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EDUCATION AND PROFESSIONAL EXPERIENCE

SOUTHERN OCEAN MEDICAL CENTER

2009-PRESENT

Attending Physician, Department of Emergency Medicine
Vice Chairman, Department of Emergency Medicine
Medical Director, Institute for Diving Medicine

Research While at SOMC:

Current research centers on documentation of hyperoxic myopia in decompression diving while breathing partial pressures of oxygen greater than 1.6 ATA. This has been documented in the general hyperbaric population, but not in deco divers. Research is in data collection stage.

INSTITUTE FOR DIVING MEDICINE

IDM is currently New Jersey's only location for the complete care of the recreational, commercial and scientific diver. Offering consultation and referral for general hyperbaric as well as diving medicine.

ADMINISTRATIVE AND LEADERSHIP EXPERIENCE

Vice Chairman, Department of Emergency Medicine, December 2010-Present. The vice chairman has several important roles, including heading of the Practice/Quality Improvement Committee, membership on the Critical Care Committee, and major participation in the ED Planning Committee and Throughput Committee. Our hospital is in the process of building a \$22 Million expansion to better serve the growing community's needs, and as a member of the Planning Committee, both the chairman and vice chairman have been integral to selection of contractors and subcontractors, designing floor plans, and preparation of expanding staff coverage. The vice chairman also serves as pro tempore chairman. Approximately 25% of work time is dedicated to protected administrative efforts.

UNIVERSITY OF PENNSYLVANIA

2008-2009

INSTITUTE FOR ENVIRONMENTAL MEDICINE

Fellow in Undersea and Hyperbaric Medicine

One year ACGME-accredited fellowship with both clinical and academic instruction resulting in board certification in undersea and hyperbaric medicine through the American Board of Emergency Medicine.

Research While at Penn:

Research centered on use of transcutaneous oximetry (TCOM) and its role in risk stratification for patients with Wagner III-V lower extremity wounds. Research sought to measure real-time TCOM during hyperbaric oxygen therapy and develop integrated area-under-curve measurements that further delineate total oxygen dose and its role as a surrogate outcome measure. To date, this is the first prospective study performed that elucidates the role of transcutaneous oximetry in measuring total oxygen dose during hyperbaric oxygen therapy. Abstract entitled:

Computer Based Analysis of Transcutaneous Oximetry May Augment Evaluation of Patients Undergoing Hyperbaric Oxygen Therapy. Partrick MS, Hardy KR., Logue CJ, Lambert DS, Chin M, Baczara R, Velinov D, Eller S, Thom SR.

Accepted by Undersea and Hyperbaric Medical Society annual meeting poster competition and presented in Las Vegas June 24-27th 2009.

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MORRISTOWN MEDICAL CENTER

2005-2008

Satellite teaching institution of Mount Sinai School of Medicine
ACGME accredited residency in Emergency Medicine

ADMINISTRATIVE AND LEADERSHIP EXPERIENCE

Chief Resident, Department of Emergency Medicine

2007-2008

Chosen by Faculty, Staff and fellow residents to serve as administrative and clinical chief for a one year term. Responsibilities included organization of resident's monthly clinical schedule, faculty-resident liaison, interpersonal conflict resolution, structured resident administrative meetings and monthly faculty meetings. In addition, the chief resident is the representative for the Department of Emergency Medicine on the Atlantic Health System Graduate Medical Education Meeting. In this capacity we were afforded interaction with high level AHS staff resulting in improvements in various benefits such as appropriate pay grades, benefits and confirmed paid holidays.

Research While at MMC:

Research centered on seasonal variations on incidence of carbon monoxide poisoning. We conducted a retrospective review of all cases of carbon monoxide poisoning presenting to multi-state hospital database in the northeast United States over a seven year period; data confirmed suspicions that in a temperate climate, incidence of carbon monoxide poison increases in winter months to coincide with increased use and subsequent exposure to poorly ventilated indoor heating elements. See publications for paper.

