ACUTE CARE
INPATIENT IMMUNIZATIONS

Jeffrey Silvers, M.D.
Medical Director of Pharmacy and Infection Control
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INPATIENT INFLUENZA IMMUNIZATION

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Influenza Immunization Obstacles

PERCEIVED

- Too sick to be vaccinated at this time.
- Side effects, e.g., fever, can lead to unnecessary extra testing and treatment for infections.

REAL

- Inadequate prior information for vaccine receipt this season.
- Lack of ownership of who orders the vaccine.
- Does the vaccine work?
- Not a priority during acute hospitalization.
- Administration at time of discharge leads to a lot of missed opportunities.

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DAILY INTERDISCIPLINARY ROUNDS

- Comprehensive group that addresses the patient care plan for the day
- Attending Physician, Primary Care Nurse, Charge Nurse, Respiratory Therapy, Pharmacy, Rehabilitation Services, Case Manager, Social Services, Dietary, Palliative Care, Chaplain, Medical Director of Quality
- Patient Presentation
- Nursing Check List
  - This includes immunizations

YEAR	2012	2013	2014	2015	2016
COMPLIANCE	65%	80%	100%	100%	100%

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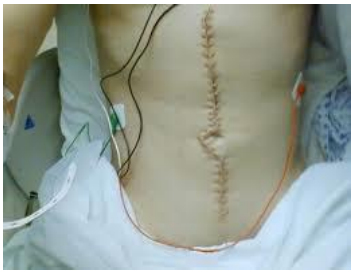

IMMUNIZATIONS FOR PATIENTS WITH ASPLENIA

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THE PROBLEM WITH ASPLENIA

- Complex process for patients, physicians, and pharmacists
- Too many vaccines and doses
- Complex timing
- EPIC software doesn't provide enough tools to make this work

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INPATIENT SPLENECTOMY ORDER SET

- Address the unreliable patient
- Address the partially immunized patient
- Customize discharge instructions

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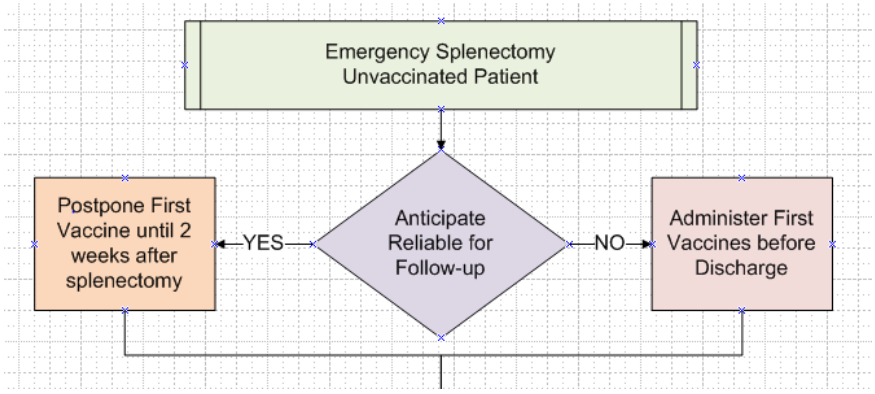

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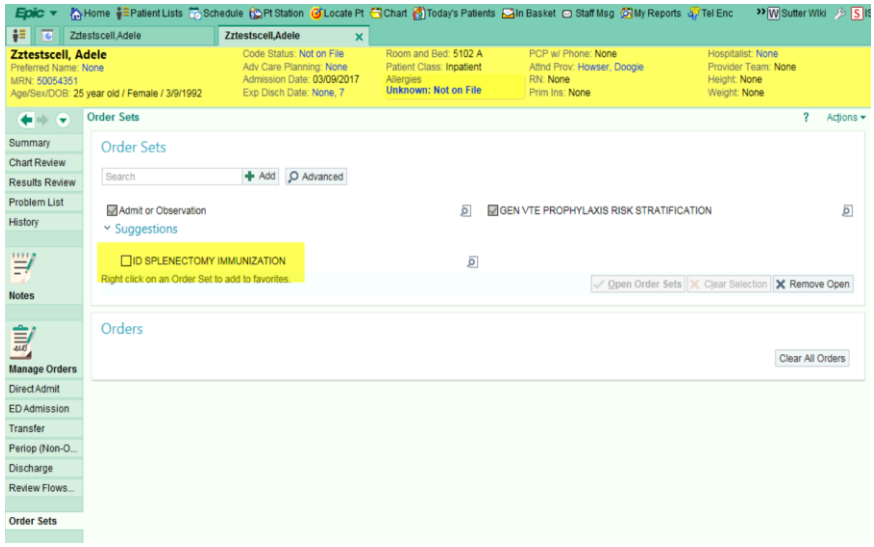
A reminder appears to suggest the splenectomy immunization order set when admitting a patient



