

Joint Theater Trauma System Clinical Practice Guideline

POST-SPLENECTOMY VACCINATION

Original Release/Approval	30 Mar 2008	Note: This CPG requires an annual review.	
Reviewed:	Oct 2008	Approved:	12 Nov 2008
Supersedes:	Post Splenectomy Vaccination, 31 Mar 08		

1. Goal. All post-splenectomy and functionally asplenic trauma patients in the CENTCOM AOR will receive appropriate and timely vaccination. All vaccinations will be documented in the longitudinal medical record and include date/time of physician order and date/time of administration by nursing personnel.

2. Background. Overwhelming, post-splenectomy sepsis (OPSS) is a rare but devastating complication with a case mortality rate in most studies approaching 50%.¹ OPSS represents a life-long risk, with the incidence in trauma patients estimated to be < 0.5%.² It is estimated that splenectomized individuals are up to 540 times more susceptible to lethal sepsis than the general population.³ The majority of trauma surgeons provide some sort of post-splenectomy vaccination to their patients, although to date, there is no consensus on timing of initial vaccination, vaccination regimen, or future re-vaccination. In 2002, Shatz conducted a survey of trauma surgeons regarding their vaccination practices in post-splenectomy patients. Of 261 active surgeons, 99.2% immunized their splenectomized patients: 1) All but two provided the pneumococcal vaccine, 2) 62.8% advocated the meningococcal vaccination, 3) 72.4% added the Haemophilus influenzae vaccine, and 4) 56.7% gave all three vaccines. The timing of vaccination ranged from the immediate post-operative period to six weeks following surgery.⁴

Within the CENTCOM AOR, > 99% of splenic injuries are managed by total splenectomy. Since these patients are at risk for OPSS, there must be a standardized process to provide post-splenectomy vaccination, accurate documentation, and life-long tracking to identify outcomes.

3. Indications. All splenectomized patients and those deemed to be functionally asplenic (i.e., < 51% normal architecture and/or vascularization in the remaining splenic segment).

4. Dosing.

- a. Streptococcus pneumoniae (23-valent polysaccharide): Single dose.
- b. Haemophilus influenzae B. (Polysaccharide-protein conjugate) By patient age:
 - 1) 2 - 6 months: Three doses + booster
 - 2) 7 - 11 months: Two doses + booster
 - 3) 12 - 14 months: One dose + booster
 - 4) > 15 months: Single dose
- c. Neisseria meningitidis (Quadrivalent): Single dose

5. Timing.

- a. All US forces and all patients for AE to LRMC: Administer all three vaccines in the immediate postoperative period at the first Level III facility. Vaccinations may be given at a Level IIb if they are available. For patients evacuated directly from Level IIb to a Level IV facility, vaccinate at the Level IV facility.

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- b. Host nation and other patients NOT for AE to LRMC: Administer all three vaccines in the immediate postoperative period at the first Level III facility, but no later than the 14th postoperative day.

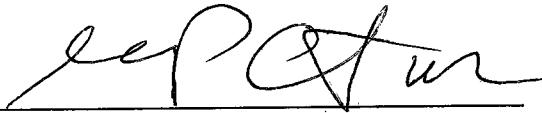
6. Documentation

- a. A dated, timed, and signed physician order for all three vaccines will be documented on the physician order form. Note: If any or all three vaccines are not ordered, there must be clear documentation indicating this, as well as the rationale for why one/more vaccines were not ordered. This facilitates clear communication along the continuum of care.
- b. Vaccine administration by nursing personnel on the medication administration record will include a dated, timed, and signed nursing entry for each of the three vaccines. If any or all of the three vaccines are ordered, but not administered (for any reason), the ordering physician must be notified, and there must be clear documentation indicating this and the rationale for why one/more vaccines were not administered. Also, document which provider was notified. This facilitates clear communication along the continuum of care.
- c. Documentation in the electronic medical record for the physician order, dispensing from the pharmacy or immunization clinic, and nursing administration is preferred when possible.

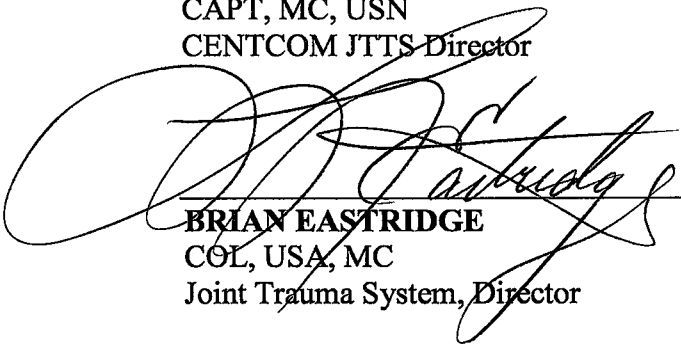
7. References.

- ¹ Prevention of pneumococcal disease: recommendations for the Advisory Committee on Immunization Practices (ACIP). *MMWR Morb Mortal Wkly Rep.* 1997; 46:12-15.
- ² Crivitz W. Overwhelming postsplenectomy infection. *Am J Hematol.* 1977; 2:193-201.
- ³ O'Neal BJ, McDonald JC. The risk of sepsis in the asplenic adult. *Ann Surg.* 1981; 194:775-778.
- ⁴ Shatz David V. Vaccination practices among North American trauma surgeons in splenectomy for trauma. *J Trauma.* 2002; 53:950-956.

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