

Ulster Medical Society

Thursday 7 October 2010 at 8.00 pm.

"Threads of Life and Health—
A Heritage of Quality in Practice"

Dr Margaret Cupples
Queen's University of Belfast

Professor Brew Atkinson:

Ladies and gentlemen, it's my pleasure to welcome you all here tonight to the Ulster Medical Society to the start of a new session. And I hope you all enjoy the evening. I'm sure it's going to be a splendid evening. And just before I introduce the incoming president, I just have a few things that I want to do.

I, first of all, want to thank the outgoing council members, Patrick Bell and Tom Diamond, for their work for the Society. There are some vacancies on the council and these were circularised by John Craig, our secretary, in the recent Ulster Medical Journal. So if you are interested in that we would be very keen to have applications for that. We decided this year to go out to applications for the council so don't be shy and Dr Craig is just sitting here and he'd be very glad to hear from any of your afterwards.

For anybody who's here who's not a member and doesn't send a cheque every year—that's very old fashioned—doesn't pay a direct debit every year, please feel free to sign up, we're always looking for new members so I'd like to encourage you to do that if you're not already a member.

I've really enjoyed my year as your president, it's a great honour to have been asked. And at the end of the year I just want to thank some people for the work they've done. John Craig has just finished his first year as honorary secretary. He's been absolutely marvellous. I'm not a flatterer, but he has been organised, he's been efficient, he's been kind. He's just been wonderful to work with and as I pass over as president I'm just so confident for Margaret coming in that John's at the helm. He really has been a marvellous secretary and a good friend this year and I hope that that will continue long between the two of us.

John Logan works tirelessly as our archivist and it would be remiss not to thank John for all the work that he does. Again, our treasurer, Fiona Stewart has worked very hard and Barry Kelly, I'm not sure if Barry's here tonight, but Barry is the editor of the Ulster Medical Journal and is doing a fine job. And Marie Murphy works part-time as a personal secretary in the Society and we would want to pass on our thanks to her for all the work that she does. And finally I'd just like to thank my wife, Hillary, who's here tonight, who's been marvellous at entertaining people staying over and various suppers beforehand, thank you for all that you have done through the year.

So, with those thanks, and again just thanking the Society for the honour of being the president, there is just a sad moment that we have to acknowledge that, during the year, a number of our members have passed away. Dr Terence Fulton, very distin-

guished Consultant Physician at the Royal Victoria Hospital and a former president, died during the year. Very sadly, and at a young age, Dr Mark Gibson, Consultant Neurologist, who had been a very distinguished editor of the Journal, died and was buried just last week. Dr Roy Mulligan, I think from Larne, has also passed away. Professor Thos Harrison, who many of us as Queen's graduates would remember in the anatomy department, died also, and Mr Alistair Macafee, who was an Orthopaedic Surgeon. I just ask you to rise for a moment while we remember our colleagues.

Thank you very much.

Now to a happier task. And it's my great pleasure to introduce to you Dr Margaret Cupples, who of course is such a well-known figure in Ulster medicine that many will be very well aware of her career and her achievements. Margaret was born in—well I'd better not do that since it's a lady—but she qualified from Queen's in 1977, graduating on the way through with a First Class Honours Degree in physiology. She's currently a clinical reader in the university specialising in general practice and is part of the centre of public health at Queen's.

Having carried out some research as an intercalated BSc student on denervation changes in the planter artery of the mouse, Margaret then graduated later on with an MD thesis on the use of digoxin in general practice in 1983, along the way picking up a variety of undergraduate and postgraduate prizes, and a variety of postgraduate diplomas. She has worked as a GP in Finaghy, in Markethill and, since 1992, as part of her role, has been a GP Principal in Woodbrook Medical Practice, sharing that role with her university one. Everyone who knows Margaret will know that she's very deeply involved in the university and general practice community, with a variety of important roles. Her research interests are in health promotion, cardiovascular disease and health inequalities, and I'm sure we'll hear about those tonight.

She currently is the Clinical Lead of the Northern Ireland Clinical Research Network in general practice and I think it's a fitting tribute to Margaret that she has been invited to be the next president of the Ulster Medical Society. Margaret, would you like to come and be installed, or whatever we are meant to say.

So I'm just going to invite Margaret to give her presidential address, *Threads of Life and Health, a Heritage of Quality in Practice*, and we all know it's going to be excellent.

Dr Margaret Cupples:

Thank you Brew, and thank you everyone for being here tonight and sharing this evening with me. As I have listened to a variety of presidential addresses over the years, I never really imagined that I would be in this position. And it is quite a privilege, I have to say, to be here and to share with you some of the memories I have of notable individuals who have held this position in the past.

