

Report on the 53rd Ten Day International Teaching Seminar on Cardiovascular Disease Epidemiology and Prevention, Colombo, Sri Lanka, , October 14 – October 25 2024

Colombo, a city steeped in heritage and lush tropical greenery, was where fellows and faculty were welcomed warmly by our hosts for the 53rd Ten Day International Teaching Seminar. This was the first time the seminar had been held in Sri Lanka and the first visit to the country for most of the fellows and faculty.

Professor Asita de Silva, Director of the Clinical Trials Unit and chair of Clinical Pharmacology at the University of Kelaniya welcomed seminar participants. Sri Lanka as many other countries is going through health transitions where chronic diseases such as heart disease and stroke are increasing with concurrent challenges still of infectious diseases and maternal and reproductive health. Urgent and sustained efforts are needed to control this epidemic. The 53rd Ten Day Seminar was a continuation of efforts to build capacity in the epidemiology and prevention of cardiovascular diseases. We also congratulated Professor Dorairaj Prabhakaran on the welcome news that he had just been elected as President-Elect of the World Heart Federation, continuing the strong association with the World Heart Federation with the presence also of Professor Fausto Pinto, past president of the World Heart Federation, on the seminar faculty.

The daily seminar programme includes four one-hour lectures. The lectures start off with the principles of epidemiology including concepts and methods of investigation, inference, followed by the major findings of cardiovascular epidemiology, and then the application and implementation of these findings to goals, strategies, and assessment of cardiovascular disease prevention programmes. A highlight of each seminar is the focus on research particularly relevant to the host country and this year was no exception with a lecture on clinical trials by Professor de Silva with inspiring examples of the particular challenges in countries such as Sri Lanka and how they were addressed, with lessons for others globally. Coincidentally, a clinical trial of a single pill combination of three low dose hypertensive drugs for hypertension control with participants from 7 countries published in the Lancet with authors including Professors de Silva and Poulter illustrated the value of international collaborative research. We were also fortunate to have Professor Fausto Pinto giving us a perspective on the World Heart Observatory, a knowledge hub for global data on cardiovascular disease conditions, determinants and policy responses.

A concurrent series of lectures on biostatistics aims to provide an introduction to key biostatistical concepts and methods used in epidemiologic research, covering issues such as sample size and power calculations, multiple regression and survival analyses.

A central focus of the seminar is the small group work. Fellows are allocated to four groups which meet daily with faculty facilitators. The small groups encourage more active individual participation and help fellows to work together to address the practical problems of doing research to answer real questions. In the first week, group work aimed to consolidate material in the lectures with practical exercises using data to examine concepts such as normal distributions, an activity involving counting numbers in bags of chocolate sweets, and various measures of risk. This was followed by a series of reviews of the literature using published papers with different study designs discussed in the preceding lectures. These illustrated the use of various study designs and their strengths and limitations, as well as introducing topics in cardiovascular disease. A cross-sectional survey examined the prevalence of and correlates of dyslipidemia in Sri Lanka. A case control study of risk factors for stroke in Ghana and Nigeria illustrated the challenges in identifying cases and selection of controls. A cohort study explored the relationship between periodontal disease, regular dental care use and incident ischemic stroke. raising issues about measurement of exposures and outcomes in large population studies. A randomized trial of semaglutide and cardiovascular outcomes in obesity without diabetes stimulated discussion about trial designs as well as debate about the increasingly widespread use of GLP-1 receptor agonists.

In the second week, the groups are assigned to prepare a study protocol using different study designs: cross sectional, case control, prospective and trial. One aim is to highlight the strengths and limitations of different study designs. Participants learn to work as a team to confront the practical problems of doing research to answer real questions. The question this year was: "Does dietary coconut oil increase risk of coronary heart disease?" The groups took on the challenges of such a topic as to how dietary coconut oil might be defined and measured, how coronary heart disease might be ascertained and defined and what populations in which to conduct such studies. Group discussions continued into the afternoon breaks and late night sessions with intense arguments for and against different options. On the final day of the seminar, each group presented its proposed study design protocol to the others with spirited exchange of criticisms and comments and defence of choices made. The range of approaches as to how dietary coconut oil might be assessed, and what populations might be studied, illustrated the possibilities of epidemiologic studies and potential relevance for clinical and public health policy. This was followed by a final summing up of some of the major issues in epidemiological research. The quality of the presentations demonstrated how much had been achieved in a relatively short time. Many of the questions and study designs discussed in previous seminars have been subsequently developed by fellows into full research projects, often with international collaboration with other seminar fellows and plans were also being made this time to follow up some ideas which might be particularly relevant to Sri Lanka as well as worldwide.

Our hosts ensured that we had a glimpse of the rich culture and history of Colombo with a tour of the city viewing some of the important landmarks including the Colombo Lighthouse, the scenic Beira Lake in the heart of the city, the Galle Face promenade with cannons of World War II, the Lotus Tower and Independence Square where many historical events had taken place. A temple visit with eclectic icons demonstrated how though Buddhism was the main religion in Sri Lanka, the emphasis was on religious tolerance and freedom incorporating other main religions including Islam, Hinduism and Christianity. A particular highlight was a visit to the magnificent National Museum with a vast collection covering Sri Lanka's cultural and natural heritage with artefacts from ancient civilisations to modern day. We feasted on traditional Sri Lankan culinary flavours "Thunapaha" surrounded by beautiful scenic waterways and entertained by a dance performance. At the weekend some intrepid fellows climbed the Sigiriya Rock Fortress, the site of an ancient palace and Buddhist monastery while others visited Galle, with unique architectural styles in the historical fortified city as well as golden beaches.

The fifty third seminar has continued to build on the tradition of this event, which aims to accomplish not just the training of an international corps of people working on the prevention of cardiovascular disease and improvement of health for all but the making of bridges across countries and cultures through peaceful international scientific cooperation. This seminar series has now trained over 2000 fellows from over 100 countries, many of whom are now leaders in the field. Each seminar adds to the strong network of people working together for common aims.

Many individuals and organisations have made this seminar possible. Thanks must be expressed first and foremost to our hosts, Professor Asita de Silva from the University of Kelaniya and Chanaka Fernando and colleagues from Remediumone for their most generous support of the seminar and We also thank the other organizations which have sponsored the seminar and supported fellows' and faculty participation.

Report prepared by Kay-Tee Khaw on behalf of the Faculty, 53rd Seminar.

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