Objectives

When preparing this article we started with a list of the objectives devised by the advisers to the MSD Foundation (all working general practitioners). Obviously two articles alone cannot achieve the objectives, nor will every general practitioner agree with them; nevertheless, we print them here convinced that they will be useful to all trainees in general practice.

Attitudes—Trainees shall regard asthma as a formidable clinical problem in general practice, worthy of intensive study and continued surveillance.

Skills—Trainees shall demonstrate their ability to:

1. Use a peak flow meter in general practice on home visits.
2. Use a diagnostic index in their own practices to identify and maintain a list of all patients known to have asthma for whom they are responsible.
3. Assess the significance of peak flow readings in relation to the normal for a child of any given age, sex, or height.
4. Maintain a systematic follow-up system in their practices for all asthmatics, including identifying and taking action about those who fail to attend appointments.

Knowledge—Trainees shall demonstrate their ability to:

1. Define asthma as a condition of potentially reversible obstruction of the airways.

asthmatic teenager. However, asthma can also arise spontaneously in teenagers and in middle-aged people. While the needs of all these patients differ in detail, the aim of management is the same for them all: the wheeze and its cause must as far as possible be eliminated, and the return of the wheeze prevented. Recurrent asthma may otherwise result eventually in chronic non-reversible obstructive lung disease with deteriorating lung function; it may also result in death. There are still 1500 deaths a year in England and Wales from asthma.

WHEEZY INFANT

John is seven months old, and you are asked to see him in his home during his first attack of wheezing which has followed a minor upper respiratory tract infection. He has no pyrexia, and is not cyanosed. As you stand looking at him, you consider the possibility that he has asthma—but what other diagnosis should pass through your mind? By your definition this child certainly has asthma, but he may not always have bronchospasm; the obstruction is probably due to oedematous bronchial walls and copious mucous secretion. John is likely to wheeze in the future. Other causes of this wheeze must be considered, however. We can usefully divide them into acute and chronic.

Acute causes include chest infections which usually make children febrile. Bronchitis, which is usually due to a virus, often makes small children seriously ill, and requires admission to hospital. It tends to occur in the spring and autumn, often in epidemic form. Another acute cause to think about is inhaled foreign bodies. Lastly you should consider acute heart failure; this is most commonly due to a previously unrecognized congenital anomaly.

Chronic causes include cystic fibrosis, which is rare. If a child develops successive episodes of wheezing, however, this condition needs to be considered and, if necessary, excluded.

Treatment—When you have excluded these possibilities, you will move on to treatment. Relieving the bronchospasm is the first priority, and while oral drugs such as beta-adrenergic stimulants might be helpful in older children they will probably not help baby John very much. Even the newer beta-adrenergic stimulants are relatively ineffective in children under 20 months of age, and theophylline derivatives must be given with extreme caution based on dosage-to-weight ratios. The best advice is to keep the child well hydrated. Extra fluids by mouth and steam inhalations are helpful, and they allow the parent to take an active part in their child's treatment.

Antibiotics should not be prescribed routinely because asthma in the young may well be precipitated by viral infections and is rarely associated with bacterial disease. Of course they should be given whenever there is an indication for them: the ears, throat, and chest

may be sites of infection. If you need to give an antibiotic, penicillin is preferable to broad-spectrum antibiotics.

2. Recall the prevalence of asthma in a typical British practice (about 5%).
3. State a satisfactory system of treating an acute episode of asthma in the home. List a satisfactory catalogue of steps of treatment suitable for the long-term surveillance of an asthmatic child at home, including indications for the parent or child, or both, to seek treatment outside the home.
4. List the composition, indications for use, and adverse effects of all the drugs they use in treating asthma.
5. List the indications for using steroids, whether given as aerosols or systemically, in children with asthma.
6. Be able to distinguish intermittent from permanent airways obstruction.
7. Know when to seek and how to use specialist help.
8. Understand the effects of the disease on the family.
9. Understand the possible effects of the disease on the child's school performance and leisure activities.
10. Understand the value of a single doctor providing continuing management.
11. List other causes of wheezing—for example, cystic fibrosis, foreign body, bronchitis.
12. Understand initial investigation and the limits of investigation.
13. Understand the signs that indicate admission to hospital during the acute episode.
14. Understand how treatments may need to be varied for age—for example, dosing and monitoring—can easily be given to the very young.

may be sites of infection. If you need to give an antibiotic, penicillin is preferable to broad-spectrum antibiotics.

