Chapter

1

The Art and Essence of Clinical Practice

THE ATTRIBUTES OF A PHYSICIAN

"The medical student must exhibit a calm and generous disposition, besides being virtuous and of a noble mind. He must be tolerant of others and exhibit patience and perseverance in his academic pursuits. Although of sharp intellect, he must be both rational and modest. He should possess a pleasant appearance and good looks, with a well-proportioned body which should be free from physical defects or any obvious diseases. Above all, he must be compassionate. He must exhibit deep interest in the art and science of healing. He must use his intelligence to discuss facts about the disease and to understand the clinical significance of symptoms. Such knowledge he must use not only for his own intellectual enrichment, but also for acquiring requisite skills in practical management. He must be humble and loyal to his teachers and instructors. He should be free from any addictions, greed, arrogance and intolerance."

Charaka Samhita (300–200 BCE)

(*The initial encyclopedic medical treatise was written in Sanskrit by Agnivesa under the guidance of the ancient physician Atreya in the 8th century BCE. Charaka revised it and it gained popularity as Charaka Samhita*)

The ideal pediatrician must have genuine interest and love for children. The opportunity of nurturing one's own children or grandchildren is a great learning experience for a pediatrician. He must be humane, systematic in his approach and genuinely interested in the welfare of his patients. He should exude confidence, patience and politeness to elicit cooperation of patients and his attendants. These qualities are crucial to generate faith of parents in his capabilities, which is a great healing force. The physician who exhibits evidences of hurry, worry, and indecision is unlikely to inspire any confidence in his patients. *To augment the process of healing, the patient must have faith in his doctor and the doctor must have faith in himself and his medicines*.

The pediatrician should approach children as children (not patients) with tact, gentleness, warmth and genuine concern. He should have a sober and affectionate look so that children are not afraid of him. *Unlike adults, children distrust the man who looks into their eyes.* To seek cooperation, the child should be watched in a sneaky unconcerned manner. He must have a scientific bent of mind, use logical systematic steps to arrive at a diagnosis with the help of core knowledge and basic principles. He should not be dogmatic and should be aware of the limitations of his own knowledge and of knowledge in general and should never hesitate to say "I don't know". He is a perpetual student, constantly learning and unlearning to transform knowledge into wisdom. The salient attributes of a pediatrician are listed in Box 1.1. The welfare of the patient must be considered as supreme and should take precedence over all other considerations including his personal pride or commercial gain. Nevertheless, he should not underestimate his own ability to make new and

BOX 1.1 The attributes of a pediatrician

- Good physical and mental health
- Knowledge, clinical and communication skills
- Wisdom
- Confidence and imperturbability
- Patience
- Politeness
- Humility, integrity and grace
- Common sense
- Pleasant demeanor and bedside manners
- Experience and expertise
- Tactful and good listener
- Caring and compassionate
- Kind and affectionate look with a smile
- Love for children
- Endowed with intuition
- Healing touch
- He should be a good human being before he can become a good doctor

original observations. Above all, though medicine is a profession but life should never be weighed in gold—it is too precious! *According to Mother Teresa, medicine must be viewed as a mission and it should not be downgraded as a profession or business*.

Children are afraid of hospitals, doctors and needles and they should never be blackmailed through threats of injections to modify their behavior. It is controversial whether pediatricians should wear white coats or not, while it appears immaterial to me. The white coat does complement the professional attitude and inculcates a sense of discipline and decorum. The pediatrician must conduct himself with dignity, seriousness and respect towards parents regardless of how deviant their behavior may appear at times of distress. He should establish a warm and cordial interpersonal relationship with patients, their parents and his team members by virtue of qualities of his head and heart. He must demonstrate impeccable bedside manners and serve as a role model to his students. He should not merely be a healer but truly serve as a teacher, philosopher and guide to his patients, parents and students. Remember, that the academic title doctor, originates from the Latin word "*docere*" which means "to teach" and physicians must spend adequate time to teach their students, patients and their parents, attendants or caretakers.

THE APPROACH TO DIAGNOSIS

"The patients should not be viewed as systems, organs, tissues, cells and DNA. They must be viewed in totality (body, mind, heart, soul) and that too not in isolation but in context with the dynamics of ecology, family, friends and society."

Meharban Singh

The methods of physicians are like those of a detective, one seeking to explain the disease, other a crime. There are no short cuts for making a clinical diagnosis. It is learnt only by practice, not a dull, dreary monotonous practice but practice with all the five senses alert. The astute physician is endowed with sharp and sensitive special senses (especially keen observation) and he must harness the skills of a lawyer, detective and a judge. During the last two decades, a revolution in imaging technology by introduction of ultrasound, CT scanning, magnetic resonance imaging, and positron emission tomography has eroded the confidence and enthusiasm of clinicians. It is a sad reality that physicians are becoming more of technocrats and they are losing the art of medicine. The patient is being fragmented into systems, organs, tissues, cells and even DNA! It is crucial that we should not lose sight of totality of the patient and his interactions with social and ecological milieu. Instead of causing disuse atrophy of clinical judgement, the newer technology should be fully exploited and harnessed to improve clinical judgement and enhance the understanding of pathogenetic mechanisms underlying the disease process. The correct diagnosis of the underlying disorder and its probable etiology are crucial for rational management and prognostication. The diagnosis is based on elicitation of correct evidence and its analysis and interpretation of findings and observations in the light of core knowledge, wisdom and experience of the pediatrician (Figure 1.1).

