

Physician Report

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Rocky Mountain Hospital
for Children at P/SL

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Quality Care at the Rocky Mountain Hospital for Children

Raju Meyappan, M.D., Pediatric Cardiac Intensive Care, Chair, QMC

While all caregivers are responsible for providing excellent care to our pediatric patients within the institution, continuing institutional quality improvement is one of the most important tools we have to maintain world-class care in the face of ever-changing national standards, medications, procedures and technology.

The Quality Management Committee's role is to furnish tools and knowledge to the providers to assist them in improving quality within their own care areas. The QMC is responsible for overseeing quality throughout the hospital, including medical, nursing, and all ancillary services, working together with other groups to improve outcomes.

Among these groups is the Pediatric and Neonatal Task Force headed by Dr. Wes Tyson. It reviews all pediatrics deaths within the institution. Another group, The Pathways Committee under the aegis of Dr. Chris Darr, director of Pediatric Emergency Care, provides evidence-based practice, from both physician and nursing perspectives for specific disorders such as asthma, sepsis

and fever of unknown etiology. Their input has been invaluable in improving and standardizing pediatric care across the HealthONE system.

The QMC also conducts retrospective chart reviews of high-volume and high-frequency diseases and procedures. National guidelines are consulted, then we compare ourselves with other children's hospitals. Finally, we provide specific corrective recommendations, if indicated, and use the reviews in staff education. In addition, areas that were previously examined are reevaluated to determine if recommendations and corrective measures were fully implemented. This process ensures improvement

in clinical care.

In past years, under the leadership of Dr. Susan Larson, the Quality Management Committee has reviewed:

- Tonsillectomies
- Asthma & Croup
- Appendectomies

All of these were high volume diseases and procedures or frequent admissions. This year the QMC plans to examine bronchiolitis as the high-volume disease and Nissen Fundoplication as the high-frequency procedure. Articles about the studies previously performed by the QMC, and their findings, are included in this issue of Physician Report. ■

Tonsillectomy

SheriAnn Poznanovic, M.D. and Molly Weaver, P.N.P.

Tonsillectomy is the second most common surgical procedure in children. More than 500,000 are performed annually in the United States. The present review entails 332 patients less than 18 years of age having tonsillectomy at RMHC and in the

HealthONE system of hospitals between January and June, 2011. All 332 procedures were performed in an outpatient setting. This study was timely; *Clinical Practice Guidelines: Tonsillectomy in Children*, a position paper by the American

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Tonsillectomy – continued

Academy of Otolaryngology (AAO), was also published in 2011, giving an authoritative, evidenced-based comparison.¹ This position paper is most useful to primary care physicians as it details the indications for surgery. Of our 332 patients, 43 (13 percent) were less than 2 years of age, 249 (75 percent) between 3 and 13 years, 40 (12 percent) between 13 and 18 years of age.

While our in-house review cannot determine the correctness of the preoperative workup or indications, the AAO recommendations for tonsillectomy for recurrent throat infections include: "... frequency of at least seven episodes in the past year or at least five episodes per year for two years or at least three episodes per year for three years with documentation in the medical record for each episode of sore throat and one or more of the following: temperature >38° C; cervical adenopathy; tonsillar exudates; or positive test for group A β -hemolytic streptococcus."

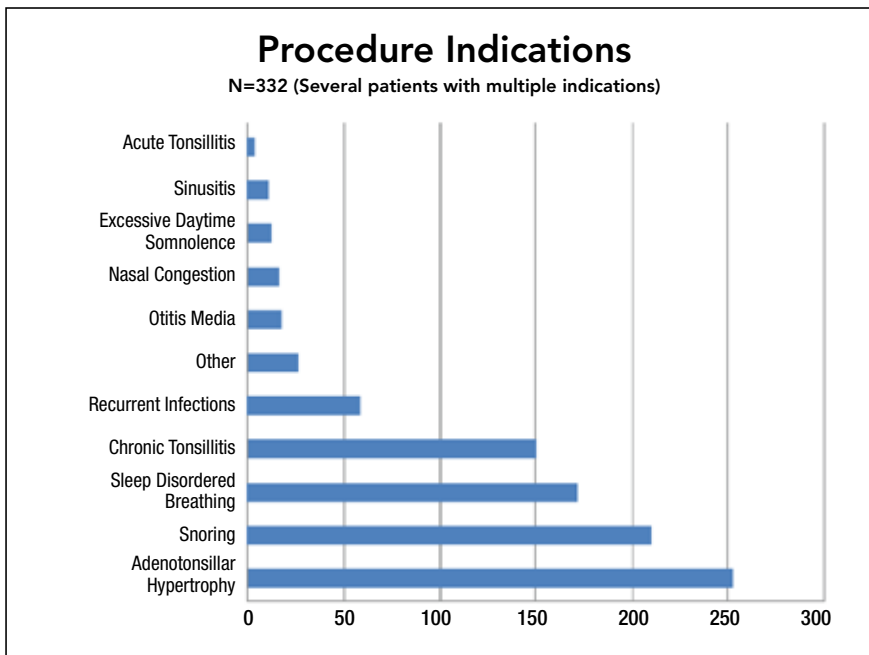
Regarding Sleep Disorder Breathing (SDB), the AAO recognizes that while polysomnography (PSG) may not be necessary in every patient, it remains the gold standard in the diagnosis of SDB. While tonsillectomy may be recommended for SDB, the otolaryngologist should also elicit co-morbid conditions as growth retardation; poor school performance; enuresis; and behavioral problems. Caregivers should be cautioned that tonsillectomy may not cure SDB or it may recur in some children, particularly those who are obese.

