Background. RSV is the most frequent etiology of pediatric lower respiratory tract infection. Most children hospitalized for RSV are previously healthy without known risk factors. Children with mild disease managed as outpatients (OP) have higher viral loads than those hospitalized with severe disease. OP children have higher concentrations of the mucosal interferon (IFN), IFNα/β, and IFN-γ, but no differences in IFNα1. We examined how RSV replication impacts cytokine production kinetics in the nasopharynx.

Methods. Primary infant human nasal epithelial (iHNE) cells were collected from nasopharyngeal swabs and cultured on an air-liquid interface. Cultures were infected with 0.1 or 0.001 multiplicity of infection (MOI) of RSV-A or -B, or mock infected. Concentrations of IFN-related (IFNα/β, IFN-γ, IL-12, and TNFα) cytokines secreted to the apical and basolateral surfaces were quantitated using immunoassay. Kinetics according to viral inocula were compared by ANOVA with Dunn post-hoc testing of the area under the curve (AUC) for each cytokine. Peak concentrations were compared according to MOI and secretion surface by 2-way ANOVA.

Results. AUC of IFNs in both surfaces of RSV infected cells were significantly higher than those of mock infected. The 0.1 MOI RSV inoculum resulted in significantly higher AUCs for all IFN cytokines on both surfaces than the 0.001 MOI. Peak IFNα1 concentrations were higher on the apical than basolateral; peak IFNα2/3 concentrations were higher on the basolateral side than apical. AUCs of inflammatory cytokines in RSV infection were significantly higher on the basolateral, but not apical, surfaces than mock; all basolateral inflammatory cytokines were higher in the 0.1 MOI than the 0.001 MOI.

Conclusion. Higher RSV inoculum induces higher concentrations of IFN-related cytokines on both sides of epithelial cells, and higher concentrations of inflammatory cytokines on the basolateral side. Differential secretion of IFNα1 and IFNα2/3 to the apical and basolateral surfaces suggests they may play different roles in immune response during RSV infection. These data support viral replication as an important factor influencing RSV pathogenesis and severity through cytokine production.

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shock increased with age (>5yo 9.5%; 5-12yo 10.6%; 12-18yo 11.5%). Lab markers including thrombocytopenia and Lymphopenia were more common on this age group. Antibiotic treatment was common (%04.9%), despite bacterial coinfection was rare (8.7%), length of hospitalization was longer in older than 2-year-old groups. 23(1.9%) patients died, similar across different age groups.

1189. COVID 19 Infection in Children in Colombia, Experience from a Nationwide Network (CORONARED)
Juan Gonzalez Mora-Monsalve, N/A, MD; Ivan Felipe Gutiérrez Tobar, n/a; Alejandro Díaz Díaz, MD; Juan Pablo Calle-Giraldo, Pediatric ID; Yamile K. Chaucaeanu-Bastidas, Dr.; Juan Francisco López-Cebolleros, Pediatric infectious diseases specialist; Laura Mendoza Rosado, Pediatric ID; Patrik Eliana Sarmiento-Wilches, n/a; Luis M. Sosa-Avalí, Professor; Luis Fernando Mejia-Rivera, n/a; Juan P. Rojas- Hernandez, Candidate for doctorate in Public Health; Catalina Arango-ferreira, Pediatric ID; Álvaro Dario Hoyos-Orejero, n/a; Diana Cristina Ortiz Marín, n/a; Rosalba Vivas-Trocche, n/a; Catalina Jaramillo-Arango, n/a; Carlos Garces, Dr.; Eduardo López Medina, n/a; Luis Gabriel Vinasco-Sánchez, n/a; Paula Araque-Muñoz, Postgraduate; Juan Pablo Londono-Ruiz, Fellow Pediatric Infectious Diseases; Claudia Patricia Beltrán-Arroyave, Dr.; Isabel C. Hurtado-Palacios, Assistant professor; General Hospital de Medellin/Clínica Las Americas Avenida, Envigado, Antioquia, Colombia; Clínica Infantil Colobusclido, Clínica Infantil Santa Maria del Lago, Bogotá, Distrito Capital de Bogotá, Colombia; Hospital General de Medellin, Medellin, Antioquia, Colombia; Clínica Versalles/Clínica Farallones/Clínica Palma Real/Clínica occidente, Cali, Valle del Cauca, Colombia; Hospital Infantil Los Angeles, Pasto, Narino, Colombia; Fundación HOMI, Bogota, Distrito Capital de Bogotá, Colombia; Clínica Laura Daniela, Valledupar, Cesar, Colombia; Clínica Materno Infantil San Luis, Bucaramanga, Santander, Colombia; Universidad Industrial de Santander / Clínica materno infantil San Luis, Bucaramanga, Santander, Colombia; Fundación Clínica Infantil Noel, Cali, Valle del Cauca, Colombia; Club Noel Children’s Hospital, Cali, Valle del Cauca, Colombia; Hospital Universitario San Vicente Fundacion/ Universidad de Antioquia, Medellin, Antioquia, Colombia; Clínica Universitaria Bolivariana/Universidad Pontificia Bolivariana, Medellin, Antioquia, Colombia; None, Medellin, Antioquia, Colombia; Clínica Soma/Procaren, Medellin, Antioquia, Colombia; ESE Hospital Manuel Uribe Angel, Medellin, Antioquia, Colombia; Universidad de Antioquia, Medellin, Antioquia, Colombia; Centro Médico Imbanaco, Cali, Valle del Cauca, Colombia; Universidad Tecnológica de Pereira, Pereira, Risaralda, Colombia; Clínica la Colina, Bogota, Distrito Capital de Bogotá, Colombia; Universidad El Bosque, Bogotá, Distrito Capital de Bogotá, Colombia; Universidad de Antioquia, Clínica El Rosario, Clínica del Prado, Medellin, Antioquia, Colombia; Universidad del Valle, Cali, Valle del Cauca, Colombia.

