of the implementation team but can often be improved by working with a range of other stakeholders – health officials, providers, community members, etc. – who have specific knowledge of contextual factors that may otherwise be overlooked.

Frameworks will be intervention-specific. For example, a [Situation Analysis Tool](#) developed by the Centre for Public Mental Health at the University of Cape Town focuses on the provision and utilisation of mental health services. A guide to situation analysis produced by the [Health Systems Trust in South Africa](#) was intended for use by district officials and is therefore primarily concerned with assessing priority health issues and district-level facilities, human resources and management. More recently, the WHO has produced a [Situation Analysis Toolkit](#) for the implementation of interventions on male circumcision, which emphasises the need for detailed assessment of local customs and stakeholder attitudes. However, it is

possible to consider a number of areas that should usually be at least considered in any such framework. These would include:

1. Politics and history
2. Physical environment
3. Population
4. Health needs and services

Politics and history

Over recent years it has been increasingly recognised in the literature that to understand how a health system functions it is essential to know how it, and the context within which it exists, has evolved over time ([Bloom 2014](#), [Grundy et al. 2014](#)). In the language of complexity theory, it is necessary to acknowledge the importance of 'path dependency' ([Paina and Peters 2012](#)). Where there has been a history of projects that promised much and delivered little, perhaps because of weak local governance structures, it may be very difficult to persuade the population that a new intervention will be successful. Where corruption has become endemic, some stakeholders will view such an intervention as a potential new source of funds, while others will be very reluctant to participate, assuming that the benefits will be misappropriated. Where there are long-standing ideological differences between different sections of the population, there will be a risk that any new development will become a cause of dissent between different political factions. On the other hand, in populations that have a history of effective community organisations, such as proactive local women's groups, it may be much easier to set up, for example, a community-based health insurance scheme ([Asaki and Hayes 2011](#)).

As indicated by the above, issues relating to local and national politics and to historical trends and events may well be seen as extremely sensitive and difficult to address within an implementation research setting. However, in many cases they will be among the most important contextual factors. Projects and programmes have come to an abrupt halt when a change of government has removed key political supporters. Others have failed to increase service utilisation because local health officials had lost the trust of a substantial section of the targeted population as a consequence of previous activities. The controversy surrounding the clinical trial in 1996 of a new antibiotic by the drug company Pfizer in Kano, Northern Nigeria, during an epidemic of meningococcal meningitis ([Wise 2001](#)), is still raised by Nigerians as an example of the risks of engaging with foreign companies in the health sector and has played a part in the resistance to polio vaccination programmes ([Yahya 2006](#)). As discussed above, under the heading 'sensitive information', the argument here is not that the implementation researcher should provoke controversy by reopening old wounds or taking sides in any political debate. However, if past events and current political positions are relevant to the potential outcome of the implementation process, they do have to be addressed, analysed and interpreted as an important component of the research findings. Again, the pragmatic use of those findings to influence policy will be discussed in Chapter 12.

Physical environment

The physical environment within which an intervention takes place should almost always play a major role in determining implementation design. To give an extreme example, implementation of an intervention designed to improve health outcomes for children living in the crowded squatter settlements of Nairobi will clearly pose very different problems from one intended for scattered populations in the highlands of Papua New Guinea or the densely populated islands of the Sundarbans mangrove forest in West Bengal. Even when the targeted regions are relatively limited in size, substantial geographical variations within regions may need to be carefully considered. For example, researchers will typically distinguish between

urban and rural locations but not differentiate peri-urban areas, which often have their own very specific environmental characteristics. Similarly, it will often be essential to classify rural areas into those that are easily accessible and those that are more remote from major centres of population, given that it will typically be substantially more difficult to provide services in the latter.

