RES MEDICA
Journal of the Royal Medical Society

North American Frontline Medical Care as Experienced on a Fifth Year Elective

Stewart Pattman
Pre-Registration House Officer
Falkirk and District Royal Infirmary
FALKIRK

Abstract

When planning my elective I wished to experience Medicine in North America as it is often at the forefront of medical developments. This would also allow me to make comparisons with our National Health Service. I arranged a four week attachment in cardiology in Toronto and a similar period at Columbia University Hospital in New York in the Medical Emergency Room. As an undergraduate, no formal USMLE qualifications were required for elective periods at these locations, and in order to work in America all doctors must have these qualifications. As I do not intend to obtain this qualification this was the only opportunity for me to experience the healthcare system in North America from the inside!

ISSN: 2051-7580 (Online) ISSN: ISSN 0482-3206 (Print)
Res Medica is published by the Royal Medical Society, 5/5 Bristo Square, Edinburgh, EH8 9AL

Res Medica, Volume 268, Issue 1, 2004: 11-14
doi:10.2218/resmedica.v268i1.1016

North American Frontline Medical Care as Experienced on a Fifth Year Elective.

STEWART PATTMAN

Pre-Registration House Officer

Falkirk and District Royal Infirmary, Major's Loan, FALKIRK, FK1 5QE

When planning my elective I wished to experience Medicine in North America as it is often at the forefront of medical developments. Thiswould also allow me to make comparisons with our National Health Service. I arranged a four week attachment in cardiology in Toronto and a similar period at Columbia University Hospital in New York in the Medical Emergency Room. As an undergraduate, no formal USMLE qualifications were required for elective periods at these locations, and in order to work in America all doctors must have these qualifications. As I do not intend to obtain this qualification this was the only opportunity for me to experience the healthcare system in North America from the inside!

Toronto.

Happily I had arranged the elective prior to the SARS outbreak and by the time of my attachment the teaching of medical students had resumed. My placement in Toronto required a visa and a thorough medical examination including a chest X-ray and an HIV test. My reading had informed me that Toronto was a city of diverse cultures situated on Lake Ontario close to the American border. Indeed the hospital where I was working was located in an area populated by Greek immigrants. However the western lifestyle and diet meant that in 1996 cardiovascular disease was the primary cause of mortality, accounting for 37% of all deaths in Canada no matter the country of origin[1]. I was also aware that January in Toronto would be very cold (average temperature around -20°C), and this could perhaps precipitate angina in susceptible individuals.

In many ways Canada is similar to the UK. The healthcare system is funded by the government and permits free access to all Canadians at the point of use. The purchase of healthcare insurance is compulsory and this covers care, with a standard fee per prescription. Physicians are not employed by the government; they charge a fee per service, rather than being salaried as in the UK. There is also a very limited private sector of healthcare in Canada, as payment for services available under the state system is illegal. This results in some citizens crossing the American border to pay for services they desire.

A typical week in Toronto comprised of holding a clinic with patients on Mondays and Thursdays, assisting with exercise ECGs on Tuesdays, watching cardiac catheterizations on Wednesdays and at other times assisting in the Acute Coronary Care unit and the regular wards. The unit was situated in the equivalent of a district general hospital in the UK. There was an Emergency Room, ITU, theatres and facilities for angiograms; however interventional cardiology and coronary artery bypass grafts could not be performed at this hospital. The days were full and intense often starting at 7am with little time for lunch and ending at around 8pm. I found the system to be very efficient in managing patients as illustrated in the following case study.

Case Study.

'PJ' was an 85 year old gentleman who, although frail, had no significant medical history but was a previous smoker (40 pack years). When I saw him in the Emergency room he described three episodes of non-radiating left sided chest tightness which lasted about 10 minutes occurring, at rest, within the last 48 hours. His ECG showed mild ischaemic changes in the form of T wave inversion, his troponin levels were slightly elevated and he was admitted to a telemetry bed for further investigation. The next day he underwent an exercise ECG. This had to be stopped at B at Bruce Stage 2 when ST elevation developed in the chest leads, however PJ did not complain of any chest discomfort. The following morning an angiogram was performed. There was difficulty accessing the femoral artery on the right side and once this was achieved, a great deal of atherosclerosis in the right iliac artery was seen but interestingly claudication was denied. The angiogram was unable to be completed due to these heavily diseased vessels and at the angiographic rounds the next day he was transferred to another hospital where stent insertion was possible, and he was to undergo another angiogram using his radial artery as the access point.

Communication Theme.