Now, if you just excuse me while I get the technology together. I hope you can hear me seeing as I might move away from the microphone and if somebody at the back says they can't hear me that's fine. I think I'll just do it like this rather than wear the travelling mic, okay.

So the Ulster Medical Society, I'd like to tell you, provides a unique opportunity for individuals of all ages, backgrounds, disciplines, to meet together to share experiences and learn together. And it, I feel, forms a virtual tapestry which is rich and which helps the provision and planning of healthcare services across Northern Ireland. And it's recognition of the value of learning from others that is the base of my talk this evening. I plan to reflect on a wealth of life experiences, of different people and areas and eras, and to weave these together into a loose tapestry which reflects the quality of practice in medicine and in the textile industry in Northern Ireland.

The flax flower, linen and other textiles, the cardiac defibrillator, renal dialysis, are the key way points on our destination this evening, which is the Strangford Stone, which itself forms the legacy of excellent teamwork and quality of practice from a 1000 young people in Northern Ireland and their supporters.

To help you to follow the thread of my thoughts, I hope to address the concept of threads of life from Greek mythology to medical practice, from flax flowers to family fortunes, from factories to communities. And the concepts of threads of life going into health in terms of social structure, leisure activities and medical textiles. And to recognise byssinosis, general practice, cardiology and renal medicine all underpinned by careful observation contribute to a heritage of quality in textiles and medical practice here in Ulster.

According to Greek mythology, the Moirae, or apportioners, were the three ladies who were reputed to control the metaphorical thread of life of every mortal from birth to death. And this 16th century tapestry shows how the first lady spins the thread of life, birth. The second will measure your allotted span and the third will choose the time and manner of your death, and at that time will cut the string and the thread with her shears. However, perhaps that's enough of Greek mythology. To come to modern times, when one hears of a diagnosis of someone having a thready pulse, it does suggest to us that someone has either got cardiac failure or shock, and an immediate need for urgent decisive medical action. When someone's critically ill we may hear the phrase, he's hanging on by a thread, and the outcome of either life lost or a stronger pulse is awaited.

But to allow the formulation of a management plan in any clinical encounter, medical students are taught that a medical history should be obtained. Following a structure, asking first about the presenting problem, going on to review clinical systems and then asking about past medical and family history. In the process of preparing for tonight, I read about the mnemonic and used the medical history taking 'JAM THREADS'. It's not what I knew as a medical student,

it may be more useful for people in the past than today, however the J for jaundice, the A for anaemia or other haematological problems, the M for myocardial infarction, and the 'THREADS' made up of tuberculosis, hypertension, other heart diseases, rheumatic fever, epilepsy, asthma, diabetes and stroke, are all relevant to any new practitioner encountering a new patient for the first time, they are potentially relevant to the future management of that person.

Taking a history in general practice we like students to learn the biopsychosocial model of diagnosis as opposed to the straighter, simpler, biomedical model. And we would suggest that, in making a diagnosis, each student should consider physical, psychological and social issues.

Omitting to ask the 45 year-old-lady presenting with difficulty swallowing about her current social circumstances, which may include imminent bankruptcy and marital breakdown and a family history of her father having recently died with oesophageal carcinoma, may not best inform the medical practitioner, physician or surgeon about the optimum management plan for that lady. Increasingly, also, in palliative care, the importance of a fourth thread, that of the spiritual needs of a person, are being recognised. And every good GP trainee knows that competence in the clinical practice requires that each of these threads should be duly considered both when making a diagnosis and constructing an appropriate management plan for any patient.

Flax in Northern Ireland has truly been a thread of life. It was the means by which products that could not be made or grown could be sold to obtain money to buy those things. It was the catalyst which held families and, indeed, communities together, ensuring care from the cradle to the grave before the days of the NHS. The process began with finding the best seed, traditionally from the Low Countries or Holland. Seeds sown in April flowered in summer and were ready for harvest by August. The subtle intensity of the blue flowers indicates good quality fibre for good yarn. Other shades, the pinkish white varieties, indicated less good quality of yarn, I'm told. The flax plant grows on a single slender stem, approximately a metre high, and, in harvesting, the stems are pulled rather than cut to ensure the full length of fibre. Small bundles are laid out in fields to dry and the seeds are removed for the next crop or for cattle food. The plants are then retted, soaked traditionally in stagnant water for about two weeks, before people perform the smelly, difficult job of removing them, usually in bare feet.

We tend to think that microbiologists are inexplicably linked with the medical profession, but microbiology is also a subject of students of the textile industry. This refers to the retting organisms and shows pictures that we're not unfamiliar with as medics. This slides shows the various stages of the retting process and a more enlarged profile you can see how the bacteria gets between the fibres of the flax stalk, or stem, to try to separate the individual little strands.

However, after drying, the retted plants then undergo scutching. This print shows a rather idealistic setting in which the dried stems are beaten to get rid of woody debris and just leave the fine fibre. But it was a dusty job and often done in less pleasant surroundings. With the advent of scutch mills, which I think we're probably all familiar with in different parts of the country, the process became easier to manage in many ways, and certainly faster. However, the power of the water wheel, which you can see on the outside of the building, didn't stop because the water didn't know if someone had an arm caught or a piece of their clothing caught in the machinery inside the building. And also these buildings were very subject to fire, which was ferocious because of the abundance of dry fibres within.

Everyone played their part in trying to improve the process, from the flax stalk, the stem, to create finer, less hairy yarn along the way. Often cottages like this housed families of a dozen or more and the people within would have included men and women. The men would have sown the seeds, the women weeded them through the growing process. Young children could be involved in spinning the scutched fibres. Older children in more delicate stages of the process. But spinning was women's work, it required more expertise and a sensitive touch, I'm told, to wind fine quality threads. As you see that lots went on in one-roomed cottages and the hens and the pigs, and whatever were necessary for everyday life, took part in the process.

Fathers and older boys, as you can see in the background, worked the looms and they took the products to market to sell to find the things that were needed. Everyone depended on others. Extended families and local communities worked together sharing resources. But at times it was difficult to find good seed and that's especially so during the First World War. This clock depicts a gift given to my grandfather, who obtained, I know not how, flax seed from Russia during the war for the local farmers. Their sense of gratitude is evident in the inscription on the clock, which says, To Jackson Pillow (? 0:16:30) from his neighbouring farmers in appreciation for obtaining flax seed for them from Russia in 1916.

So involvement in the linen industry engendered a sense of loyalty and mutual support. But, after scutching, it was taken, if not used in the domestic scene, to factories, and this shows the rope works in Mount Pottinger in the east of Belfast at the turn of the century.

Hackling and carding were done here, where the dried scutched plants were beaten further to get rid of more and more debris and create finer and finer threads. But it was dusty, as you can see. However, at one time Belfast had the largest rope works in the world, the largest spinning mill and the largest shipyard. And during this process nothing was wasted. Woody stems were used for chipboard, coarser fibres were used for ropes and furnishings, longer fibres were spun into yarns that were used for shoes and leather goods, canvas and carpeting, and finer quality

threads were used for the finer linens of handkerchiefs, cloth and bedding.

Bleaching of fine linen such as this once relied on the washing and laying on grass process, in the sunshine. But there was better control came for this process with the advent of chemicals. However, textile workers with responsibility for preparing the chemical mixes for finishing, bleaching and other stages of the process had to show competence in numeracy, just as we expect our medical students and young doctors today to be able to calculate correct doses of drugs. So the textile factory owners expected their staff to be able to manage complicated tables and do calculations to ensure that the correct dosages went into the chemical mixes to ensure that there was not wastage of huge hours of work and hard labour destroyed irreversibly by incorrect calculations.

Factory work wasn't easy. The hours were long, from 5.30am to 6pm on weekdays and 3pm on Saturdays. A pragmatic approach was used. Longer hours were required in summer and shorter in winter. And the decisions regarding home time were not those of the workers. Nevertheless, it was appreciated. Today is national poetry day, so a few little poems interspersed amongst the slides. This man said, *"I'll ne'er despise the weaving trade. The shuttle's lighter than the spade. By it I had a living made, many a day."*

And so, as Northern Ireland built its reputation for good quality linen, major investments came. Barbour established a linen thread factory in Lisburn, building homes for workers and spreading expertise to North America, starting the linen thread industry there. Other mills were established thereby, producing braided and woven products. I'm not sure that any of you might remember this mill in Lisburn, but it shows an example of what actually was created and the places where people did work a while ago.