Note that it should be standard practice to explain *why* different environmental factors are relevant. Researchers often provide descriptions that would be more appropriate for a geography textbook or a travel guide, specifying items such as precise estimates of land area, height above sea level, average annual rainfall or detailed grid references. Often the key issues concern potential physical access barriers – such as long, difficult and/or dangerous journeys to services by those seeking care ([Houben et al. 2012](#)) or restrictions on the ability of providers to transport medical supplies or appoint additional staff to facilities when required ([Cohen et al. 2010](#)). Another important question that is often overlooked relates to the willingness of providers (and their families) to live and work in 'difficult' areas, whether urban shanty towns or remote rural areas ([Agyei-Baffour et al. 2011](#), [Sundararaman and Gupta 2011](#)).

Consideration of such issues naturally leads to questions relating to infrastructure and services. We often use some indicator of the overall 'level of development' of an area, such as GDP, but where possible such measures should be supplemented by data on specific factors that are considered relevant to the planned intervention. Is the area well served by road, rail or water transport links? Is there access to electricity, clean water and sanitation? Are there local primary/secondary schools? Is there a reasonably effective and trusted law enforcement service? Are there functioning telecommunications networks that could enable access to services via telephone, radio or television? How are these various services affected by seasonal factors such as rainfall, drought, high winds or snow?

Population

Just as it is important to distinguish between geographic areas with different characteristics, it is equally important to consider the extent to which distinctions between different population groups will be relevant to the outcome of the intervention. Sometimes there will be a considerable overlap between geographical areas and population characteristics. For example, in Nigeria certain states in the south-eastern region are closely associated with the Igbo ethnic group, the majority of whom identify with the Christian religion. Even in such cases the researcher should be very cautious in assuming that the number of individuals in that area who do not share those characteristics is insignificant. The 2013 Demographic and Health Survey for Nigeria suggests that almost 98 per cent of the population of the south-eastern region are Igbo. That would still imply, however, that around half a million individuals who identify themselves as being in other ethnic groups also live in that region. Given that resources are always constrained, implementers may sometimes reasonably decide that they will tailor an implementation process in ways that they see as most likely to meet with approval from the majority population in a given location, even though this may adversely affect the response from minority groups. Nevertheless, any such decision should be clearly stated, justified and evidence-based.

Often it will be evident that there are relevant differences between population groups living in the same geographical area. For example, as in many other countries, most major cities in China have large migrant populations. Those populations have very limited access to the services, including health services, provided for those who have urban resident status ([Mou et al. 2013](#)). Any intervention intending to improve the health of the overall population living in a city would have to consider the very different circumstances of these two groups when developing the implementation design. Similar considerations would apply in south-western

Nigeria, where there are many long-established settlements entirely composed of members of the Hausa ethnic group in cities that are predominantly populated by the Yoruba people. As the purpose of these settlements was precisely to retain traditional customs and practices, including authority structures, the context within which they live differs substantially from that of the majority population ([Omobuwa et al. 2013](#)).

Having identified relevant population groups on the basis of factors such as geographical location, migrant/non-migrant, ethnicity, culture, religion, etc., it will also be essential to consider the extent of variation within these groups. Gender will almost always be a key factor. Where an intervention is intended to improve the health of all members of a population group, for example advocating behavioural change to reduce the risk of chronic illness, it seems obvious that careful thought should be given as to how such an intervention will be perceived by both women and men and how they will respond. However, this should be the case even if the intervention is clearly gender-specific, for example intended to encourage increased use of ante-natal care, given that such perceptions and responses are invariably strongly influenced, positively or negatively, by existing gender relations (e.g. [Dworkin et al. 2012](#), [Nikiema et al. 2012](#)). Potential differences between the younger and older members of population groups should also be considered. These may include attitudes to cultural traditions, authority structures or technical innovations. For example, a number of studies have suggested that older people are much less likely to use mobile phone texting services (e.g. [Deng et al. 2014](#)), with implications for behaviour change interventions that wish to adopt this approach. Note that it will often be informative to consider age and gender simultaneously. An intervention to encourage facility-based births, for example, might face opposition from older women who trust local traditional birth attendants with whom they have shared life experiences.