Two important parts of the treatment are talking to the parents and deciding how to follow up the child. When is hospital admission needed? Sometimes asthmatics of any age suffering an acute attack need to be sent to hospital. What are the criteria on which you would admit John or another asthmatic as an emergency? The asthmatic of any age may need hospital care for three general grounds: impending respiratory failure; general exhaustion; and an impossible home environment. Signs of impending respiratory failure include intercostal, supraclavicular, and diaphragmatic recession and tracheal tug. Others are cyanosis and a persistent tachycardia and the failure by a small child to respond to adrenaline or intravenous amorphous or oral drugs. Vomiting and fatigue are dangerous signs. Also important are the willingness or ability of relatives to cope: a child is sometimes better out of the hands of parents who are unable or unwilling to cope. A "silent chest," bronchospasm so severe that rhonchi are not heard, and signs of heart failure (liver enlargement or a tachycardia over 140) are also indications for admission to hospital. Giving the patient 100 mg of intravenous diazepam before he is sent to hospital should be considered essential treatment.

Having treated the acute attack successfully it is particularly important to keep in close touch with the parent and the parents. Telephone reports may be valuable, but they are no substitute for seeing the patient again. Asthma may return suddenly and sometimes unexpectedly. The wheeze may continue for days without being obvious to parents, and only by close and regular follow-up will you be sure that it has completely cleared.

WHEEZY 6-YEAR-OLD

James is six and has a history, says his mother, of chesty colds. On asking leading questions you find he had mild croup as an infant. This is your first contact with him in an acute asthma attack. It started while running home from school, and he is now in considerable distress. Other common and important presentations are simply recurrent cough and reports of difficulty with breathing during games.

Treatment—Would you approach the treatment of James's acute attack in any way differently from that of John's? Drugs such as salbutamol and cromoglycate are much more effective in older children than in infants. Sometimes it is possible to give intravenous amorphous provided the home is calm and the child is co-operative; it must be given slowly over at least 10 minutes. Some doctors, however, prefer to give subcutaneous adrenaline or terbutaline, which is easier to administer, provided that the dose is regulated according

Law and the General Practitioner

Negligence

RICHARD PARKES

Professional negligence is one of the great growth areas of the law. Old habits of deference to the judgment and ability of the professional man may die hard, but they are dying none the less; and the wish of the courts both to devise a remedy for the injured and to fix liability on the broadest available shoulders has tended to expand the frontiers of legal responsibility as well as encourage aggrieved citizens to sue the well-insured professional.

Medicine has always been firmly subject to the discipline of law: inevitably so, for the responsibilities of doctors are enormous, and the consequences of their errors potentially catastrophic, especially in the critical areas of surgery and anaesthetics. But the same principles of law apply to all doctors, whether specialist or general practitioner, and despite the impression often given by highly coloured press reports of massive awards of damages, the law's burdens are neither overwhelming nor difficult to understand.

Negligence is the breach of a duty to take reasonable care. It is only actionable in the courts if that breach of duty causes actual damage. There are some areas of human activity where it is uncertain whether a duty of care is owed at all. For instance, until 1932 it was not finally decided that the manufacturer of an item of food or medicine owed a duty of care to the ultimate purchaser or consumer. That issue was settled by the House of Lords in the great Scottish case of *Donoghue v Stevenson*, in which Miss Donoghue sued the manufacturer of a bottle of ginger beer. She and a friend went to a cafe in Paisley, where her friend bought some ginger beer. One Manchella, the proprietor, poured her a glass, which she drank. Her friend poured the rest of the bottle into another glass, and as this happened a decomposed snail floated out. Nauseated by the sight and by the consciousness of what she had done she understandably suffered from gastroenteritis and shock. This is how Lord Atkin put the central issue:

The rule that you are to love your neighbour becomes in law, you must not injure your neighbour: and the lawyer's question, "Who is my neighbour?" receives a restricted reply. "You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbour. Who, then, in law is my neighbour?" The answer seems to be—persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question.

Applying Lord Atkin's formula is easy enough in the case of doctors. All of a doctor's patients are his "neighbour," and the category must include not only those patients that he treats but also those on his list that he has never treated but who, for

instance, telephone a doctor for help that is carelessly ignored. In addition, if the doctor treats the victim of an accident which he chances upon—the old "Is there a doctor in the house?" predicament—that person becomes his patient and is owed a duty of care, no matter whether or not the doctor is paid for what he does.