As the linen industry flourished, it outstripped domestic capacity and led to the development of more and more communities and small towns and villages. Perhaps the best known of these is Bessbrook, built around the mill. The houses that were built were good quality and are still inhabited today. Bessbrook was created by the Quakers, by the Richardson family in 1845 as a model village, you probably know this, it was based on principle of Three Ps; no public houses, pawn shops or police. It was reckoned that, if there were no public houses there would be no need for pawn shops and no need for police stations. Each house also had an allotment garden for growing vegetables. Sadly, in more recent years, those opportunities have been lost for the population of today and been built upon for further development. In County Armagh, Milford village was also established around the local linen mill. And this painting shows the picturesque entrance to the manor house which later became a special care hospital, but is now closed. Today the factory is idle, but the neat red-bricked houses, built in terraces, remain comfortable homes. And Milford was an example of where rich and poor lived together, in harmony. The workers came to the

son's coming of age party; 500 attended, presented their young friend and neighbour with a gift and he in return wished them happiness and prosperity.

The spectacular River Mourne provided immense water power and was the reason for choosing the site for building Sion Mills. By 1842 piped gas from the mill provided every house with a light and there were street lights. Again, there was no public house here until a court case was lost in 1896. But there was a village band with singing classes for the girls, and for 30 years everyone attended church together. The Herdmans, who built the Sion Mills village, had a policy not to discriminate in any way and provided work, housing and schooling for all. They built the mill school and the legacy of living, working and going to school together persisted. The new state primary school, which replaced this school in the 1970s, was the first integrated school in Northern Ireland. This community found it hard to believe that the mill, the central pivot of village life, closed for good in 2004 having supported life for six or more generations of the locals. But lower wages in China and other less well developed countries have made the textile industry in Northern Ireland and most European countries uncompetitive. In today's society, the popular demand for cheap clothing does not recognize the paradox of also wanting higher wages for workers.

In respect of the social structure of Sion Mills in the late 1800s, visitors recorded some interesting observations. They found a clean, well ventilated building, where people who previously had been idle were now employed. They found that the system of social order included cottages being built for the workers and they commented that they never saw a more healthy population. They also observed that there was a resident doctor and nurse in the village, both paid for by the workers' contributions. And this community's success is all the more remarkable that, between 1845 and 1852, the Great Famine cost lives and prompted mass immigration. Herdmans, however, attended to the welfare of its workers. During the First World War, visitors noted that, in an enlightened and up-to-date firm such as Herdmans, the absence of a canteen was quite noticeable. However, it did recognise—and I'm sorry I couldn't get the crease out of this old paper—that most of the workers only lived two to three minutes' walk from the factory, so they could go back to their homes. And Herdmans were kind, they did provide a small canteen for bachelors and for visitors. And they noticed that, in other forms of social welfare, including sports, the organisation was most advanced.

The sporting tradition of the village started with cricket in 1864. Football, tennis and bowling came later. The early village team was likely to include both workers and gentry. I couldn't find a photograph of that team, but this in 1929 shows the Laurelvale team from Sintons in Tandragee to which my father-in-law went from Sion Mills as a young foreman. And I'm told, for the benefit of any cricket fans in the audience, that I should not forget to mention that, in July 1969, there was a memorable occasion for cricket

locally when the Irish team beat a West Indian touring team, which some of you may remember.

Textiles are important in many sports, for regulation team clothing, sails, parachutes, motor sport, water skiing, kite flying, bungee jumping, skipping and fishing for example. This picture illustrates the firm which makes this fine tapestry work, showing the text but also demonstrating, hopefully, the fact that they could make textiles which would withstand all elements of weather and heights. Such as were achieved by Dr Nigel Hart, when he reached the summit of Everest recently. And others in that extreme endeavours expedition and he were also dependent, not just on good quality climbing ropes, but also on their clothing and equipment not be lost as they climbed. Dropping a glove meant that there was a potential sure way of inviting an adverse impact on health. A glove dropped in those circumstances would not be easily retrieved. So lightweight, durable, flexible cordage fixing the various items of clothing and equipment were essential. Others find exhilaration in height also, using less exertion. They get help from the wings of this small aerobatic aeroplane which was built in 1966 and its early owners look quite happy with their lot. The purpose is that it illustrates the durability and strength of linen. The fabric remains intact today and blemish free and has given countless hours of pleasure to various pilots since 1966.

There is evidence that participation in sports improves both mental and physical health, but the positive impact of flying may not be well-known, but is illustrated by many pilots' poetic reflections, such as these, "*Sunward I've climbed and joined the tumbling mirth of sun-split clouds and done a hundred things you have not dreamed of. Wheeled and soared and swung, high in the sunlit silence*", so said an aerobatic pilot. Again, another one chose to say, "*Because I fly I laugh more than other men, who else has seen the unclimbed peaks, the rainbow's secret, the real reason that birds sing?*" So next time you see a pilot you may recognise that there's a lot going on in his head, or her head.

