

DAVID M. SCHRECK, MD, MS, FACP, FACEP, FHM
80 Division Avenue
Summit, New Jersey 07901

schreckdm@verizon.net

Summit Office:	908-277-8739	Office Fax:	973-277-8796
Private Practice:	908-273-4300	Corporate Office:	908-273-4300
Home:	908-522-1593	Home Fax:	908-522-0596

EDUCATION:

Medical Doctorate *M.D., Loyola University of Chicago - Stritch School of Medicine*
Maywood, Illinois - May 1980

Visiting Clinical Fellow - Columbia University

College of Physicians and Surgeons 7/80-12/84

Internal Medicine Residency: 7/80-6/83

Overlook Hospital, Summit, N.J.

Emergency Medicine Residency: 7/83-12/84

Columbia University Affiliated Hospitals

Residency in Emergency Medicine

Overlook Hospital, Summit, New Jersey

Morristown Memorial Hospital, Morristown, New Jersey

Diplomate - American Board of Internal Medicine

Fellow - Society for Hospital Medicine

Board Certification: September 1983

Diplomate - American Board of Emergency Medicine

Board Certification: June 1988

Board Recertification: December 1997

Board Recertification: December 2006

Executive Management Certificate March-October 2010

New York University Stern School of Business

Fundamental Critical Care Support (FCCS) Instructor

(“Leap Frog” endorsed) 1/29/03 – present

Fundamental Disaster Management (FDM) Instructor 2/21/04

ACLS Instructor 9/86- Present

Physician Recognition Award (CME): Current

Master of Science **Dual Degrees: *M.S., Biomedical Engineering/Science 1975***
Bachelor of Science **and *B.S., Chemistry 1975***

Stevens Institute of Technology, Hoboken, New Jersey

Masters Project: Design of ECG Simulating Device

**CURRENT
POSITIONS:**

July 1, 2001 – Present
Chairman and Medical Director
Department of Emergency Medicine
Summit Medical Group
1 Diamond Hill Road
Berkeley Heights, New Jersey 07922

July 1, 2001- present
Hospitalist – Internal Medicine, Attending Physician
Department of Medicine
Summit Medical Group
Overlook Hospital
Atlantic Health System
Summit, New Jersey 07901

Patient Care Committee
Disaster Committee

Clinical Assistant Professor of Medicine
Department of Medicine
University of Medicine and Dentistry of New Jersey
Robert Wood Johnson Medical School
Piscataway, New Jersey
December 1992 – present

Responsible for teaching medical residents, medical students
Emergency Medicine Clerkship

Adjunct Professor – Chemical Biology & Physiology
Department of Chemistry & Chemical Engineering
Stevens Institute of Technology
Hoboken, New Jersey
August 1992 – present

October 2005 - present
Manuscript Peer Reviewer
American Journal of Emergency Medicine
Elsevier

**COURSE
DIRECTOR:**

Fundamental Critical Care Course
November 1, 2003
September 26-27, 2004

Advanced Cardiac Life Support

LICENSURE: New Jersey #MA39682
Pennsylvania #MD418646 (inactive)
New York #234502 (inactive)
DEA #AS1297628
CDS #D32284
UPIN #: C63236
Medicare #: SC518068
Medical Education #: 01643801236
NPI#: 1346213782

**PROFESSIONAL
EXPERIENCE:**

July 1, 2001 – April 30, 2010
Chairman and Medical Director
Department of Hospital Medicine
Summit Medical Group
1 Diamond Hill Road
Berkeley Heights, New Jersey 07922

January 1, 2005 – December 31, 2009
Vice Chairman, Department of Medicine
Overlook Hospital
Atlantic Health System
Summit, New Jersey 07901

Medical Executive Committee
Patient Care Committee
Disaster Committee

August 1, 1997 – September 30, 2007
Vice-President, Business Development & Strategic Affairs
Emergency Medical Associates (EMA)
651 W. Mount Pleasant Avenue
Livingston, New Jersey 07039

Board of Directors
July 1993 – October 2006

\$105,000,000 annual revenue
Private ED physician democratic practice/contracting group
Approximately 1,000,000 annual patient visits
250 physicians, 150 allied health professionals
Responsible for development of new business ventures
Responsible for strategic development
Responsible for administration of Emergency Departments
Implemented same-store growth program
Implemented physician productivity measurement system
Implemented Pediatric ED
Implemented telemedicine delivery model
March 1, 1995 – September 30, 2007

