1.21 Traditional medicine and its relevance to hospital care

**Box 1.21.1 Minimum standards**
- Consider traditional medicine as a possible cause of any child presenting with symptoms suggesting poisoning.
- ABCD structured approach.
- Hypoglycaemia and electrolyte disturbance management.
- Antibiotics.
- Wound management.
- Tetanus immunisation promotion.

**Introduction**

Traditional medicine encompasses diverse health practices, remedies, approaches, knowledge and beliefs incorporating plant, animal and mineral products, spiritual therapies, charms, manual techniques, exercises, and in fact any kind of salutary method applied singly or in combination to diagnose, treat and prevent illnesses or maintain well-being, which has been handed down by the tradition of a community or ethnic group. In contrast with conventional medicine, which focuses on experiment and disease-causing pathogens, traditional medicine postulates that the human being is both a somatic and spiritual entity, and that disease can be due to supernatural causes arising from the anger of ancestral or evil spirits, the result of witchcraft, or the entry of an object into the body. It is therefore not only the symptoms of the disease that are taken into account, but also psychological and sociological factors. Thus the holistic nature and culture-based approach to traditional healthcare is an important aspect of the practice, and sets it apart from conventional western approaches. Traditional medicine is culturally treasured by various communities around the world. It thus plays an almost inestimable role in healthcare delivery to the people.

In many parts of sub-Saharan Africa, it is estimated that about 80% of the population use traditional health services. Most rural and urban dwellers often supplement treatment by orthodox medical practitioners with treatment by traditional healers. In Ghana, Mali, Nigeria and Zambia, it has been found that the first-line treatment for 60% of children with high fever from malaria is the use of herbal medicines at home. Traditional medicine is extensively used in Latin America and Asia. In China, 40% of all healthcare is delivered by traditional healers. In 2007, there were an estimated 190,000 traditional health practitioners in Africa. They treat an array of health-related problems as well as culture-bound syndromes or ailments considered to be non-responsive to western medicine. In 2002, the World Health Organization (WHO) estimated that traditional medicine provided 80–90% of healthcare in Africa.

For example, among Nigerians, there are powerful cultural and religious beliefs and practices relating to health. Approximately 85% of the population use traditional medicine and consult its practitioners for healthcare. The majority (70%) of Nigeria’s population is rural and relies almost exclusively on traditional medicine for its healthcare needs.

The popularity of traditional medicine has been attributed to poverty, limited or no access to good-quality orthodox medicine, illiteracy and ignorance. Other factors include affordability, availability, efficacy, costly or inefficient orthodox medical facilities, unfriendliness of hospital staff, poor communication (e.g. patients not being told the nature and cause of their illness), inadequate technical services leading to poor-quality care, treatment that is divorced from the patient’s culture, family and community, and the treatment only addressing biological aspects of the illness rather than also addressing spiritual aspects.

The traditional healer, as defined by the WHO (1976), is a person who is recognised by the community in which they live as being competent to provide healthcare by using vegetable, animal and mineral substances and certain other methods based on the social, cultural and religious background, as well as the knowledge, attributes and beliefs that are prevalent in the community, regarding physical, mental and social well-being and the causation of disease and disability. They rely exclusively on practical experience and observations handed down from one generation to the next, whether verbally or in writing. For most countries of the world, a traditional healer may be able to perform many functions, thus being more versatile as a healer.

The elements of traditional medicine include, among others, herbal medicine, massage, homeopathy, mud baths, music therapy, wax baths, reflexology, dance therapy, hydrotherapy, mind and spirit therapies, self-exercise therapies, radiation and vibration, osteopathy, chiropractic medicine, aromatherapy, preventive medicine, radiant heat therapy, therapeutic fasting and dieting, spinal manipulation and psychotherapy.

**Traditional healers**

There are various categories of traditional healers. Some of them may have areas of special interest.

**Herbalists**

A herbalist is a person who specialises in the economic or medicinal uses of plants. The whole plant may be used or parts of the plant, including the whole root, root bark, whole stem, stem bark, leaves, flowers, fruits and seeds, which may be administered to the patient in the following forms:

1. a powder that can be swallowed or taken with pap/traditional porridge (cold or hot) or any drink
2. a powder that is rubbed into cuts made on any part of the body with a sharp knife
3. a preparation that is soaked for some time in water or local gin, and decanted as required before drinking; the materials could also be boiled in water, cooled and strained
4. a preparation that is pounded with native soap and used
for bathing; such ‘medicated soaps’ are commonly used to treat skin diseases
5 pastes or ointments, in a medium of palm oil or shea butter
6 soup which is consumed by the patient
7 herbal preparations may also be administered as an enema.

