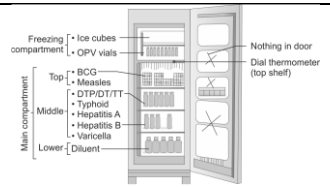
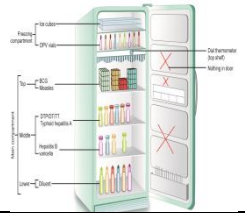
S. No.	Chapter No/Page No	Previous Text (Tables/Figures/Boxes) Or Deleted Text	New corrections/Replacement of Text/New Additional Matter	Remarks
1.	**2.5/59**	Place freeze-tolerant vaccines (measles, mumps, rubella, OPV, and BCG) in the top shelf and freeze-sensitive vaccines [diphtheria, tetanus, and pertussis (DTP)-containing vaccines; *Haemophilus influenzae* type B (Hib), Pneumococcal, influenza, hepatitis, inactivated-polio vaccine (IPV), and some varicella vaccines] on middle shelf **(Figs. 7 and 8)**.	• Place measles, MR, MMR, BCG, OPV, yellow fever, Japanese encephalitis (SA-14-142), meningococcal A conjugate, Rotavac* and/or any other vaccines not damaged by freezing on the top shelf (**Figs. 7 and 8)**. • Put DTP, DT, Td, TT, Tdap, HepB, DTP+HepB, DTP+HepB+Hib, Hib, PCV, HPV, Rotavirus and/or any other freeze-sensitive vaccines on the middle or lower shelves. • Store the diluents next to the freeze-dried vaccine with which they are supplied, on the appropriate shelf. If there is not enough space on the shelf, put the diluents on the bottom shelf, clearly labeled so they can be easily identified to their matching vaccine. *Rotavac can be stored at –20°C till expiry date. It can be stored upto 6 months at 2 to 8°C.	
2.	**2.5/60**	 **Fig. 8 Replacement**		
3.	**2.5/60**	**Add matter after Figure 8**	The following rules apply for front-opening refrigerators: ● Never put vaccines or diluents in the door shelves. The temperature is too warm for	

			vaccine storage and vaccines are exposed to room temperature each time, the door is opened. ● Never put freeze-sensitive vaccines in contact with, or close to, the evaporator plate in the refrigerator. ● Put water packs or plastic bottles full of colored water in the space below the bottom shelf. This helps to stabilize the temperature, if there is a power cut. Do not use the water packs in vaccine carriers. Never drink the water.	
4.	**3.1/96**	The standard dose of reconstituted vaccine is 0.05 mL for infants aged 1 year.	The standard dose of reconstituted vaccine is 0.05 mL upto 1 month age, thereafter 0.1 mL for infants aged upto 1 year.	
5.	**3.2/102**	WPV1 was last detected in Pakistan and Afghanistan in November 2016.	Delete text	
6.	**3.3/124**	• 6, 10, and 14 weeks	Delete text	
7.	**3.3/128**	Two more doses of hepatitis B vaccine at 1 month/6 weeks and 6 months are needed.	3 more doses of Hepatitis B vaccine should be administered at 6–10–14 weeks as part of combination vaccine.	
8.	**3.3/132**	6, 10 and 14 weeks;	Delete text	
9.	**3.4/149**	wP	Delete text	
10.	**3.4/149**	The recommendation	The previous recommendation	
11.	**3.4/150**	**Insert this text as paragraph after this last bullet** • World over, the widespread use of wP vaccines had almost eliminated	However, none of these countries are planning to revert back to whole-cell pertussis vaccines as that can result in an increase in the prevalence of the disease due to poor acceptance of a vaccine that is	

		pertussis from almost all the countries that had employed them.	much more reactogenic WHO clearly mentions that countries currently using the wP vaccine in their national programs should continue the same for the primary series, while those using the aP vaccine should continue the same and consider additional boosters and strategies such as immunization of mothers in case of pertussis resurgence. ACVIP currently recommends that the primary series should be completed with three doses of either wP or aP vaccines, irrespective of the number of components. wP vaccine is definitely superior to aP vaccine in terms of immunogenicity and duration of protection but more reactogenic. In view of parental anxiety and concerns for its reactogenicity, aP vaccine can also be administered even in the primary series. The primary aim is to increase the vaccination coverage with either of the vaccines. DTaP containing combination vaccines are in use in developed countries with a great success. A hexavalent vaccine with whole cell pertussis component is also available in market which is having very limited data.	
12.	**3.4/155**	**BOX 1** • DTaP vaccine/combinations should preferably be avoided for the primary series.	**BOX 1** • DTaP or DTwP vaccine/combination may be used for the primary immunization series.	
13.	**3.8/243**	**Measles, mumps, and rubella vaccine.** *Routine vaccination*: • *Minimum age:* 9 months.	**Measles, mumps, and rubella vaccine.** *Routine vaccination*: • Minimum age: 9 months.	

