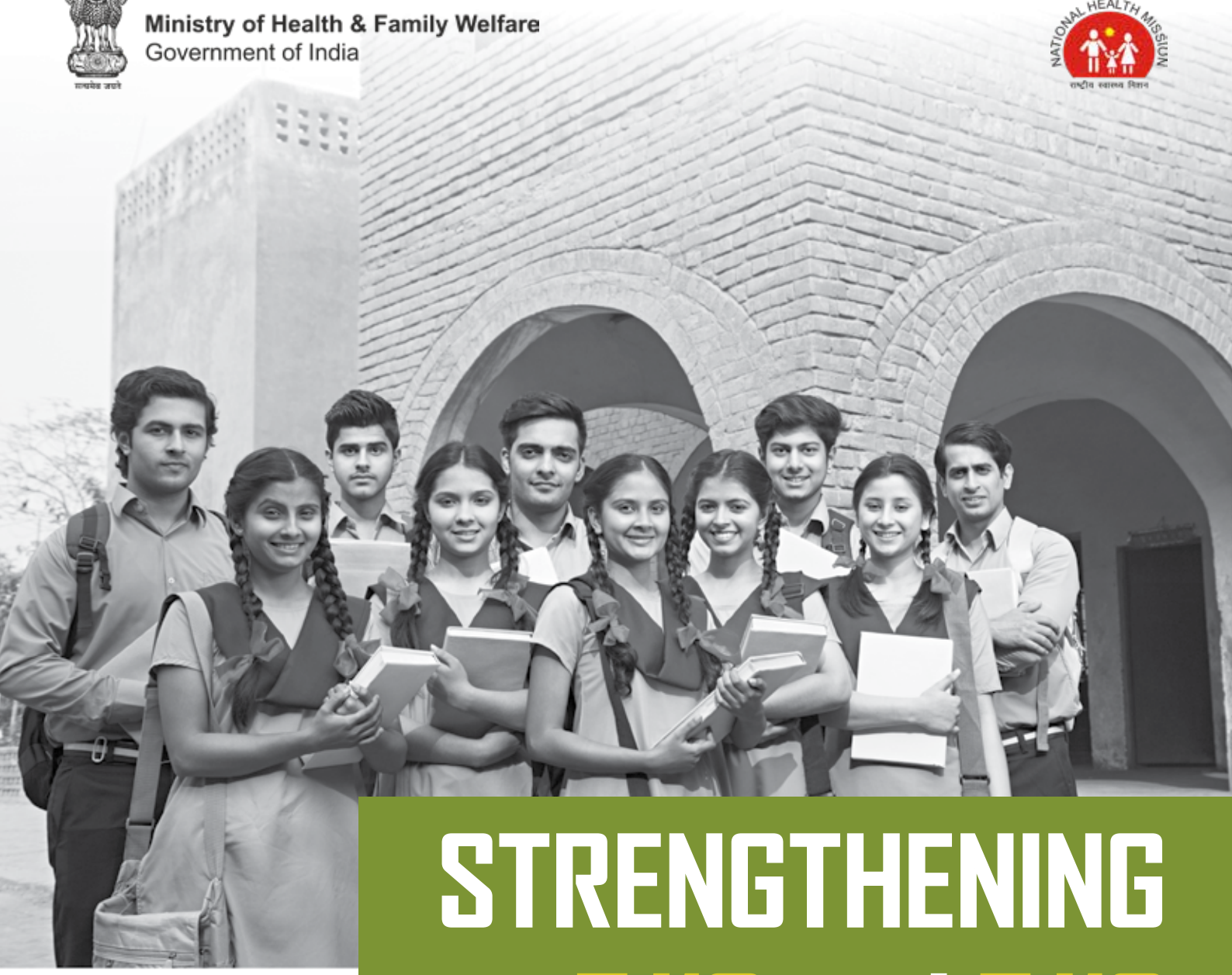
Ministry of Health & Family Welfare
Government of India



STRENGTHENING Td10 and Td16 Vaccine Implementation

Operational Guidelines and Strategic Plan

2019

Ministry of Health & Family Welfare
Government of India

STRENGTHENING Td10 and Td16 Vaccine Implementation

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2019

सबका साथ, सबका विकास, सबका विश्वास
Sabka Saath, Sabka Vikas, Sabka Vishwas

सत्यमेव जयते

डॉ हर्ष वर्धन
Dr Harsh Vardhan
स्वास्थ्य एवं परिवार कल्याण, विज्ञान और प्रौद्योगिकी व पृथ्वी विज्ञान मंत्री, भारत सरकार
Union Minister for Health & Family Welfare
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MESSAGE

India's Universal Immunization Programme (UIP), currently caters to a birth cohort of 2.6 crore infants and 2.9 crore pregnant women every year. The Programme aims at protecting all beneficiaries from vaccine preventable diseases and thereby ensuring a healthy society. There is also a constant strive to improve access, coverage and quality of immunization services.

2. There is need to extend immunization beyond infancy as our efforts for Universal health coverage will be incomplete if our growing children are left unprotected against the vaccine preventable diseases. India is host to the largest adolescent cohort who are also the future of the country so they need special attention and protection.

3. In view of the shift in burden of diphtheria cases to adolescents and adults, the National Technical Advisory Group on Immunization (NTAGI) has recommended replacement of the Tetanus Toxoid (TT) vaccine with Tetanus diphtheria (Td) vaccine under UIP schedule for the adolescent children and the pregnant women. I am sure this guideline will support the States to scale up the coverage of the Td vaccine using various platforms already available under National Health Mission.

4. I am thankful to all experts who contributed to the development of this guideline. I hope this guideline will enable the health system to respond effectively against diphtheria, and help us in attaining more than 90% immunization coverage.

(Dr. Harsh Vardhan)

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Ashwini Kumar Choubey

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सर्वेसन्तु निरामया

स्वच्छ भारत
एक कदम स्वच्छता की ओर

स्वास्थ्य एवं परिवार कल्याण राज्य मंत्री
भारत सरकार
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HEALTH & FAMILY WELFARE
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संदेश

भारत सरकार वैक्सीन से रोकथाम वाली बीमारियों से होने वाली मृत्यु व रूग्णता को कम करने के लिए निरन्तर प्रयासरत है। माननीय प्रधानमंत्री श्री नरेन्द्र मोदी जी ने 90 प्रतिशत पूर्ण टीकाकरण का आह्वान किया है जिसमें देश की गर्भवती महिलाओं और बच्चों के स्वास्थ्य को केन्द्रित किया गया है। प्रभावी जीवनरक्षक वैक्सीन के द्वारा प्रत्येक बच्चे, वयस्क व गर्भवती महिलाएं चाहे वे वंचित वर्ग के हों या दूरगामी क्षेत्र में रहने वालें हों, सभी का बहुमूल्य जीवन टीकाकारण के द्वारा बचाने के लिए भारत सरकार पूर्णरूप से कटिबध्द है।

राष्ट्रीय टीकाकारण कार्यक्रम के अन्तर्गत पिछले कुछ वर्षो में नई वैक्सीन शामिल की गई हैं, वहीं वयस्कों को भी डिप्थीरिया जैसी जानलेवा बिमारियों से बचाने के लिए Td वैक्सीन को राष्ट्रीय टीकाकारण कार्यक्रम में शामिल किया गया है। यह Td वैक्सीन टेटनेस व वयस्क डिप्थीरिया नामक दो जानलेवा बीमारियों से दोहरी सुरक्षा प्रदान करेगी।

राज्यों व केन्द्र शासित प्रदेशों द्वारा लक्षित आयु समूह–10 वर्ष, 16 वर्ष तथा गर्भवती महिलाओं में टीडी (Td) वैक्सीन टीकाकरण में निर्धारित लक्ष्य प्राप्त करने में सहयोग करने के लिए भारत सरकार द्वारा मार्ग–दर्शिका तैयार की गयी है।

मुझे पूर्ण विश्वास है कि यह मार्ग–दर्शिका राज्यों व केन्द्र शासित प्रदेशों को टेटनेस व डिप्थीरिया टीकाकरण आच्छादन को बढ़ाने में बहुत ही उपयोगी होगी। इस दिशा–निर्देशों को तैयार करने में अपना महत्वपूर्ण योगदान देने के लिए मंत्रालय के सभी अधिकारियों, सहयोगी संस्थाओं व अन्य सहयोगियों को धन्यवाद देता हूँ। मैं राज्यों व केन्द्र शासित प्रदेशों से आह्वान करता हूँ कि वे देश के प्रत्येक बच्चों को उत्कृष्ट स्वास्थ्य सेवाएं प्रदान करने के लिए कटिबध्द हों।

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Ministry of Health and Family Welfare

Date: 21.10.2019

MESSAGE

Immunization is one of the most cost-effective interventions that saves millions of lives annually and makes the world healthier and safer for the children. India, through the Universal Immunization Programme (UIP) has been successfully catering to the vaccination needs of the largest birth cohort of 2.6 crore infants and 2.9 crore pregnant women annually. Over the last few years, India's focus has been to achieve the national coverage goals and expansion of the bouquet of new vaccines to protect our children from more vaccine preventable diseases.

In order to extend the benefit of immunization beyond infancy and to cover adolescents and adults, Government of India has taken a decision to replace the Tetanus toxoid (TT) vaccine with Tetanus and adult diphtheria (Td) vaccine. The decision has been both timely and ambitious, aimed towards addressing the growing Diphtheria occurrence among higher age groups in the country and safeguarding India's sizeable population against two life threatening diseases – Tetanus and adult diphtheria.

To improve the adolescent and adult vaccination coverage, the existing programmes for the adolescent population within the NHM landscape need to be leveraged as potential platforms. There is need to seek opportunities to bolster immunization services to adolescents in-school and out-of-school.

This operational guideline recommends and defines strategies for strengthening adolescent immunization within the existing framework of NHM. These suggestive recommendations fall within the purview of both the urban and rural immunization landscape and would require a good coordination with related departments.

I request the states to implement this guideline on priority and explore the strategies that would be best suitable for their state specific needs and context thereby improving coverage of Td10, Td16 in adolescents and Td coverage among pregnant women.

(Preeti Sudan)

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Dated 23rd October, 2019

FOREWORD

National Technical Advisory Group on immunization (NTAGI) has recommended introduction of Td(Tetanus and adult Diphtheria) vaccine in India's Universal immunization Programme replacing TT(Tetanus Toxoid) vaccine in line with global recommendations. TT vaccine which was earlier given to 10 years and 16 years aged adolescents as well as to pregnant women has been replaced by Td vaccine and has been being supplied to the states.

The coverage of Td vaccine has been low in the country. In order to improve Td coverage among adolescents, this Operational Guidelines will provide a framework to increase the coverage of Td vaccination amongst adolescents and also guide on smooth replacement of TT vaccine with Td vaccine. In this document various potential platforms and mechanisms for improving Td coverage are mentioned, like the School health program (SHP), Rashtriya Bal Swasthya Karyakram (RBSK), Rashtriya Kishore' Swasthya Karyakram (RKSK), Integrated Child Development Services (ICDS),which would require working in close coordination with the other line-departments.

School going adolescents of class 5 & class 10 can be vaccinated using platforms like SHP, RBSK as well as by carrying out Td adolescent immunization week every year. Out of school adolescents can be vaccinated by using the existing routine immunization platforms under VHSND.

You are requested to explore the strategies that would be best suitable for your state. I solicit your support in this endeavor so that together we are able to strengthen Td vaccination in children and adolescent and ensure that the much-needed Booster doses are provided as per the National Immunization schedule. This would contribute towards improving both physical and Fiscal growth of our country.

I am hopeful that this guideline will impact positively in strengthening the Td vaccination in the country and will contribute to reduction in tetanus & diphtheria morbidity and mortality.

(Manoj Jhalani)

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Universal Immunization Programme is a major public health intervention covering infants, children, adolescents and pregnant women in the country. Under the UIP, Government of India is providing vaccination to prevent 12 vaccine preventable diseases i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis, Hepatitis B, meningitis and pneumonia caused by Hemophilus influenza type B; and against Rubella and Rotavirus Diarrhea in all the states and Japanese Encephalitis in endemic districts

Despite of various efforts to improve coverage of vaccines against diphtheria and other diseases, there have been outbreaks of diphtheria cases especially among children aged more than five years and adolescents. In order to address this issue and improve immunity against the disease in the adolescents and adults, the Government of India has taken a decision to replaced Tetanus Toxoid (TT) vaccine with Tetanus & adult diphtheria (Td) vaccine under the UIP, for adolescent of 10 years and 16 years and pregnant women.

I am happy to share this Operational Guidelines for strengthening Tetanus and adult diphtheria (Td) vaccination. This operational guideline aims to strengthen the existing efforts of the States/UTs in strengthening Td vaccination. This guideline provides the details on the operationalization and management of Td vaccines expansion at every level to help states in their day today activities. It is important that clear directions are communicated to the districts and regular review of the activities is undertaken so that adolescent vaccination becomes an integral part of the Universal immunization programme.

I extend my sincere thanks to officers at MoHFW, ITSU and partners like WHO, UNICEF, UNDP and JSI who have contributed in the development of this document. I am confident that states will find these guidelines useful for planning, implementing and monitoring of Td Vaccine for adolescents and pregnant women.

(Vandana Gurnani)

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Message by Program Manager

Over the past decade, India's immunization story has evolved from bleak to bright in terms of saving lives and giving more children and pregnant women a chance of healthy and productive lives. Moreover, immunization along the life-course has significant potential to ensure healthier future for adolescents, pregnant women and adults.

India accounts for around 21% of the total global adolescent population, accounting to a cohort 25.3 crores. Today, every fifth person in India is an adolescent. Investing in this segment of the population is the best way to leverage the nation's competitive advantage. However, despite the acknowledgement of the critical role of this cohort, immunization coverage among the adolescent age group has been suboptimal.

In light of the growing need of preventing disease outbreaks of Diphtheria and sustaining Tetanus elimination, Government of India has decided replace the Tetanus Toxoid (TT) vaccine with Tetanus & adult diphtheria (Td) vaccine for adolescents age 10 years and 16 years and pregnant women.

This operational guideline framed for improving Td coverage in states suggests different evidence-based strategies and operational plan that will certainly support states/UTs in smooth shift from TT to Td in the state. It is important for preventing stocking up of the Td Vaccine already available with the states and ensuring no wastage of the available TT vaccines in the states.

I hope this guiding document provides the impetus of reinforcement to all states and UTs for further strengthening immunization services beyond childhood. State's leadership to this initiative and regular review of the programme will ensure maximizing coverage outcomes at large scale.

Dr Pradeep Haldar

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Acronyms

AD	Auto – disable
AEFI	Adverse Event Following Immunization
ANM	Auxiliary Nurse Midwife
ANMOL	ANM Online
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
AVD	Alternate Vaccine Delivery
BCPM	Block Community Process Manager
BMO	Block Medical Officer
BMW	Bio-medical Waste
BRIDGE	Boosting Routine Immunization and Demand Generation
BSA	Basic Siksha Adhikari
CBO	Community-based Organizations
CCP	Cold Chain Point
CRF	Case Reporting Form
CCH	Cold Chain Handler
CDPO	Child Development Project Officer
DIO	District Immunization Officer
DTFI	District Task Force for Immunization
DPT	Diphtheria, Pertussis, and Tetanus
EEFO	Early Expiry, First-Out
eVIN	Electronic Vaccine Intelligence Network
GPV	Global Programme for Vaccines
FAQ	Frequently Asked Questions
FCIF	Final Case Investigation Form
FLW	Frontline Worker
HRAs	High Risk Areas
HWC	Health and Wellness Center
IAP	Indian Academy of Pediatrics
ICDS	Integrated Child Development Services
IEC	Information Education and Communication
IFV	Immunization Field Volunteer
ILR	Ice-lined Refrigerator
IPC	Inter-Personal Communication
IPV	Inactivated Polio Vaccine
IMA	Indian Medical Association
JRF	Joint Reporting Form
MAS	Mahila Aarogya Samiti
MCP	Mother and Child Protection
MHRD	Ministry of Human Resource Development
MO	Medical Officer
MOIC	Medical Officer In-charge
MPR	Monthly Progress Report
MR	Measles Rubella
MoHFW	Ministry of Health & Family Welfare

NCC	National Cadet Corps
NPSP	National Polio Surveillance Project
NSS	National Service Scheme
NTAGI	National Technical Advisory Group on Immunization
NUHM	National Urban Health Mission
NYK	Nehru Yuva Kendra
PCIF	Preliminary Case Investigation Form
PHC	Primary Health Centre
PHCAEFI	Preliminary Case Investigation Form
PRI	Primary Health Centre
PTA	Parent Teacher Association
PTM	Parent Teacher Meeting
RBSK	Rashtriya Bal Swasthya Karyakram
RKSK	Rashtriya Kishor Swasthya Karyakram
RI	Routine Immunization
SAGE	Strategic Advisory Group of Experts
SC	Sub-centre
SEPIO	State Expanded Programme of Immunization Officer
SMNet	Social Mobilization Network
SOPs	Standard Operating Procedures
STFI	State Task Force on Immunization
STSC	Standing Technical Sub Committee
Td	Tetanus and adult diphtheria
TT	Tetanus Toxoid
UDISE	Unified District Information on School Education
UIP	Universal Immunization Programme
UHSNDs	Urban Health Sanitation & Nutrition Days
VAEIMS	Vaccine Adverse Event Information Management System
VHSNDs	Village Health Sanitation & Nutrition Days
VVM	Vaccine Vial Monitor
WCD	Women and Child Development
WHO	World Health Organization

CHAPTER 01

CHAPTER 1

Introduction and Background

Adolescence – the second decade of life – is an age of transformation and opportunity that requires special attention and protection. World Health Organization (WHO) defines 'Adolescents' as individuals in the 10-19 years age group. India is host to the largest adolescent cohort in the world, i.e. 25.3 crores, which constitutes 21 percent of the total population.[1] As acknowledged globally, immunization is one of the most beneficial and cost-effective disease prevention measures for adolescents, yet thousands of adolescents die, and thousands are hospitalized each year due to communicable diseases which could have been prevented by access to immunization.

The WHO Scientific Advisory Group of Experts (SAGE) to the Global Programme for Vaccines and immunization (GPV) indicated the need to expand immunization activities beyond infancy, and include adolescents either as part of routine immunization services, or as part of disease elimination or eradication measures.[2]

This expansion is aimed at bolstering focus on the large proportion of unprotected adolescents by boosting their immunity status that is waning after completion of primary immunization, or the absence of "natural" immunity following exposure to a particular disease/agent.

1.1 Global Context and Epidemiology

Tetanus

Globally 56,743 deaths due to tetanus were reported in 2015. Of these, 35% deaths (i.e. 19,937 deaths) occurred in neonates. Of the 19,937 neonatal tetanus deaths, 45% occurred in South Asia, and 44% in Sub-Saharan Africa. The remaining 65% deaths (i.e. 36,806 deaths) occurred in older children and adults. Of these 36,806 deaths, 47% occurred in South Asia, 36% in sub-Saharan Africa, and 12% in South-East Asia[3].

Diphtheria

The WHO Position paper on diphtheria, 2017, mentions that the South-East Asia Region was the source of 55-99% of all reported cases each year from 2011-2015. As per the report on Review of the Epidemiology of Diphtheria - 2000-2016, US-CDCP, 5 years average of reported diphtheria cases are mostly in the South East Asia Region of WHO and more particularly in India.

1.2 Indian Context and Epidemiology

In India, 129 cases of neonatal tetanus and 8788 cases of diphtheria were reported in 2018, whereas cases of diphtheria show a fluctuating trend[4]. Amongst the South East Asian region, India contributes to the maximum number of diphtheria cases[5].

Figure 1. Reported diphtheria cases in 5-year average - 2000-2015

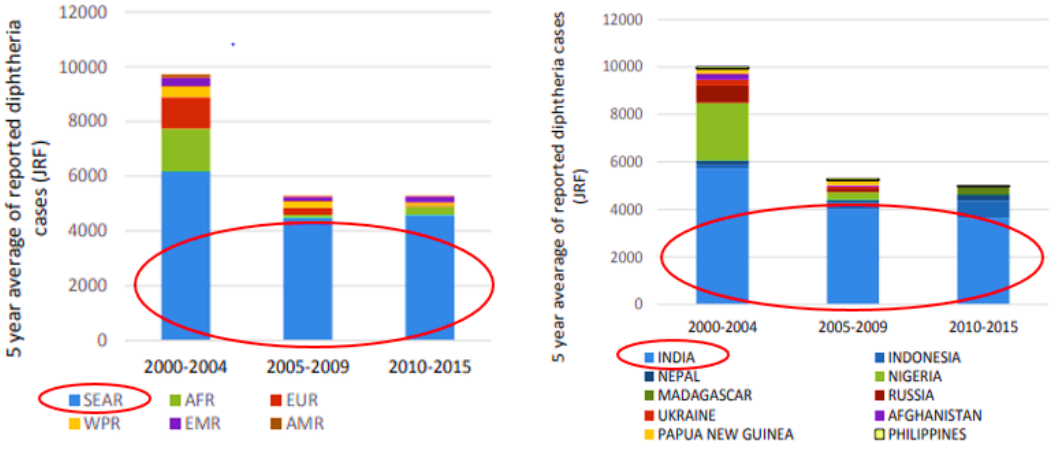

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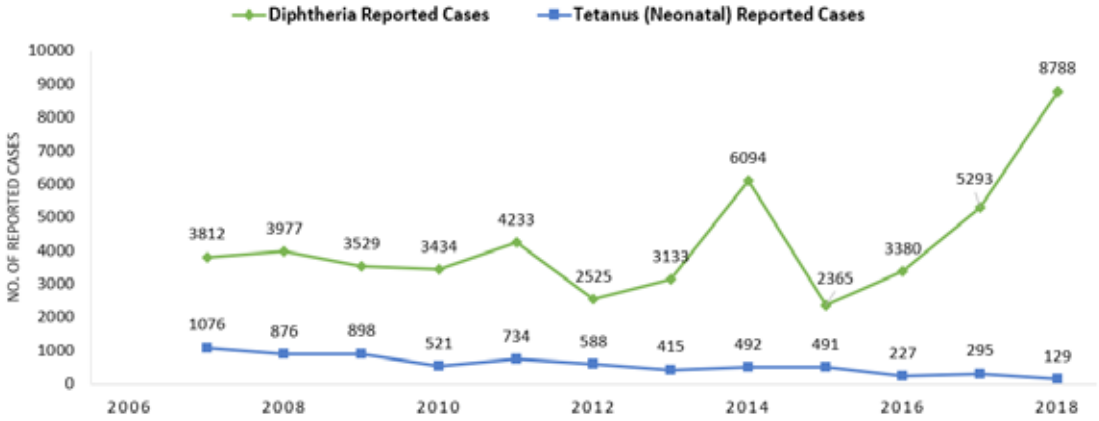
Figure 2. Trend of Tetanus and diphtheria cases in India



1.3 Rationale for TT to Td Replacement

Despite 80% reduction in global tetanus mortality since 1999, the world has witnessed an increase in diphtheria outbreaks. In India, as per National Public Health Surveillance Project's (NPSP) laboratory-supported vaccine-preventable diseases surveillance data, most cases of diphtheria occur in the age group of 5 years or above (77% and 69% in 2017 and 2018 respectively)[6]. Approximately 2/3rd of these cases are unvaccinated.

An analysis of the 2016 diphtheria outbreak in Kerala shows that nearly 79% of cases were more than 10 years of age[7]. Investigating analysis of a diphtheria outbreak in Delhi, Haryana and Uttar Pradesh in September 2018 (undertaken by Maharishi Valmiki Infectious Disease Hospital, Delhi) shows that 74% cases (103 out of 139 cases) occurred in children older than five years.

DPT vaccine was introduced in the country under routine immunization in 1978, resulting in a substantial decline in incidence in the paediatric populations. The effect was a shift of the infection to the older age groups. In 1998, around 65% of cases occurred above 3 years of age[8]. The shift in age paradigm justified the need for booster doses of diphtheria vaccination in older age groups. Hence, WHO recommends two doses of diphtheria toxoid-containing vaccination of adolescents and pregnant women.

Waning of Immunity:

Diphtheria epidemics in Eastern Europe and South America revealed that immunity to diphtheria wanes following the primary series of DTP infant immunization. After experiencing outbreaks, these regions changed to tetanus and diphtheria-containing (Td) vaccine for women of reproductive age, and Td booster doses for older children. This strategy, resulted in diphtheria very nearly disappearing in Eastern Europe and South America. Diphtheria immunity following a 3-dose primary vaccination schedule subsides over time. Therefore, booster doses of diphtheria toxoid-containing vaccines are needed to ensure continued protection. WHO recommends a schedule of 3 primary doses plus 3 booster doses for diphtheria vaccination.

Global recommendations of TT replacement with Td

To control the burden of diphtheria cases/outbreaks, WHO has recommended that all countries needs to replace TT with Td for vaccination of women of reproductive age (including pregnant women as per national immunization targets), older children and adolescents to provide enhanced protection against diphtheria. The recommendation to shift from using TT to Td vaccine was re-stated by the Strategic Advisory Group of Experts (SAGE) on Immunization in 2002 and 2016, and was published and disseminated again in the WHO position papers on tetanus vaccine in 2006[9] and 2017[10].

Consequent to the recommendations from SAGE and WHO, countries have started replacing TT by Td Vaccine. Available WHO and UNICEF joint reporting form (JRF) and UNICEF Supply Division data as at end of May 2018 show that only 133 countries are fully using Td

[6] WHO, VPD surveillance data 2017 & 2018, obtained from Immunization Division, MoHFW, GoI.
[7] Sangal, Lucky, Sudhir Joshi, Shalini Anandan, Veeraraghavan Balaji, Jaichand Johnson, Asish Satapathy, Pradeep Haldar et al. "Resurgence of diphtheria in North Kerala, India, 2016: laboratory supported case-based surveillance outcomes." Frontiers in public health 5 (2017): 218
[8] S. K. Ray, S. D. Gupta, and I. Saha, "A report of diphtheria surveillance from a rural medical college hospital," Journal of the Indian Medical Association, vol. 96, no. 8, pp. 236–238, 1998.
[9] WHO. Tetanus vaccine: WHO position paper. Weekly Epidemiological Record, No 20, 19 May, 2006
[10] WHO Tetanus vaccine: WHO position paper. Weekly Epidemiological Record, 10 February 2017, vol. 92, 6 (pp. 53–76)

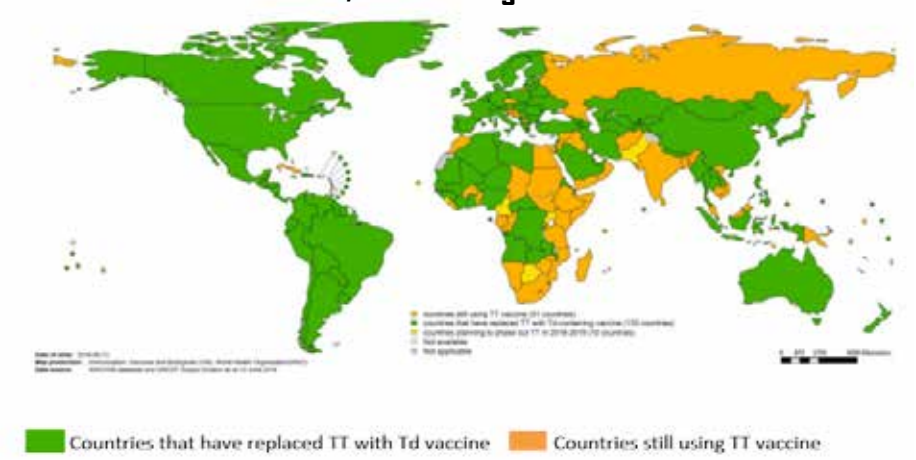
instead of TT vaccine and 61 countries are still using TT vaccine in their national immunization programmes (Figure 3). Ten of these are already planning for the replacement between 2018 and 2019; nothing is yet planned for the remaining 51 countries.

About Td vaccine

Tetanus and adult diphtheria (Td) vaccine is a combination of tetanus and diphtheria with lower concentration of diphtheria antigen (Td).

Figure 3. Global trend of Tetanus and adult diphtheria vaccine

Td vaccine is safe, and is being used in 133 countries



Recommendation of National Technical Advisory Group on Immunization (NTAGI), to introduce Td in India

Based on the surveillance data, the Standing Technical Sub Committee (STSC) concluded that there is a shift in the burden of diphtheria cases to adolescents and adults, acknowledged the low booster dose coverage and the lack of platforms to provide booster doses and highlighted the need to strengthen these platforms. The STSC recommended strengthening of the diphtheria surveillance system and replacement of TT with Td vaccine. It further suggested that supplementation of school-age vaccination and routine coverage with Td would further increase coverage against diphtheria. In 2017, the National Technical Advisory Group on Immunization (NTAGI) endorsed and accepted the recommendation of the STSC for replacement of TT vaccine with Td vaccine in India's immunization programme for all age groups, including pregnant women.

In August 2018, as per the recommendation of NTAGI, Government of India decided to replace Tetanus Toxoid (TT) vaccine provided at 10 years (TT10) and 16 years (TT16) under the Universal Immunization Programme (UIP) schedule with Tetanus and adult diphtheria (Td) vaccine.

