

CURRICULUM VITAE

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Place of Birth: New York City, New York

Education:

1970		Cheltenham High School, Wyncote, PA.
1974	B.S.	Yale College, New Haven, Conn.
1978	M.D.	University of Pennsylvania School of Medicine, Philadelphia, PA

Postdoctoral Training:

Internship and Residencies:

1978-1979	Intern in Pediatrics, Children's Hospital, Boston, MA
1979-1980	Junior Assistant Resident in Pediatrics, Children's Hospital, Boston, MA
1980-1981	Senior Assistant Resident in Pediatrics, Children's Hospital, Boston, MA

Clinical and Research Fellowships

1981-1984	Fellow in Pediatric Cardiology, Children's Hospital, Boston, MA
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Licensure and Certification:

- 1979 Diplomate National Board of Medical Examiners
- 1981 Massachusetts State License Registration
- 1983 Diplomate of American Board of Pediatrics
- 1985 Diplomate of sub-board Pediatric Cardiology, American Board of Pediatrics
- 1991 New Hampshire State License Registration

Academic Appointments:

- 1984 Assistant Professor of Pediatrics, Tufts University School of Medicine, Boston, MA
- 1990 Associate Professor of Pediatrics, Tufts University School of Medicine, Boston, MA
- 1998 Associate Professor of Pediatrics, Harvard Medical School, Boston, MA

Hospital Appointments:

- 1984-1992 Assistant Cardiologist, Floating Hospital for Children at the New England Medical Center, Boston, MA
- 1984-1986 Research Associate, Children's Hospital, Boston, MA
- 1986- 2006 Pediatric Cardiologist, Franciscan Children's Hospital, Brighton, MA
- 1991- Consulting Staff, Pediatric Cardiologist, St. Joseph Hospital, Nashua, NH
- 1992-1997 Cardiologist, Floating Hospital for Children at the New England Medical Center, Boston, MA
- 1994-1997 Consulting Staff, Pediatric Cardiologist, Saints Memorial Medical Center, Lowell, MA
- 1994- Consulting Staff, Pediatric Cardiologist, Norwood Hospital, Norwood, MA
- 1994-2000 Consulting Staff, Pediatric Cardiologist, Newton-Wellesley Hospital, Newton, MA
- 1995-2001 Affiliate Staff, Pediatric Cardiologist, South Shore Hospital, Weymouth, MA
- 1996- Active Staff, Pediatric Cardiologist, St. Elizabeth's Medical Center, Boston, MA
- 1996-1997 Provisional Staff, Pediatric Cardiologist, Beverly Hospital, Beverly, MA
- 1996-1997 Clinical Associate in Pediatrics, Massachusetts General Hospital, Boston, MA
- 1998- Senior Associate in Cardiology, Children's Hospital, Boston, MA
- 1998- Provisional Staff, Pediatric Cardiologist, Good Samaritan Medical Center, Brockton, MA
- 2001-2006 Consulting staff, Holy Family Hospital, Methuen, MA
- 2002- Pediatrician to Affiliate Staff, Department of Newborn Medicine, Brigham and Women's Hospital, Boston, MA

Hospital and Health Care Organization Service Responsibilities:

New England Medical Center

- 1984-97 Attending Physician, Pediatric Cardiology Service, Floating Hospital for Children at the New England Medical Center, Boston, MA. 2-4 months/year
- 1984-97 Pediatric Cardiac Catheterization Laboratory, Floating Hospital for Children at the New England Medical Center, Boston, MA. Diagnostic tests and therapeutic intervention.
- 1984-97 Non-invasive Laboratory, Floating Hospital for Children at the New England Medical Center, Boston, MA- performance and interpretation of 2-D, M-mode, pulsed, continuous and color Doppler echocardiography.
- 1992-93 Non-invasive Laboratory, Floating Hospital for Children at the New England Medical Center, Boston, MA- performance and interpretation of transesophageal echocardiography in the operating room and fetal echocardiography during a weekly clinic.
- 1984-92 Exercise Physiology Laboratory, Floating Hospital for Children at the New England Medical Center, Boston, MA- performance and interpretation of treadmill exercise tests.
- 1984-97 Outpatient cardiology clinics:
Floating Hospital for Children at the New England Medical Center (1984-1997, weekly)
Franciscan Children's Hospital, Brighton, MA (1985-1997, monthly)
Framingham Heart Center, Framingham, MA (1988-1997, monthly)
St. Joseph Hospital, Nashua, NH (1991-1997, monthly)
Pediatric and Adolescent Referral Center, Waltham, MA (1994-1997, weekly)
Norwood Hospital, Norwood, MA (1995-1997, monthly)
Beverly Hospital, Beverly, MA (1996-1997, monthly)
Winchester Hospital Family Medical Center, Wilmington, MA (1995-1997, monthly)
Massachusetts General Hospital, Boston, MA (1996-1997, weekly)
- 1991-97 Center for Adults with Congenital Heart Disease- monthly clinic at New England Medical Center staffed jointly by adult and pediatric cardiology staff.
- 1994-97 Consulting cardiologist for in-patient evaluations:
Newton-Wellesley Hospital
St. Elizabeth's Hospital
Massachusetts General Hospital