PJ was scheduled to be followed up by Dr Bentley-Taylor, the physician to whom I was attached and his clinics took place outside the hospital in a private building. The healthcare system, paying physician per service, allowed greater flexibility in consulting time, compared with my previous experience within the NHS. Consults often took over 40 minutes for returning patients. This time allowed full discussion about results of investigations, medication review and therapeutic options. The extra time was also useful in new patient consultations, allowing doctor-patient rapport to be formed. New patients were often relatives of current patients and it was obvious that there was strong loyalty to a single physician under this system.

I witnessed excellent communication between specialties, both at angiographic rounds where the cardiologists discussed cases with the cardiothoracic surgeons and at multidisciplinary meetings involving family physicians. This allowed patients individual cases to be discussed informally and the optimum methods of management planned.

Pharmacology and Evidence-Based Medicine Theme.

All cardiology patients including the case of PJ were prescribed a statin. Statin usage has changed during my time in medical school and illustrates the importance of frequent review of new evidence. Data from the CARE trial showed that Pravastatin reduced plasma levels of CRP in a manner independent of LDL-C [2]. Hence there is evidence that statins have anti-inflammatory effects in addition to lipid lowering effects. CRP levels reflect systemic inflammation and indeed these levels have been shown to be a strong independent predictor of risk for future MI and stroke in healthy men and women[3]. Hence it is beneficial to reduce these levels even if lipid levels are within satisfactory limits.

There is also recent evidence to show that statins vary in their degrees of effectiveness. The REVERSAL trial showed that levels of atherosclerosis progression (measured using intravascular ultrasound, IVUS), and indeed CRP levels, were reduced more effectively with Atorvastatin than with Pravastatin[4]. This shows that choice of drug is also important in high risk individuals.

The recent increase in levels of statin prescriptions has been recognized in Canada and is associated with clinical trial evidence, clinical practice guidelines, policy changes and marketing initiatives[5]. In Britain, Simvastatin is currently the statin of choice.

Of course, it wasn't all work and I did manage to navigate my way around snow-bound Canada. The highlights were a trip to Niagara Falls which was partly frozen. I also made it to Quebec City, the heart of the French speaking area of Canada, with its European style architecture it had an almost alpine feel to the city. I visited during the winter festival and the city was packed with salopette sporting Americans admiring the ice sculptures.

New York.

My second four weeks was spent in the district of Washington Heights, in Manhattan, New York. I chose Emergency Medicine as I believed the range of experience and situations I would be exposed to would be valuable learning experiences.

I was working in a small community hospital, which was a branch of the larger Presbyterian Hospital. There were no facilities for Trauma patients in my allocated unit and it dealt with medical emergencies and minor injuries. I was based in an area of New York which was populated by a Hispanic community. This presented a range of new challenges. English was not spoken and an interpreter was required to obtain a history. Patients often did not have a family practitioner and so used the emergency department as a primary care centre. Some of those presenting often had multiple, unrelated problems such as a painful foot and chest pain. Health insurance which covers care and drug treatment is non-compulsory in the USA. For those who are uninsured, Medicaid covers the cost of treatment if the individual earns below a certain wage and Medicare covers those chronically unwell or elderly. Many employers provide health insurance for their staff. For those people who fall between these categories, the emergency room provides a safety net as all those attending the department are treated and the government is charged for their care.
As with my experience in Edinburgh, patients were triaged by nursing staff prior to awaiting examination by a doctor. My role in the department was to select appropriate patients after triaging and to take a history and examine them in order to present the case and the proposed management plan to the attending physician. The hospital, although small, had full imaging services including CT scanning and ITU and theatre facilities. When the case was non-urgent referral could be made to a clinic in the main hospital.

The hospital only had 12 bed spaces in the ER department and it often became quickly overcrowded, and the construction of an extension was underway. I found it a challenge to work under these conditions and the patients voiced the same view.

The USA shares a similar morbidity and mortality pattern to the UK, with cardiovascular disease, cancer and cerebrovascular disease being the top three causes of death[6]. The area in which I worked was relatively deprived compared to the rest of Manhattan and conditions associated with poverty such as pneumonia and asthma were prevalent.

Case study.

AD was an 84 year old lady, visiting relatives in New York from the Dominican Republic. She attended with her granddaughter with a complaint of a constant throbbing pain in her right ring and small finger. Her right arm was currently in a cast due to a fracture of her right wrist 6 weeks previously. She also had decreased extension in her ring finger. Her fingers were bruised and swollen, and sensation was intact. Medically she had hypertension and had a prosthetic right eye and a past history of a hysterectomy. Her granddaughter told me she was aware AD had an irregular heart beat but she was unsure as to how long this had been irregular. She was not taking any medications, and had no allergies. There was no family history of conditions, although her daughter died aged 40 from an MI. A repeat X-ray of the wrist showed no deformation of the wrist and good healing. However a routine ECG showed that she was in atrial fibrillation. She was at risk of an embolic event as no anticoagulants were being taken at the time. She was admitted to the hospital to be commenced on anticoagulant therapy.

