Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

134 Improving Aztreonam Stewardship Through a Dedicated Penicillin Allergy Testing Pharmacist

Gilbert Ortega, MD[1], Belinda Sam, PharmD[2], Kristin Alvarez, PharmD[2], David Khan, MD FAAAAI[1]; [1]University of Texas Southwestern, [2]Parkland Health and Hospital System.

RATIONALE: Dedicated pharmacist-led inpatient penicillin allergy testing (PAT) programs have been shown to be an effective delabeling method. We hypothesized that a dedicated PAT pharmacist incorporated into an aztreonam stewardship program results in significant reduction in use of aztreonam, a costly antibiotic.

METHODS: Retrospective chart review of patients who underwent penicillin testing with the assistance of a clinical decision support tool (CDS), which prompts a PAT consult when aztreonam is ordered, and a dedicated PAT pharmacist during the years 2014-2020 focusing on cost savings and inpatient days on aztreonam as a metric of antimicrobial stewardship. Times without a dedicated PAT pharmacist were compared to times where one was on staff. Primary outcomes included rates of aztreonam use and estimated cost savings.

RESULTS: Prior to introducing the CDS, aztreonam administrations per 1000 patient days were 2.11; at the end of the studied period, this rate had decreased to 0.62. In 2017 and 2018, there were gaps of time without a dedicated PAT pharmacist and aztreonam use increased from 1.12 to 1.26 and 1.03 to 1.46, respectively. In 2020, there was a gap of time without a PAT pharmacist but the rate of aztreonam use was similar at 0.64 vs 0.62.

CONCLUSIONS: Since the addition of a CDS to a dedicated inpatient PAT pharmacist led delabeling program, we have measured a substantial decrease in aztreonam use. Aztreonam is 3-10x more expensive than comparable antibiotics and we estimate a 71% cost savings since starting our program. The impact of this program was less during the COVID pandemic.

135 Penicillin allergy de-labeling by primary care physicians

Cheryl Rozario[1], Jessica Stern, MD[1]; [1]University of Rochester Medical Center.

RATIONALE: Inaccurate penicillin allergy (PCN-A) labels pose a major public health challenge. De-labeling in primary care is crucial but underutilized. We demonstrate an effective model for PCN-A evaluation and de-labeling by primary care physicians (PCPs) in an adult primary care clinic.

METHODS: PCPs identify and refer patients with PCN-A label to the clinic pharmacist, who risk stratifies patients using a validated, institutional beta lactam risk stratification and decision support algorithm. Risk status is conveyed to PCPs, who counsel patients accordingly. Patients with no risk are de-labeled based on history. Low risk individuals are scheduled for follow up with a nurse practitioner for oral amoxicillin challenge. Moderate risk patients are referred to Allergy/Immunology for evaluation.

RESULTS: Fourteen patients were evaluated between July 7th and August 24th, 2021. The majority of patients (64%) were low risk and 56% were de-labeled after a direct oral amoxicillin challenge. Of the remaining patients, 14% had no increased risk, and 21% had moderate risk. 1 patient was de-labeled by history alone, while the other refused. One third of patients are awaiting challenge, and 11% (n=1) refused. All patients who underwent direct oral challenge had no subsequent immediate or delayed symptoms.

CONCLUSIONS: Direct oral amoxicillin challenge for low risk PCN-A patients in primary care is effective and safe. Established algorithms and use of existing clinic resources to pre-screen, risk stratify, and administer challenge can minimize strain on PCPs.

136 Characterization of Sulfonamide Allergy in the Veteran Population

Daniel Rosenberg, MD[1], Dyan Lesnik[2], Sujani Kakumanu, MD FAAAAI[3]; [1]University of Wisconsin Hospital and Clinics, [2]William S. Middleton Veterans Hospital, [3]University of Wisconsin and Middleton Ve.

RATIONALE: Sulfonamide antibiotics are the second leading cause of drug reactions, and are often clinically important given their role in pneumocystis prophylaxis and treatment of MRSA infections. However, evaluation of sulfonamide allergy is limited by a lack of robust clinical data as well as a standardized testing approach. We therefore sought to better characterize patients with sulfonamide allergy in a large single center Veterans hospital and determine the need for further interventions in this population.

METHODS: In an IRB-approved protocol, we queried the electronic medical records of the William S Middleton Veterans Hospital in Madison, WI to identify patients with sulfonamide allergy and study the demographics, health care utilization, antibiotic use, and comorbidities in this high-risk population. Data was collected from 10/1/19 to 8/9/21.

RESULTS: Our initial query resulted in 284 patients with sulfonamide allergy who accounted for 355 inpatient admissions and 423 emergency room (ER) visits. Amongst ER patients, 14/25 antibiotic prescriptions (56%) were beta-lactams, and the only patient to receive trimethoprim-sulfamethoxazole was diagnosed with allergy two days later. Amongst inpatients, 40/81 antibiotic orders (49%) were for beta-lactams, and 14 were for vancomycin, daptomycin, or carbapenems (17%). Only two inpatients received trimethoprim-sulfamethoxazole after their original allergy was listed.

CONCLUSIONS: A significant number of patients with sulfonamide allergy in our system ultimately required emergency and/or inpatient care with most receiving beta-lactam antibiotics. This data will be used as a needs assessment to create a pathway for evaluation and de-labeling of sulfonamide allergy at our institution.

137 SARS-CoV-2 and Perceived Physical, Mental and Social Health in Northern California

Katharine Fast, MD FAAAAI[1], Alexandra Lee[1], Quinlan Hampton[1], Sharon Chinthrajah[1], Sayantani Sindher, MD[1], Xiaolin Jia, MD[1], William Collins, MD[1], Kari Nadeau, MD PhD FAAAAI[1], Shu Cao[1]; [1]Stanford University School of Medicine.

RATIONALE: In April 2020, we began collecting data on long-term immunity in local survivors of SARS-CoV-2 and included a validated measure of self-reported health outcome data to assess perceptions of post-infection function.

METHODS: The Sean N. Parker Center for Allergy and Asthma Research has followed 264 volunteers for 16 months. All were recruited on presentation for SARS-CoV-2 testing if positive; if a family member tested positive and our volunteer did as well (asymptomatic volunteer); or on discharge from care for SARS-CoV-2. Volunteers returned every 1-3 months for blood tests and PROMIS-10 questionnaires. These questionnaires are validated and have a long history of providing reliable assessment of physical, psychological and social health.

RESULTS: Our volunteers encompassed all genders, multiple ethnic identities and spanned decades in age. More symptoms (0-10+) at presentation correlated with worse self-reported physical and mental health: $p=0.0005$ correlation for mental health and $p=0.0101$ for physical health. Self-identifying Latinx participants reported higher mental ($p=0.0075$) and physical ($p=0.00053$) health burden than non-Latinx. More severe disease and more underlying health conditions were associated with worse self-reported physical health (($p=0.013$; $p=0.23$ for mental health; $p=0.0034$; $p=0.23$ for mental health, respectively).

CONCLUSIONS: Self-reported data reflect disease severity and burden of underlying conditions. We believe efforts to initiate prompt treatment of SARS-CoV-2 symptoms and ongoing efforts to bolster perceived health and management of chronic conditions are necessary to help our community.