

2020 UNTHSC Conclave Resident Poster Session Form

To submit and present your poster at the 2020 UNTHSC TCOM Educational Conclave,
you must return both pages of this document.

1. On this Page:

Fill in the following information

*Please be sure to include all relevant information and titles of all associated participants

Main Contact:

Position: Resident Faculty Administrator/Coordinator

Catagory: Clinical Research Educational Research Case Report

Email: Ashleigh.workman@medicalcityhealth.com

Include main contact email to receive information about Conclave and the Poster session

Additional Authors: *(add additional page if needed)*

Ashleigh Workman, DO¹; Josh Lindsley, MS-III²; Nathaniel Webb, BS³; Thaddeus Miller, DrPH, MPH⁴; Erica Stockbridge, PhD⁴; Jean Charles, DO¹; Michael Carletti, DO¹; Stephen Weis, DO¹

Institutional Affiliation: ¹Medical City Weatherford, Weatherford Texas; University of North Texas Health Science Center, Fort Worth Texas; ²The University of North Texas Health Science Center, Texas College of Osteopathic Medicine, Fort Worth, Texas; ³Department of Biostatistics and Epidemiology, School of Public Health, University of North Texas Health Science Center, Fort Worth, Texas; ⁴Department of Health Behavior & Health Systems, School of Public Health, University of North Texas Health Science Center, Fort Worth, Texas

Faculty Advisor: Stephen Weis, DO

Program Director: Stephen Weis, DO

2. On the Next Page:

Fill in all of the information for your abstract on the following page.

This abstract will be published in the proceedings

This abstract will be provided to the judges a week before the poster session. Judges will ask you questions about your research.

Please keep the font at 10 Calibri

There is not a maximum or minimum word count, however, **your abstract is limited to one page.**

Poster information will follow when an abstract submission is accepted

** Please be sure all information on the final abstract submission is correct. We will make no changes to your document.

The Effect of Providing Immunization Education and Immediate Immunization during Specialty Care on Pneumococcal Vaccination Uptake in Patients Receiving Immunosuppressive Therapy

First Author: Ashleigh Workman, DO¹

Institutional Program: ¹Medical City Weatherford

Additional Authors & Affiliations: Josh Lindsley, MS-III²; Nathaniel Webb, BS³; Thaddeus Miller, DrPH, MPH⁴; Erica Stockbridge, PhD⁴; Jean Charles, DO¹; Michael Carletti, DO¹; Stephen Weis, DO¹

University of North Texas Health Science Center (UNTHSC), Fort Worth, TX;² UNTHSC, Texas College of Osteopathic Medicine, Fort Worth, TX;³ Department of Biostatistics & Epidemiology, School of Public Health (SPH), UNTHSC, Fort Worth, TX;⁴ Department of Health Behavior & Health Systems, SPH, UNTHSC, Fort Worth, TX

BACKGROUND/INTRODUCTION:

Immunosuppressive therapies increase the risk of infections at least 2-fold when compared to naive individuals (1-2). Persons with autoimmune diseases often do not receive recommended immunizations, with immunization rates ranging from 35-65% for seasonal flu and pneumococcal vaccinations (3). Factors positively influencing vaccination include receiving a prescription from a clinician and knowledge of vaccines. Negative influences include a lack of recommendation from the treating clinician. Failure to vaccinate can occur by overlooking indication and an uncertainty as to who is responsible for vaccination (4-6). Since the early 2000's, vaccinations have been offered in pharmacies (7). This could potentially result in additional confusion as to responsibility for vaccination. As a result of not being immunized patients on immunosuppressive medications experience higher rates of preventable infections (8-9). We observed that many of our patient's immunizations were incomplete and sought to increase immunization uptake through a quality improvement (QI) project beginning in Fall 2019. We evaluated the project's approach of providing patient education coupled with immediate onsite immunization availability relative to standard care to determine if vaccination uptake per CDC guidelines (10) can be increased.

