November 2023

Dr. Leo's most recent literature research.

Summary:

1. Clinicians / patients should consider age, LTCF residence, and conditions such as COPD and CHF, in shared decision-making regarding RSV vaccination to prevent severe RSV-associated outcomes. Although RSV hospitalizations were less frequent than COVID/Flu related hospitalizations, they were associated with more severe disease.
2. COVID hospitalizations occur largely in unvaccinated individuals. Only 23% of hospitalized pts with COVID have been vaccinated.
3. Empiric antibiotic therapy for DFU lead to increased hospitalizations compared to culture based antibiotic therapy.
4. Rosuvastatin, compared with atorvastatin was associated with lower LDL cholesterol levels but a higher risk of new onset diabetes mellitus requiring antidiabetics and cataract surgery.
5. Risk of acute kidney injury did not differ between cefepime and piperacillin-tazobactam when treating adults with acute infection; however, neurological dysfunction was more common with cefepime.
6. Oral therapy vs IV therapy for treating endocarditis had no difference in clinical success at 90 days or recurrence of bacteremia.

MMWR - 10/6/2023 - Characteristics and outcomes of pts >60 hospitalized with RSV	• Among 1,634 patients aged ≥60 years hospitalized with RSV,
	  ○ 54% were aged ≥75 years, and
	  ○ 17% resided in long-term care facilities (LTCFs).
	  ○ Obesity, chronic obstructive pulmonary disease (COPD), and congestive heart failure (CHF) were common underlying conditions
	• During February 2022–May 2023, hospitalizations for RSV were less frequent but were associated with more severe disease than were hospitalizations for COVID-19 or influenza, including receipt of standard flow oxygen therapy, high-flow nasal cannula or noninvasive ventilation, and intensive care unit admission
	• https://www.cdc.gov/mmwr/volumes/72/wr/mm7240a1.htm?s_cid=mm7240a1_w
	• https://www.cdc.gov/mmwr/volumes/72/wr/mm7240a2.htm?s_cid=mm7240a2_w

MMWR - 10/6/2023 - COVID hospitalizations 1/2023 - 8/2023	• During January–August 2023, adults aged ≥65 years accounted for 62.9% of all COVID-19–associated hospitalizations. • Most hospitalized adults aged ≥65 had multiple underlying conditions. • Only 23.5% had received the recommended COVID-19 bivalent vaccine • https://www.cdc.gov/mmwr/volumes/72/wr/mm7240a3.htm?s_cid=mm7240a3_w