President, EMO Medical Care
Medical Director, Hospitalist EMO
(Hospitalist, Primary care, Urgent care division of EMA)
651 W. Mount Pleasant Avenue
Livingston, New Jersey 07039

\$10,000,000 annual revenue
Hospitalist service
Primary Care/Urgent Care facilities
60,000 annual office patient encounters
55,000 annual hospital patient encounters
Responsible for all operations and strategic growth
Implemented primary care program
Implemented adult hospitalist program
Implemented pediatric hospitalist program
Implemented risk contracting with HMOs
Implemented contract research program
Implemented Physician Assistant Program

June 1986 – present
Attending Physician, Internal Medicine
Hospitalist – Internal Medicine
EMO Medical Care
369 Springfield Avenue, Berkeley Heights, N.J.
Private Practice – Internal Medicine, Primary Care
Overlook Hospital, Summit, New Jersey

August 1, 2001 – November 30, 2003
Chairman, Department of Emergency Medicine
Capital Health System, Trenton, NJ
Helene Fuld Hospital
Mercer Hospital

Major regional trauma center
Annual patient volume 70,000
EMS annual patient transports 19,000
Bioterrorism Committee
Trauma Committee
Critical Care Committee
ED Operations Committee – Chairman
Implemented pediatric ED

August 1, 2001 – December 31, 2003
Medical Director - Mobile Intensive Care Unit, Mercer County
Capital Health System, Trenton, NJ
Helene Fuld Hospital
Mercer Hospital
EMS annual patient transports 19,000

August 1, 2001 – December 31, 2002

Medical Director

Trenton Emergency Medical System (TEMS)

Trenton, New Jersey

November 1, 1991- March 1, 2001

Chief, Department of Emergency Medicine

Medical Director - Mobile Intensive Care Unit

Muhlenberg Regional Medical Center, Plainfield, New Jersey

Annual patient volume 36,000

Responsible for all operations, quality assurance, and staffing

Implemented full departmental status

Implemented patient tracking/electronic medical record system

Implemented physician extender program

Implemented hospitalist program

Implemented express admission program

Implemented Observation Unit

Implemented Fast Track program

Implemented research program

Medical Executive Committee

ED Management Committee – Chairman

Credentials Committee

Practice Improvement Committee

Trauma Committee

Behavioral Health Committee

AIMS (PHO) – Board of Directors

November 2005 – December 2010

Associate Editor

Computers in Biology and Medicine

Elsevier, London, UK

President, Mid-Atlantic Primary Physicians PA, IPA

369 Springfield Avenue

Berkeley Heights, New Jersey 07922

November 1994 – December 2001

Founder of 420 member IPA.

Responsible for all managed care operations.

Implemented risk contracting for physician network

Implemented UM program

Implemented development of internet practice management

Board of Managers, Physician Alliance LLC, IPA

651 W. Mount Pleasant Avenue

Livingston, New Jersey 07039
May 1999 – December 2001
Super-IPA with 1100 physician members

American Medical Management, Inc.

President

R&D company

Clinical trials

Atrial fibrillation

Asthma

Consulting for medical and pharmaceutical industry

Device development

Catheter design

Market development

Physician investigator for multiple phase 3 and 4 trials

Hypertension

Acute bronchitis

Pneumonia

Pharyngitis

March 2000 – September 2000

Acting Chief, Department of Emergency Medicine

Christ Hospital, Jersey City, New Jersey

46,000 Annual patient volume

Implemented ED Operations Committee

April 1996 – January 2000

Biosearch Medical Products, Inc.

