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18/08/2017

I can treat you, but should I ?

(Experiences of a Hospital Doctor)

Without doubt, the advances in technology have brought advantages to both doctors and their patients. This evolution has evolved constantly through the history of human civilisation, and has accelerated in the last century as scientific endeavour has broadened our horizons in ever widening areas. Whether these be in diagnostics, therapeutics or just general understanding, we continue to progress, and medical care improves.

Whatever the technology, there is a patient somewhere in the pathway and I want to tell you a short story. Earlier this a member of my family died peacefully in his 90th year after a long and fulfilling life. He had been suffering from a bone-marrow malignancy which lead to progressive kidney failure. Chemotherapy had been tried but discontinued because its side effects outweighed the presumed extension to life. I am sure that the chemotherapy would have done a lot of good, but the nausea and feeling of weakness was too much of a cost for my family member. In the last six months of his life, he had a number of kidney infections, which manifested as falls and confusion. On two occasions they lead to emergency admissions to hospital where the treatment involved intravenous fluids and drugs, urinary catheters and plenty of ECGs and monitoring. My family member improved, but hated the whole process. He hated the indignity of treatment, successful as it was and expressed a wish to avoid future admissions. So when the third episode of deterioration occurred, we were notified by his nursing home that admission was indicated. Against some opposition, we resisted this, stating that if he were admitted, the hospital would not be capable of limiting their standard invasive treatment. There were established pathways of care and variation to suit the individual patient circumstance would not occur. So, he didn't go to hospital. He recovered with no more than simple oral antibiotics, and remained in the reassuring surroundings of his home.

I tell this story as it demonstrates to me how modern medicine now has increasing capacity to treat complex and potentially life threatening conditions. When hospital staff in particular are faced with a diagnosis, they enter well proven pathways of diagnosis and treatment which have scientifically been proven to provide the best outcome for the patient. Hospitals and indeed individually doctors are monitored and assessed to ensure that they provide care to the predetermined standard, and the wishes of the patient are secondary. Why has this happened? How have we allowed it? My premise is that the technology required but it very complex nature has been concentrated in hospitals, and to be efficiently used, patients must pass through the hospitals in large numbers for short stays. In this numbers game, there is no time for hospital staff to ever know a patient comprehensively.

I don't wish to be too judgemental of just hospital staff. The issue of knowing a patient in a manner that Paul Tournier would have espoused is not limited to professionals. I met an elderly woman recently who probably had a bowel malignancy. She was anaemic and her bowels were irregular. It was near-on impossible to examine her because she was so exhausted from the ambulance trip from her nursing home. She was wheelchair bound and had renal failure and mild dementia for several years. She had no symptoms. However she appeared happy and distress-free. Her daughter, a physiotherapist from far away, accompanied her. She came expecting that her mother would have a colonoscopy or CT scan to make the diagnosis. It was obvious that any diagnostic test would probably injure her kidneys further accelerating death, and she was never going to be fit enough to survive any treatment if a diagnosis were made. The pressure to apply medical technology that I felt, came from family expectations, where the use of the technology was not going to offer the patient any benefit. In this case it was family expectation that drove the desire for technological intervention.

At times, the health professions have become reliant on advanced technologies when sometimes simpler and less invasive treatments provide better and more sustained results. As a surgeon, I love using all manner of instruments in the operating theatre, and even operating where in the past, operations might not have been undertaken. Take for instance simple haemorrhoids, a condition which is regrettably probably familiar to some of you. These days we can use ultrasound probes to identify the haemorrhoid arteries, and then we can use laser to obliterate the artery. Or we could use electrocautery to do the same. Sometimes we even use stapling devices, or ultrasonic cautery or bipolar electrocautery to remove the haemorrhoids. Or we can use a scalpel or diathermy to cut the haemorrhoid off. This is a thriving business and the livelihood for colorectal surgeons. However, the vast majority of haemorrhoids can be treated with simple investigation, education and change in the way the toilet is used. This involves old technology, and is the only approach that gives a long term cure to haemorrhoidal bleeding.

At the more sophisticated levels of therapeutic care, intensive care units have acquired technology to provide temporary renal replacement in situations where patient suffer from renal failure as part of trauma or other severe medical conditions. This technology bridges the period of acute renal failure until the kidneys usually recover their normal function. The treatment is typically required for one or two weeks and requires admission to intensive care. I have noted ever increasing demands for this treatment over the last two decades, and it has saved lives. This is very good.