Variations in levels of education may also be an important consideration. Some interventions, for example those that provide written instructions and/or warnings to patients in relation to drug treatments, may be premised on the assumption that the great majority of the targeted population are either literate in one of the languages selected for use in the intervention or will be able to rely on support from a literate person. If this is not the case, alternative approaches may have to be adopted ([Dowse and Ehlers 2001](#)). There is evidence that adherence to anti-retroviral therapy can be influenced by the level of education of patients, though not always in the expected direction ([Emamzadeh-Fard et al. 2012](#), [Radhakrishnan et al. 2012](#)). Interventions that involve some form of written contractual relationship – for example where individuals are invited to join a health insurance scheme – may be more easily comprehended and thus more attractive to those with language and/or numeracy skills beyond those that would be acquired at the primary level of education ([Jehu-Appiah et al. 2011](#)). A general understanding of the distribution of the population across different education levels may therefore be useful in predicting the potentially different responses to various components of an intervention, with implications for implementation design.

Finally in this section, we need to consider potential financial barriers to care. Even when an intervention is providing a notionally ‘free’ service we will typically find that utilisation is significantly lower for the poorer members of the population. This may sometimes be because facilities find ways to add indirect fees, for example to register with the facility, or because they encourage patients to take additional services – laboratory tests, scans, supplementary drugs, etc. – and imply that this will greatly increase the efficacy of the basic, free treatment. In some cases, it may be that patients have to bear travel or accommodation costs, or, more recently, need access to a mobile phone to utilise the service. It is also possible for the ‘opportunity costs’, associated with a household member having to take time away from wage employment, household production or other tasks, to be *relatively* high for poor households. In poor areas of rural China, for example, poverty is often associated with a lack of household labour time

because household sizes tend to be limited and many of those of working age leave to seek employment in urban areas.

The aim of contextual analysis in this area would be to gain an understanding as to which sections of the identified population groups might either fail to access treatment due to financial barriers, or experience serious hardship due to expenditures associated with accessing treatment – often described as ‘catastrophic healthcare expenditure’ ([Mills et al. 2012](#)). This will typically involve compiling order-of-magnitude per capita annual household income or expenditure estimates, focusing on those within the identified groups most at risk. These might include, for example, small farmers and the landless in rural areas, day labourers and the self-employed in urban areas. These estimates will sometimes be available from sample survey data but it may often be necessary to rely on the judgement of a number of key informants. For interventions where substantial out-of-pocket expenditures might be involved – for example a co-payment scheme for inpatient treatment – it will also be useful to explore the extent to which these groups tend to have disposable assets, outstanding debts and access to sources of credit (including from extended families). In many countries, illnesses that result in substantial costs or loss of income can severely disrupt the livelihoods of households that have to sacrifice productive assets, including agricultural land, or take out loans on highly unfavourable terms that may force asset sales at a later date ([de Laiglesia 2011](#), [Kenjiro 2005](#)). Finally, there should be at least some consideration of intra-household financial arrangements. For example, in many countries expenditure on healthcare for children may be influenced by women’s status in decision-making and control over household resources ([Richards et al. 2013](#)).

Health needs

An intervention intended to improve the detection and treatment of TB cases should obviously compile as much information as possible about the incidence of TB in the target population, the extent to which those with TB have access to services and the extent to which they utilise those services. This would apply to any disease-specific intervention. Even for such focused interventions, however, it will often be important to compile data on a range of other health issues. Such data can, for example, assist us to understand population awareness and perceptions of the health issues with which we are primarily concerned, which may help explain their attitudes to our intervention. For example, a population in which both adults and children are subject to frequent bouts of fever, cough and diarrhoea may question why those implementing an intervention on chronic conditions such as hypertension or diabetes are failing to address what they, and possibly local health service providers, see as more immediate concerns.