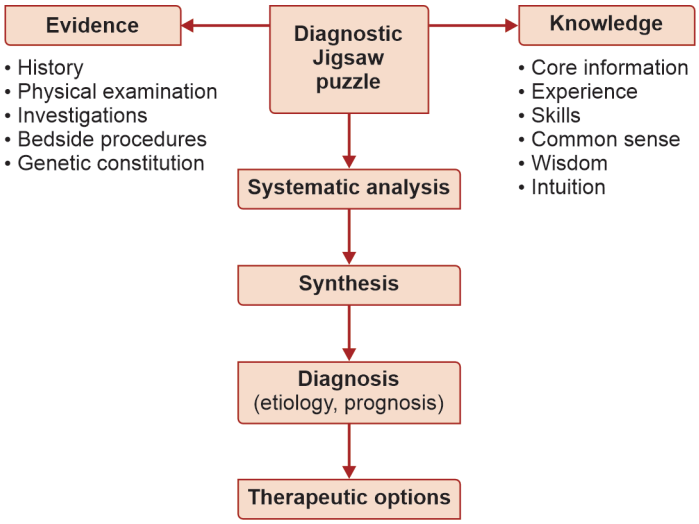


Figure 1.1 The key elements to solve the diagnostic puzzle. The correct diagnosis is crucial to institute rational therapy.

THE EVIDENCE

Just as evidence is crucial for a detective to identify the culprit, similarly sound evidence as collected by history, physical examination and investigations is of fundamental importance to resolve the diagnostic dilemma.

History

The art of clinical pediatrics is summarised in Box 1.2.

BOX 1.2 The art of clinical pediatrics

- Handle children in a relaxed and playful manner because they do not know that they are patients.
- No child would cry if you greet him or her with a smile.
- Children distrust the man who intently looks into their eyes.
- Offer a toy and ignore the child, while you observe her through your "sneaky gaze".
- Do not stare as it scares the child. The best way to make friends with a child is to show 'intelligent' neglect.
- Examine children with warm hands and warm heart without unnecessary disrobing and preferably so in the security and comfort of mother's lap.
- Be relaxed and be humble as, you try to crack the diagnostic riddle, not as an enigma but more as a matter of fun.
- Treat your patients not only with your head but also from the bottom of your heart.

Symptoms are cries of the diseased body organs and they provide an alert or warning to seek medical help. Good history taking is an art and it needs inquisitiveness, persistence and tact. You must emphasize the important, minimize unimportant and suppress irrelevant information. The history should be sifted off undue parental anxiety and concern in order to obtain a lucid chronological story with a special emphasis on the onset and evolution of the disease process. Through a process of detailed review of various symptoms and systems, an attempt should be made to identify the organ(s) affected by the disease process. Identify whether a single system is affected or one is dealing with a multisystem disorder. Attempt should be made to identify whether a disorder is acute, subacute and chronic or insidious and classify it into static, resolving or progressive in nature.

The psychological, social, ethnic, geographical, ecological and genetic factors influencing the disease process should be identified. Sir William Osler rightly said, *"Medicine is about sick people, and not about diseases"*. Therefore, our focus should be the patient and not his disease. Race and ethnicity play an important role in the expression of disease. In addition to genetic factors, individuals

with similar ethnic backgrounds share cultural, nutritional, environmental, economic, and social characteristics that influence the disease.

An experienced pediatrician is able to emphasize the important, minimize unimportant and suppress irrelevant information in the history. It must be remembered that over 75% of diagnoses can be correctly made by virtue of good history alone. It is important that no observation of the mother, whether apparently trivial or unimportant, should be ignored or set aside, even when it fails to fit into the tentative diagnosis. Indeed, it may be the most important clue or hint to unravel the diagnostic puzzle.

Physical Examination

"A great part, I believe, of the art of medicine is the ability to observe. Leave nothing, to chance, combine contradictory observations and allow yourself enough time."

Hippocrates

The history tells of events which have led to the present condition of the patient while examination reveals the status of the patient at a given moment. Accuracy of history depends upon the education, memory, intelligence and concern of the attendant while yield of physical examination depends upon the experience, skills and thoroughness of the pediatrician. *Most errors in medicine are made by making cursory incomplete examination and not due to lack of knowledge and skills.*

The approach during examination of children is determined by the age, development status and level of understanding of the child. The clinical examination should be unstructured and made a fun to relieve the anxiety of the child. The pediatrician must have inherent fondness and love for children and examine them with warm hands and warm heart. The examination chamber should be warm, familiar, well lighted and stocked with soft toys. Deep yellow or blue-colored curtains should be avoided in the examination chamber because they may interfere with evaluation of jaundice and cyanosis. *The children must be treated as children and not patients and examination should be conducted in an unstructured playful manner.* Patients must be handled with utmost care and reverence as they are the real books of physicians. The maximum time should be devoted to observation of the child and to the system or organ which appears to be predominantly affected on the basis of history.

"To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to the sea at all …"

Sir William Osler

Physicians must sharpen their observation skills by enhancing the capabilities of their special senses. Pediatrics deals with children from birth to adolescence, varying in size from less than 1.0 kg to over 50 kg and having different grades of functional maturation of various body organs. Pediatrics has been likened to a flying bird which deals with dynamic, evolving and changing size and maturity of children. The knowledge regarding developmental anatomy, developmental pharmacology, developmental biochemistry and developmental biology in general is crucial for proper evaluation of normal children at different ages for recognition of abnormalities or deviations due to diseases. You must have information and knowledge regarding normal variations at different ages before you can pick up the abnormalities. The developmental or functional status of the child affects the incidence and expression of various diseases and conversely the diseases may adversely affect the growth and development of children. The lymphoid tissue is physiologically hypertrophied in children leading to development of large tonsils, adenoids, or cervical lymph nodes following minor infections.

Laboratory Investigations

"Use the laboratory as your slave, not the savior. The slavish submission to laboratory reports may lead to the atrophy of the clinical judgement."