Standard of care

Once the group of people is established to whom the duty of care is owed it is necessary to isolate the standard of care that the doctor must achieve to avoid being in breach of the duty. In the case of the general practitioner it is the standard of the ordinary competent practitioner exercising the ordinary degree of professional skill. The standard will vary according to the circumstances, which will include the facilities available, the conditions under which treatment must be given, and the amount of time that the doctor has to do what is necessary. The important thing to remember is that it is always a defence to proceedings for negligence for the doctor to prove that his actions are in accordance with general and approved practice, which means practice approved at the time the negligence is alleged to have happened, even if later research or experience shows that the practice is unsound. What is more, it need not necessarily matter that a large number of one's professional colleagues would have handled matters differently, as long as the treatment given would be accepted as proper by "a responsible body of medical men skilled in that particular art."

It is also worth remembering that an error of judgment need not be negligent but is perfectly capable of being so; a remark of Lord Denning's, in the recent case of *Whitehouse v McGregor*, when he stated that "in a professional man, an error of judgment is not negligent," has been rightly criticised and ended firmly by the House of Lords in *Wilkinson v The Health Authority*, where it was fairly clear that he meant that such an error is not necessarily negligent. It all depends on whether the error is one which might be made by the ordinary competent practitioner exercising the ordinary degree of professional skill.

Of course the general practitioner must keep his knowledge up to date, at least in his own field of practice; otherwise he may take himself outside the ambit of the law's potential protection. Similarly, he must know his case is beyond his scope and ability, and in such a case refer the patient to a consultant or a specialist unit. Once he does so, and the consultant has assumed overall responsibility, it is a defence for the general practitioner to show that he acted on the consultant's instructions. If he fails to refer the patient and attempts to carry out treatment for which he is insufficiently qualified the failure to refer may in itself be negligence, and in addition he is likely to be judged in carrying out that treatment by the higher standard of care of the ordinary competent specialist in the field on which he has trespassed. (The same rule probably applies, logically enough but perhaps unjustly, to the ignorant but well-meaning by-

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to the child's weight. A few general practitioners are now beginning to use salbutamol given by nebuliser for treating acute attacks of asthma in the child's home. James's bigger body means a greater therapeutic ratio and therefore a greater margin of safety in the dosage. Also his wider bronchi mean that a better response to bronchodilators is likely.

There is no evidence that bacterial infection plays an important role in inducing bronchospasm at this age, and routine antibiotics are not indicated. Intravenous and intramuscular hydrocortisone are of considerable help in more severe attacks and act faster than the stated 24 to 36 hours of the pharmacology textbooks. They may even be life-saving.

ASTHMATIC TEENAGER

Treating Catherine, aged 17, in her acute attack is little different from treating James. It is unlikely, however, to be her first attack: a probable cause is that she is taking her prophylactic erratically after adequate control by drugs the most important aids to treatment the doctor can use is sympathy, a firm yet flexible attitude, and an understanding of the patient as a person. Catherine will need time alone with her doctor to discuss her asthma as she sees it. Her mother may also need time to discuss her asthma.

MILD-AGED ASTHMATIC PATIENT

Mrs Jackson, in her early fifties, has no previous history of bronchospasm. Asthma in middle-age is not uncommon. Yet she is one in whom the diagnosis is difficult, because she has no wheeze, and is the most common misdiagnosis, especially in men, and purely because the family doctor fails to make a few inquiries and conduct some simple tests in the home. The rare case of heart failure which used to be called cardiac asthma may also be missed.

Investigations

The age of onset of asthma not only largely determines the treatment but also the nature of investigations. Asthma in the wheezy baby has different causes from that in the older child or adult. Very important, of course, is a detailed history: it may bring to light a familial tendency to asthma and the precipitating factors of the acute attacks. The history is less likely to be helpful, however, in baby John's case.

INFANT

For John, an acute wheezy illness usually does not require investigation unless there are reasons to suspect underlying disease. It is important, however, in the long-term care of a child in general practice to make sure from the history and from the records whether a particular episode is really a first episode or whether it is the third, fourth, or further episode. Failure to thrive, with many recurrences of wheezing, should alert the clinician to the possibility of an underlying cause, and specific questions should be asked about whether the child has passed bulky stools. Height and weight should be checked against percentile charts to exclude failure to thrive. Referring a 6-month-old child for a chest radiograph after one attack of asthma is hardly good medicine, but referral after many episodes may well be indicated. Some general practitioners find that a routine blood count is useful to exclude anaemia, but other investigations are not productive.

