

CURRICULUM VITAE

LEONARD FRIEDLAND, M.D.

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PROFILE

I am a pediatrician and research scientist who is passionate about vaccines. I spend my days helping people understand the science of vaccines and complex ideas about how vaccines help to improve public health and the lives of patients. Following a rewarding academic career in teaching and patient care, I joined GSK in 2003 to focus my efforts on vaccination and public health. At GSK, I am involved in the development of vaccines for use in children, adolescents, adults, the elderly, and pregnancy; including vaccines for the prevention of flu, meningitis, whooping cough, rotavirus, hepatitis, measles, RSV and shingles. I am privileged to be GSK's medical and public health representative and spokesperson for US vaccine topics at CDC, other public health venues, congresses, and media outlets.

EDUCATION

Vassar College, Poughkeepsie, NY
A.B. (Biology), 1979-1983

Mount Sinai School of Medicine, New York, NY
M.D., 1983-1987

Xavier University Center for Management and Professional Development, Cincinnati, OH
Physician Leadership and Management Program, 1994-1995

GRADUATE MEDICAL TRAINING

Residency, Pediatrics, Children's Hospital of Philadelphia, Philadelphia, 1987-1990

Fellowship, Pediatric Emergency Medicine, St. Christopher's Hospital for Children, Philadelphia, 1990-1992

PROFESSIONAL EXPERIENCE

GlaxoSmithKline (GSK), Philadelphia, PA

2003 – present

Vice President, Scientific Affairs and Public Health, Vaccines, North America (2013-present)
Provide strategic scientific affairs leadership for development and marketed vaccines within the US. Influence and inform prophylactic vaccines medical affairs, health outcomes and epidemiology strategy and research priorities. Company primary external medical and public health representative and media spokesperson for US vaccines topics.

Vice President, Head, Clinical and Medical Affairs, Vaccines, North America (2009-2013)

Executive Director, Head, Clinical and Medical Affairs, Vaccines (2008)

Provided strategic medical leadership for development and marketed vaccines within the US and Canada. Influenced and informed prophylactic vaccines clinical research, medical affairs, health outcomes and epidemiology strategy and research priorities. Managed team of up to 120 staff responsible for US and Canada clinical operations (study management, clinical trial supplies, study contracts and budgets, field based monitors, data capture, QA), clinical trial medical monitoring, medical affairs, health outcomes, epidemiology, quality and risk management and publications activities.

Executive Director, Clinical Research and Development, Vaccines, North America (2007-2008)

Senior Director, Clinical Research and Development, Vaccines, North America (2004-2007)

Director, Clinical Research and Development, Vaccines, North America (2003)

Provided strategic and tactical medical leadership for development and marketed vaccines within the US.

AstraZeneca, Wilmington, DE

2000-2003

Director, Clinical Research and Development, Analgesics and Anti-infectives

Provided strategic and tactical medical leadership for development analgesics and anti-infectives.

Temple University Children's Hospital, Philadelphia, PA

1996-2000

Division Chief, Pediatric Emergency Medicine

Provided strategic and tactical leadership for a clinical team of doctors, nurses, medical students and allied health professionals within Temple University School of Medicine. Developed a well-regarded, high quality clinical department; grew patient volume over 20K/year. Provided clinical care, taught medical students and residents and conducted clinical research.

Children's Hospital Medical Center, Cincinnati, OH

1992-1996

Attending Physician, Pediatric Emergency Medicine

Provided clinical care, taught medical students and residents and conducted clinical and bench research.

PROFESSIONAL ACCREDITATION/ AFFILIATIONS

LICENSURE

Ohio 35-06-3344 (1992-1996)

Pennsylvania MD-042407-E (1987-1992, 1996-present)

BOARD CERTIFICATION

National Board of Medical Examiners 336880 (1988)

American Board of Pediatrics 44468 (1990, 1999)

Subspecialty of Pediatric Emergency Medicine 071 (1992, 1998)

ACADEMIC HONORS AND AWARDS

Phi Beta Kappa - Vassar College

Kate Roberts Prize for Excellence in Biology -Vassar College

Alpha Omega Alpha - Mount Sinai School of Medicine

Arthur Ross Award for Academic Excellence - Mount Sinai School of Medicine

ACADEMIC APPOINTMENTS

Associate Professor of Pediatrics, Temple University School of Medicine (1998-2004)

Assistant Professor of Pediatrics, Temple University School of Medicine (1996-1998)

Assistant Professor of Clinical Pediatrics and Emergency Medicine, University of Cincinnati College of Medicine (1992-1996)

Clinical Instructor in Pediatrics, Temple University School of Medicine (1990-1992)

Assistant Instructor in Pediatrics, University of Pennsylvania School of Medicine (1987-1990)

HOSPITAL APPOINTMENTS

Division Chief, Pediatric Emergency Medicine (1996-2000)

Attending physician - Division of Pediatric Emergency Medicine

Temple University Children's Medical Center, Philadelphia, PA

Attending physician - Division of Emergency Medicine (1992-1996)

Children's Hospital Medical Center, Cincinnati, OH

Attending physician - Division of Pediatrics (1990-1992)

St. Christopher's Hospital for Children, Philadelphia, PA

CLINICAL SERVICE

ROTAPLAST (www.rotaplast.org)

Pediatrician and medical committee member with *Rotaplast*, -a non-profit humanitarian organization providing free reconstructive cleft palate/cleft lip operations and treatment for children in need worldwide (2010-present)

SMILES FOR GUATEMALA

Pediatrician with *Smiles for Guatemala*, -a joint non-profit humanitarian group comprised of medical members affiliated with the Children's Hospital of Philadelphia and funded by the Lafayette Hill, PA Rotary Club. *Smiles for Guatemala* provides free reconstructive cleft palate/cleft lip, microtia, burn, and congenital orthopedic operations and treatment for children in need in Guatemala (2017-present)

TEMPLE UNIVERSITY CHILDREN'S MEDICAL CENTER, PHILADELPHIA, PA

Attending in the Pediatric Emergency Department, ICU and Inpatient Units (1996-2000)

Volunteer Attending in the Pediatric Emergency Department (2000-2004)

CHILDREN'S HOSPITAL MEDICAL CENTER, CINCINNATI, OH
Attending in the Pediatric Emergency Department (1992-1996)

Basic Cardiac Life Support Provider
Pediatric Advanced Life Support Provider and Instructor
Advanced Trauma Life Support Provider and Instructor
Advanced Cardiac Life Support Provider

PROFESSIONAL ORGANIZATIONS

Fellow, American Academy of Pediatrics
Infectious Diseases Society of America

NATIONAL COMMITTEES

Health and Human Services, National Vaccine Advisory Committee Maternal Immunization Work Group: Biotechnology Industry Organization (BIO) member company representative: November 2014-February 2017

Health and Human Services, Vaccines and Related Biological Products Advisory Committee (VRBPAC) of the Food and Drug Administration; Alternate Industry Representative: February 2016-January 2020

Health and Human Services, National Vaccine Advisory Committee; Industry Representative Member: February 2017-February 2020

PUBLICATIONS

REFEREED JOURNAL ARTICLES

1. Friedland LR, Bell LM, Rutstein R. Utilization and clinical manifestations of human immunodeficiency virus type 1-infected children presenting to a pediatric emergency department. *Pediatr Emerg Care* 1991;7:72-75.
2. Friedland LR. Universal precautions and safety devices which reduce the risk of occupational exposure to bloodborne pathogens: a review for emergency health care workers. *Pediatr Emerg Care* 1991;7:356-362.
3. Friedland LR, Raphael SA, Deutsch ES, et al. Disseminated *Acanthamoeba* infection in a child with symptomatic human immunodeficiency virus infection. *Pediatr Infect Dis J* 1992;11:404-407.
4. Friedland LR, Joffe M, Wiley JF, Schapire A, Moore DF. Effect of educational program on compliance with glove use in a pediatric emergency department. *Am J Dis Child* 1992;146:1355-1358.