Psychological Theme.

Although the presenting complaint was pain in the fingers it was difficult to establish if this was the primary concern. The inability to converse with AD in her native language meant I was unable to gauge the level of concern about the pain in her fingers. Her granddaughter appeared more concerned about her heart, especially as her mother had died from a heart attack at a young age. She could have encouraged AD to attend the hospital whilst in New York so she would receive a check-up. The open access policy of the emergency room means that this is the best method to seek help for what can be chronic problems. This safety net of the American system is vulnerable to exploitation. The family may have been keen for the patient to receive high quality care in the USA rather than in the Dominican Republic, essentially making AD a health tourist.

Confidentiality Theme.

An important aspect of care was patient confidentiality. Prior to commencing the attachment I had to undertake an open book test to allow me to receive my HIPAA (Health Insurance Portability and Accountability Act) qualification. This permitted me to work with patients and exchange information with other healthcare professionals. The policies on confidentiality covered electronic, verbal and printed mediums of communication and although I was familiar with the principles they were much more clearly stated in the USA than I had witnessed in the UK.

Washington Heights certainly wasn't a tourist friendly area of Manhattan, but a 30 minute subway ride took you to the Empire State building, Chrysler building and Grand Central Station. I managed to get to the top of the Empire State building on a snowy St. Patrick's Day, giving me a birds-eye view of the pseudo-Irish community of New York parading with bagpipes and pints of Guinness.

I also visited Boston and Washington for weekends and managed to take in the highlights of the Cheers bar in Boston and seeing George W Bush in a helicopter about to land at his house.

Reflections.

My experiences in both Canada and the USA illustrated the difference in allocation of resources between them and the UK. In the USA defensive practice means that more investigations are likely to be carried out, for example CT scans on headache patients. There is also more rapid access to such investigations than I have experienced in Scotland. In Toronto, almost all patients who reported new onset anginal pains would undergo an angiogram the same week following a clinic appointment.

One of the greatest challenges I faced during my time was the low daily temperatures in Toronto. The bulk of my daily commute to the hospital could be made by subway; however the 15 minute walk at either end required me to purchase some heavy duty outdoor wear! The heavy snowfall affected patients attending the clinics as many had to reschedule appointments due to the weather.

I have benefited from the elective in a variety of areas. I have broadened my knowledge base and I have also gained more skills in devising management plans, learned about new developments in interventional cardiology, appreciated the importance in constant review of evidence and learned new communication skills especially when taking histories and examining patients who speak a foreign language.

I feel this elective has furthered my career aim of working in hospital medicine. I was able to undertake procedures such as elective DC cardioversion, lumbar puncture and cannulation alongside history taking and examination. Staff were very eager to teach at both sites and as a result I would encourage students to consider these venues for electives.

I believe the exposure to different healthcare systems allowed me to evaluate the benefits and drawbacks of our own system. It also exposed me to different clinical methods and techniques which have augmented my range of skills. My elective has also been a social education as I was able to travel to Quebec, Montreal, Boston and Washington DC to experience their different cultures. Future work in America would require the USMLE qualification. I feel I have benefited from this opportunity and it has given me confidence and experience which will be useful in my future care of patients.

References

[1]Health and Stroke foundation of Canada. Heart Disease and Stroke in Canada. Ottowa, 1997.
[2]Ridker PM, Hennekens CH, Buring JE et al. C-reactive protein and other markers of inflammation in the prediction of cardiovascular disease in women. *N Engl J Med* 2000;**342**: 836-843.
[3]Ridker PM, Nader R, et al. Long-term effects of Pravastatin on plasma concentration of C-reactive protein. *Circulation*. 1999; **100**: 230-235.
[4]Nissen SE, Tuzcu EM, Schoenhagen P et al. Effect of intensive compared with moderate lipid-lowering therapy on progression of coronary atherosclerosis: a randomized controlled trial. *JAMA* 2004; **291(9)**:1071-80.

[5]Jackevicius CA, Tu K, Filate WA, Brien SE and Tu JV. Trends in cardiovascular drug utilization and drug expenditures in Canada between 1996 and 2001. *Can J Cardiol* 2003;**19(12)**:1359-66.
[6]National Vital statistics reports. *NVSR* 2003; **52 (3)**:1120.

Dr Pattman received funding from the RMS Travel & Study Fund which is available to all members of the Royal Medical Society.
See www.royalmedical.co.uk for application forms.