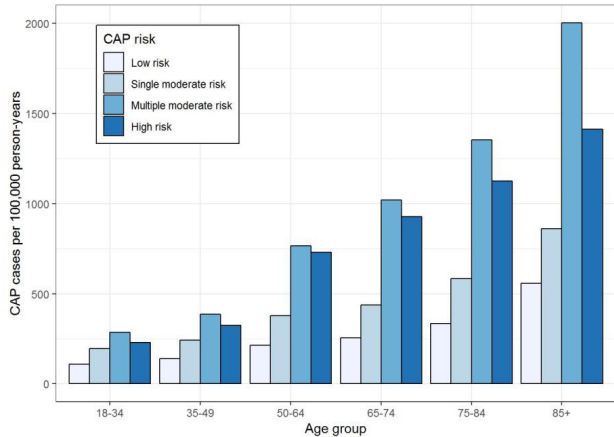


Table

Age	CAP Cases	Patient Years	CAP cases / 100,000 person years (95% CI)	Prevalence (%), one moderate-risk condition	Prevalence (%), >1 moderate-risk condition	Prevalence (%), high-risk condition
18-34	1,303	914,155	143 (135- 150)	20.1	6.2	3.5
35-49	2,962	1,432,931	207 (199- 214)	25.5	10.4	8.0
50-64	11,267	2,486,250	453 (445- 462)	26.3	20.1	16.5
65-74	13,328	2,126,508	627 (616- 637)	26.2	19.1	26.7
75-84	5,292	669,266	791 (770-812)	22.8	11.5	36.0
85+	3,196	301,995	1058 (1022-1096)	18.6	6.3	41.8

Figure



Conclusion: Age-adjusted analysis revealed that the greatest burden of CAP occurs in patients with > 1 moderate-risk condition, even compared to those with a high-risk condition. Our analysis of CAP based on national VHA data suggest that additional preventative health measures directed at individuals older than 50 years with > 1 moderate-risk condition may help to reduce the burden of CAP and limit its morbidity and mortality.

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1500. Population-based incidence, health care resource utilization and cost among children < 5 years of age hospitalized with RSV, Utah

Krow Ampofo, MBChB¹; Yoonyoung Choi, PhD, MS, RPh²; Evan G. Heller, BSc¹; Alexander G. Platt-Koch, Bachelor of Science³; Per H. Gesteland, MD, MSC³; Lazarus Adua, PhD¹; Lyn Finelli, DrPH, MS⁴; ¹University of Utah, Salt Lake City, Utah; ²Merck, Philadelphia, Pennsylvania; ³University of Utah School of Medicine, Oak Park, Illinois; ⁴Merck & Co., Inc., Kenilworth, NJ

Session: P-68. Respiratory Infections - Viral

Background. Respiratory Syncytial Virus (RSV) is one of the most common causes of childhood lower respiratory tract infection (LRTI) worldwide. Accurate data are critical to inform the rationale for RSV vaccine and immunoprophylaxis development. We evaluated the burden of laboratory-confirmed RSV from hospitalized children.

Methods. During the 2019-2020 RSV season, we prospectively identified children < 5 years of age hospitalized with laboratory-confirmed RSV LRTI at Primary Children's and Riverton hospitals in Salt Lake City, Utah. Outcomes included Salt Lake county RSV hospitalization rates, adjusted for market share, health care resource utilization including intensive care unit (ICU) stays, mechanical ventilation, length of stay (LOS), and total hospital costs.

Results. A total of 284 children had laboratory-confirmed RSV LRTI hospitalizations during the 2019-2020 RSV season: 106 (37%) < 6 months of age; 67 (24%) had high-risk medical conditions (HMC); 70 (25%) children had an ICU stay; 18 (6%) required mechanical ventilation; 132 (46%) received antibiotics and median hospital

LOS of 2.3 days (IQR 1.6- 3.6). Population-based incidence rates of RSV hospitalization were 4.6/1000 (range 0.7/1000 to 17/1000). The highest rates were in children < 6 months, and rates decreased with increasing age. The mean hospital cost was \$12,974.6 (standard deviation: \$19869.7), with a total for the cohort was \$3.7 million; 42% was accounted for by children < 6 months. Median age of children with HMC's were significantly older (18.7 mon vs. 12.7 mon; p=0.001) than healthy, but comparable mean hospital cost (\$14208.5 vs. 12593.2) and median hospital LOS (2.4 vs. 2.3).

