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DEDICATION

Dr. Harold R. Roberts

The editors dedicate the second edition of *Consultative Hemostasis and Thrombosis* to Dr. Harold R. Roberts, Professor of Pathology and Medicine at the University of North Carolina (UNC) at Chapel Hill, in recognition of the enduring contributions he has made to the diagnosis and treatment of persons with inherited and acquired disorders of hemostasis and thrombosis. His accomplishments are the result of a long and distinguished career as a laboratory investigator, clinical researcher, and practicing physician.

A native of North Carolina, Dr. Roberts received both his undergraduate training and his medical degree from UNC. His postgraduate training included an internship, residency, and subspecialty training at the Vanderbilt School of Medicine in Nashville, Tennessee, and a year as a Fulbright Scholar in experimental pathology in Copenhagen, Denmark, where he worked in the area of fibrinolysis in the laboratory of Professor Tage Astrup. He then entered a fellowship in the Department of Pathology at UNC under the direction of Dr. Kenneth Brinkhous. After completing his fellowship, Dr. Roberts became a research associate at UNC; seven years later he was named Chief of the Division of Hematology.

While exploring genetic alterations resulting in factor IX deficiency (hemophilia B), Dr. Roberts and his laboratory investigators were the first to recognize that persons with hemophilia B could have any one of numerous point mutations or deletions in the gene coding for factor IX. The gene alterations could result either in no expression of protein or in the expression of a protein that was recognized by immunologic methods but had little or no functional activity. Dr. Roberts' laboratory also was the first to discover that a patient who presented with deficiencies of factors II, VII, IX, and X had a congenital deficiency of the enzymes regulating the vitamin K–γ-carboxylase system.

As a clinical researcher, Dr Roberts focused on new and improved biologics for the treatment of bleeding disorders. His team was the first to test commercially prepared (large-scale) plasma fractions for the treatment of factor VIII deficiency (hemophilia A). These studies resulted in the development of purified concentrates of factor VIII, marking the beginning of a new era for the treatment of hemophilia. In a natural evolution of this work, Dr. Roberts and his team conducted some of the first clinical trials with recombinant factor VIII. His group also has been actively engaged in gene therapy as a next step in improving treatment for patients with hemophilia.

Dr. Roberts has played a seminal role in defining the mechanism of action of recombinant factor VIIa (rFVIIa), as well as in the commercial development of this agent for the treatment of hemophilia in patients who have inhibitors.

Throughout his career, Dr. Roberts has held leadership positions in professional societies nationally and internationally and has served on editorial boards or as editor of multiple journals. He has worked tirelessly with the International Society on Thrombosis and Haemostasis, the American Society of Hematology, the World Federation of Hemophilia, the College of American Pathologists, and the National Hemophilia Foundation. He has chaired study sections and served on councils for the National Institutes of Health, and he has been an invited guest lecturer throughout North Carolina, the nation, and the world.

Numerous societies and governments have honored Dr. Roberts for his laboratory and clinical research, as well as for the establishment of centers for the treatment of disorders of thrombosis or hemostasis. Dr. Roberts was the 2001 recipient of the Henry M. Stratton Medal presented by the American Society of Hematology. As a tribute to the outstanding care and advances in treatment that Dr. Roberts has provided for patients at the former UNC Hemophilia Treatment Center, university officials have renamed the Center as the Harold R. Roberts Comprehensive Hemophilia Diagnostic and Treatment Center.

The outstanding academic work of Dr. Roberts is evident in the more than 300 articles that he has authored during his career. However, the publications do not begin to document completely all of the successes of the numerous students, fellows, and faculty whom he has trained and mentored. Those who have been privileged to work with him recount stories that reveal his warmth, humility, and wonderfully dry sense of humor. Dr. Roberts' ability to nurture and sustain long-lasting relationships with patients, health care providers, public advocacy groups, and government officials across multiple countries ensures that the advances in clinical care that he has developed are available to patients throughout the nation and the world.

Contributors

Victoria Afshani, MD
Hematologist/Medical Oncologist, Georgia Cancer Specialists, Atlanta, Georgia

Management of Bleeding Disorders in Pregnancy

William C. Aird, MD
Associate Professor of Medicine, Harvard Medical School; Attending Physician and Chief, Division of Molecular and Vascular Medicine, Beth Israel Deaconess Medical Center, Boston, Massachusetts

Endothelium

Barbara M. Alving, MD
Bethesda, Maryland

The Antiphospholipid Syndrome: Clinical Presentation, Diagnosis, and Patient Management; Risk Factors for Cardiovascular Disease and Arterial Thrombosis; Management of Thrombophilia and Antiphospholipid Syndrome During Pregnancy

Jack E. Ansell, MD
Professor of Medicine, Boston University School of Medicine; Vice Chairman, Department of Medicine, Boston Medical Center, Boston, Massachusetts

Outpatient Anticoagulant Therapy

Kenneth Ataga, MD
Assistant Professor, University of North Carolina at Chapel Hill School of Medicine; Attending Physician, University of North Carolina Hospitals, Chapel Hill, North Carolina

Hemostatic Aspects of Sickle Cell Disease

Richard C. Becker, MD
Professor of Medicine, Divisions of Cardiology and Hematology, Duke University School of Medicine; Director, Cardiovascular Thrombosis Center, Duke Clinical Research Institute, Durham, North Carolina

Hemostatic Aspects of Cardiovascular Medicine

Peter C. Block, MD
Professor of Medicine, Emory University School of Medicine; Attending Physician, Emory University Hospitals and Grady Hospital, Atlanta, Georgia

Atrial Septal Abnormalities and Cryptogenic Stroke

Lisa N. Boggio, MS, MD
Assistant Professor of Medicine and Pediatrics, Rush University Medical Center, Chicago, Illinois

Hemophilia A and B

Charles D. Bolan, MD
Associate Professor of Medicine, Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine; Staff Clinician and Hematology Fellowship Program Director, Hematology Branch, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Maryland

Blood Component and Pharmacologic Therapy of Hemostatic Disorders

Andrew K. Burroughs, MD
Professor of Hepatology, Royal Free and University College School of Medicine; Consultant Physician and Hepatologist, Royal Free Hospital, London, United Kingdom

Hemostatic Alterations in Liver Disease and Liver Transplantation

Hugo ten Cate, MD
Department of Internal Medicine, University of Maastricht Medical School, Maastricht, The Netherlands

The Cross-Talk of Inflammation and Coagulation in Infectious Disease and Their Roles in Disseminated Intravascular Coagulation

Richard Chang, MD
Chief, Special Procedures, Department of Radiology, W. G. Magnuson Clinical Center, National Institutes of Health, Bethesda, Maryland

Thrombosis Related to Venous Access Devices

Mary Cushman, MD, MSc
Associate Professor of Medicine, University of Vermont College of Medicine; Director, Thrombosis and Hemostasis Program, Division of Hematology & Oncology, Fletcher Allen Health Care, Burlington, Vermont

Risk Factors for Cardiovascular Disease and Arterial Thrombosis

Thomas G. DeLoughery, MD
Professor of Medicine and Pathology, Divisions of Hematology/Oncology and Laboratory Medicine, Oregon Health and Science University, Portland, Oregon

Anticoagulation for Atrial Fibrillation and Prosthetic Cardiac Valves

Jorge Di Paola, MD
Associate Professor of Pediatrics; Director, Hemophilia Treatment Center, Carver College of Medicine, University of Iowa, Iowa City, Iowa

Congenital and Acquired Disorders of Platelet Function and Number

Tieraona Low Dog, MD
Clinical Assistant Professor, Department of Medicine, University of Arizona College of Medicine; Director of Education, Program in Integrative Medicine, University of Arizona Health Sciences Center, Tucson, Arizona

Dietary Supplements and Hemostasis

Miguel A. Escobar, MD
Assistant Professor of Medicine and Pediatrics, University of Texas Medical School at Houston; Associate Medical Director, Gulf States Hemophilia & Thrombophilia Center, Houston, Texas

Less Common Congenital Disorders of Hemostasis

Bruce M. Ewenstein, MD, PhD
Global Medical Director, Baxter BioScience, Westlake Village, California

Nonhemophilic Inhibitors of Coagulation

Andres Fernandez, MD
Postdoctoral Research Fellow, Neurology Department, Columbia University College of Physicians and Surgeons, New York, New York

Hematologic Interventions for Acute Central Nervous System Disease

Charles W. Francis, MD
Professor of Medicine and Pathology and Laboratory Medicine, University of Rochester School of Medicine and Dentistry, Rochester, New York

Antithrombotic Agents

James N. George, MD
George Lynn Cross Professor, Department of Medicine, University of Oklahoma College of Medicine, Oklahoma City, Oklahoma

Immune Thrombocytopenic Purpura

David L. Gillespie, MD
Professor of Surgery, Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine, Bethesda, Maryland; Chief and Program Director, Vascular Surgery, Walter Reed Army Medical Center, Washington, DC

