Background
Peanuts and tree nuts remain the leading cause of food-related anaphylaxis fatalities worldwide. Since the Learning Early about Peanut Allergy (LEAP) study was published in 2015, the National Institute of Allergy and Infectious Diseases (NIAID) came out with addendum guidelines in 2017 for early peanut introduction based on whether an infant has risk factors of severe eczema and/or egg allergy.

Methods
Two cohorts of infants aged 4-11 months within Kaiser Permanente Southern California were compared, from 2017 to 2019. The electronic medical record (EMR) was used to identify those with early-onset moderate-severe eczema and/or egg allergy. Given the presence of risk factors, source documents were reviewed to determine the proportion of infants managed per standard of care according to the NIAID guidelines. The rates of screening with serum peanut IgE (sIgE), peanut skin prick tests (SPT), allergy referral, and oral food challenges (OFC) were compared.

Results
For infants with early-onset moderate-severe eczema, the odds of receiving standard of care was 6.6 times higher in 2019 than 2017 (P-value <0.0001, Figure 1). All infants with both early-onset moderate-severe eczema and egg allergy were managed per standard of care, as compared to 87.8% in 2019 (P-value 0.018).

From 2017 to 2019, there were statistically significant increases in rates of screening with serum peanut IgE (5.9% to 25%), peanut SPT (5.9% to 18.4%), and allergy referrals (7.1% to 45.6%) in infants with early-onset moderate-severe eczema; and rates of allergy referrals (33.3% to 70%) for infants with egg allergy (Figure 2).

Although not statistically significant, rates of allergy referrals remained high in infants with both risk factors and in peanut-allergic infants without risk factors. Rates of peanut OFCs remained low over time, with the highest (19.5%) in infants with both risk factors.

Discussion
Pediatricians are recognizing eczema as a risk factor for peanut allergy, but not egg allergy. The majority of “gap in care” cases were not due to inappropriate care but rather due to omission of counseling. Eczema was over-coded by physicians about 20% of the time and >50% of generic “food allergy” coding was actually “egg allergy.” Thus, the lack of accuracy in physician coding limits the utility of screening through the EMR for LEAP-albe infants.

Conclusion
Pediatricians and allergists are practicing more standard of care per the NIAID guidelines for infants with early-onset moderate-severe eczema, with higher rates of screening tests, but there has not been a significant change in practice in infants with egg allergy only or those with both risk factors.

References: