

Presidential Address 2018

Inventing the future with science, professionalism and knowledge¹

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Let me first of all thank you all for coming today in spite of your busy schedules. Your presence here is a source of encouragement to me. Secondly, let me thank Dr S. D. Jayaratne, the immediate past-president and my former teacher from the North Colombo Medical College, for introducing me to this audience. Next I would like to thank the past-presidents of the College for inviting me to be the president, and the members of the College for electing me as their president for this year. I am deeply honoured by this election, but also humbled when I see the list of my predecessors. I fully appreciate that this is a huge responsibility, and I will do everything in my capacity to do justice to their legacy and to live up to your expectations. I also wish to thank all those who joined the council this year, and all those who pledged their support from outside the council; with your support, I hope to carry out my duty to everyone's satisfaction.

It is my great pleasure to offer a special Thank You to the immediate past-president Dr Jayaratne as well as his council, for the wonderful job they did last year. The work last year was especially formidable, as we celebrated our golden jubilee anniversary as one of the country's oldest specialist medical professional organisations. Your hard work and leadership has given our College a year that we can be proud of and one that we will remember for a long time. Sir, I congratulate you and thank you, on behalf of the College membership.

Changing times, quickening pace

In July last year, the Ceylon College of Physicians celebrated her fiftieth birthday with a simple gathering of a handful of people who came together in her office in Rajagiriya – much like how she began her journey exactly fifty years previously, when a small band of

eleven committed pioneers met in the consultants' lounge in the General Hospital (GH) Colombo and resolved to set up a College to promote “an academic postgraduate medical college for physicians, paediatricians and psychiatrists”. Two months later the College was formally inaugurated and the first council appointed, with Dr E. M. Wijerama as founder-President. A few weeks afterwards, the first council meeting was held at Dr Wijerama's residence on McCarthy Road, now known to us all as the Wijerama House on Wijerama Mawatha. One of the members of that original council, Dr Lakshman Ranasinghe, is with us in this year's council as well – this time around, as the Trustees' representative.

Today, the College has a lot to celebrate, and we are justifiably proud of our golden jubilee anniversary and our achievements.

But fifty years is a little speck in the fullness of time – we are reminded of this particularly this year, because the Royal College of Physicians of London, the oldest medical college of them all, is celebrating 500 years this year! But 500 years ago, when even William Shakespeare was not yet born, times were different. Today the world is much more interconnected, integrated and fast-paced, and the next fifty years can carry more challenges than even the past 500 years. Today, it is no longer enough to learn old ways and stick to them – we have to learn to face a future of uncertainty that is far more complex.

The medical profession became keenly aware of this fast-paced change quite early on. This is nicely epitomised by a famous statement to medical students made by Charles Sidney Burwell, who was the Dean of the Harvard Medical School during 1935-1949: “Half of what we are going to teach you is wrong, and half of it is right. Our problem is that we don't know which half is which”. To survive, we must learn not only the old ways, but also how to learn new ways to face challenges we know little about today.

¹ Based on the Presidential Address of the Ceylon College of Physicians, delivered at the ceremonial induction on January 05, 2018 at BMICH Colombo.



We belong today to a profession in transition, which is living in a world in transition. The pace of our lives has quickened. To help us all appreciate that quickening of pace, allow me to briefly recapitulate the history of modern medical education in our country. You will see that the history of our own College has played a significant part in this. Since this audience is not limited to physicians, or indeed even to the medical profession, I thought that such a recapitulation may be interesting to you all.

Modern medical education in Sri Lanka²

In the early nineteenth century, the medical needs of the colonial masters were initially looked after by British-qualified doctors who were employed by the military. These army surgeons started modern medical education in our country, when they conducted classes for local students informally, in the military hospitals. The students who reached proficiency went on to become medical assistants in hospitals that also served civilians. One of these, Dr E. F. Kelaart, went on to the UK for higher studies and obtained the MD (Edinburgh) in 1841, the first Ceylonese to hold a postgraduate medical qualification. But today he is celebrated and more famous not as a medical doctor, but as a naturalist – or a zoologist, as we would call him today – which should give us a glimpse of the extent to which we have metamorphosed and specialised!

