

CURRICULUM VITAE

Rowena C. Punzalan MD

Associate Professor
Department of Pediatrics
Division of Hematology and Oncology - Pediatrics

OFFICE ADDRESS:

MACC Fund Research Center
8701 Watertown Plank Rd
Milwaukee, WI 53226

EDUCATION:

06/1984 - 04/1988 B.S., University of the Philippines, Manila, Philippines
06/1986 - 05/1991 M.D., University of the Philippines College of Medicine, Manila, Philippines

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

07/1993 - 06/1996 Resident, Pediatrics, Medical College of Wisconsin Affiliated Hospitals, Milwaukee, WI
07/1996 - 12/1999 Fellowship, Pediatric Hematology/Oncology, Medical College of Wisconsin, Milwaukee, WI
09/2003 - 09/2004 Fellowship, Transfusion Medicine and Blood Banking, Blood Center of Wisconsin and Medical College of Wisconsin, Milwaukee, WI

FACULTY APPOINTMENTS:

10/2005 - 06/2011 Assistant Clinical Professor, Department of Pediatrics, Section of Hematology/Oncology/Bone Marrow Transplant, Medical College of Wisconsin, Milwaukee, WI
10/2005 - Present Assistant Clinical Professor, Department of Pathology, Medical College of Wisconsin, Milwaukee, WI
10/2005 - 03/2011 Associate Medical Director, Blood Center of Wisconsin, Milwaukee, WI
04/2011 - Present Medical Director, Blood Center of Wisconsin, Milwaukee, WI
07/2011 - 06/2013 Assistant Professor, Department of Pediatrics, Section of Hematology/Oncology Bone Marrow Transplant, Medical College of Wisconsin, Milwaukee, WI
07/2013 - Present Associate Professor, Department of Pediatrics, Section of Hematology/Oncology/Bone Marrow Transplant, Medical College of Wisconsin, Milwaukee, WI

EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:

09/2010 - 04/2013 Associate Director, Transfusion Medicine and Blood Banking Fellowship, Medical College of Wisconsin and Blood Center of Wisconsin, Milwaukee, WI
04/2013 - Present Program Director, Transfusion Medicine and Blood Banking Fellowship, Medical College of Wisconsin and Blood Center of Wisconsin, Milwaukee, WI

HOSPITAL AND CLINICAL ADMINISTRATIVE APPOINTMENTS:

10/2005 - Present Medical Director, Transfusion Service, Children's Hospital of Wisconsin, 9000 W. Wisconsin Ave., Wauwatosa, WI 53226
10/2005 - 12/2012 Associate Medical Director, Blood Center of Wisconsin, Milwaukee, WI
01/2013 - Present Medical Director, Versiti Blood Center of Wisconsin, Milwaukee, WI

HOSPITAL STAFF PRIVILEGES:

10/2005 - Present Children's Hospital of Wisconsin, 9000 W. Wisconsin Ave., Wauwatosa, WI 53226
10/2005 - Present Froedtert Memorial Lutheran Hospital, 9200 W. Wisconsin Ave., Milwaukee, WI 53226
11/2005 - Present Aurora St. Luke's Medical Center (consulting staff, Pathology), 2900 W Oklahoma Ave,

Milwaukee, WI 53215
 11/2005 - Present Aurora Sinai Medical Center (consulting staff, Pathology), 945 North 12th Street.
 Milwaukee, WI 53233
 11/2005 - Present Aurora West Allis Medical Center (consulting staff, Pathology), 8901 W. Lincoln Ave.,
 West Allis, WI 53227
 07/2007 - Present Aurora Medical Center Kenosha (consulting staff, Pathology), 10400 75th St, Kenosha, WI
 53142
 07/2007 - Present Aurora Memorial Hospital of Burlington (consulting staff, Pathology), 252 McHenry Street
 Burlington, WI 53105
 07/2007 - Present Aurora Lakeland Medical Center (consulting staff, Pathology), W3985 County Road NN,
 Elkhorn, WI 53121

SPECIALTY BOARDS AND CERTIFICATION:

<u>Board Certified</u>	<u>Issue Date</u>	<u>Expiration</u>
American Board of Pediatrics	08/2002	12/2010
American Board of Pediatrics –Hematology/Oncology	11/2004	12/2022
American Board of Pathology – Trans-Fusion Medicine/Blood Banking	09/2006	12/2026

<u>Licensure</u>	<u>Number</u>	<u>Issue Date</u>	<u>Expiration</u>
Wisconsin License	36081-20	10/2007	10/31/2021

