Overview of recent research papers with a focus on contact investigation and preventive therapy

Child and Adolescent Tuberculosis Working Group
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0. Impact evaluation of malaria control interventions on morbidity and all-cause child mortality in Mali.
1. 2000-2012
   PMID: 30428380 Free PMC Article

2. Human IFN-y immunity to mycobacteria is governed by both IL-12 and IL-23.
   Martinez-Barricarte R, Marde JG, Ma CS, Deenick EK, Ramírez-Alejo N, Mele F, Latorre D,
   Mahdavian SA, Aytekin C, Mansouri D, Bryant VL, Jabot-Hanin F, Deswarte C, Nieto-Pattan A, Surace
   Rapaport F, Sedeuthner Y, Schmidt M, Klintholm J, Dogu F, Tanir G, Tabarsi P, Blouzaaz MR,
   Joseph JK, Heer A, Kong XF, Migaud M, Lazarov T, Geissmann F, Fleckenstein B, Aichhammer CL,
   Sette A, Puel A, Emile JF, Van de Vosse E, Quintana-Murci L, Di Santo JF, Abel L, Boisson-Dupuis S,
   Bustamante J, Tagnitude S, Bailer J, Casanova JL.
   PMID: 30578351 Free PMC Article

   Vázquez R, García E, García P.
   PMID: 30459750 Free PMC Article
CHILDHOOD TB PUBLICATIONS
My biases

- 1048 studies identified on PubMed
- On review of title selected 134 that I thought looked interesting
- Each year this job is involving more work
- Can you please stop publishing papers on childhood TB
- Review of abstracts brought down to 31
- PLEASE forgive me if I have not included your paper!!!
- PLEASE forgive me if I do a terrible job of summarising your work in 1 minute!
Epidemiology
Temporal trends in the prevalence of *Mycobacterium tuberculosis* infection in South African adolescents


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Epidemiology of tuberculosis among children and adolescents in the USA, 2007–17: an analysis of national surveillance data

Tori L. Cowger, Jonathan M Wortham, Deron C Burton
High prevalence of infection and low incidence of disease in child contacts of patients with drug-resistant tuberculosis: a prospective cohort study

Helena Huerga, Elisabeth Sanchez-Padilla, Nara Melikyan, Hakob Atshemyan, Armen Hayrapetyan, Ani Ulumyan, Mathieu Bastard, Naira Khachatryan, Catherine Hewison, Francis Varaine, Maryline Bonnet

Potential effect of household contact management on childhood tuberculosis: a mathematical modelling study

Peter J Dodd, Courtney M Yuen, Mercedes C Becerra, Paul Revill, Helen E Jenkins, James A Seddon

Seasonality of childhood tuberculosis cases in Kampala, Uganda, 2010-2015

Devan Jaganath, Eric Wobudeya, Moorine Penninah Sekadde, Betty Nsangi, Heather Haq, Adithya Cattamanchi
INVESTIGATING OUTCOMES OF ADOLESCENTS AND YOUNG ADULTS (10–24 YEARS OF AGE) LOST TO FOLLOW-UP FROM TUBERCULOSIS TREATMENT IN GABORONE, BOTSWANA

Leslie A. Enane, MD,*†‡§ Elizabeth D. Lowenthal, MD, MSCE,†§¶ Tonya Arscott-Mills, MD, MPH,†§¶ Jessica Eby, BS,|| Cynthia Caiphus, RN,** Botshelo Kgwaadira, MBChB,|| Susan E. Coffin, MD, MPH,,*†¶ and Andrew P. Steenhoff, MBBCh, DCH,*†§||

Prevalence and Determinants of QuantiFERON-Diagnosed Tuberculosis Infection in 9810 Mongolian Schoolchildren