Board of Directors

35 Industrial Parkway

P.O. Box 1700

Somerville, New Jersey 08876-1276

February 1, 1995 - June 1996

Medical Director

Hospice of New Jersey

Bloomfield, New Jersey

June 1, 1986 - October 31, 1991

Emergency Medicine/Internal Medicine Specialist

Chairman, Emergency Medicine and Primary Care

Summit Medical Group

Summit, New Jersey

July 1988 through June 1993:

Adjunct Faculty, Research Coordinator

Morristown Memorial Hospital Residency in Emergency Medicine

April 1, 1985 - May 31, 1986:
Assistant Attending, Division of Emergency Medicine
Emergency Medical Associates, Inc.
Overlook Hospital, Summit, New Jersey

January 1, 1985 - May 31, 1985:
Assistant Attending, Department of Emergency Medicine
Holy Name Hospital, Teaneck, New Jersey

November 1983- November 1984
Staff Physician
Express Medical Care, Weehauken, New Jersey

October 1976 - June 1977
Biomedical Engineer
CR Bard, Inc., Murray Hill, New Jersey
Medical Device Development, Catheter Design, Biomaterials

June 1975 - October 1976
Polymer Chemist
Tenneco Chemicals, Inc., Piscataway, New Jersey
Polymer synthesis and testing, theoretical analysis, R&D computer applications, mathematical modeling, statistical design of experimentation, product development, pilot plant operations.

June 1973 - May 1975
Research Chemist (Undergraduate)
Stevens Institute of Technology
Electrocardiology R&D, waste fermentation, prebiotic chemistry, natural products, microbiology.

GRANTS:

Merck Sharp & Dohme
Analysis of beta-lactam antimicrobial activity and bacterial susceptibility using multivariate technique.

Miles Laboratories, Inc.
Antimicrobial activity of mezlocillin.

SpaceLabs, Inc.
Fractal and chaotic dynamics applications in ECG analysis.

Marion-Merrill-Dow
IV diltiazem vs. IV digoxin in the emergency department treatment of atrial fibrillation/flutter.

C. R. Bard, Inc.
Screening tests for diagnosis of acute urinary tract infections: Comparison of Uriscreen vs. standard methodology.

Aventis Pharmaceuticals

Cardiac modeling

HONORS AND AWARDS

Society for Critical Care Medicine Annual Research Award 2011
New Jersey Monthly Top Doctor 2009, 2011
America's Top Physicians Award 2007, 2008, 2009, 2010
Consumers Research Council of America
Fellow of the Society of Hospital Medicine 2009
NJACEP Annual Research Award 1999 – 3rd Place
Computer Modeling/Technology Abstract Reviewer – SAEM 1998
Moderator Computer Modeling Section – SAEM 1998
NJACEP Annual Research Award 1998 – 3rd Place
NJACEP Annual Research Award 1997 - 3rd Place
SAEM Annual Research Award 1996 (Technology) - 1st place
McClellan Annual Research Award 1996 –
Stevens Institute of Technology
Elected to Board of Directors –
Emergency Medical Associates, Inc. 1993
Elected to Board of Directors - NJACEP 1992-1995
Research Award (First Prize) - National ACEP 1992
Fellow of the American College of Physicians - 1989
Fellow of the American College of Emergency Physicians - 1988
Who's Who in Frontiers of Science and Technology 1985
Diplomate - National Board of Medical Examiners 1981
President, Overlook Housestaff Association 1981-1982
Treasurer, Overlook Housestaff Association 1980-1981
Outstanding Young Men of American 1981
American Chemical Society Award of Merit 1975
Stevens Symposium on Chemical/Biological Research Award 1975
Eastern Colleges Science Conference 1974
M.S./B.S. cum laude (concurrently) 1975

AFFILIATIONS: America Medical Association (AMA)
American College of Physicians (ACP)
American College of Emergency Physicians (ACEP)
Continuous Quality Improvement Section
Computers in Emergency Medicine Section
Managed Care and Health Policy Section
New Jersey ACEP
Board of Directors 1992-1995
Legislative Committee
Key Contact
American Society of Health-System Pharmacists
Society for Critical Care Medicine (SCCM)
Internal Medicine Section
Emergency Medicine Section

Society for Academic Emergency Medicine (SAEM)
Reviewer of abstracts in field of computer technology and
mathematical modeling
Society for Hospital Medicine
National Association of EMS Physicians
International Society of Electrophysiology
International Society of Computerized Electrophysiology
American Heart Association
Medical Society of the State of New Jersey
Union County Medical Society
American Chemical Society (ACS)
Institute of Electronics and Electrical Engineers (IEEE)
Engineering in Biology and Medicine Section

