

CURRICULUM VITAE

Joseph A. Grubenhoff, MD, MSCS

Associate Professor of Pediatrics	Medical Director, Diagnostic Safety Program
Section of Emergency Medicine	Chair, Professional Standards Committee
University of Colorado School of Medicine	Children's Hospital Colorado

BUSINESS ADDRESS

Children's Hospital Colorado
 13123 E. 16th Avenue, B-251
 Aurora, CO 80045
 (720) 478-9240 (office)
 Joe.grubenhoff@childrenscolorado.org

EDUCATION and POST-GRADUATE TRAINING

8/1993 – 5/1997	The Colorado College Colorado Springs, CO	BA <i>magna cum laude</i>
8/1998 – 5/2002	St. Louis Univ. School of Medicine St. Louis, MO	MD <i>summa cum laude</i>
6/2002 – 6/2003	University of Colorado, Denver Denver, CO	Pediatric Internship
7/2003 – 6/2005	University of Colorado, Denver Denver, CO	Pediatric Residency
7/2006 – 6/2009	University of Colorado, Denver Denver, CO	Emergency Med. Fellowship
1/2012 – 12/2015	University of Colorado, Denver Denver, CO	MSCS (Clinical Science)
2/2020 – 4/2022	Children's Hospital Colorado Aurora, CO	Physician Leadership Development Program

ACADEMIC APPOINTMENTS

4/2002 – 5/2002	Visiting Lecturer	Colorado College, Department of Gen. Studies
11/2004 – 6/2009	Clinical Instructor	University of Colorado School of Medicine Department of Pediatrics
7/2009 – 6/2016	Assistant Professor	University of Colorado School of Medicine Department of Pediatrics Section of Emergency Medicine



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11/2009 – 8/2010	Clinical Associate	Nova Southeastern University, College of Allied Health and Nursing, Physician Assistant Department
7/2016 – 6/2025	Associate Professor	University of Colorado School of Medicine Department of Pediatrics Section of Emergency Medicine Department of Emergency Medicine (by courtesy)
7/2025 –	Professor	University of Colorado School of Medicine Department of Pediatrics Section of Emergency Medicine Department of Emergency Medicine (by courtesy)

OTHER PROFESSIONAL POSITIONS

6/1997 – 7/1998	Research Assistant	University of Colorado School of Medicine Department of Internal Medicine, Section of Rheumatology
7/2005 – 6/2006	CarePoint, PC	3033 S. Parker Rd., Suite 800 Aurora, CO 80014
2/2014 – 2/2015	Consultant	Pediatric After-Hours Triage Protocols (trauma) Barton Schmitt, MD
1/2017 – 11/2020	Associate Medical Director	Clinical Effectiveness (focus: diagnostic error) Children's Hospital Colorado
12/2020 – Present	Medical Director	Diagnostic Safety Program Children's Hospital Colorado

HONORS, SPECIAL RECOGNITION AND AWARDS

6/1996 – 8/1996	Summer Research Fellow, University of Colorado Cancer Edu. Ctr.
5/1994	Alpha Lambda Delta – Colorado College
5/1997	Phi Beta Kappa Honor Society – Beta Chapter of CO/Colorado College
5/2001	Alpha Sigma Nu Jesuit Honor Society – St. Louis University
5/2001	Alpha Omega Alpha Honor Medical Society – St. Louis University
5/2002	Merck Book Award – St. Louis University
5/2002	Department of Psychiatry Senior Student Award – St. Louis University



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5/2002	Outstanding Student in Pediatrics – St. Louis Pediatrics Society
5/2008	Academic Pediatric Association Ludwig-Seidel Award
4/2011	Golden Stethoscope Best Patient/Physician Communication Award CU SOM Foundations on Doctoring Curriculum
12/2011	Children's Hospital Colorado Emergency Department "Above & Beyond"
6/2012	Children's Hospital Colorado Pillar Award Presented to the Values Champion Workgroup
8/2013	5280 Magazine "Denver's Top Docs" Recipient (also 2014-2022) Pediatric Emergency Medicine category removed 2023
4/2014	Golden Key International Honor Society – University of Colorado
4/2014	Children's Hospital Colorado Century Award CHCO Medical Staff
5/2014	Children's Hospital Colorado Excellence in Trauma Physician Award
10/2017	Children's Hospital Colorado Medical Staff Provider of the Month
5/2018	Golden Stethoscope Best Physical Exam Skills Award CU SOM Foundations on Doctoring Curriculum
5/2019	1 st Dan (1 st Degree Black Belt) American Tae Kwon Do Kicks Martial Arts, Aurora, CO
10/2020	Best Oral Research Abstract 2020 13 th Annual Diagnostic Error in Medicine Conference
3/2021	Finalist – Inaugural National Academy of Medicine Scholars in Diagnostic Excellence Fellowship
3/2022	CU Medical Alumni Hero University of Colorado Anschutz Medical Alumni Office
7/2022	American Board of Medical Specialties Visiting Scholar
8/2023	Patient & Family Experience Top 20% ED Provider Children's Hospital Colorado
11/2023	Tim Givens Award for Service to the Section of Emergency Medicine
5/2025	Children's Hospital Colorado Outstanding Service Award CHCO Medical Staff



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PROFESSIONAL SOCIETIES

1/2003 – Present	American Academy of Pediatrics
11/2009 – Present	AAP Section of Emergency Medicine
5/2013 – 5/2014	Pediatric Trauma Society
11/2015 – 8/2024	Society to Improve Diagnosis in Medicine (nonprofit filed for bankruptcy)

MAJOR COMMITTEE and SERVICE RESPONSIBILITIES

National

8/2009 – 8/2010	Medical Director (Denver Venue), 2010 Jewish Community Centers of America Maccabi Games
3/2015 – 12/2020	Chief Medical Consultant: National High School Sports-Related Injury Surveillance Study (High School RIO™)
3/2022 – 10/2022	15 th Annual Society to Improve Diagnosis in Medicine Conference: The Future of Diagnosis, Conference Planning Committee
12/2022 – 12/2023	Subject Matter Expert and Faculty, AAP Quality Minute Series on Diagnostic Safety in the Ambulatory Setting
9/2023 – Present	Member, National Quality Forum Diagnostic Excellence Committee
4/2024 – Present	Member, AHRQ Quality Indicators Program Diagnostic Safety Expert Workgroup
8/2023 – 8/2024	Subject Matter Expert for AHRQ Project: “Evaluation of Measure Dx: A Resource to Improve Diagnostic Decisions in the Hospital Setting.”

School Of Medicine

8/2022 – 7/2023	Coach, Institute for Healthcare Quality, Safety and Efficiency (IHQSE) Certificate Training Program (Cohort #10; Surgical Hospitalist-Assisted Recovery Team)
2023 – Present	Faculty and Steering Committee Member, IHQSE Collaborative Case Review Program

Department of Pediatrics

11/2009, 2012, 2025	Interviewer, University of Colorado Pediatric Emergency Medicine Fellowship Program
11/2010 – 12/2021, 11/2023 – Present	Interviewer, University of Colorado Pediatric Residency Program



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7/2014 – 3/2020 Core Faculty, Longitudinal Small Group Facilitator
University of Colorado Pediatric Residency Program

9/2015 – 8/2018 Member, Resident Selection Committee
University of Colorado Pediatric Residency Program

Section of Emergency Medicine

6/2019 – Present Case Review Committee

10/2019 – 5/2022 Faculty Advisory Committee

11/2019 – Present APP Shared Service Taskforce

1/2021 – Present Research Implementation Committee

7/2021 – 6/2024 Clinical Competency & Program Evaluation Committee
(Pediatric Emergency Medicine Fellowship program)