5. Friedland LR, Brown R. Introduction of a "safety" intravenous catheter for use in an emergency department: a pediatric hospital's experience. *Infect Control Hosp Epidemiol* 1992;13:114-115.
6. Friedland LR, deChadarevian JP, Gilbert-Barness E. Pathological case of the month: Myocardial infarction and coronary Kawasaki-like arteriopathy. *Am J Dis Child* 1992;146:1315-1316.
7. Fein JA, Friedland LR, Rutstein R, Bell LM. Children with unrecognized HIV infection: an emergency department perspective. *Am J Dis Child* 1993;147:1104-1108.
8. Friedland LR, Kulick RM. Emergency department analgesic use in pediatric trauma victims with fractures. *Ann Emerg Med* 1994;23:203-207.
9. Friedland LR, Menon AG, Reising SF, Ruddy RM, Hassett DJ. Development of a polymerase chain reaction assay to detect the presence of *Streptococcus pneumoniae* DNA. *Diagn Microbiol Infect Dis* 1994;20:187-193.
10. Pohlgeers AP, Friedland LR, Keegan-Jones L. Combination fentanyl and diazepam for pediatric conscious sedation. *Acad Emerg Med* 1995;2:879-883.
11. Poirer MP, Friedland LR. Pediatric vaginal bleeding. *Acad Emerg Med* 1995;2:527-528, 563-565.
12. Friedland LR, Kulick RM, Biro FM, Patterson A. Cost-effectiveness decision analysis of intramuscular ceftriaxone as compared with oral cefixime for adolescent women with gonococcal cervicitis. *Ann Emerg Med* 1996;27:299-304.
13. Strait RT, Ruddy RM, Friedland LR, Duncan KM, Wilmott RW. A pilot study of the predictive value of plasma tumor necrosis factor α and interleukin 1β for *Streptococcus pneumoniae* bacteremia in febrile children. *Acad Emerg Med* 1997;4:44-51.
14. Friedland LR, Pancioli AM, Duncan KM. Pediatric emergency department analgesic practice. *Pediatr Emerg Care* 1997;13:103-106.
15. Thomas LP, Friedland LR. The cost-effective use of nebulized racemic epinephrine in the treatment of croup in one geographic area. *Am J Emerg Med* 1998;16:87-89.
16. Diercks DB, Friedland LR, Ernst AA. Hallucinations as the initial presentation of shigellosis. *Pediatr Emerg Care* 2000;16:99-101.
17. Guinto-Ocampo H, Friedland LR. Disseminated gonococcal infection in three adolescents. *Pediatr Emerg Care* 2001;17:441-443.
18. Pichichero ME, Blatter MM, Kennedy WA, Hedrick J, Descamps D, Friedland LR. Acellular pertussis vaccine booster combined with diphtheria and tetanus toxoids for adolescents. *Pediatrics* 2006;117:1084-1093

