Knock Out Pneumococcal Disease
Hard to say it; easy to get vaccinated

Improving Pneumococcal Vaccination Rates In The Era of Electronic Medical Records

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Aim To Increase the percentage of pneumococcal vaccine prescribed for Diabetic patients visiting HGH National Diabetic Centre (NDC) from 5% to 50 % starting 01 Nov 2016 to 30 June 2017

Background- Patients with diabetes have a deranged immune system making them more prone for infections. Hospitalization and death due to pneumococcal disease and influenza are higher in diabetes patients. They, like other healthy individuals, have a normal humoral response to vaccination with clinically significant benefits. The American Diabetes Association, , World Health Organization, United Kingdom Guidelines and a number of other scientific organizations have well defined guidelines for vaccination in diabetes

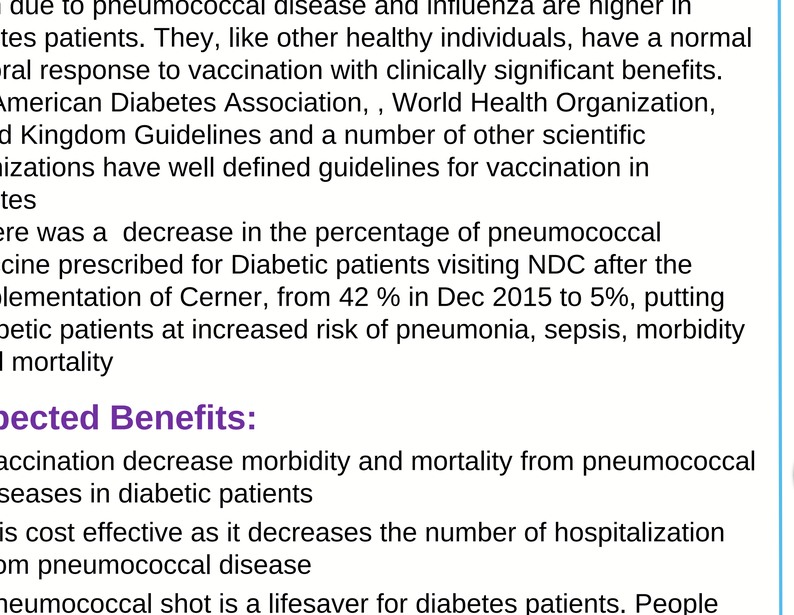
- There was a decrease in the percentage of pneumococcal vaccine prescribed for Diabetic patients visiting NDC after the implementation of Cerner, from 42 % in Dec 2015 to 5%, putting diabetic patients at increased risk of pneumonia, sepsis, morbidity and mortality

Expected Benefits:

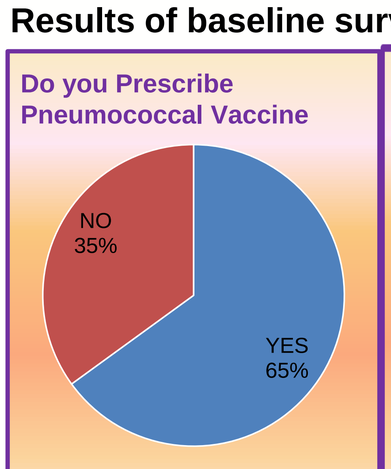
- Vaccination decrease morbidity and mortality from pneumococcal diseases in diabetic patients
- It is cost effective as it decreases the number of hospitalization from pneumococcal disease
- Pneumococcal shot is a lifesaver for diabetes patients. People with diabetes are about 3 times more likely to die with pneumonia.
- A pneumonia shot can also protect diabetes patients against other infections caused by the same bacteria like Bacteremia & meningitis

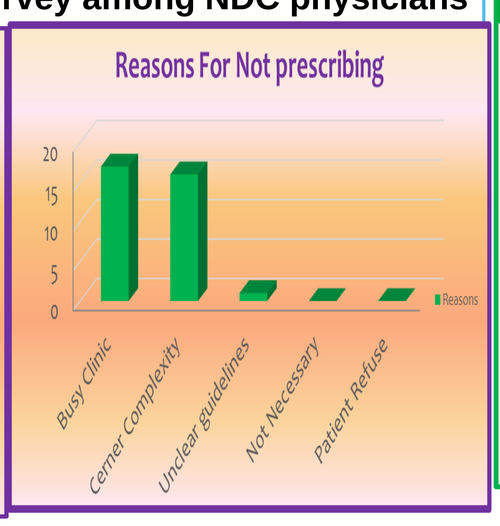
So why not give our patients a simple, safe pneumonia shot ????