10/2021 – 6/2023 Implement & PREDICT Septic Shock Data Safety Monitoring Committee
DSMC Committee Chair. (Project PI: H. Scott; AHRQ K08;
CT.gov NCT05065333)

Hospital

9/2003 – 6/2005 Resident Member, Children's Hosp. Colorado Advocacy Committee

7/2010 – 7/2015 ED Liaison, Children's Hospital Colorado Trauma QI Committee

4/2011 – 1/2013 Children's Hospital Colorado Values Champion Workgroup
Sole Medical Staff Representative

7/2016 – 12/2021 Member, Practitioner Review Team (PRT)^π, Children's Hospital Colorado

1/2017 – 12/2020 Associate Medical Director, Clinical Effectiveness (Diagnostic Safety)
Children's Hospital Colorado

1/2019 – Present Member, Clinical Pathways and Measures Committee

1/2021 – Present Medical Director of Diagnostic Safety, Children's Hospital Colorado

**1/2022 – Present Chair, Professional Standards Committee (formerly PRT)^π,
Children's Hospital Colorado**

1/2023 – Present Member, Serious Safety Event Review Committee
Children's Hospital Colorado



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LICENSURE and BOARD CERTIFICATION

5/2004 – Present	Colorado Medical License
6/2004 – Present	DEA Registration
11/2005 – 12/2022	American Board of Pediatrics: General Pediatrics (# 83869)
3/2011 – Present	American Board of Pediatrics: Pediatric Emergency Medicine (# 1675)

CLINICAL CERTIFICATIONS

7/2002 – Present	Pediatric Advanced Life Support
8/2006 – 8/2016	Pediatric Advanced Life Support Instructor
9/2005 – 9/2016	Advanced Trauma Life Support

REVIEW and REFEREE WORK

7/2010	<i>Journal of Emergencies, Trauma and Shock</i> <i>ad hoc</i> article reviewer – TBI in elderly adults
2/2012	<i>Pediatric Emergency Care</i> <i>ad hoc</i> article reviewer – Back blow maneuvers
11/2013	<i>Pediatrics</i> <i>ad hoc</i> article reviewer – Use of ACE discharge instructions
4/2014	AAP National Conference and Exhibition Scientific abstract reviewer – Section of Emergency Medicine
1/2015	<i>American Journal of Sports Medicine</i> <i>ad hoc</i> article reviewer – Utilization of head CT in the ED for children with sports-related head injury
7/2015	<i>American Journal of Sports Medicine</i> <i>ad hoc</i> article reviewer - Objective measurement of balance in acutely concussed athletes
1/2016	<i>American Journal of Sports Medicine</i> <i>ad hoc</i> article reviewer - A randomized trial of exercise tolerance in adolescents with sport-related concussion
8/2016	<i>The Journal of Pediatrics</i> <i>ad hoc</i> article reviewer - Annual and seasonal trends in ambulatory care visits for pediatric concussion in Ontario between 2003 and 2013 - A population-based study



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4/2017	<i>BMJ Open</i> <i>ad hoc</i> article reviewer - The Advancing Concussion Assessment in Pediatrics (ACAP) study: Protocol for a prospective, concurrent cohort, longitudinal study of mild traumatic brain injury in children
4/2017	<i>American Journal of Sports Medicine</i> <i>ad hoc</i> article reviewer - The association between dual-task gait after concussion and prolonged symptom duration
5/2017	<i>JAMA Pediatrics</i> <i>ad hoc</i> article reviewer - Physician Diagnosis of Concussion in Pediatric Emergency Departments: A Prospective Multicenter Study
8/2017	<i>The Journal of Pediatrics</i> <i>ad hoc</i> article reviewer - Psychological Resilience as a Predictor of Persistent Post-Concussive Symptoms in Children with Single and Multiple Concussions
10/2017	<i>Child Abuse and Neglect</i> <i>ad hoc</i> article reviewer - Development of screening tool for child maltreatment in Korea
2/2018	<i>Child Abuse and Neglect</i> <i>ad hoc</i> article reviewer – Diagnostic Yield of Skeletal Surveys in Pediatric Trauma Patients by Age
4/2018	<i>American Journal of Sports Medicine</i> <i>ad hoc</i> article reviewer - Identifying persistent post-concussion symptom risk in a pediatric sports medicine clinic
5/2018	<i>The Journal of Pediatrics</i> <i>ad hoc</i> article reviewer - Emergency department visits due to intentional and unintentional traumatic brain injury in infants in the United States: a population-based assessment. (assisted by N. Navanandan, MD)
9/2018	<i>Diagnosis</i> <i>Ad hoc</i> article reviewer - Resident Education on Misdiagnosis and Quality Assurance in Emergency Medicine Training Programs
11/2018	<i>The American Journal of Sports Medicine</i> <i>Ad hoc</i> article reviewer - High injury burden in adolescent elite athletes: a 52-week prospective study
11/2018	<i>Journal of Neurotrauma</i> <i>Ad hoc</i> article reviewer - Practice Patterns in Pharmacologic and Non-pharmacologic Therapies for Children with Mild Traumatic Brain Injury: A survey of 15 North American Centers
2/2019	<i>Child Abuse and Neglect</i> <i>Ad hoc</i> article reviewer - Non-Accidental Trauma is an independent risk factor for mortality among injured infants



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8/2019	<i>Pediatrics</i> <i>Ad hoc</i> article reviewer - A Comparison of Methods for Classifying Persistent Postconcussive Symptoms in Children
9/2019	<i>Pediatric Quality and Safety</i> <i>Ad hoc</i> article reviewer - The Impact of a Multi-Disciplinary Sepsis Initiative on Diagnostic Knowledge and Clinical Behavior in a Pediatric Tertiary Care Center
10/2019	<i>Pediatric Quality and Safety</i> <i>Ad hoc</i> article reviewer - Contributing Factors to Pediatric Ambulatory Diagnostic Errors: Project RedDE
11/2020	<i>Journal of Head Trauma Rehabilitation</i> <i>Ad hoc</i> article reviewer - Traumatic brain injury-related attention deficits in children: A controlled treatment trial with lisdexamfetamine dimesylate
4/2021	<i>Diagnosis</i> <i>Ad hoc</i> article reviewer - Identification of Diagnostic Errors in the Acute Setting: A Process-driven Approach
7/2021	14 th Annual Diagnostic Error in Medicine (SIDM) Conference Scientific abstract reviewer
8/2021	<i>Hospital Practice</i> <i>Ad hoc</i> article reviewer – Diagnostic Error in Pediatric Hospitals
11/2021	<i>Diagnosis</i> <i>Ad hoc</i> article reviewer – Facilitating Optimal Therapies for Patients with Infection-Related Decompensation through Team-Based Decision Making
4/2022	15 th Annual Society to Improve Diagnosis in Medicine (SIDM) Conference Workshop proposal reviewer
4/2022	<i>JAMA Network Open</i> <i>Ad hoc</i> article reviewer - Changes in hospital-based care seeking for acute mental health concerns in children and adolescents during the COVID-19 pandemic
5/2022	<i>Academic Emergency Medicine</i> <i>Ad hoc</i> article reviewer - Frequency of Potential Missed Opportunities to Diagnose Three High-Risk Conditions Among Children Presenting to the Emergency Department with Undifferentiated Symptoms
1/2023	<i>Hospital Pediatrics</i> <i>Ad hoc</i> article reviewer - Nonspecific diagnoses and return visits among children discharged from the emergency department
3/2023	<i>Hospital Pediatrics</i> <i>Ad hoc</i> article reviewer - Community Validation of an Approach to Detect Delayed Diagnosis of Appendicitis in Big Database