		• Administer the first dose of MMR vaccine at 9 months of age, second dose at 15 months, and third dose at age 4 through 6 years. •The third dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.	• Administer the first dose of MMR vaccine at 9 months of age, second dose at 15 months, and third dose at age 4 through 6 years. •The third dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the last dose.	
14.	**3.10/272–273**	*Dosage Schedule* An overall protective rate of 100% after one dose of live attenuated hepatitis A vaccine has been reported and the long-term immunogenicity and effectiveness could last as long as 15 years.[11] In a large scale clinical trial to evaluate single dose and booster dose of live attenuated hepatitis A vaccine, 72% of children who received a single dose had detectable anti-HAV antibodies for 96 months (GMC at 96 months: 89.0 mIU/mL) and 98% children in the booster group remained anti-HAV positive at 96 months (GMC at 96 months: 262.8 mIU/mL) suggesting a booster effect of reinjection. However, results from single dose group seem not to support the need for booster doses of live attenuated hepatitis A vaccine in immunocompetent individuals.[12] In India, a multicenteric evaluation of immunogenicity and tolerability of single dose live attenuated injectable hepatitis A vaccine was done in four centers across the country. The vaccine was, administered to 505	**LIVE HEPATITIS A VACCINE** *Data on immunogenicity and safety of a single dose of this vaccine:* A study involving 11451 subjects was conducted to assess its immunogenicity. A seroprotection level of >20 mIU/mL was achieved in 92.9% of subjects within 2-5 weeks of vaccination.[11] In a randomized controlled trial, Biovac-A was compared to inactivated international vaccine from GSK and also a domestic inactivated vaccine. The assessment was in terms of immunogenicity. There was a comparable immune response seen between Biovac-A and international inactivated hepatitis A vaccine within 7 to 28 days.[12] In another study evaluating Biovac-A vaccine effectiveness and its long-term immunogenicity, there was a significant reduction in Hepatitis A cases reported (98%) in the vaccinated group. Additionally, there was reduction incidence of hepatitis A in the entire population by 90% because of herd immunity. Certain subjects in this group were regularly followed up for immunogenicity parameters up to 15 years. It was found that more than 80% subjects remain seroconverted above	

		children aged 18–60 months and the evaluation was done by estimation of anti-HAV antibody titer at 6 weeks and 6 months following administration of the vaccine. At 6 weeks, 95.1% seroconverted and at the end of 6 months, 97.9% had seroconverted.[13] Another long-term immunogenicity study of a single dose live attenuated H2 strain hepatitis A vaccine is being conducted in healthy Indian children at KEM Hospital, Pune. 131 of the original 143 children vaccinated in 2004, were evaluated for anti-HAV antibodies 30 months postvaccination. Seroprotective antibody levels more than 20 mIU/mL were demonstrated in 87.8% subjects with an overall GMT of 92.02 mIU/mL. No hepatitis like illness was recorded in any of the subjects since vaccination.[14] WHO recommends that the live attenuated vaccine is administered as a single dose.[7] However, long-term serologic data from India with single dose of live vaccine is still not available. In a significant subset of original study subjects of KEM Pune cohort,[14] there is an appreciable dip in both seroprotection levels (anti-HAV IgG <20.0 mIU/mL) and GMTs in the 8th year of follow-up despite natural boosting. The investigators are now planning to demonstrate anamnestic responses in these subjects by performing boosting with a 2nd dose of the	the protection criteria of 20 mIU/mL. The GMT graph also confirmed that the rate at which there is a fall in the titers over all these years is very slow.[13] **INDIAN DATA** The vaccine was brought to India in 2004 and has undergone studies in Indian subjects as well. • Of 143 children vaccinated in 2004, 121 children were evaluated in 2014, clinically and for anti-HAV antibodies. About 106 (98%) of 108 remaining children had seroprotective levels with a geometric mean titer of 100.5 mIU/mL. On analysis of all 121 children, the immunogenicity was 87.6%.[14] • In a multicentric single arm study conducted in 4 metros of the country, children 18-60 months were followed up for 5 years. It was noted that the seroprotection criteria was maintained 97.3% in these 5 years of follow up with high GMT levels. While the GMT was 81.4 mIU/mL at 6 weeks, there was a rise in GMT seen at 6 months. This rise is attributed to the live-attenuated property of the vaccine. The seroconversion rates considering seroprotection levels of anti-HAV antibody titer >20 mIU/mL, following vaccination starting from 6 weeks, 6 months, 12 months, 24 months, 36 months, 48 months and 60 months were 95.1%, 97.9%, 98.3%, 96.2%, 97.8%, 92.6% and 97.3%, respectively. The geometric mean concentration (GMC) over the years increased from 64.9 mIU/mL at 6 weeks to 38.1 mIU/mL and 135.2 mIU/mL at 6 months and 12 months, respectively	

		vaccine. IAP ACVIP recommends two doses of live attenuated hepatitis A vaccine given subcutaneously in a dose of 0.5 mL in children 1–15 years. The second dose should be administered after 6–18 months of the first.[9] Minimum age for giving hepatitis A vaccine is 12 months.	and was maintained at 127.1 mIU/mL at 60 months.[15] In conclusion, the result of this 5-year follow up study showed that the single dose of live- attenuated vaccine is well tolerated and provides long-term immunogenicity in healthy Indian children. As per WHO position paper, both inactivated and live-attenuated hepatitis A vaccines are highly immunogenic and immunization will generate long-lasting, possibly life-long, protection against hepatitis A in children as well as in adults. Currently, inactivated HAV vaccines are licensed for intramuscular administration in a 2-dose schedule with the first dose given at the age 1 year, or older. The interval between the first (primary) dose and the second (booster) dose is flexible (from 6 months up to 4–5 years), but is usually 6–18 months. The live-attenuated vaccine is administered as a single subcutaneous dose. The IAP ACVIP committee has already recommended a single dose of this vaccine at 12 months of age.[16] IAP ACVIP (2018–19) also recommends a single dose of live Hepatitis A vaccine. Second dose of live-attenuated hepatitis A vaccine is not recommended.[17] It is to be remembered that inactivated vaccine is preferred during outbreak situation. **REFERENCES** 11. Cheng NL, Zhonghua Yi Xue Za Zhi. Immunological effects of live attenuated hepatitis A vaccine. 1992;72(10):581-3, 638	