Davaasambuu Gansaa,12 Polyna Khudyakov,1 Uyangaa Buyanjargal,3 Badamtsengig Jargalsaikhan,2 Delgerkh Bajgal,2 Oyunsuren Munkhjargal,2 Narankhuu Yansen,2 Sunjidmaa Bolorman,2 Enkhseikhan Lkhagvasuren,24 Christopher T. Sempoe,3 Sobri Bremage,2 Zhenqiang Wu,4 Batbayar Ochirbat,2 Batbaatar Gunchin,24 and Adrian R. Martineau6
Paediatric tuberculosis transmission outside the household: challenging historical paradigms to inform future public health strategies


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Building a tuberculosis-free world: The Lancet Commission on tuberculosis

Imaging and Lung Function
RESEARCH ARTICLE

Computed tomography-based predictive nomogram for differentiating primary progressive pulmonary tuberculosis from community-acquired pneumonia in children

History of tuberculosis is associated with lower exhaled nitric oxide levels in HIV-infected children

ORIGINAL ARTICLE: IMAGING

Chest ultrasound findings in children with suspected pulmonary tuberculosis

Charlotte C. Heuvelings MD1,2 | Sabine Bélard MD1,2,3,4 | Savvas Andronikou PhD2,5 | Norme Jamieson-Luff BSc2 | Martin P. Grobusch FRCP1 | Heather J. Zar PhD2
HIV co-infection
Monocyte-to-Lymphocyte Ratio Is Associated With Tuberculosis Disease and Declines With Anti-TB Treatment in HIV-Infected Children

Rewa K Choudhary, MD, MPH,* Kristin M. Wall, PhD, MS,† Irene Njuguna, MBChB, MSc, MPH,‡§ Patricia B. Pavlinac, PhD, MS,¶ Sylvia M. LaCourse, MD, MPH,¶† Vincent Otieno, MBChB, MPH,# John Gatimu, MPH,# Joshua Stern, MS, Elizabeth Maleche-Obimbo, MBChB, MPH,# Dalton Wamalwa, MBChB, MPH,# Grace John-Stewart, MD, PhD,§¶‡‡ and Lisa M. Cranmer, MD, MPH*

Lopinavir–ritonavir super-boosting in young HIV-infected children on rifampicin-based tuberculosis therapy compared with lopinavir–ritonavir without rifampicin: a pharmacokinetic modelling and clinical study

Helena Rabie, Paolo Denti, Janice Lee, Mhleli Masango, Ashraf Coovadia, Sandy Pillay, Afaaf Liberty, François Simon, Helen McIlrion, Mark F Cotton, Marc Lallemant
Pharmacokinetics
Pharmacokinetic study of isoniazid and pyrazinamide in children: impact of age and nutritional status

Rajeshwar Dayal,¹ Yatish Singh,¹ Dipi Agarwal,² Manoj Kumar,¹ Soumya Swaminathan,³ Geetha Ramachandran,⁴ Santosh Kumar;⁵ Shamrendra Narayan,⁶ Ankur Goyal,⁷ A K Hemant Kumar⁴

Effect of Co-administration of Lidocaine on the Pain and Pharmacokinetics of Intramuscular Amikacin in Children With Multidrug-Resistant Tuberculosis: A Randomized Crossover Trial

Anthony J. Garcia-Prats, MD,* Penelope C. Rose, MMed,* Heather R. Draper, MSc,* James A. Seddon, PhD;† Jennifer Norman, MSc;‡ Helen M. Mcilleron, PhD; Anneke C. Hesseling, PhD,* and H. Simon Schaaf, MD*

Alternative dosing guidelines to improve outcomes in childhood tuberculosis: a mathematical modelling study

Kendra K Radtke, Kelly E Dooley, Peter J Dodd, Anthony J Garcia-Prats, Lindsay McKenna, Anneke C Hesseling, Radojka M Savic
Pharmacokinetics, optimal dosing, and safety of linezolid in children with multidrug-resistant tuberculosis: Combined data from two prospective observational studies

Anthony J. Garcia-Prats, H. Simon Schaaf, Heather R. Draper, Maria Garcia-Cremades, Jana Winckler, Lubbe Wiesner, Anneke C. Hesseling, Rada M. Savic