19. Black S, Friedland LR, Schuind A, Howe B, for the GlaxoSmithKline DTaP-IPV Vaccine Study Group. Immunogenicity and safety of a combined DTaP-IPV vaccine compared with separate DTaP and IPV vaccines when administered as booster doses with a second dose of MMR vaccine to healthy children aged 4 to 6 years. *Vaccine* 2006;24:6163-6167
20. Zepp F, Knuf M, Habermehl P, Mannhardt-Laakmann W, Howe B, Friedland LR. Safety of reduced antigen content tetanus-diphtheria-acellular pertussis vaccine in adolescents as a 6th consecutive dose of acellular-pertussis containing vaccine. *J Pediatr* 2006;149:603-610
21. Zepp F, Knuf M, Habermehl P, Mannhardt-Laakmann W, Howe B, Friedland LR. Immunogenicity of reduced antigen content tetanus-diphtheria-acellular pertussis vaccine in adolescents as a 6th consecutive dose of acellular-pertussis containing vaccine. *Vaccine* 2007;25:5248-5252
22. Black S, Friedland LR, Ensor K, Weston WM, Howe B, Klein, NP. Diphtheria-tetanus-acellular pertussis and inactivated poliovirus vaccines given separately or combined for booster dosing at 4-6 years of age. *Ped Inf Dis J* 2008;27:341-346
23. Dennehy PH, Bertrand HR, Silas PE, Damaso S, Abu-Elyazeed R, Friedland LR. Coadministration of RIX4414 oral human rotavirus vaccine does not impact the immune response to antigens contained in routine infant vaccines in the United States. *Pediatrics* 2008;122:e1062-e1066
24. Zangwill KM, Eriksen E, Lee M, Lee J, Marcy SM, Friedland LR, Weston W, Howe B, Ward JI. A Population-based, Post-Licensure Evaluation of the Safety of a Combination Diphtheria, Tetanus, Acellular Pertussis, Hepatitis B, Inactivated Poliovirus Combination Vaccine in a Large Managed Care Organization. *Pediatrics* 2008;122:e1179-e1185
25. Blatter M, Friedland LR, Weston WM, Li P, Howe B. Immunogenicity and safety of a tetanus toxoid, reduced diphtheria toxoid and three-component acellular pertussis vaccine in adults 19-64 years of age. *Vaccine* 2009;27:765-772
26. Chevart B, Friedland LR, Abu-Elyazeed R, Han HH, Guerra Y, Verstraten T. The human rotavirus vaccine RIX4414 in infants: a review of safety and tolerability. *Ped Inf Dis J* 2009;28:225-232
27. Weston WM, Chandrashekar V, Friedland LR, Howe B. Safety and immunogenicity of a tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine when co-administered with influenza vaccine in adults. *Human Vaccines* 2009;5:1-9.
28. Marchant CD, Miller JM, Marshall GS, Blatter M, Aris E, Friedland LR, Boutriau D. Randomized trial to assess immunogenicity and safety of *Haemophilus influenzae* type b and *Neisseria meningitidis* serogroups C and Y-tetanus toxoid conjugate vaccine in infants. *Ped Inf Dis J* 2010;29:48-52

29. Marshall GS, Marchant CD, Blatter M, Aris, E, Boutriau D, Poolman JT, Friedland LR, Miller JM. Immune response and one year antibody persistence after a fourth dose of a novel *Haemophilus influenzae* type b and *Neisseria meningitidis* serogroups C and Y-tetanus toxoid conjugate vaccine (Hib-MenCY) at 12-15 months of age. *Ped Inf Dis J* 2010;29:469-471
30. Klein NP, Hansen J, Lewis E, Lyin L, Nguyen B, Black S, Weston W, Wu S, Li P, Howe B, Friedland LR. Post-marketing safety evaluation of a tetanus toxoid, reduced diphtheria toxoid and 3-component acellular pertussis vaccine administered to a cohort of adolescents in a United States Health Maintenance Organization. *Ped Inf Dis J* 2010;29:613-617
31. Weston WM, Friedland LR, Wu X, Howe B. Immunogenicity and reactogenicity of co-administered tetanus-diphtheria-acellular pertussis (Tdap) and tetravalent meningococcal conjugate (MCV4) vaccines compared to their separate administration. *Vaccine* 2011;29:1017-1022.
32. Baxter R, Baine Y, Ensor K, Bianco V, Friedland LR, Miller JM. Immunogenicity and safety of an investigational quadrivalent meningococcal ACWY tetanus toxoid conjugate vaccine in healthy adolescents and young adults 10–25 years of age. *Ped Inf Dis J* 2011;30:e41-e48
33. Marshall GS, Marchant CD, Blatter M, Friedland LR, Aris E, Miller JM. Co - administration of a novel *Haemophilus influenzae* type b and *Neisseria meningitidis* serogroups C and Y-tetanus toxoid conjugate vaccine does not interfere with the immune response to antigens contained in infant vaccines routinely used in the United States. *Human Vaccines* 2011;7:1-7
34. Byrant KA, Marshall GS, Marchant CD, Pavia-Ruz N, Nolan T, Blatter M, Aris E, Boutriau D, Friedland LR, Miller JM. Immunogenicity and safety of *H. influenzae* type b–*N. meningitidis* C/Y conjugate vaccine in infants. *Pediatrics* 2011;127:e1375-e1385
35. Weston WM, Messier M, Friedland LR, Wu X, Howe B. Persistence of antibodies 3 years after booster vaccination of adults with combined acellular pertussis, diphtheria and tetanus toxoids vaccine. *Vaccine* 2011;29:8483-8486
36. Klein NP, Weston WM, Kuriyakose S, Kolhe D, Howe B, Friedland LR, Van Der Meeren O. An open-label, randomized, multi-center study of the immunogenicity and safety of DTaP-IPV (Kinrix) co-administered with MMR vaccine with or without varicella vaccine in healthy pre-school age children. *Vaccine* 2012;30:668-674
37. Weston WM, Friedland LR, Wu X, Howe B. Vaccination of adults 65 years of age and older with tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine (Boostrix): results of two randomized trials. *Vaccine* 2012;30:1721-1728