Recurrent infections and SDB were also the two most com-

mon indications for tonsillectomy in our 332 patients (see graph). Patient age distribution was: 13 percent <2 years.; 75 percent between 2 and 13 years.; and 12 percent between 13 and 18 years. The average surgery and anesthesia times were 16 minutes and 46 minutes, respectively.

The AAO position paper also discussed the high incidence (70 percent) of post-operative nausea and vomiting (N&V) occurring in children without prophylactic anti-emetics. Evidence-based studies recommend the administration of a single intra-operative dose of dexamethasone to prevent N&V which facilitates oral intake and diminishes pain. This results in decreased hospitalization for intravenous hydration and pain control. The exception to the administration of dexamethasone is when the child is already on corticosteroids for endocrine disorders (e.g. diabetes). In our review, 320 patients (96.4 percent) received dexamethasone. Toradol (ketorolac) was administered to the remaining 12 patients (3.6 percent). Nine of these 12 patients had an average estimated blood loss of 36 cc which exceeds the 11.35 cc average of patients not receiving Toradol. One of the 12 (8.3 percent) patients returned to the emergency room for bleeding >24 hrs. post-operation versus seven of 320 (0.2 percent). The benchmark for post-operative tonsillectomy bleeding is 0.1-3.0 percent, with ketorolac use 4.4-18 percent. Clearly, ketorolac should not be used in tonsillectomies. Corrective action has been instituted.

Earlier studies recommending the administration of antibiotics have largely been discredited due to methodological deficiencies. Presently, the recommendation of the AAO is to not use antibiotic in the perioperative period unless it is for co-morbidity (e.g. cardiac defect, concurrent peritonsillar abscess). Citing a Cochrane review of 10 randomized controlled trials that "found no evidence to support a consistent, clinically important impact of antibiotics in reducing the main morbid outcomes after tonsillectomy," the AAO indicated that injudicious antibiotic use promoted bacterial resistance, allergic reaction, and gastrointestinal upset. Among our patients, 132 (39.7 percent) received antibiotics either intra- or post-operatively. We do not have chart documentation regarding the need for antibiotics. Thus, a cautionary notice concerning the AAO recommendation will be sent to all otolaryngologists and future use will be tracked.



Tonsillectomy – continued

Another recommendation of the AAO was the proactive, time-dependent use of acetaminophen. Acetaminophen with codeine, rofecoxib, or hydrocodeine did not demonstrate any advantage over acetaminophen alone. Pain was controlled best through around-the-clock administration of acetaminophen rather than on a PRN basis. The great majority (>90 percent) of our patients received acetaminophen with a narcotic derivative. Any recommended change in our post-operative pain management should be accompanied by proper instruction to caregivers regarding around-the-clock scheduling of administration as well as a follow-up review of pain control effectiveness, which also will be monitored.

Our review of 332 tonsillectomy patients found no intra-operative complications and a 14.4 percent immediate post-operative complication rate, primarily from desaturation (6.9 percent), pain (3.3 percent), N&V (1.8 percent) and dehydration (1.2 percent). Two patients were readmitted within 14 days (0.6 percent) with a benchmark of 3.9 percent. Of 76 patients (22.9 percent) who had delayed discharges 46 were under three years of age, 12 required bleeding monitoring and 12 were planned for co-morbidities.

From a review of the literature and our chart review, an educational process is required to recommend the use of intra-operative dexamethasone, the elimination of ketorolac and routine antibiotics, and the proactive timed use of acetaminophen without codeine.