However, just to show you a little bit more inside more modern factory settings. They're underpinned by careful mechanicking in the machine shop, to ensure the smooth running of machines on the factory floor. Winding is no longer done by hand, but is a totally mechanical process. Many machines perform at one time, much more than the little cottage which we looked at previously. And their precision is necessary to produce output of designs such as this. Each of the cords needs to be carefully controlled to find its correct place at the right time to create the rope with a pattern that is required.

The next picture shows the indication of the speed to which the bobbins can increase and the number of fibres that can actually be included in the number of threads to produce an intricate design.

These are some of the local products which have been produced and distributed worldwide. Others from the same factory in Tandragee have included sutures, bandages, tapes and dressings and gone

around the world, perhaps more recognised in other parts than locally.

The area of medical textile was linen. In good quality hospitals such as the Royal it was, at one stage, used as a form of application of poultices, the prescription for which could be obtained in the Belfast Hospitals' Pharmacopoeia, the official formulary of the various hospitals and printed in 1942. This recipe—prescription—for a poultice was probably written by a doctor but probably not prepared by them, him or her. I think it was probably the nurse who got the boric acid, mixed the cold water to the consistency of cream, then got boiling water to make a translucent jelly and then spread it on the gauze and repeated the process every four hours. Of note, the attention to cost effectiveness was present even then, although there were only 196 preparations available.

However, our medical resources have expanded since then. Researchers in biotextiles are working to create interactive fabrics with sensors, actuators and logic circuits now. The applications include wound management, tissue repair and rehabilitation, and such things as pressure garments, drug delivery systems and implants. This hydrocolloid gel is based on the same principal of textile manufacture. And it is a regularly spaced network of pores resembling structures in bone marrow and thymus.

Some cells would adhere to the gells' surface, others would not. Exploring the reasons for this has contributed to developments using stem cells and tissue generation. And scientists are now developing new fibrous scaffolds, trying to bridge gaps in bone has been a major challenge for them. But using structures such as the gel and translating that into the scaffolds they are trying to actually design scaffolds with the same porosity as the original texture of the tissue which they're hoping to create. And research continues looking at the effects of different stem cells and the effectiveness of producing these tissues.

However, not all outcomes of health related to textiles are good. Byssinosis was one of these. Textile dust can stimulate airway inflammation, causing constriction and respiratory difficulty. And, over time, dust accumulation in the lungs causes a typical brown discolouration, with non-specific pathological changes. The symptoms of chest tightness and shortness of breath typically commence after returning to work on a Monday morning after the weekend. Easing later in the day, gradually, but lasting longer and becoming more severe each week.

Professor John Pemberton, who was a professor of social medicine here, was asked to inspect mills in Northern Ireland first and then in England, to examine the frequency and the difficulty with which these workers encountered their shortness of breath and potential implications for complications and compensation. He found that 17% of almost 3000 workers he surveyed reported respiratory symptoms, but interestingly found that much more were these reported in the earlier, dustier stages of the process and there were actually none in the spinning rooms, which were wet and where dust was absent.

He, however, having given this information to the government, which allowed the flax workers to receive industrial compensation, wanted to discover more because he had noticed that symptoms were rare in those who did not smoke cigarettes and common in those who did. He wondered if there was evidence of permanent damage having occurred and conducted a follow up study ten years later, but had insufficient numbers to make confident conclusions. So a further study was undertaken, after 20 years, of random samples of the population and this concluded that there was no excess respiratory disability among former textile workers. Lung damage was closely linked to cigarette smoking and Pemberton's work was timely and re-assuring.

He later—rather earlier—had undertaken work providing help feeding and tending the feet of the Jarrow marchers. Men from Jarrow marched 300 miles from North East England to London in 1936. Their local shipyard had closed and there was ensuing terrible poverty and hardship. They took their petition to parliament, but unfortunately the Prime Minister at the time, Stanley Baldwin, did not look or meet any of them. And conditions didn't improve until World War II brought employment to the area to relieve the poverty.

Pemberton was interested in people. His next contribution was a survey which formed the basis of successful nutritional policy of the war years. A diet that was considered the major contributor to the improved health of the UK population after 1939 and worthy of advocacy today. His research continued throughout his life and he had his last academic letter published just a week before his death aged 97 in 2010. His research included the study of general practice and this was informed by him acting as a locum to Will Pickles in Wensleydale in his holidays.