By 1844, there were enough overseas-qualified doctors here, both foreigners and locals, to start the Colonial Medical Library – now known as the Sri Lanka Medical Library, currently the oldest standing medical library in Asia, hosted in the ground floor of the Wijerama House itself, as required by Dr Wijerama himself in his Will.

The Colombo Academy (now Royal College), which was established in 1835, was beginning to offer the London Matriculation, and students who passed this went to universities in Calcutta and London³. Not surprisingly then, the first, formal arrangement for medical education was to send our students to the

Bengal Medical College in Calcutta, also established in 1835 and currently known as Medical College Kolkata. One of these early graduates, Dr E. L. Koch, was able to secure the gold medal there – today he is immortalised by the famous Koch Memorial Tower down Kynsey Road. These doctors continued in the tradition of obtaining their postgraduate qualifications in Scotland, especially the MD (St. Andrews).

The first modern medical school in Ceylon itself was the Mission Medical School, at Manipay in Jaffna, established in 1848 by Dr S.F. Green, an American missionary. Its graduates found employment not only in Ceylon but also in India and Malaya. Between 1848 and 1879, this medical school produced 87 doctors, about half of them in the English medium and half in the Tamil medium. They were pioneers in popularising western medicine among the people of Jaffna and “weaning them away from their indigenous methods”. But soon after Dr Green left Ceylon and returned to USA in 1873, the school sadly folded up.

In the meantime in Colombo, one of the Bengal-qualified doctors, Dr James Loos, now working for the colonial government, was entrusted with the task of investigating the depopulation of the Vanni in the 1860s. He attributed this in his report to three diseases: malaria, cholera and parangi. But more importantly for us today, he was impressed by the fact that these epidemics had had much less effect in the Jaffna peninsula itself, and he realised, that this owed much to the work carried out by the doctors who had qualified from Dr Green’s Mission Medical School, especially in their success in weaning people away from the so-called “indigenous methods”. He therefore strongly recommended setting up a local medical school in the same model, so that the same good work could be carried out in the other areas of the country. Fortunately, the colonial government did not ignore his recommendation, even though it had little to do with the subject that he was appointed to study – perhaps a far cry from contemporary governments, when even the recommendations on the subject itself are merrily ignored.

Thus was born the Colombo Medical School in 1870. Its first three principals were graduates of the Bengal Medical School, with Dr Loos himself as the first, and the gold medal-winning Dr Koch as the second. In 1880 it was elevated as the Ceylon Medical College. Many of us rightly consider it as the mother of all medical schools in our country – and by that same token, I suppose we should then consider the Bengal Medical School as their grandmother.

From this time until after our Independence was a time of consolidation. Ceylonese doctors continued

² I gratefully acknowledge *A History of Medicine in Sri Lanka: From the Earliest Times to 1948* by Dr C.G. Uragoda, published by Sri Lanka Medical Association in 1987, for invaluable information from the nineteenth century up to 1948.

³ Based on Professor G.P. Malalasekera’s contribution to *Education in Ceylon: A Centenary Volume* (volume 3, chapter 73) published by the Ministry of Education and Cultural Affairs in 1969, where he described the Colombo Academy as “the focal point” higher education in Ceylon at this time.

to obtain their postgraduate education in the UK, with a notable example being Sir Marcus Fernando, a gold medalist at both MBBS and MD examinations in London, the first consultant physician appointed to the GH Colombo, the founder-director of the Bacteriological Institute (now known as the Medical Research Institute) and one of the pioneers who agitated for a national university for our country. In 1942 the Ceylon Medical College became the Faculty of Medicine of the University of Ceylon, and its licentiate became the MBBS degrees. Soon afterwards it began offering postgraduate diplomas, such as the Diploma in Tropical Medicine and Hygiene, modelled after the DTM&H (London).

The next momentous occasion in this story came in 1959, when Professor K. Rajasuriya, Professor of Medicine at the Faculty of Medicine, University of Ceylon, commenced the MD (Ceylon) degree – the first postgraduate medical degree in our country. Professor Rajasuriya modelled it as a combination of two exams: the MD (Lond) and MRCP (Lond) examinations. And he invited Lord Rosenheim, chief examiner of the MRCP (Lond), to be an external examiner. We can see why he did that: He wanted to ensure that no one who passed the MD (Cey) would fail in either the MD (Lond) or the MRCP (Lond), because on this point would hinge the prestige of the nascent MD (Cey) that could, one day, come to its own terms in a country that still prided itself on British-style education. Well, it didn't take long for his dream to be realised. It was not long before Lord Rosenheim declared thus: "Your degree of MD is awarded on the results of a very searching examination, the standards not differing from the London Membership" – those days, the MRCP (Lond) was an exit examination, not an entry examination like it is now – "We place Australia, New Zealand and Ceylon on the top bracket. I hold your MD in very high esteem"⁴.