Session: P-70. Pediatric Viral Studies (natural history and therapeutic)
Background. Worldwide SARS-CoV-2 infections increase every day. Despite the infection is less severe in children, it can be severe and associated with complications. However, local data remain scarce. We sought to describe epidemiological and clinical characteristics of COVID-19 infection in this population across different age groups.
Methods. Observational, multicenter study across 23 Colombian hospitals from 22 different territories. We included all patients from 0 months to 17 years with confirmed SARS-CoV-2 infection by either antigen or RT-PCR testing.
Results. From March 1, 2020, to October 31, 2021, we identified 1,186 patients: neonates (88), 1 to 3 months (130), 4 to 23 months (306), 2 to 4 years (169), 5 to 11 years (229) and 12 to 18 years (226) with confirmed COVID-19 infection. Of those, 776 (62%) were asymptomatic, 631 (53.2%) hospitalized, 132 (11.2%) required ICU. 58 cases met WHO definition of MERS. Patients less than 24 months of age were characterized by fever (74%) and more respiratory distress (30%) compared to other groups. Patients >5yo seemed to have a more severe presentation. They had more gastrointestinal (GI) symptoms (31% vs 37%), had more need for ICU care given presentation with fever (74%) and more respiratory distress (30.1%) compared to other groups. Patients >5yo seemed to have a more severe presentation. They had more gastrointestinal (GI) symptoms (31% vs 37%), had more need for ICU care given presentation with

1190. Burden of Congenital Cytomegalovirus Among Newborns/Infants < 2 Years of Age From 2010 to 2020
Karen Fowler, PhD; Jacek Mucha, MS; Neumann Monika, Information Specialist; Witold Lewandowski, MD, BA; Magdalena Kaczenowska, MPH; Elvira Schmidt, MSc; Andrew Natenshon, MA; Carla Talarico, MPH, PhD; Philip Buck, MPH, PhD; John D. Decaro, MS, PhD; University of Alabama at Birmingham, Birmingham, AL; (Cetara, Kraków, Malopolskie, Poland; Cetara Germany GmbH, Loerrach, Baden-Württemberg, Germany; Moderna, Inc., Cambridge, Massachusetts.

Session: P-70. Pediatric Viral Studies (natural history and therapeutic)
Background. Congenital cytomegalovirus (cCMV) is a leading cause of preventable congenital birth defects worldwide. In the United States, approximately 1 in 200 infants are born with cCMV and about 10% exhibit symptoms at birth; of those, 40-60% experience long-term sequelae including sensorineural hearing loss and developmental delays. As routine newborn surveillance is universally absent, it is difficult to assess the absolute burden of cCMV and demonstrate the need for CMV treatment and prevention. Here we describe the global epidemiologic burden of cCMV from 2010-2020 by performing a systematic review of the literature.
Methods. Publications from 2000-2020 on CMV-related epidemiologic, economic, and humanistic burden across all ages were identified using Medline, Embase, and Lilacs. Epidemiologic burden estimates of cCMV in at-risk age groups (newborns [<1 month] and infants [2 months to 2 years]) were extracted from recent studies published from 2010-2020, excluding previous systematic literature reviews, chart reviews, case series, gray literature, and studies in immunosuppressed populations. The primary outcome measure was seroprevalence, defined by CMV-specific