

Anthropological perspectives on injections: a review

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Qualitative studies from developing countries have pointed to the widespread popularity of injections. In addition to their use by formal and informal providers and traditional healers, there is now increasing evidence of the use of injections and injection equipment by lay people. Epidemiological research links the large number of unsafe injections to serious bloodborne infections such as viral hepatitis B and C and acquired immunodeficiency syndrome (AIDS). The present article examines the reasons behind the demand for injections by consumers and the administration of unnecessary or unsafe injections by different types of provider. Interventions aimed at reducing the risk of unsafe injections are discussed in relation to cultural and social factors as well as those factors associated with health systems. Suggestions are made for approaches to the design of such interventions.

Keywords: cultural characteristics; developing countries; disease, ethnology; injections, utilization; knowledge, attitudes, practice.

Voir page 142 le résumé en français. En la página 142 figura un resumen en español.

Background

A recent issue of the *Bulletin of the World Health Organization* highlighted the extent of the problem posed by unsafe injections in developing countries (1). Not only are vast numbers of injections unnecessary and unsafe but they have also been linked to the possible transmission of millions of cases of viral hepatitis B and C and to as many as 150 000 cases of human immunodeficiency virus (HIV) infection (2).

Clearly, the administration of injections in developing countries often leaves much to be desired. Many injections are given for the wrong indications, such as acute respiratory infections, diarrhoea, fever, skin infections and urinary tract infections (3–5). In some countries children seem to be receiving alarmingly large numbers of injections (1). Administration and sterilization practices are unsatisfactory in many places (1, 6) because health workers have insufficient knowledge or because there is a lack of equipment. In developing countries the epidemic of acquired immunodeficiency syndrome (AIDS) has persuaded many donors to provide disposable injection equipment (even though this sometimes means ignoring national policies), and disposable syringes are often reused despite their intended purpose. The disposal of used syringes and needles presents a problem that increases the risk of transmitting diseases. Health centres often dispose of used syringes and needles in nearby open pits, a practice which makes it possible for people to obtain and reuse the injection equipment.

The overuse and misuse of injections should be curbed. Of course, in designing effective interventions it has to be borne in mind that some injections are very useful. Vaccination, for example, has saved the lives of many children. In some cases the injection of penicillin may be the most rational way to treat certain conditions. If patients cannot swallow or are nauseated and vomit medicine that is given orally, as may happen with small children suffering from malaria, injection may be the best form of treatment. However, most injections given in developing countries are, from the medical standpoint, unjustifiable, and may even be dangerous. Furthermore, they represent a waste of scarce resources. It is necessary to prevent and limit the administration of harmful and unnecessary injections without damaging the public perception of useful injections. Non-useful injections may be unnecessary, contain harmful substances, or be administered in an unsafe way. Of these categories, the first and second are often hard to distinguish in the informal sector, where records are rarely kept. The third can be monitored and measured through observation and self-reporting.

The provision of injections takes place in the following sectors:

- the formal, which includes public and private providers;
- the informal;
- the traditional;
- the domestic.

The formal sector consists of providers who have been trained to give injections and have been authorized by the state to do so, including doctors, nurses and other health workers. Also included are other staff who provide injections within health facilities, such as orderlies and nursing aides. The

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informal sector is characterized by providers who are not sanctioned by the state and are not institutionalized; they have had no formal training and have mostly taught themselves how to administer injections. Traditional healers, who may be recognized by the state through associations, are often trained by apprenticeship to experienced healers; they are specialists who are frequently paid by their clients after the results of treatment are known. In the domestic sector, injections are administered at home by relatives and neighbours as a favour or an expression of care, and generally no payment is involved.