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

01/2006 - Present AABB (Blood Bank)
 04/2006 - Present American Society of Hematology
 2007 - Present Hemophilia and Thrombosis Research Society
 2011 - Present Inspector for the College of American Pathologists

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Journal Review
 2006 - Present American Journal of Hematology
 2014 - Present New England Journal of Medicine
 2014 - Present British Journal of Hematology
 2015 - Present Transfusion
 2019 Pediatric Blood and Cancer
 2019 Journal of Pediatric Intensive Care
 2019 Journal of Physical Medicine and Rehabilitation

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2013 - Present Member, AABB Fellowship Directors Subsection, American Association of Blood Banks

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

Title:	A Randomized, Open-Label, Active Controlled, Safety and Descriptive Efficacy Study of Apixaban in Pediatric Subjects Requiring Anticoagulation for the Treatment of a Venous Thromboembolic Event
Source:	Pfizer

Role & Effort: Local principal investigator
Dates: 05/2015 - Present
Direct Funds: \$385,000 ((so far, since start))

Title: A Phase 3, Open-Label, Randomized, Multi-Center, Controlled Trial To Evaluate The Pharmacokinetics and Pharmacodynamics of Edoxaban and To Compare the Efficacy and Safety of Edoxaban with Standard of Care Anticoagulant Therapy in Pediatric Subjects from Birth to Less Than 18 Years of Age with Confirmed Venous Thromboembolism (VTE)

Source: Daiichi Sankyo
Role & Effort: Local co-investigator
Dates: 11/2016 - Present

Title: ALXN1210-PNH-304, A Phase 3, Open-Label Study of ALXN1210 in Children and Adolescents with Paroxysmal Nocturnal Hemoglobinuria (PNH)

Source: Alexion
Role & Effort: Local principal investigator
Dates: 10/2018 - Present
Direct Funds: \$82,122 ((\$65,236.26 per patient))

Title: t-PA Prophylaxis to Reduce Central Venous Catheter Associated Infection and Thrombosis

Source: NIH
Role & Effort: local Co-investigator
Dates: 12/2018 - Present

Prior

Peer Review

Title: Determination of the Optimal Prophylactic Platelet Dose to Prevent Bleeding

Source: NHLBI
Role & Effort: Principal Investigator at CHW
Dates: 10/2005 - 12/2007

Title: High Dose Granulocyte Transfusions for the Treatment of Infection in Neutropenia

Source: NHLBI
Role & Effort: Local principal investigator
Dates: 05/2008 - 06/2011

Title: Resolving Infection in Neutropenia with Granulocytes

Source: NHLBI
Role & Effort: Principal Investigator at CHW
Dates: 06/2008 - 2010

Title: Duration of Therapy for Thrombosis in Children (Kids-DOTT)
Source: NHLBI
Role & Effort: Principal Investigator at CHW
Dates: 12/2011 - Present

Title: Single-Dose Study to Evaluate the Pharmacokinetics, Pharmacodynamics, Safety and Tolerability of Apixaban in Pediatric Subjects at Risk for a Venous or Arterial Thrombotic Disorder
Source: Bristol-Myers Squibb
Role & Effort: Local co-investigator
Dates: 04/2013 - 12/2019

Title: Age of Blood in Children
Source: NIH
Role & Effort: Local co-investigator
Dates: 04/2014 - 01/2020

Title: A Phase 1, Open-Label, Single-Dose, Non-Randomized Study to Evaluate Pharmacokinetics and Pharmacodynamics of Edoxaban in Pediatric Patients
Source: Daiichi Sankyo
Role & Effort: Local co-investigator
Dates: 01/2015 - 02/2020

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

International

RC Punzalan, Coagulation in infants and children, AABB annual meeting, New Orleans, LA, 10/2009
RC Punzalan, Extracorporeal photopheresis in children, AABB Annual Meeting, Philadelphia, PA, 10/2014
RC Punzalan, Thrombotic Disorders in Children, Pediatric Grand Rounds. St. Luke's Medical Center, Quezon City, Philippines, 07/2017 - Present
RC Punzalan, Recurrent Allergic Transfusion Reactions., AABB annual meeting, Virtual, 10/2020

National

RC Punzalan, Red Cell Genotyping Patients - The Clinician's Perspective, Academy of Clinical Laboratory Physicians and Scientists Annual Meeting, Milwaukee, WI, 05/31/2012
RC Punzalan, Transfusion Medicine, 2019 American Society of Pediatric Hematology Oncology Review Course, Irving, TX, 02/01/2019

