The Challenges of Emergency Care

GUNNAR BIÖRCK, MD, FRCP, FACP, Professor of Medicine, Karolinska Institutet, and Head of the Department of Medicine, Serafimerlasarettet, Stockholm, Sweden

We are all aware of the fact that medical care and hospitals are organised in different ways in different countries. Each of us speaks more or less from his own local post of observation. The problems and their solutions will differ in detail, but the major issues present themselves in a similar way to most of us.

Fifteen years ago, when I became head of the Department of Medicine at the Seraphimer Hospital, Sweden's oldest hospital (founded in 1752), in the very centre of Stockholm, the proportion of patients admitted to our wards as emergency cases was recorded as 10 per cent of the total number of admissions. Now, and for several years, this figure has risen to 70 to 80 per cent, and most Swedish departments of medicine, in urban or rural areas, report similar figures (Table 1). These figures are in clear contrast to the experience of the surgeons: only about one-third of their ward admissions are acute cases; the majority is made up by patients undergoing planned elective surgery.

Table 1. Changes in admission over 14 years: Department of Medicine, the Seraphimer Hospital, Stockholm

| Number of beds | March 1958 | March 1972 |
|----------------|------------|------------|
|                | Male 180   | Female 91  | Male 190   | Female 87  |
| Total number of admissions | 103 | 91 | 184 | 150 |
| Acute cases | 22 | 18 | 102 | 87 |
| Mean ages | 50 yrs | 57 yrs | 62 yrs | 68 yrs |
| Number of deaths | 1 | 2 | 8 | 8 |

*Diagnosis on admission:*
- Heart disease: 4 | 5 | 36 | 25
- Stroke: 2 | 3 | 10 | 13
- Diabetes, thyroid, gastro-intestinal diseases: 2 | 1 | 4 | 7
- Intoxications: 6 | 2 | 6 | 4
- Pneumonia, asthma: 1 | 2 | 11 | 13
- Liver cirrhosis: 1 | 1 | 8 | 2
- Other: 7 | 4 | 27 | 23

Increase in numbers 500 per cent. Increase in mean age 11 to 12 years. Increase in percentage of total admissions 270 per cent.
In our case, at least, there are two major factors underlying this rapid development. One is the ageing of the population, with concomitant increase of cardiovascular emergencies such as myocardial infarction and various arrhythmias, in combination with a social process, in which elderly people are living alone without continuous supervision and help by members of their family, and thus having instead to find shelter and care in the hospital. The other factor is the increase in the number of intoxications, mostly with sedatives, hypnotics and other psychopharmacological drugs, but, of course, not infrequently in combination with alcohol. These two groups dominate the picture in our urban hospitals, but I believe that intoxications are less frequent in rural areas.

A major contributing factor is the vanishing of the general practitioner, who used to make home calls and assume responsibility for his patients round the clock. Office hours in the modern society are 40 out of the week’s 168; for the remaining 128 hours, the hospitals and the police share the responsibility for the city and the citizens.

During the 1960s the increasing demand on acute medical care in hospitals was met by various organisational devices. Intensive care units developed in connection with special units for postoperative care, generally under the anaesthetists’ direction. Gradually, an increasing number of medical patients was referred to the intensive care units, and today probably half the patients in such a unit are medical rather than surgical.

In the latter half of the 1960s coronary care units were established in many larger hospitals, either within the department of medicine, or in conjunction with, or as a part of, an intensive care unit. (In some instances, an intensive care unit was subdivided into two sectors—one for ‘intensive care’, the other for ‘intensive observation’.)

Furthermore, many hospitals found it convenient to establish an acute admission unit for patients being admitted after the regular ‘office hours’, in order not to interfere with and cause inconvenience to the scheduled work (and night rest) in general wards. Patients in such acute admission units may be admitted for a variety of reasons other than those of urgent medical care: namely, ‘observation’ and ‘social causes’. A considerable proportion of these patients can be released the next morning, while those needing continued medical attention will be transferred to general wards.

It should also be mentioned that special service units have been developed in connection with departments of medicine, such as dialysis units and pacemaker service units, which, in addition to scheduled work, may also have to handle acute cases.