Perceptions of etiology

In developing countries the concepts of germs, bacteria, infections, disease vectors and antibiotic resistance are not familiar to most people who use biomedicine. Biomedical technology has been widely accepted in these countries but this is not true of the conceptual system behind it. Most cultures in the developing world have their own explanations for the occurrence of disease, which may involve supernatural forces or ideas about balance between different elements. Sometimes these etiologies involve concepts that originate in the biomedical framework but which are used in ways that differ from the practices of biomedical professionals. People may understand that the cause of their disease is germs but think that spirits are responsible for the germs attacking them instead of other individuals. Or they may start with a biomedical explanation of their disease but change to a supernatural one if the disease does not respond to biomedical treatment. Sometimes the perception of the cause of disease depends on which treatment gives relief from symptoms. Explanatory systems may vary from area to area within the same country and from one type of provider to another. City dwellers in Africa, for example, may be fully aware of the main modes of transmission of HIV, whereas many rural inhabitants still think that AIDS is caused by witchcraft. Treatment strategies may depend on many factors, among them the following:

- whether patients and their social group perceive an illness to be serious;
- whether they regard it as caused by natural or supernatural forces;
- perceived accessibility of treatment;
- efficacy of treatment.

Perceptions of efficacy

The principal reason for the popularity of injections, as reported from many developing countries (7–9), seems to vary with the culture concerned. Injections are seen as the outstanding symbol of biomedicine and have often been portrayed as such in health and vaccination campaigns. Since health professionals frequently use injections to treat serious illness, it is

understandable that injections have been perceived as powerful and technologically advanced. However, injections are often classified and used in ways that are markedly at variance with biomedical intentions, and may even be irrational from the biomedical point of view. This is because injections have been introduced into cultural contexts where other explanatory models for illness prevail.

This difference in cognitive orientation also means that the efficacy of medicines may be judged in different ways (10). The action of filling a syringe and penetrating the body with a needle may be perceived as an elaborate ritual and a sign of powerful medicine. In many countries, body-piercing rituals are seen as a way of manipulating the body and intervening in its processes, and injections fit well into this explanatory framework. Examples include putting things under the skin (Indonesia), scarification (parts of Africa) and different forms of acupuncture (Bhutan, China, Thailand). The pain associated with inserting a needle may be perceived as a sign of strong medicine. Injections may also be perceived as particularly effective because of the direct entry into the bloodstream (11) or because they are believed to “run in the bloodstream” (12). Another explanation is that they are “hotter” than other types of medicine (13) or that they constitute a cold substance (14).

In certain cultures, injections may be considered more appropriate for some age groups than for others. Children under 5 years of age have been reported to receive an inordinate number of injections (3, 4, 15). This may happen because of a belief that it more appropriate for children to be given injections, and possibly also because it is easier to give reluctant children injections than to make them swallow medicine.

Injections and social relationships

The context of cure and care is changing in developing countries. Most people used to live in villages and had little geographical or social mobility, whereas today there is significant migration from rural to urban areas. Social value systems are changing and so are the perceptions of medicines and providers. There is a trend towards treating illness and psychosocial problems with substances rather than through the ritual manipulation of social relationships (16). Drugs and injections are tangible expressions of healing, giving the impression that illness is a concrete entity to which a substance can be applied (9). The traditional rituals cannot work without money, time and familiar social contexts. They operate in contexts where power relationships and the social histories of families influence the choice of treatment. In today’s societies the social structures have become more fluid and traditional power relationships are being questioned. People do not have the money or the time to engage in long complicated rituals and they may not wish to submit themselves to the rules and consequences of

traditional social relationships. Taking a capsule or an injection is much easier and quicker, and it is possible to choose who provides the medicine and in what context. In some countries (e.g. Pakistan, Thailand), many women of reproductive age and older attend health centres in order to obtain injections (12, 17). They may complain of vague symptoms and receive injections or intravenous fluid containing vitamin B complex, allowing them to feel that they have been given the best possible care.