Dose	Route	Site
0.5 ml	Intra muscular	Upper Arm

- » WHO prequalified
- » VVM 30
- » Shelf life: 24-36 months

Based on the NTAGI recommendation, the revised UIP schedule is given below:

Age	Vaccination schedule after Td introduction
At birth	BCG, OPV-zero dose, Hep B-birth dose
6 weeks	OPV-1, Pentavalent-1, Rota-1**, fIPV-1, PCV-1**
10 weeks	OPV-2, Pentavalent-2, Rota-2**
14 weeks	OPV-3, Pentavalent-3, Rota-3**, fIPV-2, PCV-2**
9 months	Measles-1/MR-1, Vit A, JE-1*, PCV-B**
16-24 months	DPT first booster dose, OPV-booster dose, Measles-2/ MR-2, JE-2*
5-6 years	DPT second booster dose
10 & 16 years	Td
For pregnant woman	Td-1 : early in pregnancy Td-2 : 4 weeks after Td-1 Td-B#: if pregnancy occur within 3 years of last pregnancy and 2 Td doses were received

*in endemic districts only
**Being introduced/scaled up
#one dose if previously vaccinated within 3 years

Adolescent immunization status:

India has the largest cohort of adolescents in the world, yielding great dividends for future generations. For optimal well-being of this age group, immunization coverage of adolescents at the age of 10 and 16 years with Td is crucial. Currently, TT10 and TT16 coverage is sub-optimal and needs the focused attention of programme managers.

To gain the maximum benefit of Td vaccine and to prevent diphtheria occurrence among higher age groups, it is essential to increase the coverage among adolescents. In order to increase the coverage of Td vaccine, robust and efficient planning, implementation, monitoring and reporting of these services are of utmost importance.

Statistics Speak

- In FY 2018-19, the national coverage of TT vaccine was at 54.9% and 48.4% for TT10 and TT16 respectively.
- State-wide coverage of TT at both 10 and 16 years varies significantly.
- TT10 coverage ranges from 9.2% in Arunachal Pradesh to 92.6% in Tamil Nadu.
- TT16 coverage varied from 5.4% in Delhi to 78.9% in Chhattisgarh.

Source: HMIS Report

1.4 Aetiopathogenesis of Disease

Aetiopathogenesis of Tetanus

Tetanus is a highly infectious, non-communicable, bacterial disease caused by Clostridium *tetani*. The spores of *C. tetani* are prevalent in the environment, particularly in the soil of warm and moist areas, and carried in the intestinal tracts and faeces of humans and animals. The highly potent toxin produced by *C. tetani* is called Tetanospasmin. It blocks inhibitory neurotransmitter in the central nervous system, causing muscular rigidity and spasms. The incubation period of tetanus is 3-21 days after infection.

Clinical Features of Tetanus

Tetanus presents itself in three characteristic clinical manifestation:

1) Localized tetanus:

- This form of tetanus is uncommon
- It is characterized by sustained contraction of the muscles

2) Cephalic tetanus:

- It is a rare form of the disease associated with C. tetani
- It presents clinically as cranial nerve palsies
- Cephalic tetanus can progress to generalized tetanus; in which case it has a similarly poor prognosis[1].

3) Generalized tetanus:

- Occurs in more than 80% of the cases presenting as generalized spastic disease[1]
- Characteristic features of disease onset are early spasms of the muscles of the jaw known as trismus or lockjaw
- Spasm of the facial muscles produces risus sardonicus, a distinctive facial expression that resembles a forced grin
- Sustained spasm of the muscles of the back leads to opisthotonos, the backward arching of the head, neck and spine, and to sudden generalized seizure-like spasms
- Spasm of the glottis may cause sudden death
- The case fatality rate of generalized tetanus varies from 10 to 70%. In the absence of optimal care, case fatality is almost 100%

Aetiopathogenesis of Diphtheria

Diphtheria is a bacterial disease caused by Corynebacterium diphtheria. The exotoxin produced by C. diphtheria inhibits protein synthesis in the cell leading to cell death. In addition to the bacterial exotoxin, cell-wall components such as the O- and K-antigens are essential in the pathogenesis of the disease. Transmission of C. diphtheriae occurs from person to person through droplets and close physical contact. Transmission may also occur via contagious cutaneous diphtheria lesions, as has been documented in some areas of the tropics and under conditions of poor hygiene. Cutaneous diphtheria is common in warmer climates and settings with poor hygiene and overcrowding. C. diphtheriae replicates on the surface of the mucous membrane but can also manifest as a cutaneous form.

The incubation period of diphtheria is 2-5 days (range 1-10 days). The disease manifests a high case fatality (> 10%) in endemic areas.

Clinical Features of Diphtheria

Diphtheria presents itself in the following range of clinical presentations:

- Transmission of nontoxigenic *C. diphtheriae* to susceptible individuals frequently results in transient asymptomatic pharyngeal carriage or mild clinical disease
- Infection can cause respiratory or cutaneous diphtheria and in rare cases can lead to systemic diphtheria. Depending on the anatomical location, respiratory disease may be nasal, pharyngeal, or laryngeal, or any combination of these.
- Pharyngeal diphtheria is the most common form. The onset is usually relatively slow and characterized by mild fever and an exudative pharyngitis that organizes into pseudo-membrane in nose, pharynx and tonsils.
- Bull neck diphtheria is characterized markedly enlarged anterior cervical lymph nodes with considerable inflammation and oedema of surrounding tissues
- Absorption of diphtheria toxin into the bloodstream results in toxic damage to organs such as the heart, kidneys and peripheral nerves

CHAPTER 02

CHAPTER 2:

Strategic Components for Effective Td10 and Td16 Roll-out

The key components of Td vaccination, such as: Micro-planning, Cold chain-vaccine logistics management, AEFI, Recording-reporting, Monitoring-supervision and Communication-social mobilization are briefly described in this chapter.

2.1 Micro-planning

Micro-planning is one of the tools that health workers use to ensure that immunization services reach every community by identifying priority communities, addressing barriers, and developing workplans with solutions. Micro-plans are prepared for a one-year period but must be reviewed every quarter. For optimal Td vaccination, an appropriate micro-plan needs to be prepared for in-school and out-of-school adolescents.

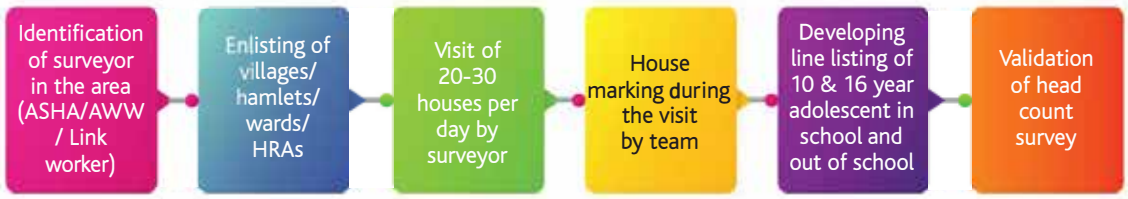
Specific components of a RI micro-plan for Td immunization:

- Enlisting of all villages/wards/tolas/HRAs
- Enlisting of all schools (government, government-aided, private, religious, and so on) of the area
  - On line-listing of all students of class 5th and 10th of the schools
- Headcount of all 10 and 16-years old adolescents through house-to-house survey
  - School-going and
  - Out-of-school adolescent
- Medical Offices will plan for immunisation session based on updated microplan with the help of RBSK and schools. RBSK will provide line-listing of all names of children who are not vaccinated within government and government aided school with help of school authorities and school education department. RBSK team will create awareness among children about the need to vaccinate Td
- Estimate and plan the vaccine and logistic requirements, including modes of vaccine delivery
- Device school and outreach-specific communication plans focusing on adolescent populations
- Supervision and monitoring plans
- For Td vaccination two types of micro-plans need to be prepared: a) For School-going and b) For out-of- school adolescents

Estimation of the target population through the house-to-house survey:

House-to-house survey for estimation of the target population (10 and 16 years adolescents) is an essential component of the activity. A systematic approach for a house-to-house survey is illustrated in Figure 4.

Figure 4. Systematic approach for house to house Survey



Definition of Adolescent

The definitions for a 10 and 16 years old adolescent are as follows:

- 10 year adolescent: one who has completed 10 years but not reached 11th year (Age: 10 years upto 10 years and 364th day) on the date of the house-to-house survey.
- 16 year adolescent: who has completed 16 year but not reached 17th year (Age: 16 years to 16 year 364th day) on date of the house-to-house survey.

Validation of house-to-house survey:

- Validation should be conducted by the block/ district level officials to maintain the quality of the survey. The block/planning unit assigns one supervisor for every 1-3 sub-centers and urban areas. Each supervisor is responsible for ensuring the quality of the survey by guiding and monitoring the health worker (ASHA/AWW/Link Worker) who are involved in data collection.

List of different Formats related to house-to-house survey of targeted beneficiaries (Adolescents 10 and 16 years of age): (attached as Annexes)

- Survey Form 1 - Area demarcation for house-to-house survey of 10 and 16 year old adolescents
- Survey Form 2 - Line list of 10 and 16 year old adolescents
- Survey Form 3 - Validation of house to house survey of 10 and 16 year old adolescents.
- Survey Form 4 – Due list for 10 and 16 year old adolescents
- School Form 1 – Line list of schools for adolescent Td immunization
- School Form 2 - Line list of class 5 and class 10 of school adolescents

Remember:

- Include adolescent age groups (both school-going and out-of-school adolescents) of 10 and 16 year olds as part of the head count survey of AWW and ASHA
- Additional focus on coverage of adolescent boys may be made through this survey by AWW
- Prepare a specific communication plan addressing in-school and out-of-school adolescents
- The micro-plan should also include the supervision and monitoring plan

2.2 Cold Chain and Vaccine Logistics

The state must ensure availability of Td vaccine at state vaccine stores, regional vaccine stores, district vaccine stores, and cold chain points. Cold Chain Handlers should avoid stock-out by indenting the required vaccine from higher stores once the stock reaches a minimum level. The review of the stock position using eVIN and entering vaccine transaction on the eVIN application helps the states to monitor the Td availability and the utilization trend. The vaccine stock and distribution registers should be updated to reflect the vaccine transactions.

Vaccine estimation and procurement:

Before Td roll-out, states need to calculate and share the estimated requirement of Td vaccine and syringes to Government of India as per the given formula (Figure 5). Consider retaining 25% buffer stock before forecasting and sending the requirement at each level.

Vaccine Sensitivity:

Td is freeze and heat-sensitive and thus needs to be transported and stored at +2 to +8 degree Celsius temperature, just like TT (Figure-6).

Figure 5. Td estimation

Since, Td come in 10 dose vials the calculation will be:

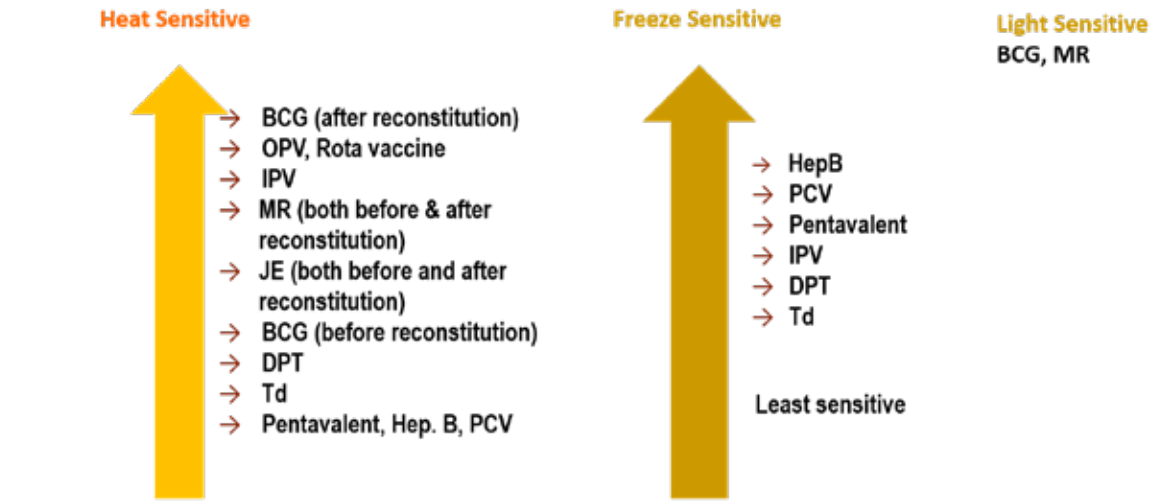
$$Td = \frac{\text{Beneficiaries per month} \times 1.1}{10}$$

Proper calculation of syringes required is also necessary. Therefore,

*0.5 ml ADS = (Beneficiaries for Td) × 1.1**

*(*For Syringes = 10% wastage rate or 1.11 Wastage Multiplication Factor)*

Figure 6: Vaccine sensitivity



The damage caused by heat is cumulative and cannot be reversed by re-storing the vaccines under recommended temperature.

The effect of freezing is not cumulative, once frozen it is of no use.

Td Vaccine Stock Management:

- The storage, package size, presentation, route of administration, wastage rate, doses required, transportation, heat and freeze sensitivity, cold chain maintenance is the same as TT
- No requirement for additional cold chain storage capacity to accommodate Td vaccine; however, in case of additional requirement because of increase in number of beneficiaries, extra ILRs need to be placed as per requirement
- If the remaining stock of TT vaccine still meets all validity requirements, it should be used first and then begin using the Td vaccine
- Td should be stored in ILR below DPT and IPV (Figure: 7)
- Vaccine with the nearest expiry date will be used first in a system known as EEFO (early expiry, first-out)
- There is no need to discard or recall stocks of available TT vaccine
- Td vaccine can be given as a subsequent dose following TT, and all previous TT doses will remain valid. There is no need to re-start the series.
- Open vial policy is applicable to Td vaccine.
- Shake test is applicable.
- Expiry date should always be checked whenever a vial is opened. If you find a frozen vaccine vial, do not use it and record it in the vaccine stock and distribution register.
- The AD syringes (0.5 ml) available under the UIP will be used to administer Td vaccine.

Figure 7: Storage of Td in the ILR

Stock and vaccine distribution register:

Stock Register:

- Td vaccine stock to be entered in stock register for each transaction as being done for other UIP vaccines.
- If TT vaccine is available at store/CCP, transaction of the TT and Td will be entered in stock register separately.

Distribution Register:

» The distribution details of Td for each transaction will be entered in distribution register under TT vaccine column, however, Td to be mentioned in heading clearly. If TT is also available, separate sheet may be used for Td and TT entries.

Use of eVIN for Smooth TT to Td transition:

eVIN is rolled out in majority of states and used for comprehensive Immunization supply chain management. Use of eVIN will be critical for smooth transition of TT vaccine to Td vaccine in terms of following aspects:

1) **Forecasting and Estimation of requirement:**

In eVIN states, vaccine requirement, minimum and maximum stock are already present. Forecasting requirement for Td will be same as TT. All Cold chain handlers have to ensure that eVIN mobile app as well as web module is capturing the same minimum and maximum stock, as well as the recommended quantity at the time of indent generation.

2) **Monitoring consumption of TT:**

Td will be used only when TT is completely utilized and stocked out. Ensure that there is no variation in TT consumption and it is timely consumed. eVIN has to be monitored regularly for TT consumption.