Conclusion. Hospitalized RSV LRTI among children < 5 years remains significant, and is associated with substantial HCRU, antibiotic use and morbidity. Nationwide, the mean hospital costs may total \$1.1 billion. Our data support the need for RSV vaccines and immunoprophylaxis to prevent RSV hospitalization.

Disclosures. Krow Ampofo, MBChB, Merck (Grant/Research Support) Yoonyoung Choi, PhD, MS, RPh, Merck (Employee) Lyn Finelli, DrPH, MS, Merck & Co Inc, (Employee)

1501. Pragmatic Assessment of Influenza Vaccine Effectiveness in the DoD (PAIVED): Updates from Year 2 of multi-site trial

Stephanie A. Richard, PhD¹; Timothy Burgess, MD, MPH²; Timothy Burgess, MD, MPH²; Limone Collins, MD³; Rhonda Colombo, MD, MHS⁴; Anuradha Ganesan, MBBS, MPH⁵; Casey Geaney, MD⁶; David Hrnrcir, MD⁷; Tahaniyat Lalani, MBBS⁸; Ana E. Markelz, MD⁹; Ryan C. Maves, MD¹⁰; Bruce McClenathan, MD, FACR,FAAAAI¹¹; Katrin Mende, PhD¹²; Jitendrakumar Modi, MD¹³; Jay R. Montgomery, MD¹⁴; Christina Schofield, MD¹⁵; Srihari Seshadri, MBBS, MPH¹⁶; Catherine Skerrett, MSN, FNP, RN¹⁷; Christina Spooner, MS¹⁸; Gregory Utz, MD¹⁸; Tyler Warkentien, MD, MPH¹⁹; Christian L. Coles, PhD²⁰; ¹IDCRP, Rockville, Maryland; ²Infectious Disease Clinical Research Program, Bethesda, MD, Bethesda, Maryland; ³Immunization Health Branch, Defense Health Agency Bethesda, MD, Falls Church, VA, San Diego, CA, Falls Church, VA; ⁴Madigan Army Medical Center, Tacoma, WA, Infectious Disease Clinical Research Program, Bethesda, MD, and Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., Bethesda, MD, Tacoma, Washington; ⁵Infectious Disease Clinical Research Program and the Henry M. Jackson Foundation for the Advancement of Military Medicine and Walter Reed National Military Medical Center, Bethesda, Maryland; ⁶Walter Reed National Military Medical Center, Bethesda, MD; ⁷Lackland Air Force Base & Carl R. Darnall Army Medical Center, San Antonio, Texas; ⁸Infectious Disease Clinical Research Program, Bethesda, MD, The Henry M. Jackson Foundation, Bethesda, MD, and Naval Medical Center Portsmouth, VA, Portsmouth, Virginia; ⁹Brooke Army Medical Center, Fort Sam Houston, Texas; ¹⁰Naval Medical Center San Diego, San Diego, CA and Infectious Disease Clinical Research Program, Bethesda, MD, San Diego, California; ¹¹Womack Army Medical Center, Fort Bragg, NC 28310, Fort Bragg, North Carolina; ¹²Infectious Disease Clinical Research Program, Bethesda, MD, The Henry M. Jackson Foundation, Bethesda, MD, and Brooke Army Medical Center, Fort Sam Houston, TX, San Antonio, TX; ¹³NHC Annapolis, Annapolis, Maryland; ¹⁴Defense Health Agency, Vienna, Virginia; ¹⁵Madigan Army Medical Center, Tacoma, WA, Tacoma, Washington; ¹⁶Immunization Health Branch, Defense Health Agency, Falls Church, VA; ¹⁷Lackland Air Force Base, San Antonio, Texas; ¹⁸Naval Medical Center San Diego, Infectious Disease Clinical Research Program, Bethesda, MD, and Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., Bethesda, MD, San Diego, California; ¹⁹Naval Medical Center Portsmouth, Portsmouth, VA, Portsmouth, VA; ²⁰Infectious Disease Clinical Research Program, Bethesda, MD, The Henry M. Jackson Foundation, Bethesda, MD, Bethesda, MD

Session: P-68. Respiratory Infections - Viral

Background. Despite nearly universal influenza vaccination for active duty military personnel, breakthrough influenza infections occur. We are reporting on the second year of the Pragmatic Assessment of Influenza Vaccine Effectiveness in the DoD (PAIVED), comparing three FDA-licensed influenza vaccine types (egg-based, cell -based, and recombinant) to assess differences in immunogenicity and effectiveness.