Meharban Singh

They are useful to assess the degree of organ dysfunction, assist in confirming the diagnosis, help in management, prognostication and follow-up. *There is no justification to undertake routine investigations in every patient.* Instead, appropriate and relevant investigations should be ordered depending upon the diagnostic possibilities entertained on the basis of a detailed clinical evaluation. The pediatrician should be aware of limitations of all laboratory tests and follow the philosophy that the laboratory is used as a slave and not as a master.

Physicians must have faith in their clinical acumen and use laboratory as an aid for confirmation of diagnosis in order to provide effective and rational management to the patient. *The approach should be to treat the patient and not his laboratory reports.* Nevertheless, the diagnosis should not be delayed by deferring to undertake essential investigations. Timely laparotomy may be life-saving in a child with acute abdomen, undiagnosed lump and for differentiation between neonatal hepatitis and extrahepatic biliary atresia. The children with cervical lymphadenitis should not be given a trial of antitubercular therapy unless the diagnosis is confirmed by fine needle aspiration cytology or lymph node biopsy.

There is an increasing trend for utilization of "point of care" confirmation of clinical findings by pulse oximetry, ultrasonography, echocardiography, ECG, EEG and online consultations, etc.

THE CORE KNOWLEDGE

The evidence generated by painstaking history, physical examination and investigations should be viewed in the light of available knowledge and experience of the pediatrician. Every pediatrician should be aware of the essential features and criteria for making the diagnosis of common childhood disorders. It must be remembered that no symptom or sign has a 100% frequency or specificity in a disorder because no two patients are alike. In general, the manifestations of diseases are rather atypical among neonates and infants. You must have an up-to-date knowledge pertaining to the current state-of-the-art information for diagnosis and management of common pediatric problems otherwise you will get rusted and outdated.

A large number of diseases in children can be diagnosed on the basis of typical facies or facial dysmorphism. The physician must be equipped with some core knowledge because chance favors only the prepared mind. *It is well known that what mind knows, it is more likely to explore and unravel in the patient.* The diagnosis of acute post-streptococcal glomerulonephritis can only be made, if one knows that it is characterized by acute onset of puffiness and edema feet, oliguria and smoky urine (microscopic hematuria), hypertension and azotemia following two weeks later after an inadequately treated or missed attack of acute streptococcal pharyngitis.

THE ART OF DIAGNOSIS

"Oh God, let my mind be ever clear and enlightened. By the bedside of the patient, let no alien thought deflect it. Let everything that experience and scholarship have taught it, be present in it and hinder it not in its tranquil work. For great and noble are those scientific judgements that serve the purpose of preserving health and lives of thy creatures……."

Moses ben Maimonides

The diagnostic process is one of the greatest challenges in medicine. The patient should be viewed as a jigsaw puzzle and physician should be calm, relaxed and methodical to solve the dilemma. The evidence (demography, epidemiology, symptoms, signs, investigations) pertaining to the patient should be sifted and analyzed through a process of logical thinking in the light of core knowledge, experience and clinical judgement of the pediatrician to arrive at plausible diagnostic possibilities. All the points in favor and against a particular diagnosis should be listed and carefully sifted to arrive at a final diagnosis. The physician should have thorough understanding of basic principles to solve the

diagnostic puzzle and be aware of limitations of his own knowledge to avoid dogmatism. There is no place for expressions, such as NEVER and ALWAYS in medicine. The greater the ignorance, greater is the dogmatism. Be humble and don't have "know all" attitude. It is wiser to confess ignorance than to "beat about the bush" or give silly explanations. *We must keep in mind that our knowledge in matters of health and disease is like a pond while our ignorance is Atlantic.* The following principles are useful to keep in mind while making a diagnosis.

1. The psychogenic label is the commonest refuge of the inexperienced physician lacking in diagnostic skills. The functional disorder should be diagnosed both by exclusion of an organic disorder and by the presence of positive evidences of a psychogenic disturbance. The attention must be paid to the whole child along with his environment rather than merely to his body organs. *The focus should be the child and not his disease*. Ask the mother how the index child differs or compares with other siblings. The behavior and personality disorder in a child is a reflection of parental discord and the child should be considered as a barometer of the family's emotional health. The psychological symptoms in a child is a signal to implore us, "please help my family."
2. It is important to keep in mind that common diseases occur more commonly. *The rare manifestations of a common disorder are more common than the common manifestations of a rare disorder.* When a symptom or a sign is commonly found in a large number of diseases, its absence is more significant than its presence for making a specific diagnosis.
3. Give due credence to the diagnosis made by the previous physician but do not accept it as the gospel truth. You should make your own decision regarding the likely diagnosis based on the sequence of events, course of the disease, leads obtained on investigations and therapeutic response to medications.
4. Efforts should be made to fit the total clinical picture into a single diagnostic entity. This is more often possible in a child as compared to an adult. No diagnosis should be taken for granted, even when it is attributed to a reliable physician or a renowned medical institution, unless it is based on a sound evidence and logic.
5. Avoid masking symptoms and signs by giving drugs to a patient with an evolving disease process. Do not instil mydriatics into the eyes for examination of fundus or give sedatives to a child with head injury because this would compromise the diagnostic utility of pupillary size and level of consciousness. In a case of undiagnosed acute abdomen or head injury, strong analgesics and sedatives should be avoided.
6. Do not delay the surgical diagnostic procedure or a laparotomy whenever it is indicated.
7. The diagnosis of a curable disease should not be overlooked. When clinical picture is compatible both with tuberculosis and Hodgkin's disease, it is preferable to confirm the diagnosis by a lymph node biopsy before starting the treatment.
8. Do not allow the social status of the patient or family to limit your examination. Undress the child completely whenever necessary. Incomplete or cursory examination is the most important cause of diagnostic misadventures.
9. Be confident but don't be biased or dogmatic in your approach. Be humble and handle patients with due compassion, consideration, and concern.
10. The diagnosis may be made in stages and do not hesitate to revise your diagnosis after a period of observation. The appearance of new symptoms and signs, as the disease evolves, may offer additional diagnostic clues. Sir