			12. Zheng H, et al. Comparing live-attenuated and inactivated hepatitis A vaccines: An immunogenicity study after one single dose Vacc. 2011;29:9098-103. 13. Zhuang FC, Mao ZA, Jiang LM, Wu J, Chen YQ, Jiang Q, Chen NL, Chai SA, Mao JS. Long-term immunogencity and effectiveness of live attenuated hepatitis A vaccine (H2-strain): A study on the result of 15 years' follow up. Zhonghua LiuXing Bing Xue Za Zhi. 2010;31:1332–5. 14. Bhave S, et al. Long-term immunogenicity of single dose of live attenuated hepatitis A vaccine in Indian children. J Ind Ped. 2015;52:687-90. 15.Monjori Mitra, Nitin Shah, MMA Faridi, Apurba Ghosh, VS Sankaranarayanan,Anju Aggarwal5, Suparna Chatterjee, Nisha Bhattacharyya, Ganesh Kadhe, Gaurav Vishnoi, and Amey. Long term follow-up study to evaluate immunogenicity and safety of a single dose of live attenuated hepatitis a vaccine in children Human Vaccines & Immunotherapeutics 11:5, 1147-52; May 2015 16. Vipin M Vashishtha, Panna Choudhury, Ajay Kalra, Anuradha Bose, Naveen Thacker, Vijay N Yewale, Cp Bansal, Pravin J Mehta. Indian Academy of Pediatrics (IAP) Recommended Immunization Schedule for Children Aged 0 through 18 years, India, 2014 and Updates on Immunization.	

			17. Balasubramanian S, Abhay Shah, Harish K Pemde, Pallab Chatterjee, Shivananda S, Vijay Kumar Guduru, Santosh Soans, Digant Shastri, Remesh Kumar. Immunization schedule (2018–19) for children birth through 18 years— Immunization Update Indian Pediatrics, volume 55, Dec 15, 2018.	
15.	**3.10/276**	• Start the 2-dose hepatitis A vaccine series for children aged 12 through 23 months; separate the two doses by 6–18 months. •Children, who have received one dose of hepatitis A vaccine before the age of 24 months, should receive a second dose 6–18 months after the first dose. •Two doses of both killed and live hepatitis A vaccines as of now. •Administer two doses at least 6 months apart to unvaccinated persons.	• Start the 2-doses of inactivated hepatitis A vaccine series for children aged 12 through 23 months; separate the two doses by 6–18 months • For inactivated vaccine 2 doses are recommended. •A single dose is recommended for live hepatitis A vaccine after age of 12 months. • Administer two doses of inactivated vaccine at least 6 months apart to unvaccinated persons. • single dose for live hepatitis A vaccine	
16.	**3.11/298**	**BOX 1** – *Vi-PS conjugate (Typbar-TCV®)*: Single dose at 9–12 months and a booster during second year of life.	**BOX 1** – *Vi-PS conjugate (Typbar-TCV®)*: Single dose at 6-9 months. The need for boosters is not certain.	
17.	**3.12/311**	**DOSE AND SCHEDULE** 10–12 years	**DOSE AND SCHEDULE** 9 years	

<table>
<tr>
<td>18.</td>
<td>3.12/312</td>
<td>Human papillomavirus (HPV) vaccines routine.
Routine vaccination:
• Minimum age: 9 years
•4vHPV (Gardasil) and 2vHPV (Cervarix) are licensed and available; 9vHPV is yet to be licensed and made available in India
•Either 4vHPV (or 9vHPV) (0, 2, 6 months) or 2vHPV (0, 1, 6 months) is recommended in a 3-dose series for females aged 11 or 12 years
• 4vHPV (or 9vHPV) can also be given in a 3-dose series for males aged 11 or 12 years, but not yet licensed for use in males in India
•The vaccine series can be started beginning at age 9 years
• Administer the second dose 1–2 months after the first dose and the third dose
6 months after the first dose (at least 24 weeks after the first dose)
Catch-up vaccination:
• Administer the vaccine series to females (either HPV2 or HPV4) at age 13 through 45 years if not previously vaccinated
•Use recommended routine dosing intervals (see above) for vaccine series catch-up.</td>
<td>9–14 years:
• Interval between doses should not be < 5 months.
• The minimum interval is 5 months between the first and second dose.
• If the second dose is administered after a shorter interval, a third dose should be administered a minimum of 5 months after the first dose and a minimum of 12 weeks after the second dose.
• If the vaccination schedule is interrupted, vaccine doses do not need to be repeated (no maximum interval).

15 years and older:
• 3 doses at 0–1–6 months for BHPV and 0–2–6 months for QHPV.
• Interval between dose 1st and 2nd dose should not be less than 4 weeks and between 2nd and 3rd does not less than 12 weeks.
• All immunocompromised, irrespective of age should receive the 3-dose schedule.</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>3.13/325</td>
<td>TABLE 1: Influenza vaccines licensed in India.