GRAND ROUNDS: Thrombolytic Therapy in Acute Ischemic Stroke
Emergency Management of Acute Atrial Fibrillation
Supraventricular Tachydysrhythmias
Mathematical Modeling of the Electrocardiogram
Hospice in Medical Practice
COBRA/EMTALA
Emergency Treatment of Asthma
Bioterrorism
Issues in Anticoagulation
Diagnosis and Management of Shock

CIVIC AFFAIRS: Board of Health - Summit, New Jersey
President: January 2001 – December 2004
Medical Director: January 2001 – April 2003
Board of Directors: January 1999 – December 2005
Vice-President: January 2000 – December 2000
Summit Helping Its People (SHIP)
Board of Directors 1998 – 2001
Medical Advisor 1998 - present
Plainfield High School – Research Mentor 1998-2000
Police Athletic League (PAL) Board of Directors 1991 – 1996

**HOBBIES &
INTERESTS:** Sports, wine and beer making, travel, museums, history, games,
music (guitar), bicycling, GOLF

BIBLIOGRAPHY

U.S. Patent # 6,920,349 B2
System and Method for Predicting the Onset of Cardiac Pathology Using Fractal Analysis
Issued July, 2005

U.S. Patent # 6,901,285 B2
System and Method for Synthesizing Leads of an Electrocardiogram
Issued May 31, 2005

U.S. Patent # 4,411,655
Apparatus and Method for Percutaneous Catheterization
Issued October 25, 1983

Acid-Base/Fluid and Electrolyte Management
Computer Software, 1983

Schreck DM, et al: Diagnosis of complex acid-base disorders: Physician performance vs. the Microcomputer. *Ann Emerg Med* 1986; 15:164-170

Schreck DM, et al: Nonlinear mathematical transformation of the resting electrocardiogram in the diagnosis of coronary artery disease. *Ann Emerg Med* 1986; 15:897-900

Schreck DM, et al : Detection of coronary artery disease from the normal resting ECG using non-linear mathematical transformation. *Ann Emerg Med* 1988; 17:132-134

Terndrup TE, **Schreck DM**: Simultaneous dorsal dislocation of the proximal and distal interphalangeal joints in one digit. *Ann Emerg Med* 1988; 17:368-370

Schreck DM, et al: Correlation of non-linear mathematical transformation of the normal electrocardiogram with the severity of coronary disease. *Crit Care Med* 1989; 17:269-273

Schreck DM, et al: Factor analysis of normal and abnormal ECGs. *Ann Emerg Med* (Abstract) 1990; 19(10):1226

Lavery RF, Allegra JR, Cody RP, Zacharias D, **Schreck DM**: A prospective evaluation of glucose reagent test strips in the prehospital setting. *Am J Emerg Med* 1991; 9:304-308

Schreck DM, et al: The synthesis of normal and infarction electrocardiograms from principal vectors by factor analysis. *Ann Emerg Med* (Abstract) 1992;21:462

Schreck DM, et al: Factor analysis of the electrocardiogram and vectorcardiogram. *Crit Care Med* (Abstract) 1994; 22(1):A22 January (Supp)

Schreck DM, et al: Mathematical modeling of the electrocardiogram and vectorcardiogram. *Ann Emerg Med* (Abstract) 1994; 23(3):617

Mian N, **Schreck DM**, et al: Incidence of deep venous thrombosis with femoral vein catheter insertion. *Academic Emerg. Med. (Abstract)*1994; April

Schreck DM, et al: Fractal dynamics of the electrocardiogram. *Acad Emerg Med (Abstract)* 1994; 1(2): A24

Schreck DM, et al: Emergency treatment of atrial fibrillation and flutter. Comparison of IV digoxin vs IV diltiazem. *Ann Emerg Med (Abstract)* 1995; 25:1

Schreck DM, Leber IB, et al: Cost-effective treatment of gonorrhea and chlamydia with the use of a decision analysis model. *Ann Emerg Med (Abstract)* 1996;27:1

Schreck DM, et al: Factor analysis of the standard ECG. *Acad Emerg Med (Abstract)* 1996; 3(5): 477

Schreck DM, et al: Emergency treatment of atrial fibrillation and flutter. Intravenous diltiazem versus intravenous digoxin. *Ann Emerg Med* 1997; 29:135-140