¹ *Baugh RF, et al. Clinical Practice Guideline: Tonsillectomy in Children. Otolaryngology - Head and Neck Surgery (2011)144:S1-30.*

Asthma, Croup, and Neonatal Evidenced-Based Practice and Efficiency of Emergency Room Care

Sasha Gubser, M.D. M.P.H., Associate Medical Director, Pediatrics Division, Carepoint, PC

While quality of care has always been important to physicians, measurement and reporting of quality improvement increasingly has become a priority for both professionals and institutions. To ensure standardized care throughout the six emergency departments within the RMHC system, we have tracked proven quality indicators for treating asthma, croup and neonatal fever among our providers since 2006, when we implemented treatment guidelines for these illnesses.

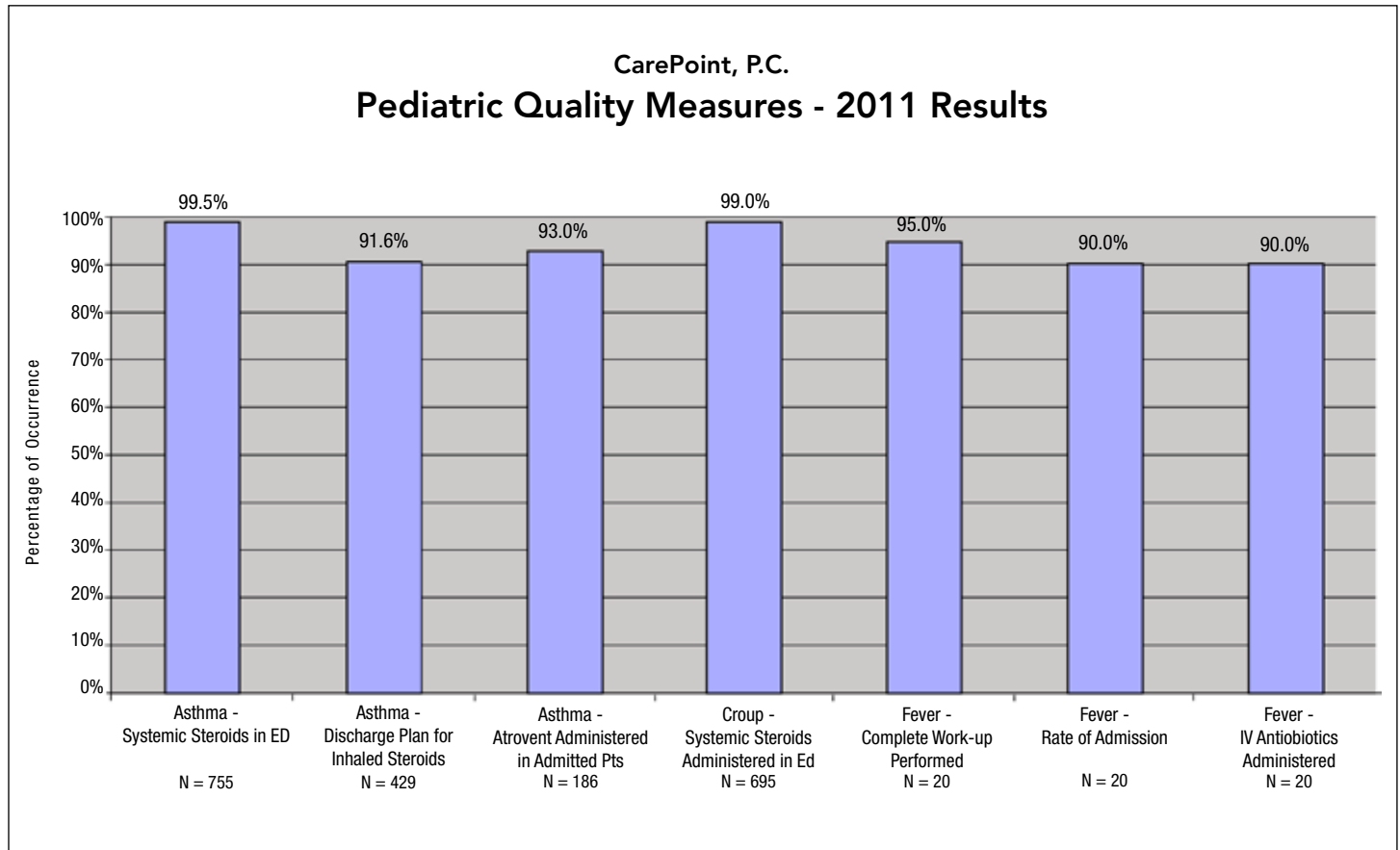
By tracking quality and metrics for the Rocky Mountain Hospital for Children emergency departments, we can continue to meet our goal of providing high-quality and timely care for all pediatric patients.