Brand names | Manufacturer | Types of vaccine | Valent | Composition
Influvac | Solvay Pharma India Pvt Ltd (Abbott) | Split virion, inactivated | Trivalent | TIV (NH)</td>
<td>TABLE 1: Influenza vaccines licensed in India.

Brand names | Manufacturer | Types of vaccine | Valent | Composition
Influvac Tetra | Abbott India Ltd | Surface antigen, inactivated | Quadrivalent | QIV</td>
<td></td>
</tr>
</table>

20.	**3.13/326**	**TABLE 2:** Dosage and schedule of trivalent inactivated vaccines (TIVs). ***Footnote*** **For children who have not previously been vaccinated, a second dose should be given after an interval of at least 4 weeks.* *Dosage and schedule:* The dosage schedule is provided in **Table 2**. Revaccination is recommended with a single annual dose irrespective of age.	**TABLE 2:** Dosage and schedule of inactivated vaccines (IIV). ***Footnote*** **For children who have not previously been vaccinated, a second dose should be given after an interval of at least 4 weeks* ***Note:*** *In February 2020, the DCGI approved the 0.5 mL dose of Influvac Tetra, for administration from 6 months of age.* *Dosage and schedule:* The dosage schedule is provided in **Table 2**. Revaccination is recommended with a single annual dose irrespective of age. DCGI has recently approved 0.5 mL Influvac Tetra flu vaccine in India for use in children below 3 years.	
21.	**3.15/356**	**TABLE 1:** Licensed meningococcal vaccine in India. *Type* — *Nature and diluent* MCV: conjugate vaccine — Lyophilized, sterile distilled water	**TABLE 1:** Licensed meningococcal vaccine in India. *Type* — *Nature and diluent* MCV: Meningococcal conjugate vaccine — Menactra®, Meningococcal (Groups A, C, Y and W-135) Conjugate Vaccine Solution for Intramuscular Injection	
22.	**3.15/358**	**Quadrivalent Meningococcal Polysaccharide-protein Conjugate Vaccine**	**Quadrivalent Meningococcal Polysaccharide-protein Conjugate Vaccine**	

		…intramuscular (IM) is recommended. This vaccine had comparable immunogenicity to the previously used polysaccharide vaccine.	…intramuscular (IM) is recommended beyond 24 months of age. This vaccine had comparable immunogenicity to the previously used polysaccharide vaccine.	
23.	**3.16/369**	**CARE OF ANIMAL-BITE WOUNDS** The first step is thorough cleansing of the wound with soap and flushing under running water for 10 minutes. When suturing is unavoidable for purpose of hemostasis, it must be ensured that RIG has been infiltrated in the wound prior to suturing.	**CARE OF ANIMAL-BITE WOUNDS** The first step is thorough cleansing of the wound with soap and flushing under running water for 15 minutes as per WHO recommendation. When suturing is unavoidable for purpose of hemostasis, it must be ensured that RIG has been infiltrated in the wound prior to suturing. Only stay suturing is advocated initially. Delayed suturing may be done after 48 hours if needed.	
24.	**3.16/371**	**Passive Immunization** *Human Monoclonal Antibody* A total of 50,000 vials used postmarketing have not reported any serious adverse events. RMab can be started till 7th day of first dose of vaccine.	**Passive Immunization** *Human Monoclonal Antibody* Nearly more than 2 lakhs vials used and postmarketing have not reported any serious adverse events. RMab can be started till 7th day of first dose of vaccine.	
25.	**3.16/371**	The remaining part if any is to be injected intramuscularly (IM) into the deltoid region or anterolateral aspect of thigh away from the site of vaccine administration to avoid vaccine neutralization. equal volume of	**Delete Text**	Entire dose of immunoglobulin is to be infiltrated in and around the wound. Intramuscular (IM) administration

				is no longer recommended.
26.	**3.16/372**	The currently available vaccines are: • The cell culture vaccines (CCVs) and include purified chick embryo cell vaccine (PCECV), human diploid cell vaccine (HDCV), purified Vero cell rabies vaccine (PVRV); and • Purified Duck Embryo vaccine (PDEV)	The currently available vaccines are: • The cell culture vaccines (CCVs) and include purified chick embryo cell vaccine (PCECV), purified Vero cell rabies vaccine (PVRV); and purified duck embryo vaccine (PDEV).	
27.	**3.16/373**	*Post-exposure Prophylaxis* In case of bites by pet animals, PEP may be deferred only if the pet at the origin of exposure is more than a year old and has a vaccination certificate indicating that it has received at least two doses of a potent vaccine, the first not earlier than 3 months of age and the second within 6–12 months of the first dose and in the past 1 year. If vaccination is deferred, the pet should be observed for 10 days; if the dog shows any sign of illness during the observation period, the patient should receive full rabies PEP urgently.	*Post-exposure Prophylaxis* In case of bites by pet animals, PEP should be started immediately. The vaccination status of the suspect animal should not be the deciding factor when considering to initiate PEP or not when the vaccination status of the animal is questionable. A history of rabies vaccination in an animal is not always a guarantee that the biting animal is not rabid. Animal vaccine failures may occur because of improper administration or poor quality of the vaccine, poor health status of the animal, and the fact that vaccine does not always provide long-lasting protection against rabies infection.	
28.	**3.16/374**	*Schedule of Vaccination* The standard schedule (Essen protocol) is five doses on days 0, 3, 7, 14, and 30, with day "0" being the day of commencement of vaccination.	*Schedule of Vaccination* The standard schedule is a 4-dose schedule on days 0-3-7-14 to 28 days.	