Methods. Participants in the second year of PAIVED were enrolled from Oct 2019 through Jan 2020 at 9 military facilities. Participants received weekly inquiries about influenza-like-illnesses (ILI) experienced in the past week, and if the participant reported having a cough or sore throat and a) muscle/body aches or fatigue and/or b) being feverish or having chills, they were scheduled for a clinic visit. During this visit, a blood sample and a nasal swab were collected, as well as information about symptom duration and severity. A second (convalescent) visit was conducted approximately 4 weeks later, which involved collecting additional information about the duration of symptoms and illness burden, as well as a second blood draw. Due to the COVID-19 pandemic, acute and convalescent visits were disrupted at most sites in March and April due to COVID-19 precautions.

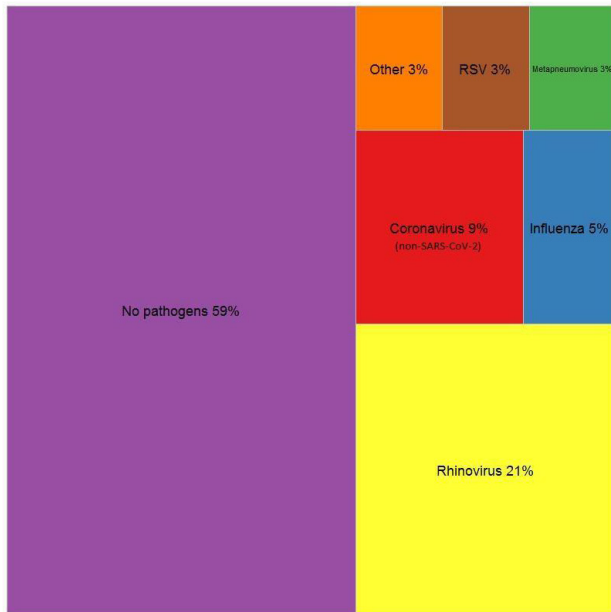
Results. PAIVED year 2 enrolled 5,892 participants who completed demographic forms (Table 1). Among those who reported any ILIs, most reported one ILI (1,345), while 264 reported two ILIs, and 42 reported three ILIs. Nasal swabs were processed

from 273 ILIs at four sites (Fig 1), and 14 cases of influenza were identified thus far. The median duration of ILIs was ten days, with a median of three days of limited activity, and two days with fever. Nine individuals were hospitalized.

Table 1. Demographic characteristics of individuals enrolled in PAIVED 2019/20

Variable	Value	
Age group	18-24	2270 (38.5%)
	25-34	1455 (24.7%)
	35-44	863 (14.6%)
	45-54	574 (9.7%)
	55-64	449 (7.6%)
	65+	235 (4%)
Sex: Female	1821 (30.9%)	
Race/ethnicity	White	3473 (58.9%)
	Hispanic	1113 (18.9%)
	Black	666 (11.3%)
	Asian	362 (6.1%)
	Other	278 (4.7%)
Education	High school	2765 (46.9%)
	Associate degree	862 (14.6%)
	Bachelor degree	1007 (17.1%)
	Higher degree	1221 (20.7%)
Military status	Active duty	3896 (66.1%)
	Retired military	714 (12.1%)
	Dependent	698 (11.8%)
	Recruit	571 (9.7%)
DoD affiliation	Army	2526 (42.9%)
	Navy	1763 (29.9%)
	Air Force	903 (15.3%)
	Marines	631 (10.7%)
	Coast Guard	22 (0.4%)
	Other	47 (0.8%)

Figure 1. Lab results as of 5/15 (N=273 samples)



Conclusion: Over 25% of participants reported an ILI, and 5% of the nasal swabs that have been tested thus far have been positive for influenza. While most samples

have not yet been analyzed, we have identified some breakthrough cases of influenza among vaccinated participants. Planned analyses include comparative vaccine effectiveness in order to inform future vaccine purchasing decisions.

Disclaimer

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The authors have no conflict of interest to disclose.

The investigators have adhered to the policies for protection of human subjects as prescribed in 45CFR46.