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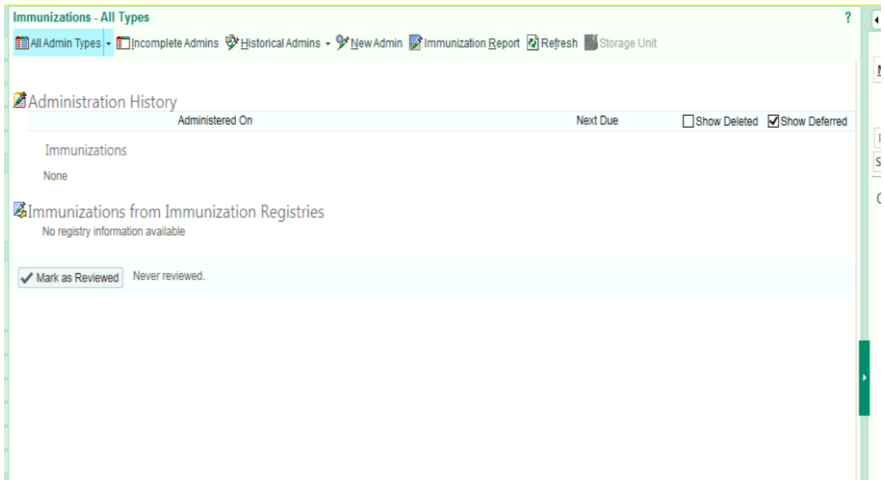
Lots of categories and lots of clicks



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Not user friendly

Order Sets ? Actions

Immunization Recommendations -Text only Collapse

Recommendations for immunizations for planned splenectomy, emergent splenectomy, or functional asplenia (sickle cell disease)

Recommendations for planned splenectomy or functional asplenia (sickle cell disease)

1. **Administer Prevnar 13 (PCV13) if the patient has not been vaccinated previously.** Prevnar should be given either a minimum of 2 weeks before surgery or 2 weeks after surgery.
2. **Administer Pneumovax 23 (PPSV23) if the patient has not been vaccinated previously:**
   a. Administer Pneumovax 23 a minimum of 8 weeks after Prevnar 13.
   b. Repeat the Pneumovax 23 dose in 5 years.
3. **Administer a single dose of Hib conjugate vaccine if the patient has not been vaccinated previously.**
4. **Administer a single dose of polyvalent meningococcal vaccine (Menactra) if the patient has not been previously vaccinated. Administer a 2 dose series of Meningococcal Group B (Bexsero(MenB)) vaccine if the patient has not been vaccinated previously.**
   a. Give the first dose of Menactra and Bexsero(MenB) either a minimum of 2 weeks prior to splenectomy or 2 weeks after splenectomy.
   b. Menactra and Bexsero(MenB) must be given a minimum of 8 weeks after Prevnar 13
   c. Give the second dose of Menactra and Bexsero(MenB) 8 weeks after the first
   d. Repeat the Menactra and Bexsero(MenB) every 5 years
5. **Administer influenza vaccine annually**