More wide-ranging interventions, for example the introduction of performance-related payments in primary healthcare centres or new insurance schemes to meet the cost of inpatient care, would merit the compilation of detailed information on a range of relevant conditions with high incidence or prevalence rates in the target population. Such data should allow an improved understanding both of the healthcare needs of the population and of the current and potential demands placed on healthcare providers. Thus in the example above, reliable estimates of the likely rates of hypertension, diabetes and other chronic diseases in a population will not only indicate the need for an intervention to address such conditions but also the implications for healthcare services of improvements in their detection and diagnosis that may result from such an intervention. Note that cultural factors may complicate the translation of health needs into demands for health services. An obvious example in many countries relates to mental illnesses, where the stigma attaching to mental illness and the assumption that it should be addressed by religious or traditional healers will often prevent sufferers and their families from seeking care from allopathic providers ([Brenman et al. 2014](#)).

In many countries reliable data on incidence/prevalence rates and service utilisation over a recent period will be difficult to obtain, except possibly where there are well-funded major programmes for specific diseases such as HIV/AIDS or TB, or where it is possible to obtain access to detailed facility or health insurance data. In general, researchers will have to rely on evidence from previous national surveys. For example, data on the most common early childhood diseases can be found from the [Demographic and Health Surveys](#) undertaken in many countries. It should be noted that such surveys are typically based on reported symptoms rather than formal diagnosis and that they rely heavily on the ability of respondents to provide details as to the type of healthcare accessed. A useful international source of data on disease-specific morbidity and mortality for most countries is provided by the [Global Burden of Disease](#) studies. The country profiles compiled under this programme represent systematic attempts to use whatever data are available to derive best estimates of the impact of different diseases based on the number of years of life lost to premature deaths and the number of years lived with a disability. Note that national surveys will aim to provide data for the population as a whole. Disaggregation by location or population group may be possible to some extent, depending on the nature of the survey and whether access to the raw data is possible, but it will often be impossible to derive disease patterns for the specific population targeted by the intervention.

Health systems

In Chapter 1 it was argued that the most useful approach to the study of health systems, especially in situations where there are multiple providers and limited regulation of services ([Bloom and Standing 2008](#)), is to require the implementation researcher to define the health system – in terms of agents, units and institutions – that will be the focus of their research. However, in order to undertake that definition, to define the boundaries of the system with which they are concerned, they should first undertake a systematic assessment of the diverse range of providers that are offering to provide health services to the population targeted by the implementation. This may not be a simple task. For example, we often characterise health service providers under headings such as:

- Public healthcare;
- Formal private healthcare;
- Informal private providers (unlicensed practitioners, shops, drug sellers);
- Traditional, religious and faith healers;
- Household healthcare.

However, many of these categories consist of multiple components that have their own distinct characteristics. In China, for example, public hospitals may offer either allopathic (Western) medicine, Traditional Chinese Medicine, or both. Ayurvedic practitioners have recently gained a similar status in India. In the United Kingdom, there are long-standing debates as to whether homeopathic treatments should be available under the public National Health Service. In most countries the 'formal' private sector will include individuals from a variety of medical traditions ranging from senior specialists, with qualifications and experience equal to or greater than those in the public sector, to providers with minimal training and titles ranging from Registered Medical Practitioner in India ([Das and Hammer 2007](#)) to Village Doctor in Bangladesh ([Mahmood et al. 2014](#)) to Community Health Worker in other countries. In terms of the quality of services provided, there may be little to choose between many of these providers and those who practise without any form of licence or simply sell drugs in shops or local markets. In both groups there will be dedicated, principled providers who sincerely believe that they are doing their utmost to help those who seek their services and there will be unprincipled charlatans or 'quacks', whose primary aim is to extract money from or exert influence over their patients.

Having identified those components that seem most relevant to the implementation – that is, those which play a substantial role in delivering the services on which the implementation is focused – it will be helpful to undertake a systematic descriptive analysis to identify for each component the various units, decision-making agents and (formal and informal) institutions that govern its operation. A simple outline example is provided below (Tables 5.1 and 5.2), where we adopt the WHO classifications discussed in Chapter 1 to consider different aspects of each type of service provider. As always in health systems research, we will wish to assess the implications of our analysis in terms of access, utilisation and quality of services for different population groups. In general, it will be relatively straightforward to identify the main agents and units but understanding the institutional arrangements will typically be more challenging.