Revised Antituberculosis Drug Doses and Hepatotoxicity in HIV Negative Children

C. K. Indumathi, Aruna Sethuraman, Saurav Jain, Savita Krishnamurthy
Diagnostics and Therapeutics
Using Changes in Weight-for-Age z Score to Predict Effectiveness of Childhood Tuberculosis Therapy

Silvia S. Chiang, Sangshin Park, Emily I. White, Jennifer F. Friedman, Andrea T. Cruz, Hernán Del Castillo, Leonid Lecca, Mercedes C. Becerra, and James A. Seddon

Prevention of tuberculosis in household members: estimates of children eligible for treatment
Yohhei Hamada, Philippe Glaziou, Charalampos Sismanidis, and Haileyesus Getahun

Diagnostic Accuracy of Stool Xpert MTB/RIF for Detection of Pulmonary Tuberculosis in Children: a Systematic Review and Meta-analysis
Emily MacLean, Giorgia Sulis, Claudia M. Denkinger, James C. Johnston, Madhukar Pai, Faiz Ahmad Khan
Tuberculosis Preventive Therapy for Individuals Exposed to Drug-resistant Tuberculosis: Feasibility and Safety of a Community-based Delivery of Fluoroquinolone-containing Preventive Regimen

Feasibility of Identifying Household Contacts of Rifampin- and Multidrug-resistant Tuberculosis Cases at High Risk of Progression to Tuberculosis Disease

Treatment Outcomes in Global Systematic Review and Patient Meta-Analysis of Children with Extensively Drug-Resistant Tuberculosis

Muhammad Osman, Elizabeth P. Harausz, Anthony J. Garcia-Prats, H. Simon Schaaf, Brittany K. Moore, Robert M. Hicks, Jay Achar, Farhana Amanullah, Pennan Barry, Mercedes Becerra, Domnica I. Chiotan, Peter C. Drobac, Jennifer Flood, Jennifer Furin, Medea Gorgia, Petros Isaakides, Andréi Marandioukov, Ivoza Ozere, N. Sarita Shah, Alena Skrakhina, Elena Yablokova, James A. Seddon, Anneke C. Hesselink, for The Collaborative Group for Meta-Analysis of Paediatric Individual Patient Data in MDR TB
Fundamental Science
Tuberculous meningitis in children is characterized by compartmentalized immune responses and neural excitotoxicity

Ursula K. Rohlfink1,2,9, Anthony Figaji1,9, Katalin A. Wilkinson2,3, Stuart Horswell1, Abdul K. Sesay3,8, Armin Heffer3, Nico Ersln1, Regan Solomon5, Ronald Van Toorn6, Brian Eley6, Michael Levin7, Robert J. Wilkinson2,3,4,7 & Rachel P. J. Lai2,7

Differential Pathogen-Specific Immune Reconstitution in Antiretroviral Therapy-Treated Human Immunodeficiency Virus-Infected Children

Maximilian Muenchhof1,2,4 Emily Adland1, Julia Reider1,2,4, Henrik Kleverprie5,6,8,8 Alasdair Leslie1,6, Stephan Boehm1,4, Oliver T. Keppler1,4, Thumbi Ndungu1,2,4 & Philip J. R. Goulder1,2
Vaccines
Global shortages of BCG vaccine and tuberculous meningitis in children

*K du Preez, J A Seddon, H S Schaaf, A C Hesseling, J R Starke, M Osman, C J Lombard, R Solomons

Association of BCG Vaccination in Childhood With Subsequent Cancer Diagnoses A 60-Year Follow-up of a Clinical Trial

Nicholas T. Usher; Suyoung Chang, MD; Robin S. Howard, MA; Adriana Martinez, MSc; Lee H. Harrison, MD; Mathuram Santosham, MD; Naomi E. Aronson, MD
Conclusions

- Number of publications increasing, many of high quality
- Encouraging to see some adolescent papers being produced
- Some lung function evaluations being done
- Good geographical variation
- Keep it going!!!