Recommendations for emergent splenectomy

1. **Administer Prevnar 13 (PCV13) if the patient has not been vaccinated previously.**
   a. For patients with reliable medical follow-up give Prevnar 13 (PCV 13) 2 weeks after hospital discharge.
   b. For patients with unreliable medical follow-up give Prevnar 13 (PCV 13) prior to discharge.
2. **Administer Pneumovax 23 (PPSV23) if the patient has not been vaccinated previously.**
   a. Administer Pneumovax 23 a minimum of 8 weeks after Prevnar 13 is given.
   b. Repeat the Pneumovax 23 dose in 5 years.
3. If the patient has been previously vaccinated with Prevnar 13 (PCV13) more than 8 weeks ago then:
   a. For patients with reliable medical follow-up give Pneumovax 23 (PPSV 23) 2 weeks after hospital discharge. Repeat Pneumovax 23 in 5 years
   b. For patients with unreliable medical follow-up give Pneumovax 23 (PPSV 23) prior to discharge. Repeat Pneumovax 23 in 5 years.
   c. Repeat the Pneumovax 23 in 5 years
4. **Administer a single dose of Hib conjugate vaccine if the patient has not been vaccinated previously.**
5. **Administer a 2 dose series of meningococcal polyvalent vaccine (Menactra) and Meningococcal Group B (Bexsero(MenB)), if the patient has not been vaccinated previously.**
   a. Menactra and Bexsero(MenB) must be given a minimum of 8 weeks after Prevnar 13 (PCV13)
   b. For patients with reliable medical follow-up , schedule the first doses of Menactra and Bexsero(MenB) 8 weeks after the Prevnar13 (PCV13) is scheduled to be given.
   c. Give the second doses of Menactra and Bexsero(MenB) 8 weeks after the first doses.
   d. Repeat Menactra and Bexsero(MenB) vaccination every 5 years
6. **Administer the influenza vaccine annually**

Reference source: : Rubin, et al. Care of the asplenic patient; NEJM 371; 4: 349-356

- 2013 IDSA Clinical Practice Guidelines for Vaccination of the Immunocompromised Host
- Splenectomy Immunizations Flowchart

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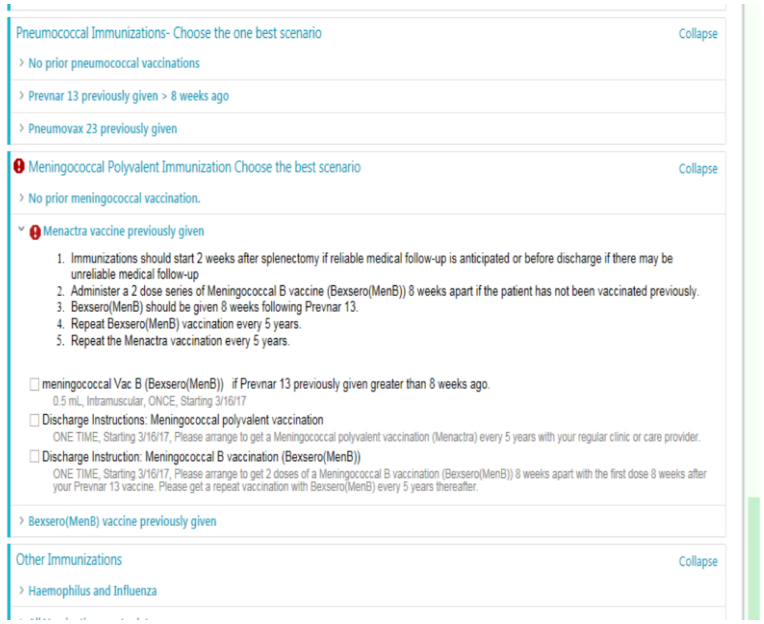

Pneumococcal Immunizations- Choose the one best scenario Collapse

› No prior pneumococcal vaccinations

› Prevnar 13 previously given > 8 weeks ago

› Pneumovax 23 previously given

Meningococcal Polyvalent Immunization Choose the best scenario Collapse

› No prior meningococcal vaccination.

Menactra vaccine previously given

1. Immunizations should start 2 weeks after splenectomy if reliable medical follow-up is anticipated or before discharge if there may be unreliable medical follow-up
2. Administer a 2 dose series of Meningococcal B vaccine (Bexsero(MenB)) 8 weeks apart if the patient has not been vaccinated previously.
3. Bexsero(MenB) should be given 8 weeks following Prevnar 13.
4. Repeat Bexsero(MenB) vaccination every 5 years.
5. Repeat the Menactra vaccination every 5 years.

☐ meningococcal Vac B (Bexsero(MenB)) if Prevnar 13 previously given greater than 8 weeks ago.
0.5 mL, Intramuscular, ONCE, Starting 3/16/17

☐ Discharge Instructions: Meningococcal polyvalent vaccination
ONE TIME, Starting 3/16/17, Please arrange to get a Meningococcal polyvalent vaccination (Menactra) every 5 years with your regular clinic or care provider.