3) **Ensure adequate stock of Td before TT phase-out:**

While TT will phase out, it will be important to ensure that there is adequate stock of Td at each level for seamless immunization sessions. eVIN can generate state, district and CCP wise reports to ensure stock availability, adequacy and probability of stock out.

4) **Comparison of TT and Td consumption:**

Comparison of TT and Td consumption should be closely monitored through eVIN. This comparison will help the health workers and programme managers to ensure that the phase-in and phase-out process is as per the Roll-out plan.

5) **Temperature Monitoring:**

As Td is a heat and freeze sensitive vaccine, it is important to ensure that Td is stored under recommended temperature range of +2 to +8° Celsius. Through eVIN, temperature can be monitored remotely and instant alerts are generated when there is a temperature breach. As per the SOPs for temperature monitoring, immediate corrective action, by the Cold chain handler/technician, has to be taken at the time of temperature breach.

Vaccine transport:

The Cold chain handler must avoid overstocking or stock out of vaccine at cold chain points. Shortage of stock and wastage must also not occur. Therefore, it is needed to have a prior estimation of the minimum and maximum stock of the vaccine (Figure 9).

Figure 8: Tracking of TT to Td transition

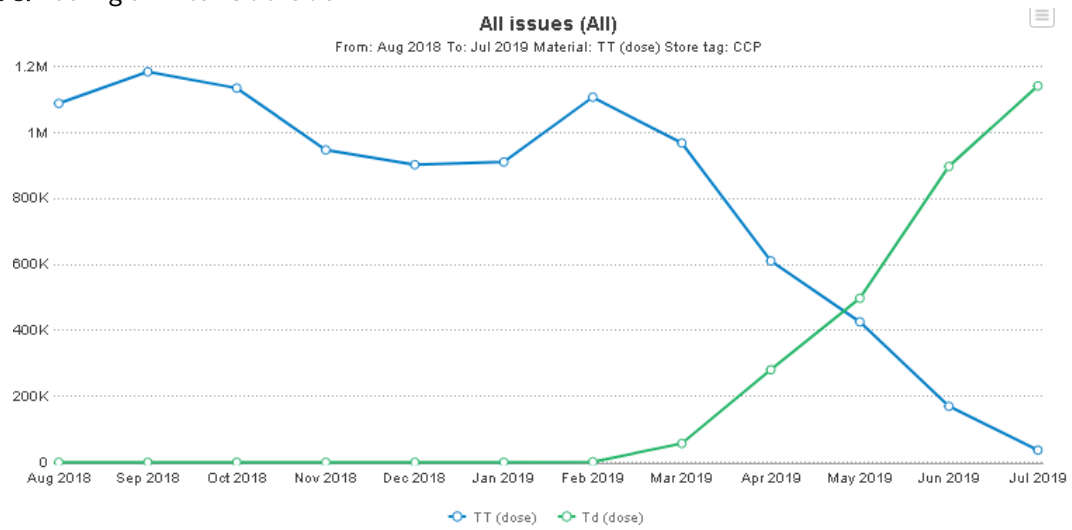
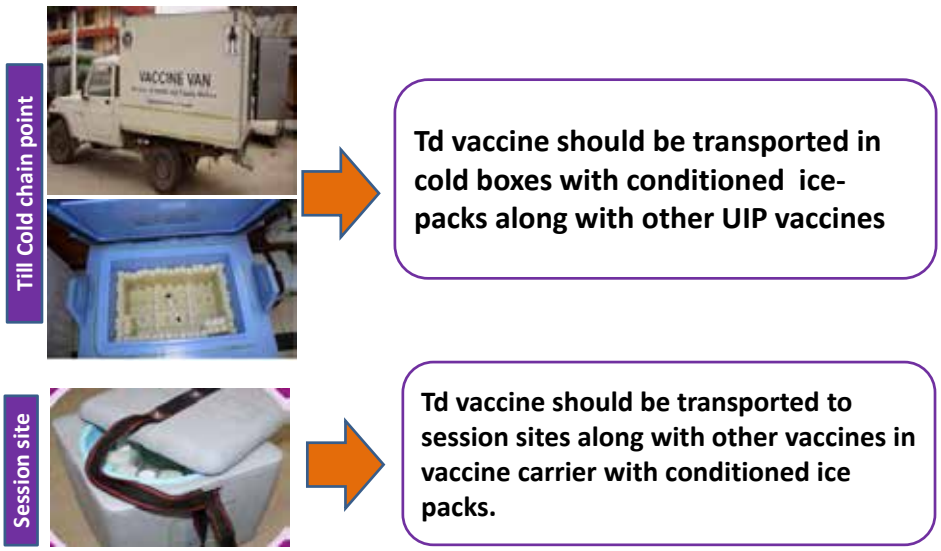


Figure 9: Vaccine Transport



Monitoring supply of AD syringes:

Available records must be examined for supply, utilization and balance of vaccines and AD syringes, and must be verified physically to see whether there is a logical association between vaccines and AD syringes supplied and used.

If the following scenarios are found, there is a need to explore and address the reasons:

- The utilization of the vaccine and AD syringes show a pattern of rapid increase or decrease week after week;
- If there is any mismatch between the reported number of doses and AD syringes used

2.3 Adverse Event Following Immunization

An Adverse Event Following Immunization (AEFI) is an untoward medical occurrence which follows immunization and which does not necessarily have a causal relationship with the usage of the vaccine. The adverse event may be any unfavorable or unintended sign, abnormal laboratory finding, symptom or disease. A reported adverse event can be either an actual adverse event (actually a result of the vaccine or the immunization process) or a coincidental event (which is not due to the vaccine or the immunization process but is temporally associated with immunization). Adverse events following immunization can also occur in clusters. A cluster is two or more cases of the same adverse event related in time, place or vaccine administration.

Td vaccines have been used for decades in many countries and are known to be a safe and effective. The widespread use of Td vaccines in many countries has not produced any signal of possible harm to pregnant women or foetus. However, the health system has to be prepared for managing, reporting, investigating adverse events and conducting an assessment to know the cause.

The following adverse events are known to occur following administration of Td vaccines:

Minor symptoms: These reactions are generally mild and confined to the site of injection administration. Some inflammation may occur along with transient fever, malaise and irritability. Occasionally, a nodule may develop at the site of injection but this is rare.

Allergic reaction/anaphylaxis: Rarely, severe allergic reaction such as hives, swelling of the face and throat, or difficulty in breathing may occur. Very rarely, anaphylaxis may occur following administration of Td vaccine. These reactions can be managed as per instructions mentioned below:

- Manage allergic reactions by referring the beneficiary to the nearest AEFI management center.

- » If anaphylaxis is suspected, immediately administer an age-appropriate dose of injection Adrenaline through intra-muscular route and then rush the beneficiary to the nearest health facility.
- » Record such cases in the PHC AEFI register and report and investigate as per AEFI guidelines.

Anxiety reaction: Reactions such as syncope, giddiness, fainting, vomiting, etc. may be reported individually or in clusters. Anxiety reactions are self-limiting, and usually beneficiaries recover without any long-term effects. These reactions can be prevented by:

- » Arranging session sites in such a manner so as to segregate potential recipients from those who have received the vaccines so that they do not interact with each other.
- » Keeping beneficiaries under observation for 30 minutes post vaccination for potential adverse events
- » Ensuring session site has a calm environment with good ventilation and is not crowded.
- » Diverting attention of the recipients during vaccination and after vaccination.
- » Ensuring recipients have had something to eat before vaccination.

Report and investigate all AEFI cases including anxiety reactions. Ensure availability of anaphylaxis kit with injection Adrenaline within expiry date at the session site with the vaccinator.

Management of AEFI cases demands a strengthened AEFI surveillance system with accurate and timely reporting of AEFI cases in the country. It is important to strengthen the existing AEFI surveillance system to ensure that all AEFI cases are reported and investigated and assessed to know the cause of AEFI. Key steps to ensure timely reporting of AEFI cases are:

1. All adverse events (minor, serious and severe) should be recorded in the PHC AEFI register.
2. All serious and severe AEFIs should be reported and investigated as per the National AEFI Surveillance and Response Operational Guidelines-2015 (Ministry of Health and Family Welfare, GoI) using the Case Reporting Form (CRF), Preliminary Case Investigation Form (PCIF), and Final Case Investigation Form (FCIF).
3. In cases of hospitalization, all hospital records (including case records, laboratory investigation reports, discharge summaries, etc.) should be collected and submitted with the PCIF and FCIF.
4. In cases of deaths, post-mortems should be encouraged and reports sent with PCIF and FCIF.
5. In case of deaths where no hospitalization and/or postmortem has been done, Verbal Autopsy Format for AEFI should be filled and sent with the PCIF/FCIF.

2.4 Recording and Reporting

Recording and reporting of accurate data is crucial to measure the performance of all components of the immunization programme. A periodic analysis of the correct and accurate data will help to aid in identifying the problems and taking corrective actions, thereby improving the quality and success of the programme.

In India, there are many sources of data available at each level to aid evidence-based decision-making. As per the guidelines, standard recording and reporting formats are available at each level of healthcare which are consolidated or aggregated for forwarding to the district and state levels. The data are usually collected through standard reporting formats (tally sheets, register, monthly progress report, etc.) and are gathered by supervision visits. Online web-based repositories are also made functional in form of health-data portals such Health Management Information System (HMIS), RCH portal/ANMOL, UDISE, etc. An effective HMIS not only serves to monitor the performance and quality of the health services but also provides a sound evidence to base decisions upon, by acting as a repository of information for key healthcare indicators.

The introduction of the Td vaccine in the UIP provides an opportunity to strengthen the overall monitoring of the RI programme. Vital recording and reporting formats to capture coverage of TT10 or Td10 and TT16 or Td16 are as follows:

1. **Health Management Information System (HMIS) Portal:** The Portal captures health facility wise data which is entered every month as per the pre-defined timeline. HMIS will be modified to record the coverage of Td in place of TT, till then Td doses administered will be recorded along with TT doses.

2. **Reproductive and Child Health (RCH) Portal:** An innovative RCH portal has been designed to achieve early registration and timely provision of services to all potential beneficiaries. The existing RCH portal/ ANMOL do not have the option to record the Td beneficiary and vaccination details, the same may need to be provisioned in the RCH portal/ ANMOL.
3. **Unified District Information on School Education (UDISE) Portal:** The UDISE system, developed by National University of Educational Planning and Administration and supported by MHRD provisions collection of information to organize and classify all school data across the country. The UDISE will also have data element on Td which will be entered at the school level.

Revision of all formats is needed before Td introduction

- Mother-child protection (MCP) card
- Due-list
- Tally sheets
- Vaccine stock form, indenting forms, distribution registers
- Monthly progress report at all levels
- Maternal & Child Health (MCH)/ Immunization registers
- Coverage monitoring charts
- Supervisory checklists
- Computer databases
- Immunization coverage surveys and evaluation formats
- AEFI reporting formats
- RI micro-plan

Td doses administered will be recorded at the place of TT doses, till these formats are modified to include the Td column.

Moreover, the existing monthly immunization dashboard (generated by ITSU) will also include detailed analysis and visualization of data related to Td. These dashboards are shared on a monthly basis with the state for further action. The state will also include analysis and visualization of data related to Td in their existing monthly immunization dashboard.

2.5 Monitoring and Supervision

A robust monitoring system and continuous supportive supervision oversight of the implementation activities is crucial at all levels. Monitoring is the systematic and continuous process of examining data, procedures and practices. A well-designed monitoring programme will measure the quality of the immunization service at each level of the health system by measuring progress, identifying problems, developing solutions, and guiding policies and interventions. In addition to the monitoring, supportive supervision promotes quality at all levels of the health system through the development of professional competence among the health workforce. Supportive supervision promotes quality outcomes by strengthening communication, identifying and solving the problem, facilitating teamwork, and providing leadership and support to empower health providers to monitor and improve their own performance.

Monitoring and supervision are required at each level of the health system: health-facility level, district level, state level and national level. A team of national and state monitors will be monitoring and supervising all activities in the states where the TT is replaced with Td. These teams are responsible for guiding and providing supportive supervision on the management and operational aspects during the launch with immediate corrections, problem-solving and on-the-job training. This will ensure medical officers, vaccinators and other health-workers comply with the highest quality standards.

Key steps to ensure smooth roll-out of Td will look upon the following aspects:

- Regular field visits by the monitors to provide real-time information
- Inclusion of Td components in the existing supervisory checklist for immunization programme monitoring.
- Regular supervisory visits by the supervisors to schools/health facilities to assess the progress of the state
- Formation of a special task force on Td

immunization at the national, state and district levels for efficient coordination between various departments and to facilitate a robust review mechanism

A detailed supportive supervision plan will be prepared at every level. Supportive supervision will focus on the critical aspects of quality, effectiveness and safety related to programmatic issues. The DTFI and STFI will also focus on Td performance, issues and challenges of roll-out and possible suggestions for effective roll-out. Review meetings by MOs in coordination with RBSK and education deparment should be done to discuss the performance. Data analysis and review of performance on Td coverage will be done at all levels including state, district and block level. The existing mechanisms such as the task force for immunization, other interactions and review meetings should be used for feedback and information sharing for appropriate corrective measures and follow-up.

The supervisors at different levels will be as under:

- State level supervisors – 1 supervisor for each district
- District level (second line) supervisors – 1 supervisor for each block
- Independent external monitors from national, state, district levels – both government and non-government partners (externally hired monitors by WHO / UNICEF, NGOs, donors, other partners)

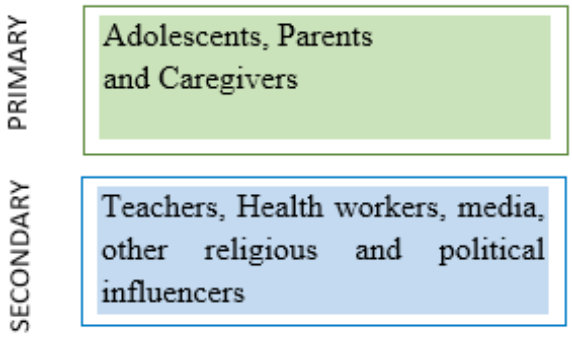
2.6 Communication, Advocacy and Social Mobilization

Communication Strategy and Plan

Protecting India's large cohort of adolescents by replacement of in-school TT vaccination with Td and leveraging the existing RI platforms for out-of-school/ drop-outs requires a robust communication strategy and plan tailored to their needs. The communication operational plan to strengthen TT/Td10 and 16 coverage has been developed in light of the following objectives:

- Positive and factual positioning of Td among key stakeholders (parents/caregivers/ adolescents/teachers and health workers) and media
- Clear and strategic communication to ensure Td is not viewed as a new vaccine, rather a replacement of TT
- Capacitate health workers and teachers in inter-personal communication (IPC) for effective social mobilization and micro-planning activities at the community / facility / school level
- Build an enabling environment around Td vaccine through positive media advocacy and outreach

Figure 11: Target Audience



Key components of the communication strategy

The communication strategy for Td is built upon the four key strategic communication approaches – advocacy, social mobilization, capacity building and media engagement.