Children's Hospital- Boston

- 1998- Attending physician- Cardiology In-patient Service- 2 months/year
- 1998-2001 Cardiac Catheterization Laboratory- Attending Physician- 1 day/week
- 1998- Cardiology Consultation Service- Director; attending physician 3 months/year
- 1998- Attending physician- Fellow's clinic- weekly afternoon session
- 1998- Outpatient Cardiology Clinics
 - Children's Hospital, Boston, MA: weekly session
 - Lexington Children's Hospital Center: monthly session
 - Norwood Hospital, Norwood, MA: twice monthly
 - Pediatric and Adolescent Referral Center, Waltham, MA: monthly (d/c 2000)
 - St. Joseph Hospital, Nashua, NH: monthly
 - Franciscan Children's Hospital, Brighton, MA: every other month (d/c 2000)
 - Good Samaritan Medical Center, Brockton, MA: monthly
 - Holy Family Hospital, Methuen, MA: monthly (began 2001, d/c 2005)
 - 240 State Road, Dartmouth, MA: monthly (began September 2001, d/c 2003)
 - Franklin Street, Framingham, monthly (began January 2002)
 - Waltham, Children's Hospital satellite site: monthly session began June 2005
- 1998- Rapid Response Team- evaluation of patients referred for same day assessment from community physicians; one day each week
- 1998- Biweekly conference with housestaff and cardiology fellows to teach auscultation skills with aid of CD-ROM
- 1998-2002 Clinical Management Conference- Director: monthly
- 1999- Cardiovascular Program Quality Improvement Committee, Children's Hospital, co-chairperson
- 2004- Senior Rounds- one day weekly attend Senior Resident rounds to review and discuss patient admissions and management
- 2006 Consult Chiefs Policy Working Group- Chairman of committee to formulate and implement hospital consult service policy

Major Administrative Responsibilities:

New England Medical Center

- 1984-1988 Quality Assurance, Division of Pediatric Cardiology, Floating Hospital for Children at the New England Medical Center, Boston, MA
- 1985-1987 Member, Intern Selection Committee, Floating Hospital for Children at the New England Medical Center, Boston, MA
- 1989-1995 Director- Pediatric Cardiac Catheterization Laboratory, Floating Hospital for Children at the New England Medical Center, Boston, MA
- 1991-1997 Co-director - Center for Adults with Congenital Heart Disease, New England Medical Center, Boston, MA

- 1994-1997 Clinical Continued Improvement Committee, Division of Pediatric Cardiology, Floating Hospital for Children at the New England Medical Center, Boston, MA
- 1995-1997 Associate Chief, Division of Pediatric Cardiology, Floating Hospital for Children at the New England Medical Center, Boston, MA
- 1995-1997 Member, Pediatric Emergency Services Operations Committee, New England Medical Center, Boston, MA
- 1996 JCAHO survey- Pediatric Cardiology representative and spokesperson, Floating Hospital for Children at the New England Medical Center, Boston, MA

Children's Hospital- Boston

- 1998- Cardiology Consultation Service, Director
- 1998 Course co-director: Assessment of Cardiovascular Problems Commonly Encountered in Pediatric Office Practice- an update for the pediatrician and primary care practitioner, June 4, 1998. Offered by Harvard Medical School. Course co-directors: Michael D. Freed, Herbert E. Cohn, Robert Geggel.
- 1998- 2001 Clinical Management Conference, Children's Hospital, Boston, MA: monthly session to permit review of patient data so that clinical decisions can be made. Conference is attended by cardiology and cardiothoracic services so that an efficient review for complex patients can be achieved. The formation of this conference was suggested by me when I joined the staff in 1998.
- 1999- Quality Improvement Committee, Cardiovascular Program- co-chairperson
- 1999- Outpatient Department Administrative Committee, Cardiovascular Program- member.
- 1999 Course co-director: Management of pediatric cardiovascular problems in office practice, May 4, 1999. Offered by Harvard Medical School. Course co-directors: Michael D. Freed, Herbert E. Cohn, Robert Geggel.
- 2001-2002 Boston Children's Heart Foundation, Board of Directors, member.
- 2002- Residency Training Committee, Department of Medicine- member.
- 2005-2007 Physician Leadership Council- elected member from Department of Cardiology
- 2006 Consult Chiefs Policy Working Group- Chairman of committee to formulate and implement hospital consult service policy

