

# DRUE M. ORWIG, DO, MBA, CWSP

drueorwig@gmail.com

## QUALIFICATIONS PROFILE

**Accomplished, highly motivated physician leader, offering strong clinical background and people leadership.** Visionary leader, skilled at creating and implementing strategies to drive clinical and business outcomes. Armed with proven success in change management. Board-certified in Emergency Medicine and Hyperbaric Medicine.

## EDUCATION & TRAINING

2023	<b>Masters of Business-Healthcare Focus</b> West Texas A and M University- Canon, TX
2017	<b>Fellowship – Undersea and Hyperbaric Medicine</b> Hennepin County Medical Center – Minneapolis, MN
2012	<b>Residency – Emergency Medicine</b> Grand Rapids Medical Education Partners – Grand Rapids, MI
2009	<b>Internship – Internal Medicine</b> University of Connecticut – Farmington, CT
2008	<b>Doctor of Osteopathic Medicine</b> Michigan State University, College of Osteopathic Medicine – East Lansing, MI
2004	<b>Bachelor of Science, Major in Biology</b> University of Arkansas – Fayetteville, AR

## BOARD CERTIFICATION – AMERICAN BOARD OF EMERGENCY MEDICINE

2012	<b>Emergency Medicine # 5101018431</b> Initial certification 2013. Expires Dec 31 2023
2017	<b>Undersea and Hyperbaric Medicine</b> Initial certification 2017. Expires Dec 31 2027

## LEADERSHIP EXPERIENCE

SPECTRUM HEALTH SYSTEM – GRAND RAPIDS, MI, USA

2017–Present	<b>Section Chief</b> , Wound and Limb Care Preservation Clinic-Spectrum Health Medical Group <b>Medical Director</b> , Hyperbaric Medicine-Spectrum Health Hospital Group <ul style="list-style-type: none"><li>□ <b>Drove financial improvements and Improved Clinical Operations</b><ul style="list-style-type: none"><li>– Improved Wound gross charges by 95.8% (\$2.3 million annually)</li><li>– Improved Hyperbaric gross charges by 407% (\$5.3 million annually)</li></ul></li></ul>
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- ❑ Initiated and led a full wound product review for the hospital system, to ensure research-based use and cost-effectiveness. Led to \$80,000+ in annual cost savings
- ❑ Awarded Hyperbaric Facility Accreditation with Distinction from the Undersea and Hyperbaric Medical Society. Only facility in the state of Michigan and one of only 54 centers worldwide to receive this accreditation
  - Led readiness assessment, action planning, and application process for accreditation survey.
- ❑ Developed and implemented clinical guidelines for wound and hyperbaric service line
- ❑ Grew new patient referrals for wound and hyperbaric medicine through education and relationship development with a wide variety of referring providers.
- ❑ Implemented an internal wound-outcome database that will allow for monitoring internal wound healing rates, evaluating clinical practice patterns, and outcomes-benchmarking with national wound healing programs
- ❑ Implemented Hyperbaric database in conjunction International Database based at Dartmouth Hospital
- ❑ Restructured legacy regional outreach wound clinic to meet standard of care and optimize wound healing.
  - Implemented standard work and products to align with flagship wound center
  - Optimized medical staffing and training
  - Streamlined operational leadership to improve consistency
  - Increased provider presence from one to three days per week to improve access for new patients and to allow for monitoring and ongoing follow-up that meets standard of care
- ❑ Optimization of a Limb Preservation Clinic and multidisciplinary Limb Board
  - assigned lead APP to run limb preservation clinic, improved throughput from wound clinic to vascular intervention (time to intervention prior to this was 547 days, afterward was 37 days), improved monitoring of patients after intervention with close follow-up
- ❑ Improved patient access through optimization of provider time in clinic with more efficient appointment lengths and start times, standardized notes to reduce documentation time for providers, restructured nurse work expectations to ensure each are working at full level of licensure
- ❑ **Drove safety and reliability by initiating:**
  - Developed and implemented semiannual hyperbaric simulation labs for all staff to ensure maintenance of skills
  - Implemented mandatory time-out checklist for any emergent hyperbaric treatment
  - Ongoing quality improvement projects – Blood sugar checks before and after treatments, compliance with emergency treatment checklist
  - Developed proctorship for oncoming hyperbaric providers to ensure initial competencies

## MEDICAL EXPERIENCE

2017–Present    **Section Chief**, Wound and Hyperbaric Department, Spectrum Health Hospital

- ❑ Clinical role in outpatient primary wound clinic, regional wound clinic, inpatient consult service, telemedicine appointment.