Regional

RC Punzalan, Issues in Pediatric Transfusion Medicine, Wisconsin Association of Blood Banks Annual Meeting, Appleton, WI, 09/11/2008 - 09/12/2008
RC Punzalan, Transfusion Therapy in Sickle Cell Disease, Association of Clinical Laboratory Scientists - WI Spring Meeting, Pewaukee, WI, 04/07/2011

Local

RC Punzalan, Update on the Treatment of Hemophilia and von Willebrand Disease, Pharmacy Grand Rounds, Aurora St. Luke's Medical Center, Milwaukee WI, 05/2007
RC Punzalan, Selection of Blood Products: Overview and Special Needs, Aurora Clinical labs annual seminar, West Allis, WI, 10/2008 - Present
RC Punzalan, Blood Transfusion in Pediatric Hematology-Oncology, Association of Pediatric Hematology Oncology Nurses Wisconsin Chapter Meeting, Wauwatosa, WI, 04/2013

PEER REVIEWED WORKSHOPS/PRESENTATIONS:**International**

R.C. Punzalan, M.C. Du, J.P. Scott, P.S. Low, and C.A. Hillery. Role of hydration status in erythrocyte adhesion to thrombospondin. Oral presentation at the American Society of Hematology Annual Meeting, San Diego, CA, 1997.

COMMITTEE SERVICE:**Medical College of Wisconsin**

- 10/2005 - 10/2008 Member, Scholarship oversight committee for Sheila Hanson, MD, Medical College of Wisconsin
- 05/2012 - 10/2012 Member, Scholarship Oversight Committee for Hemalatha Rangarajan Fellow, Medical College of Wisconsin
- 06/2012 - 12/2012 Faculty Reviewer, Critical Care Medicine Fellowship Program Internal Review Committee, Medical College of Wisconsin

Hospital

- 10/2007 - Present Chair, Blood Utilization Committee, Children's Hospital of Wisconsin
- 01/2008 - Present Chair, Anticoagulation Committee, Children's Hospital of Wisconsin
- 05/2009 - Present Member, Anticoagulation Committee, Children's Hospital of Wisconsin
- 2010 Alternate member, Institutional Review Board, Blood Center of Wisconsin
- 2011 - 2015 Member, Institutional Review Board, Blood Center of Wisconsin
- 10/2012 - Present Member, Committee on Prevention of Hospital-acquired conditions (thromboembolism), Children's Hospital of Wisconsin

MCW TEACHING ACTIVITIES:**Medical Student Education**

- 11/2006 - Present M2 lectures; topic: Transfusion Medicine
- 2010 - 2012 Teaching attending at Morning Report (monthly), CHW

Graduate Student Education

- 06/2008 - Present Pediatric Surgery Physician Assistants lecture series; topic: Pediatric Transfusion Medicine
- 09/2010 - Present Pediatric Hematology Nurse Practitioners; topic: Evaluation of Immune Hemolysis

Resident and Fellow Education

- 07/2006 - 07/2009 Pathology resident lecture series; topic: Introduction to Transfusion Medicine
- 08/2006 - Present Transfusion Medicine fellow lecture series; topic: Hemoglobinopathies
- 08/2006 - Present Transfusion Medicine fellow lecture series; topic: Hematopoietic Growth Factors
- 08/2006 - Present Pediatric resident noon academic conference; topic: Pediatric Transfusion Medicine
- 07/2007 - Present Pediatric hematology/oncology fellow lecture series; topic: Pediatric Transfusion Medicine
- 07/2007 - Present Pediatric hematology/oncology fellow lecture series; topic: Immune Hemolytic Anemia
- 01/2008 - Present Hematology/Oncology/Transplant resident's lecture; Topic: Pediatric Transfusion Medicine
- 07/2009 - Present Pathology resident lecture series; topic: Adverse Events - Blood Transfusion
- 08/2009 - Present Transfusion Medicine fellow lecture series; topic: Issues in Pediatric Transfusion
- 07/2010 - 2011 Morning report with pediatric residents: case-based teaching
- 07/2010 - Present Pathology resident lecture series; topic: Evidence-based Indications for Transfusion
- 05/2011 - Present Pediatric resident board review series; topic: Thrombocytopenia in Infants and Children
- 2016 - 2017 Hematology/Oncology/Transplant resident's lecture, Topic: Bleeding and Thrombosis in Children
- 2016 - 2017 Hematology/Oncology/Transplant resident's lecture, Topic: Hemolytic anemia