2007 Associate Attending Policy- member of ad hoc committee to review hospital policy pertaining to communication between primary attending and associate attending for patients with multiple care providers at the medical center who are evaluated in the Emergency Room or who are admitted

Major Committee Assignments:

Tufts Medical School

1993 Member, Research Development Group - Subcommittee on Vascular Biology, Tufts University School of Medicine, Boston, MA

Floating Hospital for Children at the New England Medical Center

1984-1988 Quality Assurance, Division of Pediatric Cardiology, Director
1985-1987 PL-1 Selection Committee, Member
1985-1990 Resident Advisor
1993 Pediatric Cost Reduction Committee, Member
1994-1997 Clinical Continued Improvement Committee, Division of Pediatric Cardiology, Director
1995-1997 Pediatric Emergency Services Operations Committee, Member
1995-1997 Pediatric Cardiology Division Mortality Review, Director
1995 Faculty Productivity Committee, Vice-chair
1995 Committee on policy and procedure for sedation and analgesia by non-anesthetists during diagnostic and therapeutic procedures in pediatric patients, Member
1996-1997 Pediatric Emergency Services, sub-committee: Community Physicians Advisory Group, Member
1996 JCAHO survey- Cardiology representative and spokesperson
1996 Healthsource site visit (1/17/96)- Cardiology representative to present division's activities and services
1996 Emergency Services, subcommittee on ambulance diversion policy, Member
1996 Inpatient staffing restructuring committee, Member
1996 Emergency Department Overload- discharge and bed assignment, Member
1996 Patient flow communication task force, Member
1996 Advanced Risk and Brokerage/Patient Advocates, Inc., Maine. (11/22/96)- Cardiology representative to present division's activities and services.
1996 Central venous line placement advisory committee, Member
1997 Restructuring of pediatric in-patient units, Member

National

1994-2002 American Thoracic Society/European Respiratory Society- Committee on Bronchopulmonary Dysplasia, Member. Recommendations for cardiovascular monitoring and treatment, especially pertaining to pulmonary hypertension for infants and children with this condition. Sole cardiology representative for this committee.

Children's Hospital, Boston

1999- Patient Care Committee
1999-2003 Quality Improvement Committee- Cardiovascular Program- co-chair
1999- Outpatient Department Administrative Committee, Cardiovascular Program, member.
2002- Residency Training Committee, Department of Medicine- member
2006 Consult Chiefs Policy Working Group- Chairman of committee to formulate and implement hospital consult service policy

Regional

2002 Blue Cross Insurance Company- RSV Prophylaxis (Synergis) Coverage Policy, November 26, 2002. Provided advice of patient selection for coverage for patients with congenital or acquired heart disease.
2003 Blue Cross Insurance Company- RSV Prophylaxis (Synergis) Coverage Policy, July 30, 2003. Update of coverage policy.
2008 Massachusetts Medical Society- Committee on global Medicine

Harvard Medical School

2003 Scholar in the Academy at Harvard Medical School

Professional Societies:

1984- Northeast Pediatric Cardiology Society, Member
1989- American Heart Association - Council of Cardiovascular Disease in the Young, Member
1990- Massachusetts Medical Society, Member
1990- American College of Cardiology, Fellow
1990 American Federation for Clinical Research
1995- American Medical Association, Member
1997- The Society for Cardiac Angiography and Interventions, Fellow

Community Service Related to Professional Work:

- 1980 (July-August) Physician employed by the International Rescue Committee (New York City) to work in Khao-I-Dang, a holding center organized by the United Nations High Commission for Refugees in Thailand. Staffed the Emergency Room and cared for pediatric and adult patients.
- 2000 September 15-23: Cardiologist for medical team that provided cardiac care to poor infants and children in Quito, Ecuador. This group was organized by Por Cristo, headquartered in Boston; team members came from Boston, Washington, D.C., and Florida. I performed all the interventional catheterizations (14 procedures in 4.5 days) and gave several lectures on congenital heart disease. Lesions included severe aortic stenosis, coarctation of the aorta, pulmonary stenosis, and patent ductus arteriosus.
- 2001 September 7-15: Cardiologist for Por Cristo sponsored medical team to Quito, Ecuador. I performed all the interventional catheterizations (9 procedures in 4.5 days). Lesions included pulmonary stenosis, patent ductus arteriosus, coarctation, as well as some diagnostic studies.
- 2002 June 14-22: Cardiologist for Por Cristo sponsored medical team to Quito, Ecuador. I performed all interventional catheterizations (7). Lesions included aortic stenosis, pulmonary stenosis, and patent ductus arteriosus. Local physicians were trained to perform these procedures.
- 2003 September 5-13: Team leader and cardiologist for Por Cristo sponsored medical team to Quito, Ecuador. Performed interventional catheterization procedures (11). Lesions included aortic stenosis, pulmonary stenosis, patent ductus arteriosus, stenotic shunts. Provided additional training and supplies to local physicians.
- 2004 November 5-13: Organized procurement of catheterization equipment for procedures that were performed. Donations of equipment were obtained from multiple companies and exceeded \$20,000 in value. Due to serious illness in my family, I was unable to travel to Ecuador this year.
- 2005 November 4-12: Cardiologist for Por Cristo sponsored medical team to Quito. Directed cardiac catheterization activities. I procured extensive supplies from various vendors for use during our stay and for the local cardiologist's use after our departure. We performed 11 interventional procedures including balloon valvuloplasty of aortic stenosis and pulmonary stenosis, and coil occlusion of patent ductus arteriosus. The team also performed 75 echocardiograms and I supplied advice on patient management.
- 2006 November 3-11: Cardiologist for Por Cristo sponsored medical team to Quito. I directed the cardiac catheterization activities. Approximately \$30,000 of

medical equipment was procured from donations from multiple medical supply companies. We performed 15 interventional procedures. Procedures performed included coil closure of patent ductus arteriosus, balloon valvuloplasty of aortic stenosis, pulmonary stenosis, and recurrent coarctation.

2007 November 9-17: Cardiologist for Por Cristo sponsored medical team to Quito. I directed the cardiac catheterization procedures. We performed 8 procedures including coil closure of patent ductus arteriosus, balloon valvuloplasty of valvar aortic stenosis and pulmonary stenosis. Approximately \$30,000 of medical equipment was procured from donations from multiple medical supply companies.

Editorial Responsibilities:

1986- Journal of Pediatrics: reviewer of submitted manuscripts. Topics- congenital heart disease, pulmonary hypertension.
1995- Journal of Clinical Ultrasound: reviewer of submitted manuscripts.
1995- Journal of Thoracic and Cardiovascular Surgery: reviewer of submitted manuscripts. Topics- pulmonary hypertension, morphometric analysis of lung structure.
1995- Catheterization and Cardiovascular Diagnosis: reviewer of submitted manuscripts. Topics- interventional pediatric catheterization.
1995- European Heart Journal: reviewer of submitted manuscripts.
2002- Pediatrics: reviewer of submitted manuscripts.
2004 American Journal of Cardiology- reviewer of submitted manuscript
2006 American Journal of Medical Genetics- reviewer of submitted manuscript
2007 Heart- reviewer of submitted manuscript
2008 Circulation- reviewer of submitted manuscript

Awards and Honors:

1970 High School Graduating Class rank 1 in class of 605 students
1973 Phi Beta Kappa, awarded in junior year at Yale College
1974 Yale College: general honors summa cum laude, highest honors in biology
2000 Nominated for "Teacher of the Year" award by pediatric cardiology fellows
2003 Selected as a Scholar in the Academy at Harvard Medical School. The Academy's mission is to provide greater recognition for teaching efforts, support educational innovation, and enhance skills of the entire community of teachers at Harvard Medical School. I was the first and as of November 2007 only member of my department admitted to the academy
2004 Listed in "Guide to America's Top Pediatricians" published by Consumers' Research Council of America
2007 Listed in "Guide to America's Top Cardiologists" published by Consumers' Research Council of America

2007 Selected to Best Doctors in America® 2007-2008 database, a peer selected process with selected physicians representing 5% of American physicians. Physician list printed in Boston Magazine