A reasonable understanding of the formal institutions can usually be gained by a review of the available documentation: policy statements, plans, laws, regulations, protocols, procedures, guidelines, etc., though identifying and prioritising such documents will often require guidance from key informants. However, in many cases these documents will describe a system that differs substantially from that which actually exists. Undertaking research in Nigeria in the mid-1990s, it was common to find in some local government areas that the rural primary healthcare system described by the ministry of health simply did not exist. Health workers had not been paid for many months and had moved away to seek other employment, equipment had become unserviceable or disappeared and in some cases buildings had collapsed because of long-term failures in basic maintenance. Similarly, following the economic reforms in China, the rural ‘three-tier healthcare system’, under which County Hospitals supervised Township Healthcare Centres, which supervised Village Health Stations, evolved into what were essentially local competitive markets, with each facility competing for patient ‘out-of-pocket’ fees. It took many years before this situation was officially recognised and action taken to offset the worst characteristics of these markets. In one East African country, basic drugs were at one time primarily available via ‘essential medicine kits’ supplied by an international aid agency. It was general knowledge that many of these kits were diverted to local shops to which patients would be referred even by providers at public health centres. However, formal acknowledgement of this practice would have resulted, under the agreement with the agency, in the withdrawal of the kits until more secure delivery mechanisms could be devised. As this was seen as creating a potentially life-threatening situation for many children, everyone proceeded as if they were unaware of the true situation.

In such situations it will be necessary to understand both the intended and the actual institutional arrangements that are governing the activities of a health system. While it may be common knowledge that that system is functioning quite differently from what was intended in the various policy documents and formal operating guidelines, it is rarely possible for those charged with managing the system to radically shift their activities to allow for that fact. Officials, managers, administrators and providers have contracts of employment that assume intended operating procedures. Data collection systems and reporting forms will have been designed to align with those procedures. In some countries, health officials will take great care in preparing annual budgets that they know will be ignored. In many others those managing health information databases will use sophisticated techniques to analyse and present data that are well understood to be incomplete and highly unreliable. Institutions are important even when they result in unintended consequences. The implementation research has to understand both how they were intended to function and how they fail.

Table 1: Public health sector

	Units	Agents	Institutions
Service delivery	Hospitals Clinics Laboratories	Doctors Nurses Technicians Managers	Legal system Professional guidelines Peer review
Human resources	Hospitals Clinics Laboratories Training institutions	Managers Doctors Nurses Technicians Teachers	Legal system Professional guidelines Curricula
Supplies and equipment	Facilities Pharmacies Drugstores	Managers Pharmacists Drug company representatives	Legal system Equipment norms Procurement guidelines Drugstore procedures Audit
Leadership and governance	Ministries Hospital Boards Professional organisations	Ministry officials Hospital directors	Legal system Professional guidelines
Financing	Patients Insurance agencies Government	Patients Insurance agents Ministry officials	Legal system Insurance schemes
Information systems	Registers District reports Health surveys	Administrators Enumerators Statisticians	Data quality audit Dissemination procedures Notifiable diseases

Table 2: Informal private health sector

	Units	Agents	Institutions
Service delivery	Clinics Shops Markets	Village doctors Drug sellers Shop salespersons	Legal system Custom and practice
Human resources	Households	Village doctors Drug sellers	Custom and practice
Supplies and equipment	Shops Drugstores	Shopkeepers Wholesalers	Legal system Custom and practice
Leadership and governance	Providers Trade organisations	Village doctors	Legal system Custom and practice
Finance	Patients Community organisations	Patients	Markets Custom and practice
Information systems	Account books Receipts	Shopkeepers Drug sellers Purchasers	Custom and practice

4. Stakeholder analysis

Stakeholder analysis ([Brugha and Varvasovszky 2000](#)) can be one of the most important activities undertaken by researchers in terms of understanding the context within which the implementation takes place – but only if it is systematic and comprehensive. As discussed in Chapter 1, even apparently simple technical health system innovations typically involve complex social interventions. The extent to which different groups respond with enthusiasm, indifference or hostility to an implementation will often determine its relative success or failure.