Continuing Medical Education

- 08/2006 Neonatology Noon Conference; topic: Blood Banking
- 09/2007 Pediatric Surgery Grand Rounds; topic: Deep Venous Thrombosis in Children
- 05/2009 Neonatology Academic Conference; topic: Neonatal Transfusion Issues
- 10/2009 Pediatric Surgery/Emergency Medicine joint conference; topic: Transfusion Issues in the ED
- 10/2009 Pediatric Critical Care Lecture Series; topic: Use of rFVIIa and AT3 in the PICU
- 07/2011 Pediatric Emergency Medicine Grand Rounds; topic: Pediatric Thrombotic Disease
- 05/2012 Section of Allergy Grand Rounds; topic: Neutrophil Disorders
- 03/2014 Section of Pediatric Cardiology Research Conference; topic: Anticoagulation in Pediatric Cardiac Disease
- 05/2016 Section of Allergy Grand Rounds; topic: Neutrophil Disorders
- 06/2016 Section of Pediatric Hematology/Oncology/BMT Tumor Board; topic: Red Blood Cell transfusion updates
- 02/2018 Section of Adolescent Medicine Grand Rounds; topic: Overview of bleeding and thrombotic disorders in adolescents
- 07/2018 Section of Neonatology; topic: Cytomegalovirus infections and transfusion in neonates

Community/Lay Public

- 04/2009 CHW Oral Anticoagulation Symposium; topic: Warfarin Metabolism
- 04/2011 Drug-induced hemolytic anemia on-line education module

EXTRAMURAL TEACHING:

Continuing Medical Education

- 08/2006 - Present Specialist in Blood Banking lecture series; Blood Center of Wisconsin; topic: Hemoglobinopathies
- 2006 - 2013 Specialist in Blood Banking lecture series; Blood Center of Wisconsin; topic: Hematopoietic Growth Factors
- 08/2009 - Present Specialist in Blood Banking series; Blood Center of Wisconsin; topic: Issues in Pediatric Transfusion
- 2010 - 2012 Marquette University Acute Care Pediatric Nurse Practitioner program; topic: Pediatric Hematologic Emergencies

MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:

Clinical/Research Fellows

- 10/2005 - 10/2008 Sheila Hanson MD, Oversight Committee Member, Medical College of Wisconsin
- 2009 Sweta Gupta, MD, Mentor, Medical College of Wisconsin
- 2009 Carmen Briones, MD, Mentor, Medical College of Wisconsin
- 2012 Chelsea Collins, MD, Mentor, Medical College of Wisconsin
- 2012 Hemalatha Rangarajan, MD, Mentor / Oversight Committee, Medical College of Wisconsin
- 2013 - 2015 Asfaw Asfawassen MD, Research Mentor / Oversight Committee, Medical College of Wisconsin

Residents

- 2010 Amanda Reiswig, Research project mentor, MCW
- 2020 - 2021 Maria Clarise Valencia MD, Research, Medical College of Wisconsin
- 2021 - Present Abinav Grover, MD, Research, Medical College of Wisconsin

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS MENTORED:

Graduate Students

Students Advised

- 01/2019 - 06/2020 Natalie Phillips MT, Comparison of Small Volume and Large Volume Transfusions of RBCs containing Adsol in Pediatric Patients Less than 6 Months Old Undergoing Cardiopulmonary Bypass Surgery, Blood Center of Wisconsin, - For this paper Ms. Phillips won the 2019 AABB Future

Leader SBB Scholarship Award
2020 - 2021 Rachel Pietrzak MT, Versiti

Clinical/Research Fellows

2012 Kyle Annen, DO, Mentor, Medical College of Wisconsin and Blood Center of Wisconsin
2016 Waseem Anani MD, Academic, MCW Blood Banking/Transfusion Medicine
2017 Sarah Tehseen MBBS, Academic, MCW Blood Banking/Transfusion Medicine

PROGRAMMATIC DEVELOPMENTS:

Educational Programs

Fellow

2010 - Present Transfusion medicine and Blood banking curriculum for transfusion medicine and pediatric hematology/oncology/bone marrow transplant fellows

Resident

2016 - 2017 Pediatric Hematology curriculum for Pediatric Hematology/Oncology/Transplant residents

Clinical Programs

2010 - Present Children's Hospital of Wisconsin Extracorporeal Photopheresis Program
Children's Wisconsin Program For Prevention Of Venous Thromboembolism
Children's Wisconsin Thrombosis Program
Children's Wisconsin Erythrocytapheresis Program

COMMUNITY SERVICE ACTIVITIES:

