

Nick Nudell, MS, NRP

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PROFILE

I've spent more than 23 years working as an ambitious and tenacious yet visionary information systems strategist. My focus has largely been on improving health care systems with mHealth and HealthIT technologies and through innovative approaches to knowledge discovery and management. For me, it is not about 'the data', rather it is about using information to make sense of patterns, and to understand the relationships between different issues allowing users to make better decisions. This means that one size does not fit all and specific challenges demand precise solutions.

EDUCATION

D.Sci. Information Systems - Analytics and Decision Support. Dakota State University (Expected 2018).

MS - Computer Information Systems - Information Security. Boston University (2013).

BA - Management with concentration in Information Technology. Golden Gate University (2011).

Paramedic Certificate. Montana State University College of Technology - Great Falls (2001).

PROFESSIONAL APPOINTMENTS/EMPLOYMENT

2000-Present. Board Member/ Chief Data Officer. Paramedic Foundation, Inc. (501c3) & PrioriHealth Partners, LLP. St Paul, MN. paramedicfoundation.org

Architect and engineer of numerous performance improvement initiatives for complex social determinants of health, public health, system evaluation, and health policy issues with a special focus on the particular needs of rural and remote areas.

Manage grant portfolio including applications for multi-year programs exceeding \$500,000 annually.

Responsible for information system strategy, data analytics, modeling, visualization, knowledge discovery, and story telling.

Founder and director of:

- Ultra Medical Team - develop evidence based guidelines & curriculum for ultra-endurance sports including managing more than 150 medical volunteers across the country.
- ParamediCon - a new approach to conferences, education, and networking for the paramedic profession.
- Paramedic Information Privacy, Security, and Assurance Alliance (PIPSAA) - to develop information system curriculum, training & certification for paramedic services.
- ProjectFRED - to further the profession of paramedicine by promoting research, mentorship, and international collaboration to identify and define the paramedic body of knowledge.

Principal Investigator for:

- Emergency Medical Services Data for Performance Measurement project contracted with NHTSA.
- Robert Wood Johnson Foundation's Evaluating High-Value Innovations from Low-Resource Communities project in collaboration with Glacier County EMS and the University of Washington Department of Family Medicine.

2000 - Present. Critical Care Paramedic/Ed. Coordinator. Glacier County EMS. Cut Bank, MT. www.glacierems.com

2014 - 2015. Paramedic. Humboldt General Hospital. Black Rock City (Burning Man). Winnemucca, NV

2008 - 2009. Per Diem Paramedic. Robert Wood Johnson University Hospital. New Brunswick, NJ

1999 - 2000. EMT-B Volunteer. Pondera County Ambulance. Valier, MT. www.ourpmc.com

Supervised & taught First Responders, EMT partners, and Paramedic Interns, then approving new hires for permanent employment status.

Provided customer service, marketing, and community education including providing patient care in 911 responses, inter-facility and regional ground transport in remote, rural, and urban settings.

2011 - 2013. System Integration Manager. FirstWatch Solutions, Inc. Encinitas, CA. www.firstwatch.net

Providing excellent customer service and support, project management, pre-sales engineering, and developing a next generation semi-automated data mining and quality improvement system for Emergency Medical Service patient care records.

2005 - 2011. Senior Field Clinical Engineer/Clinical Educator. AngelMed, Inc. Tinton Falls, NJ. www.angel-med.com

Reporting to VP of CRA, directed operational activities for feasibility study and then developed clinical strategy for 1,000+ patient/50 site pivotal trial for novel implantable cardiac monitoring mHealth device.

2006 - 2007. Regional Ops Manager. Idaho Dept. of Health and Welfare EMS Bureau. Boise, ID. www.idahoems.org

Designed an innovative hospital bed tracking system, based upon a unique collaborative research and development program to integrate rural EMS providers with Critical Access Hospital programs, multi-year strategic plan, and reorganized my staff of ten and per diem staff of 200+ in five regional offices.

Established EMS system standards including the conversion of National Registry examinations to Computer Based Testing; provided technical assistance for the startup of the Idaho EMS Physician Commission including the drafting of administrative rules and a comprehensive standards manual.