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| 11/2023 | <i>Joint Commission Journal of Quality and Patient Safety</i>
<i>Ad hoc</i> article reviewer - Emergency Medicine 72-Hour Potentially Preventable Returns with Admission (PPRA-72): Review Process Validation and a Potential Health Equity Evaluation |
| 1/2024 | <i>The Journal of Pediatrics X</i>
<i>Ad hoc</i> article reviewer - Characterizing Inequities in Pediatric Appendicitis Misdiagnosis and Perforation |
| 3/2024 | <i>Diagnosis</i>
<i>Ad hoc</i> article reviewer - Delayed Diagnosis of New Onset Pediatric Diabetes Leading to Diabetic Ketoacidosis: A Retrospective Cohort Study. |
| 10/2024 | <i>Academic Emergency Medicine</i>
<i>Ad hoc</i> article reviewer - Implementing electronic triggers to study diagnostic errors in pediatric emergency departments |

[Dr. Grubenhoff's Web of Science Profile](#) and [ORCID Public Profile](#)

TEACHING RECORD

Invited Lectures and Presentations

- | Local | |
|--------------|--|
| 1. 5/2007 | <i>Mild Traumatic Brain Injury</i>
Denver Health Medical Center Pediatric Grand Rounds |
| 2. 7/2007 | <i>Pediatric Toxicology</i>
Denver Area Emergency Medical Services Conference |
| 3. 9/2007 | <i>Pediatric Trauma Considerations</i>
Pridemark Ambulance Services, Westminster, CO |
| 4. 2/2009 | <i>Mild Traumatic Brain Injury (mTBI)</i>
Colorado Permanente Medical Group (Colorado Kaiser) |
| 5. 8/2009 | <i>Pediatric Burns</i>
Flight For Life Case Conference, Denver, CO |
| 6. 10/2009 | <i>Blows to the Bean: When to Buzz the Melon and other head injury questions answered</i>
Children's Colorado Inaugural Urgent Care Conference |
| 7. 1/2010 | <i>Blows to the Bean: When to Buzz the Melon and other head injury questions answered</i>
Lutheran Medical Center Lecture Series, Westminster, CO |
| 8. 6/2010 | <i>Myths and Facts, Consensus and Controversy of Pediatric mTBI</i>
Denver Health Medical Center Pediatric Grand Rounds |



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9. 11/2010 *Child Abuse*
Flight for Life Case Conference, Denver, CO
10. 9/2011 *ALTE: Apparent Life-Threatening Event or Annoying Little Trivial Episode?*
Children's Hospital Colorado Annual Urgent Care Conference
11. 10/2011 *Pediatric Environmental Emergencies*
Partnership in Outstanding Pre-Hospital Pediatric Care, Aurora, CO
12. 11/2011 *Common Pediatric Overdoses*
Boulder Community Hospital
13. 1/2015 *Pre-hospital Providers' Contribution to In-hospital Care*
Partnership in Outstanding Pre-Hospital Pediatric Care, Aurora, CO
14. 11/2015 *Psychological predictors of delayed symptom resolution in children with concussion.* Master's Thesis Defense, Clinical Science Graduate Program, University of Colorado, Aurora, CO
15. 6/2016 *Refining Clinical Reasoning*
Colorado Permanente Medical Group (Colorado Kaiser)
16. 10/2016 *Diagnostic Performance and Patient Safety Workshop (4 session series)*
CU SOM IHQSE CTP Connections Seminar Series
17. 5/2017 *Diagnostic Safety is a Multidisciplinary Sport*
Children's Hospital Colorado Target Zero Open Forum
18. 8/2017 *Centering the Pendulum: Clinical Practice Update on Concussion*
Colorado Permanente Medical Group (Colorado Kaiser)
19. 9/2017 *Beyond a Knowledge Gap: Human Reasoning and Diagnostic Safety*
CU SOM Department of Pediatrics Division of Endocrinology
20. 10/2017 *Beyond a Knowledge Gap: Human Reasoning and Diagnostic Safety*
CU SOM Dept. of Pediatrics Division of Emergency Medicine
21. 1/2018 *How the Brain is Hardwired: How Systems of Human Judgment Influence the Diagnostic Process*
CHCO Eliza Fernie Critical Care Nursing Annual Conference
22. 1/2018 *Beyond a Knowledge Gap: Human Reasoning and Diagnostic Safety*
CU SOM Dept. of Pediatrics Division of Metabolics/Genetics
23. 2/2018 *Heuristic and Dispositions: The Next Adventure in Patient Safety*
Department of Pediatric Radiology, Children's Hospital Colorado
24. 2/2019 *Heuristic and Dispositions: The Next Adventure in Patient Safety*
Cardiac Ultrasonographer Corps, Children's Hospital Colorado



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25. 1/2020 *Beyond a Knowledge Gap: Human Reasoning and Diagnostic Safety*
CU SOM Dept. of Pediatric Surgery
26. 5/2021 *We're Not in Kansas Anymore: Human Reasoning and Diagnostic Safety*
CU SOM Pediatric Critical Care Fellow Lecture Series
27. 9/2021 *No News is ~~Good~~ No News: Feedback Sanction and Threats to Diagnostic Safety*
Target Zero Open Forum, Children's Hospital Colorado
28. 6/2022 *Strategies for Diagnostic Error Mitigation in Trainees*
CU SOM Dept. of Pediatrics, Sect. of Hospital Medicine
TEAM Faculty
29. 4/2023 *The Game of Blame and Shame: Or Making Mistakes and Surviving*
CU SOM Section of Emergency Medicine CME Lecture Series
30. 9/2023 *Honing the Blade: Strategies for Diagnostic Excellence*
Colorado Permanente Medical Group (Colorado Kaiser)
31. 6/2024 *Remember That Patient You Saw? – Human Reasoning and Diagnostic Safety*
CHCO CICU Staff Continuing Education Seminar
32. 4/2025 *Honing the Blade: Strategies for Diagnostic Excellence*
CU SOM Section of Cardiology CME Series
- Regional**
1. 3/2008 *The Importance of Specialists When it Comes to the ER*
34th Annual Barbara Joyce Symposium
Colorado State University, Ft. Collins, CO
2. 11/2009 *Blows to the Bean: When to Buzz the Melon and other head injury questions answered*
Poudre Valley Hospital Lecture Series, Ft. Collins, CO
3. 4/2010 *Child Abuse for the Healthcare Provider*
Penrose-St. Francis Hospital Trauma and Critical Care
Symposium, Colorado Springs, CO
4. 5/2010 *Pediatric Burns: Evaluation and Management and Pediatric Trauma Care*
Eagle County Ambulance Service Critical Care Course, Vail, CO
5. 9/2010 *Child Abuse Recognition in the ED*
Good Samaritan Hospital, Lafayette, CO



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6. 11/2011 *Expanding Your Comfort Zone: Reporting and Documentation of Child Physical Abuse in the Emergency Department.*
Children's Hospital Colorado Annual Trauma Conference
7. 6/2012 *Pediatric Shock Management*
AirLink/Medical Center of the Rockies, Loveland, CO
8. 9/2012 *Evaluation of Blunt Head Trauma & Shock Skills Station*
Children's Hospital Colorado Emergency and Trauma Outreach Symposium, Cheyenne, WY
9. 9/2013 *Concussion Management*
Children's Hospital Colorado Emergency and Trauma Outreach Symposium, Steamboat Springs, CO
10. 9/2013 *Recognizing Child Abuse in the ED*
Children's Hospital Colorado Emergency and Trauma Outreach Symposium, Steamboat Springs, CO
11. 11/2014 *Identifying Sentinel Injuries in Child Physical Abuse*
Children's Hospital Colorado Annual Trauma Conference
12. 1/2015 *Pre-hospital Providers' Contribution to In-hospital Care*
Children's Hospital Colorado Annual EMS Conference
13. 4/2016 *Centering the Pendulum: Supporting Rational Concussion Management Through Evidence*
Pediatric Grand Rounds, Univ. of Colorado School of Medicine
14. 10/2016 *The Boy Who Cried Wolf and Other Tales: Diagnostic Reasoning, Patient Safety and Escalating Concerns*
6th Annual Escalation in Care Nursing Conference (CHCO)
15. 11/2016 *"Brain Sprain" Let's Start Concussion Recovery Right*
Children's Hospital Colorado Acute Illness and Injury Conference
16. 11/2016 *State of the Science Emergent Concussion Evaluation*
Children's Hospital Colorado Annual Trauma Conference
17. 11/2017 *Acute Concussion Management – An Emergency Dept Perspective*
Children's Hospital Colorado Annual Advanced Care of the Young Athlete Conference
18. 1/2018 *Heuristic and Dispositions: The Next Adventure in Patient Safety*
Pediatric Grand Rounds, Univ. of Colorado School of Medicine
19. 4/2018 *Cognitive Bias: The Impact of Human Reasoning in the Diagnostic Process*
AAP Colorado Chapter Annual CME Conference