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- ❑ Supervision of both routine and emergent hyperbaric medicine (3 monoplace chambers, 1 12-person multiplace chamber)
- ❑ Hospitals: Butterworth, United

2012–Present **Attending Emergency Physician, Emergency Care Specialist**

- ❑ Work clinical shifts in large academic hospital system. Active teaching role with resident physicians.
- ❑ Hospitals: Butterworth, Blodgett, Gerber, Big Rapids, United

2020–2021 **Attending Emergency Physician, Sparrow Hospital System**

- ❑ Work clinical shifts at small regional Emergency Department
- ❑ Hospitals: Sparrow

2012–2017 **Attending Emergency Physician, Coast-to-Coast Healthcare**

- ❑ ASPIRUS KEWEENAW HOSPITAL – CALUMET TOWNSHIP, MI, USA
- ❑ ASPIRUS IRON RIVER HOSPITAL – IRON RIVER, MI, USA
- ❑ ASPIRUS ONTONAGON HOSPITAL AND CLINIC – ONTONAGON, MI, USA
- ❑ STURGIS HOSPITAL – STURGIS, MI, USA
  - ❑ Locum Tenens Emergency Medicine shifts

2011–2012 **Attending Flight Physician, Spectrum Health Aeromed Medical Transport**

- ❑ Flight physician for helicopter transport system

## TEACHING EXPERIENCE

SPECTRUM HEALTH HOSPITAL (MICHIGAN STATE UNIVERSITY) – GRAND RAPIDS, MI, USA

2009–Present **Clinical Instructor, Emergency Medicine Department**

- ❑ Clinical faculty for residency teaching hospital

2017-present **Clinical Instructor, Wound and Hyperbaric Department**

- ❑ Oversee Wound and Hyperbaric Rotation for Vascular surgery, PM&R, Infectious Disease, and Emergency Medicine Residents and Fellows
- ❑ Oversee Wound and Hyperbaric Rotation for Medical Students

## MEMBERSHIP AND SERVICE IN PROFESSIONAL ACTIVITIES

2023-present Education Committee Member, Undersea and Hyperbaric Medicine Society

2022 Spectrum Health Fredrick Meijer Heart Institute - Faculty Leadership Panelist Interviewer  
Vice President, Department Chief

2021-present Alternate Councilor – Undersea and Hyperbaric Section. American College of Emergency Physicians

2021-present Founded Women Physician and APP Leadership Group. Spectrum Health. Grand Rapids MI

2017-present American College of Emergency Physicians/Undersea and Hyperbaric Medicine Section-member

2016-present Undersea and Hyperbaric Medicine Society-member

2009-present Michigan College of Emergency Physicians-member

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American College of Emergency Physicians-member

## AWARDS AND HONORS

### Michigan State University

2004–2008     Sigma Sigma Phi Honors Fraternity  
Kate Garrod Post-Education Scholarship Recipient

### University of Arkansas

2000–2004     Swim and Dive Team ▪ Phi Beta Kappa ▪ SEC Academic Honor Roll  
Academic All-American Honorable Mention ▪ Scholar Athlete Award  
National Women’s Athletic Department ▪ Academic Department Champion  
SEC Conference Finalist, *Full Bright* ▪ College of Arts and Sciences Dean’s List

## SPEAKING ENGAGEMENTS

**Multidisciplinary Approach to Amputation Prevention.** Fredrik Meijer Health and Vascular Institute Town Hall. March 8 2023.