Advocacy

A well-charted advocacy plan will play a key role

Figure 10: Key components

in setting the Td agenda and influence decision-makers and stakeholders to support policies and actions to facilitate uptake of Td10 and Td16 vaccine by the community.

Prior to the development of the plan, states need to assess the existing resources and adapt them in the context of Td related messages. An indicative matrix for advocacy activities is outlined in the Annexure (Indicative Planning Matrix for Advocacy Activities) for use at various levels:

Key determinants for effective Td roll-out:

Departments: Education, ICDS, WCD, NUHM, Tribal Welfare, Youth Affairs, RWAs

Platforms for advocacy: RKSK programme officers/counselors, schools, public representatives, government, private medical networks and doctors, religious leaders, Lions club, Rotary Club, IMA and IAP, MAS members

Social mobilization

Social mobilization will be a key strategic approach to create awareness, disseminate information for Td vaccine, build trust and confidence of the caregivers and community on Td.

A clear social mobilization plan with names of the key mobilizers needs to be developed using the communication planning matrix provided in the annexure. States need to ensure this plan forms part of the school-based micro plan.

Capacity Building

Periodic training programmes/orientation of the frontline workers, health care providers and other key mobilizers on Td through state, district and block- level trainings will enable them to effectively carry out communication activities and share essential and relevant information with the community. A cascade training model may be adopted by states, with focus on frequently asked questions (FAQs) related to Td, micro-planning and tracking of children due for Td vaccine, through influencer meetings and mosque announcements.

Media engagement

Keeping the media well-informed, engaging with media on a regular basis and advocating with them for Td vaccine is essential so as to build a conducive and enabling environment for acceptance of the vaccine. A strong media outreach using print, digital/online media and social media will facilitate in disseminating factual information on the vaccine and countering negative information and rumours.

Social Media

Social media platforms such as Facebook, Whatsapp, Youtube will play a key role in disseminating information on the benefits of Td and in countering rumours / negative stories. States and districts should develop a social media plan to showcase vaccine uptake and amplify its benefits. WhatsApp groups of state health departments, BMO's MOIC's and FLW's should

Stakeholder	Potential Mobilizers
Adolescents in-school	School-based platforms (parent teacher forum/ associations/ groups/ PTA/ PTM) and influencers (teachers/ supervisors)
Adolescents out-of-school	Adolescent groups, RBSK staffs, peer educators, NGOs and CBOs working with children's groups, children's homes, hostels
Mothers of adolescents	Mothers meetings, UHSND/ VHSND

Note: Engaging with community groups, women's groups, self-help groups, youth clubs, NGOs, religious groups and community-based organizations (CBOs) through a range of communication activities will be essential for making the community aware about the need for Td in the context of improving adolescent health, and to convince and move refusal or resistant communities/ families towards behavior change. .

For working with the adolescents in school and out-of-school, it will be necessary to coordinate with NYK, NSS and NCC for mobilizing the youth groups in the educational institutions and at the community, the state and district levels.

be tapped to disseminate the key messages on Td/ positive news/stories/ factoids related to Td. Information on Td needs to be seeded regularly through innovative GIFs, infographics, updates and photographs from the session sites, testimonials from beneficiaries, local influencers, front-line workers and health officials.

Media outreach activities to be undertaken for Td are as follows:

- Develop a comprehensive media plan including news media, social/digital media
- Seed in positive stories and opinion articles on the importance of immunization for adolescents
- Undertake regular media monitoring at the national, state and district level which includes monitoring the major print dailies, local news channels, websites and news app groups on Td
- Track reporting of Td10 and Td16 through media for tonality of reporting
- In case of negative or incorrect reporting, ensure that the reporter has access to correct information
- Organize media reorientation/ sensitization workshops with key journalists in case of more negative news media coverage or lack of visibility of positive news media on Td
- Keep the media well-informed on Td by giving out FAQ's or developing a media info-kit to encourage evidence based and scientific reporting.

Crisis Preparedness and Management:

Negative coverage in the media following an AEFI can be detrimental to the successful roll-out and coverage of Td.

Therefore, it is imperative to

- Keep a crisis communication plan handy
- In case of AEFI, deal sensitively with media through timely and factual information; ensure information is provided through nominated and trained spokesperson (district/state)
- Use the AEFI media communication protocol to respond systematically
- Rope in influencers to help downplay negative news and build confidence in the vaccine

To prepare for crisis, states need to prepare a handy information package containing Frequently Asked Questions, factsheet or technical brief on Td and on AEFI's related to Td along with contact details of spokespersons that media can contact.

Communication Planning

The communication plan templates based on the RI communication planning templates, should be considered in preparing for the roll out of the Td vaccine. The activities listed in the templates are indicative and states may choose the activities which are found suitable / feasible to their regional needs.

Communication Monitoring

It is imperative to monitor all activities mentioned in the communication plan through regular monitoring visits by key state/ district/ block officials. States may develop communication monitoring checklists for the monitors based on the following indicators:

- Display of Td IEC materials at school, VHSND and health facilities.
- Training of health and wellness ambassadors on Td
- Parents / caregivers oriented on Td through PTMs
- School teachers trained on Td communication materials
- Inter-departmental coordination meetings held with all stakeholders including RBSK and RKSK
- Orientation of MAS
- Development of social mobilization plan for Td
- AWWs and ASHAs trained in IPC skills (BRIDGE)

Detailed list of indicative activities for each of the three strategic interventions and each strategic area – advocacy, social mobilization, capacity-building are outlined under the chapter on Operational Plan for Roll-out strategy.

CHAPTER 03

CHAPTER 3:

Recommended Strategies for Td10 and Td16 Roll-out

Presently, there are multiple programmes running across states in India, which capture the adolescent age group of 10-19 years. However, the mandate of these programmes is guided by limitations, leaving out a large proportion of this age group (e.g. programmes targeted exclusively towards adolescent girls, or school-going adolescents (leaving out of school adolescents), and the provision of counseling services for adolescents (omitting other preventive services) etc.

In the light of these gaps, other public health programmes which can be utilized as a platform to increase the coverage of TT/Td vaccination amongst adolescents were assessed.

» Key platforms/schemes were explored: UIP, RBSK, RKSK, ICDS, School Health Programme, Tribal Immunization and Health campaigns

Three strategies were finalized which will facilitate states to strengthen TT/Td vaccination among in-school, out-of-school and drop-out adolescents in India.

Figure 12: Three recommended strategies to strengthen roll of Td in India

3.1 STRATEGY 1
Involvement of RBSK to Improve Td10 and Td16 Coverage

Rashtriya Bal Swasthya Karyakram (RBSK) which envisages Health Screening and Early Intervention Services, comprises a systemic approach of early identification and link to care, support and treatment. This programme includes existing schools and aims at early identification and early intervention of children from birth to 18 years to cover the 4 'D's i.e. Defects at Birth, Deficiencies, Diseases, Development Delays including Disabilities. The RBSK Block Mobile Health Team is assigned for each block in a district with the following composition: 4 members per team; 2 doctors (AYUSH/allopath) + 1 ANM/staff nurse + 1 pharmacist/lab technician/ophthalmic assistant. An ANM/Staff Nurse for the SC/HWC/PHC can be attached to the RBSK team to carryout these activities. The concerned ANM/SN should be suitably trained in immunization program including details of Td vaccine, management of AEFI etc.

Programme Strengths of Strategy 1

- Covers all government and government-aided in-school adolescents annually, through well prepared micro-plans
- **The provision of Sub center ANM/staff nurse with each of the RBSK team so that it is equipped to provide TT/Td vaccination (post training)**
- Medical officers need to ensure vaccine delivery at school session site in coordination with RBSK teams
- A sound recording and reporting mechanism will facilitate in proper reporting of immunization among adolescent
- The presence of a quarterly review mechanism (at state, district and block level) with representation of key departments (health, education and ICDS) further provides an opportunity for effective review of coverage and services

3.2 STRATEGY 2
Strengthen VHSNDs/UHSNDs to Improve Td10 and Td16 Coverage

Village Health,Nutrition and Sanitation Day (VHSND) and Urban Health, Nutrition and Sanitation Day (UHSND) is fixed-day and fixed-site activity that is to be organized every month at sub-center/anganwadi center or other suitable location. This strategy can be planned during school breaks, summer breaks etc. when the adolescents will be at home.

Programme Strengths of Strategy 2

- Detailed line-list of adolescents available for both in and out-of-school
- Most VHSNDs/UHSNDs and immunization sessions are conducted at AWCs, and with AWW support for mobilization activities
- Services presently offered in the targeted age group- Immunization, supplementary nutrition, health education to pregnant and lactating mothers and adolescent girls up to the age of 18 years

3.3 STRATEGY 3
Organize Td Immunization Week(s) to Improve Td10 and Td16 Coverage

To reach out to the unreached adolescent population for Td vaccination, Td immunization week(s) is one of the suggested strategies. The focus is to conduct the activity in all schools (government, private and religious schools) to cover the large cohort of the targeted age group at one time. The remaining beneficiaries can be reached out through existing VHSNDs/UHSNDs. Good communication strategies should be in place. The learning from measles-rubella campaign should be used to organize the Td immunization week(s). Immunization weeks should be planned to target the maximum number of beneficiaries i.e. during the initial months of start of school sessions.

The Td Immunization Week is aimed at optimizing adolescent Td vaccination coverage with focus on all schools/religious schools such as madrasa, missionaries and vedic schools etc. Td immunization week can be conducted at these places on non-RI days of the week. Regular RI sessions will be conducted as planned on the RI days.

Programme Strengths of Strategy 3

- Learning from MR campaign can be used for covering the drop outs, private and religious schools such as madrasa, missionaries and vedic schools..
- Availability of IEC material and IPC interventions.

The Ministry has issued a letter to all the states regarding implementation of various strategies to strengthen adolescent Td immunization (copy of letter is given at page number 22). Some of the key points to consider regarding strategies are as follows:

- These 3 strategies are not mutually exclusive, i.e. the guidance is not that states have to choose any one of the strategies.
- Depending on the feasibility and state's prerogative, a combination of the strategies may be used for more effective coverage of the target population.
- States may even adopt a combination of the all three strategies with modifications for ensuring maximum coverage and minimum number of drop-out/left-out for Td10 and Td16.
- States having strong RBSK or School health platform can choose this strategy as the primary one supplemented by immunization week/RI sessions to cover out-of-school adolescents.
- However, currently, RBSK does not cover private, religious schools and some special categories of schools; therefore, adolescents in these schools need to be covered by Immunization weeks like that of MR campaign, or through VHSNDs/UHSNDs. In regular VHSNDs and UHSNDs, covering the school-going adolescents will be a challenge because of the fact that adolescents will be in school on RI days during the usual session time, i.e from 9 AM to 4 PM. With proper line-listing by FLWs, out-of-school adolescents will be mobilized and vaccinated through VHSNDs/UHSNDs.

3.4 Pre Roll-Out Interventions

With the roll-out of Td in the states, the following key activities should be undertaken in advance.

I Strengthening capacities for effective last mile roll-out

This requires capacity-building interventions at all levels (i.e. at the national, state, district and block level) to make the health officials and health workers aware about adolescent immunization, covering all aspects of operational planning, communication/IEC/media management, monitoring and reporting, vaccine and logistics management, and AEFI.

National Level: SEPIO, partner agencies and other stakeholders have been briefed during national level meetings/workshops like SEPIO reviews, eVIN assessment report launch and UIP review meetings etc. A media orientation should also be organized to disseminate the information at the national level.

State Level: States should take adequate steps to create awareness about Td immunization under the UIP. Capacity-building interventions at the state level should include:

- Organizing media briefing for creating awareness, so as to avoid any negative messaging on Td immunization.
- Convergence among all concerned departments/programmes such as WCD, Education, RBSK and NHM, and clearly defining their roles and responsibilities.
- Orientation of health-workers and teachers in inter-personal communication (IPC) for effective social mobilization and micro-planning activities at the community / health facility/school level
- Attach SC/HWC/PHC ANM/SN to RBSK team.
- Orientation of RBSK/RKSK teams, peer educators, selected journalists and designated spokesperson from the government, NGOs and youth organizations with ground level presence on the importance Td
- Regular updation of micro-plans, due-lists, reporting formats and IEC materials and

ensuring their availability

- » Keep a media/ social media kit, other IEC/ information tools ready; along with a dissemination plan in place
- » Build an enabling environment around Td vaccine through positive media advocacy and create pre roll-out buzz through audio announcements/miking from autos/vans and places of worship, local newspapers, WhatsApp groups and other social media channels
- » Preparedness for AEFI management and reporting

District Level: States should also ensure that all districts are well oriented on Td immunization under UIP. Capacity-building interventions at the district level will include:

- » Orientation meeting with the block MOICs, DEO, BSA, CDPOs, BCPM, CCHs and partners under chairmanship of district magistrate.

II Streamlining inter-departmental coordination and strengthening review mechanism

Leveraging potential opportunities for partnerships with government departments at the national and sub-national level will be the key to successful Td vaccine roll-out. These include MoHFW, MHRD, WCD and PRI etc.

The intra-departmental coordination should be spearheaded by respective department heads at the state and district levels, who must take the lead for successful coordination and smooth implementation of the programme.

The state and district task forces on immunization should steer the planning, coordination, implementation and monitoring of the programme.

At least one meeting of state task force should be conducted before the implementation of Td immunization to review the following:

Review mechanism at the State Level: The STFI meetings should be organized at the state level to issue directives for planning and implementation for Td immunization. These meeting will ensure:

- » Convergence among all concerned departments and defining roles and responsibilities with timelines
- » Review of preparations related to micro-planning, vaccines and logistics, human resources, training, waste management, AEFI and IEC/BCC at all levels
- » Develop monitoring and feedback mechanisms for corrective actions

Review mechanism at the District Level: The District Task Force for Immunization (DTFI) should meet at least once before Td implementation to:

- » Ensure inter sectoral coordination
- » Review the quality of micro-plans
- » Assess tracking and mobilization efforts
- » Plan for vacant sub-centres
- » Training status and vaccine logistics
- » Special focus on high risk areas

III Bolstering AEFI surveillance

Before the introduction of the Td vaccine, the existing AEFI surveillance system should be strengthened at the state and district levels:

Strengthening surveillance at the state level: The surveillance at the state level can be strengthened through the following activities:

Ensure that the State AEFI Committee is in place and membership is updated.

Inform them that the TT vaccine is being replaced with Td vaccine and the reason for this. Explain that there are no safety issues with this vaccine.

Strengthening surveillance at the district level: The surveillance at the district level can be strengthened through the following activities:

- » Ensure that the District AEFI Committee is in place and membership is updated.
- » Inform the members that the TT vaccine is being replaced with Td vaccine and the reason for it.
- » Explain that there are no safety issues with this vaccine.

मनोज झालानी
Manoj Jhalani
अपर सचिव एवं मिशन निदेशक (रा.स्वा.मि.)
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GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NIRMAN BHAVAN, NEW DELHI - 110011

D.O. No.: T-22011/01/2017-Imm
Dated the 06th June, 2019

Subject: Various strategies to strengthen adolescent Td/TT vaccination.