Useful injections

Most useful injections are administered in hospitals, health centres, dispensaries and outreach clinics of the public sector. The doctors, nurses, midwives and paramedical workers in this sector have been trained to make diagnoses and administer drugs. Preventive public health work, including vaccination, family planning, hygiene and sanitation, is an important part of their functions. Immunization is almost always the responsibility of the public sector, although non-profit private institutions contribute substantially to it in some countries. Most useful therapeutic and contraceptive injections are also administered in public facilities. There are close links between the public health work and curative functions carried out by public health workers, and the administration of injections creates an important part of their public image.

However, not all useful injections given in the public sector are administered safely. Health facilities commonly lack the equipment or fuel required for sterilizing syringes and needles, and health personnel may be unaware of the importance of proper sterilization or too busy to carry it out. For example, fears expressed by Ugandan patients are not unjustified (6), and there have been serious problems in ensuring safe injections in many health settings.

Promoting useful injections

In planning to reduce the number of unnecessary injections it is important to avoid negative effects on people's perceptions of vaccinations and contraceptive injections. AIDS prevention campaigns have led many people to be afraid of syringes and needles because they may transmit HIV. It would be unfortunate if this fear had a negative impact on childhood vaccinations. Efforts aimed at improving information, education and communication should be carefully designed so that only non-useful injections are targeted. Innovative measures may be needed; for example, syringes intended to be used only for vaccination might have a distinctive appearance or might be kept separate from other syringes.

Non-useful injections in the public sector

In developing countries, health workers in the formal sector administer far too many injections. When

questioned, some providers may stress that injections ensure compliance or may express the opinion that they offer the best form of treatment. A review of public and private hospitals, health centres and dispensaries in the Mwanza Region of the United Republic of Tanzania showed that 25% of all outpatients received injections, most of which were given for acute respiratory infections, skin diseases and urinary tract infections; 70% of these injections were considered unnecessary. The main reason for this state of affairs was that only 4% of nurses possessed adequate knowledge of rational prescribing practices. A contributory factor was the demand for injections among patients, particularly the elderly, who felt that injections were the right treatment for serious complaints such as high fever, malaria or severe cough.

If they refuse to give injections, health workers find that many patients go to another health facility in order to obtain them. Friction may arise within health teams if one member prescribes more injections on demand than others, and difficulties have even occurred when health workers have been accused by villagers of stealing injectables (18). Clearly, it is widely felt by patients that a provider who injects is one who cares. Providers who refuse to inject lose status and popularity among patients and may find that patients prefer other colleagues or other health facilities. Sometimes there are public health implications when people are denied what they consider to be the best possible care.

The example in the box shows that injections are perceived as tangible and optimal expressions of

Using unnecessary injections for public health care

In a public health centre in a village in north-eastern Thailand the midwife, Noi, administered drugs and injections and promoted public health. She spent a considerable time explaining the importance of latrines, safe water and family planning. Immunization coverage was high. Noi lived next door to the health centre and was always available for emergencies. She was very popular with the villagers, who felt that she truly cared for them.

A survey revealed that 42% of the patients seeking treatment in the health centre during a two-week period received one or more injections. In many cases the patients did not know what type of injection was administered. The substances given included oxytetracycline, paracetamol, vitamins, diazepam, drotaverine (Nospa) and chlorphenamine.

Noi was well aware that most of the injections were irrational from a biomedical point of view. However, she felt strongly that she had to administer injections in order to convince the villagers of her sincere wish to help and care for them. She explained that if she refused to administer unnecessary injections the villagers would think her uncaring and would obtain unhygienic injections from an informal source, the local rice miller. Moreover, they would cease listening to her messages on such matters as sanitation and hygiene. In other words, she felt that denying the villagers these injections would put their health at risk and limit her ability to do important public health work (12).

care and cure. Noi expresses her care for the villagers in a form that they can understand, i.e. as injections. She uses the injections as a subtle form of negotiation: "I'll give you an injection if you'll listen to my health education messages". Noi functions in a web of social relationships associated with healing and culture-specific perceptions of the quality of care. In this context the villagers' acceptance of public health measures depends on how Noi interacts with patients and how she uses different forms of delivering medicine, in particular injections, to provide cure and negotiate care.