CHILD

James, the 6-year-old, poses a different problem. Not only would we like to know the cause of his symptoms, but we want to know the effect of his asthma on his growth, development, and lung function. You may ask some of these questions: with his history of eczema has he an allergy? And how relevant to

subsequent treatment is a blood film and measurement of IgE concentration? Could he co-operate by using a mini peak flow meter, and if so what would be a useful measure of his lung function? Would he be able to do a spirometry test? Indeed, how important is the simple physical examination? For James the blood film and serum IgE may help the decision whether to look for allergens. Eosinophilia and a high IgE level may sometimes point to an allergic factor in the environment and may help management. The need for chest radiography is arguable. Only one should be taken, if any. Even a 4-year-old can be taught to use a peak flow meter and to peak flow using it before and after treatment will give an idea only of his disability but also of his response to treatment.

ADOLESCENT

For Catherine, blood and biochemical investigations take second place to a careful history and inquiry into the background of her attack. Both James and Catherine, however, should be examined for signs of chronic irreversible disease, which include a permanently overinflated chest; pigeon-chest deformity; lower recession; and growth retardation pushing them into the lowest percentiles. Peak flow measurements are also an important part of Catherine's regular assessment.

MIDDLE-AGED PATIENT

For the older asthmatic, such as Mrs Jackson, the chest x-ray film is essential. Her sputum, too, can profitably be examined. Aspergillosis, farmer's lung, asbestosis, silicosis, and other allergic or irritant lung disorders are possible differential diagnoses, but of course are extremely rare in practice.

ONE HUNDRED YEARS AGO There can be no doubt that the town of Hastings is likely to suffer considerably when the knowledge is spread among the medical profession that the important appointment of medical officer of health has been made in a man of such profession in the town wholly disapproves. A town such as Hastings offers many advantages to visitors for health-purposes; but it is also replete with dangers. Only last week, we had a serious case of typhoid addressed to us of the want of sanitary precautions in one of the lodging-houses, in respect to the arrival of an imperfectly convalesced scarlatina patient, and warning of adequate quarantine arrangements. Hastings has enjoyed the reputation, under the charge of Mr Ashenden, with the vigorous assistance of Mrs Johnston, of having organized a system by which epidemic and zymotic disease could be kept in check, and was provided with unusual sanitary safeguards for visitors. The carrying out of such a system, most essentially in a town of such a size, and in the absence of a health-research, depends for its success very largely upon the complete, hearty, and intimate co-operation of the medical men generally with the medical officer of health, and on the readiness of the medical profession to constantly arise in carrying out such a system. The spontaneous ead, information, and concurrence afforded by the private practitioners constitute primary elements of success in the regulation of a seaside resort, and the consequent readiness of the medical profession to recommend their clients to resort to it—in relation to the above, the following memorial is being influential and numerously signed for presentation, to the Mayor of Hastings.

We, the undersigned inhabitants of the borough, do respectfully ask you to convey, at your earliest convenience, a public meeting, to protest emphatically against the late appointment of the medical officer of health against the general wish of the inhabitants, which we consider calculated to do infinite injury to the health of the town, by bringing disrepute upon it as a health resort, which is assuredly evidenced by strictures passed in the leading medical journals, and is thus brought upon the town, and the health of its inhabitants, and we earnestly refrain from recommending their patients to come here if such appointment be maintained. (*British Medical Journal*, 1881.)

stander who tries to treat the victim of an accident: if he causes damage he is likely to be judged by a doctor's, not a layman's, standards. Yet there is the difficulty that a qualified St John Ambulance man will surely only be judged by the standards of his fellow first-aiders: why should the lay good Samaritan face a sterner test?

How negligence may arise

If a general practitioner falls below that standard of care he will be in breach of his duty and guilty of negligence. It is impossible to catalogue the ways in which negligence may arise, for they are infinite; but a few examples might include failing to prescribe the appropriate drug, failing to respond to a patient's request for urgent treatment, failing to diagnose a patient's condition, failing to warn a patient of the dangers of a course of treatment, failing to make proper inquiries to find out what treatment, if any, the patient has received from his previous doctor, and failing to tell those responsible for continuing the patient's treatment of one's own findings. In each case no damage may be caused, in which case the patient has no claim, or on the particular facts of the case there may be a good defence. For instance, the patient who telephones an urgent request for treatment may have cried "wolf" so often in the past that it may be reasonable to treat the "urgency" with a pinch of salt, or the correct diagnosis may not be one that the ordinary competent practitioner could be expected to reach without the help of specialised equipment not available to doctor or patient. In neither case would there be a failure to meet the proper standard of care. Each case must be examined in the light of the circumstances to see if, on the particular facts, there has been a failure to meet that standard.