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20. 8/2019 *Acute Head Injury Care in the Pediatric Setting*
Children's Hospital Colorado Youth Concussion in the Primary
Care Setting mTBI Symposium
21. 8/2020 *Beyond a Knowledge Gap: Human Reasoning and Diagnostic Safety*
Valley View Hospital Grand Rounds, Glenwood Springs, CO*
(*postponed due to SARS-CoV2 Pandemic)
- National**
1. 1/2013 *Concussion Recognition & Management for Riders and Instructors*
United States Pony Club Annual Meeting, Westminster, CO
2. 5/2014 *Pediatric Concussion: Making the Diagnosis and Discharge Plan*
Pediatric Academic Societies Annual Meeting Workshop
Vancouver, CAN
3. 10/2015 *Identifying and Managing Concussion in the Homeless Population*
National Association of State Head Injury Administrators
Annual Meeting, Denver, CO
4. 9/2017 *Developing a Diagnostic Safety Program to Reduce Harm: Children's
Hospital Colorado's Experience (So Far)*
Children's Hospital Association Patient Safety Organization
Annual Meeting, Chicago, IL
5. 5/2018 *Humans, Systems and Diagnostic Safety: Preventing Harm From
Diagnostic Errors* (workshop)
Pediatric Academic Societies Annual Meeting Workshop
Toronto, CAN
6. 2/2019 *How the Design of Systems Contribute to Delayed or Missed Diagnosis
and Treatment in the Emergency Department*
Children's Hospitals Associate Patient Safety Organization
Safe (CHA PSO) Table Webinar Panelist
7. 3/2020 *A Novel Data Stream for Detecting Harm from Diagnostic Errors*
CHA Annual Quality and Safety Conference "Pioneering
Initiative"*
(*prepared but not given due to SARS-CoV2 Pandemic)
8. 5/2020 *A Novel Data Stream for Detecting Harm from Diagnostic Errors*
CHA PSO Webinar on CHA PSO's Dx Safety Toolkit
9. 11/2020 *A Family's Experience with Diagnostic Error and Developing a Diagnostic
Safety Program*
Solutions for Patient Safety Learning Series
10. 4/2021 *We're Not in Kansas Anymore: Human Reasoning and Diagnostic Safety*
Society for Pediatric Urgent Care Weekly CME Webinar



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11. 7/2021 *Feedback Sanction and its Threat to Diagnostic Safety in the PED*
Gary Fleisher PEM Grand Rounds (CU, Harvard,
UT-Southwestern, Ohio State)
12. 10/2021 *Feedback Sanction and its Threat to Diagnostic Safety in the PED*
Primary Children's Hospital Grand Rounds, Salt Lake City, UT
13. 2/2023 *Intentions, Intuitions, and Incident Reports: Diagnostic Safety Requires
Us to Think Differently*
NYU Langone Department of Pediatrics Grand Rounds, NY, NY
14. 4/2023 *Intentions, Intuitions, and Incident Reports: Diagnostic Safety Requires
Us to Think Differently*
Hackensack University Department of Pediatrics Grand Rounds,
Hackensack, NJ
15. 8/2023 *Clinical Pathway Adherence and Missed Diagnostic Opportunities*
Society to Improve Diagnosis in Medicine QI Journal Club (virtual)
16. 9/2023 *Operationalizing Cognitive Bias/Diagnostic Error Concepts -- Identify,
Educate and Improve*
Children's Hospital Association Patient Safety Organization
Annual Meeting, St. Louis, MO
17. 10/2023 *Intentions, Intuitions, and Incident Reports: Diagnostic Safety Requires
Us to Think Differently*
Nemours Children's Hospital/University of Central Florida
Pediatric Grand Rounds
18. 10/2023 *Patient Safety & Diagnostic Errors in the Era of EHRs*
AAP NCE Combined COCIT-COQIPS Workshop (SME on
Diagnostic Safety)
19. 5/2024 *Measure Dx: Implementing a Resource to Identify and Learn from
Diagnostic Safety Events*
IHI 2024 Patient Safety Congress, Orlando, FL
20. 8/2024 *Diagnostic Safety Capacity Building – Diagnostic Timeout*
CHA PSO Learning Laboratory
21. 4/2025 *Diagnostic Agnosia Why Smart People Diagnose Incorrectly and How to
Learn from It*
Children's Mercy Hospital/Univ. of Missouri-Kansas City Pediatric
Grand Rounds, Kansas City, MO

Student/Resident/Fellow Lectures

1. 4/2007 *Pediatric Mild Traumatic Brain Injury*
Pediatric Noon Conference, CU Pediatric Residency Program

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2. 10/2008 *Pediatric Toxicology*
Pediatric Noon Conference, CU Pediatric Residency Program
3. 12/2008 *Pediatric Mild Traumatic Brain Injury*
Pediatric Noon Conference, CU Pediatric Residency Program
4. 11/2009 *Pediatric Mild Traumatic Brain Injury*
Pediatric Noon Conference, CU Pediatric Residency Program
5. 10/2010 *Pediatric Mild Traumatic Brain Injury*
Pediatric Noon Conference, CU Pediatric Residency Program
6. 12/2011 *Pediatric Mild Traumatic Brain Injury*
Pediatric Noon Conference, CU Pediatric Residency Program
7. 9/2012 *Trauma Team Activation*
PEM Fellows Lecture Series, CU Pediatric Emergency Medicine Fellowship Program
8. 10/2012 *Pediatric Mild Traumatic Brain Injury*
PEM Fellows Lecture Series, CU Pediatric Emergency Medicine Fellowship Program
9. 5/2013 *Pediatric Mild Traumatic Brain Injury*
Weekly Resident Education, DHMC Emergency Medicine Residency Program
10. 8/2013 *Pediatric Mild Traumatic Brain Injury*
Pediatric Noon Conference, CU Pediatric Residency Program
11. 9/2013 *Trauma Team Activation*
PEM Fellows Lecture Series, CU Pediatric Emergency Medicine Fellowship Program
12. 1/2015 *The Game of Blame and Shame: Or How Not to Learn from Our Mistakes*
Longitudinal Small Group Series, CU Peds Residency Program
13. 5/2015 *The Game of Blame and Shame: Or How Not to Learn from Our Mistakes*
Longitudinal Small Group Lecture Series, CU Pediatric Emergency Medicine Fellowship Program
14. 5/2015 *Concussion Case Studies*
Emergency Medicine Academic Half-day, CU Pediatric Residency Program
15. 11/2015 *Pediatric Mild Traumatic Brain Injury*
CU Family Medicine Residency Clinical Lecture Series