Informing the public and enabling providers

Interventions to reduce the number of unnecessary injections in the public sector are highly desirable but not easy to effect. They should start on two fronts and be specific to the contexts of culture and health system. The popular demand for injections has to be taken into account. Educational campaigns should be carefully designed and monitored so as to achieve the intended results. Research in Pakistan has indicated that public education on the risks of unnecessary injections resulted not in a reduced demand for injections but in people bringing their own syringes and needles to health facilities (17). This unintended consequence arose because of the cultural reinterpretation of the messages given.

Providers may need training in rational prescribing, including instruction on appropriate indications for the use of injections. In the United Republic of Tanzania it was found that prescribing habits could be changed and that it was important to target lower-level health workers in dispensaries as well as staff in health centres and hospitals. However, it may also be necessary to consider replacements for injections. How can health workers give tangible expressions of care without administering injections? One possibility might be to use less harmful practices that may satisfy patients' needs more. These could include, for example, checking for tuberculosis by use of a stethoscope and tapping on the chest.

More importantly, a better interaction between provider and patient might be achieved through spending more time on explaining and communicating about diseases and their rational treatment. In some settings this would require providers to spend more time with each patient, although heavy workloads could make this difficult. Elsewhere, the high use of injections is partly attributable to preconceived ideas among health workers as to what patients want. In central Java this resulted in a lack of open communication between patients and health workers. The health workers were convinced that the patients wanted injections, yet significant numbers of patients did not desire such treatment and only accepted it because the providers wanted to administer injections and because it was difficult to demur (18). Interventions could aim at improving health

workers' communication and listening skills and encouraging them to engage patients in a dialogue about injections and other health issues.

Non-useful injections in the formal private sector

In some Asian countries the private medical sector attracts a large number of practitioners whose entire income comes from this source. In other countries, formal providers work in very difficult circumstances. In many African countries there is a scarcity of public funds for health care, and reforms and privatization have occurred in some places. Sometimes providers go unpaid for long periods and working conditions are far from optimal. It has been said that health care professionals in Uganda can only survive by ignoring their standard ethics (6). Many of these providers have private clinics in their own homes, where they practise in the evening. Public supplies of drugs sometimes find their way into such private practices. Most of these public/private providers administer injections as part of their normal activities; however, the same provider may administer considerably more injections in private than in public practice even though the types of disease dealt with are largely the same (12). A probable reason for this difference in prescribing patterns is that private practitioners need to satisfy their patients in order to ensure future work. The identities of injected substances are known only to the providers, since there are no accompanying labels or texts. Thus the patient cannot go directly to a drug shop or pharmacy and buy the medicine without consulting the private practitioner. A sort of dependence is created that is beneficial to the practitioner. This situation does not exist everywhere, because injections are too expensive for private patients in some settings (19).

The profitability of safe injection practices

Public sector training of health staff reaches private providers who practise in both sectors. As long as providers perceive the administration of injections as necessary for attracting and retaining clients, however, it can be expected that many unnecessary injections will continue to be given in private clinics. It may not be possible in the foreseeable future to change this practice. However, policies could aim at making the injections safer and reducing the risk of transferring bloodborne diseases. Private providers may be persuaded to use high-quality sterilization and administration methods if this means that their services will be more valued by patients and that increased numbers of clients will be attracted.

Non-useful injections in the informal sector

Some informal providers of injections have had a brief exposure to the biomedical system through serving as cleaners and janitors or through being patients themselves. Others have gained knowledge of injections and drugs from military service or have taught themselves by reading package inserts or advertisements. The services provided by these informal providers are often highly valued by their clients. Informal providers are very accessible; they often live near their clients or travel to their homes in the interest of privacy or convenience. They are socially closer to the patients than their biomedical counterparts and can explain diseases and treatments in culturally meaningful terms. Their services are sometimes expensive but there may be a willingness to postpone payment until a cure has been obtained or the patient can afford it.