Pickles was an eminent GP and a founder president of the Royal College of General Practitioners. And it's of note that the owl who sits at the top of their crest – larger evidence here – doesn't just signify wisdom, but also indicates the fact that GPs get up at night and work the night hours as well as daytime! So thanks to (?? 0:34:27) for making that recognised!

When he came to Northern Ireland, in Belfast he set up shop, as it were, over in the Royal. But he got to know George Irwin, who was a keen, young General Practitioner, keen to promote general practice in Northern Ireland. And together, they managed to establish the Queens University Department of General Practice, the fifth only in the UK.

Professor Irwin's vision and dedication has fuelled GP's pioneering work in medical education. I was lucky enough to work in a practice which he and Bill Rowney and others established and I can vouch for the fact that they all taught me by example, and I know that Professor Irwin himself, on late Friday afternoon surgeries sought to inspire and desired to provide best quality care for all his patients.

Following his retirement in 1976, Pemberton continued to be active in painting, hiking, post-graduate training and research. And before he retired, his

interests had expanded to include coronary artery disease and the establishment in Belfast of a World Health Organisation Centre for multinational monitoring of cardiovascular disease, subsequently led by Professor Alan Evans, to whom I'm grateful for having shared some slides for this presentation.

Linked to Professor Pemberton through community studies of cardiac disease was Professor Frank Pantridge. He has been claimed as the father of emergency medicine in North America and locally. His pragmatic example in Northern Ireland and his recording of impeccable clinical data led to the North American's implementation of pre-hospital care. He established mobile coronary care in Belfast in 1966 and reported this in *The Lancet* and it was through his development of the portable cardiac defibrillator that made mobile coronary care feasible.

But it was his reporting of data in the 1980s, perfectly collected and again published in *The Lancet* that actually convinced people that this was a worthwhile enterprise.

He inspired the team he led and has been described as an extraordinary medical graduate, teacher and investigator. And his data was careful. This shows how the Ballymena population with the red squares had better cardiac outcomes than those in Omagh. The cardiac ambulance was provided in the Ballymena area, but initially not in the Omagh area. And this sort of information was spread around America. He was given credit.

Industry, however, wished to create equipment that would provide larger shocks than his. So his life was not without controversy, but he contended successfully that small shocks worked and bigger did not work better.

The potential for life saving by cardiac defibrillation was well-recognised both at home and abroad. The contribution of the textile industry has contributed over the years to promoting health in local communities. One of the Ulster Medical Society members is Michael Scott, but I don't think he's here tonight. I hope he doesn't mind me showing this youthful picture of him in the late 60s, when he was a cardiologist in Craigavon and he was presented here with a defibrillator by a young Tommy Reid in his factory.

The next link that I'm going to show you is this, which shows the graduation of Professor Pantridge as a doctor of medicine. It is at the same time as Molly McGeown graduated with second class honours and my mother, coincidentally, also graduated the same year. Molly McGeown was a lady of quality. She's probably not best remembered for the effective, careful epidemiological research which she did, but it's formed the basis for today's effective, efficient renal services across Northern Ireland. She pioneered renal dialysis and transplantation and, from the first transplant in Northern Ireland in 1968, Northern Ireland figures topped the UK league for survival. Her team kept careful records and the key difference between themselves and others was their sparing use of steroids at the stages of induction, anti-rejection and long-term maintenance.

The Belfast recipe for renal transplantation became known, used and respected worldwide. I could have spent the whole evening talking about her and the threads of her life's remarkable story, but I have had to restrain myself, you'll be glad to know. In her childhood, she suffered illness, often missing school for two months at a time. Her primary school was one room, two teachers and 35 pupils. However, she became ready to enter medicine at Queens, but unfortunately was rejected; she was four days too young.

However, she was undaunted. With the outbreak of war, her help for her widowed mother on their home farm disappeared, because he found a more lucrative job in the local munitions factory. So she took over, mucking out pigs, milking cows, farming sows and litters and loved it. But her younger brother wanted to be the farmer, so she became a medical student, taking blood, aspirating chests, performing lumbar punctures, minor operations and short anaesthesia, and becoming adept at talking to patients which she regarded as a great skill.

As a house-officer she worked with the surgeon, Cecil Woodside, who was a renal surgeon interested in kidney stones. She undertook an MD with distinction in pathology, but then planned to get married and was told, I don't have married women on my staff. She thought, well, I didn't really want to be a pathologist, I'd actually like to be a paediatrician; they might want me. She went to a professor of paediatrics who said, sorry, no better; there are plenty of young male doctors coming back from the war. So she got a job working for a PhD in biochemistry studying phosphate esters in milk.