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16. 1/2016 *Dental and Abdominal Trauma Jeopardy*
PEM Fellows Educational Series, CU Pediatric Emerg. Medicine Fellowship Program
17. 6/2016 *Role of Observation following Blunt Head Injury*
PEM Fellows Journal Club, CU Pediatric Emergency Medicine Fellowship Program
18. 3/2017 *The Game of Blame and Shame: Or How Not to Learn from Our Mistakes*
Longitudinal Small Group Lecture Series, CU Pediatric Residency Program
19. 1/2018 *Metabolic Emergencies Board Review*
PEM Fellows Board Review Series, CU Pediatric Emergency Medicine Fellowship Program
20. 2/2018 *Diagnostic Errors: A Family's Perspective*
Longitudinal Small Group Lecture Series, CU Pediatric Residency Program
21. 3/2018 *Evolution of a Manuscript – Submission, Peer-review, Publication*
PEM Fellows Journal Club, CU Pediatric Emergency Medicine Fellowship Program
22. 1/2019 *Review of an RCT on APAP for Febrile Seizures*
PEM Fellows Journal Club, CU Pediatric Emergency Medicine Fellowship Program
23. 1/2019 *Dental and Abdominal Trauma Jeopardy*
PEM Fellows Educational Series, CU Pediatric Emerg. Medicine Fellowship Program
24. 1/2019 *Manuscript Review, Revision and Resubmission*
PEM Fellows Educational Series Journal Club, CU Pediatric Emergency Medicine Fellowship Program
25. 4/2019 *Pediatric Endocrine Emergencies*
DHMC Emergency Medicine Core Lecture Series
26. 5/2020 *Features of Poorly Presented/Written Journal Articles*
PEM Fellows Educational Series Journal Club, CU Pediatric Emergency Medicine Fellowship Program
27. 7/2020 *Pediatric Endocrine Emergencies*
DHMC Emergency Medicine Core Lecture Series
28. 9/2020 *Beyond a Knowledge Gap: Human Reasoning and Diagnostic Safety*
CU SOM Dept. of Pediatrics Fellow Lecture series



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29. 1/2021 *Racial Disparities in Triage Assignment: Why's this kid even here?*
PEM Fellows Educational Series Journal Club, CU Pediatric
Emergency Medicine Fellowship Program
30. 5/2021 *We're Not in Kansas Anymore: Human Reasoning and Diagnostic Safety*
CU Acute Care Pediatric Nurse Practitioner Program
31. 5/2021 *We're Not in Kansas Anymore: Human Reasoning and Diagnostic Safety*
CU SOM Dept. of Pediatrics Critical Care Fellowship Program
32. 5/2021 CU SOM Pediatrics Residency Leadership Simulation Session (facilitator)
33. 9/2021 CU SOM Pediatrics Residency Intern Simulation Session (facilitator)
34. 5/2022 CU SOM Pediatrics Residency PGY2 Resident Orientation
Escalation of Care (facilitator)
35. 6/2022 CU SOM Pediatrics Residency PGY3 Resident Orientation
Escalation of Care (facilitator)
36. 6/2022 CU SOM Pediatrics Residency Leadership Simulation Session (facilitator)
37. 6/2023 CU SOM Pediatric Emerg. Med. Fellowship Simulation Session (facilitator)
38. 3/2025 CU SOM Pediatrics Residency Academic Half-day: BRUE & Child Abuse

Lectures as Part of Courses in Degree-granting Programs

1. 2008-2015 *Pediatric Radiology: Pearls for the Provider* in Minor Acute Illness
(NURS6487), PNP Program, CU School of Nursing (SON)
2. 2012 *Pediatric Radiology: Pearls for the Provider* in Primary Health Care of
Children and Their Families (NR 642), FNP Program, Loretto Heights
School of Nursing, Regis University
3. 2021-2024 *Beyond a Knowledge Gap: Human Reasoning and Diagnostic Safety*
(NURS6510, NURS6520, NURS5923), Acute Care Program, CU SON
4. 2016-2019 *Common Issues and Errors in Pediatrics/ Evolution in Clinical Decision
Making in Trainees* (IDPT 8004/8005) CU SOM MD Program

Clinical Teaching as Attending Physician

Children's Hospital Colorado Emergency Department

- 2009 – Present Supervision and bedside teaching of pediatric emergency medicine
fellows, pediatric and internal medicine-pediatric residents, emergency
medicine residents and family practice residents (8-10 8-hr shifts/month)



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- | | |
|----------------|---|
| 2009 – 2017 | Supervision and bedside teaching of 1-3 emergency care clerkship students per month in “teaching attending” shifts (~6 6-hour shifts/yr)
NOTE: Program discontinued by clerkship director |
| 2009 – 2022 | Foundations on Doctoring Preceptor for a total of 5 medical students
Teaching occurred during regular shifts in the CHCO ED
(~1-2 sessions/month for MS1/2 students; program ended by SOM 2021) |
| 2022 – Present | Longitudinal Integrated Curriculum Preceptor CU SOM medical students
Teaching occurs during regular shifts in the CHCO ED
(Ginocchio '21-'22; Jiang, Ha '22-'23; De Schutter, Bolotin '23-'24; LeRoy '25) |

Children's Hospital Colorado Emergency Department at Parker Adventist Hospital

- | | |
|-------------|---|
| 2006 – 2011 | Supervision and bedside teaching of family medicine residents and pediatrics clerkship students. (1-2 12-hour shifts/month) |
|-------------|---|

Children's Hospital Colorado South Campus Emergency Department

- | | |
|----------------|---|
| 2020 – Present | Supervision and bedside teaching of family medicine resident
(1-2 8-hour shifts/month) |
|----------------|---|

GRANT SUPPORT

Current Grants

- | | |
|---------------|---|
| 9/2023-9/2027 | <p>The Right Call: Implementing a Sepsis Diagnostic Safety Toolkit in a Pediatric Transfer Call Center to Improve Diagnosis of Children in General Emergency Settings (Halden Scott, PI)</p> <p>Granting Agency: Agency for Healthcare Research and Quality</p> <p>Grant Number: R18HS029786-01</p> <p>Total Award: \$1,826,983</p> <p>Role: Co-investigator</p> <p>FTE: 0.10</p> |
|---------------|---|

Completed Grants

- | | |
|-----------------|--|
| 9/2022 – 8/2023 | <p>Moving from "Do you remember?" to "What can we learn?": Developing strategies to assist emergency department (ED) providers in calibrating diagnostic performance. (Joseph A. Grubenhoff – PI)</p> <p>Granting Agency: American Board of Medical Specialties</p> <p>Grant Number: n/a</p> <p>Total Direct Costs: \$12,500</p> <p>Role: PI, Visiting Scholar</p> <p>FTE: In-kind</p> |
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11/2022 – 4/2023	<p>Diagnostic Safety Capacity Building (Joseph A. Grubenhoff, PI) Granting Agency: MedStar health for AHRQ Grant Number: HHSP233201500022I Total Direct Costs: \$7,500 Role: Local PI FTE: In-kind (part of 0.3 FTE from CHCO to Grubenhoff)</p>
12/2015 – 9/2018	<p>Near-infrared spectroscopy (NIRS) for intracranial hematoma detection in Children (Matthew Kirschen – PI) Granting Agency: InfraScan, Inc. Grant Number: n/a Total Direct Costs: \$ 26,739 <u>Role:</u> Site PI FTE: In-kind – Industry funded study</p>
7/2017 – 6/2018	<p>Developing a Diagnostic Error Trigger Tool for the Emergency Department (I. Topoz and J. Grubenhoff, Co-PIs) Granting Agency: UC Denver COEPS Small Grant Program Grant Number: n/a Total Direct Costs: \$15,000 Role: Co-PI FTE: In-kind</p>
7/2015 - 6/2017	<p>Outpatient Follow-up after ED Evaluation of Concussion in Children: Barriers, Facilitators and Benefits. (Joseph A. Grubenhoff – PI) Granting Agency: Colo. Dept. of Human Services Grant Number: 4600 Total Direct Costs: \$95,676 over 2 years FTE: 0.10</p>
7/2015 - 6/2017	<p>Fast MRI for Young Children with TBI (Daniel Lindberg – PI) Granting Agency: Colo. Dept. of Human Services Grant Number: 4595 Total Direct Costs: \$300,000 over 2 years <u>Role:</u> Co-I FTE: 0.03</p>
9/2009 - 8/2012	<p>Lorazepam Efficacy and Safety Study (James Chamberlain – PI) Granting Agency: NIH (NICHD) Grant Number: 63095035 Total Direct Costs: \$154,520 over 3 years (local) <u>Role:</u> Site PI FTE: 0.09 (averaged over 3 years)</p>
10/2010 - 9/2012	<p>Comparison of acute mTBI symptoms and persistence of post-concussion symptoms (Joseph A. Grubenhoff – PI) Granting Agency: Thrasher Research Fund Grant Name: Early Career Award</p>