Beyond his strictly clinical duties, the general practitioner has responsibilities to his patients, and to other visitors, as an occupier of property. This is another facet of the law of negligence, governed now by the Occupiers' Liability Act 1957. As far as visitors to the surgery are concerned, the occupying doctor's duty (section 2(2)) is to take such care as is in all the circumstances of the case is reasonable to see that the visitor will be reasonably safe in using the premises for the purposes for which he is invited or permitted to be there. If the occupier makes a visitor of a danger—a slippery floor, for example, or a hole in the path—that will discharge his duty if it is enough to enable the visitor to be reasonably safe.

The wording of section 2(2) limits the area of the doctor's property to which this duty applies, since if the visitor goes outside the area of invitation or permission—if he strays, for instance, from the path to the surgery and goes exploring an outbuilding—he becomes a trespasser, not a lawful visitor, and the doctor's duty of care is a slippery slope for the patient, who is probably not looking unsympathetically on the patient who wan-

ders off from the surgery to look for a laboratory, so it is as well for general practitioners to ensure that their lavatories are well marked, safe, and accessible; otherwise they may find that patients with bladder difficulties are covered—though strictly they are trespassers, because outside the area to which they are expressly invited—by the duty of care owed to the lawful visitor. The duty owed to trespassers is rather more difficult to state, partly because the 1957 Act failed to deal with the question; certainly the duty is a lower one than that owed to lawful visitors. The courts have provided guidelines suggesting that the duty is to act "as a humane person exercising common sense," or "in accordance with common sense and common civilised behaviour." Much depends on factors such as the age of the intruder (obviously children will be less careful than adults), the occupier's resources, the time of day, the danger causing the injury himself, and how likely it was that a trespasser would wander on to his land.

It is as well to remember that there seems to be an implied permission to any member of the public on lawful business to enter one's garden gate and come to the door, which of course makes them lawful visitors, and this must apply a fortiori in the case of a general practitioner, who in the nature of things is a legitimately accessible figure.

That is not the end of the doctor's responsibility. He is also liable by the principles of vicarious liability for the negligence of an assistant employed by him, and there is no reason why the liability should stop at a medically qualified employee; if a receptionist is negligent in, for instance, failing to transmit to the doctor the symptoms described by a patient over the telephone, so that the doctor is unaware of the need to respond properly to the urgency of the situation, the doctor will be vicariously liable for that negligence.

Liability for the acts of employees and for the safety of visitors can and should be taken care of by insurers; it can be no substitute for taking all possible care, but at least it allows one to sleep more easily at night. The area of clinical responsibility, where the spectre of professional negligence proper has his haunt, is stoutly championed by the defence societies, but no amount of financial assistance and legal advice can compensate for the trauma for a doctor of causing injury by his own carelessness. None the less, calmly considered, the duties and standards required of him are not hard to live up to.

References

1. Donoghue v Stevenson (1932) AC 562.
2. Donoghue v Stevenson (1932) AC 562 at 580.
3. Bolton v Friern Hospital Management Committee (1957) 1 WLR 582 at 587 per Lord Macdowell.
4. Whitehouse v Jordan (1981) 1 ALL ER 690 at 698.
5. Whitehouse v Jordan (1981) 1 ALL ER 697 at 698 per Lord Fraser at 281.

touch, making me sure the sample was not the fresh one I had asked Rupert to give me. I was sure that the sample was the one that had been at the back of my mind before he got to work. I asked him to undress completely, and complaining, he stripped off shirt and trousers. Surely no underpants too? As last only a pair of long footie knickerbockers remained, and I felt like a gambler as I insisted on their removal. To my surprise and relief there were several incisions, some recent, and one on the right inner thigh. Rupert's explanation was that he thought a nice spicy Robin would look nice near the path of his house. When he got home from work he often jumped over it in sheer exuberance, and so his legs and thighs were scratched. I do not normally use herbal remedies, but I told Rupert that if he moved the Robin his haemorrhoids would get better—and it did.

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We'll be pleased to consider for publication other interesting clinical findings in general practice.—Ed, BMJ.