METHODOLOGY:

We compared acceptance of recommended pneumococcal immunization for patients on immunosuppressive therapy who were and were not subject to the QI project in two different dermatology clinics. Those who had never received the PCV13 or PPSV23 vaccination were defined as unimmunized. Persons who had received either of these vaccinations were defined as partially immunized. Persons who had received both of these vaccinations were defined as completely immunized. We collected simple demographics and immunization status for all patients and compared acceptance rates for patients who were and were not subject to the QI approach. We used Chi-square tests to evaluate differences in proportions using SAS v9.4 software [Cary, NC, USA].

RESULTS:

Patients subject to the QI intervention (N=146) were similar to those who were not (N=55), both in terms of gender and in immunizations prior to the project's initiation. At baseline, immunization rates of the intervention and control groups did not differ significantly; the control group was fully, partially, and unimmunized at rates of 18.2%, 16.4%, and 65.5%, respectively, while the intervention group had immunization rates of 13.0%, 17.8%, and 69.2%, respectively [$X^2=0.87$, $p=0.65$]. Patients subject to the QI approach accepted pneumococcal immunization at a much higher rate than those who were not (106/127 or 83.5% vs. 0/45 or 0%; $X^2=97.8812$, $p<0.0001$). After the QI project the immunization rates of the intervention and the control groups differed significantly [$X^2=55.73$, $p<0.001$]. While the control group's immunization rates were unchanged from baseline, post-intervention 36.3%, 50.7%, and 13.0% of the intervention group were fully, partially, and unimmunized, respectively.

CONCLUSION/DISCUSSION:

Providing patient education with immediate vaccination in a specialty clinic increased uptake of recommended immunizations. Use of this practice could reduce vaccine preventable illness and improve population health.

REFERENCES:

- 1) Gluck, T. and U. Muller-Ladner (2008). "Vaccination in patients with chronic rheumatic or autoimmune diseases." *Clin Infect Dis* 46(9): 1459-1465.
- 2) Doran, M. F., et al. (2002). "Frequency of infection in patients with rheumatoid arthritis compared with controls: a population-based study." *Arthritis Rheum* 46(9): 2287-2293.
- 3) Bonhomme, A., et al. (2017). "Vaccination status in psoriasis patients on immunosuppressant therapy (including biologics)." *Ann Dermatol Venereol* 144(2): 92-99.
- 4) Lejri-Ei Euchti, H., et al. (2019). "Vaccination against influenza and pneumococcal infections in patients with autoimmune disorders under biological therapy: Coverage and attitudes in patients and physicians." *Eur J Intern Med*.
- 5) Brocq, O., et al. (2016). "Influenza and pneumococcal vaccine coverage in 584 patients taking biological therapy for chronic inflammatory joint: A retrospective study." *Joint Bone Spine* 83(2): 155-159.
- 6) Hua, C., et al. (2015). "Reasons for non-vaccination in French rheumatoid arthritis and spondyloarthritis patients." *Rheumatology (Oxford)* 54(4): 748-750.
- 7) Hogue MD, et al. (2003). "Pharmacist involvement with immunizations: a decade of professional advancement." *J Am Pharm Assoc* 46(2): 168-79.
- 8) Her, M. and A. Kavanaugh (2016). "Alterations in immune function with biologic therapies for autoimmune disease." *J Allergy Clin Immunol* 137(1): 19-27.
- 9) van Aalst, M., et al. (2018). "Incidence of invasive pneumococcal disease in immunocompromised patients: A systematic review and meta-analysis." *Travel Med Infect Dis* 24: 89-100.
- 10) Rubin, L. G., et al. (2014). "2013 IDSA clinical practice guideline for vaccination of the immunocompromised host." *Clin Infect Dis* 58(3): 309-318.

Your Abstract submission is **limited to this one page only** (approximately 400 words).

Only this page will be included in the printed proceedings and judging packets.

Please be sure to correct any errors before final submission.