Dear Colleague,

I am writing to draw your attention to the need for scaling up the Td Vaccination initiative. As per the lab supported vaccine preventable diseases surveillance data from WHO-India, 77% (1244 out of total 1616 cases) and 76% (1370 out of total 1802 cases) cases of diphtheria in 2017 and 2018 respectively occurred in age group 5 years and above. The occurrence of diphtheria cases in older age groups is due to the fact that immunity to diphtheria subsides following the childhood primary series of infant immunization. National Technical Advisory Group on Immunization (NTAGI) recommended introduction of Td vaccine in India's Universal Immunization Programme replacing TT vaccine in line with global recommendations. TT vaccine which was earlier given to 10 years and 16 years adolescents as well as to pregnant women (one dose or two doses depending upon their previous vaccination status) is now being replaced by Td vaccine which is already being supplied to the states.

The coverage of Td/TT vaccine has been low in the country. In this regard a situational analysis was conducted and various potential platforms and mechanisms for improving Td/TT coverage were identified like School health program (SHP), Rashtriya Bal Swasthya Karyakram (RBSK), Rashtriya Kishor Swasthya Karyakram (RKSK), Integrated Child Development Services (ICDS), Government schools under the Departments of School Education and Tribal Affairs, and those under the local bodies etc. It is recommended that all the potential platforms as mentioned above can be used for strengthening Td/TT vaccination.

Adolescents aged 10 years & 16 years are to be vaccinated with Td vaccine as per national vaccination schedule. School going adolescents of class 5 & class 10 can be vaccinated using platforms like SHP, RBSK as well as by carrying out Td adolescent Immunization week once every year. Out of school adolescents can be vaccinated by strengthening the existing routine immunization platforms under VHSND.

Simultaneously states will need to take measures to address / handle hysteria / hesitancy related issues which may arise with the introduction of Td in schools like conducting Parent Teacher Meeting (PTM), advocacy through local media, school social media etc. Sessions may be organized in the schools regarding Td vaccine benefits and resolving apprehensions (if any) prior to vaccination.

Contd. on page 2/-

Telefax : 23063687, 23063693 E-mail : manoj.jhalani@nic.in

D.O. No.: T-22011/01/2017-Imm

-2-

You are requested to explore the strategies that would be best suitable for your state. I solicit your support for this endeavor so that together we are able to strengthen children and adolescent Td/TT vaccination and ensure that the much needed Booster dose is provided to all the Children and Adolescents.

With regards,

Yours sincerely

(Manoj Jhalani)

Addl. Chief Secretary/Principal Secretary/ Secretary (Dept. of Health) of All States/UTs

CHAPTER 04

CHAPTER 4:

Operational Plan for Roll-out of Strategy 1

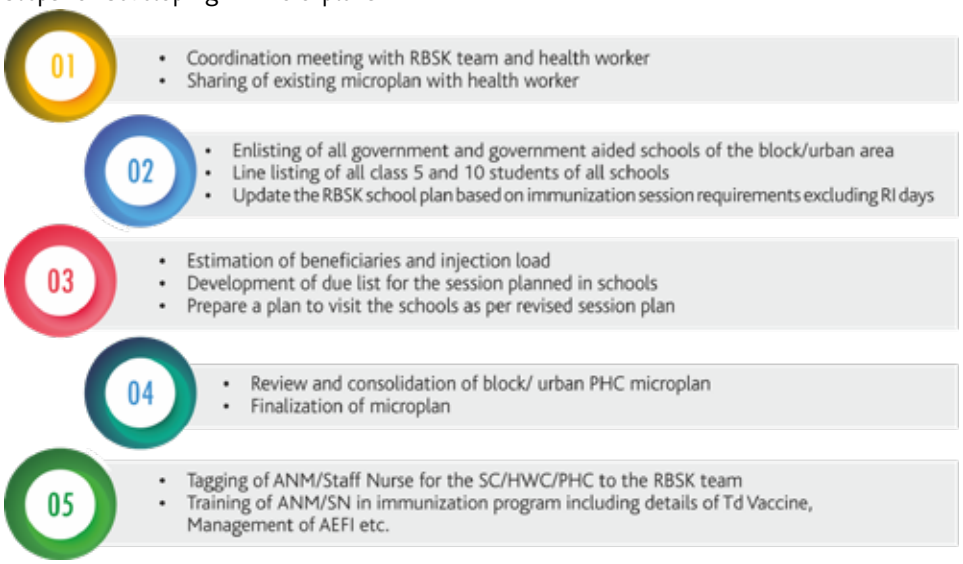
Involvement of RBSK to Improve Td10 and Td16 Coverage

The following are the details of the roll-out plan for implementing Strategy 1:

4.1 Micro-planning

Micro-plans should be prepared in coherence with RBSK team, excluding RI days, for school activity and is based on the number of schools, and 5th and 10th class students of the schools in the area/block.

Figure 13: Steps for developing RI micro-plans



Key components of Td micro-plans

For initiating the micro-plans for Td Immunization, the following components will be considered.

- Accurate, complete and realistic micro-plans will be critical for optimum coverage
- Ideally one school to be covered in one day. No team should cover two schools on the same day although there will be some exceptions depending on the number of students in the school
- An ANM/Staff Nurse for the SC/HWC/PHC can be attached to the RBSK team to carryout these activities. The concerned ANM/SN should be suitably trained in immunization program including details of Td vaccine, management of AEFI etc.
- Planning of sessions in schools should be done on non-RI days of the state
- Each beneficiary will wait for at least 30 minutes after Td vaccination. Vaccinators must wait for at least 1 hour at the site after vaccinating the last adolescent
- Initiate greater engagement with parents through parent teacher association (PTA) meetings and dissemination of positive messaging on Td vaccine through mobile texts and WhatsApp messages and create a lobby of vaccine advocates among caregivers of school-going adolescents

The role and responsibilities of stakeholders for adolescent immunization using RBSK programme as a supportive platform are mentioned in Annexure 1.

Revisions in micro-planning format:

- Revision/updation in existing micro-planning format by inserting a column for the beneficiaries of Td 10 & Td16. RBSK team will help in preparing the list of Td beneficiaries (class 5 and Class 10 students) in coordination with school teachers
- Strengthen the existing Universal Immunization Programme monitoring formats (both concurrent and supervisory) with the inclusion of critical indicators on Td10 and Td16 for effective tracking of Td services in schools

Session site planning

Session site planning in government and government-aided schools will be done as per the following activities:

- A prior list of beneficiaries at the school should be obtained with the help of RBSK teams and school staffs to plan the number of sessions, location of session site and the expected vaccine and logistics requirement.
- Nodal teacher to be identified from every school and to be oriented suitably. They will be responsible for mobilizing the beneficiaries to the session site on the day of vaccination.
- One student/monitor from each class will be identified to support the Nodal teacher in mobilizing the students and engaging them in activities during vaccination.
- Inform the parents about the vaccination through available means of communications (PTM, SMS, WhatsApp, student diary message, school website)
- The team will visit the schools as per the plan
- Td vaccine distribution as per the requirement will be done via nearest cold chain point. An ANM from the nearest sub-centre will be deployed at the school to facilitate the sessions. MOs may arrange suitable provision for vaccine and logistics delivery to session site i.e. either through AVD or in coordination of RBSK team whichever feasible

Sub-center ANM will immunize the targeted adolescents based on the line-listing of beneficiaries during screening and will maintain the records of the same in standard recording and reporting formats. The vaccination will be conducted during school timings.

The team needs to segregate those who have received the vaccines and are under observation for 30 minutes post vaccination from those in line to receive the vaccine so that they do not interact with each other. To ensure this, the following should be done:

- a waiting area for beneficiaries: Nodal teachers should ensure to involve the students in some extra-curricular activities to reduce apprehension of vaccination in the designated "Waiting room"
- a separate area to vaccinate students: Designated as "Immunization room"
- area for waiting for 30 minutes after the vaccine is administered designated as "Observation room". Encourage students to remain in a group, or at least in pairs, for the first 15 minutes after being immunized so students are not left alone
- Encourage students not to skip meals on the day of immunization

The following process should be followed:

Class to Registration desk (location: Inside or outside the vaccination room)

Greet child → Before going in the vaccination room → Nodal teacher cross ticks the name in the attendance register/due-list → child goes to vaccination team

Registration desk → vaccination room

Vaccinator greets the student → Ask to sit → Vaccinate → Fill date of vaccination in card

From Vaccination Site to observation room/ area

From vaccination room → Join friends in observation room/ area → Observe for 30 minutes → student may resume the school activities

4.2 Cold Chain Vaccine and Logistics

To improve the Td10 and Td16 coverage, the existing micro plan and AVD plan need to be revised by incorporating the components on adolescent immunization. MOs need to ensure the updated micro plan including session site planning in schools and vaccine distribution.

The critical steps of this strategy are head count of 10 and 16 years old students (Class 5 and Class 10), tagging schools to cold chain points, preparing vaccine distribution plan and immunization waste management at the schools. Sustainability and efficiency of above interventions will however be based on three key factors:

- Robust monitoring
- Strengthening review and feedback mechanisms
- Streamlining inter-departmental coordination (between Health, Education and Women and Child department)

Different components of cold chain and vaccine logistics management under this strategy are described below:

Estimation of vaccine logistics

- Cover government and government-aided schools and plan school visits in the beginning of the school year or between September-December to ensure maximum attendance
- Include adolescent age group of 10 and 16 years as part of the head count survey of school-going children and undertake line-listing of all 10 and 16 years old adolescents in schools twice a year
- Estimate the vaccine-logistics requirement considering 10% wastage
- Add requirements of all the schools tagged to a cold chain point and estimate demand considering 25% buffer
- Forecasting and indenting to be done accordingly

Vaccine Storage

- After receiving the required amount of vaccine and logistics they need to be stored in the tagged cold chain point
- Td vaccine is to be stored at +2 to +8 degree Celsius
- Carry out 'Shake test' whenever in doubt regarding freezing status of the vial
- As Td will be replacing TT, cold chain points may have adequate space; however, based on the increase in number of beneficiaries in the adolescent age group, additional requirement of cold chain space needs to be estimated and adequate ILRs must be in place

Distribution including AVDS

- Develop vaccine distribution plans via nearest cold chain point using AVD
- Estimate vaccine and vaccine carrier requirements in accordance with the number of beneficiaries at each school
- Prepare a route map of schools for vaccine delivery in consultation with RBSK team
- Ice packs to be kept in the vaccine carrier must be conditioned
- Ensure that vaccine and other logistics reach the session site (school) in time

Cold Chain Management at Session Site

- Vaccines to be kept in the vaccine carrier with conditioned icepack
- Inspect vaccine vials for visible contamination i.e. check for any change in the appearance of vaccine, any floating particles or breaches of integrity such as cracks and leaks. If found DO NOT USE
- Check VVM before use; if found in unusable stage, discard the vial
- One vial at a time to be taken out of the carrier
- All vaccine vials must be marked with date and time of opening at first use
- Always pierce the septum with a sterile needle for drawing vaccine from the multi-dose vials being used
- Td should not be kept on the ice pack
- Unused or partially used vials must be returned to the nearest cold chain point on the same day in accordance with open vial policy

Waste Management

- Ensure that waste generated at the immunization site in the session sites are segregated as per BMW management norms and collected in the defined colour coded containers
- Functional hub-cutter must be there in the session site and after each use, the AD syringe must be cut immediately.
- Segregated waste must be returned to the nearest cold chain point on the day of immunization
- Waste material needs to be disposed of at the cold chain point as per the protocol

4.3 Adverse Events Following Immunization

As children would be administered Td vaccine in government and government-aided schools, the following steps should be ensured to prevent and manage suspected AEFI cases. The detailed operational strategy will be as follows:

Prior to the start of the session

- » Ensure AEFI management centers are identified and included in the micro-plans against each session site.
- » Each AEFI management centers should have an AEFI treatment kit with trained MO to use the kit.
- » Availability of anaphylaxis kit with injection Adrenaline within expiry date should be ensured with all teams and ANM/SN have to be re-sensitized for administration of one dose of age-appropriate injection Adrenaline for suspected cases of anaphylaxis.
- » Beneficiaries/care-givers to be informed about administration of vaccine, so as to prevent anxiety related to vaccination. Immunization session should be planned in a designated room.

During the vaccination session

- » Screening of adolescent has to be done to rule out acute illnesses.
- » All the beneficiaries are to be monitored for at least 30 minutes post vaccination. In case of a suspected AEFI, information is to be shared with the MO of the nearest AEFI management centre/health facility. Ambulance/108/ private transport may be used to transport the child to health facility.

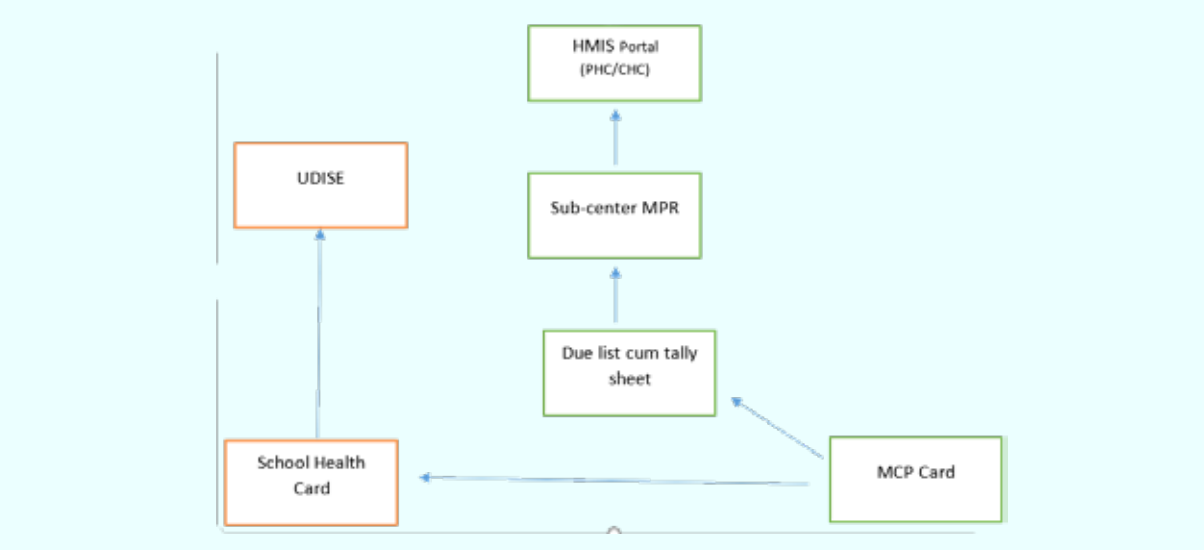
After the session

- » Contact details of nearest AEFI management centre may be shared with school authorities.