Prevention, Diagnosis, and Treatment of the Postphlebitic Syndrome

Samuel Z. Goldhaber, MD
Professor of Medicine, Harvard Medical School; Director, Venous Thromboembolism Research Group; Director, Anticoagulation Service; and Staff Cardiologist, Brigham and Women's Hospital, Boston, Massachusetts

Deep Vein Thrombosis and Pulmonary Embolism

David Green, MD, PhD
Professor of Medicine, Northwestern University Feinberg School of Medicine; Attending Physician, Northwestern Memorial Hospital; Physician, Northwestern Medical Faculty Foundation, Chicago, Illinois

Prevention and Treatment of Venous Thromboembolism in Neurologic and Neurosurgical Patients

Christine L. Hann, MD, PhD
Clinical Fellow, Department of Medical Oncology, Johns Hopkins University School of Medicine, Baltimore, Maryland

Vena Caval Filters

John A. Heit, MD
Professor of Medicine, Mayo Clinic College of Medicine; Director, Coagulation Laboratories and Clinic, and Consultant, Division of Cardiovascular Diseases, Mayo Clinic, Rochester, Minnesota

Thrombophilia: Clinical and Laboratory Assessment and Management

John R. Hess, MD
Professor of Pathology and Medicine, University of Maryland School of Medicine, Baltimore, Maryland

Hemorrhage Control and Thrombosis Following Severe Injury

William R. Hiatt, MD
Professor of Medicine, University of Colorado School of Medicine, Denver, Colorado

Peripheral Arterial Disease

Christopher D. Hillyer, MD
Professor, Department of Pathology and Laboratory Medicine, and Director, Transfusion Medicine, Emory University School of Medicine; Director, Medical, Blood Bank, Emory University Hospital, Atlanta, Georgia

Therapeutic Apheresis

John B. Holcomb, MD
Adjunct Professor of Surgery, University of Texas School of Medicine at San Antonio, San Antonio; Trauma Consultant for the Surgeon General and Commander, U.S. Army Institute of Surgical Research, Fort Sam Houston, Texas

Hemorrhage Control and Thrombosis Following Severe Injury

McDonald K. Horne, III, MD
Senior Clinical Investigator, Hematology Service, W. G. Magnuson Clinical Center, National Institutes of Health, Bethesda, Maryland

Thrombosis Related to Venous Access Devices

Mark R. Jackson, MD
Assistant Clinical Professor, Department of Surgery, Columbia University College of Physicians and Surgeons, New York, New York; Vascular Surgeon, St. Francis Hospital, Greenville, South Carolina

Topical Hemostatic Agents for Localized Bleeding

Shawn Jobe, MD, PhD
Fellow, Pediatric Hematology Oncology, Carver College of Medicine, University of Iowa, Iowa City, Iowa

Congenital and Acquired Disorders of Platelet Function and Number

Eefje Jong, MD
Resident, Department of Internal Medicine, University of Amsterdam Academic Medical Center, Amsterdam, The Netherlands

The Cross-Talk of Inflammation and Coagulation in Infectious Disease and Their Roles in Disseminated Intravascular Coagulation

Craig M. Kessler, MD
Professor of Medicine and Pathology, Georgetown University School of Medicine; Chief, Coagulation Laboratory, Lombardi Comprehensive Cancer Center, Washington, DC

A Systematic Approach to the Bleeding Patient: Correlation of Clinical Symptoms and Signs with Laboratory Testing; Hemophilia A and B; Thrombocytosis: Essential Thrombocythemia and Reactive Causes

Nushmia Khokhar, MD
Department of Internal Medicine, Washington Hospital Center/Georgetown University Hospital, Washington, DC

A Systematic Approach to the Bleeding Patient: Correlation of Clinical Symptoms and Signs with Laboratory Testing

Craig S. Kitchens, MD
Professor of Medicine, University of Florida; Associate Chief of Staff, Malcom Randall Veterans Administration Medical Center, Gainesville, Florida

The Consultative Process; Purpura and Other Hematovascular Disorders; Disseminated Intravascular Coagulation; Venous Thromboses at Unusual Sites; Surgery and Hemostasis

Harvey G. Klein, MD
Adjunct Professor of Medicine and Pathology, Johns Hopkins, University School of Medicine; Chief, Department of Transfusion Medicine, W. G. Magnuson Clinical Center, National Institutes of Health, Bethesda, Maryland

Blood Component and Pharmacologic Therapy of Hemostatic Disorders

Kiarash Kojouri, MD, MPH
Assistant Professor of Medicine, University of Oklahoma College of Medicine, Oklahoma City, Oklahoma

Immune Thrombocytopenic Purpura

Barbara A. Konkle, MD
Professor of Medicine; Director, Penn Comprehensive Hemophilia and Thrombosis Program, University of Pennsylvania, Philadelphia, Pennsylvania

Thrombotic Risk of Contraceptives and Other Hormonal Therapies

Kendra Kubiak, MD
Clinical Instructor in Medicine, University of Virginia School of Medicine, Charlottesville, Virginia

Point-of-Care Testing for Hemostatic Disorders

Jody L. Kujovich, MD
Clinical Assistant Professor of Medicine, Oregon Health & Science University School of Medicine; Physician, Northwest Cancer Specialists, Portland, Oregon

Management of Thrombophilia and Antiphospholipid Syndrome During Pregnancy

David J. Kuter, MD, DPhil
Assistant Professor of Medicine, Harvard Medical School, Boston; Associate Professor of Medicine, Health Sciences and Technology, Massachusetts Institute of Technology, Cambridge; Director of Clinical Hematology, Massachusetts General Hospital, Boston, Massachusetts

General Aspects of Thrombocytopenia, Platelet Transfusions, and Thrombopoietic Growth Factors

Carrie LaBelle, MD
Medical Director, Compensation and Pension Service, Veterans Health System, Malcom Randall VA Medical Center, Gainesville, Florida

Disseminated Intravascular Coagulation

Marcel Levi, MD
Professor of Medicine, University of Amsterdam School of Medicine; Chairman, Department of Medicine, University of Amsterdam Academic Medical Center, Amsterdam, The Netherlands

The Cross-Talk of Inflammation and Coagulation in Infectious Disease and Their Roles in Disseminated Intravascular Coagulation

Miles B. Levin, MD
Chief Resident in Pathology, Montefiore Medical Center, Bronx, New York

The Antiphospholipid Syndrome: Clinical Presentation, Diagnosis, and Patient Management

Mark Levine, MD, MSc
Professor of Clinical Epidemiology and Biostatistics and Medicine and Buffet Taylor Chair of Breast Cancer Research, Michael G. DeGroote School of Medicine, McMaster University Faculty of Health Sciences, Hamilton, Ontario, Canada

Thrombosis and Cancer

Minetta Liu, MD
Assistant Professor of Medicine and Oncology, Lombardi Comprehensive Cancer Center, Georgetown University Hospital, Washington, DC

A Systematic Approach to the Bleeding Patient: Correlation of Clinical Symptoms and Signs with Laboratory Testing

Richard Lottenberg, MD
Professor of Medicine, Division of Hematology/Oncology, University of Florida College of Medicine, Gainesville, Florida

Hemostatic Aspects of Sickle Cell Disease

B. Gail Macik, MD
Associate Clinical Professor of Medicine and Pathology, University of Virginia School of Medicine, Charlottesville, Virginia

Point-of-Care Testing for Hemostatic Disorders

Victor J. Marder, MD
Professor of Medicine, Division of Hematology/Medical Oncology, David Geffen School of Medicine at UCLA, Los Angeles, California

Thrombolytic Therapy

Merry Jennifer Markham, MD
Fellow, Division of Hematology/Oncology, University of Florida Department of Medicine, Gainesville, Florida

Dietary Supplements and Hemostasis

Stephan A. Mayer, MD
Associate Professor of Clinical Neurology and Neurosurgery, Columbia University College of Physicians and Surgeons; Director, Neuro-ICU, NewYork–Presbyterian Hospital, New York, New York

Hematologic Interventions for Acute Central Nervous System Disease

Jan Jacques Michiels, MD, PhD
Professor, Department of Hematology, Blood Coagulation and Vascular Research, University of Antwerp Faculty of Medicine/University Hospital Antwerp, Antwerp, Belgium; Director, Department of Hematology, Hemostasis and Thrombosis Research, Hemostasis and Thrombosis Science Center, Goodheart Institute and Foundation, Rotterdam; Scientific Medical Advisor, Medical Diagnostic Center, Rotterdam; and Project Leader, Deep Vein Thrombosis and the Post-thrombotic Syndrome, Erasmus Medical Center, Rotterdam, The Netherlands

Thrombocytosis: Essential Thrombocythemia and Reactive Causes

Joel L. Moake, MD
Professor of Medicine, Baylor College of Medicine; Associate Director, Biomedical Engineering Laboratory, Rice University, Houston, Texas

Thrombotic Thrombocytopenic Purpura

Thomas L. Ortel, MD, PhD
Associate Professor of Medicine and Pathology, Duke University School of Medicine, Durham, North Carolina

Anticoagulation in the Perioperative Period

Reagan W. Quan, MD
Fellow, Vascular Surgery, Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine, Bethesda, Maryland, and Walter Reed Army Medical Center, Washington, DC