BOX 1.3 Don'ts for diagnosticians

- Don't be too clever
- Don't diagnose rarities
- Don't be in a hurry
- Don't be faddy
- Don't mistake a label for the diagnosis
- Don't diagnose two diseases simultaneously
- Don't be too cocksure
- Don't be biased and avoid saying "Never" or "Always" in medicine
- Don't overlook the diagnosis of a curable disease
- Don't diagnose a psychological disease merely on the basis of exclusion alone
- Don't hesitate to revise your diagnosis
- Don't be dogmatic
- Don't be arrogant
- Don't ignore your intuition and common sense

Robert Hutchison, the legendary clinician, has enunciated several don'ts for the diagnosticians (Box 1.3).

THE DIAGNOSTIC POSSIBILITIES

In allopathic or modern system of medicine, most diseases can be classified into eight broad etiologic groups (Table 1.1). Infections account for over 75% of all diseases. In children, protein-calorie malnutrition and deficiency of micronutrients (vitamins and minerals) constitutes the core health problem which makes children susceptible to develop infective disorders which are likely to run a relatively protracted and fulminant course. Overnutrition and obesity are emerging as public health problems among adolescent children belonging to affluent or well-to-do families. Most genetic (inborn errors of metabolism), chromosomal and developmental abnormalities manifest during early childhood. The degenerative disorders due to aging are uncommon in children but there is a need to identify various clinical and laboratory markers for these disorders so that preventive strategies can be instituted during childhood to reduce the burden of these diseases during adult life. *We must remember that seeds of most adult diseases, like obesity, hypertension, type 2 diabetes mellitus and coronary artery disease, are sown in childhood.*

After clinical assessment, a tentative diagnosis should be made and various differential diagnostic possibilities in the order of their probability should be listed before ordering

TABLE 1.1 The spectrum of diagnostic possibilities

Etiology	*Spectrum of diseases*
Infections	Viral, bacterial, spirochetal, fungal, parasitic and prion diseases
Exogenous toxins and injuries	Drugs, chemicals, foreign body, trauma, burns, and electric shock
Deficiency states or disorders of abundance*	Hypoxia, dehydration, protein-calorie malnutrition, deficiency of vitamins, minerals, and hormones
Developmental disorders	Genetic diseases, or inborn errors of metabolism, chromosomal disorders and congenital malformations
Neoplasms	Benign or malignant
Allergic, hypersensitivity, or autoimmune disorders	Allergic diathesis, atopy, bronchial asthma, post-infectious disorders, collagen vascular or connective tissue disorders, etc.
Degenerative disorders	Atherosclerosis, progeria, degenerative disorders of central nervous system
Psychogenic and psychosomatic disorders	Breath-holding spells, nocturnal enuresis, recurrent abdominal pain, anxiety, conversion reaction, conduct disorders, behavior disorders, depression, autism spectrum disorders, attention deficit hyperactivity disorder, substance abuse, learning disability, etc.

*For example, hyperoxia (retinopathy of prematurity), over hydration (over infusion, low oncotic pressure, capillary damage), obesity, hypervitaminosis, and excessive release of hormones (thyrotoxicosis, gigantism, hypercorticism, insulinoma).

laboratory investigations. It is essential to make a complete diagnosis including the *primary condition and likely cause, associated complications,* like intercurrent infections, and *concomitant disorders.* For example; protein-calorie malnutrition, marasmic type, faulty feeding and weaning practices, recurrent diarrhea, hypothermia, nutritional anemia, zinc deficiency, primary pulmonary complex and scabies.

In systemic disorders, the clinical diagnosis should indicate the site of disease *(anatomy), physiologic basis, pathology, etiology, predisposing conditions or risk factors, complications* and *associated disorders*. The examples of clinical diagnoses in various systemic disorders are given below.

Alimentary System and Abdomen

1. A case of cirrhosis (pathology) following viral hepatitis (etiology) with portal hypertension, anemia, hepatocellular failure, and hematemesis (complications) and a past history of blood transfusion at the age of 3 years (risk factor).
2. A case of failure to thrive with recurrent episodes of diarrhea (malabsorption) due to fibrocystic disease of pancreas (pathology) with iron deficiency anemia, rickets and rectal prolapse (complications).

Respiratory System

1. A case of right upper lobe (anatomy) consolidation (pathology) probably due to bacterial pneumonia (etiology) with empyema (complication) following pyoderma and protein-energy malnutrition (risk factors).
2. A case of left-sided (anatomy) pleural effusion (pathology) probably because of tuberculous origin (etiology) with history of primary pulmonary complex at 2 years of age (risk factor).

Cardiovascular System

1. A case of mitral (anatomy) stenosis (physiology) of rheumatic origin (etiology) without any congestive heart failure or rheumatic activity and the patient is in sinus rhythm at present.
2. A case of mitral stenosis and aortic (anatomy) incompetence (physiology) of rheumatic origin (etiology) with bacterial endocarditis, cardiac failure and atrial fibrillations (complications).

Central Nervous System

1. A case of spastic paraparesis in extension (deficit or physiology) due to compressive myelopathy caused by caries spine (etiology) and the lesion is at the level of T10 segment of the spinal cord (anatomy or site of lesion) with urinary retention and urinary tract infection (complications).
2. A case of left-sided complete hemiplegia (deficit or physiology) due to cerebral thrombosis involving lenticostriate branch of middle cerebral artery (etiology) and site of lesion is in the right internal capsule (anatomy or site of lesion) with protein-energy malnutrition and impetigo (associated conditions).