In patients with asthma, we measure systemic steroid use; use of Atrovent in admitted patients; a discharge plan for inhaled steroids in patients requiring oral steroids; and multiple nebulizer treatments in the ED. In patients with croup we measure whether systemic steroids are given during the ED visit. Physicians and PAs in the Rocky Mountain Hospital for Children emergency departments continue to provide superior quality care throughout our system, demonstrated by

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"Door to Doc" Time - Pediatrics - 2011	
Facility	Turnaround Time in Minutes
Overall Pediatrics	17.7 minutes
North Suburban Medical Center	23.4 minutes
RMHC at Presbyterian/St. Luke's Medical Center	12.7 minutes
Rose Medical Center	12.5 minutes
Sky Ridge Medical Center	18.9 minutes
Swedish Medical Center	19.6 minutes
The Medical Center of Aurora	19.3 minutes

Asthma, Croup, and Neonatal Evidenced-Based Practice and Efficiency of Emergency Room Care – continued



their compliance with recommended treatment guidelines for these respiratory illnesses to similar measures in published data from the National Hospital Ambulatory Medical Care Survey.¹ In infants less than 29 days of age with fever of 100.4° F or higher, we comply with recommended treatment guidelines, including a full septic work-up, administration of IV antibiotics and hospital admission.

Our physicians and physician assistants are committed to providing not just high quality, but also timely care. Our ED wait times are readily available to physicians, patients and their families on the Rocky Mountain Hospital for Children website, on mobile applications and on signage throughout the Denver metropolitan area. We follow

these metrics for each of our providers and for each facility throughout the year, including the “Door to Doc Time,” the time from which a patient arrives at the ED until they are seen by a physician or PA.

By tracking quality and metrics for the Rocky Mountain Hospital for Children emergency departments, we can continue to meet our goal of providing high-quality and timely care for all pediatric patients.

¹ Knapp JF, Simon SD, Sharma V. Quality of Care for Common Pediatric Respiratory Illnesses in United States Emergency Departments: Analysis of 2005 National Hospital Ambulatory Medical Care Survey Data. *Pediatrics* (2008) 122:1165-1170.

Appendectomy

Jack H.T. Chang, M.D., Pediatric Surgeon, Pediatric Physician Liaison, HealthONE

The appendectomy chart review has the same limitations as the tonsillectomy review in that pre-operative information may be incomplete since many patients were referred from other sites and 30-day readmission rate data is necessarily only from our HealthONE facilities. However, these reviews reflect on pre- and post-operative management and provide guidance in future monitoring.

In 2009, 269 patients less than 18 years of age had appendectomies at the RMHC and HealthONE hospitals. The primary goals in the treatment of appendicitis are accuracy in diagnosing abdominal pain, which prevents unnecessary operations with the finding of a normal appendix, and operating in a timely manner to prevent appendiceal perforation. Of the 269 appendectomies, six were incidental in other abdominal procedures and excluded from the statistical calculations. Among the remaining 263 appendectomies, there were three normal (1.1 percent), 212 acutely inflamed (80.6 percent), and 48 gangrenous/perforated (18.3 percent) appendices.

Excluding the outliers who had incidental appendectomies with other procedures and negative appendectomies, the average length of stay for a patient treated at RMHC and HealthONE facilities was 44 hours.

These results compared most favorably with a recent review of 8,959,155 pediatric patients from 40 U.S. pediatric emergency departments (Pediatric Health Information Systems database 2005 - 2009) where the normal appendectomy rate was 3.6 percent.¹ From the Kids Inpatient Data Database (2000, 2003, and 2006), of 250,783 patients <18 years of age, 6.7 percent had negative appendectomies.² Another recent multi-institutional article comparing the incidence of appendicitis outcomes among 1,472 pediatric patients treated at teaching hospitals and 6,431 at non-teaching hospitals, found a perforation rate of 37 percent and 30 percent respectively.³ The rate of gangrenous/perforated appendectomies performed at the RMHC and HealthONE facilities was 18.3 percent. A comparison of data acquired about our review is shown in Table 1.

The majority of the appendectomies were performed laparoscopically (95 percent). Two inadvertent enterotomies occurred during manipulation of distended intestine by grasping forceps. Both were repaired without sequelae. The incidence of intestinal injuries is rare and the recommendations of the QMC were either for use of atraumatic clamps

Hospitals	# Pts.	% Normal	% Acute	% Gang/ Perf/ Abscess
RMHC (2009)	263	1.1	80.8	18.3
Liverpool (2008)	210	19.5	34.8	45.7
Toronto (2007)	24,019	10.85	54.85	34.3
UC Irvine (2007)	465	5.0	55.5	43.5

or considering an open procedure for markedly distended intestine.

Another measure of clinical care was the length of stay. Excluding the outliers who had incidental appendectomies with other procedures and negative appendectomies, the average length of stay for a patient treated at RMHC and HealthONE facilities was 44 hours. Because of the short hospitalizations, 64 percent of these patients were classified as outpatients or observation patients. Our data again showed we compared well with other institutions as seen in Table 2.