Prevention, Diagnosis, and Treatment of the Postphlebitic Syndrome

Jacob H. Rand, MD
Professor of Pathology and Medicine, Albert Einstein College of Medicine of Yeshiva University; Director of Hematology Laboratories, Montefiore Medical Center, Bronx, New York

The Antiphospholipid Syndrome: Clinical Presentation, Diagnosis, and Patient Management

Margaret E. Rick, MD
Assistant Chief, Hematology Service, W. G. Magnuson Clinical Center, National Institutes of Health, Bethesda, Maryland

von Willebrand Disease

Frederick R. Rickles, MD, FACP
Professor of Medicine, Pediatrics, and Pharmacology and Physiology, George Washington University School of Medicine and Health Sciences, Washington, DC; Fellow, Center for Science and Technology, Noblis, Falls Church, Virginia

Thrombosis and Cancer

Fred Rincon, MD
Clinical Assistant in Neurology and Post-Doctoral Clinical Fellow, Columbia University Medical Center, New York, New York

Hematologic Interventions for Acute Central Nervous System Disease

Harold R. Roberts, MD
Sarah Graham Kenan Distinguished Professor of Medicine and Pathology, Department of Medicine, Division of Hematology and Oncology, and Carolina Cardiovascular Biology Center, University of North Carolina at Chapel Hill School of Medicine; Director, Comprehensive Hemophilia Treatment Center, University of North Carolina Hospitals, Chapel Hill, North Carolina

Less Common Congenital Disorders of Hemostasis

Lewis J. Rubin, MD
Professor of Medicine, University of California, San Diego, School of Medicine, La Jolla, California

Pulmonary Hypertension: Thrombotic and Nonthrombotic in Origin

Marco Senzolo, MD
Consultant Gastroenterologist/Hepatologist, Gastroenterology Unit, Department of Surgical and Gastroenterological Sciences, University Hospital of Padua, Padua, Italy

Hemostatic Alterations in Liver Disease and Liver Transplanatation

Stephanie Seremetis, MD
Global Medical Director, Hemostasis, NovoNordisk A/S, Bagsvaerd, Denmark

Management of Bleeding Disorders in Pregnancy

Chelsea A. Sheppard, MD
Transfusion Medicine Fellow, Department of Pathology and Laboratory Medicine, Emory University School of Medicine/Emory University Hospital, Atlanta, Georgia

Therapeutic Apheresis

Suman Sood, MD
Instructor in Medicine, Division of Hematology-Oncology, University of Pennsylvania School of Medicine; Penn Comprehensive Hemophilia and Thrombosis Program, University of Pennsylvania Health System, Philadelphia, Pennsylvania

Thrombotic Risk of Contraceptives and Other Hormonal Therapies

Steven Stein, MD
Adjunct Assistant Professor, Hemophilia and Thrombosis Program, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania

Thrombotic Risk of Contraceptives and Other Hormonal Therapies

Michael B. Streiff, MD
Assistant Professor of Medicine, Johns Hopkins University School of Medicine; Medical Director, Anticoagulation Management Service, Johns Hopkins Medical Institutions, Baltimore, Maryland

Vena Caval Filters

Bundarika Suwanawiboon, MD
Instructor, Division of Hematology, Department of Medicine, Faculty of Medicine, Mahidal University/ Siriraj Hospital, Bangkok, Thailand

Anticoagulation in the Perioperative Period

Eric C.M. van Gorp, MD
Staff Physician, Department of Internal Medicine, Slotervaart Hospital, Amsterdam, The Netherlands

The Cross-Talk of Inflammation and Coagulation in Infectious Disease and Their Roles in Disseminated Intravascular Coagulation

Theodore E. Warkentin, MD
Professor, Department of Pathology and Molecular Medicine and Department of Medicine, Michael G. DeGroote School of Medicine, McMaster University Faculty of Health Sciences; Associate Head, Transfusion Medicine, Hamilton Regional Laboratory Medicine Program; Hematologist, Service of Clinical Hematology, Hamilton Health Sciences, Hamilton General Hospital, Hamilton, Ontario, Canada

Heparin-Induced Thrombocytopenia

Ann B. Zimrin, MD
Assistant Professor of Medicine, University of Maryland School of Medicine/Marlene and Stewart Greenebaum Cancer Center, Baltimore, Maryland

Hemorrhage Control and Thrombosis Following Severe Injury

Marc Zumberg, MD
Associate Professor of Medicine, University of Florida College of Medicine, Gainesville, Florida

Purpura and Other Hematovascular Disorders; Venous Thromboses at Unusual Sites

Preface

We editors were pleased by the enthusiasm and success with which the first edition of *Consultative Hemostasis and Thrombosis* was met. Clearly, there is a niche for a mid-sized textbook on hemostasis and thrombosis that can authoritatively assist the busy consultant; thus, we are presenting an updated second edition.

Much has happened since the first edition appeared in early 2002. For example, the discovery of ADAMTS-13 and the elucidation of its role in thrombotic thrombocytopenic purpura were just being accomplished when the first edition was published.

The use of recombinant activated factor VII (rFVIIa) has expanded greatly beyond the original indication for which it was licensed. This is reviewed in detail in this new edition. We are now seeing the increased use of thrombin-specific inhibitors, and initial studies of the pentasaccharide fondaparinux in the treatment of heparin-induced thrombocytopenia are promising.

As editors of the book, we have focused on two primary goals. One was to provide updates on the "core material" for hemostasis and thrombosis, with internationally renowned experts writing chapters on deep vein thrombosis, pulmonary embolus, hypercoagulability, thrombocytopenia, von Willebrand disease, and heparin-induced thrombocytopenia, as well as thrombotic thrombocytopenia purpura and other disorders. Our second goal was to ensure a very strong integration among the specialties that deal with clinical issues in thrombosis and hemostasis; these include cardiology, neurology, oncology, obstetrics, and vascular surgery. Accordingly, we tapped internationally renowned authors writing on hemostatic and thrombotic complications associated with such conditions as a patent foraman ovale, pulmonary hypertension, malignancy, indwelling catheters, trauma, and pregnancy.

We are deeply grateful to our contributing authors, and we appreciate the colleagues who have given us support and constructive criticism for this second edition. We hope that this book will serve as an improved and useful guide for all who are involved in providing consultation and care for patients with hemostatic or thrombotic disorders.

Craig S. Kitchens, MD

Barbara M. Alving, MD

Craig M. Kessler, MD

Part I

General Information

Chapter 1

The Consultative Process

Craig S. Kitchens, MD

Life is short, and the art long, the occasion fleeting, experience fallacious, and judgment difficult.

—Hippocrates[a]

As long as medicine is an art, its chief and characteristic instrument must be the human faculty. We come therefore to the very practical question of what aspects of human faculty it is necessary for the good doctor to cultivate. The first to be named must always be the power of attention, of giving one's whole mind to the patient without the interposition of oneself. It sounds simple but only the very greatest doctors ever fully attain it. It is an active process and not either mere resigned listening or even politely waiting until you can interrupt. Disease often tells its secret in the casual parentheses.

—Wilfred Trotter[b]

As a specialist, the hematologist is frequently asked to consult on a patient in order to clarify or solidify the diagnosis, prognosis, or treatment plan of another physician. Consultation is done in either the inpatient or the outpatient setting and can in turn be requested on a stat, urgent, subacute, or leisurely basis. By inference, the referring physician remains the physician in control of the patient's care, but the consultant's expertise, experience, judgment, wisdom, and even approval are sought in order to assist the referring physician's concept of the case in its entirety. In this era of cost containment and managed care, expert evaluation is cost-effective because it may curtail the diagnostic process, limit unnecessary or even ill-directed testing, and shorten overall hospital time as well as minimize patient suffering. A well-directed consultation is the best bargain for all stakeholders.

Several papers have discussed the mechanics and elements of a proper consultation and have suggested that just so many items are necessary in the review of systems or family history in order to justify a certain billing code. This chapter does not attempt to address such impermanent or regional matters but focuses instead on foundations allied with the precepts of internal medicine

The diagnostic procedure is a fascinating exercise. It involves the most acute use of our senses and the accurate recording of our observations. It requires a logical synthesis of the central nervous system of the responsible doctor, of information from the patient and his family, from other doctors who have cared for the patient in the past, from colleagues in various specialties who are helping with the immediate problem, and from the laboratory. Prognosis and correct therapy depend upon the correct use of the diagnostic process.

—Eugene A. Stead, Jr.[c]

[The] oldest and most effective act of doctors [is] touching. Some people don't like being handled by others, but not, or almost never, sick people. They need being touched, and part of the dismay in being very sick is the lack of close human contact. Ordinary people, even close friends, even family members, tend to stay away from the very sick, touching them as infrequently as possible for fear of interfering, or catching the illness, of just for fear of bad luck. The doctor's oldest skill in trade was to place his hands on the patient.

Over the centuries, the skill became more specialized and refined, the hands learned other things to do beyond mere contact. They probed to feel the pulse at the wrist, the tip of the spleen, or the edge of the liver, thumped to elicit resonant or dull sounds over the lungs, spread ointments over the skin, nicked veins for bleeding, but the same time touched, caressed, and at the end held on to the patient's fingers.