Schreck DM, et al: Comparison of ipratropium bromide vs. placebo in the emergency management of acute asthma. *Acad Emerg Med (Abstract)* 1997;4(5):471

Schreck DM, et al: Verapamil or diltiazem for acute rate control. *Ann Emerg Med* 1997; 30:354-355

Schreck DM, et al: Fractal dynamics of normal and infarction electrocardiograms: A computer predictive model. *Ann Emerg Med (Abstract)* 1997; 30:430-431

Mian NZ, Bayly R, **Schreck DM**, et al: Incidence of deep venous thrombosis associated with femoral venous catheterization. *Acad Emerg Med* 1997; 4:1118-1121

Schreck DM, et al: Chaotic dynamics mathematical modeling of emergency department patient flow. *Acad Emerg Med (Abstract)* 1998; 5:538-539

Schreck DM, et al: The effect of the physician assistant on physician performance in the emergency department. *Ann Emerg Med (Abstract)* 1998; 32(3):S25

Schreck DM, et al: Emergency department length of stay and patient volume relationships: effect of the physician assistant on system performance. *Ann Emerg Med (Abstract)* 1998; 32(3):S25

Schreck DM, et al: Prediction of the electrocardiogram using iterative key set factor analysis and target factor analysis. *Ann Emerg Med (Abstract)* 1998; 32(3):S46

Schreck DM, et al: Mathematical modeling of the standard electrocardiogram using polynomial abductive network. *Ann Emerg Med (Abstract)* 1998; 32(3):S46

Schreck DM, et al: Statistical methodology: VI. Mathematical modeling of the electrocardiogram using factor analysis. *Acad Emerg Med* 1998; 5(9):929-934

Sussman G, Shurman J, Creed MR, Larsen LS, Ferrer-Brechner T, Noll D, Allegra J, Montgomery R, **Schreck DM**, et al: Intravenous ondansetron for the control of opioid-induced nausea and vomiting. *Clinical Therapeutics* 1999; 21(7):1216-1227

Schreck DM, et al: Prediction of the 19-lead electrocardiogram from 3 lead-vectors using factor analysis. *Ann Emerg Med (Abstract)* 1999; 34(4):S25-S26

Schreck DM, et al: Factor analysis of the 19-lead electrocardiogram. *Crit Care Med* 1999; 27(Suppl.):A31.

Schreck DM, et al: Prediction of the 12-lead electrocardiogram from 3 lead-vectors using factor analysis. *Ann Emerg Med (Abstract)* 2000; 35(5):S62

Schreck DM, et al: Prediction of total patient encounter times using chaotic dynamics and an artificial neural network. *Acad Emerg Med (Abstract)* 2000; 7(5):520

Schreck DM, et al: Electrocardiogram mathematical modeling using simplex optimization. *Ann Emerg Med (Abstract)* 2000; 36:S71

Schreck DM, et al: The derivation and electrical basis of the 22-Lead electrocardiogram: a computer mathematical model. *Ann Emerg Med (Abstract)* Oct 2001

Schreck DM, et al: Comparison of racemic albuterol and levalbuterol in the treatment of acute asthma. *Ann Emerg Med (Abstract)* September 2001

Schreck DM, et al: Derivation of the 12-lead electrocardiogram using abstract factor analysis and simplex optimization. *Int J Bioelectromagnetism* 2002; 4(2):337-338

Schreck DM, et al: On the derivation of a new cardiac marker: the electrocardiogram eigenvalues. *Ann Emerg Med (Abstract)* September 2002; 40(4):S70

Schreck DM, et al: The derivation of the 12_lead ECG from 3 standard leads. *Prehospital Emergency Care* 2003; 7:160-161.

Schreck DM, et al: Emergency department comparison of racemic albuterol and levalbuterol in the treatment of acute asthma. *Prehospital Emergency Care* 2003; 7:169

Schreck DM, et al: A new marker for myocardial infarction: a real time computer model of measured and derived ECG eigenvalues. *Crit Care Med* 2003; 30(12 suppl):A20

Schreck DM, et al: Mathematical modeling of the electroencephalogram. *Acad Emerg Med* 2003;10:439

Schreck DM, et al: Mathematical modeling of the electroencephalogram. *Ann Emerg Med* 2003;42:S3

Schreck DM, et al: A real-time cardiac marker for acute infarction: eigenvalues of the measured and derived ECG. *Ann Emerg Med* 2003;42:S30.