The plants are gathered from the environment, and are therefore part of every cultural tradition and have helped the development and growth of herbalism. Some of the plants that are facing extinction due to drought, bush burning, rapid growth of communities, farming or other factors are specially cultivated by some herbalists to maintain a steady source of supply.

Traditional birth attendants (TBAs)
A traditional birth attendant assists the mother at childbirth, and initially acquired her skills delivering babies by herself or by working with other birth attendants. TBAs are predominantly female. For example, around 60–85% of childbirth in Nigeria is overseen by TBAs, especially in the rural communities. They therefore occupy a prominent position in the healthcare system. Their skills are wide ranging, including diagnosis of pregnancy, antenatal care, conduct of labour and postnatal care. They are quite acceptable to those living in rural communities because their practice is linked to socio-cultural practices. For this reason, some governments have started to train TBAs in an attempt to reduce maternal and child morbidity and mortality.

Traditional bone setters
Traditional bone setters are knowledgeable in the art and skill of setting broken bones in the traditional way, using their skill to ensure that the bones unite and heal properly. They are involved in setting various types of fractures using wooden splints made from bamboo plants, and they use dry fibre from banana stems as bandaging. Wounds resulting from such fractures are usually cleaned and bleeding stopped by the application of plant extracts. Some practitioners fracture similar bones in a bird and treat it alongside the fractured limb of the patient. This is used to determine the time that it will take for the patient’s fracture to heal, and the correct time for removing the wrapped splints and clay cast. Importantly, some bone setters collaborate with orthodox medical practitioners who treat the open wounds, offer radiological services and give advice on cases that require referral. This may help to reduce the number of complications occurring in their practices.

Traditional surgeons
These practitioners undertake minor surgery. The procedures that they perform include the cutting of tribal marks, male circumcision and female genital mutilation (see Section 2.10), ear piercing, and incision and drainage of abscesses, to name just a few. Complications such as haemorrhage, tetanus and sepsis have been reported in their practices.

Traditional psychiatrists
The traditional psychiatrist specialises mainly in the treatment of patients with mental disorders. Psychotics who are violent are usually restrained by chaining them with iron or by clamping them down with wooden shackles. Those who are diagnosed as demon possessed are usually caned or beaten into submission and then given herbal hypnotics or highly sedative herbal potions to calm them. Such herbal preparations include extracts of the African *Rauwolfia* species. Treatment and rehabilitation of people with mental disorders usually take place over a long period of time. Incantations and various forms of occultism are often employed.

Practitioners of therapeutic occultism
These are traditional practitioners who use supernatural or mysterious forces, incantations, or prescribed rituals associated with the community’s religious worship, and they adopt various inexplicable methods to treat a range of diseases. They are usually respected within the community because of their ability to deal with unseen and supernatural forces. They are regarded as witches and wizards.

Traditional medicine ingredient dealers
These dealers are involved in the buying and selling of plants, animals (including insects) and minerals used to make herbal preparations. Some of them also cultivate certain medicinal plants. Although they are not traditional healers, they have knowledge of products that cure different disease conditions, and can therefore prescribe and administer these. Due to this fact, some of them are referred to as traditional healers.

Relevance of traditional medicine
Many communities have developed various traditional systems using locally available resources for the alleviation of their health problems. This has resulted in the appearance of a number of different categories of healers, and a variety of healing methods, strategies and medicines or remedies. Most people who live in rural communities do not have access to orthodox medicine. For example, in Nigeria it is estimated that about 75% of the population still prefer to solve their health problems by consulting traditional healers. Furthermore, many rural communities have great faith in traditional medicine, particularly its inexplicable aspects, as they believe that it represents the wisdom of their forefathers which also incorporates their socio-cultural and religious background, which orthodox medicine seems to neglect.

There is some justification for the use of herbs by the various traditional healers. A range of herbs have been used in the treatment of various disease conditions, including the African *Rauwolfia* species (used to treat cardiovascular diseases such as hypertension), rose periwinkle (used to treat diabetes), the Chinese herb *Artemisia annua* (used to treat malaria) and lemon grass (used to treat diseases of the respiratory system). Although herbal medicines may have beneficial active ingredients, the dosage cannot be controlled as there is no assay system for defining potency, and this increases the risk to patients who receive such treatment.