Hospital	Hours hospitalized
RMHC	44 hrs.
Indianapolis	67 hrs.
Kansas City	106 hrs.
Montreal	85 hrs.
Toronto	98 hrs.
UC Irvine/Longbeach	76 hrs.

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Appendectomy – continued

The readmission rate within 30 days of discharge was examined as a reflection of adequacy of care as well as discharge instructions to the parents. Limitation of resources and privacy issues only allowed for data from the RMHC and hospitals in the HealthONE system. Of our 263 patients, 6 (2.3 percent) were readmitted. This figure compared favorably with other institutions as seen in Table 3.

This first review of the treatment of pediatric patients for appendicitis has resulted in a closer QMC examination of the pre-operative work-up for appendicitis and initiation of a protocol to determine the effectiveness of ultrasound versus computerized tomography to minimize radiation exposure. While our current results are quite satisfactory compared to the literature, our goal is always to improve upon our care and service. In that vein, our Pathways Committee is formulating an evidenced-based protocol for appendicitis care, which may further improve our results.

¹ Bachur AG, et al.: Diagnostic imaging and negative appendectomy rates in children: effects of age and gender. *Pediatrics* (2012) 129:877-884.

² Oyetunji TA, et al.: Pediatric negative appendectomy rate, trend,

Hospital	#Pts	Readmissions	%
RMHC	263	6	2.3
Liverpool	162	12	7.4
Montreal	281	11	3.9
Aberdeen	8783	403	4.6
London	200	4	2.0

predictors, and differentials. *J Surg Res* (2012) 173:16-20.

³ Lee, SL et al.: A multi institutional comparison of pediatric appendicitis outcomes between teaching and non-teaching hospitals. *J Surg Educ* (2011) 68:6-9.



Rocky Mountain Hospital for Children Publications by Physician 2008-2011

The priority of the private practitioner is clinical care. In their everyday practice over the years, physicians develop a substantial experience which is of obvious benefit to their patients but may not necessarily be transmitted to their colleagues. At the Rocky Mountain Hospital for Children, physicians are encouraged to publish their expertise in medical journals and to present their experience at local and national meetings. The following are the publications of the medical staff of various specialties.

Rocky Mountain Pediatric Kidney Center

Dr. Missy Hanna

1. Dose of dialysis based on body surface area is markedly less in younger children than in older adolescents.

Daugirdas JT, Hanna MG, Becker-Cohen R, Langman CB.

Clin J Am Soc Nephrol 2010 May;5(5):821-7. Epub 2010 Mar 18.

Dr. Mindy Banks

1. Chronic Kidney Disease — Mineral Bone Disorder and Peritoneal Dialysis

Banks M, Sprague SM

Peritoneal Dialysis International, Vol. 28 (2008), Supplement 2

Rocky Mountain Neurology and Sleep Medicine

Dr. Ben Ross

1. Spectrum of pediatric neuromyelitis optica.

Lotze TE, Northrop JL, Hutton GJ, Ross B, Schiffman JS, Hunter JV.

Pediatrics. 2008 Nov;122(5): e1039-47. Epub 2008 Oct 6.

Rocky Mountain Pediatric Hematology Oncology

Dr. John van Doorninck

1. Ewing tumors that do not overexpress BMI-1 are a distinct molecular subclass with variant biology: a report from the Children's Oncology Group.

Cooper A, van Doorninck J, Ji L, Russell D, Ladanyi M, Shimada H, Krailo M, Womer RB, Hsu JH, Thomas D, Triche TJ, Sposto R, Lawlor ER.

Clin Cancer Res. 2011 Jan 1;17(1):56-66. Epub 2010 Nov 3.

2. Current treatment protocols have eliminated the prognostic advantage of type 1 fusions in Ewing sarcoma: a report from the Children's Oncology Group.

van Doorninck JA, Ji L, Schaub B, Shimada H, Wing MR, Krailo MD, Lessnick SL, Marina N, Triche TJ, Sposto R, Womer RB, Lawlor ER.

J Clin Oncol. 2010 Apr 20;28(12):1989-94. Epub 2010 Mar 22.

3. BMI-1 promotes ewing sarcoma tumorigenicity independent of CDKN2A repression.

Douglas D, Hsu JH, Hung L, Cooper A, Abdueva D, van Doorninck J, Peng G, Shimada H, Triche TJ, Lawlor ER.

Cancer Res. 2008 Aug 15;68(16):6507-15.