Schreck DM, et al: The Derived N-Lead Electrocardiogram. *Crit Care Med* 2003; 31 (12 suppl):A62

Schreck DM, et al: Pharmacoeconomic comparison of albuterol and levalbuterol in the treatment of acute asthma. *Crit Care Med* 2003; 30 (12 suppl):A66

Schreck DM, et al: Clinical application of eigenvalue analysis and the derived electrocardiogram as a real-time marker for infarction. *J Am Coll Cardiol* 2004; 43(5 suppl): 424

Schreck DM, et al: The eigenvalue as an electrical marker in the prediction of acute myocardial infarction in measured and derived electrocardiograms. *Computers in Cardiology* 2004, Chicago, Illinois. (Proceedings) Page 46

Schreck DM, et al: The measurement of productivity in an emergency medical group practice. *Ann Emerg Med* 2004;44(4 supplement):S18

Schreck DM, et al: The derived n-lead electrocardiogram. *Ann Emerg Med* 2004; 44(4 supplement):S73-S74

Schreck DM, et al: The eigenvalue model as an electrical marker in the prediction of acute myocardial infarction in measured and derived electrocardiograms. *Ann Emerg Med* 2004;44(4 supplement):S124

Schreck DM, et al: The eigenvalue model as an electrical marker in the prediction of acute myocardial infarction in measured and derived electrocardiograms. *Circulation* 2004;110 (17 Supplement III): 668

Schreck DM, et al: Mathematical modeling of the electroencephalogram using factor analysis. *Crit Care Med* 2004; 32 (12 suppl):A20

Schreck DM, et al: The eigenvalues of the derived 12-lead ECG: A new cardiac electrical marker for acute myocardial infarction. *Prehospital Emergency Care* 2005; 9 (1): 120

Schreck DM, et al: The derived ECG eigenvalues: A marker for acute infarction. *Journal of Electrocardiology* 2005; 38(4S):143

Schreck DM: The eigenvalues of the electrocardiogram: A new electrical cardiac marker for acute myocardial infarction. *Chest* 2005;128(4 Suppl): 284S

Schreck DM, Babin S: Hospital economic impact in the treatment of acute asthma: A comparison of racemic albuterol versus levalbuterol. *Chest* 2005;128(4 Suppl); 246S

Schreck DM, et al: The mathematical modeling and utility of the derived electrocardiogram. *Circulation* 2005; 112(17): II-1111

Schreck DM, Schreck AJ: Mathematical modeling of the derived electrocardiogram. Crit Care Med 2005; 33 (12 suppl): A57

Schreck DM, Babin S: Comparison of racemic albuterol and levalbuterol in the treatment of acute asthma in the ED. AJEM 2005; 23:842-847

Schreck DM: Asthma pathophysiology and evidence-based treatment of severe exacerbations. Am J Health-Sys Pharm 2006; 63 Supplement 3:S5-S13

Schreck DM, et al: Case studies illustrating the implementation of treatment strategies for acute and chronic asthma. Am J Health-Sys Pharm 2006; 63 Supplement 3:S22-S26

Schreck DM, et al: Pharmacoeconomic model for the treatment of acute asthma: A comparison of racemic albuterol vs. levalbuterol. Ann Emerg Med 2006;48(4 supplement):S9

Schreck DM, et al: Mathematical modeling of the electrocardiogram. Ann Emerg Med 2006;48 (4 supplement):S29

Schreck DM, et al: Pharmacoeconomic model for the treatment of acute asthma: A comparison of racemic albuterol vs. levalbuterol. Crit Care Med 2006; 34(12 suppl): A96

Schreck DM, et al: The derived electrocardiogram eigenvalues as a marker for acute myocardial infarction. Acad Emerg Med 2007;14(5 suppl): S73-S74

Schreck DM: Eigenvalue analysis of the 15-lead electrocardiogram. Crit Care Med 2007; 35(12 Suppl): A71

Schreck DM, et al: The derived electrocardiogram and a cardiac electrical marker for acute myocardial infarction. Ann Emerg Med 2008;52 (4 Suppl): S115

Schreck DM: Eigenvalue analysis as a cardiac electrical biomarker to identify acute myocardial infarction. Ann Emerg Med 2010;53 (3 Suppl): S34.