2015 - Present Philippine Center Free Clinic, Milwaukee WI (volunteer and fundraising board member)
2016 Philippine Center Free Clinic, Milwaukee WI (fundraising committee chair)

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. R.C. Punzalan, C.A. Hillery, R.R. Montgomery, J.P. Scott, and J.C. Gill. Low molecular weight heparin (enoxaparin) in thrombotic disease in children and adolescents. *Journal of Pediatric Hematology Oncology* 22(2):137-142, Mar-Apr 2000.
2. Greenbaum L.A., Kerlin B.A., Van Why S., Punzalan R.C., Trost B.A., Pan C.G., Scott J.P. Concurrent poststreptococcal glomerulonephritis and autoimmune hemolytic anemia. *Pediatric Nephrology* 18(12):1301-3, 2003.
3. N.J. Wandersee, R.C. Punzalan, M.P. Rettig, M.D. Kennedy, N.M. Pajewski, R.L. Sabina, J.P. Scott, P.S. Low, C.A. Hillery. Erythrocyte adhesion is modified by alterations in cellular tonicity and volume. *British Journal of Haematology* 131:366-377, 2005.
4. S.J. Hanson, R.C. Punzalan, N. Ghanayem, P.L. Havens. Prevalence of heparin-dependent platelet antibodies in children after cardiopulmonary bypass surgery. *Pediatric Critical Care Medicine*, 8(4):358, 2007.
5. S.J. Hanson, R.C. Punzalan, R.A. Greenup, H Liu, T.T. Sato, P.L. Havens. Incidence and Risk Factors for Venous Thromboembolism in Critically Ill Children after Trauma. *Journal of Trauma*, 68(1):52, 2010.
6. R.A. Neibler, R.C. Punzalan, M. Gamez, M.W. Lankiewicz. Activated Recombinant Factor VII for Refractory Bleeding During Extracorporeal Membrane Oxygenation. *Pediatric Critical Care Medicine*, 11(1):98, 2010.
7. S Gupta, CL Piefer, JT Fueger, ST Johnson, RC Punzalan. Trimethoprim-Induced Immune Hemolytic Anemia in a Pediatric Oncology Patient Presenting As an Acute Hemolytic Transfusion Reaction. *Pediatric Blood and Cancer*, 55:1201, 2010.
8. Rangarajan HG, Punzalan RC, Camitta BM, Talano JA. The use of novel Therakos™ Cellex® for extracorporeal photopheresis in treatment of graft-versus-host disease in paediatric patients. *Br J Haematol*. 2013 Nov;163(3):357-64.
9. Collins CL, Scott JP, Panepinto JA, Punzalan RC. Severe thrombocytopenia in a child secondary to passive

