

Table 3.3.3: Recommendations for revaccination following haematopoietic stem cell transplant (HSCT) in children and adults, irrespective of previous immunisation history^{125,126,133-137}

Vaccine	Months after HSCT				Comments
	6	8	12	24	
<i>Streptococcus pneumoniae</i> (pneumococcal disease)					
13-valent pneumococcal conjugate vaccine (13vPCV)	Yes	Yes	Yes	Not needed	Refer to 4.13 <i>Pneumococcal disease</i>
23-valent pneumococcal polysaccharide vaccine (23vPPV)	No	No	No	Yes (after 13vPCV)	Refer to 4.13 <i>Pneumococcal disease</i>
<i>Haemophilus influenzae</i> type b					
Hib	Yes	Yes	Yes	Not needed	
Diphtheria, tetanus, pertussis					
DTPa-containing vaccine for children <10 years of age dTpa for those ≥10 years of age	Yes	Yes	Yes	Not needed	For recipients <10 years of age, give all 3 doses as DTPa-containing vaccine. For recipients ≥10 years of age, give the 1st dose as dTpa, followed by 2 doses of dT. If dT is unavailable, complete vaccination course with dTpa.
Poliomyelitis					
IPV	Yes	Yes	Yes	Not needed	A 3-dose course of inactivated poliomyelitis vaccine is recommended. This can be given as DTPa-IPV or dTpa-IPV; refer to 'Diphtheria, tetanus, pertussis' above.
Hepatitis B					
Hepatitis B vaccine	Yes	Yes	Yes	Not needed	A high-dose formulation (H-B-Vax II dialysis formulation) is preferred. Alternatively, give single strength Hep B vaccine in each arm at each dosing interval <i>OR</i> administer a standard vaccination course, then check HBsAb titres 4–8 weeks following the last vaccine dose. If titres are <10 mIU/mL, repeat the vaccination course.
Influenza					
Two doses of influenza vaccine at least 4 weeks apart are recommended for all HSCT recipients receiving influenza vaccine for the first time post transplant (irrespective of age), with the 1st dose given as early as 6 months after transplant (refer also to the introduction of 3.3.3 <i>Vaccination of immunocompromised persons</i> above), then a single dose annually thereafter.					

Table 3.3.3 (continued)

Vaccine	Months after HSCT				Comments
	6	8	12	24	
<i>Neisseria meningitidis</i> (meningococcal disease)					
Meningococcal B vaccine (MenBV)	Yes	Yes	Not needed (refer to comments)	Not needed (refer to comments)	Two doses of MenBV are recommended for persons ≥ 6 months of age. Additional doses are required if the vaccine course was commenced before 6 months of age (refer to 4.10 <i>Meningococcal disease</i> , Table 4.10.1). The co-administration of MenBV and 4vMenCV in persons who are at increased risk of meningococcal disease is acceptable based on first principles. (Refer also to 4.10 <i>Meningococcal disease</i> .)
Quadrivalent meningococcal conjugate vaccine (4vMenCV)*	Yes	Yes	Not needed (refer to comments)	Not needed (refer to comments)	Two doses of 4vMenCV are recommended for persons ≥ 6 months of age. Additional doses are required if the vaccine course was commenced before 6 months of age (refer to 4.10 <i>Meningococcal disease</i> , Table 4.10.2). The co-administration of MenBV and 4vMenCV in persons who are at increased risk of meningococcal disease is acceptable based on first principles. (Refer also to 4.10 <i>Meningococcal disease</i> .)
Human papillomavirus					
HPV vaccine			A 3-dose course of 4vHPV is recommended at intervals of 0, 2 and 6 months. Specific immunogenicity data in this group are not available; better immune responses may be expected at >12 months post transplantation when a greater level of immune reconstitution has been achieved.		Individual recommendations for HPV vaccination in those >9 years of age should be determined by an individual risk assessment (refer to 4.6 <i>Human papillomavirus</i>).
Measles, mumps and rubella					
MMR vaccine	No	No	No	Yes, 1 or 2 doses separated by a minimum interval of 4 weeks (refer to comments)	Give only if the person is off immunosuppressive therapy, with no cGVHD and with reconstituted cell-mediated immunity. Check serology 4 weeks after 1st vaccine dose. If there is no seroconversion, repeat the dose.

Table 3.3.3 (continued)

Vaccine	Months after HSCT				Comments
	6	8	12	24	
Varicella					
Varicella vaccine	No	No	No	Yes, 2 doses separated by a minimum interval of 4 weeks (refer to comments)	Give to a seronegative recipient only if the person is off immunosuppressive therapy, with no cGVHD and with reconstituted cell-mediated immunity.

* Any transplant recipient who anticipates travelling may require additional vaccination, such as for meningococcal and hepatitis A disease (refer also to 3.2 *Vaccination for international travel*).

† The recommended interval between doses is 12 weeks for children who commenced their 4vMenCV course between 7 and 23 months of age as outlined in Table 4.10.2 in 4.10 *Meningococcal disease*.