Touching with the naked ear was one of the great advances in the history of medicine. Once it was learned that the heart and lungs made sounds of their own, and that the sounds

[a] Hippocrates (460–370 B.C.) is considered to be the founder of European medicine. He lived in Greece during the Classic Period and was a contemporary of Socrates, Plato, Herodotus, and others. He is credited with three advances in medicine: the separation of medicine as an art and science from magic, the development of the written detailed study of disease, and the promulgation of the highest of moral standards that characterize the profession. Descriptive bedside medicine was his forte. His writings showed him to be humble, containing frequent admissions of errors in his thinking in order that others might not stumble in the same manner. This timeless aphorism contains all the essential elements of clinical practice in a concise statement.

[b] Wilfred Batten Trotter (1872–1939) was an English sociologist and neurosurgeon who was very interested in the sociologic aspects of medicine. He is credited with originating the term *herd instinct*. He was also a surgeon to King George V. This quote is taken from the chapter entitled "The Art of Being a Physician" by Lloyd H. Smith, Jr., in the 19th edition of the *Cecil Textbook of Medicine* (W. B. Saunders, Philadelphia, 1992).

[c] Eugene A. Stead, Jr., (1908–2005) is a primary pillar of American internal medicine. He was born and educated in Atlanta and then went to Harvard University in Boston, where he was strongly influenced by Soma Weiss. He was a pioneer in clinical investigation of the human circulatory system. At 34 years of age, he returned to Emory University as the Chairman of Medicine in 1943 but was recruited to the new Duke Medical School in Durham, North Carolina, in 1947, where he was Chairman for 20 years, founding and elevating that department of medicine to one of the greatest in the nation. He trained innumerable professors and chairs of medicine. Dr. Stead was a master of clinical thought and piercing observations and had a keen wit bettered by none. The two quotes are from E. A. Stead, Jr., *What this Patient Needs is a Doctor*, edited by Wagner, Cebe, and Rozer (Carolina Academic Press, Durham, North Carolina, 1978).

were sometimes useful for diagnosis, physicians placed an ear over the heart, and over areas on the front and back of the chest, and listened. It is hard to imagine a friendlier human gesture, a more intimate signal of personal concern and affection, than these close bowed heads affixed to the skin. The stethoscope was invented in the nineteenth century, vastly enhancing the acoustics of the thorax, but removing the physician a certain distance from his patient. It was the earliest device of many still to come, one new technology after another, designed to increase that distance.

—Lewis Thomas[d]

There are many facets of the consultative process, ranging from the extent and reason for the consultation to the nature of recommendations and outcomes expected. These are listed in Table 1-1.

Table 1-1 The Consultative Process

- Extent of the consultation
  - Confirmatory consultation
  - Brief consultation
  - Comprehensive consultation
  - Urgent consultation on a catastrophically ill patient
  - "Undiagnosing" consultation
  - Telemedicine consultation
  - The curbside consultation
- Reason for consultation
  - Helping another physician
  - Second opinion requested by the primary physician
  - Second opinion requested by the patient
  - Second opinion requested by a third-party payor
  - Other third parties
  - The disgruntled patient or family
  - Inappropriate consultations
- Consultant's point of view
- Duties of the referring physician and consultant
- Timing
- How to do the consultation
- Role of the clinical laboratory
- Recommendations
- Concerns
- Outcomes
  - Total agreement
  - Supporting consultation
  - Finding another physician for the patient
  - Consultant assumes primary care of the patient
  - Serious troubles
  - Redirecting thrust of a workup
  - Major disagreements between physicians
  - Duration of consultation
  - Noncompliant patients
  - End-of-life issues
  - Family members
  - When a diagnosis is not forthcoming
- When should a consultant request a consultation?

EXTENT OF THE CONSULTATION

It is essential that both the referring physician and the consultant have in mind the extent of consultation requested, which will in turn govern the aim and comprehensiveness of the consultation.

Confirmatory Consultation

In this situation the referring physician is quite comfortable with the diagnosis, prognosis, and treatment. He or she generally wishes the consultant to focus on efforts already made and to corroborate those findings. This type is frequent in the second opinion consultation or one in which the referring physician needs encouragement as well as perhaps some advice garnered from the consultant's experience. These consultations are therefore focused, often brief, yet may involve reviewing substantial previously collected data. In general, the consultant does not need to request extra tests.

A subtype of the confirmatory consultation exists when the referring physician does not think the services of the consultant are indicated but, because of uncertainty or pressure from family members, wishes the consultant to document such in the chart. The most common reason for not using specific services is severe illness in the patient, which would make the consultant's services worthless, futile, or even contraindicated by unnecessarily extending the dying process. Examples in hematology might include evaluation for mild thrombocytopenia in an intensive care unit (ICU) patient with multiorgan dysfunction syndrome or whether a "hypercoagulable workup" is indicated in an elderly patient dying of carcinomatosis yet presenting with new deep venous thrombosis. The referring physician should indicate to the consultant that services may not be indicated. The consultant should not be reluctant to see such patients.

Brief Consultation

In this consultation, the questions are more broad based and in an appropriately diagnosed and managed patient commonly involve long-term questions such as length of therapy with glucocorticosteroids in a patient with immune thrombocytopenia purpura before one proceeds to splenectomy or the duration of anticoagulant therapy in a patient with hypercoagulability who has developed a major thrombosis. The consultant's long-term experience with many similar patients and knowledge of the literature are often more important than his or her diagnostic or therapeutic acumen.

Comprehensive Consultation

In a comprehensive consultation, the referring practitioner may not be a subspecialist but an internist or possibly another physician who needs comprehensive assistance regarding the diagnosis, prognosis, and therapy. This consultation often is generated by surgeons or obstetricians/gynecologists attending a patient with thrombosis who needs thorough evaluation for hypercoagulability. In these situations the

[d] Lewis Thomas (1913–1993) was a native New Yorker and a graduate of Harvard Medical School. He was on the faculty of the University of Minnesota, and then became Dean of New York University Medical Center, followed by his appointment as Dean at Yale Medical School. He became president of Memorial Sloan-Kettering Cancer Center in New York City. He was a member of the National Academy of Sciences. His ability to translate with both clarity and intense interest things scientific, biologic, and medical into prose readable and enjoyable to the average reader was unparalleled. Three of his major works were *The Lives of A Cell, The Medusa and the Snail,* and *The Youngest Science: Notes of Medicine Watcher,* all of which received broad recognition and multiple prizes. The first citation comes from a short piece entitled "Leech Leech, et cetera," and the second from "Housecalls."

consultant more often than not is the manager of laboratory testing and can do so in a cost-effective manner based on his or her expertise. Key decisions are often made by the consultant with the approval of the referring physician. Occasionally, the referring physician will ask the consultant to manage entirely hematologic aspects of the patient's care, which can be easily done conjointly with the referring physician. A common example is consulting with an obstetrician attending a woman with antiphospholipid syndrome. Together they can discuss preconception issues, anticoagulant therapy throughout gestation, and anticoagulant management during and after delivery of the child with the patient and her family.

Urgent Consultation on a Catastrophically Ill Patient

Catastrophically ill patients are often hospitalized in an ICU and may be seen by multiple experts attempting to assist the attending physician in a diagnosis. These consultations require subspecialty expertise and a solid knowledge of general internal medicine. Anyone may make the single unifying diagnosis that underpins all manifestations in such extremely ill patients. The consultant hematologist may be the first to recognize that thrombocytopenia in a febrile, confused, azotemic patient supports an overall diagnosis of Rocky Mountain spotted fever, thus corroborating all findings made by all previous consultants.

"Undiagnosing" Consultation

Sometimes patients may be incorrectly diagnosed and thus inappropriately sent to the hematologist. In these situations one must be rather careful to exclude explicitly the diagnosis that the referring physician made. It is both professional and cost-effective to rule out the diagnosis that was being entertained. One must carefully garner laboratory data that justify the negation of the working diagnosis and compile corroborating evidence, such as historical and physical examination findings, that may be incompatible with that diagnosis. It is easier to diagnose a patient incorrectly than to undo a diagnosis. One could argue that higher standards are required for undiagnosing an illness than diagnosing that illness. An example is a physician who seeks your endorsement of his or her diagnosis of protein C deficiency only to learn the protein C level was low because of concurrent warfarin therapy. The incorrect diagnosis not only is wrong but has financial, familial, and insurability ramifications. A forthright consultation will steer the referring physician away from the incorrect diagnosis so that the diagnostic process may be redirected.

Telemedicine Consultations

In an increasingly electronic world, telemedicine (telephone, video, and electronic transmissions [e-mail]) of medical information) is a reality. The accelerating use of telemedicine has left in its wake numerous unanswered legal, ethical, financial, and medical questions.

It is clear that such modern modalities are useful if for no other reasons than the rapidity of correspondence and the availability of consultative expertise in more remote and underserved areas. Because of uncertainty of its standing, one must be cautious and expect rapid changes in resolutions of these questions from government, professional societies, and insurance carriers. Legal issues will arise, and precedents will be established.