Grant Number: NR-0126
Total Direct Costs: \$22,740 over 2 years
FTE: 0.05

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Peer-reviewed Journal Articles

1. **Grubenhoff JA**, Brent A. *Case Report: Brown-Sequard syndrome resulting from a ski injury in a 7-year-old male*. Curr Opin Pediatr 2008 20(3): 341-344. PMID: 18475106
2. **Grubenhoff JA**, Kirkwood M, Gao D, et al. *Evaluation of the Standardized Assessment of Concussion in a Pediatric Emergency Department Population*. Pediatrics 2010;126(4):688-695. PMID: 20819901
3. **Grubenhoff JA**, Kirkwood M, Deakyne S, Wathen J. *Detailed concussion symptom analysis paediatric ED population*. Brain Inj 2011;25(10):943-949. PMID: 21749192
4. Greene AE, Roosevelt GE, **Grubenhoff JA**, Klein U. *Little boy black and blue*. Pediatr Emerg Care 2011;27(8):758-759. PMID: 21822090
5. Kedia S, Ginde AA, **Grubenhoff JA**, Kempe A, Hershey AD, Powers SW. *Monthly variation of United States pediatric headache emergency department visits*. Cephalgia 2014; 34(6):473-8. PMID: 24335850
6. Kirkwood MW, Peterson R, Connery A, Baker D, **Grubenhoff JA**. *Postconcussive symptom exaggeration after pediatric mild traumatic brain injury*. Pediatrics 2014;133(4):643-50. PMID: 24616360
7. **Grubenhoff JA**, Deakyne S, Brou L, Bajaj L, Comstock RD, Kirkwood MW. *Acute Concussion Symptom Severity and Delayed Symptom Resolution*. Pediatrics 2014;134(1):54-62. PMID: 24958583
8. Chamberlain JM, Okada P, Holsti M, Mahajan P, Brown KM, Vance C, Gonzalez V, Lichenstein R, Stanley R, Brousseau DC, **Grubenhoff JA**, Zemek R, Johnson DW, Clemons TE, Baren J; Pediatric Emergency Care Applied Research Network (PECARN). *Lorazepam vs diazepam for pediatric status epilepticus: a randomized clinical trial*. JAMA. 2014 23-30;311(16):1652-6. PMID: 24756515
9. Mackelprang JL, Harpin SB, **Grubenhoff JA**, Rivara FP. *Adverse Outcomes among Homeless Adolescents and Young Adults Who Report a History of TBI*. Am J Public Health. 2014;104:1986-92. PMID: 25122029
10. **Grubenhoff JA**, Deakyne SJ, Comstock RD, Kirkwood MW, Bajaj L. *Outpatient follow-up and return to school after emergency department evaluation among children with persistent post-concussion symptoms*. Brain Injury ePub May 25, 2015 1-6. PMID: 26004755



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11. Comstock RD, Currie DW, Pierpoint LA, **Grubenhoff JA**, Fields SK. *An Evidence-Based Discussion of Heading and Concussions in High School Soccer*. JAMA Pediatr 2015;169(9):830-7. PMID: 26168306

12. **Grubenhoff JA**, Currie D, Comstock RD, Juarez-Colunga E, Bajaj L, Kirkwood MW. *Psychological Factors Associated with Delayed Symptom Resolution in Children with Concussion*. J Pediatr. 2016;174:27-32. PMID: 27079963

13. Vollmer B, Kirkwood MW, Comstock RD, Currie D, **Grubenhoff JA**. *Assessing the Clinical Utility of the Question "Is Your Child/Are You Back to Normal?" in Pediatric Concussion Symptom Resolution*. Clin Pediatr. (Phila) 2018 Feb;57(2):146-151. PMID: 28198194

14. Sanchez-Cristal N, Staab J, Chatham R, Ryan S, McNair B, **Grubenhoff JA**. *Child Life Reduces Distress, Pain & Improves Family Satisfaction in the Pediatric Emergency Department*. Clin Pediatr. (Phil) 2018 Nov;57(13):1567-1575. PMID: 30175600

15. Howell DR, Wilson JC, Kirkwood MW, **Grubenhoff JA**. *Quality of Life and Symptom Burden 1 Month After Concussion in Children and Adolescents*. Clin Pediatr (Phila). 2019;58(1):42-49. PMID: 30311786

16. Currie D, Pierpoint L, Snedden T, Comstock RD, **Grubenhoff JA**. *Factors Influencing Primary Care Follow-up after Pediatric Mild Traumatic Brain Injury*. J Head Trauma Rehabil. 2019;34:E11-E19. PMID: 30608309

- 17*. **Grubenhoff JA**, Ziniel S, Bajaj L, Hyman D. *Pediatric Faculty Knowledge of Heuristics and Comfort Discussing Diagnostic Errors: A Pilot Survey to Understand Barriers to An Institutional Educational Program*. Diagnosis (Berl). 2019;6:101-107. PMID: 30759067

18. Snedden T, Pierpoint L, Comstock RD, **Grubenhoff JA**. *Post-concussion Academic Support in Children Who Attend a Primary Care Provider Follow-up Visit after Presenting to the Emergency Department*. J Pediatr 2019;209:168-75 PMID: 30853206

19. Lindberg DM, Stence NV, **Grubenhoff JA**, Lewis T, Mirsky DM, Miller AL, O'Neill BR, Grice K, Mourani, PM, Runyan DK. *Feasibility and Accuracy of Fast MRI vs CT for Traumatic Brain Injury in Young Children*. Pediatrics published online 9-20-19 doi: 10.1542/peds.2008-1536. PMID: 31533974

20. Gaensbauer JT, Todd J, **Grubenhoff JA**, Soranno DE, Scudamore D, Cheetham A, Messacar K. *A Resident-Based, Educational Program to Drive Individual and Institutional Improvement in a Pediatric Training Hospital*. J Pediatr. 2019 Nov;214:4-7.e1 PMID: 31655703

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- 22*. **Grubenhoff JA**, Ziniel SI, Cifra CL, Singhal G, McClead RE, Singh H. *Pediatric Clinician Comfort Discussing Diagnostic Errors for Improving Patient Safety: A Survey*. Pediatr Qual Saf. 2020;5:e259. PMID: 32426626



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- 25*. Staab S, Black T, Leonard J, Bruny J, Bajaj L, **Grubenhoff JA**. *Diagnostic Accuracy of Suspected Appendicitis: A Comparative Analysis of Misdiagnosed Appendicitis in Children*. *Pediatr. Emerg. Care*. 2020;38:e690-e696. PMID: 34170096
26. Kirschen MP, Myers SP, Neuman MI, **Grubenhoff JA**, Mannix R, Stence N, Yang E, Woodford AL, Rogers T, Nordell A, Vossough A, Zonfrillo MR. *Intracranial Traumatic Hematoma Detection in Children Using a Portable Near-infrared Spectroscopy Device*. *West J Emerg Med*. 2021;22:782-791 PMID: 34125061
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- 34*. Michelson KA, Bachur RG, **Grubenhoff JA**, Cruz AT, Chaudhari PP, Reeves SD, Porter JJ, Monuteaux MC, Dart AH, Finkelstein JA. *Outcomes of Missed Diagnosis of Pediatric Appendicitis*,



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*These manuscripts are included in the AHRQ Patient Safety Network (PSNet) Collection

Non-refereed Journal Articles, Invited Commentaries and Letters to the Editor

1. **Grubenhoff JA**, du Ford K, Roosevelt GE. *Heat-related illness.* Clin Ped Emerg Med 2007;8:59-64.