Dr. J. Brad Ball

1. A two-event in vitro model of acute chest syndrome: The role of secretory phospholipase A(2) and neutrophils.

Ball JB, Khan SY, McLaughlin NJ, Kelher MR, Nuss R, Cole L, Liang X, Silliman CC.

Pediatr Blood Cancer. 2011 Jul 25. doi: 10.1002/pbc.23265. [Epub ahead of print]

2. Transfusion-related acute lung injury (TRALI): current concepts and misconceptions.

Silliman CC, Fung YL, Ball JB, Khan SY.

Blood Rev. 2009 Nov;23(6):245-55. Epub 2009 Aug 20. Review.

3. Mirasol Pathogen Reduction Technology treatment does not affect acute lung injury in a two-event in vivo model caused by stored blood components.

Silliman CC, Khan SY, Ball JB, Kelher MR, Marschner S.

Vox Sang. 2010 May;98(4):525-30. Epub 2009 Nov 25.

Rocky Mountain Pediatric Orthopedics

Dr. Laurel Benson

1. Biomechanical testing of unstable humeral shaft fracture plating.

Catanzarite J, Alan R, Baig R, Forno P, Benson L.

J Surg Orthop Adv. 2009 Winter;18(4):175-81.

Rocky Mountain Scoliosis and Spine Center

Dr. Shay Bess

1. Dynamic Changes of the Pelvis and Spine Are Key to Predicting Postoperative Sagittal Alignment Following Pedicle Subtraction Osteotomy: A Critical Analysis of Preoperative Planning Techniques.

Dr. Shay Bess – continued

- Smith JS, Bess S, Shaffrey CI, Burton DC, Hart RA, Hostin R, Klineberg E And The International Spine Study Group.
Spine (Phila Pa 1976). 2011 Oct 21. [Epub ahead of print]
- Acute reciprocal changes distant from the site of spinal osteotomies affect global postoperative alignment.**
Klineberg E, Schwab F, Ames C, Hostin R, Bess S, Smith JS, Gupta MC, Boachie O, Hart RA, Akbarnia BA, Burton DC, Lafage V.
Adv Orthop. 2011;2011:415946. Epub 2011 Oct 4.
 - Multicenter validation of a formula predicting postoperative spinopelvic alignment.**
Lafage V, Bharucha NJ, Schwab F, Hart RA, Burton D, Boachie-Adjei O, Smith JS, Hostin R, Shaffrey C, Gupta M, Akbarnia BA, Bess S.
J Neurosurg Spine. 2012 Jan;16(1):15-21. Epub 2011 Sep 23.
 - Sagittal spino-pelvic alignment failures following three column thoracic osteotomy for adult spinal deformity.**
Lafage V, Smith JS, Bess S, Schwab FJ, Ames CP, Klineberg E, Arlet V, Hostin R, Burton DC, Shaffrey CI; The International Spine Study Group.
Eur Spine J. 2011 Aug 12. [Epub ahead of print]
 - Does vertebral level of pedicle subtraction osteotomy correlate with degree of spinopelvic parameter correction?**
Lafage V, Schwab F, Vira S, Hart R, Burton D, Smith JS, Boachie-Adjei O, Shelokov A, Hostin R, Shaffrey CI, Gupta M, Akbarnia BA, Bess S, Farcy JP.
J Neurosurg Spine. 2011 Feb;14(2):184-91. Epub 2010 Dec 24.

- Complications of growing-rod treatment for early-onset scoliosis: analysis of one hundred and forty patients.**
Bess S, Akbarnia BA, Thompson GH, Sponseller PD, Shah SA, El Sebaie H, Boachie-Adjei O, Karlin LI, Canale S, Poe-Kochert C, Skaggs DL.
J Bone Joint Surg Am. 2010 Nov 3;92(15):2533-43. Epub 2010 Oct 1.
- Pain and disability determine treatment modality for older patients with adult scoliosis, while deformity guides treatment for younger patients.**
Bess S, Boachie-Adjei O, Burton D, Cunningham M, Shaffrey C, Shelokov A, Hostin R, Schwab F, Wood K, Akbarnia B; International Spine Study Group.
Spine (Phila Pa 1976). 2009 Sep 15;34(20):2186-90.
- Adolescent idiopathic scoliosis - to operate or not? A debate article.**
Weiss HR, Bess S, Wong MS, Patel V, Goodall D, Burger E.
Patient Saf Surg. 2008 Sep 30;2(1):25.

Rocky Mountain Pediatric Cardiovascular Surgery

Dr. Steven Leonard

- Cerebral near-infrared spectroscopy during cardiopulmonary bypass predicts superior vena cava oxygen saturation.**
Ginther R, Sebastian VA, Huang R, Leonard SR, Gorney R, Guleserian KJ, Forbess JM.
J Thorac Cardiovasc Surg. 2011 Aug;142(2):359-65.
- Heart transplantation techniques after hybrid single-ventricle palliation.**
Sebastian VA, Guleserian KJ, Leonard SR, Forbess JM.
J Card Surg. 2010 Sep;25(5):596-600. doi: 10.1111/j.1540-

8191.2010.01055.x.