In environments where illness is believed to have a magical/spiritual origin, people become involved in intense prayers and sacrifices to compensate for their frailty and powerlessness. Western explanations of illness are rarely taken seriously. Local people may embrace traditional medicine to the exclusion of all other approaches, or combine it with orthodox medicine. Adverse drug interactions may result from such combinations of approach. Medical
practitioners working in places where traditional medicine is practised must be patient and respectful in their encounter with patients who are using traditional approaches. With health education and therapy that bring real health benefits, local people will become persuaded to accept effective evidence-based treatment.

Although the disadvantages of traditional medicine are numerous, it does also have a few advantages. The traditional healers and their drugs are available in these communities and their drugs are relatively easy to obtain compared with those of orthodox medicine. The healing system cares for the body, mind and soul of the patient in the context of the family, community, God or gods. The relationship between the practitioner and the patient can be close, encouraging and intense, with active participation of the family and neighbours. The practitioners are well known, trusted and respected in the community, and their methods fit very well with the culture and customs of the people. The drugs are cheap and readily available, and the healers accept payments either as a whole, in part or in kind, which also makes their treatments much more accessible for the people.

**Complications of traditional medicine**

Contrary to popular opinion that traditional medicine, especially herbal medicine, is natural or safe, it can be hazardous to health if these preparations are taken in recommended or larger amounts, injected or combined with prescription drugs. Some Asian herbal products have been found to contain potentially dangerous concentrations of harmful substances such as arsenic, mercury and lead, many of which cause liver failure, haemorrhage or heart failure.

Where confidence in conventional medical care is low, there is a tendency to resort to more risky traditional remedies which may be more toxic. Conversely, when confidence in conventional medical care improves, there is an increasing movement towards the use of less toxic remedies, even though the use of some traditional remedies may continue to satisfy cultural and social needs.

In many low-income countries, patients are subjected to traditional treatment as first aid therapy in emergency conditions at home. Caregivers may apply interventions that are ineffective, harmful, and have no pathophysiological basis. The use of traditional medicine is largely ethnocentric.

**Crude oil**

In the Niger Delta region of Nigeria, crude oil is available in large amounts. It is highly regarded locally as a remedy for a variety of ailments, including febrile convulsions, gastrointestinal disorders, burns, ‘foot rot’ and leg ulcers, and poisoning. It is also used in witchcraft. The oil is applied to the skin, mixed with alcohol or water as a drink, and instilled into body orifices such as the nostrils, ears, anus, vagina and urethra. The use of crude oil as traditional medicine in Nigeria has been reported to have an analgesic effect comparable to that of aspirin. Complications associated with its use have been reported in children with febrile convulsions.

Complications caused by crude oil have been reported to affect a number of organs, including the skin, lungs, liver and kidneys. Skin exposure may result in the formation of vesicles, blisters and even extensive epidermolysis. Ingestion of crude oil may result in nausea, vomiting and diarrhoea, and the aspiration of crude oil during vomiting results in chemical pneumonitis. Central nervous system symptoms range from vertigo and headache caused by ingestion of small doses, to lethargy, convulsions, coma and death with larger doses. Renal failure has been described as another toxic effect.

**Cow’s urine concoction**

‘Cow’s urine’ concoction (CUC) is a traditional medicine used in the management of convulsive disorders in childhood among the Yoruba-speaking people of south-western Nigeria. It is prepared from leaves of tobacco, garlic and basil, lemon juice, rock salt and onion bulbs, which are soaked in cow urine, which acts as the vehicle in which the active principles of these constituents dissolve. Over 50 chemical compounds have been identified in CUC, the major ones being benzoic acid, phenylacetic acid, p-cresol, thymol and nicotine. These components are toxic, and have harmful effects on the different systems of the body. The main effects are severe respiratory depression, effects on the cardiovascular system and the central nervous system, and hypoglycaemia. These toxic effects acting singly or in combination are believed to be the cause(s) of death from CUC.

**Cow dung**

It is estimated that 30–40% of infections resulting in deaths from neonatal sepsis are transmitted at the time of childbirth and have early onset of symptoms (developing during the first 72 hours after birth). Worldwide, 60 million births occur outside healthcare facilities, and even within such facilities, hygienic practices may be suboptimal.