Some of the overall effects of these changes in the type of patients admitted to our departments, and the machinery to deal with them, are—
1. A displacement of less acute cases to other medical resources, particularly out-patient care.
2. Decreased facilities for planned in-hospital studies of patients with serious and complicated diseases but in a non-acute phase.
3. An accumulation of post-acute patients in need of care for the chronically ill, waiting for a bed in some institution for such patients, or for the arrangement of sufficient after-care at home.
4. Not infrequently a forced dismissal of insufficiently treated or investigated patients to give room for an acute overload.
5. An increase in the mean age of the in-patients with consequently increased demand on primary nursing care.

It is also quite clear that this situation has caused a shift in the proportions of disease groups in the clinical material, and made the patient material in the departments of medicine less representative of the conditions met with in ambulant practice, be it in out-patient departments or in private practice. This has a particular bearing on the teaching of medicine to students (and student nurses) because a great number of conditions will now be handled mainly on an out-patient basis and rarely appear in the wards.

A special problem arises in the hospitals with departments, or divisions, of sub-specialties of internal medicine, such as endocrinology, metabolic diseases, allergology, rheumatology. Many of these divisions have sliced their beds out of the general medical department's cake, and claim a superior right of ear-marking their beds for their particular patients, and of assigning beds to their patients for diagnostic work-up, according to their own waiting lists and time-tables. The consequences of this have been that a gradually reduced number of beds in the department of medicine proper has to carry the burden of almost all the medical emergencies and their after-care, while comparatively little of this is handled by the subdivisions (the coronary care unit being an exception, of course).

During a recent discussion in the Swedish Board of Health concerning sub-specialisation in internal medicine, attention was drawn to the fact that this process develops in two different ways (Table 2). On the one hand, there is a specialisation of physical plant ('localities'); on the other, there is one of 'knowledge and skill'. These may or may not necessarily be congruent. Some 'localities' may be a common ground for sub-specialists of different origin (medicine, surgery, anaesthetics), while some sub-specialised 'knowledge' actually has little need of an ear-marked physical plant, and might well, for certain purposes, serve the hospital at large on a consultant basis.

To this is added the problem of medical competence and training. We are
now passing through a very difficult phase in the management of departments of medicine. Those of us who had our training in subordinate positions in the 1930s to 1950s have had much less first-hand experience with the modern handling of medical emergencies than our present junior assistants, on whom the greatest burden of emergency room service, night calls, and instantaneous action in the infarction unit falls. Of course, we saw such cases in our junior days, but we had comparatively little to offer, fewer gadgets, and less opportunity to choose with regard to diagnostic aids and therapy, which in a way means that we had more limited decisions to make. The demand for speed in action was probably less.

Ours was another world, that of making ‘clinical’, i.e. more or less intuitive, diagnoses; probably more of reasoning on the basis of the often insufficient evidence in the case in question, but with more reference to what we could remember of similar cases from our own memory or from the literature. Treatment was more of an art, where careful observation of the patient from day to day had more to tell than the scanty information then available on the pharmaco-dynamics of drugs.

In a way, therefore, I believe we are in the midst of a ‘generation gap’, where many of us know and practice a medicine for which the number of clients in our departments is dwindling, while junior staff are acting as life-savers behind our backs, or while we are asleep, only to present their cases, neat, clean and well done, to us next morning on our ward rounds—or else to the pathologist.

The situation I have presented is, perhaps, somewhat overstated. It pertains to a generation gap between those in their fifties or sixties and those in their thirties or forties, because most of the latter have grown up during the period of increasing emphasis on emergency medicine and they will probably know

### Table 2. The development of sub-specialisation affecting internal medicine in a hospital

| Specialised localities          | Specialised knowledge       |
|--------------------------------|-----------------------------|
| Emergency rooms                | Anaesthesia                 |
| Intensive care unit            | Infectious diseases         |
| Coronary care unit             | Dermatology                 |
| Intoxications unit             | Neurology                   |
| Isolation:                     | Psychiatry                  |
| Infectious diseases            | etc.                        |
| Dermatology                    | etc.                        |
| Dialysis unit                  | etc.                        |
| Metabolic ward                 | etc.                        |
| etc.                           | etc.                        |
that by heart if and when they take command of a medical department and
are relieved from night duty. However, there is a rapid turn-over of methods
and equipment in that area and one’s knowledge soon becomes obsolete, un-
less it is reinforced in the daily routine.