It was at this point in time that the eleven pioneers met in Colombo and set up our College. Among them was Professor Rajasuriya himself, who went on to become the second president of our College.

There was a very special reason why the College came into existence exactly at this time⁵. This was a

⁴ Gunaratne M (1997). *Journal of the Ceylon College of Physicians* **30**: 27.

⁵ This aspect was not part of the Presidential Address on January 05, 2018, but was added to this paper following a communication by Dr Channa Wijesinghe (founder-joint secretary of the College) when he met the council on June 08, 2018. Its importance is self-evident and I believe it is justifiable to include it here, so that what Dr Wijesinghe recollected is documented for posterity.

time of faltering economic fortunes for our country, as the post-colonial, import-export economy had begun to flounder in the 1960s due to falling exports, an expanding population and increasingly costly, populist policies of successive governments. As a result, the foreign exchange allowance given to Ceylonese doctors to go abroad for their postgraduate training was drastically curtailed and even its complete halt was being discussed among political circles. This posed a threat not only to doctors' professional career paths but also to the maintenance of the internationally recognised standards that our specialists had achieved by this time – it was, in contrast to today, a time when Singaporeans travelled to Ceylon to obtain world-class medical care at the GH Colombo! The pioneers of our College were making a precautionary response to this threat, so that if overseas postgraduate training was ever completely stopped, the College could do whatever it can to maintain specialists' standards. The College, as you can see, thus always had postgraduate training and specialist standards foremost in its mind.

After the College was formed, our pioneers did not rest for even a bit⁶. Not surprisingly, our College since then has been closely entwined with postgraduate education, continuing professional development (CPD) and developing finer specialisation in our country, and her contribution is to my mind salutary, foundational and indispensable. It is therefore with much pride that I wish to record here at least part of it (see Box 1).

We are thus at fifty years now. At the start, our College not only looked after the professional interests of physicians, but also that of pathologists, paediatricians and psychiatrists, who didn't yet have their own professional colleges. When the finer specialties of General Medicine developed over time, the College welcomed them into her fold and nurtured and encouraged them by providing much-needed, initial intellectual and infrastructural support. When the Institute of Postgraduate Medicine was established in the 1970s and its successor the Postgraduate Institute of Medicine (PGIM) in 1980, the College became the natural academic partner to our country's own postgraduate training program in Medicine. Ours is the first medical professional college incorporated by

⁶ I gratefully acknowledge *Ceylon College of Physicians: Fifty Years of Excellence* compiled and edited by Professor Chandanie Wanigatunge, Dr Dinithi Fernando and Dr Nirmala Wijekoon and published by CCP in 2017, for invaluable information on the activities of the College in its first fifty years.

Box 1. The contributions of our College to postgraduate education, CPD and finer specialties

Year	Milestones
1968	The first Foundation Lecture and the first scientific meeting.
1969	The first subcommittee on postgraduate medical education. The commencement of the College journal, as <i>Transactions of the Ceylon College of Physicians</i> .
1970	The first oration: Cyril Fernando Memorial Oration.
1971	In collaboration with the Royal College of Physicians of London, the MRCP (Lond) Part 1 examination was held in Colombo – the first time it was held outside the UK. Since the number of candidates who could sit had to be limited, the College conducted a preparatory course and exam, and only those who passed this were allowed to sit the MRCP Part 1 examination. As a result, the pass rate at this examination (48/49) was very high and is still the world record. The College also commenced a preparatory course for the MD (Cey).
1972	The College participated in the Advisory Committee on Postgraduate Education.
1974-1980	The College worked closely with the Institute of Postgraduate Medicine (IPGM), which took over the conducting of the MD (Cey) and renamed it MD (Sri Lanka), as well as the conducting of the MRCP (Lond) Part 1.
1979	Seminars on finer specialties were started, and the College took a lead role in encouraging the setting up of finer specialties.
1980 to date	The College worked closely with the Postgraduate Institute of Medicine (PGIM), which was formed as an institute of the University of Colombo, which now awarded the MD, renamed MD (Col).
1984	The College's recommendation to the PGIM Board of Management that "... a minimum of one year's overseas training at an approved centre is an absolute necessity of consultant training" was accepted, and continues to this day.
1999	The College recommenced holding the MRCP (UK) Part 1 examination, which the PGIM had discontinued. (By now, the MRCP was awarded by the Federation of the Royal Colleges of Physicians of UK, and had been renamed MRCP [UK].)
2002	The College commenced holding the MRCP (UK) Part 2 theory paper in Sri Lanka.
2010	During the annual academic sessions, the College conducted a workshop with the Royal College of Physicians of London on 'Training the trainers', which ignited the changes that led to the new MD (Medicine) Prospectus of the PGIM, which has now been in place since 2016. This included inclusion of the training portfolio and workplace based assessment.
2016	The College commenced holding the MRCP (UK) PACES examination in Sri Lanka.

Parliament: this happened in 1971, hence we are legally stuck with the word 'Ceylon' even after the country was renamed Sri Lanka in 1972. She continues to maintain her close traditional links with overseas professional colleges, which provide a crucial link with global trends and practices. Today she has grown into a truly national, internationally recognised professional organisation that connects up the local with the global. Today, it is with great pride that we wear our College lapel pins and ties.

We are justifiably proud of the many famous names that adorn the lists of our past members, fellows and presidents. But our College is what she is today because of her collectivity: Her achievements are the achievements of the many – while they were guided, inspired and led by those in front. Our magic potion has been the consummating of the One and the All with an impeccable finesse.

A world in transition

But as I said before, we are a profession in transition, living in a world in transition. The profession I have in mind here is not merely our College, but rather the whole of the medical profession – including clinical, laboratory, imaging, community and administrative specialties; the curative, preventive and research communities. But before we try to understand why I believe that the profession is in transition, let us see why and in what way our world itself is in transition.

Our world is changing in many ways (see Box 2), and we are heading towards a tragic destination. How long can business-as-usual continue before tragedy strikes?

Let me share with you the famous statement by Lester Brown, one-time vice-president of Exxon and subsequently founder of the World Watch Institute: "Socialism collapsed because it did not allow the market to tell the economic truth and capitalism may collapse because it does not allow the market to tell the ecological truth". Adam Smith, when writing his book *Wealth of Nations* in the eighteenth century, simply took it for granted that the ecology had enough capacity to absorb our consumption and waste – an assumption that was true with the technology that existed then. But now this is clearly not so, and yet we continue to read his book as gospel truth – and it is we who are at fault, not him.

But to my mind, our problem is not merely these momentous changes. Unfortunately, even the *solutions* that the global elite have proposed can also become problems themselves.

What are the solutions that the global elite propose? Their tools are highly technological, expensive tools such as information and communication technology, robotics and artificial intelligence, and molecular biology and biotechnology. Their strategies seem to

Box 2: A world in transition

- *Climate change*, leading to longer droughts, heavier floods, more natural disasters and more commonplace crop failures.
- *Environment degradation*, with deterioration of air, water, top soil, biodiversity and forests, not to mention holes in the ozone layer, acidifying oceans and possibly even nuclear waste.
- *Expanding population*, with a peak we still haven't reached, and an increase in the proportion of aged people.
- *Untrammled consumerism*, which is set to increase environmental exploitation even more.
- *Increasing socio-economic inequity*.
- *More violence and wars*.
- *More emergence of new disease*, especially infectious disease and the psychological problems of alienation, stress and dissatisfaction.

be in geoeengineering, fusion energy, surveillance society, high throughput technology, etc. – solutions that are focused more on producing profits than ameliorating the problems. To promote their acceptance and profits, more emphasis is placed on individualism over collectivism, security over peace, rights over duties, individuality over egalitarianism, certification over education and rule of law over justice.

These issues will affect humanity's future health and healthcare, both globally and locally, because health is inextricably intertwined with our physical, biological and social environments, and healthcare is intertwined with our general societal response.