The unhealed umbilical cord is an important portal for local and invasive infections during the neonatal period. It is rapidly colonised by bacteria from the maternal genital tract and then from the environment. Infection can emanate from the bamboo stick that is used to cut the umbilicus, and from the cow dung (believed to have desiccating properties) that is used to dress the umbilical stump. Localised umbilical infection (omphalitis) emanating from these sources can spread to the abdominal wall, the peritoneum, or through the umbilical or portal vessels leading to systemic sepsis, which if untreated has a high fatality rate. Neonatal

**Examples of problems resulting from traditional medicine practices**

**Experience of the use of traditional medicine in Nigeria**

In Nigeria, as in most other developing countries, children are subjected to unorthodox treatment as first aid therapy in emergency conditions at home. Caregivers may apply interventions that are ineffective, harmful, and have no pathophysiological basis. The use of traditional medicine is largely ethnocentric.
tetanus is a very important complication resulting from these practices, which are common among the Yorubas of south-western Nigeria and the Maasai people of Kenya. Cow dung is also used to anoint the heads of the sick among the Maasai people.

Traditional eye medications

In one study, complications occurred in 55% of the individuals studied, and included corneal opacities, staphyloma and corneal ulcers. Other complications were panophthalmitis, endophthalmitis, uveitis, cataract and bullous keratopathy. Eleven individuals in one study underwent enucleation of the affected eye.

Traditional healers tend to prefer to use substances that cause irritation and pain, as these are perceived by both healers and patients to be more potent. Such substances may be acidic or alkaline, resulting in ocular burns. No particular attention is paid to concentration and sterility, as most of these concoctions (mixture of various substances, which may be plant or animal extracts) are prepared without regard for hygiene, including the use of contaminated water, local gin, saliva and even urine.

Most of these ocular conditions could have been adequately treated using standard medicines, which were sometimes available.

Experience of the use of traditional medicine in pregnancy in South Africa

A recently published review showed that a large percentage of pregnant women still use herbal remedies during pregnancy and childbirth, and in one study the use of at least 56 botanical species was documented.

Such herbal treatments are known collectively as Isihlambezo, which is taken as an antenatal tonic during the last trimester of pregnancy in the belief that it promotes a favourable pregnancy and a quick and uncomplicated labour. It is also used to treat common pregnancy-related ailments such as oedema, indigestion, constipation, infection and high blood pressure. It is even believed by some that such traditional medicines may be able to turn a breech baby.

Many different plants are ingredients of Isihlambezo, and the recipes for this tonic vary depending on factors such as the traditional healer consulted, the general state of health of the woman, the geographical area and the tribal community. The ingredients are boiled or infused in water and the ‘tea’ is then taken by the spoonful or cupful. The concentration of the mixture may be increased at the end of pregnancy in order to speed up labour.

Isihlambezo mixtures can be purchased from and dispensed by traditional healers and herbalists or ‘muti’ shops, and individual ingredients can be obtained from open herbal medicine markets throughout the country. In the rural areas, the ingredients for Isihlambezo are often harvested from the local countryside by senior women in the tribal community or by traditional birth attendants.

ImbelekiSane and Imenbe are more specific remedies used as uterogenic drugs in cases of prolonged and difficult labour. However, interviews conducted with traditional healers in KwaZulu-Natal revealed that ImbelekiSane and Imenbe are regarded by them as dangerous medicines.

Teratogenicity can be largely ruled out, as these remedies are usually only used in the last trimester. However, the potential for maternal and fetal toxicity remains. Sixteen of the species used in these remedies are known to be poisonous, and one of these, Callilepis laureola (Impila), is extremely poisonous and has been responsible for many fatalities resulting from hepato-renal failure. Other toxic effects that have been linked to the use of these medicines in pregnancy include low neonatal birth weights, fetal meconium staining of amniotic fluid, and fetal uterine rupture.

All of the plants investigated in the above-mentioned study were able to directly stimulate uterine contraction to varying degrees. Clivia, Agapanthus and Rhoicissus significantly augmented the initial response of the uterus to oxytocin, and were able to produce initial phasic contractions followed by tonic contractions at higher doses. Herbal remedies containing these plants must therefore be considered to have the potential to cause uterine hyperstimulation and its associated adverse effects, including uterine rupture.

Experience of traditional medicine in the Eastern Cape area of South Africa

In another publication, traditional remedies were found to be regularly used in the home management of children in the Eastern Cape, and probably in the great majority of cases these remedies do little harm beyond delaying presentation to the healthcare system. However, serious effects were occasionally identified. Most often the traditional remedy was given to treat a symptom of an underlying disease, rather than being the cause of the condition or symptoms.

- iYeza lo moya: commonly given to infants by mouth, with few problems reported. However, a traditional enema may also be given, which may have more toxic effects.

- Senecio extracts: infusions of this weed with yellow flowers have been reported to cause veno-occlusive disease in a small number of children.

- Impila: extracts from this root may cause fatal hepato-renal failure, often presenting with hypoglycaemia.

- River onion: this is used both orally and rectally, and causes hepato-renal failure in a significant number of children.