THE RATIONAL MANAGEMENT

"To augment the process of healing, the patient must have faith in his doctor and the doctor must have faith in himself and his medicines."

Meharban Singh

The purpose of making a correct diagnosis is to institute rational therapy and provide prognostic guidelines to the family. It is preferable to use a single most appropriate therapeutic agent, which should be administered in an optimal dose through the most convenient route, instead of instituting a "shotgun" therapy with half a dozen drugs. Avoid administration of unnecessary medicines. The most experienced physician gives the least number of medicines. It must be remembered that most diseases recover spontaneously and no drug is entirely safe. Virtually every drug has side effects including a placebo! It is desirable to use familiar drugs which have withstood the test of time. The newer drugs or procedures are not necessarily better. The discomfort and pain of the

TABLE 1.2 The spectrum of therapeutic options

▪ Medications (allopathy, AYUSH) ▪ Surgical procedures ▪ Life sustaining technologies ▪ Physical therapies ▪ Psychotherapy ▪ Magnetic therapy ▪ Gemology ▪ Aroma therapy ▪ Body "chakras" ▪ Spiritual healing ▪ Prayer	▪ Natural healing forces (sunshine, air, water, food, rest, sleep, exercise) ▪ Healthy lifestyle ▪ Acupressure and acupuncture ▪ Reflexology ▪ Tai chi and Qigong ▪ Reiki ▪ Yoga ▪ Visualization ▪ Hypnotherapy ▪ Meditation

Hope, faith, love and compassion have great healing powers. Energize the psycho-neuro-immunology axis of the patient.

patient must be relieved by appropriate and safe medicines with due regard for their comfort and wellbeing.

There are a large number of therapeutic options in various traditional and modern systems of medicine (Table 1.2), we must try to harness the best therapeutic option for the welfare of our patients.

"A person may have learnt a great deal and still be an exceedingly unskillful physician, who awakens little confidence in his powers..... The manner of dealing with patients, art of winning their confidence, soothing and consoling them, or drawing their attention to serious matters …… all this cannot be learnt from books ....."

John Apley

We must provide global health care to the child rather than a mere cure against a disease process. A comprehensive advice regarding diet, personal hygiene and immunizations should be given to all children irrespective of the underlying disease process. The medical systems should not be fragmented into watertight compartments and instead all systems including complementary and alternative systems (CAS) should be exploited and harnessed to provide relief. The Government of India has introduced the concept of AYUSH by providing a kit to primary health care providers, which contains **A**yurvedic, **U**nani, **S**iddha and **H**omeopathic medicines, apart from medicines belonging to the modern or Allopathic system. However, it is illogical to treat a patient simultaneously with a homeopathic as well as allopathic medicines because the former is supposed to expel out the disease while the latter tries to suppress it. The physician must establish a rapport with the child and his parents to provide them emotional support and win their confidence.

The pediatrician who is likely to exhibit evidences of hurry, worry, and indecision is unlikely to inspire confidence in his patients. The skillful physician knows when to sedate with drugs, when to soothe with words, when to treat aggressively for cure, palliatively for relief and consolingly for comfort. What we don't say and what we do say, how we say it and when we say it, makes all the difference between helping and not helping our patients. These attributes and skills cannot be learnt from books but by emulating the example of one's model teachers who are unfortunately a dwindling tribe in the modern commercialized society.

"All human beings, but doctors in particular, should not under estimate the power of touch, a smile, a kind word, a listening ear, an honest compliment, or the smallest act of caring, all of which have the potential to heal and turn a life around."

Meharban Singh

The patients and attendants have emotional feelings and one should avoid saying "nothing can be done" (because something can always be done), "there is nothing wrong" (even when it is a functional disorder), "don't worry", "it is all right", etc. The *world needs caring and concerned physicians, and not merely curing and commercial robots who lack compassion and deny the healing virtues of hope and human touch.* Identify the major worries and fears of the child and his parents. Relieve their anxiety, reassure them and restore their confidence so that the will to fight is never dulled or extinguished. Nevertheless, we should be honest and pragmatic towards our patients. There is hardly any place

for use of injections in ambulatory pediatric practice except for the administration of vaccines and treatment of anaphylactoid reaction.

The news regarding the incurable or a life-threatening disease in a child should preferably be disclosed to both the parents simultaneously by the consultant with due concern, empathy and compassion. The dialogue should be unhurried and parents should be encouraged to express their feelings, fears and concerns by asking questions. It has been rightly said by Bernie Siegel that "*Our power to heal people and their lives seems to have diminshed as dramatically as our power to cure diseases has increased by the technology boom*". In the maze of scientific advances, we seem to have lost the human dimension. There is a need to resurrect the art of medicine. *There is no doubt that we should make sincere efforts not only to become knowledgeable and skillful physicians but we should strive to evolve as effective healers and above all good human beings.* These virtues of physicians are extolled in Charaka Samhita "…Thou shall behave and act without arrogance and with undistracted mind, humility and constant reflection, thou shalt pray for the welfare of all creatures…" When we look at our patients with a smiling, kind and caring eyes, the act of looking becomes a prayer, a meditation and a way of healing. And when we perceive outside world with calmness and clarity, our inner self reflects positive energy, which is endowed with great healing potential. The sound management mantras are summarized in Box 1.4.