In 2002 the American Medical Association (AMA) officially endorsed on-line consultation and billing of these services. A CPT code, 0074T, has been established. In a 2003 policy paper, the American College of Physicians (ACP), further urged the Center for Medicare and Medicaid Services (CMS) to reimburse for such services. Some third-party payors will reimburse fees whereas others have yet to decide. Several other related unresolved issues exist but are beyond the scope of this chapter. Most of these other issues have yet to be addressed, let alone solved:[1]

1. Confidentiality, because telemedicine is not as secure as hoped. Encryption is recommended at a minimum.
2. Because confidentiality is not certain, issues will arise regarding the Health Insurance Portability and Accountability Act (HIPAA).
3. Because the consultant and consultee may reside in different localities, issues of licensure and jurisdiction are inevitable.
4. Differing from typical "curbside" consultation, a durable, retrievable, and probably discoverable written record exists, which could impact questions of establishment of a doctor–patient relationship.
5. Ethics and quality of care issues. One study reported 50% of physicians will respond to unsolicited e-mail consultations, and of these, 84% offer diagnostic and therapeutic advice.[2]

Traditional medicine requires face-to-face interactions and appropriate examination and testing prior to diagnostic and therapeutic considerations. If there exists a previous doctor–patient relationship then the traditional face-to-face evaluation has been established, so that this issue may be moot in most cases.

In this rapidly evolving and effervescent climate one should consult expert advice. The website eRisk Working Group for Healthcare (www.medem.com/phy/phy_erisk-guidelines.cfm) provides frequent updates.

The Curbside Consultation

Although many condemn "curbside consultations," they are a fact of professional life. These consults occur serendipitously in the doctors' lounge, in the hallway, or occasionally by telephone. They are unofficial, and both the "consultant" and the requesting physician must realize any suggestions arising from this act are not based on a real doctor–patient relationship because there is no traditional history, physical examination, or counseling of the patient; therefore a doctor (consultant)–patient relationship is not established. Accordingly, no fee is generated.

Liability for injury arising from one's unofficial advice can always be claimed. Considerable case law exists supporting that failure to have an established doctor–patient relationship is key to such a challenge. No duty is owed to a patient without creation of a doctor–patient relationship.[3]

A recent federal case (*Newborn v USA*) supported that even considerable and repetitious e-mail consultation between a Walter Reed Medical Center hematologist and

pediatricians at an Army medical facility in Germany did not establish "close management and control" in a disputed wrongful death case. The deciding judge noted that encroachment on such informal consultation would negatively impact accessibility of practitioners to consultation, resulting in grave public policy implications.[4] That decision was upheld in the U.S. Court of Appeals.[5]

Rather, the requesting physician is inquiring in an unofficial broad manner about generalities that may well apply for a group of patients (e.g., those with mild thrombocytopenia undergoing colonoscopy) yet might not apply to a specific patient (e.g., as above but in a Jehovah's Witness). Giving of one's professional advice, even without compensation, is part of professionalism. Practitioners should not abuse this precept either by repeatedly taking advantage of this courtesy or by using the general unofficial advice in a specific official capacity.

A name provides an illusion of clarity where there was mystery and gives illness a tangibility which makes it seem more likely to be overcome. This applies not only to the patient but also to the doctor.

—Richard Asher[e]

While a doctor's knowledge may be extraordinarily precise for predicting what would happen to a thousand patients with a given condition, as the denominator becomes smaller, accuracy in prediction attenuates exponentially. It nearly disappears when the sample size recedes to unity, namely, when the doctor is called to prophesy outcome for a single individual. It is difficult to apply statistics to an individual patient. The unique challenge in doctoring is to determine where, if anywhere, a particular patient fits on the Gaussian distribution curve derived from a larger population. The decisive factor is the physician's breadth of clinical experience.

—Bernard Lown[f]

REASON FOR CONSULTATION

At first glance it seems intuitive that the reason to consult is to help another physician's management of a patient. Although this view is fundamental, it is not all inclusive. Several reasons exist for the consultation and cover the entire spectrum of the consultant–patient interaction.

Helping Another Physician

This is still the most common reason for the consult to be requested. In these situations, the primary physician requests assistance in the patient's diagnosis, prognosis, or treatment while he or she maintains overall care of the patient.

Second Opinion Requested by the Primary Physician

In this situation the primary physician has made a diagnosis and plan, but because of his or her unfamiliarity with the process or because of the seriousness of the illness, he or she requests a second corroborating opinion. In nearly all cases, the patient's care remains with the referring physician.

Second Opinion Requested by the Patient

In this situation the patient either has pressed for a second opinion or may have secured the consultation without informing the primary physician. This circumstance should be elucidated early in the consultative process and is probably best done by asking to whom the report should be sent. The patient and family may vary in reasons for pursuing a second opinion, but more often than not it is the result of a benign motivation. They generally wish the report to go back to the referring physician. That should be done with an opening sentence in the consultation letter stating that the patient sought the second opinion and that your information is being transmitted to the primary physician.

Second Opinion Sought by a Third-Party Payor

Increasingly, third-party payors are requesting second opinions, especially if a new diagnosis or planned procedure has significant financial implications. These consultations are worthwhile financially to the payor but also especially to the patient because the correct diagnosis and treatment are always best for the patient. These second opinions should be honored and are part of good modern medicine.

Other Third Parties

Occasionally, because of disputes regarding quality of care, causation, injury, prognostication, and workers' compensation, an independent medical evaluation (IME) is requested. This is one of the few situations in which a consulting physician should remain an uninvolved neutral party; the goal of this type of consultation is to remain objective and try to find facts to assist the mediation process while serving as an advocate for neither side. It is of great importance for the consultant to project this neutrality to the patient, his or her family, and both parties of a dispute and to document in the report that he or she is not and will not be a provider of care and thus no

[e] Richard Asher (1911–1969) was a keen English clinician and consummate wordsmith. His writings and lecture style clearly showed that he liked what he did. He excelled especially at the interface of internal medicine and psychiatry. He coined the terms *Munchausen syndrome* and *myxedema madness*. His writings and lectures demonstrate that he made cogent observations from the simplest of medical situations and wrote about them in an economic style. This quote comes from a collection of his best essays on how doctors should use words, *Talking Sense* (University Park Press, Baltimore, 1972).

[f] Bernard Lown (b. 1921) graduated from Johns Hopkins Medical School in 1942 and spent his clinical years in Boston. He was a cardiologist of the old school, giving most of his credit as a clinician to Dr. Samuel Levine. Dr. Lown taught a whole generation of clinical cardiologists not only cardiology but also the art of being a physician, with particular reference to listening to the patient and making a strong, empathetic connection. Dr. Lown's contributions are numerous and include seminal observations on digitalis intoxication, use of lidocaine in arrhythmias, the establishment of DC cardioversion, and the establishment of what would become the modern coronary care unit. He won the Nobel Peace Prize in 1985 for his work in prevention of nuclear war. These quotations are taken from his 1996 book *The Lost Art of Healing* (Houghton, Mifflin, Boston, 1996), which is highly recommended to any physician cherishing aspects we may well be losing as the burden of the technological approach to medicine increases.

traditional doctor–patient relationship has been established. Therefore, treatment will not be instituted (unless absolutely emergently so) but rather is described in the report, which should be an objective statement of findings. Some consultants do not do IME or workers' compensation consults, and this should be clearly stated to those who are requesting such consultation. Recently, Baum has described liability issues that can arise from IMEs.[6]

A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical service.

—AMA Code of Medical Ethics[g]

The Disgruntled Patient or Family

Occasionally a patient has lost confidence in a practitioner for either a real or perceived cause. These patients and especially their families may rail against a physician for missing or delaying a diagnosis, for treating too rapidly or too slowly, or for a less-than-perfect outcome. It is generally best to allow some degree of emotional venting by such parties during the consultation visit, but the consultant should make it clear soon thereafter that even if the patient is not to return to that initial practitioner, the patient's well-being remains dependent on records, reports, and tests from the other physician. At this time, the consultant should discuss with the patient the importance of the background work collected by the primary physician because it serves as the foundation for the consultation. All previous information is useful. Information from the first physician should be requested by the consulting physician (not by the patient) in a nonthreatening but honest manner, preferably face-to-face or by telephone rather than the mail; such direct discourse between the two physicians greatly facilitates the initial practitioner's efforts to elaborate his or her side of the story, to diminish concerns that the patient and consultant may be conspiring against the primary physician, and finally, in fact, to expedite patient care. The new consultant may assume primary care of the patient, find another qualified practitioner appropriate for the patient, or facilitate continued care of the patient by the original physician, especially if there have been only minor misunderstandings between these two parties.

In explaining to patients the failure of other physicians to have reached the correct diagnosis in the past, it should be pointed out that one cannot judge the past by the present. It often takes time for changes to occur to the point where a correct diagnosis is possible.