Some people receive injections in pharmacies, shops or marketplaces. Customers also commonly buy ampoules, and sometimes syringes and needles, and take them to a provider for administration.

Most informal injection providers do not have the knowledge or equipment needed for diagnosing diseases and providing injections. There is often no rational basis for the selection of substances for injection. For example, in a village in north-east Thailand the local rice miller injected vitamin B complex and diazepam for the treatment of all complaints. His approach to sterilization, probably typical of many informal injection providers, consisted of boiling the syringe and needle for some minutes and thereafter placing both in a bloodstained box to await the next customer (12). Reports from the Dominican Republic (20), Ecuador (21), and Uganda (22) indicate the sterilization practices of informal providers to be very inadequate.

Informal providers earn money by giving injections, which may be the only type of treatment they give and, indeed, be a substantial source of income. Other providers administer injections because of the status they gain by doing so. Injections are commonly administered by important members of village communities, e.g. chiefs, police officers or respected elder women.

Many of the injections provided by informal providers are non-useful, except for the placebo effect they may have on psychological well-being. Sometimes the injections are even dangerous because the substance administered may cause allergic reactions or resistance. Furthermore, there is a substantial risk of transmitting bloodborne diseases (1). However, other injections given by informal providers may well have therapeutic value. In countries where malaria and other infectious diseases account for most mortality and where there is little access to formal health care, some lives are probably saved by chloroquine or penicillin injections provided in the informal sector.

Interventions are needed to ensure the safety of life-saving injections and limit the number of unnecessary and unsafe injections given in the informal sector. Unfortunately, the providers in question are difficult to reach. They are not organized in an official system and there is no way of training them collectively. Moreover, they would be reluctant to lose a significant source of income and status. It is probably more feasible to determine how injection practices can be made less dangerous than to prevent providers from injecting people. The providers could be taught simple sterilization techniques and advised on how to store injection equipment.

Interventions aimed at promoting safe injection by informal providers are difficult because of the circumstances under which they have to be conducted. As a rule, governments do not allow these providers to administer injections or any kind of biomedical drugs, and consequently it is difficult to make policies for this group. Authorities in Thailand and some other countries have recognized that in order to reduce risks to health they have to work with informal providers. In Thailand, owners of drug shops have received a diploma after basic training on health and drugs. However, the less visible injection providers, such as market vendors, policemen or rice millers, are harder to reach with educational campaigns on safe injections. It is probably not feasible to stop the many injections given by these people in the foreseeable future. A possible way of promoting safe injection practices, among both providers and patients who buy syringes and needles, would be to ensure that suppliers of injectables provide instructions in local languages on how to sterilize injection equipment using locally available materials. In addition, public information campaigns could encourage patients to insist on witnessing the sterilization procedures before being injected with any substance.

Traditional healers

The extent to which injections are administered by traditional healers, traditional birth attendants and other specialists is unknown. There are reports of this practice happening in several countries (23–26) but information is needed on why healers supplement traditional practices with drugs and injections. It is desirable to know what substances the healers inject, how they perform injections, and the extent to which injecting is increasing or decreasing. The injection practices of traditional healers are of particular concern in countries with a significant AIDS problem. Traditional healers are frequently consulted by AIDS patients, and there is a significant risk of transmitting HIV through scarification and unsafe sterilization.

Traditional healers are often very willing to collaborate with the formal health system and eager to learn from it. In Uganda and some other countries, traditional healers attend training courses during

which they learn to recognize serious diseases and to refer patients to the formal health system if necessary. Training courses could include information on safe injection practices and could possibly offer alternative signs of prestige and biomedical knowledge, for instance diplomas or simple diagnostic equipment. The above suggestions on interventions for informal providers could also apply to traditional healers. Both traditional healers and informal providers have significant potential as educators because of their close links with communities.