The principles of rational management of diseases and art of medicine have been beautifully summed up by Sir Robert Hutchison in the following quote:

> *"From inability to let well alone, from too much zeal for the new and contempt for what is old; from putting knowledge before wisdom, science before art and cleverness before common sense, treating patients as cases, from making the cure of the disease more grievous than endurance of the same, good Lord deliver us"*
>
> ***Sir Robert Hutchison***

BOX 1.4 The sound management mantras

- Most diseases are self-limiting, no medicine is safe, use them only when indicated and with due care and concern.
- Practice evidence-based medicine, and complement it with your experience, expertise and common sense.
- Every patient is unique, no two patients are alike. The same medicine in the same dose for an identical disease may have different effects on different patients.
- Provide symptomatic relief to one and all, avoid "shotgun" therapy which is nothing better than a mere shot in the dark. Prescribe less but promote health messages galore.
  Always have a tentative diagnosis, treat with a specific medicine, have faith and confidence in whatever you do to boost your healing vibes.
- Focus not merely on cure, but be concerned to provide holistic care to promote optimal growth and development.
- View the patient in totality—body, mind, heart, soul and society. Treat the patient and not the disease.
- Pediatrics is the mother of preventive medicine. Every contact with the patient should be harnessed to promote personal hygiene, environmental sanitation, promotion of nutrition, provision of immunization and prevention of accidents.
- Be a good human being before we can become a good doctor. We should treat our patients not only with our head but also with our heart.
- The young physician starts life with 20 drugs for each disease while an experienced physician ends life with one drug for 20 diseases.
- To promote the process of healing, the patient must have faith in his doctor and doctor must have faith in his medicines.
- Be pragmatic but nerve say nothing can be done. Hope is a great heating force, keep it alive as something can always.

In order to avoid therapeutic misadventures, there are five messages or pearls of wisdom encapsulated in the aforementioned quote.

1. Most diseases are self-limiting and they recover spontaneously without any drugs. Nature, time and patience are the three great physicians.
2. We should not be enamoured and fascinated or carried away to use newer drugs which have not withstood the test of time and instead, we should remember the well-known dictum that "old is gold".

3. Art of medicine should not be sacrificed at the altar of technology.
4. Patients should not be viewed as systems or organs but handled in their totality—body, mind, heart, soul and society. A good physician treats the disease, while a great physician treats the patient who has the disease.
5. Medicines should be used only when indicated and they should not cause more harm to the patient than the disease itself for which they are prescribed.

We must use those medicines which have withstood the test of time with an assured efficacy and safety track record. It is important to remember that no medicine is entirely safe and it has been cynically summed up by Oliver Wendell Holmes, *"If the whole materia medica as being used now, could be sunk to the bottom of the sea, it would be better for all the mankind – but all the worse for the fishes."*

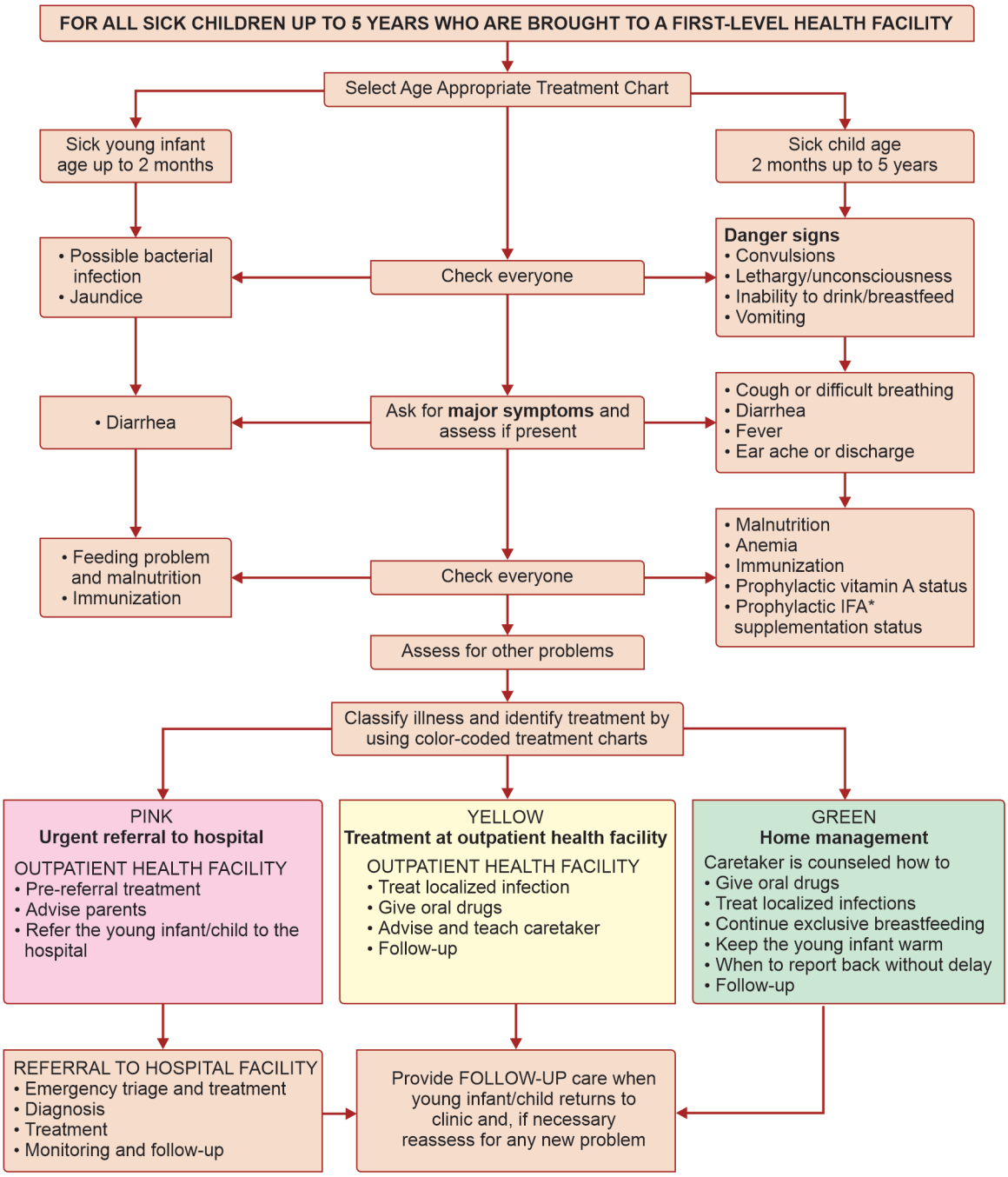
Integrated Management of Neonatal and Childhood Illnesses (IMNCIs)

