Department of Physiology,
Velammal Medical College Hospital & Research Institute, Madurai

‘ECG – Recording and Interpretation’ Workshop

Conducted by	: Dr. M. Renu Meena, Assistant Professor, Physiology. Dr. R. Durai Arasan, Assistant Professor, Physiology.
Date & time	: 18.02.2025 to 21.02.2025 02.00 pm to 04.00 pm
Topic	: ECG - recording and interpretation workshop.
Venue	: Cardiopulmonary lab and Research lab, Department of Physiology, Velammal medical college.

In alignment with the Competency-Based Medical Education (CBME) curriculum prescribed by the National Medical Commission (NMC), and in accordance with the academic schedule of The Tamil Nadu Dr. M.G.R. Medical University, the Department of Physiology, Velammal Medical College Hospital and Research Institute, organized a structured and hands-on workshop on ‘ECG Recording’ for first year M.B.B.S. students. A total of 150 first-year M.B.B.S. students participated in the workshop. To ensure individualized attention and effective hands-on training, the students were divided into four batches, with approximately 37 to 38 students attending the session on each day. The sessions were spread over a period of four days, ensuring that each student had adequate time and opportunity for practical exposure and learning.

The workshop was conducted in two key laboratory facilities within the Department of Physiology – the Cardiorespiratory Physiology Laboratory and the Research Laboratory. On each day, the students were further subdivided into two groups based on gender to facilitate a smooth workflow and maintain privacy and comfort. Male students were trained in the Cardiorespiratory Lab, while female students underwent training in the Research Lab. The primary focus of the workshop was on the practical recording of electrocardiograms (ECG) using the CARDIART 4108T ECG machine. Under the supervision of department faculty members and technical staff, students were guided step-by-step in preparing the subject, placing electrodes, and recording a 12-lead ECG.

The comprehensive content of the workshop included the recording of all 12 standard ECG leads: Lead I, II, III, aVR, aVL, aVF, and the six precordial leads V1 through V6. Emphasis was placed not only on the technical skill of recording, but also on the physiological basis of lead placement and the electrical axis of the heart. In addition to

recording, students were taught how to interpret the ECG, particularly focusing on Lead II, which is commonly used in clinical monitoring. Specific parameters were calculated and analysed in the Lead II tracing, including heart rate, cardiac rhythm, PR interval, QT interval, ST segment, PP interval, and RR interval. The faculty explained the clinical significance of each parameter, and how deviations from the normal values could indicate underlying cardiac conditions.

At the end of each session, every student was required to record and interpret a Lead II ECG independently. Their recordings and interpretations were assessed by the faculty to evaluate the understanding and skill acquired during the workshop. Constructive feedback was provided to the students to reinforce learning and correct errors. The workshop was highly interactive and student-centric, promoting experiential learning.