- Stent implantation for coarctation of the aorta in a premature infant through carotid cutdown as a bridge to surgical correction.**
Dimas VV, Leonard SR, Guleserian KJ, Forbess JM, Zellers TM.
J Thorac Cardiovasc Surg. 2010 Apr;139(4):1070-1. Epub 2009 Apr 11. No abstract available.
- Ministernotomy for repair of congenital cardiac disease.**
Sebastian VA, Guleserian KJ, Leonard SR, Forbess JM.
Interact Cardiovasc Thorac Surg. 2009 Nov;9(5):819-21. Epub 2009 Aug 14.

Rocky Mountain Pediatric Sports Medicine Institute

Dr. John Polousky

- Subscapularis tendon injuries in adolescents: a report of 2 cases.**
Polousky JD, Harms S.
J Pediatr Orthop. 2011 Jul-Aug;31(5):e57-9.
- Juvenile osteochondritis dissecans.**
Polousky JD.
Sports Med Arthrosc. 2011 Mar;19(1):56-63. Review.
- A survey of physician opinion: adolescent midshaft clavicle fracture treatment preferences among POSNA members.**
Carry PM, Koonce R, Pan Z, Polousky JD.
J Pediatr Orthop. 2011 Jan-Feb;31(1):44-9.
- Adolescent patellofemoral pain: a review of evidence for the role of lower extremity biomechanics and core instability.**
Carry PM, Kanai S, Miller NH, Polousky JD.

Orthopedics. 2010 Jul;33(7):498-507. doi: 10.3928/01477447-20100526-16. Review. No abstract available.

5. **Isolated avulsion fracture of the subscapularis tendon with medial dislocation and tear of biceps tendon in a skeletally immature athlete: a case report.**
Provance AJ, Polousky JD.
Curr Opin Pediatr. 2010 Jun;22(3):366-8.
6. **The use of navigation in total knee arthroplasty for patients with extra-articular deformity.**
Bottros J, Klika AK, Lee HH, Polousky J, Barsoum WK.
J Arthroplasty. 2008 Jan;23(1):74-8. Epub 2007 Sep 24.
7. **Decreased complications of pediatric femur fractures with a change in management.**
Sink EL, Faro F, Polousky J, Flynn K, Gralla J.
J Pediatr Orthop. 2010 Oct-Nov;30(7):633-7.

Dr. K. Brooke Pengel

Back Pain - Cycling.
Miller SM, Pengel K.
Medicine & Science in Sports & Exercise: May 2009, 41(5):54-55

Sports Medicine.
Wilson P, Pengel K.
Current Pediatric Diagnosis & Treatment, 19th edition, Chapter 25.

Foot Injury – Gymnastics.
Coel R, Pengel K.
Medicine and Science in Sports and Exercise 2008e, 40(5 Supplement).

Dr. Karen McAvoy

REAP Manual for concussion – Reduce, Educate, Accommodate and Pace

The Center for Concussion, Rocky Mountain Hospital for Children

Rocky Mountain Pediatric Urology

Dr. Job Chacko

1. **Pediatric laparoscopic pyeloplasty: lessons learned from the first 52 cases.**
Chacko JK, Piaggio LA, Neheman A, González R.
J Endourol. 2009 Aug;23(8):1307-11.
2. **Genetic and environmental contributors to cryptorchidism.**
Chacko JK, Barthold JS.
Pediatr Endocrinol Rev. 2009 Jun;6(4):476-80. Review.
3. **Iatrogenic ureteral injury after laparoscopic cholecystectomy in a 13-year-old boy.**
Chacko JK, Noh PS, Barthold JS, Figueroa TE, Gonzalez R.
J Pediatr Urol. 2008 Aug;4(4):322-4. Epub 2008 Feb 25.

Urology Associates

Dr. Stanley Galansky

Randomized controlled multisite trial of injected bulking agents for women with intrinsic sphincter deficiency: mid-urethral injection of Zuidex via the Implacer versus proximal urethral injection of Contigen cystoscopically.

Lightner D, Rovner E, Corcos J, Payne C, Brubaker L, Drutz H, Steinhoff G; Zuidex Study Group. Collaborators: Appell R, Galansky SH, Ghoniem G, Davila W, Herschorn S, Juma S, Cornella JL, Petrou SP, Moy ML, Tarantino A, Winters JC, Jacoby K, Vaughan DJ Jr, Whitlock N, Devore RD, Wurzel R, Bent AE, Dmochowski R, Dalin L.

