

10th College of Physicians Lecture: The Challenges of Reinventing Medical Generalism in the 21st Century

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Presidents, Fellows, Members, distinguished guests I am honoured to be invited by the Singapore College of Physicians to give this 10th College of Physicians lecture titled: “The Challenges of Reinventing Medical Generalism in the 21st Century”.

One of the major challenges which we face in General Internal Medicine is re-inventing medical generalism. We are forced to do this now and in the years to come, because of important changes in the demographics of our patient population and the way patients present, as we age, to acute medical units.

I think we can agree the cornerstones of good health care:

- The right thing for the patient—we must be more patient-focused not only in terms of the standards of care that we give but also in terms of the organisational aspects of care delivery.
- Effectiveness—with the demands on systems in which whatever healthcare system you work in, be it insured, partially-insured, not reimbursed or a United Kingdom (UK) state system, we must strive to be effective and efficient at all times.
- Standardisation—I think equally we need standardisation across all domains of healthcare and standardisation of practice needs to be evidence based and guideline driven.
- Sustainability is key. How are we going to continue to look after the frail elderly patients of the future? We need a named consultant with continuing responsibility for the patient, a safe decision-maker in charge of every patient.
- At the same time we need to maximise the input of all the members of the team and our specialist colleagues, to make sure there is provision of holistic care at the right level.

As a profession, we come at this from different perspectives but our priorities must be patient expectation, patient experience and the expectations of the family and carers. Coverage of these issues by the medical media is often disproportionate and emphasises that patients allegedly demand specialist care. If I take my own specialty of cardiology and give you the case of a young man who presents in atrial fibrillation, an uncontrolled ventricular rate, in heart failure with a family history of sudden death in the context of probable cardiomyopathy—a constellation of problems which will not just involve me as a general cardiologist, but one which demands the input from an imaging cardiologist, a rhythm cardiologist, maybe an ablation cardiologist, a device cardiologist and in all probability a cardiac geneticist. Pure specialism is in fact already a thing of the past and has given way to “microspecialisation”. Secondary care medicine is now challenged by the need to co-ordinate care to the extent and to the level that is appropriate for many elderly patients presenting with many comorbidities. We must ask ourselves if microspecialisation for the relative few is set to expand at the expense of holistic care for the many.

I want to show you figures for a weekend in May: 16 patients on a UK medical ward with an average age of what you would expect, around 80—if you look at the “specialism” problems with which they presented, they number 16 with a mean number of 6 comorbidities per patient. To complicate the nature of the problem we often see potentially life-threatening illnesses occurring together, commonly acute heart failure in the context of worsening renal function. Numerous clinical cases demonstrate the potential dangers of polypharmacy with drug combinations worsening renal function and in turn adversely affecting renal clearance of many common therapeutic agents. Analgesics and anti-inflammatory drugs frequently lead to problems in the elderly patients admitted to hospitals

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and restablising an effective medical drug treatment regime is both complex and time consuming. When it comes eventually to a care package and discharge planning arrangements, we need to acknowledge the amount of time involved, not just for doctors but also nurses and other members of healthcare teams.

To return to the comorbidity score of 6: to try to offer efficient specialty care by specialists in all these specialties cannot be achieved. I believe it can't be delivered effectively by individual consultants in any healthcare system. But at the same time we still need to offer the best possible care to our elderly patients in these categories and to achieve this, I believe we need to reinvent the medical generalist. To achieve this, there are numerous challenges to be overcome and I shall confine my presentation to some of the more important aspects.

An adequate workforce is key. We must make sure that careers in general medicine and the specialties are as attractive for women as they are for men. The female intake into medical schools in the UK peaked 2 years ago at 61%, this year it is falling but we now are seeing the consequences of the gender shift. There is a rhyme "Jack of all trades, master of none". Importantly, in this day and age, it needs to include "Jill of all trades" as well. There is a less well known second line to this rhyme: "Jack of all trades, master of none, is certainly better than master of one." Clearly, recognition of the limitations of pure specialist practice.

Whether specialism or generalism, workforce must relate to workload. We often hear that the problem of too many patients being admitted to acute units arises because access to primary care is limited and patients are increasingly self-presenting to Accident and Emergency (A&E). However, this problem was evident in Scotland before the General Practitioner (GP) contract switched to weekday working and in the 1980's we were already seeing a shift towards an increasing number of elderly patients, requiring hospital stays of 3 or more days. So it is not just a recent phenomenon relating to reduced availability of the primary care physician, it has been happening since the demographics of the patient population started to change. To compound the problem, bed numbers have progressively fallen in most healthcare systems, at a time when the medical admissions continue to rise. Of course, the justification has always been that reduced bed complement has been a result of increased efficiency usually arising from elective surgical procedures for example cataract surgery, hip replacement etc. I would put it to you that such efficiencies in care cannot be achieved to the same degree in the management of our longer-stay patients particularly the frail elderly with comorbidities.