The domestic sector: patients and families

The domestic sector is characterized by a lack of specialization and by the absence of payment for injections administered. Family members and friends administer injections as a sign of concern and care. In some countries it is common for families to have their own injecting equipment. For example, among 213 Hispanic women in Los Angeles, 44% stated that somebody in the household or they themselves had injected drugs or vitamins within the previous six months. The most frequently used injectables were antibiotics and the birth control drug *Perlutal* (estradiol enantate and dihydroxyprogesterone acetophenide). Vitamins were either injected or taken intravenously in 19% of the households. Needles and syringes were reused in almost half the households; and in 76%, equipment was shared by household members. Some members of households regarded the sharing of injection equipment as being comparable to sharing a thermometer. Injection equipment was cleaned with water (sometimes with soap) and alcohol (27).

A study in the USA revealed that it was common among migrant Hispanic farm workers for lay injections to be given for minor infections or complaints. The injections contained hormones for birth control, painkillers, diazepam, herbal preparations, and so on. This was linked to the Mexican people's experiences with non-formal providers such as witches, spiritualist healers, bonesetters and drug vendors. It is common in Mexico to obtain injectables without prescription from pharmacies, drug vendors or supermarkets. Lay people such as friends, family members or neighbours administer most of the injections, although nurses, paramedics or pharmacy employees do so in some cases. Injections serve as a means of social bonding. Sometimes people do not charge each other for administering injections but perceive the act as an expression of care and solidarity. Most people use soapy water, alcohol or boiling as sterilization measures. Nobody uses bleach as recommended for preventing spread of HIV (28).

In African countries the use of injections in the domestic sector has also been reported. In Uganda, for instance, many injections are provided by family members or neighbours (6).

Relations between sectors

In Mexico it is common for physicians to prescribe an injectable medicine and then to rely on lay providers to carry out their directions. In the eyes of communities such collaboration legitimizes the informal providers of injections. Also in Mexico, difficult access to the formal health system associated with cost, transportation, long waiting times, loss of working time and lack of child care encourages the use of lay providers. Doctors in the USA often refuse to administer unnecessary injections, with the result that patients turn to lay providers (28), and there may also be cultural and linguistic obstacles to access.

A study of Mexican farm workers in the USA showed that interventions could influence injection behaviour. People who knew about HIV and blood-borne diseases bought only disposable needles or stopped self-injecting entirely. Other people changed their behaviour in response to strong recommendations from physicians, although they did not fully understand the reasons behind the recommendations (28). After an HIV testing and counselling programme in Los Angeles, researchers reported a significant improvement in people's knowledge of the use of bleach to sterilize needles and syringes. However, there was no reported change in the way respondents actually cleaned their needles. People remained sceptical about the use of bleach as a disinfectant because it was culturally associated with illegal drugs and was therefore not perceived as appropriate to their medications (27).

Links between the formal health system and informal and lay providers have also been reported from eastern Uganda, where health workers are demoralized because they are often unpaid. Drugs and equipment commonly disappear from facilities and most health workers have to supplement their incomes by engaging in private medical practice or other activities. In the context of HIV infection and public information campaigns about modes of transmission, people have become wary of injections administered under the auspices of the public authorities. This has led them to keep syringes at home, where they are cleaned before being brought to health facilities so that providers can inject medicines. Even health care providers have been reported to insist on personal syringes and needles for their own injections (6).

In Uganda the general public regards practices in health facilities as very dangerous because they involve communal sterilization procedures and storage of injection equipment. In order to protect themselves against AIDS and other diseases, individuals or households have acquired their own injection equipment. Within each household there is normally a needle and syringe for the parents, another set for other adults, and a third set for young children. The sources of contamination and HIV are perceived as being outside the household, and the sterilization of injection equipment at home is seen as the best way to ensure safety.