38. Klein NP, Baine Y, Bianco V, Lestrade PR, Naz A, Blattter M, Friedland LR, Miller JM. One or two doses of quadrivalent meningococcal serogroups A, C, W-135 and Y tetanus toxoid conjugate vaccine is immunogenic in 9-12 month old children. *Ped Inf Dis J* 2013;32:760-767
39. Dubin G, Toussaint J-F, Cassart J-P, Howe B, Boyce D, Friedland LR, et al. Investigation of a regulatory agency enquiry into potential porcine circovirus type 1 contamination of the human rotavirus vaccine, *Rotarix*TM: approach and outcome. *Human Vaccines and Immunotherapeutics* 2013;9:1-11
40. Halperin SA, Baine Y, Domachowske JB, Aggarwal N, Simon M, Langley JM, McNeil SA, Friedland LR, et al. Comparison of the safety and immunogenicity of a novel quadrivalent meningococcal ACWY-tetanus toxoid conjugate vaccine and a marketed quadrivalent meningococcal ACWY-diphtheria toxoid conjugate vaccine in healthy individuals 10-25 years of age. *J Ped Infect Dis Society* 2014;3:33-42
41. Leonardi M, Latiolais T, Sarpong K, Simon M, Twiggs J, Lei P, Rinderknecht S, Blatter M, Bianco V, Baine Y, Friedland LR, et al. Immunogenicity and reactogenicity of Infanrix when co-administered with meningococcal MenACWY-TT conjugate vaccine in toddlers primed with MenHibrix and Pediarix. *Vaccine* 2015;33:924-932
42. Leonardi M, Latiolais T, Sarpong K, Simon M, Twiggs J, Lei P, Rinderknecht S, Blatter M, Bianco V, Baine Y, Friedland LR, et al. Quadrivalent meningococcal (MenACWY-TT) conjugate vaccine or a fourth dose of H. influenzae–N. meningitidis C/Y conjugate vaccine(HibMenCY-TT) is immunogenic in toddlers who previously received three doses of HibMenCY-TT in infancy. *Vaccine* 2015;33:933-941
43. Rosillon D, Buyse H, Friedland LR, Ng, SP, Velazquez FR, Breuer T. Risk of intussusception after rotavirus vaccination: meta-analysis of postlicensure studies. *Ped Infect Dis Journal* 2015;34:763-768
44. Cunningham AL, Garçon N, Oberdan L, Friedland LR, et. al. Vaccine development from concept to early clinical testing. *Vaccine* 2016;34:6655-6664
45. Preiss S, Garçon N, Cunningham AL, Strugnelli R, Friedland LR. Vaccine Provision: delivering sustained & widespread use. *Vaccine*, 2016;34:6665-6671
46. O'Hagan DT, Friedland LR, Hanon E, Didierlaurent AM. Towards an evidence based approach for the development of adjuvanted vaccines. *Curr Opin Immunol*, 2017;47:93-102
47. Volker V, Denizer G, Friedland LR, Krishnan J, Shapiro M. Understanding modern-day vaccines: what you need to know. *Ann Med* 2018;50:110-120

48. Hoffman V, Abu-Elyazeed R, Enger C, Esposito DB, Doherty MC, Quinlan SC, Skerry K, Holick CN, Basile P, Friedland LR, et. al. Safety study of live, oral human rotavirus vaccine: a cohort study in United States health insurance plans. *Human Vaccines and Immunotherapeutics*. 2018 <https://doi.org/10.1080/21645515.2018.1450123>
49. McNamara M, Buck PO, Yan S, Friedland LR, Lerch, K, Murphy A, Hoge C. Is patient insurance type related to physician recommendation, administration and referral for adult vaccination? A survey of US physicians. *Human Vaccines and Immunotherapeutics*. 2019 <https://doi.org/10.1080/21645515.2019.1582402>
50. Watson P, Novy PL, Friedland LR. Potential benefits of using a multicomponent vaccine for prevention of serogroup B meningococcal disease. *International Journal of Infectious Diseases* (accepted for publication).

