If the central tendency of the population distribution is crucially important then much more research is needed to understand its determinants. If we want to discover the causes of hypertension, obesity, alcoholism, depression, violence, and so on we need to study the determinants of average blood pressure and weight, average alcohol intake, average population "mood," intellectual performance, aggression, etc. The study of the average is crucial also to understanding better the dynamics of social change and of the interactions (possibly two way) between the majority and the deviants.

FOR PREVENTION

Traditional preventive strategy is concerned with identifying and helping minorities with special problems, by treating their risk factors or seeking changes in their behaviour. The underlying aim is to truncate the risk distribution, eliminating the high tail but not interfering with the rest of the population.⁶ In practice such truncation proves hard or impossible to achieve. As our results show, the spread of a distribution is not readily compressed. The close link between mean and prevalence implies that to help the minority the "normal" majority must change.

FOR SOCIETY AND GOVERNMENT

It suits society to alienate its problem minorities and to regard them as independently responsible for their problems; but if the tail belongs to the distribution and the minorities' problems exist as a consequence of the majority's attributes then it is no longer possible to

regard normal (majority) behaviour as of no wider consequence. The way that most people eat, drink, and behave, even if it were harmless to themselves (which is often not the case), may determine how many others, more vulnerable, will suffer as a consequence. The health of society is integral.

This view is unwelcome to governments. It is cheaper, and politically safer, to support special measures for needy minorities than to change general social and economic policies that affect the whole population. The policy on alcohol, for example, implies highlighting the problem of heavy drinkers while condoning "drinking in moderation"; and the policy on violence is to blame a small minority of extremists, while ignoring factors which influence aggression in society as a whole. What is needed is an acceptance of collective responsibility for the population's health and social well being.

We are grateful to the Intersalt study editorial committee for permission to use some unpublished data.

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How To Do It

Visit a health centre in a developing country

P A G Gibson, A McClelland

Most people in the world will not see a doctor when they are sick. Their nearest health worker will be a primary health care worker based in a village, aid post, or health centre. These health workers at the periphery of the health care system experience major problems of lack of supervision, leadership, supplies, and support. It is increasingly realised that training workers and posting them to rural health centres is not enough to ensure delivery of the quality and quantity of health care required to reach the goal of health for all by the year 2000. To reach this goal these workers require appropriate supervision.

Supervision has been defined as the overall range of measures to ensure that personnel carry out their activities effectively and become more competent at their work. The supervision of health centres is often best provided by district medical officers based in hospitals. As an important part of this process is visiting the peripheral health workers we will describe

some points that a medical officer needs to bear in mind when planning and making a visit to a health centre. This protocol will need adjustment to suit local conditions and could be modified for use by, for example, a visiting pharmacist or specialist obstetrician.

Communication

Good communication is very important for the optimum functioning of any health system. All means available should be used to increase the quality and quantity of communication in primary health care—for example, radio, telephone, correspondence (reports, newsletters, feedback on referred patients), and ambulance or vehicle connections. A visit is an opportunity for the highest quality communication—and there is no substitute for it. The more regular and frequent that visits can be, the better. If possible, visits should be arranged for different days so as to include different aspects of health centre work: antenatal clinic, well baby clinic, tuberculosis and leprosy clinic, village patrol, aid post visit, and community health meeting. The best arrangement is if the same person can make repeated visits and build up a good relationship with the staff.

Once the time and date of the visit have been decided it is very important to keep to it, whether it is a visit every second Thursday of the month or once every six months. The ever demanding hospital workload must not be allowed to interfere with the important but

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Main components of a health centre visit

- Good communication with all health workers
- Teaching and discussion
- Seeing patients with health workers
- Tour of health centre
- Assessing performance
- Follow up and feedback to health centre

Teaching and discussion: common problems should be emphasised

Child health

Cough
Diarrhoea
Immunisation
Fever
Convulsions
Nutrition

Maternal health

Antenatal care
Birth control
Management of labour

Communicable diseases

Water supply
Waste disposal
Tuberculosis
Malaria
Leprosy

Sexually transmitted diseases (including HIV)

Revision of previous teaching sessions

hidden needs and workloads in the community. If the visits are more than two months apart it is worth writing to give advance notice and to confirm nearer the time by telephone, radio, or post. Everyone is wrong footed when a doctor arrives unexpectedly, tired and thirsty after a gruelling three hour trip in a bumpy vehicle.