- 2004 - 2006. EMS Agency Specialist, Disaster & Emergency Operations Coordinator.** San Francisco Dept. of Public Health. San Francisco, CA. www.sanfranciscoems.org
 Performed strategic planning then developed EMS disaster and Emergency Operations Plans, policies, procedures and training guidance for EMS field providers, nursing and medical staffs and led multiple patient incident exercises and drills.
 Managed complex programs with individual budgets exceeding \$1 million including the first Disaster Registry Program and the Strategic National Stockpile CHEMPAK program.
- 2003 - 2005. ER Technician.** John Muir Medical Center. Walnut Creek, CA www.johnmuirhealth.com
- 2001 - 2003. ER Technician.** Northern Rockies Medical Center. Cut Bank, MT nrmcinc.org
 Credentialed as mid-level provider in Critical Access Hospital functioning as a resuscitation team leader, neonatal provider, and orthopedic technician in a low-resource rural environment.
- 1995 - 1998. Precision Agriculture Information Systems Development.** ConAgra. Walla Walla, WA/Valier, MT.
 Developed applications for agricultural information systems to support sales, marketing, and field engineering programs.
 Identified new market opportunities including the first successful online "Partners in Precision" marketing campaign resulting in a 35% revenue increase.

PUBLICATIONS

Selected manuscripts in refereed journals

1. Rice DT, **Nudell NG**, Habrat DA, Smith JE, Ernest EV. CPR Induced Consciousness It's Time for Sedation Protocols for this Growing Population. *Resuscitation*. (2016), <http://dx.doi.org/10.1016/j.resuscitation.2016.02.013>
2. **Nudell N**, Rice D, Gale JA, Wingrove GW. Rural acute myocardial infarction survey. *International Paramedic Practice*. 2013 Jan 1;2(1), 169-175.
3. Ellestad MH, Messenger J, Montgomery B, **Nudell N**, Narula J. Intracardiac Electrogram and Ischemia Alert. *Journal of the American College of Cardiology*. 2012 Feb 7;59(6):631-3.
4. Lerner EB, Schwartz RB, Coule PL, Weinstein ES, Cone DC, Hunt RC, Sasser SM, Liu JM, **Nudell NG**, et al. Science and Evidence-based Considerations for Fulfilling the SALT Triage Framework—Lerner et al Reply. *Disaster Medicine and Public Health Preparedness*. 2010;4(01):12-.
5. Lerner EB, Schwartz RB, Coule PL, Weinstein ES, Cone DC, Hunt RC, Sasser SM, Liu JM, **Nudell NG**, et al. Lerner et al reply. *Disaster Medicine and Public Health Preparedness*. 2010;4(1).
6. Lerner EB, Schwartz RB, Coule PL, Weinstein ES, Cone DC, Hunt RC, Sasser SM, Liu JM, **Nudell NG**, et al. Lerner et al reply. *Disaster Medicine and Public Health Preparedness*. 2009;3(2).
7. Lerner EB, Schwartz RB, Coule PL, Weinstein ES, Cone DC, Hunt RC, Sasser SM, Liu JM, **Nudell NG**, et al. Mass Casualty Triage: Universal Versus Specific: Lerner et al reply. *Disaster Medicine and Public Health Preparedness*. 2009;3(02):72-.
8. Lerner EB, Schwartz RB, Coule PL, Weinstein ES, Cone DC, Hunt RC, Sasser SM, Liu JM, **Nudell NG**, et al. Mass casualty triage: an evaluation of the data and development of a proposed national guideline. *Disaster Medicine and Public Health Preparedness*. 2008;2(S1):S25-S34.