		…….A regimen of five 1-mL doses of HDCV or PCECV should be administered…. ….of the five-dose course… ….administered on days 3, 7, 14, and 28 after the first vaccination.	…….A regimen of 4 doses of available anti-rabies vaccine should be administered….. …..of the four-dose course….. …..administered on 3, 7 and 14 to 28 days after the first vaccination.	
29.	**3.16/375**	*Intradermal Vaccination* Intradermal vaccination is a cost-effective alternative to intramuscular vaccination as the dose required is only 0.1 mL. Based on the recommendations of the expert group as well as WHO, the Drug Controller General of India (DCGI) has recently decided to allow ID route administration of tissue culturebased antirabies vaccine for PEP in a phased manner in certain government antirabies centers. …The schedules permitted in the first phase include the Thai Red Cross Regimen (2-2-2-0-1-1, two intradermal doses on the deltoid on days 0, 3, and 7, and one dose on day 30 and 90) and the Updated Thai Red Cross Regimen (2-2-2-0-2-0 and two doses on days 0, 3, 7, and 30)….	*Intradermal Vaccination* Intradermal vaccination is a cost-effective alternative to intramuscular vaccination as the dose required is only 0.1 mL irrespective of reconstituted volume (0.5 mL or 1 mL for IM route). Based on WHO recommendation and results of various safety, efficacy studies and feasibility trial conducted by ICMR, Drug Controller General of India (DCGI) approved the use of intra-dermal vaccination regimen for rabies post-exposure prophylaxis. In India too, it is being used for more than 10 years in Govt sector but not in private sector. ….The recommended ID schedule for PEP is 2-sites ID on days 0, 3 and 7….	

30.	**3.16/376**	…The intradermal route should not be used for immunocompromised patients and those on chloroquine therapy.	…The intradermal route should not be used for immunocompromised patients and those on chloroquine therapy. Latest WHO guidelines recommend 2-sites ID on days 0, 3 and 7 as PEP.	
31.	**3.16/377**	This is given irrespective of the duration of previous vaccination. *Pre-exposure Prophylaxis* Any of the tissue culture vaccines can be given for this purpose. Three doses are given intramuscularly in deltoid /anterolateral thigh on days 0, 7, and 28 (day 21 may be used if time is limited but day 28 preferred). The intradermal schedule is 0.1 mL of any vaccine by the intradermal route on days 0, 7, and 21/28.	This is given irrespective of the duration of previous vaccination except if complete PEP or PrEP already received within 3 months previously. *Pre-exposure Prophylaxis* Any of the tissue culture vaccines can be given for this purpose. For immunologically naive individuals of all age groups WHO currently recommends the following PrEP schedules: a 2 sites ID or a 1-site IM vaccine administration on days 0 and 7. A routine PrEP booster or serology for neutralizing antibody titres is recommended only if a continued, high risk of rabies exposure remains	
32.	**3.16/379**	• Postexposure prophylaxis: –*Dose:* 1.0 mL IM in anterolateral thigh or deltoid (never in gluteal region) for human diploid cell vaccine (HDCV), purified chick embryo cell (PCEC) vaccine, purified duck embryo vaccine (PDEV); 0.5 mL for purified Vero cell rabies vaccine (PVRV). Intradermal (ID) administration is not recommended in individual practice.	• Postexposure prophylaxis: –*Dose:* 1.0 mL IM in anterolateral thigh or deltoid (never in gluteal region) for purified chick embryo cell (PCEC) vaccine, purified duck embryo vaccine (PDEV); 0.5 mL for purified Vero cell rabies vaccine (PVRV). Intradermal (ID) administration is not recommended in individual practice.	

		– *Schedule*: 0, 3, 7, 14, and 30 ……A sixth dose on day 90 is optional and may be…. –Equine rabies immunoglobulin (ERIg) (dose 40 U/kg) can be used if human rabies immunoglobulin is not available. • Pre-exposure prophylaxis: –Three doses are given intramuscularly in deltoid/anterolateral thigh… –For re-exposure at any point of time after completed (and documented) pre- or post-exposure prophylaxis, two doses are given on days 0 and 3.	–*Schedule*: 0, 3, 7 and 14–28 days with "0" being…… ……An additional dose on day 90 is optional and may be…….. –Equine rabies immunoglobulin (ERIg) (dose 40 U/kg) can be used if human rabies immunoglobulin is not available. –Rabies monoclonal antibodies are preferred over RIG and its dose is 3.3 U/kg. • Pre-exposure prophylaxis: Two doses as a 1-site IM vaccine administration on days 0 and 7 on deltoid or anterolateral thigh –For re-exposure >3 months after completed (and documented) pre- or post-exposure prophylaxis, two doses are given on days 0 and 3.	
33.	**4.1/396**	Add Matter before Heading "**PERTUSSIS VACCINATION"**	**SIGNIFICANCE OF ADOLESCENT IMMUNIZATION** Vaccines are offered to adolescents with following aims: 1. To protect them against the diseases that have higher morbidity (hepatitis A, varicella), or higher incidence (mumps, meningococcal infection) during adolescent period. 2. For boosting the waning immune responses of certain vaccines administered	