4.4 Recording and Reporting

It will be important to include recording and reporting of Td10 and Td16 in the existing recording and reporting tool. As we plan to involve schools in rollout, the RBSK team can support in providing beneficiary wise details of adolescent administered Td 10 and Td 16 in the schools. A separate MCP card has to be maintained for each beneficiary. The schools will also maintain the information of immunized adolescents in their school report card and in their existing MIS viz., Unified District Information on School Education (UDISE). The existing MPR form needs to have a section to include the collated data on Td 10 and Td 16. The ANM would be following existing data flow of HMIS for the service provided which includes reporting the collated data form (Due list cum tally sheet) for the SC catchment area in which schools are covered to Sub centre MPR and then finally entering the data into the HMIS portal at the block level.

Figure 14: Schematic data flow chart for recording and reporting under adolescent immunization in government and government-added schools



4.5 Monitoring and Supervision

As the rollout strategy envisages support of RBSK for Td vaccination, it will be important to strengthen the existing supervisory system .

- Medical Officers to conduct joint supervisory visit to review school immunization, including officials of RBSK and RI, as per feasibility
- Inclusion of critical indicators on Td10 and Td16 for adolescents will be done for effective tracking of Td services in schools
- Regular review of data will be done at each level (block, district and state)

4.6 Communication, Advocacy and Social Mobilization

Schools provide a conducive environment to mobilize adolescents and promote behavior change interventions aimed at their wellbeing. The communication activities enlisted in the matrix below have been drawn to offer guidance to states for strengthening Td10 and Td16 services in schools (government and private).

Advocacy

- Meetings with RBSK nodal officer, ICDS official for Td vaccine implementation
- Meeting with NGOs / Youth organizations/ Youth hostels for Td vaccination
- Meeting with Lions club, Rotary, NYK, NSS and NCC for supporting Td activities
- Monthly coordination meetings with state RBSK teams, district level nodal officers and health teams
- Meetings with PTM/ PTAs for creating awareness regarding Td vaccine

Social Mobilization

- Organize activities for mobilization in schools under RBSK (e.g. painting competitions, games and essay competitions on Td vaccine)
- Inform and motivate students and parents on Td vaccine through "Health and Wellness Ambassadors" (under the new School Health Programme guidelines)
- Share information on Td vaccine through school websites, notice boards and school meetings
- Meeting with parent teachers' groups, teachers, supervisors' groups for enlisting support on Td vaccination
- Display IEC material (i.e. posters, standees, leaflets) in strategic locations-outside schools, school notice boards, schools' areas. Disseminate key messages (FAQs, one-pagers) on Td vaccination through schools and government department websites

Capacity building

- Sensitize the RBSK / RKSK teams on key messages for Td vaccination to be disseminated during their sessions
- Sensitize RBSK nodal officers and counsellors of AFHS clinics on Td vaccination
- Orient RBSK peer educators on the importance of Td vaccination, its efficacy and use
- Meeting with Peer Educators in the village level/ ward level

Media/Social Media

- Share media kit with RBSK officials, ICDS officials, Youth department officials and Tribal Welfare departments
- Share Td vaccine related FAQs and key messages with students and their parents
- Develop GIFs, Mobi-shots and, brief testimonial videos of vaccinated students, parents, nodal teachers/supervisors for dissemination using Facebook, WhatsApp and YouTube
- Seed messages on Td vaccination in youth-based WhatsApp groups
- Seed messages on Td vaccination in school-based children's magazine, journals and newsletters

CHAPTER 05

CHAPTER 5:

Operational Plan for Roll-out for Strategy 2

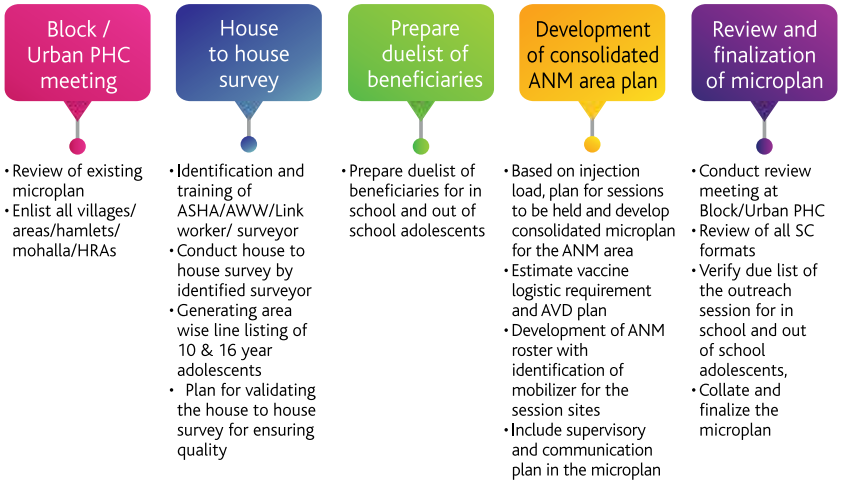
Strengthen VHSNDs/UHSNDs to Improve Td10 and Td16 Coverage

VHSND and UHSND are fixed-day and fixed-site activities that are to be organized every month at sub-center/anganwadi center or any other suitable location. VHSND and UHSND (outreach) plays an important role in systematically delivering various health services to those who need them the most and find it difficult to access the health facility-based services. Services provided at VHSNDs/UHSNDs are related to maternal health, child health, family planning, health promotion and nutrition etc. The existing VHSND/UHSND platform can be used to strengthen the RI and improve Td10 and Td16 coverage by undertaking and supporting the activities mentioned below.

5.1 Micro-planning

RI micro-plans should be prepared/updated annually based on house to house survey and should be reviewed regularly. The steps in the process to update RI micro-plans for inclusion of Td10 and Td16 are shown in Fig 15.

Figure 15 : Steps for updating RI micro-plans for Td10 and Td16 coverage through VHSND/UHSND



Task forces for immunization at the state, district and block levels have been established for regular planning and review of the routine immunization programme. The state and district task forces on immunization should steer the planning, coordination, implementation and monitoring of the programme. Increasing the involvement and accountability/ownership of state and district health officials through state and district task forces for immunization is necessary for smooth implementation of the programme. This will play a pivotal role in improving and delivering high quality immunization coverage across all states.

The task forces should meet regularly and critically review monitoring data, micro-planning, training status of frontline workers, and vaccine and cold chain management, with a special focus on high priority areas. They should identify operational constraints and ensure corrective operational steps to improve routine immunization coverage. At least one meeting of the state task force should be conducted before the implementation of Td immunization to review the programme.

Key components of Td micro-plans

For initiating the micro-plans for Td Immunization, the following components will be considered.

- » Accurate, complete and realistic micro-plans will be critical for optimum coverage.
- » Utilize anganwadi workers/link workers' household survey data to identify in-and out-of-school adolescents
- » Update due-list to include in-school, out-of-school adolescents
- » Special innovative measures must be undertaken to reach the previously unreached, that must be part of micro-plan.
- » This strategy can be planned during school breaks, summer breaks etc. when the adolescent will be at home
- » Organize (state/district/block level) sensitization workshops on Td10 and Td16 for key influencers including teachers, religious and political leaders and local media
- » VHSND/UHSND micro-plan should include segregated information on adolescent boys and girls, mobilization plans, communication plans, vaccine contingency plans, AVD plans and supervisory plans
- » ANM should report the Td vaccination by mentioning Td10 and Td16 information within the existing immunization reporting formats and Mother Child Protection (MCP) cards, to streamline and strengthen record-keeping on Td coverage.

Revisions in current RI micro-planning format:

- Insertion of column for Td or replacement of TT column in all formats.
- Strengthen the existing Universal Immunization Programme monitoring formats (both concurrent and supervisory) with the inclusion of critical indicators on Td10 and Td16 for adolescents.

Capacity Building of ANM/ASHA/AWW

- » AWWs/ASHAs/ANMs need to be sensitized on the importance of Td10 and Td16 and its implementation strategies including AEFI management through IPC sessions during review meetings at state/districts/block levels.
- » Organizing orientation of FLWs (ANM/AWW/SN) on Td related AEFI reporting is essential to maintain vaccine confidence in community.

Session site planning

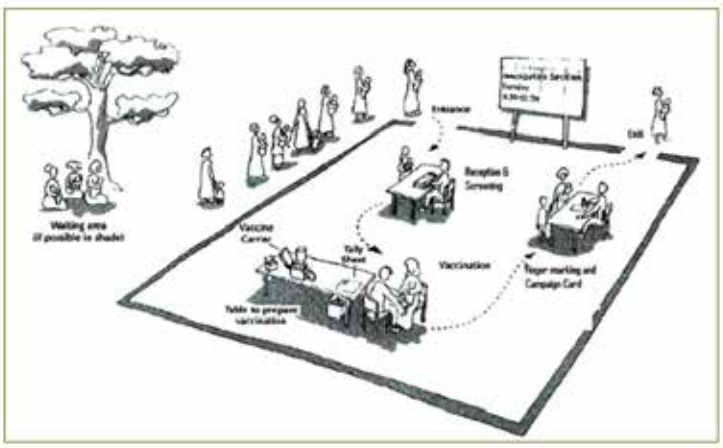
Prepared due-list based on the targeted beneficiaries identified during the household surveys should be used to estimate the expected vaccines and logistics requirement for the session. ASHA/AWW should be given the responsibility for mobilizing the beneficiaries to the session site.

As per this strategy, the adolescents for Td10 and Td16 will be immunized during fixed and outreach sessions during immunization days. The vaccination site should be easily identifiable and vaccination should be conducted as per session timings. Recording and reporting to be undertaken through tally sheets, MCP cards, RCH register, MPR and HMIS. The ANM is to incorporate information pertaining to Td10 and Td16 within the existing immunization reporting formats and MCP cards, to streamline and strengthen record-keeping on Td coverage.

5.2 Cold Chain Vaccine and Logistics

Cold chain and vaccine logistics management in the Routine Immunization strategy would remain more or less the same as that for other vaccines under UIP. However, line-listing of out-of-school

Figure 16 : Vaccination of beneficiaries at session site



adolescents need to be carried out meticulously and estimation of logistics need to be done accordingly. Key components of cold chain and vaccine logistics management are described in the following table:

Estimation of Vaccine Logistics

- » ASHA and AWW should list out the adolescents of 10 years to 16 years age group during household survey.
- » ASHA and AWW should carry-out listing of adolescents those are missed for Td vaccination at school (school drop-outs), as well as, non-school going (left-out/ illiterate) adolescents and update the due-list accordingly
- » Estimate the number of adolescents per session site
- » Estimate the vaccine-logistics requirement considering 10% wastage
- » Add requirements of all the cold chain points and estimate demand considering 25% buffer
- » Forecasting and indenting to be done accordingly

Storage

- » After receiving the required amount of vaccine and logistics they need to be stored in the tagged cold chain point
- » Td vaccine is to be stored at +2 to +8 degrees Celsius
- » Carry out 'Shake test' whenever in doubt regarding freezing status of the vial
- » As Td will be replacing TT, cold chain points may have adequate space; however, based on the increase in number of beneficiaries in the adolescent age group, additional requirement of cold chain space needs to be estimated and adequate ILRs must be in place

Distribution including AVDS

- » Develop vaccine distribution plan through alternate vaccine delivery (AVD) system for VHSNDs and RI sessions
- » Estimate vaccine and vaccine carrier requirement in accordance with the number of beneficiaries at each school
- » Prepare a route map of session sites with respect to their respective cold chain points for vaccine delivery along with vehicle requirement under RI.
- » Ice packs to be kept in the vaccine carrier must be conditioned
- » Ensure that vaccine and other logistics reach at session sites in time

Cold Chain Management at session site

- » Vaccines to be kept in the vaccine carrier with conditioned icepack
- » Inspect vaccine vials for visible contamination, i.e. check for any change in the appearance of vaccine, any floating particles or breaches of integrity such as cracks and leaks. If found DO NOT USE.
- » Check VVM before use; if found in unusable stage, discard the vial.
- » One vial at a time to be taken out of the carrier
- » All vaccine vials must be marked with date and time of opening at first use.
- » Always pierce the septum with a sterile needle for drawing vaccine from the multi-dose vials being used.
- » Td should not be kept on the ice pack.
- » Unused or partially used vials must be returned to the nearest cold chain point on the same day in accordance with open vial policy.

Waste Management

- » Ensure that waste generated at the immunization site in the session sites are segregated as per BMW management norms and collected in the defined colour-coded containers
- » Functional hub cutter must be there in the session site and after use each AD syringe must be cut immediately.
- » Segregated waste must be returned to the nearest cold chain point on the day of immunization
- » Waste material needs to be disposed of at the cold chain point as per the protocol

5.3 Adverse Events Following Immunization

The detailed operational strategy will be as follows:

Prior to the start of the session

- » Ensure AEFI management centers are

identified and included in the micro-plans against each session site.Each AEFI management center should have an AEFI treatment kit with trained MO to use the kit.

» Availability of Anaphylaxis kit with injection Adrenaline within expiry date should be ensured with all teams and ANM/SN to be re-sensitized for administration of one dose of age-appropriate injection Adrenaline for suspected cases of anaphylaxis.

» Beneficiaries/care-givers to be informed about administration of vaccine, so as to prevent anxiety related to vaccination. Immunization session to be planned in a designated room.

During the vaccination session

» Screening of adolescent to be done to rule out acute illnesses.

» Information regarding serious AEFI case, if any, to be shared with the MO of the nearest AEFI management centre/health facility. Child to be referred to the nearest health facility using Ambulance/108/private vehicle whichever is readily available.

After the session

» Contact detail of nearest AEFI management centre/PHC should be available with health workers (ASHA/AWW) and may also be shared with the care-givers.

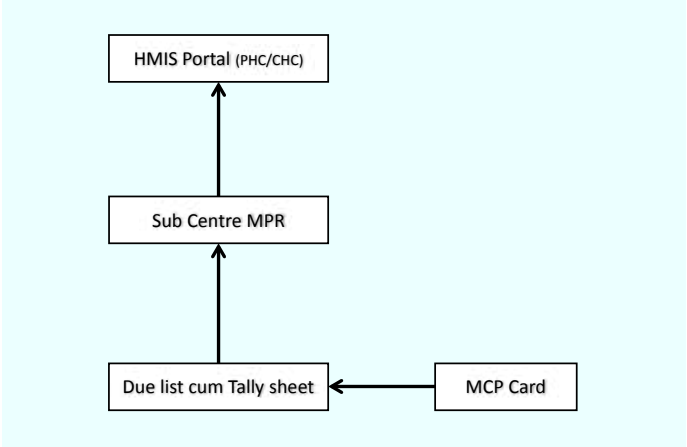
5.4 Recording and Reporting

All the existing recording and reporting formats will be revised to replace TT10 and TT16 by Td10 and Td16. Inclusion of Td10 and Td16 will be required in immunization card, due-list, tally sheets, monthly progress reports at all levels, coverage monitoring chart, session site monitoring format, house to house monitoring format, supervisory checklists, computer databases as well as AEFI reporting formats. till the time the new formats are put in place, data entry will be done under TT.