☐ Discharge Instruction: Meningococcal B vaccination (Bexsero(MenB))
ONE TIME, Starting 3/16/17, Please arrange to get 2 doses of a Meningococcal B vaccination (Bexsero(MenB)) 8 weeks apart with the first dose 8 weeks after your Prevnar 13 vaccine. Please get a repeat vaccination with Bexsero(MenB) every 5 years thereafter.

› Bexsero(MenB) vaccine previously given

Other Immunizations Collapse

› Haemophilus and Influenza

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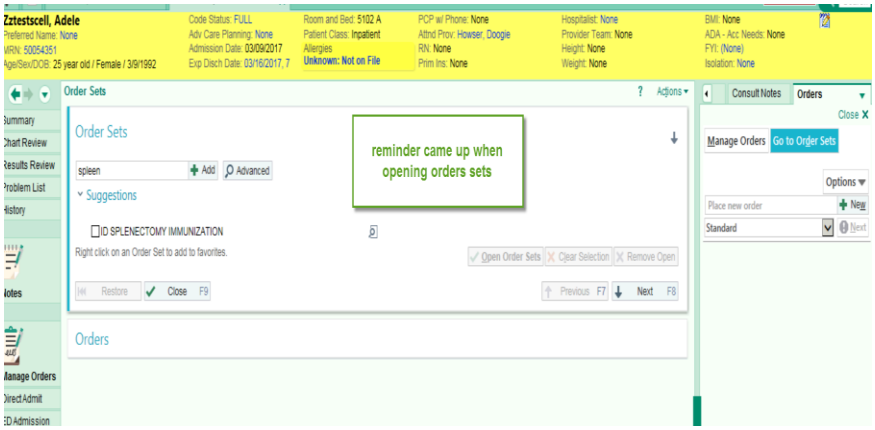
If at first you don't succeed…



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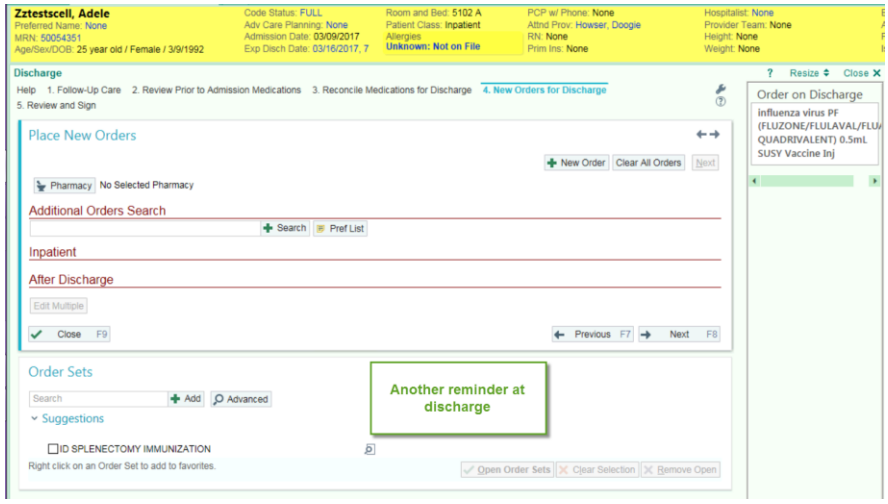
LAST TRY



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TAKE HOME LESSONS AND PEARLS

- A nurse driven protocol for influenza immunization works.
- Calendar Day #1, attempt to obtain immunization history.
- Calendar Day #2, complete history and administer immunization.
- If not completed on that day, keep on daily report until completed.
- Include physicians in discussion on every patient to engage everyone in the process.
- We have not seen administration during hospitalization result in unexpected complications or resource utilization.

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TAKE HOME LESSONS AND PEARLS

- A successful asplenia immunization program will be difficult to complete without:
  - Readily available immunization records in a common data base.
  - Computer software that downloads the information and makes recommendations based on age, diagnoses, previous immunizations and allergies. We need EPIC and other software program developers to assist with this major obstacle.
  - More combination vaccinations.
  - Ideally microneedle patch immunizations or some other painless technology.
  - Simpler immunization algorithms.

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