How do we serve these patients best? We all try to get to see patients quickly to offer specialist opinion. We

know that if we don't deliver prompt consultation then in all probability discharge will be delayed. Do we carry on as we're doing, with more consults as required taking us away from other duties? Do we use our specialist skills in different ways and see patients on a more regular basis and dove-tail care. The downside is of the latter is confusion: teams don't know who is looking after the patient—is it the cardiologist, is it the renal physician, is it the general physician, is it the geriatrician? Alternatively should we expand geriatric medicine or do we have another solution? However whatever we decide on, in all probability will need to be achieved with no more money, no more beds, no more trainees and a fixed length of training. So, the challenges posed striking a balance between acute medicine "versus" specialty remain considerable.

We have seen a significant rise in the numbers of acute medicine physicians over recent years but I think we need to ask ourselves is that pattern going to stay or will that pattern change over the years to come? When I was undergoing training, it was routine that we were all dual accredited. We would finish our senior registrar years with a Certificate of Completion of Training (CCT) in General Internal Medicine (GIM) plus an additional CCT in Cardiology. With the development of on-call intervention rotas, the pattern of provision of acute Cardiology has changed and more recently only the minority of trainees look to a future contribution to GIM. The same trend is evident in other specialties. I am particularly concerned about the number of renal physicians who previously would have contributed to the acute take but now are being absorbed by specialist renal rotas. Gastroenterologists who are recruited to rotas for GI bleeding will also start to disappear from the acute take. If all disciplines look to specialist rota provision, we will be left with care of the elderly and acute medicine physicians doing an increasing share of the acute take. We are already seeing the attractiveness of the whole system that we currently operate in acute medical admissions, once the pinnacle of career aspirations, starting to fade.

There can be no doubt that acute general medicine is becoming less popular as a career choice. The workload/workforce balance is far from ideal and our admission units are under pressure 24/7. In the UK we now work with an inadequate bed complement for most of the year. In reaching bed occupancies of 85% and over, patient "grid-lock" results in efficiency falling and average length of stay increasing (Fig. 1). To compound the problems re-admission rates increase and likewise, patient-related complications (e.g. HAI, DVT etc.). Working in a pure specialty with a protected bed complement may offer you more control over your workload. Cardiac care unit (CCU) is limited to 10 beds and there is only one patient on the angiography table. In cardiology you would usually have a better idea

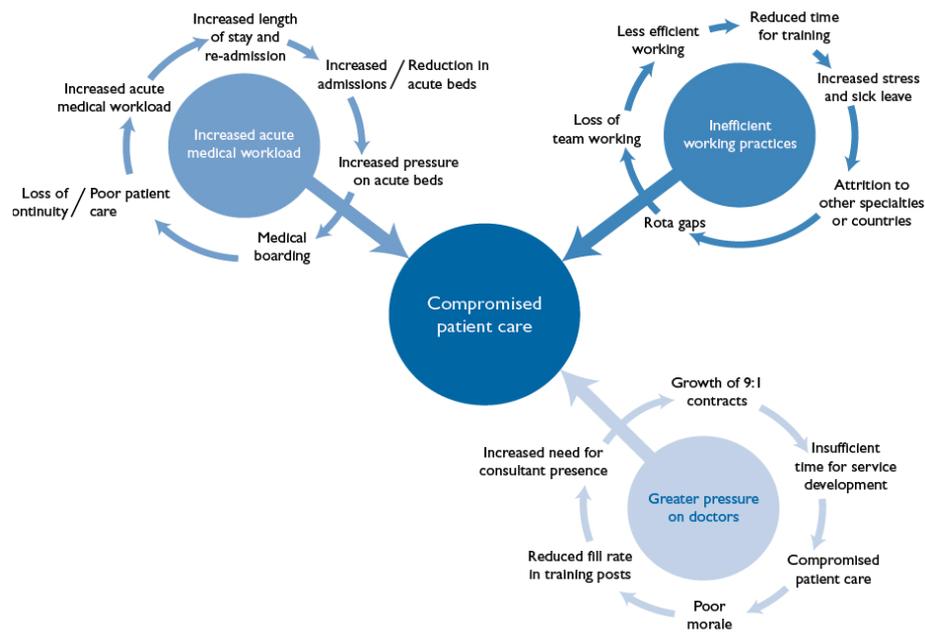


Fig. 1. The vicious circles in the acute medical specialties.

of what your day to day timetable is, but if you are going to be on-call for acute medicine on a Friday, you may be responsible for anything between 30 and 70 admissions.