2. Schmitt BD, **Grubenhoff JA**. *Observations regarding "Evaluation of An After-Hours Call Center: Are Pediatric Patients Appropriately Referred to the Emergency Department."* Pediatr Emerg Care 2015;31(8):e5-6. PMID: 26241720

3. **Grubenhoff JA**. *The Diagnostic Safety Program at Children's Hospital Colorado.* Pennsylvania Patient Safety Advisory. 2018;15 (Suppl1):p55-56.

4. Cheung DS, **Grubenhoff JA**. *Machine Learning in Clinical Medicine Still Finding Its Way.* JAMA Netw Open. [Epub ahead of print] 2019 Jan 4;2(1):e186926. PMID: 30646201



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6. **Grubenhoff JA**. PECARN blunt head-trauma prediction rule in infants <3 months old. J Pediatr. 2021;238:338-342. PMID: 34702504.
7. **Grubenhoff JA**, Carubia BA. *Understanding Regional Healthcare-Seeking Behavior During the COVID-19 Pandemic – An Important Aspect of Addressing Resource Needs*. JAMA Netw Open. 2022;5:e2220560. PMID: 35797051.
8. **Grubenhoff JA**, Perry MF. *Complementary Approaches to Identifying Missed Diagnostic Opportunities in Hospitalized Children*. Hosp Pediatr. 2023;3:e186-e188. PMID: 37271797

Book Chapters and On-line Educational Content

1. Mandt MJ, **Grubenhoff JA**. Emergencies and Injuries. In Hay WW et al, ed. *Current Diagnosis and Treatment-Pediatrics*, 20th ed. New York: McGraw-Hill; 2010:300-320.
2. **Grubenhoff JA**. Head Injury. In: Bajaj L et al, eds. *Berman's Pediatric Decision Making*, 5th ed. Philadelphia: Mosby; 2011:418-21.
3. **Grubenhoff JA**. Neck Injury. In: Bajaj L et al, eds. *Berman's Pediatric Decision Making*, 5th ed. Philadelphia: Mosby; 2011:422-25.
4. Mandt MJ, **Grubenhoff JA**. Emergencies and Injuries. In Hay WW et al, ed. *Current Diagnosis and Treatment-Pediatrics*, 21st ed. New York: McGraw-Hill; 2012:316-338.
5. **Grubenhoff JA**, Provance A. Physical and Neurologic Exam. In Yeates KO & Kirkwood MW, eds. *Pediatric Mild Traumatic Brain Injury: From Basic Science to Clinical Management*. New York: Guilford; 2012:196-217.
6. Mandt MJ, **Grubenhoff JA**. Emergencies and Injuries. In Hay WW et al, ed. *Current Diagnosis and Treatment-Pediatrics*, 22nd ed. New York: McGraw-Hill; 2014:334-356.
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8. Ricci LR, Dorighi M, **Grubehoff JA**, Nicklas D. *Concussion Podcast- Department of Pediatrics University of Colorado*, 22 Nov. 2019, www.merlot.org/merlot/viewMaterial.htm?id=771655813.
9. *A Simple Way to Reduce Diagnostic Errors*. (Invited commentary in Children's Hospitals Today Newsletter) October 12, 2022
10. American Academy of Pediatrics Quality Minute Series: Improving Diagnosis in Ambulatory Pediatrics – Intracranial Processes <https://learn.aap.org/course/view.php?id=153&pageid=2924>



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Scientific Abstracts - Competitive (Grubenhoff lead author unless indicated otherwise)

1. *Knowledge, practice and attitudes regarding NOCSAE helmet standards among high school lacrosse coaches.* Pediatric Academic Soc. Annual Meeting 2007 – Toronto, CAN (poster)
2. *Use of the SAC-ER for identifying mild traumatic brain injury in a pediatric population.* Pediatric Academic Soc. Annual Meeting 2008 – Honolulu, HI (oral)
3. *A Detailed Evaluation of Acute Mild Traumatic Brain Injury Symptoms in the ED.* Pediatric Academic Soc. Annual Meeting 2009 – Vancouver, CAN (poster)
4. *Monthly Variation of US Emergency Department Visits for Headaches in School-Aged Children* (Kedia, S lead author) Pediatric Academic Soc. Annual Meeting 2013 – Washington, D.C. (poster)
5. *Injury Management Experiences Following ED Evaluation of Concussion.* Pediatric Academic Soc. Annual Meeting 2014 – Vancouver, CAN (oral)
6. *Acute Symptom Load Does Not Predict Persistent Post-concussion Symptoms.* Pediatric Academic Soc. Annual Meeting 2014 – Vancouver, CAN (oral)
7. *Evaluating Parental Views on Head Injury Terminology.* (Santana A lead author; Grubenhoff J senior author) Pediatric Academic Soc. Annual Meeting 2014 – Vancouver, CAN (poster)
8. *Results of a Randomized Controlled Trial of Lorazepam Versus Diazepam for Pediatric Status Epilepticus.* (Chamberlain J lead author) Pediatric Academic Soc. Annual Meeting 2014 – Vancouver, CAN (oral)
9. *Compliance of Return-to-Play Guidelines of US High School Athletes After Sports-Related Concussion from 2005/06 through 2012/13.* (Reiderer M lead author) American Medical Society for Sports Medicine Annual Meeting 2014 – New Orleans, LA (poster)
10. *Compliance of Return-to-Play Guidelines of US High School Athletes after Sports-Related Concussion from 2005/06 to 2012/13.* (Reiderer M lead author) American Academy of Pediatrics NCE 2014 – San Diego, CA (poster)
11. *Traumatic brain injury among runaway/homeless youth.* (Harpin SB lead author) State of the Science Congress on Nursing Research, Council for the Advancement of Nursing Science 2014 - Washington, DC (oral)
12. *Acute Symptom Load Does Not Predict Persistent Post-concussion Symptoms.* Craig Hospital National Brain Injury Summit 2015 – Vail, CO (oral)
13. *Documentation of Symptoms and Diagnosis Accuracy in Children with Blunt Head Trauma.* (Szeffler P lead author; Grubenhoff J, senior author) Pediatric Academic Soc. Annual Meeting 2015 – San Diego, CA (poster)
14. *Psychological Factors Associated With Delayed Symptom Resolution in Concussed Children.* Pediatric Academic Soc. Annual Meeting 2016 – Baltimore, MD (oral)