Urology. 2009 Oct;74(4):771-5. Epub 2009 Aug 5.

Rocky Mountain Pediatric Gastroenterology

Dr. Sandy Oesterreicher

1. **Endoscopic pneumatic reduction of a pediatric ileo-ileocolic intussusception during diagnostic colonoscopy.**
Rippel SW, Olivé AP, Wesson DE, Oesterreicher SH, Wilsey MJ Jr.
J Pediatr Gastroenterol Nutr. 2008 Sep;47(3):273.

Dr. Chad Best

1. **A Pre-Post Retrospective Study Of Patients With Cystic Fibrosis And Gastrostomy Tubes.**
Best C, Brearley A, Gaillard P, Rengelmann W, Billings J, Dunitz J, Phillips J, Holme B, Schwarzenberg SJ.
J Pediatr Gastroenterol Nutr. 2011 May 21. [Epub ahead of print]
2. **Bone marrow suppression in the setting of normal thiopurine methyltransferase phenotype testing.**
Best C, Sudel B.
Clin Pediatr (Phila). 2010 Sep;49(9):901-3. Epub 2009 May 6. No abstract available.
3. **Esophageal stenting in children: indications, application, effectiveness, and complications.**
Best C, Sudel B, Foker JE, Krosch TC, Dietz C, Khan KM.
Gastrointest Endosc. 2009 Dec;70(6):1248-53.

Pediatric/Obstetric Medical Group

Dr. Delphine Eichorst

1. **Higher cumulative doses of erythropoietin and developmental outcomes in preterm infants.**
Brown MS, Eichorst D, Lala-Black B, Gonzalez R.

Pediatrics. 2009 Oct;124(4):e681-7.
Epub 2009 Sep 28.

2. **Neurodevelopmental outcome of extremely low birth weight infants from the Vermont Oxford network: 1998-2003.**

Mercier CE, Dunn MS, Ferrelli KR, Howard DB, Soll RF; Vermont Oxford Network ELBW Infant Follow-Up Study Group (Eichorst).

Neonatology. 2010 Jun;97(4):329-38. Epub 2009 Nov 24. Erratum in: Neonatology. 2010;98(4):419.

3. **Efficacy of intravitreal bevacizumab for stage 3+ retinopathy of prematurity.**

Mintz-Hittner HA, Kennedy KA, Chuang AZ; BEAT-ROP Cooperative Group (Eichorst).

N Engl J Med. 2011 Feb 17;364(7):603-15.

Rocky Mountain Pediatric Surgery

Dr. Saundra Kay

1. **Thoracoscopic lobectomy in infants less than 10 kg with prenatally diagnosed cystic lung disease.**

Rothenberg SS, Kuenzler KA, Middlesworth W, Kay S, Yoder S, Shipman K, Rodriguez R, Stolar CJ.

J Laparoendosc Adv Surg Tech A. 2011 Mar;21(2):181-4.

2. **Laparoscopic duodenoduodenostomy in the neonate.**

Kay S, Yoder S, Rothenberg S.

J Pediatr Surg. 2009 May;44(5):906-8.

3. **Initial experience with surgical tele-mentoring in pediatric laparoscopic surgery using remote presence technology.**

Rothenberg SS, Yoder S, Kay S, Ponsky T.

J Laparoendosc Adv Surg Tech A. 2009 Apr;19 Suppl 1:S219-22.

Dr Kristin Shipman

1. **Thoracoscopic lobectomy in infants less than 10 kg with prenatally diagnosed cystic lung disease.**

Rothenberg SS, Kuenzler KA, Middlesworth W, Kay S, Yoder S, Shipman K, Rodriguez R, Stolar CJ.

J Laparoendosc Adv Surg Tech A. 2011 Mar;21(2):181-4.

2. **Experience with modified single-port laparoscopic procedures in children.**

Rothenberg SS, Shipman K, Yoder S.

J Laparoendosc Adv Surg Tech A. 2009 Oct;19(5):695-8.

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RockyMountainHospitalForChildren.com

1719 East 19th Avenue
Denver, CO 80218

RMHC Administration
Mimi Roberson
President & CEO
303.839.6100

Chief Medical Officer
Reginald Washington, MD, FAAP, FAAC, FAHA
303.839.6100

Chief Operating Officer
Andre DuPlessis
303.839.6100

Physician Liaison,
Editor of
"Physician Report"
Jack HT Chang, MD
303-839-6100

Chief Marketing Officer
Beverly Petry
303.839.6650

Physician Relations
Manager
Jill Domsch
303.869.2028

Physician Relations
Manager
Cyndi Peiffer
303.869.2072
Cell 303.653.5520