An Implementation Project to Improve Provider Review and Recommendation of Immunizations in Adult Patients with Psoriasis Receiving Biologic Therapy

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Background and Significance

Psoriasis
- Autoimmune skin disorder
- Associated with painful and debilitating psoriatic arthritis

Biologic Therapy
- Effectively treats autoimmune disorders through immunosuppression
- Leave patients at risk for infection

Pneumonia
(Wine-Lee, et al., 2013) (CDC, 2014)

Herpes zoster

National Psoriasis Foundation (NPF) Abbreviated Guidelines

- Effectively treats autoimmune disorders through Biologic Therapy
- Immunosuppression

Materials
- Vaccine questionnaire which served as a provider reminder
- Vaccine recommendation time
- Educational handout

Procedure
- Protection of human subject approval
- Education of providers and staff
- Implementation of patient questionnaire which served as a provider reminder
- Data collection

Procedure
- Description on the way vaccinate
- Education on the way vaccination
- Description of patients who received vaccination
- Description of patients who received vaccination

Design and analysis
- Description of the way vaccinate
- Description of patients who received vaccination
- Description of patients who received vaccination

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Vaccination Educational Handout

Patient Name: ___________________________DOB: ___________________________

Have you received the following immunizations? If so, when and where?

Influenza
- No / Yes / Not sure
- Date: ___________________________
- Where: ___________________________

Pneumonia
- No / Yes / Not sure
- Date: ___________________________
- Where: ___________________________

Herpes Zoster/Shingles
- No / Yes / Not sure
- Date: ___________________________
- Where: ___________________________

Reviewed by Provider: ___________________________ (MD or ARNP) Date: ___________________________

Limitations
- Short duration of study
- Small sample size

Findings

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<th>Post-intervention</th>
<th>p-value</th>
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<td>Pneumonia warrant of pneumococcal</td>
<td>n = 0 0%</td>
<td>n = 1 0.05%</td>
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<td>Vaccine</td>
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<td>Provider recommendation of pneumococcal vaccine</td>
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Further research is needed in the following areas:
- Assessment of patient follow-up with vaccine recommendations
- Assessment of other populations using biologic therapy

Conclusion

- Need for immunization review prior to start of biologic therapy
- Several patients were found to have previously received the vaccines or were not clinically appropriate to receive vaccines due to immunocompromised status

Selected References

Acknowledgments
- None

Research Questions

Did provider documentation indicating review of immunization status, prior to initiating the biologic, increase after implementation of the questionnaire?

Did provider documentation indicating review and recommendation of the live attenuated herpes zoster vaccine, prior to initiating the biologic, increase after implementation of the questionnaire?

Did provider documentation indicating review and recommendation of the influenza vaccine, prior to initiating the biologic, increase after implementation of the questionnaire?

Did provider documentation indicating recommendation of the pneumonia vaccine, prior to initiating the biologic, increase after implementation of the questionnaire?

Recommended for Practice

Reminder tool is effective for improving provider review of immunizations

Discussion

Several factors contributed to the findings in this study (9-15):
- Patient questionnaire was placed in 2 charts (n = 2)
- Upon completing the questionnaire, several patients had previously received vaccines, making recommendation unnecessary
- Influenza (n = 1)
- Pneumococcal Vaccine (n = 1)
- Herpes Zoster Vaccine (n = 1)
- Several patients were currently receiving biologics where vaccination was contraindicated (n = 1)

Conclusion

- Patients with psoriasis taking biologic agents are immunosuppressed. Providers must be vigilant in reviewing immunization history in order to make appropriate recommendations.
- Use of a patient questionnaire might also be helpful in initiating more timely conversation between patient and provider about necessary immunizations prior to the start of biologic therapy

Selected References

Acknowledgments
- None

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- None