Teaching

Local Contributions

1. Local invited teaching presentations (seminars, Grand Rounds)

- 1987 Neonatal Grand Rounds, St. Margarets Hospital, Dorchester, MA., October 1987. Topic: Persistent pulmonary hypertension of the newborn.
- 1989 Pediatric Grand Rounds, St. Anne's Hospital, Fall River, MA., April 1989. Topic: Bedside diagnosis of cyanotic congenital heart disease.
- 1991 Pediatric Grand Rounds, Leonard Morse Hospital, Natick, MA, March 1991. Topic: Kawasaki disease.
- 1991 Pediatric Grand Rounds, Framingham Union Hospital, Framingham, MA, April 1991. Topic: Chest pain in pediatrics.
- 1992 Pediatric Grand Rounds, Beverly Hospital, Beverly, MA, February, 1992. Topic: Bedside diagnosis of congenital heart disease.
- 1994 Boston Perinatal Center Conference, New England Medical Center, Boston, MA. January 1994. Topic: Congenital heart disease presenting with symptoms in the perinatal period.
- 1996 Pediatric Grand Rounds, Baystate Medical Center, Springfield, MA. June 11, 1996. Topic: Nitric oxide therapy for pulmonary hypertension in pediatric patients.
- 1999 Grand Rounds, Heywood Hospital, Gardner, MA., May 19, 1999. Topic: Pediatric Heart Murmurs.
- 1999 Pediatric Grand Rounds, Winchester Hospital, Winchester, MA. October 1, 1999. Topic: Auscultation of Heart Sounds and Murmurs in Pediatrics.
- 1999 Pediatric Grand Rounds, Norwood Hospital, Norwood, MA. October 13, 1999. Topic: Evaluation of Pediatric Chest Pain.
- 2001 Pediatric Grand Rounds, Holy Family Hospital, Methuen, MA. April 18, 2001. Topic: Pediatric Chest Pain

- 2001 Pediatric Grand Rounds, Holy Family Hospital, Methuen, MA. November 7, 2001. Topic: Auscultation of Heart Sounds and Murmurs in Pediatrics.
- 2002 Pediatric Grand Rounds, St. Joseph Hospital, Nashua, NH. January 14, 2002. Topic: Auscultation of Heart Sounds and Murmurs in Pediatrics.
- 2002 Pediatric Grand Rounds, Good Samaritan Medical Center, Brockton, MA. January 18, 2002. Topic: Evaluation of the cyanotic neonate.
- 2002 Pediatric Grand Rounds, Carney Hospital, Dorchester, MA. March 8, 2002. Topic: Evaluation of Pediatric Chest Pain.
- 2003 Children's Hospital Emergency Service Monthly Quality Improvement/Morbidity & Mortality Conference, May 15, 2003. Discussion of sudden death in children and adolescents.
- 2004 Pediatric Grand Rounds, St. Elizabeth's Medical Center, Boston, MA. April 27, 2004. Topic: Auscultation of Heart Sounds and Murmurs in Pediatrics
- 2005 Pediatric Grand Rounds, Sturdy Memorial Hospital, Attleboro, MA. November 1, 2005. Topic: Auscultation of Heart Sounds and Murmurs In Pediatrics
- 2005 Pediatric Grand Rounds, Good Samaritan Medical Center, Brockton, MA. November 18, 2005. Topic: Evaluation of Pediatric Chest Pain
- 2005 Pediatric Grand Rounds, MetroWest Medical Center, Framingham, MA. December 7, 2005. Topic: Evaluation of Pediatric Chest Pain
- 2006 Pediatric Grand Rounds, Holy Family Hospital, Methuen, MA. April 5, 2006. Topic: Neonatal Cardiology- What you really need to know.
- 2007 Faculty Career Development Seminar: The Web-based Curriculum. Children's Hospital, Karp 8 Conference Room, April 13, 2007. I presented the multimedia library that I created and summarized the resources available at the medical center for support.
- 2008 International Health Opportunities- From Student Electives Overseas to Projects for Your Medical Career, January 12, 2008. Forum sponsored by the Massachusetts Medical Society. I participated on a faculty panel "Incorporating International Health into Your Professional Career: The Challenges and Rewards."