I have also worked in intensive care units where for various ethical, political and geographic reasons, it has been determined that renal replacement therapy would not be offered. I have been amazed, that in the knowledge that this technology is not available, that there has been little of no need for the technology. Alternative approaches to treatment have resulted in fewer cases of kidney failure. By keeping a patient's kidneys well perfused with fluids, through prompt recognition of the problem, early and aggressive resuscitation patients with hypovolemic and septic shock, and with a far more vigilant and active monitoring of resuscitation, renal failure can be prevented or at least modulated. This approach requires much less technology, but far better trained and more experienced approach to resuscitation. One cannot necessarily rely on untrained doctors to provide the intensive care and attention for this fidelity of resuscitation. I assert that through the provision of better initial care, I may not need to use the advanced technology of temporary renal support. The case is made here that we probably over-rely on some technology.

Bringing this issue back into my National Health Service practice, I now observe in my patients in surgery, in the emergency department and occasionally on the wards in complicated patients, a decrease in the vigilance and attention to proactive resuscitation. I am more than likely to find unwell patient given orders for fluid treatment and then left without review for hours whereas in the past decades, a responsible and capable person would have remained with a patient for a more intense and continuous resuscitation. We have replaced expertise, experience and hands-on care on general wards delivered by lesser trained staff

with complex and expensive technologies. We have replaced experience with technology, and overall I am unsure all of our patients are better off.

I want to step away from direct patient care and consider how computer technology has impacted on how we treat our patients. No double many of you will recognise the situation where you might be undertaking a consultation with a patient, with a computer screen on your desk. You tend to look at the screen, rather than at the patient, because there are results or documents showing that relate to the patient. The computer is slow and much of the time is spend waiting for something to come up on the screen, or navigating between various pages of information. And then your typing is slow. (I cannot touch type, and even if I could I would have to look at the screen as I typed). So with a computer competing for your attention, you inevitably miss some non-verbal cues from your patient and send out a loud message that there are three people in the consultation: the patient, you and the computer.

But now enter larger scale integration

In contemporary British Hospitals, there is an evolution occurring. Every generation of young doctors is gradually becoming more dependent on technology rather than more traditional means of understanding patients and their conditions. My junior staff rely on the GP letters for a past history. And, you get this from the documents stored on the computer. What sort of person would waste time actually talking with a patient? There was once an American science fiction television series called Star Trek. It eventually developed a cult following as there was often deeper philosophical themes in the story line. On the space ship, there was doctor who had a hand held scanner which he would hold up to his patients. After scanning the patient, he would announce the diagnosis. In 2017 hospital practice, my middle grade doctors don't want to know the history of presentation or anything else about the patient which might be useful or which the patient might want to tell. They tell me about the CRP, the WCC and the CT scan result. When a patient deteriorates on a surgical ward, no one goes to examine the patient: they get a CT scan. In so many ways the science fiction of Star Trek is closer than we might think.

Is this right? Maybe we should discuss it afterwards. But I know that some diagnoses are made far more quickly in a patient's admission, so treatment can start more quickly. However, I can also tell you many stories about patients who get normal scans, and who have serious conditions which are not diagnosed. I see patients who have normal investigations who are sent home from the assessment ward only to return to a different doctor on another day with progression of disease. We must not neglect that radiation has side-effects. Unnecessary scans have unnecessary side-effects. I reflect on the causes of this trend. Have we lost the clinical skills of history and examination that were once the core of diagnosis? None of my junior staff were able to tell me whether a patient was in heart failure recently or had appendicitis. (They wanted to get an echocardiogram or a white cell count to tell). I fear that the underlying problem is far more subtle.

Doctors and Nurses are in short supply, and good ones in ever more limited supply. So much of our regular routine work is now done by unqualified staff members that undergo basic training in equipment usage. It is common not to know how to measure a blood pressure with a manual sphygmomanometer, or even get a heart rate. However, technology has given us high tech electronic machines that will take all the observations except temperature. The machines will collect the observations and upload them electronically for the ward nurse to see. More amazingly, the observations will be transmitted to any computer in the hospital or even my home. I can set alarms to warn me when a patient's observations are outside normal range. And the computer will log when I looked at the result which can be useful when managers are looking at my behaviour. This system is amazing, but hated by doctors and nurses alike. There is preference for use of paper charts because they are easier to complete and from my point of view, a lot easier to read. After all an observation chart is the result of many decades of evolution. Furthermore, these pieces of technology cannot tell me what an astute clinician can tell me: that a patient is not quite right. In my experience, the technology doesn't miss changes, but it might not be as quick or sensitive. We probably miss opportunities

to treat our patients with simple care because our systems don't detect problems until they are bigger, possibly requiring a more robust or intensive response.

In summary, a modern hospital is a business entity that is required to treat and process large numbers of patients. There is a pressure from the users to provide quality and care to all, and this pressure manifests as protocols of treatment, and as false expectations from patients and their families. We address this through offering sophisticated treatments, sometimes when taking time to educate might suffice, and though relying on tests and results the provide black and white answers, when medicine and disease are far more complex and subtle. And finally, we use technology to manage the enormity of the data associated with patient care which the side-effect of dehumanising the patient interface. I hope that I have offered you some controversies to consider and discuss later.