BOOK CHAPTERS AND MEDIA

1. Friedland LR, Bell LM. Protecting the health professional against hazardous exposures: infectious, chemical and radioactive hazards. In: Henretig FM, King C, eds. *Textbook of Pediatric Emergency Procedures*. Baltimore: Williams and Wilkins, 1997:52-61.
2. Friedland LR. Outpatient management of febrile illness in infants and young children with sickle cell anemia. In: Orenstein JB, Klein BL, Mayer TA, eds. *PediaStat: A CD-ROM rapid reference tool for Pediatric Urgent Care and Emergency Medicine*. Portland: CMC ReSearch, 1998 (www.cmcresearch.com)
3. Gomberg S, Boyle-Quinn S, Friedland LR. The hospitalized child. In: Logan P editor. *Principles and practice for the acute care nurse practitioner*. Stamford: Appleton and Lange, 1999:1241-1248.
4. Friedland LR. Bleeding. In: Ruddy RM, Cronan KM, eds. *Pediatrics Stat! Cards: a rapid guide for medical emergencies*, 2nd ed. Philadelphia: Wyeth Pediatrics.
5. Friedland LR. Family Practice: Asthma in Children. In *Audio-Digest*, vol. 46, issue 42, September 1998.
6. Friedland LR. Family Practice: Cellulitis. In *Audio-Digest*, vol. 49, issue 35, September 2001.
7. Friedland LR and Miller JM. Conducting clinical trials in developing countries. In: Mulberg AE, Silber SA, van den Anker JN, eds. *Pediatric Drug Development: Concepts and Applications*. Hoboken: John Wiley and Sons, 2009:431-436.
8. Steering Committee member and contributing author. Frequently Asked Questions: Adult Vaccines, A Grown Up Thing to Do. A Report from the American Academy of Microbiology. 2012 <http://academy.asm.org/index.php/colloquium-program/faq-series/409-adultvaccinesfaq>

9. Bok K. for the National Vaccine Advisory Committee (Friedland LR, contributor). Overcoming Barriers and Identifying Opportunities for Developing Maternal Immunizations: Recommendations from the National Vaccine Advisory Committee. *Public Health Reports* 2017;132(3):1-14