			during infancy/early childhood (measles, pertussis, tetanus, diphtheria, etc.). 3. To take care of the upward shift of epidemiology to right, e.g. Hepatitis A 4. To provide protection against diseases such as cervical cancer appearing during adulthood. 5. As a part of control or elimination projects of some VPDs such as measles elimination, and rubella and congenital rubella syndrome (CRS) control program. 6. The tendency of the adolescents to indulge in certain risky activities such as substance abuse, intravenous administration of drugs, etc., exposing exposes them to certain diseases which are VPDs, e.g. hepatitis B and human papilloma virus (HPV) infection. 7. For travel and abroad study 8. As a catch up who missed the previous opportunities.	
34.	**4.1/397**	…high incidence of disease infants, who are... Human papillomavirus vaccination …transmitted infection in humans; HPV is closely associated with… …of which cervical cancer is the most frequent; most infections are acquired…	…high incidence of disease in infants, who are... Human papillomavirus vaccination (HPV) …transmitted infection in humans. HPV is closely associated with… …of which cervical cancer is the most frequent and most infections are acquired…	

35.	**4.1/398**	…has additionally types 6 and 11 (responsible for anogenital warts),…	…has additionally types 6 and 11 (also responsible for anogenital warts),…	
36.	**4.1/399**	**Add Paragraphs before this Paragraph:** Considering that teenage pregnancy rate……following link: http://wwwnc.cdc.gov/travel/. **TABLE 2** ‡ A minimum interval of 3 years should be observed between two doses of typhoid vaccine	The only VPD which was targeted, till recent past, for adolescents and adults immunization was tetanus. However, with the substitution of Tetanus-Toxoid (TT) with Tetanus-diphtheria (low adult dose) (Td) vaccine and the recent launch of Measles-Rubella vaccination campaign, three more diseases, i.e. measles, rubella and diphtheria have joined tetanus as the vaccine preventable diseases (VPDs) targeted for prevention and control amongst adolescents. Japanese encephalitis vaccine is also offered to adolescents and adults, but only in endemic districts of few states. **TABLE 2** TCV can be given 4 weeks after pure polysaccharide vaccine.	
37.	**4.1/401**	**TABLE 4:** IAP ACVIP-recommended immunization schedule for adolescents, 2018 (with range). ***7–10 years*** ***11–12 years*** ***13–18 years*** See footnote 1 Three doses Complete three-dose series	**TABLE 4:** IAP ACVIP-recommended immunization schedule for adolescents, 2018 (with range). ***7–10 years*** ***11–12 years*** ***13–18 years*** 2 doses 0–6 months after 9 years 2 doses 0–6 months till 14 years Above 15 years: 3 doses 0–1 or 2–6 months	
38.	**4.2/404**	**ADD HEADING** General principles for vaccination	**GENERAL PRINCIPLES FOR IMMUNOCOMPROMISED CHILD**	

		of the immunocompromised are:[1-3]	General principles for vaccination of the immunocompromised are:[1-3]	
39.	**4.2/406**	**TABLE 1** *Vaccine* DTwP/DTaP/TT/Td/Tdap If IPV is not affordable, OPV should be given.	**TABLE 1** *Vaccine* DTwP/DTaP/Td/Tdap **Delete this Line**	
40.	**4.2/407**	**TABLE 1** * Hepatitis B virus surface antigen (HBsAg) positive mothers, infant to be given hepatitis immunoglobulin (HBIG) within 12 hours of birth as per birth weight, if status unknown <2,000 g infant to be given both HBV vaccine and HBIG. If >2,000 g to check the status and give HBIG accordingly (not later than 1 week)	**TABLE 1** * Administer monovalent HepB to newborns before hospital discharge. Normal-weight infants of mothers who are hepatitis B surface antigen (HBsAg)-negative should receive HepB within 24 hours of birth or at discharge, whichever comes first. If mother is HBsAg-positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours after birth. If mother's HBsAg status is unknown, administer HepB within 12 hours after birth. Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG as soon as possible. If the infant weighs <2,000 g at birth, do not wait more than 12 hours after birth to administer HBIG. If the infant weighs ≥2,000 g at birth, do not wait more than 7 days to administer HBIG.	
41.	**4.2/408**	**Add Paragraphs after this Paragraph:**	Highly immunocompromised cancer patients are those who have received chemotherapy and/or radiation therapy	

		Influence of cancer per se on immune function is minimal……requirements for cancer cases need special consideration as described below.[8] • Live vaccines are contraindicated during and for 6 months after end of chemotherapy. Nonlive vaccines are also best given after 6 months from end of treatment for durable immunity.[9] Sibling should receive inactivated poliovirus vaccine (IPV) and if OPV is either given by mistake or given because there is no other option, then the sibling should remain away from index child for at least 2 weeks.[13,14]	within the preceding 3 months, those who have generalized malignancy or hematologic malignancy, and those who have received the equivalent of ≥20 mg prednisone daily for ≥2 weeks, as well as stem cell transplant recipients within 2 years of transplant (or beyond 2 years, if there is ongoing evidence of graft-vs-host disease) **Delete this bulleted para** Sibling should receive inactivated poliovirus vaccine (IPV) and if OPV is either given by mistake or given because there is no other option, then the sibling should remain away from index child for at least 2 weeks.[13,14] Newly diagnosed children with cancer are to receive pneumococcal vaccines as per age (PCV13 and PCV23), if not administered earlier.	
42.	**4.2/411**	**Add Matter as Footnote of TABLE 2**	**BCG VACCINE:** IAP recommended upper age limit for vaccination is 5 years. It is contraindicated during ongoing chemotherapy and can only be given after 6 months of completion of chemotherapy as a single dose in previously unimmunized children. In children with previously completed immunization with visible scar no further doses are recommended.	