Schreck DM: Detection of acute myocardial infarction using a real-time cardiac electrical biomarker. Crit Care Med 2010;38 (Suppl 12): A1.

Schreck DM and Fishberg RD: Mathematical modeling and utility of the derived 22-lead electrocardiogram. J Am Coll Cardiol 2011;57: E119.

Schreck DM and Fishberg RD: Real-time cardiac electrical biomarker for detection of AMI. J Am Coll Cardiol 2011;57: E919.

NATIONAL AND INTERNATIONAL PRESENTATIONS:

Diagnosis of complex acid-base disorders: physician performance vs. the microcomputer. Schreck, DM et al. UA/EM (SAEM) Annual Scientific Sessions, May 22, 1984, Louisville, Kentucky (Abstract in Annals of Emergency Medicine May 1984)

Nonlinear transformation of the resting electrocardiogram in the diagnosis of coronary artery disease. Schreck DM, et al. Presented at the UA/EM (SAEM) Annual Scientific Sessions, May 22, 1985, Kansas City, Missouri (Abstract in Annals of Emergency Medicine May 1985).

Detection of coronary artery disease from the normal resting electrocardiogram using non-linear mathematical transformation. Schreck, DM, et al. Presented at the ACEP 1986 Scientific Assembly September 16, 1986, Atlanta, Georgia (Abstract in the Annals of Emergency Medicine August 1986).

Correlation of non-linear mathematical transformation of the normal ECG with the severity of disease. Schreck, DM et al. Presented at the Society of Critical Care Medicine 16th Annual Symposium May 28, 1987, Anaheim, California (Abstract in Critical Care Medicine May 1987).

The synthesis of normal and infarction electrocardiograms from principal vectors by factor analysis. Schreck, DM et al. Presented at the Fourth International Conference on Emergency Medicine, May 9, 1992, Washington, D.C. (Abstract in Annals of Emergency Medicine April 1992).

Mathematical Modeling in Electrocardiography (educational exhibit). Schreck, DM et al. Presented at the ACEP 1992 Scientific Assembly September 14-16, 1992, Seattle, Washington. Received first prize award.

Factor Analysis of the Electrocardiogram and Vectorcardiogram. Schreck, DM et al. Presented at the SCCM 1994 Scientific Assembly January 31-February 3, 1994, Orlando, Florida.

Mathematical Modeling of the Electrocardiogram and Vectorcardiogram. Schreck, DM et al. Presented at the ACEP Research Forum March 18-19, 1994, San Diego, California

Incidence of Deep Venous Thrombosis with Femoral Venous Catheter Insertion. Mian N, Schreck, DM, et al. Presented at the Society of Academic Emergency Medicine Annual Scientific Sessions May 9-12, 1994, Washington, D.C.

Fractal Dynamics of Normal and Infarction Electrocardiograms. Schreck DM et al. Presented at the Society of Academic Emergency Medicine Annual Scientific Sessions May 9-12, 1994, Washington, D.C.

Emergency Treatment of Atrial Fibrillation and Flutter: Comparison of IV Digoxin vs IV Diltiazem. Schreck DM et al. Presented at the ACEP Research Forum February 25, 1995, San Francisco, California.

Management of Atrial Arrhythmias in Emergency Room Settings. Schreck DM. Presented at the 14th Annual Chicago Critical Care, Trauma, and Emergency Medicine Symposium September 15, 1995, Oak Brook, Illinois.

Emergency Management of Atrial Fibrillation and Flutter. Schreck DM. Presented at the 34th Annual Critical Care Symposium February 15, 1996, Las Vegas, Nevada.

Cost-effective treatment of gonorrhea and chlamydia with the use of a decision analysis model. Schreck DM, et al. Presented at the American College of Emergency Physicians Research Forum 1996, February 25, 1996, Cincinnati, Ohio.

Factor analysis of the standard electrocardiogram. Presented at the Society for Academic Emergency Medicine Annual Scientific Sessions, May 7, 1996, Denver, Colorado.