She wished to return to clinical work having achieved that, and a letter in *Nature*, but the professor of medicine was unimpressed; she'd been away from clinical work for five years. She would not really be able to teach the students.

But she thought, if she could think of a suitable research project and get an MRC fellowship, she might get a job. So she did, and she did—on the subject of kidney disease. And over time, she developed expertise in managing electrolyte problems and wanted to set up transplantation in Belfast, but was told, forget it; you're too far away from where things happen. But she didn't give up.

The picture of the QUB quadrangle during the war showed the background against which she worked with the students, and probably helped to set her steel nerve and resilience against such obstacles as she found in her way. She had zeal, intelligence and dedication. Her supporters were surgeons, nurses and technicians. Her search for perfection characterised her work, as did her committed clinical care, accurate data collection and scientific approach to management.

She was one of Ulster's most distinguished physicians and clinical scientists. The first physician and the first woman to become an associate member of the British Society of Urological Surgeons, and she was awarded her CBE, amongst other honours. But

she was also a caring, loyal friend, an efficient housewife and a charming hostess, who I know took time to write thank you letters for reciprocal visits with friends. She had a long-standing bond with her fellow graduates and this is her graduation photograph. I'm not sure if you can identify her, but that's her there. And my mother is also there in the picture.

Now, just to finish off on our graduation story, this was part of the address given by Sir David Keir who was the Vice-Chancellor at the time, and he indicates what's expected from a professional. "We shouldn't aim to limit our contribution to society. I think the people I've mentioned today already have certainly led lives which stretch beyond medicine. If you notice", he said, "it's not enough just to be a good doctor. The man who is only isn't even." So he's advising us that we should do more than what we think is just our limited role.

And I think a good example of this is given in this obituary notice for Mr Megaw, who was the chief of staff at one stage in the City Hospital, but was an excellent and scrupulous surgeon. And he actually was one of the people who believed in Molly McGeown, and paved the way for transplantation services in Northern Ireland.

During the war, he was in the RAMC, as you can see, in North Africa and Italy. And there he is reputed to have written letters for wounded soldiers, transfused, operated and fed them. He was known as a quiet, wise man, an excellent golfer, gardener and a host who practised his Christian faith. I know he was also a skilful surgeon who came from Belfast to a small local hospital in Banbridge in 1956 and actually performed radical renal surgery successfully on a young textile worker, who was later to become my husband.

This letter written from a grateful patient to my mother at her retirement, shows some interesting things on how isolated incidents can be woven into a lifetime thread, the impact of which is hard to measure. Not many GPs today actually collect their patient on a cold, frosty morning and take them to the maternity ward, stay with them until the baby's born. And then, actually, I do know this family did not have a telephone, so she called to tell the husband the news on the way home. But then there was another night when another child was so ill with glandular fever and had to go to Purdysburn. The family said they'd never forget that night. And then there was another time when [someone?] was worried about something else and so it went on and on, tracking a thread through, that obviously no single incident could have completed the picture that the thread did in the end.

This is Tandragee. This is my home town now, about 100 years later. But 100 years earlier, in this town, was born Professor John Creery Ferguson, who was the first president of the Ulster Medical Society. And he entered Trinity in 1818, studied arts, took first place and obtained a gold medal, before repeating this performance in medicine. He worked in Paris with Laennec, the inventor of the stethoscope and Kergardec, the pioneer of foetal auscultation. He returned

to Dublin, and eventually in 1850 became the first professor of medicine in Queens.

Now, there's a lot more to be told about him, but again I'm not going to go into that tonight. But Professor Pinkerton did deliver an address to the Ulster Medical Society in 1980, and if any of you are interested it actually makes fascinating reading.

Tandragee street looking downwards looked like that in the 1914 war and looks like this today. The structure's there similarly, but things have changed. However, some things do not change quite so much with time, although we may not recognise it. Dr Samuel Black was born in 1764 in County Down and was a physician in Newry. He recognised the importance of observing, collecting and arranging important facts in determining the history of health or disease and the powers of remedies. At that time, he was able to describe angina as a sensation as would be excited by a hard lump of bread not sufficiently chewed sticking in the lower part of the oesophagus.

He also recorded pathological observation of ossified coronary arteries, and developed the ischaemic hypothesis of angina. He derived his theory that persons as you can see predisposed by a full and plethoric habit and those who indulged to a greater extent than was suitable for their tendency and their constitution, thereby alluding to the genetic component of heart disease. He also noticed that the male sex, the better ranks of society, psychologically stressed, those who lived luxuriously, took insufficient exercise and were obese were more likely to get heart attacks. And he noticed those who were exempt including the French.