43.	**4.2/412**	**Add bulleted matter before:** • *Other vaccines:* **Add Matter before the Heading TRANSPLANT RECIPIENTS**	• *Varicella post-exposure prophylaxis:* Children exposed to varicella infection during ongoing chemotherapy should be given prophylaxis with VZIg/IVIg and/or oral acyclovir. Under ideal circumstances VZV IgG levels should be assessed at the time of exposure and children with less than protective levels, varicella zoster immunoglobulin (VZIg) should be offered (Dose 0-5 years 250 mg, 6-10 years 500 mg, 11–14 years 750 mg, ≥15 years 1000 mg given by slow intramuscular injection). Alternatively, human normal immunoglobulin at 0.2g/kg can be given intravenously, in case both the above are unaffordable high dose oral acyclovir prophylaxis (age <2 years 200 mg QID, 2–6 years 400 mg QID, >6 years 800 mg QID) has to be started from day 7 and continued till day 21 from the time of exposure. **Reference:** Bate J, Chisholm J, Heath PT, Breuer J, Skinner R, Manley S et al. PEPtalk: postexposure prophylaxis against varicella in children with cancer. Arch Dis Child. 2011;96:841-5.	

			Table 3 indicates quality of evidence and grades of recommendation of vaccines in cancer patients.	
44.	**4.2/413**	**(Tables 3 to 5)**	**(Tables 4 and 5)**	
45.	**4.2/415**	**TABLE 4:** Immunization of patients with hematopoietic stem cell transplant (HSCT) in children. *Vaccine Post-HSCT Post-HSCT*	**TABLE 4:** Immunization of patients with hematopoietic stem cell transplant (HSCT) in children. *Vaccine Pre-HSCT Post-HSCT*	
46.	**4.2/416**	**TABLE 4:** Immunization of patients with hematopoietic stem cell transplant (HSCT) in children. *Vaccine Post-HSCT Post-HSCT*	**TABLE 4:** Immunization of patients with hematopoietic stem cell transplant (HSCT) in children. *Vaccine Pre-HSCT Post-HSCT*	
47.	**4.2/417**	vaccines used in SOT cases **(Table 5)** **TABLE 5:** Vaccinations prior to or after solid organ transplant. *Vaccine Post-HSCT Post-HSCT*	vaccines used in SOT cases **(*See* Table 5)**. **TABLE 5:** Vaccinations prior to or after solid organ transplant. *Vaccine Pre-transplant Post-SOT*	
48.	**4.2/418**	*Vaccine Post-HSCT Post-HSCT*	*Vaccine Pre-transplant Post-SOT*	
49.	**4.2/420**	**CHRONIC DISEASES** vaccines are lower than healthy children and hence if indicated higher	**CHRONIC DISEASES** vaccines are lower than healthy children and hence if needed higher antigen	

		antigen content or more doses (hepatitis B). Assessment for antibody response and frequent boosters (hepatitis A and B) are recommended. **IMMUNIZATION IN CHILDREN WITH HISTORY OF ALLERGY** Children with history of serious egg allergy should not receive influenza and yellow fever vaccines but can safely receive other vaccines including measles and MMR vaccines.	content/more doses (Hepatitis B) assessment of antibody response and frequent boosters (Hepatitis A and B)are recommended. **IMMUNIZATION IN CHILDREN WITH HISTORY OF ALLERGY** Yellow fever vaccine is contraindicated for people who have a history of a severe (anaphylactic) allergy to eggs. People with a history of egg allergy who have experienced only hives after exposure to egg should receive any influenza vaccine (inactivated, recombinant or live attenuated) without specific precautions (except a 15-minute observation period for syncope). People who report having had an anaphylactic reaction to egg (more severe than hives) may also receive any age- and condition-appropriate influenza vaccine (inactivated, recombinant or live-attenuated) in a medical setting and should be supervised by a healthcare provider who is able to recognize and manage severe allergic condition. Measles and MMR vaccines can also be safely given.	
50.	**4.2/421**	…and thus should be monitored carefully. Children who have had a serious hypersensitivity reaction or anaphylaxis to a particular vaccine must never receive it again. A mild reaction is not a contraindication to vaccination. In any case all children should be watched for at least	…and thus should be monitored carefully. People with a history of anaphylactic reactions to latex should generally not be given vaccines that have been in contact with natural rubber or latex, either in the vial or in the syringe, unless the benefit of vaccination outweighs the risk of a potential allergic reaction. People with latex allergies	