Most Ugandan health providers have adjusted to these perceptions. They agree to use the patients' syringes and needles for their injections even though in some cases the equipment is dirty, rusty or blocked. There is a loss of legitimacy in professional knowledge, with an increasing tendency for biomedical practitioners to submit to popular ideas of injection use. The domestication of injections represents a popularization of biomedicine (6).

Culturally relevant practices and education

It is to be expected that health planners in Uganda will encounter difficulty in attempting to stop people from giving injections in their own homes. The lack of trust in government institutions and the fear of AIDS have led people to apply their own ideas on how to make injections safe. Birungi suggests that trust in injections administered in public institutions might be restored by demonstrating the sterile chain procedures (6). This might also give people ideas on how to improve sterilization practices in their homes. Another way of promoting safe administration of injections is to investigate local perceptions of sterilization in the home. If, for example, bleach is associated with illegal drug use, other locally available means of sterilization at home should be promoted. If sterilization is to be performed at home it should be done in the safest possible way.

Conclusion and future challenges

In each setting, injection is associated with specific meanings and interpretations depending on medical traditions and ideas about contamination, causes of disease, perceptions of providers and their institutions, and local responses to the advice and behaviour of biomedical practitioners. This does not mean that people's perceptions of injections or their safety measures cannot be changed. Perceptions and behaviours have changed already, although not always in desirable directions. Interventions should be continuously adapted to specific contexts in accordance with people's responses.

It is important to recognize that the rapid changes occurring in societies have an impact on the use of injections. The social and economic changes brought about by education, migration, urbanization, altered modes of production and new family patterns can be expected to influence people's treatment strategies and the accessibility of different providers. Injection has been widely adopted because the equipment can easily be carried and the therapy is easily recognizable and accessible in different cultural settings. An increase in the use of this form of treatment can therefore be expected in many developing countries.

Anthropological research can contribute much to a better understanding of why, how and when

injections are administered (29). This is vital for the design of programmes aimed at improving injection safety. Some approaches that may be useful in designing interventions to reduce the frequency of unsafe injections are outlined below.

- There is a need for quantitative and qualitative information on trends in injection use in developing countries. Are numbers increasing or decreasing? What substances are being injected? What are the trends in injection use in the formal public and private, informal, traditional and domestic sectors? Why are changes taking place? What is the impact on the use of necessary injections? Such trends need to be understood and monitored so that predictions can be made and policies and structures adapted. The information could be used to design interventions, allocate resources, and predict impact on bloodborne diseases, the cost of injection equipment to health systems and societies, and disposal problems.
- Intervention planners need to obtain culture-specific information on the meaning of injections in local contexts. What are the indications for which injections are given and why are injections perceived to be the optimal treatment? It is important to ask people how they have formed their opinions on injections and, on the basis of their replies, to arrive at ways of promoting safe injection behaviour.
- It is necessary to tackle the issue of injections in communities and health systems simultaneously. Health systems include formal providers, informal providers and traditional healers, and all of these sectors must be taken into consideration. Otherwise, reducing unsafe injections in one sector may increase them in others that are, perhaps, harder to monitor. The implementation and consequences of injection policies should be monitored in the field.
- It would be useful to study injection use in the context of interactions between patients and providers. Clinical interaction too frequently ends with an injection because there is little or no dialogue between provider and patient. Both providers and patients have preconceived ideas about the desirable outcome of clinical encounters but often the ideas are not shared in the interaction. In many countries there are opportunities for changing the way in which providers and patients interact. Increasing emphasis is being placed on changing the role of the health worker from that of curative provider to one of agent of change and communication. Responsibility for health care is being increasingly delegated to consumers, and they are increasingly expected to contribute financially. Health reform provides an opportunity for creating an active and equal dialogue between patients and providers, and the matter of unnecessary and unsafe injections is a good place to begin.

Among the areas requiring investigation are the following: the impact of structural reforms on the

perceptions of patients and providers about the quality of interaction; the extents to which various factors (e.g. regular feedback from patients, supervision, recognition for good work, patient education) could improve interaction; and the effect of patients and providers jointly setting standards for good quality interactions.