Selected commissioned reports

1. **Nudell N**, Wingrove G, Patterson DG, Robinson-Montera A. Emergency Medical Services Data for Performance Measurement: Data Quality Assessment and Recommendations. Washington, DC: *National Highway Traffic and Safety Administration*, Sep 2014.
2. Wingrove G, **Nudell N**, Womble M. Otoe County EMS System Assessment, Nebraska, Jul 2013.
3. Wingrove G, **Nudell N**, Murray J. Cass County EMS System Assessment, Nebraska, Jun 2013.
4. Wingrove G, **Nudell N**. Hamilton County EMS System Assessment, Nebraska, Jan 2013.
5. **Nudell N**, Becknell J, Reinert A. A Crisis and Crossroad in Rural North Dakota Emergency Medical Services, North Dakota, Jun 2011.
6. Becknell J, **Nudell N**, Reinert A. The Rural Ambulance Service Leaders Survival Guide - Nine Questions Every Rural Ambulance Service Leader Should Ask, North Dakota, Jun 2011.
7. Becknell J, **Nudell N**, Reinert A. The Impact of Oil and Energy Development on on Out-Of-Hospital Emergency Medical Services, North Dakota, Jun 2011.
8. **Nudell N**, Wingrove G, Becknell J, Reinert A. North Dakota Rural EMS Improvement Project, North Dakota, Jun 2011.
9. **Nudell N**, Wingrove G, Becknell J, Reinert A. Pembina County EMS Assessment, North Dakota, May 2011.
10. Sandy C, **Nudell N**, Wingrove G, Becknell J, Reinert A. An Introction to Rural EMS Medical Direction in North Dakota, North Dakota, Apr 2011.
11. **Nudell N**, Wingrove G. How Good Is Your Ambulance Service? A Basic Quality Kit for Rural North Dakota Ambulance Services, North Dakota, Apr 2011.
12. Wingrove G, Murray J, **Nudell N**, Becknell J, Reinert A. Boone County EMS System Assessment, Nebraska, Sep 2009.
13. Wingrove G, Murray J, **Nudell N**, Becknell J, Reinert A. City of Bridgeport EMS System Assessment, Nebraska, Aug 2009.

14. **Nudell N.** Idaho EMS Physician Commission Standards Manual. Approved under state law 2006.

Selected articles in trade journals/self published

1. **Nudell N.** (May 2016).The birth of a performance measure. *JEMS.com*.
2. **Nudell N.** (Feb 2015). How EMS is impacted by in-home caregivers' use of digital info. *EMS1.com*.
3. **Nudell N.** (Dec 2014). Why EMS Belongs In The Federal Health IT Plan. *EMS1.com*.
4. Hoffman MH, **Nudell NG**, Berry J. (Sep 2014). Introduction to the Ultra Medical Team. *National Association of EMS Physicians Newsletter*.
5. **Nudell N.** (Aug 2013). Case Studies: How The Power of Data Can Transform EMS. *EMS World*.
6. **Nudell NG.** (2004). The Concept of Scalable, Interoperable, and Fully Integrated Healthcare Information Tracking Systems for Disasters. The Paramedic Foundation. Retrieved April 8, 2016, from <http://paramedicfoundation.org/>

