MEDICAL INNOVATORS – SEMINAR EXPLANATION AND SCHEDULE

Did you ever wonder who established the existence of germs or viruses and who discovered our first antiseptics and antibiotics to treat them? Or who invented insulin to treat diabetes, chemotherapy to deal with cancer, or mRNA technology to tackle COVID? If so, then this seminar on medical innovators—nurses, doctors, and researchers who made breakthrough discoveries-- is right for you.

The seminar will be based on the 2023 book *Masters of Medicine: Our Greatest Triumphs in the Race to Cure Humanity of the Deadliest Diseases* by best-selling author Dr. Andrew Lamm as well as supplemental material such as "13 Famous Nurses Who Shaped the World of Nursing." Participants will be asked to take this immediately available material regarding a specific medical condition/advance and mold and supplement it into a 15-20-minute presentation. This will then form the basis for a scintillating discussion of questions such as how the condition/advance was discovered (lab research or serendipity), how it was brought to market or reached patients, and what other advances did, or might it, lead to.

Participants in this seminar do not need accumulated medical knowledge. Dr. Andrew Lamm is a noted ophthalmologist who practices at Baystate and UMass and his book "Masters of Medicine" (16 copies available in the MA Library System) is very readable and written to help laypeople understand medical conditions and breakthroughs. The Seminar's moderators—Dave and Sally Keehn—while admiring the dedication and innovation of the medical community (especially during the COVID pandemic)—are laypersons. We'll be taking this journey together as we explore specific medical discoveries as well as overarching questions such as the effect that the Administration's proposed 50% cutback in research grant funding will have on the National Institute of Health and its related universities and researchers, Will medical breakthroughs continue or slow- down or in the future?

WEEK ONE; INTRODUCTION and ADVANCES IN NURSING

Sanitation and Patient Care: Florence Nightengale and Clara Barton

Nurse Midwifery: Mary Breckenridge

WEEK TWO: BACTERIAL INFECTIONS

Germ Theory: Robert Koch and Paul Ehrlich

Antiseptics: Joseph Lister

WEEK THREE: ANTIBIOTICS and PREVENTING CROSS-CONTAMINAITON

Discovering Penicillin: Arthur Fleming and others

Preventing Cross Contamination: Ignaz Semmelweis

WEEK FOUR: VACCINES

Polio: Jonas Salk and Albert Sabin

mRNA for COVID: Katalin Kariko and Drew Weissman

WEEK FIVE: PANCREATIC SECRETIONS and RECONSTRUCTION SURGERY

Pancreatic Blockage and Insulin: Frederick Banting and others

Reconstructive Surgery: Howard Gilles

WEEK SIX: CANCER DETECTION AND TREATMENT

Radiation: Wilhelm Rontgen and Marie and Pierre Curie

Chemotherapy: Sidney Farber and Steven Rosenberg

WEEK SEVEN – HEART SURGERY AND BLOOD CIRCULATON

Open Heart Surgery: Dwight Harken and Charles Bailey

Cross Circulation of Blood: Walt Lillehei and John Gibbons

WEEK EIGHT – VASCULAR BYPASS/HEART TRANSPLANTS and WRAP-UP

Vascular Bypass – Charles Dotter and Andreas Gruntzig

Heart Transplant: Norman Shumway and Christian Barnard