		15 minutes after vaccination for allergy and resuscitation equipment should be kept standby.[28]	that are not anaphylactic in nature may be vaccinated as usual. Children who have had a serious hypersensitivity reaction or anaphylaxis to a particular vaccine must never receive it again. A mild reaction is not a contraindication to vaccination. In any case all children should be watched for at least 15 minutes after vaccination for allergy and resuscitation equipment should be kept standby.[28]	
51.	**4.2/422**	**TABLE 6** Nonsimultaneous	**TABLE 6** Non-simultaneous	
52.	**4.2/423**	**TABLE 7** *Product/indication Dose (mg IgG/kg) Route* Recommended interval before* *Varicella containing measles or vaccine† administration (months)*	**TABLE 7** *Product/indication Dose (mg IgG/kg) Route* Varicella containing Recommended interval before measles containing vaccine† or varicella vaccine administration (months)*	
53.	**4.2/424**	**TABLE 7** *Product/indication Dose (mg IgG/kg) Route* Recommended interval before* *Varicella containing measles or vaccine† administration (months)*	**TABLE 7** *Product/indication Dose (mg IgG/kg) Route* Varicella containing Recommended interval before measles containing vaccine† or varicella vaccine administration (months)*	
54.	**4.2/427**	Measles, MMR, and varicella vaccines can be safely given to contacts of pregnant women as these vaccines do not spread from vaccine to contacts. Smallpox vaccine is the only vaccine known to be harmful to the fetus.	Measles, MMR, and varicella vaccines can be safely given to contacts of pregnant women as these vaccines do not spread from vaccine to contacts. Smallpox vaccine is the only vaccine known to be harmful to the fetus.	

55.	**4.2/428**	**Add paragraph before the Heading CATCH-UP IMMUNIZATION**	**INTERCHANGIBILITY OF BRANDS** It is preferable and ideal that doses of vaccine in a series should be from the same manufacturer; however, if this is not possible or if the manufacturer of doses given previously is unknown, healthcare personnel should administer the vaccine that they are readily available. The exception to this is HPV vaccine. Further it is to be kept in mind that there are no robust data for interchangeability of different brands of DTaP vaccines.	
56.	**Annexure III/483**	*Vaccine* *Schedule* bOPV Birth, 6,10,and 14 weeks, 15–18 (LAV) months, 5 year, NIDs, S	*Vaccine* *Schedule* bOPV Birth, 6,10,and 14 weeks, 15–18 (LAV) months, NIDs, SNIDs	
57.	**Annexure III/486**	*Vaccine* *Major adverse effects* MMRV (LAV) Same as measles and rubella, high fever, rarely parotid swelling aseptic meningitis	*Vaccine* *Major adverse effects* MMRV (LAV) Same as measles and rubella, high fever, rarely parotid swelling aseptic meningitis Febrile seizure in measles non-primed children	
58.	**Annexure III/487**	*Vaccine* *Schedule* DTwP+ 6±10, 14 weeks Hib+ Hep B	*Vaccine* *Schedule* DTwP+ 6, 10, 14 weeks Hib+ Hep B	
59.	**Annexure III/488**	*Vaccine* *Schedule* Vi-PS-TT conjugate typhoid Single dose at ≥6 months, booster after 3 years	*Vaccine* *Schedule* Vi-PS-TT conjugate typhoid Single dose at ≥6 months	

60.	**Annexure III/489**	*Vaccine* *Content/dose* HPV Bivalent L1 protein of serotypes 6 and 11 *Vaccine* *Schedule* HPV Bivalent 9–14 years, 0 and 6 months; 14–45 years, 0, 1, and 6 months	*Vaccine* *Content/dose* HPV Bivalent L1 protein of serotypes 16 and 18 *Vaccine* *Schedule* HPV Bivalent 9–14 years, 0 and 6 months; 15–45 years, 0, 1, and 6 months	
61.	**Annexure III/490**	*Vaccine* *Schedule* PPSV23 Single dose at 3 years Revaccination only once after 3–5 years	*Vaccine* *Schedule* PPSV23 Single dose after 2 years Revaccination only once after 3–5 years	
62.	**Annexure III/491**	*Vaccine* *Schedule* Varicella Two doses, at 12–15 months and after 3 months or 5 years age; >13 years two doses 4–8 weeks apart	*Vaccine* *Schedule* Varicella Two doses, first dose after 15 months and second dose after 3 months of first dose or at 5 years	
63.	**Annexure III/494**	*Vaccine* *Content/dose* Inactivated SA-14-14-2 Strain JE Vaccine (JEEV) 6 µg per 0.5 mL of inactivated Vero cell culture derived SA 14-14-2 JE vaccine *Vaccine* *Dose, route, and site* Inactivated SA-14-14-2 Strain JE Vaccine (JEEV) 1–3 years: 0.25 mL 3–18 years: 0.5 mL IM; deltoid/thigh *Vaccine* *Schedule* Live JE vaccine, SA-14-14-2 Single dose at 3-9 months	*Vaccine* *Content/dose* Inactivated SA-14-14-2 Strain JE Vaccine (JEEV) 3 µg and 6 µg per 0.5 mL of inactivated Vero cell culture derived SA 14-14-2 JE vaccine *Vaccine* *Dose, route, and site* Inactivated SA-14-14-2 Strain JE Vaccine (JEEV) 1–3 years: 3 µg 3–18 years: 6 µg IM; deltoid/thigh *Vaccine* *Schedule* Live JE vaccine, SA-14-14-2 Two doses at 9 month and 15-18 months	