2. Continuing Medical Education Courses

- 1990 Boston Floating Hospital Associate Staff, Scottsdale, Arizona, November 1990. Invited Lecturer. Topic: Four lectures update of pediatric cardiology.
- 1991 CME course, Harvard Medical School, director Michael Freed, M.D., October 1991. Topic: Chest pain in pediatrics.
- 1993 Boston Floating Hospital Associate Staff, Chatham, MA, June 1993. Invited lecturer. Topic: Up-to-date cardiology.
- 1997 South Shore Hospital, Continuing Medical Education Program, June 20, 1997. Lecture: Bedside diagnosis of cyanotic congenital heart disease.
- 1998 CME course co-director, Harvard Medical School: Assessment of cardiovascular problems commonly encountered in pediatric office practice, June 4, 1998; topic- Assessment of chest pain in children
- 1998 CME course, Children's Hospital, Boston: Advances in Pediatric Health Care: Lecture: Pediatric auscultation- how to interpret normal and abnormal heart sounds and murmurs. Burlington Marriott Hotel, November 18, 1998. Course directors: Alan D. Woolf, M.D., Philip Pizzo, M.D.
- 1999 CME course co-director, Harvard Medical School: Management of pediatric cardiovascular problems in office practice, May 4, 1999. Topic: Pediatric auscultation- the interpretation of normal and abnormal heart sounds. May 4, 1999.
- 2002 Pediatric Health Care Summits 2002- Continued Education Program sponsored by Children's Hospital, Boston and MetroWest Medical Center, June 6, 2002. Topic: Auscultation of Pediatric Heart Sounds and Murmurs.
- 2002 Pediatric Health Care Summits 2002- Continued Education Program sponsored by Children's Hospital, Boston and South Shore Hospital, Weymouth, MA, September 28, 2002. Topic: Auscultation of Pediatric Heart Sounds and Murmurs.

3. Advisory and supervisory responsibilities in clinical setting

1998-present 8 East inpatient cardiology unit: I have been an attending physician on this unit for 2 months each year. This unit is staffed by one first year fellow and three medical interns. Attending responsibilities include ensuring excellent care to inpatients, didactic teaching to the fellow and interns, and supervising the care delivered to patients on the consult service during the evening.

1998-2001 Cardiac catheterization laboratory: From January 1, 1998 to June 30, 2001, I was a full-time attending in the catheterization laboratory for one day each week. I was responsible for performing diagnostic and interventional procedures and teaching fellows the techniques necessary for these tests.

1998-present Cardiology Consult Service: I am the Director of the Cardiology Consult service. I arrange the schedule, interact with other Departments to coordinate patient care, and attend on the service 2-3 months/year. This service includes a second, third, or fourth year fellow and occasionally medical students. The service provides consultation to patients in all parts of Children's Hospital and also the newborn nurseries at Brigham and Women's Hospital and Beth Israel Deaconess Hospital.

1998-present Weekly Fellows Outpatient Clinic: I supervise fellows in a weekly outpatient clinic.

2001-present Second and third year residents who enroll in the elective I created to teach cardiac auscultation and patient management are taught these skills.

4. Teaching leadership role

1998-2001 Clinical Management Conference: Monthly conference to review interesting or complex patient care issues for educational and management concerns.

1998- Stethoscope auscultation skills conference: I meet with the ward team for two one hour sessions each month to teach auscultation skills. Sessions are held in my office and digitally recorded phonocardiograms that include both heart sounds and murmurs and the electrocardiogram are evaluated.

1999- 8 East Cardiology Resident Guide: I organized arranged the printing of a 180 page bound manual to orient the medical residents and students to the inpatient ward rotation. This manual has been taken by numerous visiting fellows to their own medical centers for incorporation into teaching programs at those sites.

2001- Outpatient cardiology elective: I created a new elective for second and third year residents in the Department of Medicine. Residents are able to participate in our department either in outpatient clinics, inpatient consultation, or the various divisions to broaden their clinical experience.

2002- Member of Residency Training Committee in the Department of Medicine at Children's Hospital in August 2002.

2003 Selected as a Scholar in the Academy at Harvard Medical School

- 2005 I created and edited the Multimedia Library of Congenital Heart Disease. This library contains 1123 files and 876 megabytes of data. For a full description see the bibliography section. This product is used by many faculty (both from Children's Hospital and other institutions) to generate images for lectures, and by patients and families to obtain information about various congenital heart defects.
- 2006 Creation of Global Health Curriculum for the pediatric residency program at Children's Hospital. Co-chairman of committee with Dr. Judith Palfrey. Organization of topics related to global health to be presented both at Medical Grand Rounds and bimonthly resident teaching sessions.