As important as good communication is the visitor's general attitude. It should not be that of a critical external inspector but that of a member of the same health team, or a friend, coming to work together constructively to improve health care. It helps to try to create the concept of "our health centre and hospital" rather than "your health centre and my hospital." Team building and friendship are helped along by learning everyone's names and simply remembering to say "good morning" and "thank you." Always try to have tea break together; better still, stay for a midday or evening meal. Do not rush back to base and skimp on this—it will strengthen the team, and conversation will often produce revelations and insights that would otherwise be missed. This is always a good time to promote good communication within the health centre—for example, by the use of a notice board and encouraging weekly informal meetings of the staff of the health centre. Communication between the health centre and its subcentres, dispensaries, villages, and communities is important and needs to be encouraged.

Teaching

Teaching and discussion often follow on from general conversation at tea break. Never come away from a visit without leaving behind some of your knowledge and skills, but resist requests to give a short lecture. Lectures are a passive exercise for the audience and not very effective. It is much better with a small group to stimulate a tutorial type discussion and facilitate contributions from everyone. It often helps to bring along a few prepared questions or pictures to get the ball rolling. Ask people for their solutions to problems. Base your teaching on common problems and use established protocols, standard treatments, and standard texts wherever possible.

Fostering the concept of a health team and the provision of continuing education can be promoted further by a staff exchange between the health centre and the hospital for a few weeks each year.

Seeing patients

Seeing patients with the health centre staff reveals many of the daily problems of providing care in the front line, and it also gives an opportunity to watch people actually dealing with patients. Often, particular inpatients and outpatients will be referred to the doctor. Always strive to manage them using established protocols and standard treatments. You will be closely watched, and you will be assessed just as critically as you will assess the health centre workers. This opportunity for teaching on patients should be taken. Do not confine yourself to those referred cases, but also review the other inpatients and maternity cases. It is beneficial to sit alongside staff and see routine patients as they present to the outpatient clinics. Show the staff how you manage cases of "my baby is coughing," plot children's weights in health books, give nutrition advice, and examine women who come to the centre for antenatal care. Health workers are impressed if you can roll up your sleeves and join in. Often there will be staff and their children to see. Usually they are not very sick, so guard against giving them unnecessary treatment but do give them plenty of time and attention.

Tour of the health centre

Do not march around the health centre with a clipboard checking off items on a report sheet. You are there to encourage and improve, not pass or fail. It is important to have a checklist but best to commit it to memory while travelling to the health centre and to leave the clipboard in your bag until writing your report. Improvements will take time to happen, but with encouragement and regular reviews they will occur.

It is important not to forget to check basics such as the water supply and the disposal of waste. The management of diarrhoeal illnesses is substandard if a health centre does not have good toilet and washing facilities; if we ensure supplies of single use needles for injection but these are then discarded into waste paper bins the gardener and cleaner remain at risk. Maintaining a good dispensary and cold chain are difficult, and time should be spent helping with these two tasks.

Assessing performance

Assessment of performance is not a question of pass or fail but an indication of present performance and a means of identifying priorities and areas for improvement. Assessment is made all the time during teaching, discussion, seeing patients, and touring the health centre. Comprehensive checklists can be devised to

Sister taking her turn at teaching all the members of the health centre staff: demonstrating use of a condom

Tour of health centre

Grounds and buildings
Water supply
Dispensary
Cold chain
Steriliser
Nutrition garden
Waste disposal (toilets, dressings, placentas, needles)
Maternity equipment (light for night time and suturing, blood pressure equipment, stethoscope, fetal stethoscope, delivery pack, intravenous fluids)
Child health (weighing scales, auroscope, thermometer, *Road to Health* books)

assist with assessing clinical skills, dispensary, quality of health education activities, and other functions.