- platelet antibody transfer from a plasma transfusion. *J Pediatr Hematol Oncol*. 2013 Jul;35(5):e226-8. PMID: PMC4508016
10. Franzblau EB, Punzalan RC, Friedman KD, Roy A, Bilen O, Flood VH. Use of purified fibrinogen concentrate for dysfibrinogenemia and importance of laboratory fibrinogen activity measurement. *Pediatr Blood Cancer*. 2013 Mar;60(3):500-2. PMID: PMC4461026
 11. Hanson SJ, Punzalan RC, Arca MJ, Simpson P, Christensen MA, Hanson SK, Yan K, Braun K, Havens PL. Effectiveness of clinical guidelines for deep vein thrombosis prophylaxis in reducing the incidence of venous thromboembolism in critically ill children after trauma. *J Trauma Acute Care Surg*. 2012 May;72(5):1292-7.
 12. Schloemer NJ, Abu-Sultaneh S, Hanson SJ, Yan K, Hoffmann RG, Punzalan RC, Havens PL. Higher doses of low-molecular-weight heparin (enoxaparin) are needed to achieve target anti-Xa concentrations in critically ill children*. *Pediatr Crit Care Med*. 2014 Sep;15(7):e294-9.
 13. SJ Hanson, RC Punzalan, NS Ghanayem, PL Havens. Incidence and risk factors for venous thromboembolism in critically ill children with cardiac disease. *Pediatric Cardiology* 33(1):103, 2012.
 14. JP Scott, DJ Costigan, GM Hoffman, PM Simpson, M Dasgupta, RC Punzalan, RJ Berens, JS Tweddell, EAE Stuth. Increased recombinant activated factor VII use and need for surgical reexploration following a switch from aprotinin to epsilon-aminocaproic acid in infant cardiac surgery. *Journal of Clinical Anesthesia* 26:2014-211, May 2014.
 15. Niebler RA, Woods KJ, Murkowski K, Ghanayem NS, Hoffman G, Mitchell ME, Punzalan RC, Scott JP, Simpson P, Tweddell JS. A Pilot Study of Antithrombin Replacement Prior to Cardiopulmonary Bypass in Neonates. *Artif Organs*. 2016 Jan;40(1):80-5.
 16. Punzalan RC, Gottschall JL. Use and Future Investigations of Recombinant and Plasma-Derived Coagulation and Anticoagulant Products in the Neonate. *Transfus Med Rev*. 2016 Oct;30(4):189-96.
 17. Asfaw AB, Punzalan RC, Yan K, Hoffmann RG, Hanson SJ. Screening Guidelines for Venous Thromboembolism Risk in Hospitalized Children Have Low Sensitivity for Central Venous Catheter-Associated Thrombosis. *Hosp Pediatr*. 2017 Jan;7(1):39-45.
 18. Landisch RM, Hanson SJ, Cassidy LD, Braun K, Punzalan RC, Gourlay DM. Evaluation of guidelines for injured children at high risk for venous thromboembolism: A prospective observational study. *J Trauma Acute Care Surg*. 2017 May;82(5):836-844.
 19. Landisch RM, Hanson SJ, Cassidy LD, Braun K, Punzalan RC, Gourlay DM. Evaluation of guidelines for injured children at high risk for VTE: A prospective observational study. *J Trauma Acute Care Surg*. 2017 Mar 02.
 20. Landisch RM, Hanson SJ, Punzalan RC, Braun K, Cassidy LD, Gourlay DM. Efficacy of surveillance ultrasound for venous thromboembolism diagnosis in critically ill children after trauma. *J Pediatr Surg*. 2018 Nov;53(11):2195-2201.
 21. Onyeama SN, Hanson SJ, Dasgupta M, Baker K, Simpson PM, Punzalan RC. Central Venous Catheter-associated Venous Thromboembolism in Children With Hematologic Malignancy. *J Pediatr Hematol Oncol*. 2018 Nov;40(8):e519-e524.
 22. Landisch RM, Hanson SJ, Punzalan RC, Braun K, Cassidy LD, Gourlay DM. Efficacy of surveillance ultrasound for venous thromboembolism diagnosis in critically ill children after trauma. *J Pediatr Surg*. 53(11):2195-2201, Nov 2018.
 23. Anani W, Dobrozsi S, Punzalan RC. Identification of Peanut allergen in a transfused blood product causing transfusion associated anaphylaxis. *Transfusion*. 60(5):1108-1109, May 2020.

Books, Chapters, and Reviews

1. Punzalan, RC. Hemostatic Disorders. *Pediatric Transfusion: A Physician's Handbook*, 3rd edition, 2009.
2. Punzalan, R.C., Flood, V.H. Developmental Hemostasis. *Textbook of Clinical Pediatrics*, 2nd edition. Elzouki, A.Y., ed. Springer; in press.
3. Punzalan, RC, Flood, VH. Developmental Hemostasis. *Textbook of Clinical Pediatrics*, 2nd edition. Elzouki, AY ed. Springer, 2012.
4. Punzalan RC, Scott JP. Blood Component Therapy. *Nelson's Essentials of Pediatrics*. Behrman R and Kliegman R, Eds. In Press, 2014.
5. Punzalan RC, contributing editor. *Pediatric Transfusion: A Physician's Handbook*, 4th edition. Wong E and King K, eds. AABB, 2015.
6. Punzalan RC and Gottschall JL. Use and future investigations of recombinant and plasma-derived coagulation and anticoagulant products in the neonate. *Transfusion Medicine Reviews* 30 (2016) 189-196.
7. Wong ECC and Punzalan RC. Neonatal and Pediatric Transfusion Practice. In *Technical Manual* 19th edition.

- Fung MK, Eder AF, Spitalnik SL, Westhoff CM, eds. AABB, 2017
8. Wong ECC and Punzalan RC. Neonatal and Pediatric Transfusion Practice. In Technical Manual 20th edition. Fung MK, Eder AF, Spitalnik SL, Westhoff CM, Delaney M, eds. AABB, 2020.
 9. Punzalan RC, contributing editor. Pediatric Transfusion: A Physician's Handbook, 5th edition. Wong E and Roseff S, eds. AABB, 2020.
 10. Wong ECC, Punzalan RC. "Pediatric Thrombotic Disorders" in Biochemical Basis of Pediatric Disease, 5th Edition. Dietzen D, Bennett M, Wong ECC, Hammond S (eds), Elsevier, 2021(in preparation).