On occasion, depending on their degree of authority or influence, a single individual can make the difference. Predicting likely responses, determining their potential implications, adapting procedures in line with that analysis and *repeating this process over the lifetime of the implementation* is a key activity for the implementation team in terms of maximising the likelihood of achieving targeted outcomes. For the implementation researcher, engaging in a rigorous stakeholder analysis can provide valuable insights into the social contextual factors that might promote or obstruct scaling up or relocation of the studied intervention. Too often, however, such analyses are not allocated the resources that they merit, being seen as simply a routine task to be undertaken at the start of the implementation, sometimes simply to meet the requirements of those funding the intervention, and largely disregarded thereafter.

We can outline the aims and objectives of stakeholder analysis as follows ([Varvasovszky and Brugha 2000](#)):

Aims: Identify all relevant stakeholders and assess:

- how they are likely to be affected by the intervention;
- how they are likely to respond;
- the implications of their responses, given their capacity to influence implementation outcomes either directly or through their relationships with other stakeholders.

Objectives:

- Where possible, modify the implementation design to (a) encourage collaboration and (b) minimise obstruction by different stakeholders;
- Improve understanding of the underlying causes of implementation successes or failures that are linked to stakeholder behaviour.

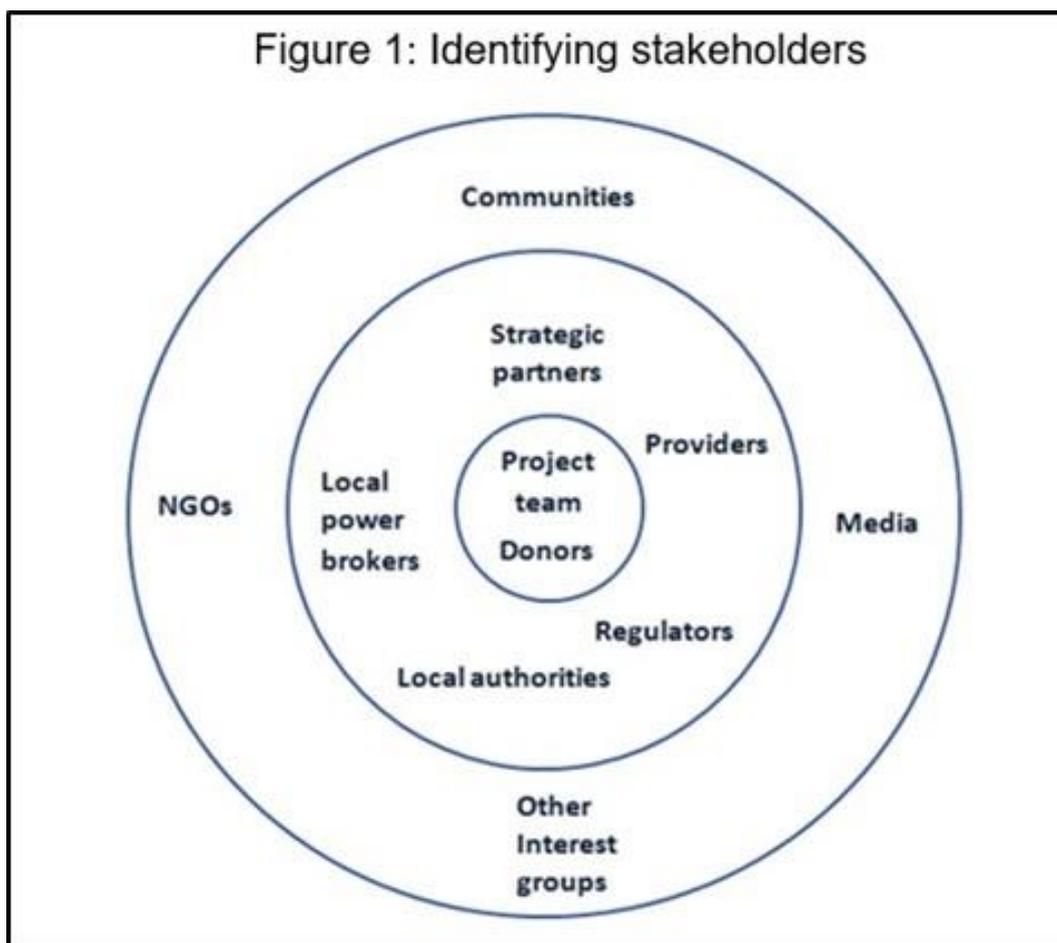
A stakeholder can be any individual, group or organisation that may be positively or negatively affected by an intervention or in a position to influence the implementation of that intervention and have a positive or negative effect on intended outcomes. Broadly speaking, the analysis is intended to generate information about these stakeholders that can improve our understanding of their incentives, perceptions, attitudes, and relationships with other stakeholders in order to provide insights into their current and likely future patterns of behaviour in relation to the implementation of a given intervention ([Hyder et al. 2010](#)). This requires:

1. Identification of potential stakeholders.
2. For each potential stakeholder, determination of:
 - a. The extent to which they are interested in the intervention;
 - b. How and to what extent they can influence the implementation progress;
 - c. Their attitudes and actions relating to the intervention objectives;
 - d. The factors that are most important in determining those attitudes and actions.

Identifying stakeholders

One way to identify stakeholders is to work 'outward' from the implementation:

- Start with the project managers or lead implementers and donors/funders;
- Move out to consider those they work with – partners, service providers, regulators and owners of resources (facilities, land, infrastructure, etc.);
- Move out again to those who will either be involved in the activities or who are beneficiaries – NGOs, local authorities, communities, media organisations and other interest groups.



Note that this diagram is intended to assist in the identification of ALL stakeholders – those who may impact ON or be impacted BY an intervention.

Stakeholder groups and subgroups

The limited resources typically allocated to stakeholder analysis often results in a failure to achieve an appropriate level of disaggregation. It is important to distinguish significant stakeholder subgroups that may have very different attitudes and levels of influence.

For example:

- Providers should at least be subdivided into categories such as: public/private, qualified/unqualified, allopathic/traditional/faith-based but some degree of cross-classification (e.g. qualified traditional private providers) may substantially increase the value of the analysis by reducing within-group variation.
- Community members might be classified in terms of: male/female, younger/older, richer/poorer, indigenous/migrant, ethnic group, etc., again keeping open the potential value of cross-classification (e.g. older poorer women)
- The large number of potentially interesting groups and subgroups requires a careful process of prioritisation in terms of analysis. The criterion for prioritisation should always be in terms of the anticipated level of influence over implementation outcomes that different subgroups may possess.

Analysis

The analysis will focus on identifying the following characteristics of each stakeholder or stakeholder group in line with the aims indicated above:

1. Their interest in the intervention:
 - Intended beneficiary;
 - Direct involvement in the implementation;
 - Likely to be directly affected by the intervention (positively or negatively);
 - Likely to be influenced by those directly affected;
 - No apparent interest (can be omitted from the current list of stakeholders but may have to be added later if this assessment changes).
2. Their potential influence over the implementation process, for instance:
 - Policymaker (capacity to affect implementation strategy or context);
 - Decision-maker (capacity to affect routine implementation activities);
 - Gatekeeper (capacity to control access to resources or take-up of services);
 - Opinion leader (capacity to affect responses of other stakeholders).
3. Their attitude to the intervention (evidence to be provided where available):
 - Enthusiastic supporter;
 - Generally supportive;
 - Indifferent;
 - Opposed;
 - Strongly opposed.
4. Factors driving attitudes, possibility of changing attitudes and potential benefits:
 - How likely are they to use their influence to change outcomes and why?
 - What would be the consequences?
 - Are they accessible to the implementation team?
 - Might they be responsive to incentives intended to modify their attitudes?