ABSTRACT PRESENTATIONS

1. Friedland LR, Bell LM, Rutstein R. Utilization and clinical manifestations of human immunodeficiency virus type 1-infected children presenting to a pediatric emergency department. *Oral presentation at the 1990 American Academy of Pediatrics Emergency Medicine Section Scientific Program, Boston, MA.*
2. Friedland LR, Joffe M, Wiley JF, Schapire A, Moore DF. Effect of educational program on compliance with glove use in a pediatric emergency department. *Oral presentations at the 1991 Ambulatory Pediatric Association Annual Meeting, New Orleans, LA; and the 1991 Society for Academic Emergency Medicine Annual Meeting, Washington, DC.*
3. Friedland LR, Kulick RM. Emergency department analgesic use in pediatric trauma victims with fractures. *Oral presentation at the 1993 American Academy of Pediatrics Emergency Medicine Scientific Program, Washington, DC.*
4. Friedland LR, Menon AG, Reising SF, Ruddy RM, Hassett DJ. Development of a polymerase chain reaction assay to detect the presence of *Streptococcus pneumoniae* DNA. *Oral presentation at the 1993 American Academy of Pediatrics Emergency Medicine Scientific Program, Washington, DC; and poster presentation at the 1994 conference "PCR: applications, alternative technologies and new techniques," San Francisco, CA, sponsored by Cambridge Healthtech Institute.*
5. Pohlgeers AP, Friedland LR, Keegan-Jones L. Combination fentanyl and diazepam for pediatric conscious sedation. *Poster presentation at the 1994 Society for Academic Emergency Medicine Annual Meeting, Washington, DC.*
6. Friedland LR, Kulick RM, Biro FM, Patterson A. Intramuscular ceftriaxone vs. oral cefixime in the treatment of adolescent women with gonorrhea cervicitis: a decision analysis. *Oral presentations at the Joint Topic Session of the 1994 APA/APS/SPR Meeting, Seattle, WA; and the 1994 Society for Academic Emergency Medicine Annual Meeting, Washington, DC.*
7. Strait RT, Ruddy RM, Friedland LR, Duncan KM, Wilmott RW. Predictive value of plasma cytokines for *S. pneumoniae* bacteremia in febrile children 0-3 years of age: a pilot study. *Oral presentations at the 1995 APA Meeting, San Diego, CA, and the 1995 Society for Academic Emergency Medicine Annual Meeting, San Antonio, TX.*
8. Friedland LR, Pancioli AM, Duncan KM. Emergency department analgesic use - 1994. *Poster presentation at the 1995 American Academy of Pediatrics Emergency Medicine Scientific Program, San Francisco, CA.*

9. Camargo CA Jr, on behalf of the MARC-4 Investigators. Randomized trial of medium-dose fluticasone vs. placebo after an emergency department visit for acute asthma [abstract]. *J Allergy Clin Immunol* 2000;105(1 Pt 2):S262
10. Friedland LR, Descamps D, for the GSK Boostrix Vaccine Study Group. A randomized controlled trial with a reduced-antigen content tetanus-diphtheria-acellular pertussis (Tdap) vaccine in adolescents. *Oral presentation at the 2004 ICAAC meeting, Washington, DC (paper # G-1669)*.
11. Black S, Nakasato C, Davis R, France E, Schuerman L, Jacquet J-M, Friedland LR. Two large phase III, multicenter trials comparing primary vaccination with DTPa-HBV-IPV/Hib versus commercially available vaccines administered at separate sites. *Poster presentation at the 4th World Society for Pediatric Infectious Diseases, Warsaw, Poland, 1-4 September 2005*.
12. Black S, Friedland LR, Howe B, for the GlaxoSmithKline DTaP-IPV Vaccine Study Group. Comparison of the immunogenicity and safety of DTaP-IPV vaccine versus separate DTaP plus IPV vaccines when administered as booster doses with a booster dose of MMR vaccine to healthy children aged 4 to 6 years. *Poster presentation at the 5th Pediatric Infectious Disease Society Conference, Napa, California, 9-11 October 2005*.
13. Friedland LR, Howe B, Zepp F, Habermehl P, Knuf M. Evaluation of safety of reduced antigen content tetanus-diphtheria-acellular pertussis (Tdap) vaccine in adolescents as a 6th consecutive dose of acellular-pertussis containing vaccine. *Poster presentation at the 2005 ICAAC meeting, Wash, DC, 16-19 December 2005 (paper # G-912/235)*.
14. Black S, Weston W, Klein N, Friedland LR, Howe B for the GlaxoSmithKline DTaP-IPV Vaccine Study Group. Immunogenicity and safety of a combination DTaP-IPV vaccine in children 4-6 years of age. *Oral presentation (publication 7160.8) at the Pediatric Academic Societies' Annual Meeting, Toronto, Canada, 5-8 May 2007*.
15. Miller J, Friedland LR, De La Bourdonnaye G, De Vleeschauwer I, Boutriau D. Immunogenicity and safety of an investigational combined *Haemophilus influenzae* type b and *Neisseria meningitidis* serogroups C and Y conjugate vaccine in healthy infants compared to licensed controls. *Poster presentation (publication 6291.1) at the Pediatric Academic Societies' Annual Meeting, Toronto, Canada, 5-8 May 2007*.
16. Abu-Elyazeed R, Bertrand H, Dennehy PH, Silas P, Damaso S, Friedland LR. Coadministration of RIX4414 oral human rotavirus vaccine does not impact the immune response to antigens contained in routine infant vaccines in the United States. *Poster presentation at the 2007 ICAAC meeting, Chicago, IL, 17-20 October 2007 (paper # G-1720)*.).
17. Weston W, Friedland LR, Howe B for the Boostrix 006 study group. Reactogenicity of concomitant and separately administered Tdap and MCV4 vaccines. *Poster presentation at the 2007 ICAAC meeting, Chicago, IL, 17-20 October 2007 (paper # G-1700)*.