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15. *Assessing the Clinical Utility of "Is Your Child Back to Normal?" for Pediatric Mild Traumatic Brain Injury Symptom Resolution.* (Vollmer B lead author; Grubenhoff J senior author) Pediatric Academic Soc. Annual Meeting 2016 – Baltimore, MD (poster)
16. *PECARN & non-PECARN Injury Variables Associated with Head CT in Concussed Pediatric ED Population.* (Krack A lead author; Grubenhoff J senior author) Pediatric Academic Soc. Annual Meeting 2017 – San Francisco, CA (poster)
17. *Discussing Diagnostic Error: Knowledge and Perceptions of a Pediatric Hospital Medical Staff.* 10th Annual Diagnostic Error in Medicine Conference 2017 – Boston, MA (poster)
18. *The LOOP Project: A Multicenter, Interdisciplinary Initiative to Improve Diagnostic Reasoning and Patient Safety through Consistent, Rapid Feedback.* (Wheeler B, lead author). University of Colorado Hospital 6th Annual Education Symposium 2017 – Aurora, CO (poster)
19. *Fast MRI is Feasible and Accurate for TBI in Young Children.* (Lindberg D, lead author) Ray Helfer Society Annual Conference 2018 – Nashville, TN (oral)
20. *Post-Concussion Academic Support in Children who attend a follow-up visit after presenting to the Emergency Department.* (Snedden T lead author; Grubenhoff J, senior author) Midwest Nursing Research Society Meeting 2018 – Cleveland, OH (poster)
21. *Barriers & Facilitators for Primary Care Follow-up after ED Evaluation of Concussion.* Pediatric Academic Soc. Annual Meeting 2018 – Toronto, CA (poster)
22. *Improving Residents' Diagnostic Reasoning through Peer-to-Peer Feedback – The LOOP Study.* (Wheeler B, lead author). Pediatric Academic Soc. Annual Meeting 2018 – Toronto, CAN (poster)
23. *CT Scan Reduction Is Not Associated with an Increase in Negative Appendectomies or Missed Appendicitis.* (Staab S, lead author). Ped. Academic Soc. Annual Meeting 2018 – Toronto, CAN (oral)
24. *Association of Burnout with Perception of Diagnostic Error at a Large Pediatric Academic Medical Center: An Opportunity to Improve Patient Safety.* (Reese J, lead author). National Summit on Promoting Well-Being and Resilience in Healthcare Providers 2018 – Columbus, OH (oral)
25. *Comparison of Pediatrician Comfort Discussing System Versus Diagnostic Errors in Morbidity and Mortality Conference.* 11th Annual Diagnostic Error in Medicine Conference 2018 – New Orleans, LA (poster)
26. *Handshake Antimicrobial Stewardship as a Model to Prevent Patient Safety Incidents and Recognize Diagnostic Errors.* (Searns J, lead author) IDWeek 2019 – Washington, D.C. (poster)
27. *Pediatric Emergency Physicians' Perspectives on Diagnostic Safety - Results from an International Survey.* (Mahajan P, lead author) 12th Annual Diagnostic Error in Medicine Conference 2019 – Washington, D.C., (oral)
28. *Types of Diagnostic Errors Self-Reported by an International Cohort of Pediatric Emergency Physicians.* (Mahajan P, lead author) 12th Annual Diagnostic Error in Medicine Conference 2019 – Washington, D.C., (poster)



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29. *Epidemiology of Diagnostic Errors in an International Cohort of Pediatric Emergency Departments* (Mahajan P, lead author) Pediatric Academic Society Annual Meeting 2020 – Philadelphia, PA (poster)*
(*not presented due to SARS-CoV2 Pandemic)

30. *Provider Opinions of Three Modalities of Feedback in a Pediatric Emergency Department*. (Graham J, lead author; Grubenhoff, J senior author) CU SOM Pediatric Research Virtual Poster Session 2020 – Aurora, CO (poster)

31. *Clinical Pathways May Be a Source of Diagnostic Error: Saved by ED Hand-off*. 13th Annual Diagnostic Error in Medicine Conference 2020 – Minneapolis, MN (virtual poster)

32. *Analysis of a Data Stream to Detect Diagnostic Errors in the Pediatric ED*. (Lam D, lead author; Grubenhoff J, senior author) 13th Annual Diagnostic Error in Medicine Conference 2020 – Minneapolis, MN (virtual plenary)

33. *Developing a Data Stream to Detect Diagnostic Errors in the Pediatric ED*. 13th Annual Diagnostic Error in Medicine Conference 2020 – Minneapolis, MN (virtual poster)

34. *Pediatric Emergency Physicians' Perspectives on Diagnostic Safety - Results from an International Survey*. (Mahajan P, lead author) AAP NCE 2020 (virtual)

35. *Provider Opinions of Three Modalities of Feedback in a Pediatric Emergency Department*. Virtual Poster Presentation Graham J, lead author; Grubenhoff J senior author) Pediatric Academic Society Annual Meeting 2021 (virtual poster)

36. *Analysis of a Data Stream to Detect Diagnostic Errors in the Pediatric ED*. (Lam D, lead author; Grubenhoff J, senior author) Pediatric Academic Society Annual Meeting 2021 (virtual poster)

37. *Not Seeing Is Believing: The Conundrum Of The Non-Visualized Appendix*. (Tutman J, lead author) Society for Pediatric Radiology Annual Meeting 2022 – Denver, CO (platform)

38. *Diagnostic Delays of MSK Infections and Clinical Pathway Execution*. 15th Annual Diagnostic Error in Medicine Conference 2022 – Minneapolis, MN (poster)

39. *Contribution of Limited English Proficiency to Diagnostic Errors in Pediatric ED Patients*. (Lowe J, lead author; Grubenhoff J senior author) 15th Annual Diagnostic Error in Medicine Conference 2022 – Minneapolis, MN (platform)

40. *Synthesized Differential Diagnoses May Decrease Diagnostic Error*. (Sheline E, lead author; Grubenhoff J senior author). Pediatric Academic Society Annual Meeting 2023 (platform)

41. *Racial and Ethnic Disparities in Pediatric Emergency Department Diagnostic Errors*. (Eyal K, lead author; Grubenhoff J senior author). Pediatric Academic Society Annual Meeting 2023 (poster)

42. *SHAREing is Caring, The Development of a Surgical Co-Management Program at Children's Hospital Colorado* (Zamkoff J, lead author). AAP NCE 2023. (poster)

43. *Racial and Ethnic Disparities in Pediatric Emergency Department Diagnostic Errors*. (Eyal K, lead author; Grubenhoff J senior author). SIDM 2023. Cleveland, OH (platform)



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44. *Synthesized Versus Inventorial Differential Diagnoses and Risk of Diagnostic Error*. SIDM 2023. Cleveland, OH (poster)
45. *Surgical Hospitalist Recovery (SHARe) Team*. (Scarberry J, lead author; Grubenhoff J, contributing author). Annual Rocky Mountain Interprofessional Research and Evidence-Based-Practice Symposium, Denver, CO 2023. (platform)
46. *Effectiveness of Standardizing Chest Radiograph Reporting to Reduce Antibiotic Overuse in Pediatric Pneumonia*. (Hoyt B, lead author). Pediatric Academic Society Annual Meeting 2024 (poster)
47. *Use of Artificial Intelligence to Facilitate EHR Documentation in Emergency Departments*. (Ozkaynak M, lead author). 2024 CU-CSU Research Summit
48. *Provider Self-assessment of Missed Opportunities for Diagnostic Excellence*. American Board of Medical Specialties Conference 2024, Chicago, IL (poster)
49. *Effectiveness of Standardizing Chest Radiograph Reporting to Reduce Antibiotic Overuse in Pediatric Pneumonia*. (Hoyt B, lead author; Grubenhoff J, contributing author) AAP NS 2025, Denver, CO (poster)

Other Products of Scholarship

1. Children's Hospital Colorado Concussion Clinical Care Guideline (Grubenhoff J, team lead, 2010)
2. Department of Ped. Collaborative Case Review Facilitator Guide (Grubenhoff, J, team lead, 2018)
3. Children's Hospital Association Patient Safety Organization Diagnostic Safety Toolkit
Member Expert: <https://www.childrenshospitals.org/content/quality/toolkit/diagnostic-safety-toolkit>
4. *Episode 4: Youth Concussions with Joe Grubenhoff* on Little Big Med podcast. December 2017.
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