WHO and UNICEF in collaboration with many other global agencies have adopted an integrated management of neonatal and childhood illnesses strategy to provide comprehensive or holistic approach for welfare and survival of children. Algorithms have been developed to diagnose and manage common childhood diseases. Apart from rational management of common diseases, health workers promote breastfeeding, provide immunizations, health and nutrition education. The emphasis has shifted from purely curative services to a package of comprehensive health preventive, and promotive services at each contact of the health worker with the consumers. The IMNCI strategy is being implemented in a phased manner for teaching of undergraduate medical and nursing students throughout the country.

The Components of IMNCI

The IMNCI guidelines for case management of common diseases have been divided into two age categories, i.e. infants from birth to 2 months and children above 2 months to 5 years of age. The salient guidelines of IMNCI are listed below.

1. The frontline workers, accredited social health activists (ASHAs) and Anganwadi workers (AWWs), after completing their IMNCI training, are required to visit newborns at their households three times during the first week of life. During their visits, the workers assess newborns, promote healthy practices, manage simple problems and refer those with a serious illness to healthcare facilities.
2. All sick infants up to 2 months of age should be assessed for "possible infection and jaundice" and they must be routinely evaluated for the major symptom like "diarrhea".
3. All sick children between 2 months and 5 years should be examined for "general danger signs" which suggest the need for immediate referral or admission to the hospital. They should be routinely assessed for major symptoms, like fever, cough, difficult or rapid breathing, vomiting, diarrhea and ear problems.
4. All sick under-5 children should be routinely assessed for nutritional and immunization status, feeding problems and other common day-to-day problems.
5. A limited number of carefully selected clinical signs are used, based on their sensitivity and specificity, to diagnose the disease. These signs were selected considering the spectrum of common disorders and ground realities prevalent at the first-level healthcare facilities.
6. On the basis of a combination of various signs, the child is classified into various groups (instead of a diagnosis) and further divided into color-coded triage as *pink* which requires urgent referral or admission to a hospital, *yellow* when specific treatment is required through the outpatient health facility and *green* which calls for home management (Figure 1.2).



*IFA: Iron folic acid

Figure 1.2 IMNCI case management process

7. The IMNCI guidelines address most but not all the major reasons for which a sick infant or child is brought to the clinic. The guidelines, for example, do not describe the management of trauma or other acute emergencies due to various accidents or injuries and also do not cover resuscitation and care of the baby at birth.

8. The management procedures outlined in the IMNCI protocols use a limited number of essential drugs and encourage active participation by caretakers in the treatment of sick infants and children.
9. In order to promote local health traditions and indigenous medicines, village health care workers and ASHAs are provided with a kit of medicines containing AYUSH (Ayurvedic, Unani, Siddha and Homeopathy) and allopathic or modern medicines to treat common day-to-day illnesses.
10. An essential component of the IMNCI guidelines lays emphasis on providing counseling and guidance to caretakers about home care, feeding, administration of fluids, immunizations, healthy lifestyle, etc. and guidelines to return back to health care facility for further management and follow-up.

THE ART OF HEALING

The art of healing comes from nature and physician must exploit the natural forces with an open mind. The best "doctors" to maintain and promote good health are sunshine, clear air, safe water, sound sleep, exercise, nutritious diet and healthy lifestyle.

"What we do not say, what we do say, how we say it, makes all the difference between helping and not helping our patients."

John Apley

Physicians should not underestimate the healing power of touch, smile, a kind word, listening ear, an honest compliment and a genuine act of caring and compassion. The spiritual components of healing include power of touch, divine spirit, human mind, prayer, compassion, faith and hope. *The patients should not be merely treated with your head alone but also with your heart*. There is scientific evidence to suggest that the electromagnetic field generated by the human heart is far more powerful than the one created by the human mind. When a physician looks at a patient with a smiling, kind and caring gaze, the act of looking becomes a healing force.

Modern medicine is dominated by the doctrine that the disease is caused by external agents or environment, thus ignoring the importance of host or genome and body-mind integrity or importance of psycho-neuro-immuno-endocrinal interactions. The master controls of our body are nervous system, immune system and endocrine system and the process of healing depends upon their intricate balance and integrity. Physicians treat patients by giving medications but healing originates from within. Several studies have shown that patients and attendants who have a positive attitude, trust their doctor and surrender themselves to his care are more likely to recover than those who approach medicine with distrust, fear and antagonism. According to Bernie Siegel, our healing capabilities are mobilized by love, faith and hope. Anything that offers hope has the potential to heal including positive thoughts, suggestions, symbols and placebos. The physicians must be careful about their body language, how they look, touch and listen to their patients and their attendants. They should not be merely concerned with diseases or disorders but with patients as human beings. In order to augment the process of healing, the patient and their attendants must have faith in their doctor and the doctor must have faith in himself and his medicines. According to Hippocrates, the critically sick patients are likely to recover simply through the goodness, concern, compassion and capability of their physicians.

"The technical and diagnostic skills of a physician are no substitute for his bedside manners."

