

Presidential address: Annual Academic Sessions of College of Pathologists of Sri Lanka 2017

Good evening ladies & gentlemen,

The College of Pathologists of Sri Lanka has bestowed a great honour on me by electing me as its President. It is with great humility and a sense of responsibility that I accept this post and thank the members for electing me. It is indeed an honour and a privilege to be the President of this prestigious association. The illustrious array of past presidents with their respective councils have steered this organization to great heights.

I too pledge to serve the college to the best of my ability and do my utmost to be worthy of the trust that has been placed in me. I will fulfil the objectives and aspirations of our college.

The theme I have chosen is,

“Evolution of Pathology; from autopsy room to the era of evidence based medicine”

Pathology is literally the scientific study of disease. It is central to the whole practice of evidence based medicine. More specifically it is a bridging discipline involving both basic science and clinical practice and is devoted to the study of structural and functional changes in cells, tissues and organs that underlie disease processes. Pathology explains the basis for the signs and symptoms and provides a sound foundation for rational clinical care and therapy.

“Your practice of medicine will be as good as your understanding of pathology”
- Sir William Osler -

Even centuries ago the physicians of the time understood the importance and relevance of pathology to clinical medicine. Pathologists diagnose diseases by examining tissues,

organs, body fluids and autopsy specimens. Pathology addresses four main components of disease: cause, mechanisms of development (pathogenesis), structural alterations of cells (morphologic changes), and the consequences of changes (clinical manifestations).

Earliest concept of disease

Centuries ago in the prehistoric times, diseases were thought to be an act of demons or other supernatural powers. The earliest concept of disease understood by the patient and the healer was that disease was the outcome of a “curse from God” or infliction of evil spirits or divine displeasure. Treatment was directed towards pleasing God through prayers and sacrifices or eliminating such evil spirit by faith healers.

“Father of Medicine” – Hippocrates

Real practice of medicine began with the great Greek clinical genius. Undoubtedly the most outstanding individual in the history of medicine was Hippocrates, an ancient Greek Physician who practiced and taught medicine in the 4th century BC. He is referred to as the father of medicine. He is recognized as one of the first physicians to reject the concept of illnesses being caused by superstitions and supernatural or divine forces. He separated the discipline of medicine from religion believing and arguing that diseases were not punishments inflicted by god. He brought forward the theory that diseases are caused by environmental, dietary or inherited factors. Hippocrates introduced ethical concepts in to the practice of medicine and is revered by medical professionals who to this day pledge the “Hippocratic oath” when they enter into the practice of medicine.

With further landmark discoveries in the



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field of medicine, there was better understanding of disease categories, patterns of disease and causative factors. The sequence of events that have taken place in the past and the various concepts that have been put forth, led to the emergence of different specialties in medicine.

“Pathology had its beginning on the autopsy table”

-Professor William Boyd-

Autopsy, which originated from a Greek word “seeing with one’s own eyes” includes dissection and examination of a dead body to determine the cause of death. Pathology made a beginning from pathologic study of tissues made available at autopsy. Up to the middle of the 19th century, the correlation of clinical manifestations with gross pathological findings at autopsy remained the major method of the study of disease. Hence it was a retrospective science, which aimed to explain the cause of death.

Father of Modern Pathology (1821 – 1902)

-Rudolf Virchow-

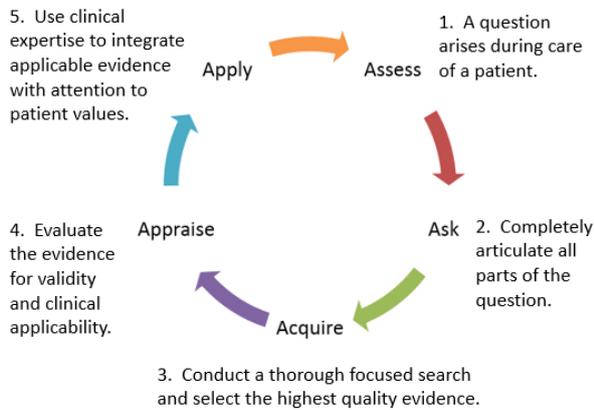
He was a great German Scientist, referred to as the father of modern pathology. He is credited for the beginning of microscopic examination of diseased tissue. He put forward the concept that diseases cause changes at the cellular level giving rise to structural and functional alterations. With these landmark discoveries Pathology started emerging as a diagnostic discipline in the latter half of the 19th century. He proposed that cells divide to form new cells. He is also recognized as the father of cellular pathology. Thus a sound foundation for diagnostic pathology was laid and this was supported and promoted by numerous other contemporary scientists.

It was around this time that scientists discovered that the knowledge and skills gained by examining postmortem specimens could be applied to surgical biopsies. And thus emerged the discipline of surgical pathology. Few other landmark discoveries helped in further evolution of pathology. The strides made in the latter half of the 20th century

have made it possible to study disease by immunohistochemical methods and at the molecular level, in order to provide **evidence based**, objective diagnoses which will enable clinicians to initiate the appropriate treatments.