Supraventricular Tachydysrhythmias. Schreck DM. Presented at the Massachusetts ACEP 1996 Annual Meeting, Boston, Massachusetts, May 22, 1996.

Emergency Management of Acute Atrial Fibrillation and Flutter. Schreck DM. Presented at the Massachusetts ACEP 1996 Annual Meeting, Boston, Massachusetts, May 22, 1996.

Emergency Management of Acute Atrial Fibrillation and Flutter. Schreck DM. Presented at the ACEP Annual Scientific Sessions 1996, New Orleans, Louisiana, September 9, 1996.

Comparison of Ipratropium Bromide vs. Placebo in the Emergency Management of Acute Asthma. Schreck DM, et al. Presented at the NJACEP Annual Scientific Sessions 1997, Atlantic City, New Jersey, May 8, 1997.

Comparison of Ipratropium Bromide vs. Placebo in the Emergency Management of Acute Asthma. Schreck DM, et al. Presented at the SAEM Annual Scientific Sessions 1997, Washington, DC, May 22, 1997.

Fractal Dynamics of Normal and Infarction Electrocardiograms: A Computer Predictive Model. Schreck DM et al. Presented at the ACEP Research Forum 1997, San Francisco, California, October 19, 1997.

Chaotic Dynamics Mathematical Modeling of Emergency Department Patient Flow. Schreck DM, et al. Presented at the NJACEP Annual Scientific Sessions 1998, Atlantic City, NJ, May 6, 1998.

Chaotic Dynamics Mathematical Modeling of Emergency Department Patient Flow. Schreck DM, et al. Presented at the SAEM Annual Scientific Sessions 1998, Chicago, Illinois, May 20, 1998.

The Effect of the Physician Assistant on Physician Performance in the Emergency Department. Schreck DM, et al. Presented at the American College of Emergency Physicians Research Forum. San Diego, California, October 11, 1998.

Emergency Department Length of Stay and Patient Volume Relationships: Effect of the Physician Assistant on System Performance. Schreck DM, et al. Presented at the American College of Emergency Physicians Research Forum. San Diego, California, October 11, 1998.

Prediction of the electrocardiogram using iterative key set factor analysis and target factor analysis. Schreck DM, et al. Presented at the American College of Emergency Physicians Research Forum. San Diego, California, October 12, 1998.

Mathematical modeling of the standard electrocardiogram using polynomial abductive network. Schreck DM, et al. Presented at the American College of Emergency Physicians Research Forum. San Diego, California, October 12, 1998.

Prediction of the 19-Lead Electrocardiogram from 3 Lead-Vectors Using Factor Analysis. Schreck DM, et al. Presented at the NJ American College of Emergency Physicians Research Forum. Atlantic City, New Jersey, May 10, 1999.

Prediction of the 19-Lead Electrocardiogram from 3 Lead-Vectors Using Factor Analysis. Schreck DM, et al. Presented at the American College of Emergency Physicians Research Forum. Las Vegas, Nevada, October 10, 1999.

Factor Analysis of the 19-lead Electrocardiogram. Schreck DM, et al. Presented at the Society of Critical Care Medicine 29th Educational and Scientific Symposium. Orlando, Florida, February 11, 2000.

Prediction of the 19-Lead Electrocardiogram from 3 Lead-Vectors Using Factor Analysis. Schreck DM, et al. Presented at the 8th International Conference on Emergency Medicine. Boston, Massachusetts, May 5, 2000.

Prediction of total patient encounter times using chaotic dynamics and an artificial neural network. Schreck DM, et al. Presented at the Society for Academic Emergency Medicine 2000 Annual Scientific Sessions. San Francisco, California, May 24, 2000.

Electrocardiogram mathematical modeling using simplex optimization. Schreck DM, et al. Presented at the American College of Emergency Physicians Research Forum. Philadelphia, Pennsylvania, October 24, 2000.

Advanced Statistical Methods for the Clinical Researcher. Schreck DM. Presented at the Association of Clinical Research Professionals (ACRP) Annual Meeting. San Francisco, California, April 30, 2001.

Clinical Research in Emergency Medicine: The Untapped Resource. Schreck DM, Zun L. Presented at the Association of Clinical Research Professionals (ACRP) Annual Meeting. San Francisco, California, May 2, 2001.

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