- Making a substantial reduction in the number of unnecessary injections may not be possible for many years and it may be more useful to aim to reduce unsafe administration. People may be more willing to take measures to ensure safety than to give up a potent symbol of optimal care.

The approaches suggested above should be carefully tested in research studies and pilot projects in developing countries. The information obtained would be invaluable in designing interventions, whether structural, policy-oriented or aimed at fostering dialogue between providers and consumers. ■

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Résumé

Les injections : perspectives anthropologiques

Des études qualitatives faites dans les pays en développement ont mis en lumière la grande popularité des injections. Il est maintenant de plus en plus avéré que les injections et le matériel d'injection sont utilisés non seulement par les dispensateurs de soins, qu'ils appartiennent ou non au système institutionnalisé, et les tradipraticiens mais aussi par des profanes. La recherche épidémiologique établit un lien entre les nombreuses injections pratiquées dans de mauvaises conditions de sécurité et des infections hématogènes graves telles que les hépatites virales B et C et le syndrome d'immunodéficience acquise (SIDA). Le présent article examine les raisons de la demande d'injections par les usagers et de l'administration d'injections superflues ou dangereuses par différents types de dispensateurs. Les interventions dont le but est de réduire le risque d'injections dangereuses sont examinées par rapport à des facteurs culturels et sociaux et à des facteurs associés aux systèmes de santé qui influent sur leur utilisation. Plusieurs approches sont

proposées ci-après pour la conception de ces interventions.

- Des informations quantitatives et qualitatives sur les tendances de l'usage des injections dans les pays en développement sont nécessaires.
- Les personnels chargés de planifier les interventions doivent recueillir des informations sur la signification des injections dans le contexte culturel local.
- La question des injections doit être traitée simultanément dans les communautés et les systèmes de santé.
- Il serait utile d'étudier l'usage des injections dans le contexte des interactions entre malades et dispensateurs.
- Il faudra peut-être de nombreuses années avant de pouvoir réduire sensiblement le nombre des injections inutiles. Aussi vaudrait-il mieux essayer de réduire l'administration d'injections dans de mauvaises conditions de sécurité.

Resumen

Antropología de las prácticas de inyección: revisión

Según diversos estudios cualitativos realizados en países en desarrollo, las inyecciones gozan de gran popularidad. Aparte del empleo que de ellas hacen los dispensadores formales e informales de asistencia y los curanderos tradicionales, hay indicios de un uso cada vez más extendido de las inyecciones y del material de inyección por el público en general. Las investigaciones epidemiológicas vinculan el elevado número de inyecciones peligrosas a graves infecciones transmitidas por la sangre como las hepatitis víricas B y C y el síndrome de inmunodeficiencia adquirida (SIDA). El presente artículo examina las razones subyacentes de la demanda de inyecciones por los consumidores y de la administración de inyecciones innecesarias o peligrosas por diferentes tipos de prestadores de asistencia. Se analizan las intervenciones encaminadas a reducir el riesgo de administración de inyecciones peligrosas en relación

con diversos factores culturales y sociales, así como con otros factores asociados a los sistemas de salud que también influyen en su uso. Se presentan a continuación varias sugerencias para encauzar el diseño de esas intervenciones.

- Se necesita información cuantitativa y cualitativa sobre las tendencias del uso de inyecciones en los países en desarrollo.
- Los planificadores de las intervenciones han de reunir información específica de la cultura en cuestión sobre el significado de las inyecciones en los contextos locales.
- Es necesario abordar el tema de las inyecciones en las comunidades y en los sistemas de salud simultáneamente.

- Convendría estudiar el uso de las inyecciones en el contexto de las interacciones entre los pacientes y los dispensadores de atención.
- Tal vez no se pueda reducir sustancialmente el número de inyecciones innecesarias hasta dentro de muchos años, por lo que quizá sería preferible intentar reducir los casos de administración peligrosa.

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