Evidence-based medicine, whose philosophical origins extend back to mid-19th century and earlier, is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available clinical evidence from systematic research. By individual clinical expertise we mean the proficiency and judgment that we individual clinicians acquire through clinical experience and clinical practice. Increased expertise is reflected in many ways, but especially in more effective and efficient diagnosis and in the more thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences in making clinical decisions about their care. By best available external clinical evidence, we mean clinically relevant research, often from the basic sciences of medicine, but especially from patient centered clinical research into the accuracy and precision of diagnostic tests, the power of prognostic markers, and the efficacy and safety of therapeutic, rehabilitative, and preventive regimens. External clinical evidence both invalidates previously accepted diagnostic tests and treatment and replaces them with new ones that are more powerful, more accurate, more efficacious, and safer. Good doctors use both individual clinical expertise and the best available external evidence, and neither alone is enough. Without current best external evidence, practice risks becoming rapidly out of date, to the detriment of patients. The practice of evidence-based medicine is a process of life-long, self-directed learning in which caring for our own patients creates the need for clinically important information about diagnosis, prognosis, therapy, and other clinical and health care issues, and in which we (1) convert these information needs into

answerable questions; (2) track down, with maximum efficiency, the best evidence with which to answer them (whether from the clinical examination, the diagnostic laboratory from research evidence, or other sources); (3) critically appraise that evidence for its validity (closeness to the truth) and usefulness (4) integrate this appraisal with our clinical expertise and apply it in practice; and (5) evaluate our performance.



The EBM-oriented clinicians of tomorrow have three tasks:

- a) to use evidence summaries in clinical practice;
- b) to help develop and update selected systematic reviews or evidence-based guidelines in their area of expertise;
- c) to enroll patients in studies of treatment, diagnosis and prognosis on which medical practice is based.

EBM suggests that you target your reading to issues related to specific patient problems. Developing clinical questions and then searching current data bases may be a more productive way of getting up to date information. Evidence-based medicine “converts the abstract exercise of reading and appraising the literature into the pragmatic process of using the literature to benefit individual patients while simultaneously expanding the clinician’s knowledge base.”

With the aim of uplifting laboratory services of the country and strengthening the facilities for the practice of evidence based medicine island wide, a master plan titled “National

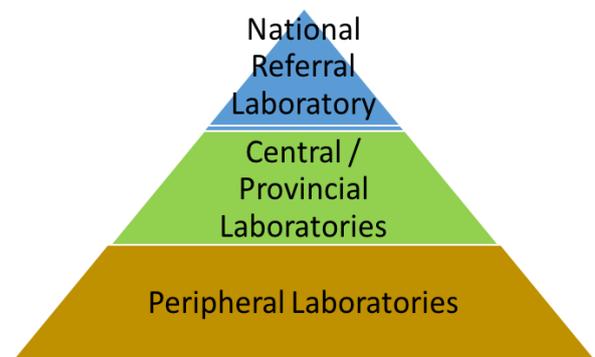
Strategic Laboratory Plan; Rational Health Care Delivery System – 2017” was formulated by the College of Pathologists of Sri Lanka and forwarded to the Ministry of Health, Nutrition & Indigenous



Medicine in June 2017. The master plan included three tiers, beginning from the basic pathology tests and gradually advancing towards more sophisticated

facilities such as molecular pathology, immunofluorescence studies and electron microscopy.

Proposed tiered system for feasible, cost effective and sustainable development of the National Laboratory System, has been subsequently accepted by the Ministry of Health, Nutrition & Indigenous Medicine.



Province	Population density/km ² Census 2012	Provincial Laboratory	
		Phase I	Phase II
Western Province	1628	NHSL TH /CSTH TH /NCTH	Kalutara
Central	461	Kandy	
Southern	460	Karapitiya	Matara
Sabaragamuwa	392	Rathnapura	Kegalle
Uva	152	Badulla	Monaragala
Eastern	166	Batticaloa	Trincomalee
North Central	130	Anuradhapura	Polonnaruwa
Northern	128	Jaffna	Vavuniya
Wayamba	317	Kurunegala	Chilaw

The proposal intends to provide quality laboratory services in all the provinces thus maintaining equity in the delivery of histopathology services. Minimum of one laboratory will be identified in each of the provinces, to be developed as a central provincial lab with immunohistochemistry, immunofluorescence and frozen section facilities in addition to routine histopathology and cytopathology services. National referral laboratory will be at the apex of the pyramid and will function to provide advanced facilities such as molecular pathology and electron microscopy.

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23rd August 2017, Colombo, Sri Lanka

“We will work as a team across boundaries to fulfil the aspirations of the college and bring the pathology services of our country to great heights”

*“ Ask not what your country can do for you;
ask what you can do for your country”*

John Fitzgerald Kennedy (inaugural speech in 1961)

Thank you