Abstracts

1. R.C. Punzalan, M.C. Du, J.P. Scott, P.S. Low, and C.A. Hillery. Role of hydration status in erythrocyte adhesion to thrombospondin. *Blood* 90(10, Suppl 1):604a, 1997.
2. R.C. Punzalan, B.A. Trost, H. Shen, J.P. Scott, A.G. Hudetz, and C.A. Hillery. Chondroitin sulfate-A limits cerebral ischemia induced by nitric oxide inhibition in sickle erythrocyte-infused rats. *Blood* 92(10, Suppl 1):329a, 1998.
3. R.C. Punzalan, S. Holzman, B.A. Trost, C. Paszty, N. Mohandas, and C.A. Hillery. Spontaneous stroke and erythrocyte adhesion in the transgenic knockout sickle cell mouse. *Blood* 94 (10 Suppl 1):304a, 1999.
4. M. Gamez, R.A. Neibler, M.W. Lankiewicz, R.C. Punzalan. Risk of thrombosis with recombinant factor VIIa during extracorporeal membrane oxygenation. *Transfusion* 46(9S):11a, Sept 2006.
5. Marchan MG, Leszczynski LA, Curnes JS, Rauter JJ, Punzalan RC, Johnson ST. Passive anti-E in a pediatric patient not detected by routine donor screening using anti-IgG solid screen II or gel test. *Transfusion* 47:160a, 2007.
6. TM Pugh, ST Johnson, LC Brenner, CL Piefer, MW Lankiewicz, RC Punzalan. Acute hemolytic transfusion reaction due to anti-Lea in a patient with sickle cell disease. *Transfusion* 47:150a, 2007.
7. S.J. Hanson, R.C. Punzalan, R.A. Greenup, H Liu, T.T. Sato, P.L. Havens. Incidence and Risk Factors for Venous Thromboembolism in Critically Ill Children after Trauma. Hemophilia and Thrombosis research Society annual meeting, April 2008.
8. C Piefer, RC Punzalan, KE Puca, N Leon, ST Johnson. Bactrim/Trimethoprim-Induced Immune Hemolytic Anemia in The Setting Of An Acute Hemolytic Transfusion Reaction. *Transfusion* 48:174a, 2008.
9. SJ Hanson, RC Punzalan, NS Ghanayem, PL Havens. Incidence and risk factors for venous thromboembolism in critically ill children with cardiac disease, oral presentation at the XXII Congress of the International Society on Thrombosis and Haemostasis, Boston, MA (07/2009)
10. SJ Hanson, RC Punzalan, NS Ghanayem, M Christensen, EM Kuhn, PL Havens. Incidence and risk factors for venous thromboembolism in critically ill children with cardiac disease, oral presentation at the American Academy of Pediatrics National Conference & Exhibition, San Francisco, CA (10/2010)
11. SJ Hanson, RC Punzalan, M Arca, P Simpson, M Christensen, PL Havens. Effectiveness of Clinical Guidelines for DVT Prophylaxis in Reducing the Incidence of Venous Thromboembolism in Critically Ill Children after Trauma. 40th Critical Care Congress, San Diego, CA, 1/15-1/19/2011.
12. RC Punzalan, JC Gill, RR Montgomery, SL Haberichter, KD Friedman. Reference Interval for Factor VIII to Von Willebrand Factor Antigen is Lower for Infants under 6 Months of Age Compared to Older Children and Adults. Accepted at the XXIII Congress of the International Society on Thrombosis and Haemostasis on July 23-28, 2011 in Kyoto, Japan.
13. Children's Hospital of Wisconsin: Blood Utilization Guidelines, Massive Transfusion Guidelines, Guidelines for VTE prophylaxis in Trauma, Guidelines for anticoagulation with warfarin, Guidelines for anticoagulation with heparin, Guidelines for anticoagulation with enoxaparin
14. C Collins, M Briggs, J Panepinto, JP Scott, RC Punzalan. Severe Thrombocytopenia in a Child Secondary to Passive Platelet Antibody Transfer from Plasma Transfusion. AABB Annual Meeting, San Diego, CA. 10/2011.
15. EB Franzblau, RC Punzalan, KD Friedman, VH Flood. Inter-Laboratory Variability in Measurement of Fibrinogen Following Purified Fibrinogen Concentrate for Dysfibrinogenemia. American Society of Pediatric Hematology Oncology Annual Meeting. New Orleans, LA. 5/2012.
16. NJ Schloemer, S Abu-Sultaneh, SJ Hanson, K Yan, RG Hoffmann, RC Punzalan, PL Havens. Higher Doses of Low Molecular Weight Heparin (LMWH) are Needed to Achieve Goal Anti-Xa Levels in Critically Ill Children. Scientific and Standardization Committee of the International Society on Thrombosis and Haemostasis Annual Meeting. Liverpool, UK. 6/2012.
17. M Mulberry, DA Margolis, RC Punzalan, M Kelly, M Browning. Autologous Stem Cell Collection for the Treatment of Malignant Disease in Pediatric Patients: The Use of the Power Hickman. 2013 American Society for Blood and Marrow Transplantation Tandem Meetings. Salt Lake City, UT. 2/2013.