OFID - 10/2023 - Empiric Therapy for DFU increases hospitalizations	• Among 147 outpatients with infected DFUs, 116 were included. Infections were categorized as mild (68%), moderate (26%), and severe (6%). • Empirical antibiotics (not culture-guided) were prescribed as initial treatment in 39 individuals, while 77 received culture-based antibiotics. There were no differences in demographic or clinical characteristics between the antibiotic administration groups, except for a higher body mass index and prevalence of chronic kidney disease in the empirical cohort. • Forty-two infected DFU patients required hospitalization within 30 days of diagnosis for the same reason. The relative risk for hospitalizations was 1.87 greater in those with mild infections when treated with empirical antibiotics compared with culture-directed antibiotics. There were no differences in amputations and/or death at 1-year follow-up • These data support obtaining tissue culture to guide antibiotic therapy, regardless of DFU infection severity, to decrease hospitalizations. • https://doi.org/10.1093/ofid/ofad495
BMJ - 10/18/2023 - Rosuvastatin vs atorvastatin treatment in adults with CAD	• 4341 of the 4400 participants (98.7%) completed the trial. Mean daily dose of study drugs was 17.1 mg (standard deviation (SD) 5.2 mg) in the rosuvastatin group and 36.0 (12.8) mg in the atorvastatin group at three years (P<0.001). • **primary outcome** was a three-year composite of all cause death, myocardial infarction, stroke, or any coronary revascularization. • **Secondary outcome**s were safety endpoints: new onset diabetes mellitus; hospital admissions due to heart failure; deep vein thrombosis or pulmonary thromboembolism; endovascular revascularization for peripheral artery disease; aortic intervention or surgery; end stage kidney disease; discontinuation of study drugs owing to intolerance; cataract surgery; and a composite of laboratory detected abnormalities • The primary outcome occurred in 189 participants (8.7%) in the rosuvastatin group and 178 (8.2%) in the atorvastatin group (hazard ratio 1.06, 95% confidence interval 0.86 to 1.30; **P=0.58)**. The mean low-density lipoprotein (LDL) cholesterol level during treatment was 1.8 mmol/L (SD 0.5 mmol/L) in the rosuvastatin group and 1.9 (0.5) mmol/L in the atorvastatin group (P<0.001). • The rosuvastatin group had a higher incidence of new onset diabetes mellitus requiring initiation of antidiabetics (7.2% *v* 5.3%; hazard ratio 1.39, 95% confidence interval 1.03 to 1.87; **P=0.03)** and cataract surgery (2.5% *v* 1.5%; 1.66, 1.07 to 2.58; **P=0.02)**. Other safety endpoints did not differ between the two groups. • Rosuvastatin was associated with lower LDL cholesterol levels but a higher risk of new onset diabetes mellitus requiring antidiabetics and cataract surgery compared with atorvastatin. • https://www.bmj.com/content/383/bmj-2023-075837
JAMA - 10/14/2023 - Cefepime vs	• There were 2511 patients included in the primary analysis (median age, 58 years [IQR, 43-69 years]; 42.7% were female; 16.3% were Non-Hispanic

pip-tazo in adults hospitalized with acute infection	Black; 5.4% were Hispanic; 94.7% were enrolled in the emergency department; and 77.2% were receiving vancomycin at enrollment). • The highest stage of acute kidney injury or death was not significantly different between the cefepime group and the piperacillin-tazobactam group; there were 85 patients (n = 1214; 7.0%) in the cefepime group with stage 3 acute kidney injury and 92 (7.6%) who died vs 97 patients (n = 1297; 7.5%) in the piperacillin-tazobactam group with stage 3 acute kidney injury and 78 (6.0%) who died (odds ratio, 0.95 [95% CI, 0.80 to 1.13], ***P* = .56**). • The incidence of major adverse kidney events at day 14 did not differ between groups (124 patients [10.2%] in the cefepime group vs 114 patients [8.8%] in the piperacillin-tazobactam group; absolute difference, 1.4% [95% CI, −1.0% to 3.8%]). • Patients in the cefepime group experienced fewer days alive and free of delirium and coma within 14 days (mean [SD], 11.9 [4.6] days vs 12.2 [4.3] days in the piperacillin-tazobactam group; odds ratio, 0.79 [95% CI, 0.65 to 0.95]) • risk of acute kidney injury did not differ between cefepime and piperacillin-tazobactam, but neurological dysfunction was more common with cefepime • https://jamanetwork.com/journals/jama/article-abstract/2810592
CID - 3/2023 - Oral vs IV therapy for Endocarditis	• We identified 257 patients with IE treated with IV-only (n = 211) or oral transitional (n = 46) therapy who met study inclusion criteria. Study arms were similar for many demographics; however, the IV cohort was older, had more aortic valve involvement, were hemodialysis patients, and had central venous catheters present. In contrast, the oral cohort had a higher percentage of IE caused by methicillin-resistant *Staphylococcus aureus*. • There was no significant difference between the groups in clinical success at 90 days or last follow-up. • There was no difference in recurrence of bacteremia or readmission rates. However, patients treated with oral therapy had significantly fewer adverse events. Multivariable regression adjustments did not find significant associations between any selected variables and clinical success across treatment groups • These results demonstrate similar outcomes of real-world use of oral vs IV-only therapy for IE • https://doi.org/10.1093/cid/ciad119