Cause And Effect Diagram



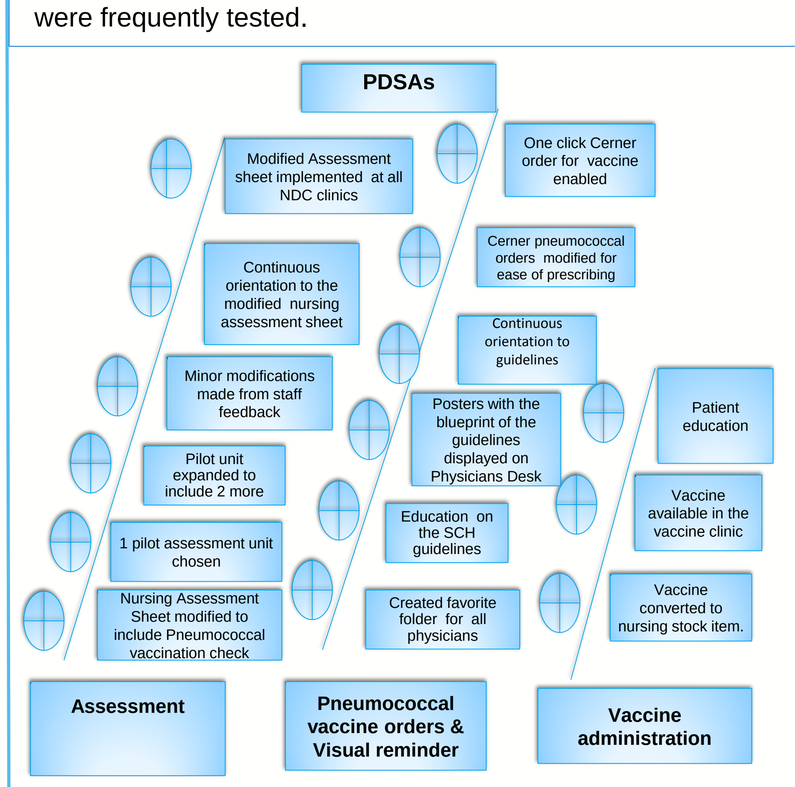
Results of baseline survey among NDC physicians





Methodology

HGH Model for Improvement. Plan-Do-Study-Act (PDSAs) adapted from Institute for Healthcare Improvement's (IHI) were frequently tested.