NORTH CAROLINA BAPTIST HOSPITAL

2003-2005

Internship and residency in categorical General Surgery

Research while at NCBH:

Research centered on practical applications of empiric antibiotic therapy for ventilator associated pneumonia, specifically developing an algorithm for covering community acquired pathogens such as pneumococcal versus nosocomial pathogens like MRSA and pseudomonas. Published data (see reference below in Journal of Trauma) showed from days 1-5 of hospitalization empiric therapy should be directed towards community pathogens and thereafter towards nosocomial pathogens. Data presented at American College of Surgeons Committee on Trauma North Carolina division Resident Paper Competition and won first place. Presented at Region 4 competition and won second place.

WAKE FOREST UNIVERSITY SCHOOL OF MEDICINE

1999-2003

Doctor of Medicine

Research while at WFUSM:

Research in the department of Cardiothoracic Surgery centered on a National Institutes of Health type F31 training grant for research on short and long term outcomes of internal mammary artery versus saphenous vein grafting in coronary artery bypass graft. Research included a retrospective review of morbidity and mortality in several different subgroups of CABG patients. Unpublished data demonstrated improvement in patients with unilateral left internal mammary artery graft in 30 day morbidity such as superficial and deep sternal wound infections, length of stay and length of intubation in ICU, and overall mortality.

WASHINGTON AND LEE UNIVERSITY

1995-1999

Bachelor of Science, Biology Cum Laude

Research while at W&L completed during summer internship at The University of North Carolina hospitals centered on psychosocial aspects of anonymous oocyte donations for use with in-vitro fertilization. Our work resulted in a publication in the journal Fertility and Sterility, see details below.

CAPE FEAR ACADEMY

1991-1995

High School Degree--Valedictorian, Class of 1995

PUBLICATIONS

- **Anonymous Oocyte donations: a follow-up questionnaire.**
Partrick, Matthew BS; Smith, Allison BS; Meyer, William MD; Bashford, Robert MD. Fertility and Sterility 75(5):1-3, May 2001.
- **A Practical Application of Practice-Based Learning: Development of an Algorithm for Empiric Antibiotic Coverage in Ventilator-Associated Pneumonia.**
Miller, Preston R. MD; Partrick, Matthew S. MD; Hoth, J Jason MD; Meredith, J Wayne MD; Chang, Michael C. MD. Journal of Trauma-Injury Infection & Critical Care. 60(4):725-731, April 2006
- **Carbon Monoxide Treatment Protocols: 1 vs. 3?**
Partrick MS. ACEP Hyperbaric Newsletter, March 2009 16:1
- **Case Report—An interesting case of Decompression Illness**
Partrick MS. ACEP Hyperbaric Newsletter, March 2009 16:1
- **Monthly Variations in the Diagnosis of Carbon Monoxide Exposures In the Emergency Department.**
Partrick MS, Fiessler F, Shih RS, Riggs R, Hung OL Undersea and Hyperbaric Medicine 36 (3) 171-175, May 2009
- **Hyperbaric Chambers for Dive Injuries.** Partrick MS, "Meet the Experts" Alert Diver Summer 2011, 27/3, 36-39.

SELECTED LECTURES

- Carbon Monoxide Poisoning—Pathophysiology and treatment with Hyperbaric Oxygen**
Institute for Environmental Medicine Educational Conference October 2008
- Decompression Illness and Gas Embolism in Hyperbaric Medicine**
Institute for Environmental Medicine Educational Conference February 2009
- Carbon Monoxide Poisoning—Pathophysiology and treatment with Hyperbaric Oxygen**
Philadelphia Joint Emergency Medicine Residency Toxicology Day April 22nd 2009
- Diving Medicine for the Recreational Diver**
South Jersey Dive Club Monthly Meeting May 5th 2009
- Transcutaneous Oximetry and Its Role in Hyperbaric Oxygen Therapy**
Institute for Environmental Medicine Educational Conference May 6th 2009
- Diving Medicine for the Recreational Diver**
New Jersey Dive Council Monthly Meeting May 27th 2009
- Carbon Monoxide Poisoning—Pathophysiology and treatment with Hyperbaric Oxygen**
Morristown Memorial Hospital department of Emergency Medicine
Grand Rounds Keynote Speaker August 25th, 2009
- Diving Expedition Medicine--INA's excavation of a 1st Century Roman Shipwreck**
1st Annual New Jersey Diving Medicine Symposium October 3rd, 2009
- Diving Expedition Medicine--INA's excavation of a 1st Century Roman Shipwreck**
February 2, 2010

