



# *Manual on* Control of Infection in Surgical Patients

By the Committee on Control of Surgical Infections  
of the Committee on Pre- and Postoperative Care



AMERICAN COLLEGE OF SURGEONS

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## NOTICE

This volume attempts to provide a useful guide to control of infection in surgical patients. The manual does not attempt to define in exhaustive detail a particular patient's requirements for therapy, nor to prejudge for a particular physician the therapeutic regimen he or she may deem necessary in regard to that patient. The Committee does not claim that other methods or approaches than those presented in this volume may not be equally successful in a specific case.

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# Foreword

Modern surgery became a reality when Lister applied the work of Pasteur in the domain of surgery, thereby greatly reducing the infections which had largely blocked earlier efforts to develop surgical procedures for the internal organs. As so often happens, a great advance against a disease does not necessarily eliminate it, and in spite of this great advance and many subsequent advances, such as the development of sulfanilamide, the development of penicillin and other antibiotics, surgical infections are still a serious problem.

Surgical infections fall into two categories: spontaneous infections, including those following trauma, which come to surgeons for cure; and hospital-acquired infections, that is those occurring as complications of surgical and other procedures performed on uninfected patients. This field has always been important, but it has varied in importance from time to time and from place to place. Thus, after a period during which antibiotics gave us remarkable control of staphylococcus infections, resistant strains developed with an epidemic of serious and sometimes fatal infections occurring in the late 1950's.

More recently the great increase in the use of inert prostheses has given the area of surgical infections a fresh importance. For instance, the indwelling plastic catheter for intravenous hyperalimentation is from time to time associated with a bloodstream infection. If prosthetic heart valves become infected, the result is all too frequently a fatal outcome. If sections of the aorta and iliac vessels are replaced with woven prostheses of Dacron or other plastic material and infection occurs, this too may well lead to a fatal issue. And if a modern prosthetic knee or hip joint becomes infected, the work of the orthopedist can be ruined and the patient suffers greatly.

It was with this background that the Regents of the American College of Surgeons authorized a Committee on Control of Surgical Infections as a subcommittee of the Pre- and Postoperative Care Committee and named Dr. William A. Altemeier as its chairman. Dr. Altemeier was influenced by three of the residents of William Stewart Halsted. Dr. George J. Heuer and Dr. Mont Reid successively served as chairman of the Department of Surgery at the University of Cincinnati, where Dr. Altemeier attended medical school, and gave it much of its direction in the second quarter of this century. Dr. Altemeier took his surgical residency at the Henry Ford Hospital under Dr. Roy D. McClure, a third Halsted resident. All of these men emphasized careful technique to minimize tissue injury—a tradition continuously emphasized by Dr.

Altemeier since he became chairman of the department in 1952. He has devoted most of his career to the study of microbiology in relation to surgery, and it is a matter of record that his service at the Cincinnati General Hospital has had an outstandingly low incidence of infections in clean wounds. With characteristic energy and thoroughness, he organized four workshops on the control of surgical infections to which came most of the active investigators in this field in the United States and other parts of the world.

This volume is a summary of their reports and discussions. It will be valuable both as a fresh statement of what is known and as a background for further research.

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