Let me give you one familiar, real example. We were taught that the cause of tuberculosis is the droplet infection by *Mycobacterium tuberculosis*. But what causes the droplet infection? Overcrowding, etc. And what causes that? The Industrial Revolution in the eighteenth century propelled humanity into uncontrolled urbanisation and pauperisation, that created the overcrowded, undernourished cities with slums, which in turn fuelled tuberculosis, rheumatic fever, scarlet fever, diphtheria, cholera and dysentery. It is only when we trace the tuberculosis pandemic backwards from the simplistic notion of a droplet infection to these mammoth events that we realise that all this is connected to social and economic policies at macro-level – what is called the political economy of health. What was driving these calamities then is much the same as what we today call the triple helix: The government, the intelligentsia and the industry. The current policies I listed earlier too will have far-reaching consequences that doctors will have to deal with in their OPDs, clinics and wards in the future. That is why they are important to us: They determine the challenges we will face as a profession.

This is too important to be left in the hands of those who command the macro-picture, often for their own short-term benefits at the expense of the long-term weal of society. We, as the leading profession in society, must get interested and involved.

Let us remind ourselves of a famous saying of the brilliant nineteenth-century physician, Rudolf Virchow: "Medicine is a social science, and politics is nothing but medicine on a large scale". (Here, of course, the word 'politics' is used in the broad sense, as in Aristotle's 'Politics', not in the narrow, 'party-politics' sense that we are used to.)

We are ever-willing to complain about the so-called 'bad system'. If we do not become conversant and engaged with the broader issues, the frustrations

of future doctors about the so-called 'bad system' will be even more than ours.

Beyond the biomedical model

There is a reason why Virchow's wisdom got lost along the way. The profession, in its endeavour to help fellow-human beings, became too narrowly focused on the human body. This is now called the 'biomedical model': a theoretical model where the human body is considered the site of our study and work, based on the assumption that it is possible to extract it out of its mind and surrounding environment and solve its problems without reference to them. But of course we all know from our experience that we can't do that – our patients' physical health and disease are closely entwined with their mind and their environment. It is this appreciation that has given rise to the currently favoured model, the 'biopsychosocial model', where our focus extends from the body to the psychological and social environments – a rediscovery of Virchow's wisdom, as it were.

But if we change our model, we must change our methods and tools too. It is no longer enough that we study the human body using natural scientific methods. We must extend our study beyond the body and also become familiar with the methods of the social sciences and the humanities.

As our societies change rapidly, so will our diseases, their solutions and even the way we practice medicine. So, our profession is in transition too. Let us ponder then: Should we passively accept the transition and simply adjust ourselves to it, or should we actively *shape* that transition to something more wholesome to our society and to the profession? It is important to remember that even the solutions that come our way are not necessarily the best, or sometimes even appropriate. It is not enough that we read and understand what reaches us – we must critically evaluate it too.

I will tell you a closer-home example to drive the point⁷. This story relates to Dr Chris Uragoda, who was the president of our College in 1982. In the early 1970s, a certain international body had advised our health authorities to stop treating sputum-negative

⁷ I gratefully acknowledge the late Dr D.N. Atukorala, who was the president of our College in 1989, for relating this story to me (among many other stories!). I have withheld the name of the "international body" involved.

pulmonary tuberculosis cases, on the grounds that this segment of cases was apparently epidemiologically unimportant. Today, no one in his or her right mind would dare give such flippant advice. Thankfully, Dr Uragoda, who at that time was our leading chest physician, had respectfully declined that advice – we can just imagine how much worse our tuberculosis situation would have been today, otherwise!

The challenge of understanding our problems and critically evaluating the solutions is not one that physicians can face alone, because problems and solutions are seldom found in water-tight compartments in different disciplines or sectors. In fact, it is not even a challenge that the medical profession itself can face alone. It is one for the whole *society* to face – a society represented by this august audience. But of course, today we are also meeting here as a profession, and I would like to urge all our colleagues – from all fields of work – to resolve to help our society to face this challenge successfully. We must successfully face a transition to the future, in a world in transition, with care and circumspection. The medical profession must take the leadership in guiding our society in this endeavour.