18. HG Rangarajan, RC Punzalan, JA Talano. The Safety and Tolerability of the Novel Therakos Cellex Machine for Extracorporeal Photopheresis in the Treatment of GVHD in Children. 20123 American Society for Blood and Marrow Transplantation Tandem Meetings. Salt Lake City, UT. 2/2013.
19. HL Chang, A Ertl, J Enters, RC Punzalan, LD Cassidy, DM Gourlay. Massive Transfusion Protocol Improves Resuscitation in a Pediatric Level 1 Trauma Center. 2013 American Academy of Pediatrics (AAP National Conference and Exhibition. Orlando, FL 10/2013.
20. R Dora, S Graminski, S Heldke, S Brooks, M de Arruda Indig, RC Punzalan. In Vitro Explanation of Stored Pediatric Apheresis Platelet Aliquots AABB Annual Meeting. Denver, CO. 10/2013.
21. A Asfawossen, SH Hanson, K Yan, R Hoffmann, RC Punzalan. Sensitivity of Screening Guideline for Identification of Hospitalized Children at Risk for Venous Thromboembolism. Pediatric Critical Care Colloquium 2014, Huntington Beach, CA (9/2014).
22. R Landisch, SJ Hanson, RC Punzalan, K Braun, D Gourlay. Anticoagulation for venous thromboembolism: prophylaxis and treatment in children with severe traumatic brain injury. Thrombosis and Hemostasis Societies of North America 2016 meeting, Chicago, IL (4/2016).
23. JP Scott, RA Niebler, EAE Stuth, DW Benson, RK Woods, J S Tweddell, R Cole, ME Mitchell, RS Bercovitz, P Simpson, R Montgomery, A Mast, S Maroney, K Yan, RC Punzalan, DK Newman . Proactive Platelet and Cryoprecipitate Transfusion during Neonatal Cardiopulmonary Bypass Rapidly Normalizes Platelet Count, Fibrinogen, and Functional Rotational Thromboelastometry Parameters. Annual Meeting of the American Association for Thoracic Surgery, Baltimore, MD (5/2016).
24. WQ Anani, RC Punzalan. Peanut Allergen-Induced Anaphylactic Transfusion Reaction. AABB Annual Meeting, Orlando, FL (10/2016).
25. S Tehseen, RC Punzalan, R Udani, KD Friedman. Atypical Hemolytic Uremic Syndrome: Is complement pathway mutation analysis over-utilized? Experience of a large reference laboratory. AABB Annual Meeting, San Diego, CA (10/2017).
26. NA Phillips, R Berens, RC Punzalan. Comparison of Small Volume and Large Volume Transfusions of RBCs containing Adsol in Pediatric Patients Less than 6 Months Old Undergoing Cardiopulmonary Bypass Surgery. AABB Annual Meeting, San Antonio, TX (10/2019).

Database, Video, or Other Research/Clinical Contributions

1. Anticoagulation clinical database
2. Blood utilization database
3. Developed Guidelines at Children's Hospital of Wisconsin: Blood Utilization Guidelines Massive Transfusion Guidelines Guidelines for Venous Thromboembolism prophylaxis in Trauma (co-developed) Guidelines for anticoagulation with warfarin Guidelines for anticoagulation with heparin Guidelines for anticoagulation with enoxaparin Guidelines for Systemic Thrombolysis (co-developed) Guidelines for anticoagulation with fondaparinux Guidelines for Venous Thrombosmebolism prophylaxis (co-developed)

Software, Software Modules

1. Blood product ordering and transfusion reaction modules for Sunrise Clinical Manager, CHW
2. Anticoagulation modules for Sunrise Clinical Manager, CHW
3. Blood product ordering and transfusion reaction modules for Epic, CHW
4. Anticoagulation modules for Epic, CHW