—Philip A. Tumulty[h]

Acknowledged mistakes provide potent learning experiences. Admitting them helps ensure that they will not be repeated. The humbling avowal of error prevents doctors from confusing their mission with a divine one. We possess no omniscient powers, only intuition, experience, and a patina of knowledge. These are most effective when one is constantly probing to advance the interest of an ailing human being.

—Bernard Lown[f]

Inappropriate Consultations

Occasionally consultations are requested that may be inappropriate. Although a consultant should always be at the service of a physician calling for a consultation, the consultant must be on guard against any consultation that reflects adversely on the patient, cost containment, or the profession. Physicians must minimize inappropriate consultations and identify abuses.

One such inappropriate consultation involves what the author refers to as "institutional elitism." This may occur when a patient with an existing chronic condition is admitted to a hospital for an acute hematologic problem. Unless proved otherwise, assume that chronic problems that are managed by other physicians are adequately treated; new consultations for these problems need not be generated. For example, if a patient with bipolar disorder is admitted with acute idiopathic thrombocytopenia (ITP), assume that the patient's chronic bipolar disorder has been appropriately treated for many years by a physician who is regarded as an expert and with whom the patient and family are perfectly happy; it is inappropriate to ask one's own institutional psychiatrist to see the patient unless one can conceive of some situation in which the bipolarism or its treatment may have something to do with the acute ITP. If the bipolar disorder or its treatment has nothing to do with ITP, it is best to continue the patient's pharmacologic management and then send a copy of the discharge summary to the psychiatrist for his or her office file.

A second, more pervasive form of inappropriate consultation is often referred to as "churning." In this situation, a patient is admitted, and each and every system or organ that is abnormal is immediately and with little forethought consulted on by experts. Basic internal medicine expertise should eliminate the notion that every murmur requires an immediate visit from a cardiologist, every wheeze requires a pulmonologist, and every arthritic joint requires a rheumatologist. This thesis is especially true with the very brief length of hospitalizations we currently endure. A consultation should be carefully chosen, and the question regarding the management should be focused toward any problem that is relevant to the current clinical setting.

A British study showed that 75 percent of the information leading to a correct diagnosis comes from a detailed history, 10 percent from the physical examination, 5 percent from simple routine tests, 5 percent from all the costly invasive tests; in 5 percent, no answer is forthcoming. Some of the most challenging medical problems I have encountered could be solved only through information provided by the patient. The time invested in obtaining a meticulous history is never ill spent. Careful history-taking actually saves time. The history provides the road map; without it the journey is merely

[g] American Medical Association Code of Medical Ethics, 1997, a compilation of medical ethics with its supporting case law, opinions, and foundations is extremely concise and well written. Unfortunately, it is not regarded by enough physicians as a foundation for a most important part of modern medical practice.

[h] Philip A. Tumulty (1912–1989) was the master consulting physician at Johns Hopkins Hospital and a professor of medicine for many decades. The three editors of this book were fortunate to have worked with Dr. Tumulty as house officers. Dr. Tumulty was the quintessential diagnostician and curator of the art of medicine exemplifying the highest attributes of an internist. His quotes in this chapter are taken from his book *The Effective Clinician* (W.B. Saunders, Philadelphia, 1973).

a shopping around at numerous garages for technological fixes.

—Bernard Lown[f]

CONSULTANT'S POINT OF VIEW

As a general rule, the consultant should approach each case from the point of view of having a degree of training more specialized than the referring practitioner. If the referring physician is another hematologist/oncologist, one can more likely than not appropriately review the case as a subspecialist (e.g., coagulationist) for that hematology/oncology referring physician. The consultation will thus be quite focused. When another internist refers the patient to the subspecialist, the consultant should regard the patient from the position of a hematologist/oncologist and therefore approach the patient in a more general manner. Therefore, other hematologic matters such as anemia, elevated white count, or splenomegaly can and should be addressed if they are found by the consultant. When consultation is originated by a noninternist such as a surgeon, obstetrician/gynecologist, or psychiatrist, approach the patient from the point of view of a general internist. In these situations one might also want to address elevated blood glucose, hypertension, or a dermatologic process not previously appreciated by the referring doctor. Although it is not necessary to address each of these problems oneself, the fact that one has found them when they had not been previously appreciated warrants consideration. The consultant may evaluate these personally or may wish to refer these patients to a diabetologist, hypertension specialist, or dermatologist, respectively. However, the fact remains that the consultant as an internist has found these items that are of medical importance and clearly parts of the overall consultation process. Increasingly patients are being referred to subspecialists by nonphysicians such as dentists, physician assistants, advanced registered nurse practitioners, and even third-party payors. In these situations, the consultant must look at the patient from a physician's perspective as well as from a specialist's perspective unless this has clearly been done by someone else. The consultant serving as physician *and* specialist must often ascertain that a patient has had appropriate preventive care (e.g., Papanicoulaou [Pap] smears and mammograms) or at least make sure that those very important points have been addressed in addition to addressing the question that is being directly asked by the referring health care provider.

I do not know a better training for a writer than to spend some years in the medical profession. I suppose that you can learn a good deal about human nature in a solicitor's office; but there on the whole you have to deal with men in full control of themselves. They lie perhaps as much as they lie to the doctor, but they lie more consistently, and it may be that for the solicitor it is not so necessary to know the truth. The interests he deals with, besides, are usually material. He sees human nature from a specialized standpoint. But the doctor, especially the hospital doctor, sees it bare. Reticences can generally be undermined; very often there are none. Fear for the most part will shatter every defense; even vanity is unnerved by it. Most people have a furious itch to talk about themselves and are restrained only by the disinclination of others to listen. Reserve is an artificial quality that is developed in most of us but is the result of innumerable rebuffs. The doctor is discreet. It is his business to listen and no details are too intimate for his ears.

—W. Somerset Maugham[i]

DUTIES OF THE REFERRING PHYSICIAN AND THE CONSULTANT

The consultant should focus as directly, efficiently, and cost effectively as possible on the precise question that the referring physician has formulated. This, of course, depends on the accuracy of the referring physician's question as well as the possibility that the referring physician may have missed some important points. In all cases, the consultant should provide that level of consultation that is best for the patient.

Consultants are increasingly working along with physician extenders such as physician assistants or advanced registered nurse practitioners. Such professionals are usually highly knowledgeable in their areas and clearly enhance the efficiency of the busy consultant. However, it must remain absolutely clear to the referring physician and the patient that the extender is working with the consultant and not independently. If the extender dictates the report, it is wise and reassuring to have joint signatures on the correspondence.

Too little has been made of the duties of the referring practitioner. In this era of brief visits in which time is at a premium, the referring physician cannot simply ask a consultant to go in depth into a patient's multiyear history of present illness with multiple hospitalizations, innumerable radiographs, biopsies, and sheaves of laboratory data just to "figure it all out" in a 45-minute consultation. Rather, the referring physician must prepare a brief (one-page) summary of what has happened and construct a chief question that is to be asked of the consultant. If radiographs, biopsies, or other special tests are of importance and pertinent, they must come with the patient, preferably hand-delivered by the patient directly to the consultant. Mailing important material that will be delivered a week after the consultation is perfunctory and disrespectful. On the other hand, if these previous records are not important, they are best left with the referring physician because they will only clutter the diagnostic process and further encroach on effective consultation time.

If I failed to send a letter along with a new referral, which I more often did than not, this man would call me before he saw the patient and bluntly ask, "Dr. Sams, what do you want me to do for this patient?" The first time this happened I was taken aback, for specialists are not usually that open or that direct, and I am afraid I stammered a little with confusion and surprise. Then I learned just as bluntly to reply, "Prove to me he does not have a brain tumor," or, "Tell me she is having migraines," or, "I am worried about multiple

[i] W. Somerset Maugham (1874–1965) was trained at St. Thomas' Hospital in London and used his medical background in his more famous career as a novelist, short-story writer, and playwright. He wrote more than 60 books. Of special interest to physicians is *Of Human Bondage*. This quote comes from his autobiography, *The Summing Up* (Bantam, Doubleday Dell Publishing Group, New York).

sclerosis and need you to confirm or deny it," or even, "She is a crock and forgive me for dumping on you."

—Ferrol Sams[j]

We sometimes forget that the fifth Oslerian essential skill of an internist (and the most important) after observation, palpation, percussion and auscultation, was contemplation.

I had a patient once with multisystem complaints who carried with her folders full of lab results, reports of endoscopies and multiple imaging studies, and a variety of other test records. I set it aside. "Aren't you going to look at this?" she asked. "If the answer to your problem was in there somewhere, you wouldn't be here." I said.

After a detailed history and physical examination I had some ideas but no answers. I wanted to read more about some possibilities that had come to mind. "I'll call you in a couple of days," I told her.
"No tests?"
"You've had plenty," I said.
"Then what are *you going to do?" she asked.*
"I'm going to think." I answered.
"Oh!" she said, "Nobody's ever done that before."

I believe that an internist's expertise, annealed to experience and analytical thought process, and the time to fully engage these most powerful tools are not only the core of our craft, but assure the patient the most cost-effective and humane medicine possible.