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1502. Psychological Stress and Anxiety among Parents of Children Younger than 5 Years Hospitalized with RSV

Krow Ampofo, MBChB¹; Yoonyoung Choi, PhD, MS, RPh²; Evan G. Heller, BSc¹; Alexander G. Platt-Koch, Bachelor of Science³; Per H. Gesteland, MD, MSc⁴; Lazarus Adua, PHD¹; Lyn Finelli, DrPH, MS⁴; ¹University of Utah, Salt Lake City, Utah; ²Merck, Philadelphia, Pennsylvania; ³University of Utah School of Medicine, Oak Park, Illinois; ⁴Merck & Co., Inc., Kenilworth, NJ

Session: P-68. Respiratory Infections - Viral

Background. Respiratory Syncytial Virus (RSV) is one of the most common causes of childhood lower respiratory tract infection (LRTI) worldwide. While financial burdens have been documented, there are few data on parental psychological stress associated with RSV hospitalizations. We evaluated the psychological stress and anxiety of parents whose children were hospitalized with RSV.

Methods. During the 2019-2020 RSV season, parents with children < 5 years of age hospitalized with laboratory-confirmed RSV LRTI at Primary Children's and Riverton Hospitals in Salt Lake City, Utah, were surveyed in person, and online after discharge. As part of the survey, parents completed the State-Trait Anxiety Inventory for Adults (STAIAD) instrument (short form) and the parental stressor scale (PSS). We evaluated the difference in parental stress and anxiety reported during hospitalization and at 2-weeks post-discharge using a paired t-test.

Results. Among 284 Salt Lake County resident children < 5 years, and hospitalized with RSV LRTI, 75 (26%) and 57 (20%) parents completed both surveys on admission and at 2-weeks post-discharge respectively. In 11 of 20 STAIAD items gauging stress and anxiety, parents reported higher levels of stress and anxiety whilst their children were admitted compared to post-discharge (Table 1). Parents' average score on several items associated with a "positive outlook," e.g. I feel calm, significantly improved (p < 0.05) at 2-weeks post-discharge. Similarly, several items associated with a "negative outlook," e.g. I am worried, significantly decreased (p < 0.05) at 2-weeks post-discharge (Table 1). For the PSS items, ≥ 50% of parents rated 15 out of 25 as being "very or extremely stressful", including: feeling helpless about how to help my baby; my baby's unusual or abnormal breathing; and when my baby seemed to be in pain (Table 2).

Estimates of Psychological Burden of RSV lower respiratory tract infection (LRTI) Hospitalization of Children <5 Years of Age on Parents: State-Trait Anxiety Inventory for Adults (STAIAD)

STAIAD Item	During Admission		Post-Discharge		Difference in Mean: During Adm.-Post-Adm.		Significance Probability
	N	Mean	Std. Dev.	Mean	Std. Dev.	t	
<i>Positive outlook</i>							
I feel calm	55	2.582	0.134	2.891	0.121	-0.309	-2.388 0.021*
I feel at ease	55	2.145	0.148	2.509	0.132	-0.364	-1.995 0.051
I am relaxed	55	2.145	0.136	2.564	0.132	-0.418	-3.460 0.001**
I feel steady	55	2.582	0.134	2.600	0.136	-0.018	-0.116 0.908
I feel satisfied with myself	56	2.554	0.142	2.893	0.134	-0.339	-2.024 0.048*
I am a steady person	56	3.304	0.105	3.054	0.121	0.250	1.846 0.070
<i>Negative outlook</i>							
I am tense	56	2.393	0.139	1.911	0.126	0.482	2.886 0.006**
Worry over misfortunes	56	2.429	0.159	2.375	0.152	0.054	0.296 0.768
I feel frightened	56	1.946	0.147	1.554	0.122	0.393	2.657 0.010*
I feel nervous	56	2.446	0.139	1.857	0.126	0.589	3.763 0.000***
I feel jittery	56	1.714	0.141	1.446	0.114	0.268	1.764 0.083
I am worried	56	2.804	0.133	2.250	0.128	0.554	4.267 0.000***
I feel nervous and restless	56	2.446	0.159	1.786	0.129	0.661	4.366 0.000***
Wish I could be happy as others	53	1.642	0.135	1.585	0.116	0.057	0.344 0.733
I feel like a failure	55	1.491	0.116	1.382	0.102	0.109	0.864 0.391
Worry things that don't matter	53	2.075	0.152	1.774	0.119	0.302	2.532 0.014*
I lack self-confidence	56	1.554	0.102	1.339	0.089	0.214	2.271 0.027*
I feel insecure	55	3.309	0.116	2.945	0.128	0.364	2.631 0.011*
I feel inadequate	55	1.673	0.130	1.491	0.110	0.182	1.428 0.159
I get in state of tension and turmoil	53	2.075	0.150	1.962	0.126	0.113	1.000 0.322

Note on significance probabilities: *p<0.05; **p<0.01; ***p<0.001.