Many of us have probably been forced to deal with this situation in a
personal way. My surgical colleague feels that his main duties have to be
discharged in the intensive care unit and its surroundings. ‘Everything that is
really serious and important will pass through there’, he says. On the other
hand, he has almost entirely given up ward-rounds in his department other
than to his own patients. I have taken the opposite view. I feel that my senior
collaborators (Oberärzte) are closer to the acute medicine than I am myself
nowadays (although my training was as a cardiologist), while I believe that
my experience, for what it may be worth, should be used preferentially in the
systematic decision-making and management of patients with severe, compli-
cated, and ‘controversial’ diseases. In this connection I am also trying to apply
a holistic approach to the patient and his problems and to counteract the
always prevailing tendencies to overdependence on laboratory data and
neglect of what the patient himself has to tell.

The majority of those who pass through our departments as students or
assistants will not end up as hospital physicians. Even in a country like mine,
where for 30 years the emphasis has been on hospitals rather than prac-
titioners, economy is putting an end to this development. I can see no likeli-
hood of the number of acute medical emergencies diminishing in the future.
They cannot be prevented by preventive medicine, only postponed, and the
more of them that strike older people or very old people, the more urgent will
become the demand for hospital services, as such people will have no family
setting to back them up. As far as I can see, we have passed the optimum of
hospital services in the modern society, in as much as reduction of working
hours with increased salaries and more demand on ‘round the clock’ attention
to more severe cases is making the hospital ‘the most rapidly failing enterprise’
in our time. There is not enough tax money to support what we already have,
and at the same time there is not enough individual saving to secure private
care. As a consequence, I can foresee that our general hospital will become
more and more acute-orientated, while the custodial care of the chronically
ill and very infirm will be the responsibility of special institutions. In between
these extremes, most medicine—and that goes for internal medicine as well—
will be handled in ambulant practice, one way or the other. Even a room in a
de luxe hotel will always be cheaper than a bed in a hospital, as long as a
person does not need medical attention for the activities of daily living.

This is a challenge that we shall have to face with regard to the teaching of
future physicians and the training of future internists. In practical terms, I am convinced that our teaching and our training will have to put a much greater emphasis on more or less programmed decision-making than hitherto, and that our problem-solving will be influenced by experience from operational analysis in general. We are going to—and simply will have to—become more efficient than by a trial-and-error technique. The intellectual and managerial methods in these endeavours, however, will not be different in principle, only with regard to time-constants, for the hospital physician and the practising specialist. I am convinced that we are to see in the next few years an abundance of flow-charts for handling diagnostic situations as well as for the management of even rather complex therapies. After all, the physician, as much as the surgeon, is a man of action, often of ‘action this day’, as Winston Churchill phrased it in the War Cabinet, and it is not unreasonable to train him for the decision-making that he can rarely escape, and should not unnecessarily postpone.

This article is based on a paper read at the Second Conference of the European Association of Internal Medicine, at Bad Godesberg, Germany, in May 1973.

The Man who does not Read

It is astonishing with how little reading a doctor can practise medicine, but it is not astonishing how badly he may do it. Not three months ago a physician living within an hour’s ride of the Surgeon-General’s Library brought to me his little girl aged twelve. The diagnosis of infantile myxoedema required only a half-glance. In placid contentment he had been practising twenty years in ‘Sleepy Hollow’, and not even when his own flesh and blood was touched did he rouse from an apathy deep as Rip Van Winkle’s sleep. In reply to questions: No, he had never seen anything in the journals about the thyroid gland; he had seen no pictures of cretinism or myxoedema; in fact, his mind was a blank on the whole subject. He had not been a reader, he said, but he was a practical man with very little time . . .

For the general practitioner a well-used library is one of the few correctives of the premature senility which is so apt to overtake him. Self-centred, self-taught, he leads a solitary life, and unless his everyday experience is controlled by careful reading, or by the attrition of a medical society, it soon ceases to be of the slightest value, and becomes a mere accretion of isolated facts, without correlation.

From the writings of William Osler (1905).