5. Names of advisees or trainees

I have been a faculty advisor for fellows in the Department of Cardiology since 1998. Advisees have included:

Ana Maria Rosales, M.D., 1998-2001, currently staff cardiologist
Massachusetts General Hospital

Oscar Benavidez, M.D., 2001- present, currently staff cardiologist, Children's
Hospital, Boston

Christopher Almond, M.D., 2002-present, currently staff cardiologist,
Children's Hospital, Boston

I have been a faculty advisor for residents in the Department of Medicine at Children's Hospital since 2001. Advisees have included:

Walter Sipe, M.D., 2001-present

Brian Feldman, M.D., 2001-present

Usama Kanaan, M.D., 2002-present

Matthew Jolles, M.D., 2003-2004

I have supervised cardiology fellows in a weekly clinic and have influenced their approach to patient management. These include:

Laurie Armsby, M.D., 1999-2002, former staff cardiologist Children's Hospital,
Boston, now cardiologist in Portland, Oregon.

David Brown, M.D., 1999-2003, currently staff cardiologist, Children's Hospital, Boston

Edward Rhee, M.D., 1998-2000, staff cardiologist Washington University, St. Louis

Clare O'Donnell, M.D., 1999-2002, former staff cardiologist, Children's Hospital, Boston, now cardiologist in New Zealand

Ravi Thiagarajan, M.D., 1999-2002, staff cardiologist, Children's Hospital, Boston

Karen Booth, M.D., 2002-2004, former fellow, now staff cardiologist Stanford University, California

Tarun Mahajan, M.D., 2004-2008, cardiology fellow, Children's Hospital, Boston

Andrew Radbill, M.D., 2007-, cardiology fellow, Children's Hospital, Boston

During my 14 year faculty position at the New England Medical Center, I was a faculty advisor and teacher to many pediatric residents. Four chose to enter the field of pediatric cardiology.

Jami Levine, M.D., 1988-1991, currently staff cardiologist Children's Hospital, Boston.

Brian O'Connor, M.D., 1987-1990, cardiologist Downstate Medical Center, NY.

Jon Meliones, M.D., 1987-1990, cardiologist/intensivist Duke Medical Center, NC.

Sharon O'Brien, M.D., 1992-1995, cardiologist Boston Medical Center.

Regional, national or international contributions

1. Invited lectures

1986 Massachusetts Chapter, American Physical Therapy Association, Annual State Meeting, Newport, Rhode Island, November 1986. Guest speaker, Lecture: pulmonary growth and development.

- 1986 Second Annual Children's Hospital National Medical Center ECMO (extracorporeal membrane oxygenation) Symposium, Snowmass, Colorado, February, 1986. Director Billie Lou Short, M.D. Guest speaker, Lectures: 1. Pathophysiology of persistent pulmonary hypertension of the newborn. 2. Pathologic findings in congenital diaphragmatic hernia.
- 1987 Tufts National Echocardiographic Symposium. Topic: Congenital heart disease.
- 1988 Tufts National Echocardiographic Symposium. Topic: Presentation of teaching cases on congenital heart disease.
- 1997 Pediatric Interventional Cardiology Symposium, Boston, MA
 1. Performance of "live" interventional catheterization procedures viewed by conference as the procedure was conducted.
 2. Moderator of half-day session.
- 1999 Frontiers in Diagnosis and Management of Congenital Heart Disease, May 5-6, 1999, Newport, Rhode Island. Chairman of session for Case presentations and discussion. Course Directors: Tal Geva, Richard Jonas, David Wessel.
- 2005 Fetus & Newborn- State-of-the-Art Care, Boston, MA, October 20-22, National Conference sponsored by Contemporary Forums. Lecture: Neonatal Cardiology: What You Really Need to Know.

2. Professional/teaching leadership role

- 1994-2002 American Thoracic Society/European Respiratory Society- Committee on Bronchopulmonary Dysplasia, Member. Recommendations for cardiovascular monitoring and treatment, especially pertaining to pulmonary hypertension for infants and children with this condition. I was the sole cardiology representative for this committee..
- 2000-2007 Physician member of Cardiology team providing care of patients in Quito, Ecuador for one week annually for the past 8 years. I am the director of cardiac catheterization activities. I bring donated equipment, instruct local cardiologists in catheterization techniques, and treat many patients.
- 2003 Pediatric Program Co-Chair for 26th Annual Scientific Sessions of the Society for Cardiac Angiography and Interventions. Meeting held in Boston, May 7-10, 2003. Responsible for preparing program, inviting speakers, reviewing abstracts, chairing sessions, and organizing fund raising from industry.

2004 Section editor for the cardiology section for the first textbook prepared for pediatric hospitalists. My tasks included assigning authors and editing seven chapters that were selected for the cardiology section. Zaoutis LB, Chiang VW, editors. Comprehensive Pediatric Hospital Medicine. Philadelphia: Elsevier; 2007.