—Faith Fitzgerald[k]

TIMING

The timing of the consultation plays an important part in determining the tempo and depth of the consultant's evaluation of a patient. For instance, for a coagulation evaluation, it is important to know whether the patient is being considered for impending surgery. In this situation the consultation would usually be more exhaustive because the hemostatic challenge of surgery is imminent. On the other hand, one may be asked to see a patient with postoperative hemorrhage in whom another operation is not currently planned. It is characteristically difficult to make sense out of postoperative intrahemorrhagic coagulation tests because most diagnostic hemostatic testing is designed to ferret out problems in stable situations. Hemostatic studies from a patient who has been stressed by operation and hemorrhage, and is in the midst of receiving a variety of therapeutic agents and blood products, are difficult to interpret. Another situation involves patients who seek hemostatic evaluation as part of a kindred analysis when another family member, often a first-degree relative, has been found to have a genetic disease such as the factor V Leiden mutation.

Accurate diagnosis and knowledge of the prognosis, both with and without various modes of therapy, should guide the physician in answering three major questions of therapy: ***Whether*** *to treat,* ***When*** *to treat, and with* ***Which*** *modality.*

—Maxwell M. Wintrobe[l]

HOW TO DO THE CONSULTATION

A consultation is fundamentally similar to an admission evaluation of a patient but can be and usually is more focused, because the consultant is answering specific questions posed by the referring physician. Nonetheless, a careful history and physical examination are still in order and should be in depth, particularly in the area of expertise of the consultant. If the question posed is clearly focused and the encounter is a simple confirmatory or second opinion consultation, the consultation can be brief and therefore very circumscribed with respect to laboratory tests. Stumbling blocks, particularly in the areas of coagulation and thrombosis, regard not only *what* laboratory studies are reviewed but also *when* the tests were drawn. Every hematologist has had the problem of finding low and then normal protein C and protein S activity levels randomly spread throughout a patient's chart without clear indication whether the patient was receiving warfarin therapy at the time of testing. Similarly, a prolonged partial thromboplastin time may be the result of a traumatic venipuncture, contaminating heparin, or a true underlying process such as disseminated intravascular coagulation. One cannot simply look at raw laboratory data without knowing what the clinical circumstances were at that time in order to interpret those data. The obverse of this is that when the consultant performs laboratory tests, he or she is expected to state explicitly in the chart the ongoing events at the time those laboratory specimens were collected. It is important to know whether warfarin therapy or heparin therapy was concurrent, whether liver disease was manifest, or if there was a recent massive thrombosis. Otherwise one is unable to convert data into information useful to the patient and the physician.

ROLE OF THE CLINICAL LABORATORY

The traditional relationship between clinical hemostasis and the coagulation laboratory is longstanding, time-honored, and intertwined. At one time, diagnostic and investigational

[j] Ferrol Sams (b. 1922) was educated at Emory University School of Medicine and still practices in southern Georgia. He is a master storyteller and has written several novels, including *Run with the Horsemen* and *Whisper of the River*. The quotation used comes from *The Widow's Mite* (Peachtree Publishers, Atlanta, 1987).

[k] Faith Fitzgerald (b. 1943) was born in Massachusetts and received her M.D. degree from the University of California, San Francisco, where she was also an intern and resident. She was then Chief Resident in Medicine at San Francisco General Hospital. She currently is Assistant Dean of Humanities and Bioethics at the University of California, Davis School of Medicine. Her bright intellect, quick wit, and sagacious personality make her a most popular medical speaker. This citation originated in an American College of Physicians chat room for Governors and Regents on February 24, 2003, and is too priceless to exist only in cyberspace, and so, with Dr. Fitzgerald's permission, it is included.

[l] Maxwell M. Wintrobe (1901–1986) is considered the father of American hematology. Born and trained in Canada, he joined the faculty at Johns Hopkins in 1929 and in 1943 became the founding icon at the new medical school in Salt Lake City, where he helped build that service into one of preeminence. A host of American hematologists can trace their academic lineage directly or indirectly to Dr. Wintrobe. His quotation is taken from the introduction to his textbook, *Clinical Hematology*, first published in 1942. It has been wisely retained by the current editors of the 10th edition (Williams & Wilkins, Baltimore, 1998).

laboratories were managed by clinicians, which significantly contributed to the clinicians' ability to unravel and understand the intricate complexities of physiologic and pathophysiologic events. Unfortunately, through modern regulations, laboratories are no longer supervised by clinicians. Residents in clinical training have considerably less exposure to even basic coagulation testing. It is strongly encouraged that residents in training seek out experience (hands-on if possible) in a diagnostic laboratory in order to understand the vagaries and underpinning of this craft. Effective consultative diagnostics requires that the laboratory not be viewed as an incomprehensible yet unquestioned "black-box" into which samples are placed and from which data emerge. What the chest x-ray is to the pulmonologist and the electrocardiogram is to the cardiologist, the coagulation laboratory is to the hematologist.

The weight of laboratory results in the diagnostic process varies considerably. On one extreme, no clinician, no matter how talented, can distinguish between congenital factor VIII deficiency and factor IX deficiency, given the identical manifestations and genetics, clinical expressions, and courses of these two disorders. The laboratory can promptly and easily distinguish these, a matter of considerable importance considering the key differences in treatment. On the other hand, the preponderance of diagnostic evidence is clinically derived with the laboratory serving primarily to confirm one's clinical diagnosis. Common clinical diagnoses include thrombotic thrombocytopenic purpura, immune thrombocytopenic purpura, disseminated intravascular coagulation, and heparin-induced thrombocytopenia. The more facile one becomes in laboratory methods, to consider its prelaboratory variables (e.g., wrong sample, wrong patient, heparin contamination) and false-positive and false-negative results, the more correctly the diagnostic laboratory will be viewed. The diagnostically naive clinician tends to rely inordinately and inflexibly on the laboratory.

RECOMMENDATIONS

A consultant's recommendations should be clearly stated and easily found. In urgent cases or especially if information is pivotal in patient management, the referring physician should be called as soon as feasible to discuss the events of the consultation. This rapid communication is then followed up with a more formal consultation note.

In preparing the final report, the consultant should state in the first sentence or two the reason for the consultation. An example may be "Thank you very much for sending this 37-year-old white man with clear-cut ITP in for consultation for my opinion regarding length of prednisone treatment prior to possible splenectomy." This first sentence thus makes clear at least what your expectations were of the consultation, and, if such expectations prove to be wrong, the consultation can be refocused. For inpatient consultation, particularly when the patient is not on an internal medicine service, one's diagnoses and recommendations are probably best tabulated in a numeric fashion, because the entire history, physical examination results, and recounting of laboratory data more likely than not will not be read by the busy referring doctor.

Genetic counseling also may be an aspect of the consultation. For example, when patients are found to have heritable diseases, such as hemophilia or thrombophilia, it is wise to tell both the family and the referring physician that at least first-degree relatives might be screened for the presence or absence of the genetic disease. It is useful for first-degree relatives to know whether they do or do not have the defect, regardless of prior symptomatology, because future therapeutic plans are impacted by either positive or negative diagnoses of such illnesses.

One should be perfectly clear about to whom to send the consultation report. In inpatient work, the report is usually left on the chart for all appropriate persons to see.

In outpatient consultations, the initial copy is sent to that practitioner who referred the patient. Frequently patients wish to have copies of the consultation, and this should be honored in almost all respects. In rare situations in which the consultant feels uncomfortable, he or she should inform the patient that it is his or her obligation to send the consultation report back to the referring physician and let the referring physician and patient discuss those matters between themselves. Keep in mind, however, that any report is rightfully discoverable, so if a patient wishes to have a report, such inevitably will be accomplished.

More often than not patients will have seen other physicians who may have a stake in the patient's overall care, so it is pertinent to ask the patient whether he or she wishes to have a copy of the report sent to other health care practitioners who have cared for the patient or may in the near future.

In the special circumstances of IME and workers' compensation cases, the report is sent to the party who requested and paid for the consultation. Here it is not advisable to send copies to other practitioners without the explicit permission of the patient or the parties requesting the IME or workers' compensation evaluation.

Time after time I have gone out into my office in the evening feeling as if I couldn't keep my eyes open a moment longer. I would start out on my morning calls after only a few hours' sleep, sit in front of some house waiting to get the courage to climb the steps and push the front door bell. But once I saw the patient all that would disappear. In a flash the details of the case would begin to formulate themselves into a recognizable outline, the diagnosis would unravel itself, or would refuse to make itself plain, and the hunt was on.

—William Carlos Williams[m]

CONCERNS

Sometimes circumstances develop during the consultation that place the consultant in an unenviable position. Maturity and professionalism will serve to direct the correct course of action even if initially it seems totally impossible. The fundamental commandment should be to do that which is best for the patient rather than one's own emotional comfort. These dilemmas usually involve the relationship between the referring physician and the patient.

[m] The American physician William Carlos Williams (1883–1963) translated his hard work as a practitioner into everyday-life scenarios that characterized his enormous production of poetry and short stories. The quotation comes from a short story called "The Practice" from the *Autobiography of William Carlos Williams* (New Directions Publishing Company, New York, NY, 1951).