INVITED TALKS/PRESENTATIONS

- American Ambulance Association. St. Louis, MO-EMS Compass Initiative.
- HIE in EMS Summit 2014, Los Angeles, CA - HIE designed for EMS use.
- EMS Today. 2013, Washington, DC-EMS Leadership Getting More From Less: How To Use Data in Your CAD and ePCR to Improve Operational and Clinical Performance. 2015, Washington, DC-EMS Performance Measures Project. 2016, Baltimore, MD-EMS Compass Town Hall Meeting: How Performance Measures Could Transform EMS.
- EMS World. 2013, Las Vegas, NV-How To Use Data to Improve Clinical Performance. 2015, Las Vegas, NV-Town Hall Meeting: Building Performance Measures and Why the Future of EMS Depends On It. Integrated Healthcare Forum Session Moderator: How Technology Is Transforming Integrated Healthcare.
- Foothills and Mile High RETAC ePCR Vendor Expo. 2015, Denver, CO-EMS Compass Initiative.
- Health Information Management Systems Society (HIMSS). 2015, Chicago, IL- Disaster Data Challenges: Don't let data become part of the disaster.
- Idaho Preparedness Conference. 2006, Burley, ID-Multiple Patient Incident Response Planning.
- Industry Council for Emergency Response Technologies (iCERT). 2015, Milipitas, CA-Forum on Cyber & ICT Security for Emergency Calling and Communications - Leveraging Secure Cloud Services for First Responder Networks.
- International Association of EMS Chiefs. 2013, Washington, DC-Leveraging Data for Results!
- Medicine & Science in Ultra-Endurance Sports Conference. 2015, Squaw Valley, CA-The Medical Kit Workshop; Ultra Medical Team Executive Director's and CMO's Perspective.
- mHealth Summit. 2015, Washington, DC-Evolving EMS: Implications of Mobile Technology.
- National Association of City and County Health Officials/Association of State and Territorial Health Officials. 2006, Washington DC-Session Moderator: Remote Control: Preparedness Challenges and Successes in Rural Areas.
- National Association of EMS Physicians. 2015, New Orleans, LA-QI Committee Discussion of EMS Performance Measures.
- National Association of State EMS Officials. 2013, Nashville, TN-Health Information Exchange and EMS Data. 2014, Orlando, FL-Health Information Exchange. 2015, New Orleans, LA-Medical Director's Council-EMS Compass Introduction. San Antonio, TX-EMS Compass Initiative. 2015, Louisville, KY-How Technology Will Shape EMS: Introducing EMS 3.0.
- National EMS Information System. 2015, Park City, UT-EMS Compass Initiative.
- National EMS Management Association. 2005, Orlando, FL-Integrated Information Technology.
- National Rural Health Association Resources Center. 2014, Washington, DC-PIPSAA Overview.
- Oregon EMS Conference. 2015, Salem, OR-EMS Compass Initiative. PIMP My Agency: How to future proof your EMS agency. Ultra Medical Care.
- Pinnacle EMS. 2011, Miami, FL-Integrating Automated Data Into Your QA Process. 2012, Colo. Spgs., CO-Is your ePCR System Living up to its Billing? 2015, Jacksonville, FL-Why Standard Performance Measures Matter More Than Ever.
- WAVE. 2015, Austin, TX -The EMS Compass Initiative.
- ZOLL Summit. 2015, Broomfield, CO-How Technology Will Shape a Totally New Experience for EMS - Introducing EMS 3.0, Designing Performance Measures for the Future of EMS. 2016, Broomfield, CO-Finding the answers that are right under your feet!

TEACHING EXPERIENCE

Glacier County EMS. Cut Bank, MT.

- Emergency Medical Technician (Undergraduate: Numerous dates 2000-2003).
- Advanced Emergency Medical Technician (Undergraduate: Numerous dates 2000-2003).
- Emergency Medical Responder (Undergraduate: Numerous dates 2000-2003).

Heartshare Training Services. San Jose, CA.

- Advanced Cardiac Life Support (Continuing Education: Numerous dates 2003 - 2005).
- Pediatric Advanced Life Support (Continuing Education: Numerous dates 2003 - 2005).
- Prehospital Trauma Life Support (Continuing Education: Numerous dates 2003 - 2005).

Idaho State University, Pocatello, ID.

EMS Development and Strategic Planning (Undergraduate: Fall 2015).

Montana State University-College of Technology, Great Falls, MT.

EMT Basic DOT Refresher (Continuing Education: Numerous dates 2002 - 2003).

Paramedic DOT Refresher (Continuing Education: Numerous dates 2002 - 2003).

Prehospital Trauma Life Support (Continuing Education: Numerous dates 2002 - 2003).

LICENSURE/CERTIFICATIONS

ACLS/BLS Healthcare Provider. American Heart Association.

Certified Test Administrator. PearsonVUE.

CCEMT-Paramedic. University of Maryland Baltimore County Dept. of EHS #15715 (Expired).

EMT Paramedic #PM3052. Montana State EMS Bureau (Expires 3/31/2017).

EMT-Paramedic #P0931478. National Registry of Emergency Medical Technicians (Expires 3/31/2017).

PROFESSIONAL SERVICE**Committees:**

2016 - Present. Prehospital Guidelines Consortium.

2015 - Present. Practitioner mental health & wellbeing committee. National EMS Management Association.

2015 - Present. Data committee. National Association of EMT's.

2014 - Present. National EMS Cost Study. University of North Dakota School of Medicine & Health Sciences.

2013 - Present. Project Execution Group, Project Manager. EMS Compass Initiative. National Association of State EMS Officials.

2012 - Present. Dedicated Short Range Communication Technical Committee. SAE - International.