Bibliography

Original Articles:

1. Geggel RL, Pereira GR, Spackman TJ. Fractured ribs: unusual presentation of rickets in premature infants. *J Pediatr* 1978;93:680-682.
2. Geggel RL, Fried R, Tuuri DT, Fyler DC, Reid LM. Congenital pulmonary vein stenosis: structural changes in a patient with normal wedge pressure. *J Am Coll Cardiol* 1984;3:193-199.
3. Geggel RL, DeLuca K, Villee DB. Heart failure secondary to iatrogenic systemic hypertension in an infant with congenital adrenal hyperplasia. *Clin Pediatr* 1984;23:358-360.
4. Geggel RL, Dozor AJ, Fyler DC, Reid LM. Effect of vasodilators at rest and during exercise in young adults with cystic fibrosis and chronic cor pulmonale. *Am Rev Respir Dis* 1985;131:531-536.
5. Geggel RL, Murphy JD, Langleben D, Crone RK, Vacanti JP, Reid LM. Congenital diaphragmatic hernia: arterial structural changes and persistent pulmonary hypertension after surgical repair. *J Pediatr* 1985;107:457-464.
6. Geggel RL, Aronovitz MJ, Reid LM. Effects of chronic in utero hypoxemia on rat neonatal pulmonary arterial structure. *J Pediatr* 1986;108:756-759.
7. Geggel RL, Carvalho ACA, Hoyer LW, Reid LM. Von Willebrand factor abnormalities in primary pulmonary hypertension. *Am Rev Respir Dis* 1987;135:294-299.
8. Geggel RL, Fulton DR, Chernoff HL. Left ventricular false tendons: unusual cause of diastolic murmur in a child. *Echocardiography* 1987;4:69-73.
9. Geggel RL, Fulton DR, Chernoff HL, Cleveland R, Hougen TJ. Cor triatriatum associated with partial anomalous pulmonary venous connection to the coronary sinus: echocardiographic and angiographic features. *Pediatr Cardiology* 1987;8:279-283.
10. Geggel RL, Tucker L, Szer I. Postnatal progression from second to third degree heart block in neonatal lupus syndrome. *J Pediatr* 1988;113:1049-1052.

11. Geggel RL, McInerney J, Estes NAM III. Transient neonatal ventricular tachycardia associated with maternal cocaine use. *Am J Cardiol* 1989;63:383-384.
12. Hu L, Geggel R, Davies P, Reid L. The effect of heparin on the hemodynamic and structural response in the rat to acute and chronic hypoxia. *Br J Exp Path* 1989;70:113-124.
13. Geggel RL, Mayer JE Jr, Fried R, Helgason H, Cook EF, Reid LM. Role of lung biopsy in patients undergoing a modified Fontan procedure. *J Thorac Cardiovasc Surg* 1990;99:451-459.
14. Kaler SG, Sadeghi A-N, Geggel RL. Hajdu-Cheney syndrome associated with severe cardiac valvular and conduction disease. *Dysmorphology and Clinical Genetics* 1990;4:43-47.
15. Geggel RL. Supravalvar aortic stenosis: discordance in monozygotic twins and reduction in severity of obstruction during childhood. *Pediatr Cardiol* 1992;13:170-172.
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Educational Material

1. 8 East Cardiology Resident Guide- 180 page bound manual supplied primarily to residents on cardiology inpatient service. This manual provides orientation to the rotation as well as information about congenital disease, evaluation techniques, and management.
2. Ask the Experts: How do you assess chest pain in Children. *Heart Murmurs* 2008;11(1):4-5.

Innovative Internet "Textbook"

1. 2005: Pediatric Cardiology Multimedia Library. The multimedia library contains images of multiple diagnostic and therapeutic procedures used to treat congenital heart disease. Currently there is information on 27 different conditions. The library is available in the Cardiovascular Program portion of the Children's Hospital website, and is accessible both within and outside the hospital. The library can be

accessed at: www.childrenshospital.org/mml/cvp. This source of images for congenital heart disease and interventions is unprecedented and unique. For most lesions, nine categories of images have been collected including: 1. Still-frames-electrocardiograms, chest radiographs, diagrams, gross pathology; 2. Wave files-phonocardiograms; and 3. video- echocardiography, angiocardiology, magnetic resonance imaging, cardiac surgery. There are 1123 files containing 876 megabytes of data. The library is useful for training of students, residents, and fellows, and for patient/parent understanding of diagnoses and procedures. In the first 16 months since release on the web, there have been 222,729 visits, 94,465 visitors, 16.5% of whom were from international locations. The average visit duration was 10:50 minutes.

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