A patient or his or her family may be disgruntled with the original physician. Diagnoses are missed by all practitioners, and therapy provided can be incorrect. Bad outcomes should be clearly separated from deviation in standard of care. Tact with honesty and forthrightness should be employed. Often diagnoses that are perfectly clear in retrospect are in fact initiated and validated by prior efforts made on behalf of the patient. Treatments can be controversial, and even bizarre treatments have their vocal advocates. One should never openly fault another practitioner without knowing all the facts involved. It is best to limit oneself to what is known and carefully document such in the record because the stated facts may change if and when more data are collected. It is usually wise to refer such cases to a third practitioner or assume the care oneself rather than force the patient and physician back together if care does appear in fact to be suboptimal. One should find a way to discuss this matter with the other physician because it will eventually be revealed in some manner regardless. Early communication will allow the other practitioner to voice facts of which the consultant may not be aware. As mentioned previously, it is often possible to reconcile the patient's and the referring physician's problems. Early communication also allows the initial physician, if he or she indeed has practiced below the standard of care, to make amends with the patient or, if appropriate, for the physician to contact his or her risk management personnel sooner rather than later.

Some practitioners initially may be curt, hurried, or disrespectful or do not offer enough of their time to their patients, but nonetheless, are practicing within the medical-legal standard of care. If reparations cannot be made, the patient is best served by finding an equally intelligent but more humanistic physician.

Some patients are habitually malcontent; this can be determined by both discussion with the practitioner and discovery that the patient is persistently unable to establish and maintain profitable relationships with any health care provider. This category may include patients with personality disorders, drug-seekers, and persons with self-induced or factitious illnesses. These patients are most difficult because their problems are far deeper than just those that apply to one's subspecialty.

What the scalpel is to the surgeon, words are to the clinician. When he uses them effectively, his patients do well. If not, the results may be disastrous.

—Philip A. Tumulty[h]

OUTCOMES

Total Agreement

In this situation the consultant totally agrees with the evaluation of the referring physician and consultation serves primarily to add a layer of understanding and confidence to the patient and his or her family. Almost always one can make some minor suggestions, the thrust of the consultation is clearly to agree with and support the diagnosis, prognosis, and treatment plan of the referring physician. In almost all cases, the referring physician will continue with the assumption of care of the patient.

Supporting Consultation

Occasionally a physician will refer a noncompliant or doubtful patient to a consultant in order to have the latter reinforce a point with which the referring physician is having difficulty because of poor patient acceptance or compliance. Common examples of this type of consultation include the acceptance of certain diagnoses and especially cessation of smoking. Surprisingly, some patients refuse to accept the determination that they are normal despite all the supporting evidence. They continue to hang on to mildly abnormal laboratory data or minor findings such as normal bruising as evidence for some underlying pathologic process. Wisely, the referring physician usually communicates this informally with the consulting physician prior to the consultation. When it is clear that the referring physician will continue to assume care of the patient, the consultation is an opportune time for the consulting physician to strongly reinforce the stance of the referring physician (assuming that it is correct). Inappropriate behavior on the part of the patient can be addressed. This may occasionally generate some degree of resentment on the part of the patient, who may report such resentment to the referring physician or even distort details of the consultation. The strong advocacy role played by the consultant physician rightfully justifies the benevolent attempt of the consultant to positively modify the patient's understanding or behavior. One should promptly alert the referring physician of these events by telephone so that the referring physician will be forewarned regarding possible negative opinions of the consulting physician voiced by the patient.

Finding Another Physician for the Patient

It may become clear to the consultant that the referring physician has not made the correct diagnosis, prognostication, or treatment and that perhaps another primary physician should assume care of the patient. The consultant must be prepared to relate this opinion to the referring physician, especially if the patient or his or her family is obviously upset with the referring physician. The consultant, as a neutral third party, can sometimes improve patient care, but it is always still advisable as well as truthful to acknowledge to all parties the foundation work prepared and gathered by the original physician.

Consultant Assumes Primary Care of the Patient

Very rarely the consultant will assume primary care of the patient; this is not an advisable practice because if this does occur the relationship between the referring physician and consultant may be eroded. Transference of care is clearly understood whenever a patient moves from an area where he or she was previously attended by the referring physician to the consultant's geographic area. One may occasionally have a patient and his or her family so positively impressed by the attention and clinical sophistication of the consultant that they ask the consultant to assume their care. Flattering

though it may be, it is advisable not to do this unless there is absolute agreement from all parties, and to include third-party payors. It is not intrinsically unethical but generally should be held to an absolute minimum.

It is not unethical to enter into a patient–physician relationship with a patient who has been receiving care from another physician. By accepting second-opinion patients for treatment, physicians affirm the right of patients to have a free choice in the selection of their physicians.

—AMA Code of Ethics[g]

Serious Troubles

Rarely, a patient's case has been so mismanaged that there is clear and immediate danger to the patient. If this occurs, the consultant is helping the patient and also potentially the referring physician by extracting the patient from continued mismanagement. If the patient's care is severely compromised and immediate care is necessary, prompt hospitalization at the consultant's facility is a way to address the problem and defuse potential ill will with the referring physician. In this manner, diagnostic and therapeutic procedures can be initiated promptly and the consultant allowed time and data to justify this aggressive maneuver to the referring physician. Whether the patient should be returned to the referring physician may be a matter of the preference for the patient, the referring physician, or both, and the decision must take into consideration the referring physician's abilities to continue the correct treatment. Jones and colleagues outlined various communication options when discussing prior practitioners' mismanagement with patients and family.[7]

The best way to get a difficult job done is face-to-face or ear-to-ear. Sending notes is never satisfactory.

—Eugene A. Stead, Jr.[c]

Redirecting the Thrust of a Workup

The consultant has the benefit of having more time, laboratory data, and response to therapy than the original physician. Occasionally the consultant may suddenly visualize the correct diagnosis, which, while explaining all the findings in the case, is far different from that of the referring physician. At this juncture the diagnostic and therapeutic thrusts must be changed from one direction to another. A example would be a patient who is being evaluated for anemia and is referred for a bone marrow examination because a myriad of tests have been negative. If the consultant recognizes that a history of fatigue, chills, fevers, weight loss, and night sweats has been overlooked and detects a new cardiac murmur, it is clear that the evaluation should be focused more toward infectious endocarditis than anemia of unknown etiology. Rarely do any parties become upset with this new direction, especially when the new diagnosis proves to be correct. Credit again must be given to the foundation of material gathered by the original physicians.

Major Disagreements between Physicians

This most unfortunate but rare situation usually occurs in the inpatient rather than the outpatient setting. Not all the recommendations that a consultant makes need be carried out by any referring physician, and the decision to follow the recommendations is certainly the prerogative of the attending physician. No code holds that the attending physician must execute each and every recommendation made by the consulting physician. Lo and colleagues explored variables for and against adherence and lack of adherence to suggestions made by infectious disease consultants.[8]

On some occasions, however, the consultant's feelings are so strong and so clear that for the primary physician to continue to ignore the recommendations may well fall below the standard of care in the consultant's opinion. In this situation, frank face-to-face discussion with the attending physician is mandatory. This is particularly true in teaching institutions, where there are several buffers of communication between the consultant faculty member and the attending physician of record. If these matters cannot be resolved, it may be wisest to sign off a case in writing in the chart. Admittedly this should be a very rare event, but it does occur perhaps a few times in a decade among consultants in a very busy consultation service. The note need not be long or give reasons but simply state that one as the consultant is signing off this case but availability can be reestablished by reconsultation. The consultant might name other consultants who may be contacted on this case.

From the day you begin practice never under any circumstances listen to a tale told to the detriment of a brother practitioner. And when any dispute or trouble does arise, go frankly, ere sunset, and talk the matter over, in which way you may gain a brother and a friend.

—William Osler[n]

Duration of Consultation

There is often question about how long one should be involved as a consultant in the outpatient setting and in the inpatient setting. This question may be more pertinent on an inpatient basis. Some focused questions are effectively answered by an equally focused single note. In other situations, those questions are quickly and efficiently answered with one or two brief follow-up visits to ascertain results of certain requested laboratory data or the response to therapy after which the consultation can be terminated. It is advisable to sign off in writing in the medical record so that it is clear to all parties that one has ceased closely following the patient yet is still available if another question emerges or if things do not go as planned.

Some consultations involve "clearing a patient for surgery." All parties should understand that the term *cleared for surgery* implies clearance *at that time*. Therefore, any events that happen later cannot have been considered; a patient is not cleared for surgery in perpetuity. This often must be expressly written in the outpatient consultation as facts can change between the consultation and the actual surgery. For instance, a patient

[n] William Osler (1849–1919) received his M.D. degree from McGill University and was the founding physician of the new Johns Hopkins University. While helping to establish the preeminence of Johns Hopkins, he wrote his *Principles and Practice of Medicine* and subsequently became the Regis Professor of Medicine at Oxford University, the chair presently held by Dr. Weatherall, who was kind enough to write the preface to the first edition of this text. Dr. Osler wrote prolifically on medical and nonmedical subjects. The quotation used is one of his *Aphorisms*.