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South Jersey Dive Club Monthly Meeting

Diving Expedition Medicine--INA's excavation of a 1st Century Roman Shipwreck February 24, 2010
Village Dive Club New York, NY

Diving Expedition Medicine--INA's excavation of a 1st Century Roman Shipwreck April 1, 2010
Rotary Club Long Beach Island, NJ

Carbon Monoxide Poisoning May 25th, 2010
Community Medical Center Grand Rounds Toms River, NJ

Treatment of Decompression Illness in Remote Locations March 25th, 2011
Beneath The Sea SCUBA exposition

Treatment of Decompression Illness in Remote Locations October 14, 2011
Undersea and Hyperbaric Medical Society Northeast Chapter Meeting

PROFESSIONAL MEMBERSHIPS AND LICENSURES

- American Medical Association 2004-Present
 - Divers Alert Network 2007-Present
 - American College of Emergency Physicians 2008-Present
 - Advanced Cardiac Life Support (ACLS) 2003-Present
 - Pediatric Advanced Life Support (PALS) 2003-Present
 - New Jersey State Board of Medical Examiners License, NJ CDS 2008-Present
 - United States Drug Enforcement Agency Practitioner Registration 2008-Present
 - Florida and Louisiana Medical Licenses 2011-Present
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AWARDS RECEIVED

- **Valedictorian**, Cape Fear Academy **June 1995**
- **Alpha Epsilon Delta** Premedical Honor Society **April 1997**
- **Richard Myers Surgical Merit Award**, Wake Forest University, for outstanding achievement in general surgery
- American College of Surgeons Committee on Trauma, North Carolina Division **July 2004**
First Place in resident paper competition for aforementioned research on ventilator associated pneumonia
- **American College of Surgeons Committee on Trauma, Region Four**
Second Place in Resident Paper competition **September 2004**
- **Chief Resident in Emergency Medicine**, Morristown Medical Center **2007-2008**
- **NJ Biz Magazine Top 40 under 40** **September 2009**
This award is given annually to forty individuals living in the state of New Jersey who are under the age of 40 and have shown extraordinary achievement and motivation in helping to develop their business or area of interest for the overall betterment of the citizens of New Jersey. Award winners are selected from a pool of over six hundred nominees.
- **Fellow, The Explorers Club** **December 2010**
- **Explorers Club Flag Award #172 (see details below)** **June 2011**

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DIVING AND EXPEDITION MEDICINE ACTIVITIES

Institute of Nautical Archeology/Institute for Diving Medicine
Underwater excavation at Kizilburun, Turkey

July-August 2009

Diving Medical Officer for over 20 scientific divers excavating a 1st century B.C. Roman Navis Lapidarium, or stone barge. Depth of approximately 150 feet, 20 minute dives on air with 15-20 minute decompression on 100% O₂ at 20 ft. On-site hyperbaric chamber management as well as general diving and emergency medicine, aural barotrauma and sinus barotrauma. Personally completed 18 dives to 150 feet and assisted in excavation as well as "minesweeping" for artifacts.