- Jeyes fluid: this is sometimes added to rectal and oral remedies, and causes local and systemic effects.

Surgical complications of traditional medicine in East Africa

A series of case histories in 2007 included a 6-year-old girl sustaining a spiral fracture of the humerus during a road traffic accident. The parents refused hospital treatment and took her to a traditional bone setter. Two weeks later she was brought back to the hospital with a gangrenous upper limb, which was the result of placing a tourniquet around the axilla. Debridement was undertaken but the child lost the whole of the skin of the forearm and most of the hand.

A second case involved an 18-month-old boy who underwent circumcision by a traditional practitioner. On subsequent admission to hospital he was found to have partial amputation of the glans penis.

Traditional medicine used in pregnancy in Malaysia

In one study, 108 mothers (51% of those studied) used at least one type of herbal medicine during pregnancy. The type most commonly used (by 64%) was coconut oil
ingested only during the third trimester. The most common indication (90% of cases) was to facilitate labour. The older generation, parents and in-laws were those who most strongly encouraged the use of herbal medicines. The main reasons for using these medicines were to facilitate labour, to promote the baby’s physical health and intelligence, to prevent a retained placenta or to promote abortion.

Management of suspected adverse effects of traditional medicine

These include a rapid assessment of:

- Airway
- Breathing
- Circulation
- Disability.

Regular assessment and treatment of these essential systems will ensure that management keeps abreast with progress and with the prevention of deterioration.

However, when treating patients who have been given traditional medicines, first look for a medical cause of the symptoms and signs before assuming that the illness is due to the traditional remedy.

### TABLE 1.21.1 Serious complications caused by traditional medicines, and their management

<table>
<thead>
<tr>
<th>System affected</th>
<th>Symptoms and signs</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>Increased cholinergic actions such as lacrimation, salivation, rhinorrhoea, diarrhoea, vomiting and miosis, severe bradycardia or heart block</td>
<td>IV atropine may help</td>
</tr>
<tr>
<td></td>
<td>Anticholinergic actions such as hyperthermia, tachycardia or tachyarrhythmias, mydriasis, constipation or acute urinary retention</td>
<td>Anticholinesterase drugs may help</td>
</tr>
<tr>
<td>Neurological</td>
<td>Weakness, epileptic fits, coma and intracranial bleeding</td>
<td>Check blood clotting</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Anaphylaxis, bronchoconstriction</td>
<td>Specific treatment for anaphylaxis and bronchoconstriction (see Section 5.1.B)</td>
</tr>
<tr>
<td></td>
<td>Severe interstitial pneumonitis, non-cardiac pulmonary oedema, acute eosinophilic pneumonia</td>
<td>Corticosteroids</td>
</tr>
<tr>
<td>Liver toxicity</td>
<td>Nausea, anorexia, vomiting, jaundice with elevated liver transaminases</td>
<td>Supportive (see Section 5.7.A)</td>
</tr>
<tr>
<td>Nephrotoxicity</td>
<td>Acute renal failure and tubular dysfunction</td>
<td>Supportive (see Section 5.6.C)</td>
</tr>
<tr>
<td>Heavy metal contamination with lead, arsenic, thallium or uranium</td>
<td>Gastrointestinal disorders, hepatitis, polyarthritis, encephalopathy (including ataxia and severe psychiatric disturbances)</td>
<td>(see Section 7.4)</td>
</tr>
</tbody>
</table>

- Clean any areas that are visibly affected with a topical application of sterile water, and apply a non-adhesive dressing if necessary.
- If available, laboratory investigations can be helpful for identifying organ systems that may be affected by a toxic traditional medicine. Take blood for a biochemical profile (urea and electrolytes, liver function tests, amylase and glucose) and a full blood count with indices. If there is any significant abnormality, refer the patient to the relevant specialist team.
- Symptoms and signs such as convulsions should be treated with diazepam injection, hypoglycaemia should be corrected with glucose infusion, and fluid and electrolyte disturbances should be corrected with appropriate oral administration or intravenous infusion.
- Appropriate antibiotics should be administered to patients with infective conditions.

### Conclusion

Traditional medicine continues to represent a very large component of community healthcare, especially in resource-limited regions. Efforts to make traditional medicine safer are urgently required, and might include official regulation to monitor the activities of traditional practitioners, standardise their practices and undertake toxicity studies on their products, in collaboration with scientists and recognised institutions. However, this will also require the traditional healers to be willing to work with such control of their practice, which could be a problem if the healers see this as an attempt to limit their practice, or to steal their secrets and remedies.