Specialty practice has always had the attractions of service development, research and innovation but there is no doubt that some specialties are oversubscribed for other reasons. The most popular specialties in the UK for accreditation are Dermatology, Genito Urinary Medicine (GUM), Rheumatology and Medical Ophthalmology. I think trainees increasingly look at work/life balance and the “family friendly” aspects of certain specialties. It is interesting that neurosurgery, with a competition ratio of 13:1, is currently the most popular of all the specialties but this has a lot to do with the quality of the training programme. Core Medical Training at 2:1 is among the least popular and I think you have to ask yourself why. You would think that rational career choices are arrived at by direct experience on the relevant units and trainee satisfaction ratings. It seems not. From a Scottish trainee survey, the greatest single influence on decision-making is discussion and debate amongst trainees. There is no doubt that medicine remains unattractive compared with all the other specialties in terms of the satisfaction ratings but importantly bad news of trainee experience travels fast among the cohort destined to be our consultants of the future. It is those specialties with the 1:1 interaction between trainee and trainer that are popular—GP, Psychiatry, Anaesthetics, Radiology. The relative popularity of hospital medicine, where the rotas and supervision are challenging

and a training environment which is often chaotic suffers as a result (Fig. 1). Employers in the UK are increasingly job planning with service delivery in mind. Consultants are offered contracts which stipulate 9 sessions of direct clinical care with only one weekly session for other duties (so called 9:1 Contracts, Fig. 1).

So we really do have to try and make the situation for trainees and consultants in acute medicine an awful lot better. Freeing up more consultant time for training is an obvious target to improve our delivery of all important training, supervision, mentoring and feedback. One of the major problems for both Scotland and England is the long-term affordability of simply expanding the consultant workforce and both governments are looking at cheaper workforce options. In the UK, we have more doctors per 100,000 of the population than the US, but the US employs more nurses. Could other healthcare practitioners such as specialist nurses or physician’s associates operate as safe decision-makers? Each alternative hybrid model must be closely reviewed not just in terms of cost effectiveness but also and more importantly in patient outcomes.

Vacancies in training schemes are symptomatic of the relative dissatisfaction with the experience in hospital medicine in the UK. If experience for trainer and trainee in GIM is challenging in the UK, is life any better in New Zealand and Australia, and can we learn from experience in other systems? Whatever training model we look at, we need to protect that option to “travel and train” and the enjoyment of that very stimulating educational experience.

Trainees value flexibility but sequential training—generalism first then specialty, could drive a lot of people away from both medicine and all specialties. Should we look at dual accreditation plus credentialing? It is the idea of credentialing that the UK Shape of Training review has focussed on. Recommendations in the recently published review, suggest 10 broad training streams—women’s health, children’s health, surgery, mental health plus others. In medicine this would culminate in accreditation in Internal Medicine (Cardiology), Internal Medicine (Gastroenterology) etc. If this is to succeed, training curricula will need review and most likely revision. For example if there is a need to up-skill care of the elderly physicians in heart failure management, some of the content currently in the specialty training curriculum may need to come into the general curriculum. If the Shape of Training recommendations are accepted, I think we could be looking at a very challenging matrix of career progression. On the back of a rapidly developing area you could end up as a relatively junior consultant “specialist”. For example the developments of the use of the biologics in rheumatology would have allowed an individual to be fast-tracked into pure specialist practice, simply to meet specialty demand on a local basis effectively taking them out of the GIM rota. Equally you could remain as an advanced generalist staying in acute medicine after basic accreditation for the rest of your career. For modular credentialing to succeed, the recommended number of training posts will need to be very closely linked to the manpower requirements for individual specialties on a national basis.

The regulator (in UK terms the General Medical Council (GMC)) will take more than a passing interest in a shift to more individuals practising more generalism. Practising out with our competence and confidence may be a real risk for the future. As a general physician, do you feel equally comfortable managing liver failure, acute rheumatology, heart failure and so on? There is no doubt that clinical care

is still the single most common cause for complaint. If you look at absolute numbers by specialty, who gets the most complaints? In fact it is the generalists—in the form of GPs and Physicians. But if you correct these statistics for the numbers of practising physicians, surgeons, obstetricians etc in the UK, the complaint rate by specialty seems to level out. Thus practising generalism does not seem to be a high-risk occupation.

Lastly, what is the perception from the specialist perspective? Increasing specialisation is the juggernaut which we cannot stop. We have 29 medical specialties and with stroke, metabolic medicine and hepatology, 3 subspecialties. In addition there are 2 new specialties on the horizon, maternal medicine and aviation medicine. You might ask why we need a new specialty of maternal medicine but medical causes are now the major causes of maternal death, including neurological catastrophes and cardiac causes such as dissection and cardiomyopathy. With populations around the world on the move, the aviation industry poses huge challenges. There are very particular health concerns around passengers as potential patients, patients as passengers and also the specialised occupational health issues of both flight staff and ground crew. Both have made impressive cases for places in the list of medical specialties in the UK.

So although Shape of Training has been a long time coming, we definitely welcome more emphasis on patient focus, continuity of care, continuity of supervision and for trainees in medicine, flexibility of programmes. There are the inevitable uncertainties around how will the specialties react to more participation in acute care and likewise the approval of modules for both specialty credentialing and the approval of the concept of the “portfolio consultant career”. I hope that all involved in provision of hospital services will welcome more generalism and that this can be achieved without threatening the excellence of specialty management.