Health centres are usually expected to collect and submit to headquarters large amounts of data and statistics. This activity can come to be a health centre's number one priority and consume vast amounts of time, to the detriment of providing patient services. The data often include notification of births, deaths, and notifiable diseases and reports of the number of clinic attendances and number of immunisations given. Rather than simply being swallowed up by a distant bureaucracy the data can be used locally to provide simple and quick feedback of the health centre's performance. Monthly bar charts are easily constructed to show, for example, monthly deliveries, perinatal mortality, and notification of infectious diseases. Immunisation rates can be plotted and compared with an uptake of, for example, 80% of an estimate of the target population. These activities are instructive, and staff enjoy plotting on a map geographical data such as the place of residence of typhoid cases. Assessing performance can be enjoyable.

Follow up and feedback

As the time for departure approaches it is important to state what actions you intend taking when you return to base. Problems will have been identified during the visit—for example, drug shortages, missing or broken equipment, or the need for reports, guidelines, and books. State clearly what you will do, and take these actions promptly. Previous reports should be read before going on a visit to ensure that actions have been taken. Recording a visit and writing a report may be a chore, but this is important. Document performance so that change can be appreciated.

A report may be a page in a book or a structured report form used in your district. The advantages of using a structured report are that it serves as a checklist; all visitors and supervisors use the same format; and copies are easily retained to monitor progress over months and years. Copies of reports should be supplied to the health centre, and one copy should be posted on the centre's notice board.

Often the return trip is more crowded than the outward trip. There may be patients to transfer, samples to carry, staff hitching a ride, and a gift of fruit. Such visits are the highlights of working in health care in a district, both for doctors making the visits and for health centre staff receiving them. Doctors can reach out to many more people through primary health care in this way than by staying tied to their hospitals. The surprise is always how well the hospital coped in the doctor's absence.

Further reading

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Letter from Brasilia

Kwashiorkor

P D Marsden

In my field clinic at Três Braços, Bahia, deep in one of the few surviving pieces of the Brazilian littoral forest, I saw a patient who reminded me of my time in Africa and upset me profoundly. As always there was a group of patients waiting for me before breakfast, but the little girl seated on her mother's lap drew my attention immediately I entered the room. Kwashiorkor, the syndrome of malignant protein malnutrition, is unmistakable, although there was some doubt about the diagnosis when Cecily Williams initially described it in Ghana in 1933.

I asked the girl's mother to enter the consulting room. The child made no motion as the mother sat down and remained apathetic throughout the consultation and examination, looking at me with large black eyes. This behaviour shows that even the growing cerebrum is affected by the lack of first class protein. Although after recovery children seem normal, there is evidence that their cerebration is permanently affected.

I was able to diagnose her condition from the doorway because of the changes in her facies and hair.

She had generalised facial oedema and lank, straight, orange coloured hair. I asked the mother to undress the child and laid her down on the couch. She was 2 years old, and no healthy child of that age will lie on the couch without his or her mother, but she lay quiet. The medial aspect of her thighs and buttocks showed the classic flaky paint pigmented rash typical of advanced kwashiorkor. The soft hepatomegaly three fingers below the costal margin reminded me of necropsies I had done in Africa on children who had died of kwashiorkor: the liver is a yellow colour and on histological examination loaded with fat. The children usually had pitting oedema below the knee because of serum albumin concentrations below 2 g/l. I did not need to know the serum albumin concentration to diagnose kwashiorkor in this child. As the mother dressed the child we talked about how the malnutrition had occurred. She had nine children aged 12 and under, and her husband had deserted her six months previously. A friend had brought her to the clinic in a car from the farm.

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