**Hyperbaric For the ED Physician.** EM Residency Monthly Education. November 30, 2022

**Wound Care for the Primary Care Provider.** Fredrick Meijer Heart Art of Cardiovascular Medicine. September 14 2022

**Hyperbaric for the Infectious Disease Physician.** ID monthly meeting. December 2021

**Wound Closure in the ED: Overview and Updates.** EM Resident Conference. January 28 2021

**Overview and Updates for Wound Care for Podiatry.** SHMG Podiatry Group. May 2020

**Overview of Wound and Hyperbaric Medicine.** Fredrick Meijer Heart and Vascular Institute Lecture Series. February 19 2018

**Carbon Monoxide Overview.** Recorded Lecture for EMS personnel – AMR. November 2017

**Hyperbaric for the Neurologist.** Neurology Grand Rounds. November 2017.

**Carbon Monoxide Poisoning: Pearls, Pitfalls, and Updates.** HCMC Conference. October 2016.

## ARTICLES

**Orwig, D. M.** (2017). A case of carbon monoxide poisoning leading to NSTEMI. *ACEP Undersea and Hyperbaric Medicine Section Newsletter*, June 2017

**Orwig, D. M.** and Decou, J. (2012). Is physical exam and laboratory data sufficient to exclude intra-abdominal injury in the pediatric trauma patient? *Emergency Medicine Journal*, 29, 258–260.

**Orwig, D. M.**, Logue, C., Hendriksen, S., Westgard, B., Walter, J., Pullis, M., and Masters, T. (2018). An approach to treating a patient with a HeartMate II™ left ventricular assist device in a multiplace hyperbaric chamber: A case report. *Undersea and hyperbaric medicine: Journal of the Undersea and Hyperbaric Medical Society, Inc*, 45(1), 89–93.

Cozzi, N. Kendall Stevens, BS; Yeoshina Pillay, MD; David Moore MD; Matthew Flannigan, DO; Mariah Barnes, MD; Matthew Singh, MD; Melisa Gagrira, MD; Christian Kolacki, MD; Jennifer Bach, DO; Dale McNinch, MD; **Drue Orwig, DO**; Jeffrey Jones, MD. *Diagnosis of Central Retinal Artery Occlusion in the Emergency Department Using POCUS: A Case Series*. NOV 2021 vol. 06 iss. 02 | POCUS J | 73

Pending

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**Orwig, D. M., Kumar, P.G., and Rajavelu, P.** Preparedness of emergency rooms in Chennai India and willingness to participate in inter-hospital transfers. *Manuscript submitted for publication.*

## PRESENTATIONS RELATED TO RESEARCH

**Orwig, D. M., Freeman, M., and Judge, B.S.** (2010a). *Hold the anchovies? A case report of clupeotoxism in West Michigan.* Grand Rapids Medical Education and Research Center, Annual Research Day, Grand Rapids, MI.

**Orwig, D. M., Freeman, M., Judge, B.S.** (2010b). *Hold the anchovies? A case report of clupeotoxism in West Michigan.* North American Congress of Clinical Toxicology, Denver, CO.

**Orwig, D. M., Huesgen, K., Stoker, A., Hamm, J., Daughtery, M., Martin, J., and Seamon, J.** (2012a). *Physician satisfaction with electronic medical record documentation compared with dictation at a Tertiary Emergency Department.* Grand Rapids Medical Education and Research Center, Annual Research Day, Grand Rapids, MI.

**Orwig, D. M., Huesgen, K., Stoker, A., Hamm, J., Daughtery, M., Martin, J., and Seamon, J.** (2012b). *Physician satisfaction with electronic medical record documentation compared with dictation at a Tertiary Emergency Department.* Midwest Society for Academic Emergency Medicine (SAEM) Conference, Columbus, OH.

## ONLINE REFERENCES

**Orwig, D. M.** (2011). Risk of vascular events in Emergency Department patients discharged home with diagnosis of dizziness or vertigo. Critical Appraisal. *BestBETs*. Retrieved from <http://www.bestbets.org/appraisals/appraisal.php?id=1335>.

**Orwig, D. M. and DeCou, J.** (2011). Is physical exam and laboratory data sufficient to exclude intrabdominal injury (IAI) in the pediatric trauma patient? *BestBETs*. Retrieved from <http://www.bestbets.org/bets/bet.php?id=2252>.