1st Annual New Jersey Diving Medicine Symposium

October 3rd, 2009

Executive Director, Sponsor, Moderator

The 1st Annual New Jersey Diving Medicine Symposium was organized in order to further the education of recreational, commercial and scientific divers in the New York/New Jersey/Pennsylvania Tri-State area on various aspects of diving medicine. This was sponsored by and held at the Rutgers University Institute of Marine and Coastal Sciences (IMCS), the University of Pennsylvania's Institute for Environmental Medicine, the Diver's Alert Network, and Southern Ocean County Hospital. Lectures included Dr. Michael Madsen and Dr. David Lambert from Penn, Dr. Nick Bird, VP of Medical Services at DAN and Bernie Chowdhury, C.H.T, noted northeast tech diver and author of "The Last Dive." Personal lecture entitled "Diving Expedition Medicine" focused on experiences gathered on aforementioned trip to Turkey.

2nd Annual New Jersey Diving Medicine Symposium

December 11th, 2010

Executive Director, Sponsor, Moderator

Similar to last year's symposium, this year's topics included "Treatment of Decompression Illness in Remote Locations" by Dr. Partrick, "PFO and Diving" by Dr. Chris Logue from the University of Pennsylvania, "Pharmacology and Diving" by Bernie Chowdhury and Dr. Nasreen Haque, and multiple lectures by Dr. Nick Bird from Divers Alert Network including "Medications and Diving" and "Diving Fatality Statistics."

Fellow, The Explorers Club

January 2010

Member of Board of Directors, Philadelphia Chapter

November 2011

Inducted as a Fellow in the Explorers Club secondary to diving medicine expedition work with Institute of Nautical Archeology as well as multiple publications relating to environmental medicine and lectures on the topics of undersea and hyperbaric medicine. The Explorers Club is an international organization made up of researchers and intrepid individuals who have pushed the envelope of scientific exploration in their particular fields. Members and Fellows of the Explorers Club were the first to both Poles, first to the Moon and first to the highest and deepest points on Earth. Former and Current Fellows include Roald Amundsen, Robert Peary, Sir Edmund Hillary, Neil Armstrong, Buzz Aldrin, Michael Collins, Richard Branson, and Robert Ballard.

Institute of Nautical Archaeology/Institute for Diving Medicine Kizilburun Excavation

Summer 2011

Dive Medical Officer, Diver **Explorers Club Flag Expedition # 172**

In the Summer of 2011 IDM once again was asked to join in the final season of excavation at Kizilburun. This summer's objectives were fourfold: First, to lift the column drums to the surface and begin conservation for eventual display either at the Temple of Apollo in Claros, Turkey or at the Bodrum Museum of Underwater Archaeology; second, to begin scientific study of microparticles in the bloodstream before and after decompression diving; third, to begin a study of hyperoxic myopia in decompression diving; and finally, to complete a logistical study of the use of in-water recompression (IWR) as a bridge to definitive therapy in remote locations where formal hyperbaric chambers are not available. Personally completed 18 dives this year and assisted in preparations of drums for surface conservation. As referenced above, I was honored to represent the Explorers Club on this expedition by carrying flag # 172.

ADDITIONAL TRAINING AND QUALIFICATIONS

- University of South Carolina Initial Training Course in Hyperbaric Medicine 2006
- NAUI open water diver certification with approximately 155 wet and chamber dives 2007
- NAUI Nitrox certification 2008
- NAUI dry suit certification 2009
- NAUI Advanced Open Water certification 2010
- NAUI Rescue Diver Certification 2010
- Rutgers University IMCS Dive Medical Officer, member of Scientific Dive Control Board 2009
- **UHMS Certified Diving Medical Examiner 40 hour training course** 2010
- **DAN Physician Referral Network Preferred Provider** 2009
- Board Certified in Emergency Medicine by ABEM 2009
- Board Certified in Undersea and Hyperbaric Medicine by ABEM 2010
- Washington and Lee University Alumni Admissions Committee 2010
- **NOAA Certified Diving Medical Officer 80 Hour Training Course** 2010
- Southern Ocean Medical Center Critical Care Committee 2010
- Southern Ocean Medical Center ED Performance Improvement Committee Chairman 2010
- Southern Ocean Medical Center ED Planning Committee 2011
- Southern Ocean Medical Center ED Throughput Committee 2011