Given the complexities of stakeholder analysis it is sometimes tempting to make the simplifying assumption that a given stakeholder or stakeholder group can be considered in isolation, and that they make their decisions in line with their own perceptions and preferences. However, in the real world we know that this is rarely the case and that relationships between stakeholders, especially power relationships ([Erasmus and Gilson 2008](#)), play a major role in influencing behaviour. A hospital manager may be convinced that a new payment mechanism would result in a better outcome for patients but act to undermine that mechanism because he wishes to avoid conflicts with senior hospital staff who believe that it will adversely affect their incomes. Local government health officials may see the training, licensing and monitoring of local drug sellers as the most effective way to deliver anti-malarials but be pressured into opposing this reform by qualified providers with connections to local politicians, who see it as threatening their control over the supply of prescription drugs.

This indicates the need to identify stakeholder networks ([Blanchet and James 2012](#)). The aim will be to map the formal and informal links between stakeholders and assess the underlying nature of those links – in particular do they exist only in theory (e.g. according to regulations) or do they have practical consequences? Relationships may be of many types including: financial support; direct management; oversight/monitoring (in theory and in practice); advice/influence (in theory and in practice), etc. Having identified such relationships, the stakeholder analysis can be revisited to explore the extent to which they provide additional clues to the attitudes and behaviours of particular stakeholders.

Data collection

A range of data collection activities will need to be undertaken. The aim will be to seek: responses to a range of specific questions; the reasons underlying these responses; and the extent to which the responses are based on available evidence. The initial activity should involve a detailed document review to assess the stated position (if any) of each stakeholder on issues relevant to the intervention objectives. This will be followed by primary data collection using semi-structured interviews, structured questionnaires (possibly self-administered) and focus groups.

One important consideration is the extent of involvement in data collection, feedback and analysis by the various stakeholders themselves. Such involvement can offer many advantages in terms of the extensive knowledge that individual stakeholders may have, for example in terms of the range of attitudes inside an organisation or internal documents that may be difficult to identify by other means. On the other hand, there are obvious risks that some stakeholders may attempt to drive the analysis in directions that support their own agendas. Decisions should be made on a case-by-case basis depending partly on the sensitivity of the information compiled. Where there are no concerns that the analysis may cause offence, a feedback stage can be included in the process to allow each stakeholder to comment on findings relating to their own position and correct factual inaccuracies where appropriate.

Finally, we would suggest that in gathering the data to perform a stakeholder analysis it is useful to keep in mind the work of pioneering sociologist Erving Goffman ([Goffman 1956](#)). This codified the commonplace observation that individuals can be compared to actors who play a variety of roles. They will behave very differently depending on whether they are 'front-of-stage', 'offstage' or 'backstage'. Front-of-stage is where the actor formally performs and here they will adhere to conventions that align with the expectations of their current audience. For example, a hospital director accompanied by senior staff members responding to questions from an unfamiliar researcher would probably play a very different role from that which they would adopt if called to a formal meeting with the Minister of Health. Offstage is where actors meet individual audience members in an informal environment. Thus, if our hospital director happened to meet the researcher at a social gathering and realised that they were both long-standing friends with the local politician who was the host of that gathering, he or she might well be much more open in discussion of current problems in the health sector. Even so, this would be another role that the director was playing. Only when they (and we) are alone 'backstage' do actors truly get to be themselves.

The lesson to be learned is that it is always wise to be cautious about the extent to which any researcher can truly 'understand' the perceptions and attitudes of different stakeholders. Those who proclaim themselves to be strongly in favour of an intervention may act in ways that undermine its implementation and those who are initially most critical may become key players in ensuring its success. Only by updating the stakeholder analysis on a regular basis and comparing actions to stated intentions can the implementation researcher hope to gain at least a working understanding of the factors influencing stakeholder behaviour.

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ⁱ Note however that it will almost certainly not be possible to prevent both the individuals and the implementation team knowing which group they are in. Double or even single blinding will not be an option.