2011 - Present. Quality Measurement, Research, & Improvement Council member. Regionalized Emergency Medical Care Services Steering Committee Member. National Quality Forum.

2011 - Present. Information Systems. Center for Leadership, Innovation, and Research in EMS (CLIR).

2004 - Present. Paramedic Advisory Committee. West Med College.

2014 - 2015. Developing Program Performance Measures for Rural EMS Advisory Committee. University of Southern Maine.

2014 - 2015. Attributes of a Successful Rural Ambulance Service. Advisory Committee. Wisconsin Office of Rural Health.

2012 - 2015. Data Manager Representative. National EMS Advisory Council. National Highway Traffic Safety Administration.

2011 - 2012. EMS Systems Sub-Committee. National EMS Advisory Council. National Highway Traffic Safety Administration.

2008 - 2009. Chair. EMS - A Call To Action And A Vision For Change. National EMS Management Association.

2004 - 2007. Public Safety Partnership Project for advanced communications. Project Mesa.

2000 - 2001. Montana Region 2A EMS Association. Board of Directors.

Peer Review:

2016 - Present. International Journal of Healthcare Information Systems and Informatics (IJHISI).

2016 - Present. 22nd Americas Conference on Information Systems (AMCIS) SIGHEALTH minitrack.

PROFESSIONAL MEMBERSHIPS

2016 - Present. Society of Decision Professionals.

2016 - Present. Society for Community Research and Action.

2016 - Present. Paramedic Chiefs of Canada.

2016 - Present. National Association of EMS Physicians. Committees: Community Paramedicine, Quality Improvement, Rural EMS, Wilderness EMS, Research, Standards & Clinical Practice.

2016 - Present. Decision Sciences Institute.

2016 - Present. American Evaluation Association. Disaster and Emergency Management Evaluation; Social Network Analysis; Data Visualization and Reporting; Health Evaluation; Community Psychology.

2016 - Present. American Association for Public Opinion Research. Pacific Chapter.

2015 - Present. Association for Information Systems. IT in Health Care (SIGHealth).

2015 - Present. AcademyHealth.

2013 - Present. Wilderness Medicine Society.

2012 - Present. SAE - International.

2012 - Present. Health Level Seven International (HL7).

2012 - Present. American Trail Running Association.

2011 - Present. INFORMS. Transportation Science & Logistics Society. Decision Analysis Society. Information Systems Society. Transportation Science and Logistics Society - TS Intelligent Trans Systems.

2008 - Present. Health Information & Management Systems Society.

2003 - Present. National EMS Management Association.

2000 - Present. National Association of EMT's.

SECONDARY & CONTINUING EDUCATION

2000 - Basic Firefighter Training. Valier Volunteer Fire Department.

2001 - Emergency Response to Terrorism. US Department of Homeland Security.
2001 - Integrated Emergency Management. US Department of Homeland Security.
2002 - University of Maryland Baltimore County CCEMT-Paramedic. Mountain Plains Health Consortium.
2002 - Montana Reserve Sheriff Deputy training. Glacier County Sheriff's Office.
2004 - Advanced Concepts of OB Transports. OB Stat High Risk Maternal Transport Team Education.
2005 - EMS Instructor Training (NAEMSE). WestMed College.
2005 - Integral Performance Solutions - Six Sigma Yellow Belt.
2005 - NIMS 700. US Department of Homeland Security.
2005 - Mass Fatality Program Instructor Trainer. US Department of Homeland Security.
2005 - WMD Standardized Awareness Level Trainer. US Department of Homeland Security.
2006 - Integral Performance Solutions - Six Sigma Green Belt.
2005 - ICS 100. US Department of Homeland Security.
2015 - Human Subjects Research - Social-Behavioral-Educational. CITI Program.
2016 - Coursera - Machine Learning Foundations: A Case Study Approach.
2016 - EdX. - Practical Improvement Science in Health Care: A Roadmap for Getting Results; Foundations of Data Analysis.
Introduction to R Programming.

FILM CREDITS

- Set medic. Hidalgo (Feature). Viggo Mortenson. 2002. Disney Production. Director: Joe Johnston.
- Production Assistant/Set medic. Blinkers On (Commercial). 2000. Honda Commercial. Tool of North America Honda.