18. Friedland LR, Weston W, Howe B for the Boostrix 006 study group. Immunogenicity of coadministered Tdap and MCV4 vaccines compared to separately administered vaccines. *Poster presentation at the 2007 ICAAC meeting, Chicago, IL, 17-20 October 2007 (paper # G-1699).*
19. Miller J, Friedland LR, Boutriau D, Immunogenicity and safety of an investigational *Haemophilus influenzae* type b and *Neisseria meningitidis* serogroups C/Y conjugate vaccine in toddlers. *Poster presentation at the 2007 IDSA meeting, San Diego, CA, 4-7 October 2007 (paper # 190).*
20. Zangwell KM, Eriksen EM, Lee M, Lee JY, Friedland LR, Weston W, Howe BJ, Marcy SM, Ward JI. Post-licensure safety evaluation of a DTaP-HBV-IPV combination vaccine in a large managed care organization. *Poster presentation at the 2008 National Immunization Conference meeting, Atlanta, GA, 18 March 2008 (poster # 167).*
21. Klein NP, Hansen J, Lewis N, Lyon L, Nguyen B, Weston W, Wu S, Li P, Friedland L, Howe B. Post-marketing Safety Evaluation of a Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) Vaccine Administered to a Cohort of Adolescents in a Us Health Maintenance Organization. *Poster presentation at the 2008 ICAAC/IDSA meeting, Washington, DC, 25-28 October 2008 (paper # G-2085).*
22. Chevart B, Abu-Elyazeed R, Friedland L. Integrated Safety Summary of The Oral Live Attenuated Human Rotavirus Vaccine RIX4414. *Poster presentation at the 2008 ICAAC/IDSA meeting, Washington, DC, 25-28 October 2008 (paper # G1-441).*
23. Miller J, Marshall G, Marchant C, Blatter M, Boutriau D, Friedland L. Immunity to an Investigational *H. influenzae* type b- *N. meningitidis* Serogroups C & Y Conjugate Vaccine Measured in a Serum Bactericidal Activity in an Assay Using Human Complement. *Poster presentation at the 2008 ICAAC/IDSA meeting, Washington, DC, 25-28 October 2008 (paper # G1-415).*
24. Miller J, Marshall G, Marchant C, Blatter M, Boutriau D, Friedland L. Immunogenicity of an 7-valent Pneumococcal Conjugate Vaccine Co-administered with an Investigational *H. influenzae* type b- *N. meningitidis* Serogroups C & Y Conjugate Vaccine. *Poster presentation at the 2008 ICAAC/IDSA meeting, Washington, DC, 25-28 October 2008 (paper # G-2109).*
25. Bryant KA, Marshall G, Marchant C, Pavia N, Nolan T, Blatter M, Rinderknecht S, Boutriau D, Mesaros N, Aris E, Friedland L, Miller J. An investigational *H.influenzae* type b- *N.meningitidis* serogroups C & Y tetanus toxoid conjugate vaccine (HibMenCY) is highly immunogenic and well tolerated in infants *Poster presentation at the 2009 IDSA meeting, Philadelphia, PA ,30 October-1 November 2009 (paper # 1192).*
26. Marshall G, Marchant C, Blatter Aris E, Baine Y, Friedland L, Miller J. Persistence of Immunity 1 Year after 4 Doses of an Investigational *Haemophilus influenzae* type b (Hib) and *Neisseria meningitidis* Serogroups C and Y Conjugate Vaccine. *Oral presentation at the 2009 IDSA meeting, Philadelphia, PA 30 October-1 November 2009 (paper # 188).*

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