What more do we know today? Well, today we recognise the same risk factors for coronary heart disease and still encourage people to be moderate in their diet and take more exercise. And I have some young colleague who, more recently, have published papers looking at the idea of physical activity. Finmore McGrady, Mark Tully and Nigel Hart are all doing their bit to try to promote this and they themselves set excellent examples in participating in sports.

Further research at the Northern Ireland Centre of Excellence for Public Health is also undertaking currently a major project in East Belfast, looking at trying to improve physical activity engagement amongst the population in Connswater through changes both in the innovations of trying to engage people and the provision of better environments for them.

However, in 1934, in the locality of Newry, there was an obvious endeavour to promote activity on at least one day, where there was a garden fete held. And here is the local GP, who was also JP, with the leader, who's the chairman, and in association with my father, who was a young keen minister in two local churches, they tried to encourage all sorts of activities, including the boys' race, the girls' race, the men's race, the ladies' race and the cycle race and a tug of war—the first between the Irish Free State and Northern Ireland. And they invited people to come in their thou-

sands! I'm not sure how many came that day. However, I do know that 1,000 young people gathered in the millennium, in July in the year of 2000 to erect this stone. They pulled up a 47 ton, 10m-high stone, with ropes that were made at Tandragee and there were commemorative stamps issued for the occasion. They obviously had quite a team of planners and organisers supporting them. Nevertheless, they did it.

The enterprise was supported by many different people, including a poet. So again for National Poetry Day, let me share with you how he set this idea in the context of the previous erection of stones of the Giant's Causeway. He said: *"We put it up with our bare hands in this smallholding. A home-made megalith. Hopes big immovable standing stone. A landmark for the lost, a windbreak for the destitute. For the unremembered and disappeared a headstone. And for all the people who pause beneath and lift their eyes, a signpost, pointing the way to the past and another way to paradise."*

T S Eliot had other words that try to encapsulate what I've been trying to say of the evening. Time present and past are both present in the future, and time future is contained in the past.

In finishing, let me remind you that linen is a cloth of the highest quality and has been recognised as thus for thousands of years. As a reminder of the importance of linen in Northern Ireland, the flax flower has been chosen as the logo for our Northern Ireland assembly. In biblical times, pharaoh honoured Joseph by arraying him in vestures of fine linen and putting a gold chain around his neck. When Joseph of Arimathaea wished to show honour to Christ's body, he wrapped it in a clean linen cloth. And I think the medical professionals of whom I've spoken briefly tonight have demonstrated a quality in their work and the other threads of their lives.

In finishing, I would just like to thank my family, friends, and all my colleagues who have helped me to prepare for this evening. From flax, families, communities and medical practice, I hope the tapestry created by our Ulster heritage will help us to remember that none of our lives is lived in total isolation and there are many threads that are intertwined in everyone's life and health. And recognition of this, I feel, should help us to provide the best quality holistic care for our patients.

Thank you.

Professor Brew Atkinson:

Thank you very much, Margaret. It's my pleasure to propose a formal vote of thanks after your lecture. Usually when we hear that somebody has spun us a great yarn, we don't really believe what they've said, but I think tonight you've spun us a great and a very true yarn. And it has taken us across so many facets of life in Ulster and it's been a marvellous account, and we've enjoyed it very much. Please join with me in thanking Margaret formally.

Can I just remind you of the next meeting, which is in the seminar room in the Health Sciences Building. Because we're still working at the Ulster Medical

Society Room, something I should have said earlier on is that we're very grateful for the great cooperation we've had with Queens. The dean, who will be the next incoming president, Professor Paddy Johnston, who's here, and Steven Duffield in Estates. They're working very hard at refurbishing the Whitla Building and I think when you come for a coffee with us now, you'll see the marvellous job that they've done in the MBC when you get your coffee in Clements just afterwards. It really is a very welcoming place for students and I think for our society now.

So the next meeting is in two weeks' time at 8 o'clock and is the Professor of Primary Care, Professor Debbie Sharp from Bristol University, and she's talking about improving quality in cancer care, the role of early diagnosis. And I'm sure that'll be a marvellous evening.

So thank you again everyone for coming. Thank you again from myself for the honour of being your president this past year and thank you again, Margaret; a lot of great work. I know you've worked very hard at this and beautifully delivered. We really appreciate it, and we hope you have a very successful year in office and that the Society goes from strength to strength.

Thank you very much.