Virchow in his time, of course, could afford to approach this somewhat paternalistically, but in today's context we must approach it, instead, from the position of a profession with its pact with the wider society. So we must take care about two things. Firstly, our knowledge must be objective and scientific, and we must acquire that knowledge through specialised education and training. The bedrock of a profession is science, and the guarantee of its value lies in the vigour of professional training. Secondly, our advice must be given in the interest of those we seek to serve and the larger public. In other words, it must be entirely disinterested advice. Simply put, we must uphold the importance of science and maintain the highest professional standards.

But, we have a problem lurking beyond our view. Science at present seems to have taken a back seat and technology is spiraling out of control, exactly as the triple helix would want it. Our technology may be cutting-edge, but our patients and people have become more confused, disappointed, dismissive and distanced than ever before. This is not because they have rejected science. In fact, nowadays even non-science is packaged in scientific jargon and technologised packages, to produce the pseudoscience of 'borderline products', 'natural remedies' and so on.

Why is this happening? To understand this, we must not only understand science well, but also understand people better. If we don't, we will be more compelled to wrap our science and non-science together and fall right into the trap of pseudoscience. A profession must take pride in its scientific basis – a profession that forfeits science to populism loses its scientific legitimacy and, hence, professional identity and worth.

But how do we understand people better? How do we better understand what ticks them in society? To do this, we must acquire not only *declarative knowledge* and *procedural knowledge* that we learn during our medical training, but also *conditional knowledge* that enables us to understand the circumstances in which we work. In general, our training and CPD are very strong on the first two, but perhaps not so much on the third.

Much of this can be learned through an alliance with the humanities and the social sciences, and I believe that we can make the medical profession more attuned to the needs of our society by linking up with them. Maybe our preoccupation with quantitative research, publications, citations and so on has downplayed the importance of learning by *doing* – we seem to emphasise learning by *counting*. Maybe we should rediscover the romance of learning that comes from actually doing things – the sort of learning that Dr Uragoda possessed (along with his extensive research publication record too!), when he had to face that bad advice coming from that international body.

Science yields knowledge, which in turn helps us understand the reality around us and to deal with it. Science is like the oil in the lamp of learning: It energises knowledge. Knowledge is like the light that comes forth from the lamp: It illuminates the world. And our profession is like the lamp itself: It stands resolutely and utilises science to bring forth knowledge. Let us guard, cherish, refine and invigorate that science. Let us enrich, ennoble and focus that knowledge to illuminate the world around us. Let us stand as a profession with conscience, dignity and pride to give leadership and guidance to society, like the upright lamp. Our society may not *want* us to do this – they seldom want anything more than a quick cure for a cold or a fever – but we know that they *need* it. Because, as I said, we are a profession in transition, in a world in transition.

Inventing the future

If we go back to our own beginnings, this is in fact what our pioneers had done – all of them: the

British military doctors, the Bengali-qualified Ceylonese doctors, Dr Green's products from Manipay, Professor Rajasuriya, and the CCP from the late 1960s. They identified the major, momentous changes in their own world and prepared themselves and their profession for the future. They realised the need and value in making the quantum leap from being medical graduates to being medical specialists, from being a collection of doctors to being a profession.

Now, facing the next fifty years of our existence, we too have a quantum leap to make: from being a profession that merely prescribes remedies to sick individuals to being an intellectual force that sees the undercurrents that create the sickness itself. We must take the quantum leap from merely glossing over the waves on the surface of the sea, to understanding the ocean currents that flow beneath. We have all we need to do this: science is our strength, professionalism is our guide, and knowledge is our toolkit. In fact, perhaps only we have everything that is needed to do this.

Our pioneers didn't wait until the ocean currents carried them away. They anticipated them and even changed their course. They practiced what computer scientist Alan Kay said about predicting the future: "The best way to predict the future is to invent it". They invented their future – which is our present.

I think I am now ready to reveal to you our theme for this year. Let us get ready to make the transition to the future. Let us understand the trends that determine our challenges of tomorrow. Let us shape and invent the future, with science as our strength, professionalism as our guide, knowledge as our toolkit. Our theme for this year is: ***"Inventing the future: with Science – Professionalism – Knowledge"***.

To my colleagues from the Ceylon College of Physicians who have so generously honoured me today, let me say that this year, I hope to help the College to face that transition into the future. And I do hope that you would give your fullest support to it.