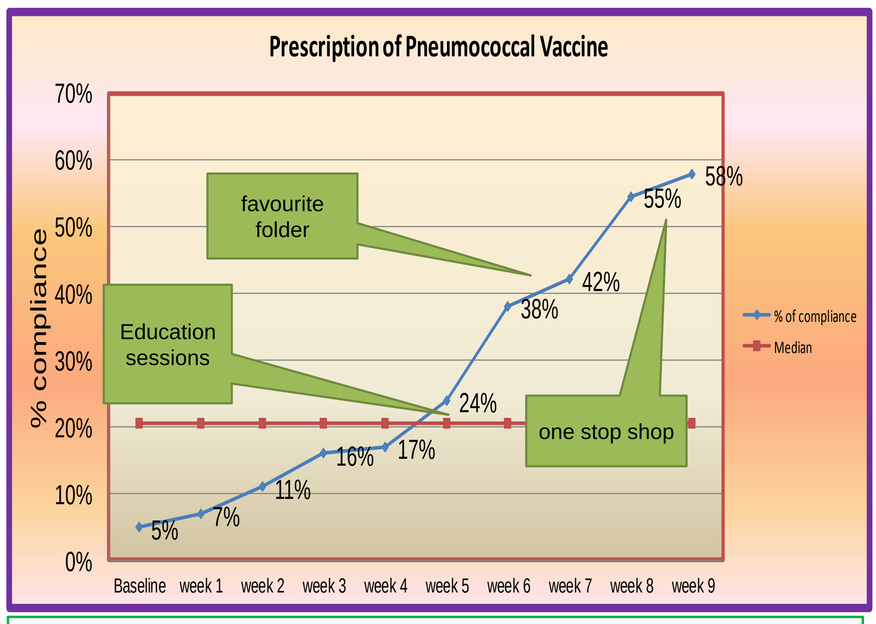
Changes done

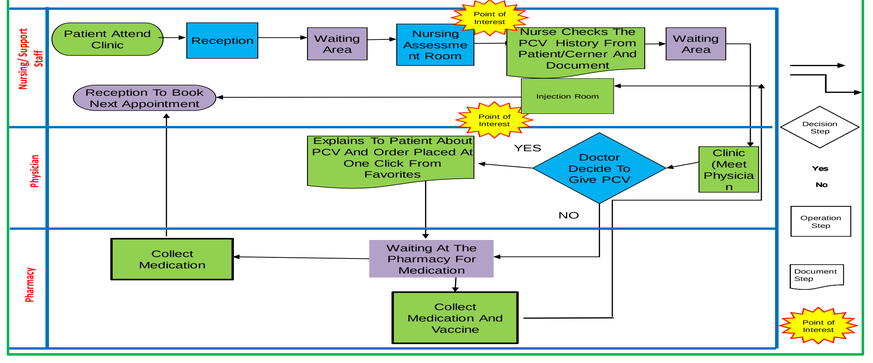
Change Ideas Saving Lives: Integrating Pneumococcal Vaccines for Diabetic patients Into Routine Care

- Conducted Education sessions to all NDC Physicians and Nurses
- Created favorite folder on the desktop for pneumococcal vaccine orders for all NDC physicians
- Awareness Posters with the blueprint of the guidelines displayed on all NDC Physicians Desk for ease of prescribing.
- Nursing Assessment Sheet modified to include Pneumococcal vaccination check.
- Pneumococcal vaccination converted from pharmacy prescription item to Nursing Stock item to realize patient need of one stop shop.

Results

Percentage of pneumococcal vaccine prescribed for Diabetic patients visiting NDC starting 1st Nov 2016 till 31 Dec 2016





Conclusions

- Our baseline data on percentage of prescribed Pneumococcal vaccines was only 5%.
- Formulated interventions based on the results of the survey that was aimed at discovering physicians obstacles in prescribing the vaccine.
- Education, Creating shortcuts/favorites, converting Pneumococcal vaccination from pharmacy prescription item to Nursing Stock item to realize patient need of one stop were some of the interventions.

After implementation of action plans, the compliance rate increased from **5% to 58% in the short span of 8 week**

- Continue increasing target and sustain the improvement
- Our plans are to expand the program beyond the HGH NDC clinic 2017
- The expansion will require resources from beyond the department – we have already begun engaging with senior stakeholders who can make this happen

Next Steps & Sustainability Plan

- Convert Pneumococcal Vaccine as a stock Medication in the Vaccine Clinic led by Nurse
- Vaccination Alert on Cerner
- Recommend Diabetic Education awareness day Once every year.
- Cascade our educational video and Brochures in patient waiting areas at HGH NDC clinics
- Expand the program beyond the HGH NDC clinic
- Improve our compliance and target

References

1/ Tomczyk S, Bennett NM, Stoecker C, Gierke R, Moore MR, Whitney CG, Hadler S, Pilishvili T; Centers for Disease Control and Prevention (CDC).
2/ Grohskopf LA, Sokolow LZ, Broder KR, et al. Prevention and Control of Seasonal Influenza with Vaccines. MMWR Recomm Rep 2016; 65:1.
3/ University of California—Davis. "UC Davis study finds e-medical records have varying effects on productivity." Dec. 2010

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