Meharban Singh

Medical schools teach everything we need to know about writing prescriptions but nothing about understanding people and our patients. Because of rapid advances in medical technology, the physicians are becoming more of technocrats and less of human beings or healers. It is desirable that doctors should understand their holistic role as health *care* providers and not merely health *cure* providers. The world need caring,

concerned and compassionate physicians and not merely curing and commercialized robots. Doctors who believe that they can cure the disease without caring for the patient may be excellent technicians but they are incomplete doctors. It is unfortunate that medicine is getting more and more dehumanized and patients are being touched mostly by the machines and sparingly by the physicians. It should be kept in mind that touching the patient with compassion and concern has great healing capabilities. *Medicine and spirituality are complementary to each other in catalyzing the process of healing.* The healing forces can be augmented through spiritually guided life forces like activation of body chakras and reiki for balancing the life energy field. According to our scriptures, physicians should see and visualize Brahma in every human being (*Aham Brahmasmi*) and feel honored that we have been given the supreme responsibility to serve Him. When you follow this celestial principle, your work becomes worship and you become true healers.

HELP mnemonic is useful to build a therapeutic alliance between the doctor and patients/relatives.

H—**H**ope. Maintain a positive alliance because hope is the greatest healer.

E—**E**mpathy. Promote empathy by listening attentively instead of talking unnecessarily.

L_2—**L**anguage, **L**oyalty and concern: Use simple language and avoid medical jargons. Care and concern toward your patients should be your prime concern.

P^3—**P**ermission, **P**artnership and **Pl**an. Build a therapeutic alliance between yourself and the patient/family for any lifestyle changes and rational plan of management.

PROGNOSIS

"Parents (and attendants) have emotional feelings. Never say "nothing can be done", because something can always be done. Never give a hopeless prognosis in order to avoid neglect and sustain the will to fight. Nevertheless be pragmatic and honest".

Meharban Singh

Most parents and attendants are worried and concerned about the outcome of the disease. They commonly ask "will the child become alright" and "how soon is he likely to recover"? The outcome depends upon the nature and severity of disease process and the type of the host or victim who is afflicted with the disease. Every patient is unique, a treatment method or an educational plan that works for one child, may not work for another. Nevertheless, one common denominator for recovery is early intervention before the disease process is advanced or becomes irreversible. The disease with an acute and sudden onset is likely to have either a dramatic recovery or a deadly outcome.

Most diseases are self-limiting and they recover on supportive management without any medications. Faith, will power, positive thinking and sound genetic constitution are great healers. A true healer cannot simply rely on technology, there must be a spiritual bond between the patient and physician. To augment the process of healing, the patient must have faith in his doctor and doctor must have faith in himself and his medicines. Infants below 3 months and children having protein-energy malnutrition or obesity, immunodeficiency state and defective genome are likely to have poor outcome.

The parents should be handled with due compassion and told about the likely outcome of the disease and possible side effects of the medications. They should be explained about the expected course of the disease. For example, most viral infections are usually self-limiting and likely to take 3–4 days for recovery. The acute onset of vomiting is usually followed by diarrhea after 12–24 hours, and a child with typhoid fever is likely take 4–5 days to settle even after start of specific antimicrobial therapy. The physician must establish a rapport with the child and his parents to provide them emotional support and win their faith, trust and confidence. Hope is the greatest healer, never give a hopeless prognosis but nevertheless we should be pragmatic and honest in our dealings with our patients and their caretakers. We should always keep in mind that nature is supreme and miracles do happen.

When a child is suffering from a chronic or incurable disease or an affliction with a lifelong disability, the parents are likely to respond with disbelief, anger and shock. The news about a disabling or deadly disease should preferably be given to both the parents simultaneously with due concern, compassion and empathy. The facts should be explained in a simple language without any medical jargon. The physician should allow the parents to ventilate their feelings and concerns, and try to answer their queries in an honest and unambiguous manner. Physician should be pragmatic but not pessimistic. It is important to remain positive and hopeful, which is a great healing force. Hope is the greatest healer and we should give a guarded but not a hopeless prognosis.

We should be careful and diplomatic in conveying the nature of the disease without hurting parental feelings. Instead of bluntly saying, "your child is mentally retarded", it is better to say that the child is rather "slow" or having "developmental delay". In Indian society, giving a spiritual context to parents of "special children" is useful to buffer their anxiety and feeling of hopelessness. *For example, you can say that* "*God has chosen you to provide care and comfort to this special child because you are so compassionate, caring and sensitive human being*." The family should be encouraged to join Self Help Association of Parents to share their mutual concerns and difficulties, and ensure effective utilization of available specialized services.

End-of-Life Issues

"Death is certain for the born and rebirth is inevitable for the dead. You should not, therefore, grieve over the inevitable."

Bhagavad Gita

During their grooming and development of career, physicians are likely to face several "end-of-life" situations. *Despite all the technological advances, medicine can never achieve immortality*! It is as natural to die as to be born. Death is more certain than rebirth. When faced with a critically sick or dying child, physician should allow the parents to express their feelings and concerns and try to answer their queries in an honest and unambiguous manner. In this situation, we should follow the well-known dictum—"*talk less and listen more*". The coping of death of a child in the hospital is a painful and challenging experience for everybody concerned with the care of the child.

Death deflates our ego and teaches us humility and provides strength to handle the greatest reality of life with equanimity, composure and confidence. During the care of critically sick children in the intensive care unit, it is important to show due concern, care and compassion (but in a detached manner) to the parents/attendants, and keep them duly informed about the condition of their child. *It is important that the physician should not only provide state-of-the-art care to the child but also make the parents and attendants perceive that whatever was humanely possible, it was done for their child.* Many parents are still grateful even if we are unable to save their child, only if we showed concern, care and compassion. The family should be emotionally and spiritually prepared before declaration of death. The news of death should be conveyed with utmost compassion but in no unmistakable terms that the child has died despite our best intents and efforts. When a child is conscious and dying, the parents should be at his bedside holding his hand and talking with him to allay his fears and provide him emotional support, for his journey to the unknown.