Alternatively, existing forms will be adapted locally with a plan for modification in the formats, at the earliest possible date. For the states which have rolled out Td, health workers will use existing columns for TT10 and TT16 for entry of Td10 and Td16 data by hand, to the existing forms and use these as long as supplies last.

The recording and reporting of Td vaccination will be done through existing mechanisms including ANM tally sheet and then collation into sub-center MPR and entry in the HMIS portal. Td10 and Td16 would be reported in place of TT10 and TT16 in existing columns of current formats.

Figure 17 : Schematic data flow chart for recording and reporting coverage in out-of-school adolescents



5.5 Monitoring and Supervision

» Task forces will be formed on Td immunization at the national, state and district level for efficient coordination between various departments so as to facilitate a robust review mechanism.

» Supervisor will be identified at each level (national, state, district and block).

- In addition to officers of the health department, officials from Integrated Child Development Services (ICDS) and Education department should also be involved in supervision.
- The supervisor will visit their allotted state/ district/ block/ session sites/ schools during the roll-out phase to review the progress achieved in roll-out of the vaccine, assess the quality and completeness of coverage
- Information pertaining to Td10 and Td16 will be included within the VHSND supervisory checklist.
- Regular review of data will be done at each level (block, district and state) to assess the achievements of each VHSND area/ sub-center, and needful feedback will be provided to improve the performance
- Session site checklist will be used to monitor proper functioning of sessions and logistics (Annexure: RF1).
- Available records will be examined for supply, utilization and balance of Td vaccines, AD syringes and droppers. These will be verified physically to see whether there is a logical association between vaccines, AD syringes and droppers supplied and used.

5.6 Communication, Advocacy and Social Mobilization

Acknowledging the challenges associated with vaccination of out-of-school adolescents; and the growing need to devise communication strategies targeting this underserved segment, the following interventions are suggested for the states to seek guidance from (for implementation of strategy) or undertake in order to strengthen Td10 and Td16 services for in-and out-of-school adolescents.

Advocacy

- Meeting with departments of Tribal Affairs, Youth Affairs, ICDS and WCD to sensitize on the Td vaccine
- Meeting with Youth hostels, Children's Welfare Societies, JJ homes for support in Td roll-out
- Meeting with RWAs/ Ward members in urban areas for support in Td roll-out
- Meeting with partners working at the national level and states and IAP and IMA
- Meeting with religious leaders/ influencers for support in Td roll-out

Social Mobilization

- Organize meetings with local NGOs, CBOs and youth clubs for mobilizing out-of-school adolescents
- Sensitization meetings with NYK, NCC and NSS for mobilizing adolescents
- Orient peer educators on the importance of Td, its efficacy and use
- Td discussions (steered peer educators) during adolescent health days (under RKSK)
- Influencer meetings on Td vaccine, monthly meetings to discuss any refusal cases
- Mosque/ temple/ panchayat announcements on the benefits of Td prior to session in the village/ urban areas
- Identify community level influencers working with out-of-school adolescents and propagate messages of Td through discussions, talks and interviews
- Meeting with youth volunteers of youth clubs, sports clubs, cultural clubs for supporting Td message dissemination
- Mother's meetings organized with mothers of adolescents on Td
- IEC display in strategic locations-outside youth hostels, boarding schools, day boarding, school notice boards, outside school premises.

Capacity Building

- Sensitize AWW/ASHA/ANM on the importance of Td10 and Td16 through IPC sessions during monthly review meetings (at the state/ district /block level)
- Orient stakeholders on key messages for Td, to be provided to school- going and out-of-school adolescents visiting the clinics

Media/ Social media

- Develop GIFs, Mobi-shots and brief testimonial videos for dissemination using Facebook, WhatsApp and YouTube
- Seed messages of Td in youth-based WhatsApp groups
- Seed messages in school-based children's magazines, journals and newsletters

CHAPTER 06

CHAPTER 6:

Operational Plan for Roll-out for Strategy 3

Organize Td Immunization Week(s) to Improve Td10 and Td16 Coverage

Campaign mode is a proven strategy to mobilize adolescents and robustly disseminate information and also boost vaccine coverage. Based on learnings from the Measles-Rubella campaign it is imperative to boost advocacy efforts with schools (including all government, government-aided, private and religious schools such as madrasa, missionaries and vedic schools etc.) on promotion of Td vaccination and its benefits for adolescents. The campaign's success will be guided by efficient mapping of schools, with focus on high risk areas/ populations for development of due-lists and micro-plans, training of teachers and supervisors, orientation with parents and the prevalence of a strong coordination mechanism (between education, health and ICDS departments) to review the campaign's gaps and successes.

To reach out to unreached adolescent population for Td vaccination, Td immunization week(s) is one of the suggested strategies. The focus is to conduct the activity in all schools (government, private and religious schools) to cover the large cohort of the targeted age group at one time. The remaining beneficiaries can be reached out through existing VHSNDs/UHSNDs. Good communication strategies should be in place. The learning from Measles-Rubella campaign should be used to organize the Td immunization week(s). Immunization weeks should be planned to target the maximum number of beneficiaries i.e. during the initial months of start of school sessions. The special immunization drive would be a national initiative to strengthen Td vaccination through identification of populations with poor access and coverage for adolescent vaccination.

Targeted population

- School going adolescents of classes 5 and 10
- Out-of-school adolescents in the of 10 and 16 years age group.

The objective of Td Immunization week(s) is to optimize the adolescent Td vaccination coverage with focus on all schools/religious schools.

6.1 Micro-planning

To develop micro-planning, partnerships with agencies with wide on-field presence may be done to map and strengthen micro-planning interventions to support Td10 and Td16 roll-out in schools.

Planning at the State Level:

A STFI meeting will be organized with following objectives:

» Convergence of all stakeholders and concerned departments.

» Define roles and responsibilities of all stakeholders/departments with timelines

» Issue directives to departments/districts for planning and implementation for Td immunization week(s).

» Review preparation related to micro-planning, vaccines and logistics, human resource, training, waste management, AEFI and IEC/BCC.

» Develop monitoring and feedback mechanisms for corrective actions

Planning at the District Level:

A DTFI meeting will be organized with the following objectives:

» At least one DTFI should be organized prior to Td immunization week

» Convergence of all departments for defining roles and responsibilities with timelines

» Review planning and address identified gaps; plan corrective actions and assign blocks to

district officials for supervising, planning and implementation of activities

» Share plan with all officials and partners

» During the Td immunization week, daily evening feedback meetings should be organized at the district level for sharing feedback and corrective actions

A District Planning Meeting should be conducted immediately to:

» Sensitize all Medical Officers In-charge and the related health staffs

» Share guidelines for preparing block/PHC-wise micro-plans

» Discuss planning and reporting formats.

» Review and address issues related to micro-planning, vaccines and logistics, human resource, trainings, waste management, AEFI, IEC and inter-personal communication-related activities.

» The meeting should be chaired by CMO and facilitated by DIO and immunization partners.

» Participants: DIO, Dy CMO, MOIC, DPM, Official from Education Department, partners and others.

Planning at the Block Level:

Detailed micro-plans for Td immunization week must be prepared as per the micro-planning template. A Block Planning Meeting should be organized prior to the activity and micro-plans should be completed one week before the start of activity. All MOs, LHV/ ANM, Education department, PRI and relevant stakeholders must be involved in the activity. Communication plan should be shared with officials and partners. The micro-plan for conducting Td Immunization week once a year should be developed based on learnings of Measles-Rubella Campaign micro-plan.

Key micro-planning activities are as follows:

» Enlisting of all schools in the area

» Head count of beneficiaries

» Estimation of vaccine and logistics based on the number of beneficiaries

» Coordination meetings with Education and PRI.

» Evening meetings after each day activities at blocks and districts.

Key components of Td micro-plans

For initiating the micro-plans for Td Immunization, the following components will be considered.

» Accurate, complete and realistic micro-plans will be critical for optimum coverage.

» Ideally one school to be covered in one day, based on injection load.

» ANM will conduct RI session on scheduled days of the week as per RI micro plan.

» Planning of sessions in schools should be done on non-RI days.

» Cover private, government and government-aided schools and other schools

» Plan school visits in the beginning of the school year or between September-December to ensure maximum attendance.

» Identification of one Nodal teacher in each school along with orientation on adolescent vaccination should be done.

» Adolescents missed during school sessions of Td Immunization week to be tracked and vaccinated in the regular RI sessions.

» Initiate greater engagement with parents through parent teacher association (PTA) meetings and dissemination of positive messaging on Td vaccine through mobile texts and WhatsApp messages and create a lobby of vaccine advocates among caregivers of school-going adolescents.

» Organize (state/district/block level) sensitization workshops on Td10 and Td16 for key influencers including teachers, religious and political leaders and local media.

Session site planning

A list of adolescents should be obtained based on enrollment of students in class 5 and 10, prior to the activity to ensure the availability of vaccine and logistics for conducting the sessions in the institutions. Once the micro-planning has been done, the adolescent immunization for Td will be done in government and private schools/madarsa/ other institutes by ANMs from nearby sub-centers or staff nurses as per the given guidelines. Based on the number of beneficiaries, the vaccine and

Vaccination targets for school team: 1 vaccinator can vaccinate upto 150 students in a day

other logistics will be provided from the nearest cold chain point as per the calculated requirement. The ANM will maintain the records in standard recording and reporting formats. The vaccination will be conducted during school timings.

The team needs to segregate those who have received the vaccines and are under observation for 30 minutes post vaccination, from those in line to receive the vaccine so that they do not interact with each other. To ensure this, the following should be done:

- a waiting area for beneficiaries: nodal teachers should ensure to involve the students in some extra-curricular activities to reduce apprehension of vaccination in the designated waiting room.
- a separate area to vaccinate students: designated as "Immunization room"
- area for waiting for 30 minutes after the vaccine is administered designated as observation room. Encourage students to remain in a group, or at least in pairs, for the first 15 minutes after being immunized so students are not left alone.

Encourage students not to skip meals on the day of immunization

6.2 Cold Chain Vaccine and Logistics

Immunization week is a proven strategy to mobilize adolescents and robustly disseminate information and boost vaccine coverage. The learning of Measles-Rubella Campaign should be used to organize the Td immunization week(s). The focus should be given to private and religious schools, with proper communication strategies in place and also on high risk areas/ populations for development of due-list and micro-plans. Mapping of all the immunization sites and route plans for AVDS must be prepared meticulously with technical support from partner agencies like WHO, UNICEF, UNDP and JSI along with line departments of government. Key points concerned with cold chain and vaccine logistics management are described in the following table:

Estimation of Vaccine Logistics

- Recent experience of MR campaign must be applied for this strategy
- List of all types of schools along with list of beneficiaries to be prepared.
- In order to cover school-going adolescents of 10 and 16 years, mapping of schools/ madarsas/other institutions should be done which will further aid in preparing due-lists and micro-plans.
- Td immunization should be conducted in all private, government-aided schools, religious schools such as madrasa, missionaries and vedic schools etc. during the Td immunization week(s) as per micro-plan.
- Like the MR campaign, line-list of adolescents (age and class wise) along with the list of drop-out children should be requested from schools through district/block education officer, minorities officer etc.
- Based on the estimated number of beneficiaries as per due-lists, vaccine requirement should be calculated Estimate the no. of adolescents per session site and cold chain point
- Estimate the vaccine-logistics requirement considering 10% wastage
- Add requirements of all the cold chain points and estimate demand considering 25% buffer
- Forecasting and indenting to be done

The following process should be followed:

Class to Registration desk (location: Inside or outside the vaccination room)

Greet child → Before going in the vaccination room → Nodal teacher cross-ticks the name in the attendance register/due-list→ child goes to vaccination team

Registration desk → vaccination room

Vaccinator greets the student → Asks to sit → Vaccinate → Fill date of vaccination in card

From Vaccination Site to observation room/ area

From vaccination room → Join friends in observation room/area → Observe for 30 min → student may resume the school activities.

accordingly

Storage

- After receiving the required amount of vaccine and logistics information the vaccines need to be stored in the tagged cold chain point
- Td vaccine is to be stored at +2 to +8 degrees Celsius
- Carry out 'Shake test' whenever in doubt regarding freezing status of the vial
- As Td will be replacing TT, cold chain points may have adequate space; however, based on the increase in number of beneficiaries in the adolescent age group, additional requirement of cold chain space needs to be estimated and adequate ILRs must be in place

Distribution including AVDS

- Develop vaccine distribution plan through alternate vaccine delivery (AVD) system for institute-wise session sites during Immunization week
- Estimate vaccine and vaccine carrier requirements in accordance with the number of beneficiaries at each session site
- Prepare a route map of session sites according to their respective cold chain points for vaccine delivery along with vehicle requirement
- Ice packs to be kept in the vaccine carrier must be conditioned
- Ensure that vaccine and other logistics reach at session sites in time

Cold Chain Management at Session Site

- Vaccines to be kept in the vaccine carrier with conditioned icepack
- Inspect vaccine vials for visible contamination, i.e. check for any change in the appearance of the vaccine, any floating particles or breaches of integrity, such as cracks and leaks. If found DO NOT USE.
- Check VVM before use; if found in unusable stage, discard the vial.
- One vial at a time to be taken out of the carrier
- All vaccine vials must be marked with date and time of opening at first use.
- Always pierce the septum with a sterile needle for drawing vaccine from the multi-dose vials being used.
- Td should not be kept on the ice pack
- Unused or partially used vials must be returned to the nearest cold chain point on the same day in accordance with open vial policy

Waste Management

- Ensure that waste generated at the immunization site in the session sites are segregated as per BMW management norms and collected in the defined colour-coded containers
- Functional hub-cutter must be there in the session site and after use each AD syringe must be cut immediately.
- Segregated waste must be returned to the nearest cold chain point on the day of immunization
- Waste material needs to be disposed of at the cold chain point as per the protocol

6.3 Adverse Events Following Immunization

The detailed operational strategy will be as follows:

Prior to the start of the session

- Ensure AEFI management centers are identified and included in the micro-plans against each session site
- Each AEFI management center should have an AEFI treatment kit with trained MO to use the kit
- Availability of anaphylaxis kit with injection Adrenaline within expiry date should be ensured with all teams and ANMs/SNs to be re-sensitized for administration of one dose of age appropriate injection Adrenaline for suspected cases of anaphylaxis
- Beneficiaries/care-givers to be informed about administration of vaccine, so as to prevent anxiety related to vaccination. Immunization session to be planned in a designated room.

During the Vaccination Session

- Screening of adolescents to be done to rule out acute illnesses
- Availability of Anaphylaxis kit with injection Adrenaline within expiry date should be

ensured with all teams and ANMs/SNs to be re-sensitized for administration of one dose of age-appropriate injection Adrenaline for suspected cases of anaphylaxis

» All the beneficiaries are to be monitored for at least 30 minutes post vaccination. In case of a suspected AEFI, information is to be shared with the MO of the nearest AEFI management centre/health facility. Ambulance/108/ private transport may be used to transport the child to the health facility.

After the session

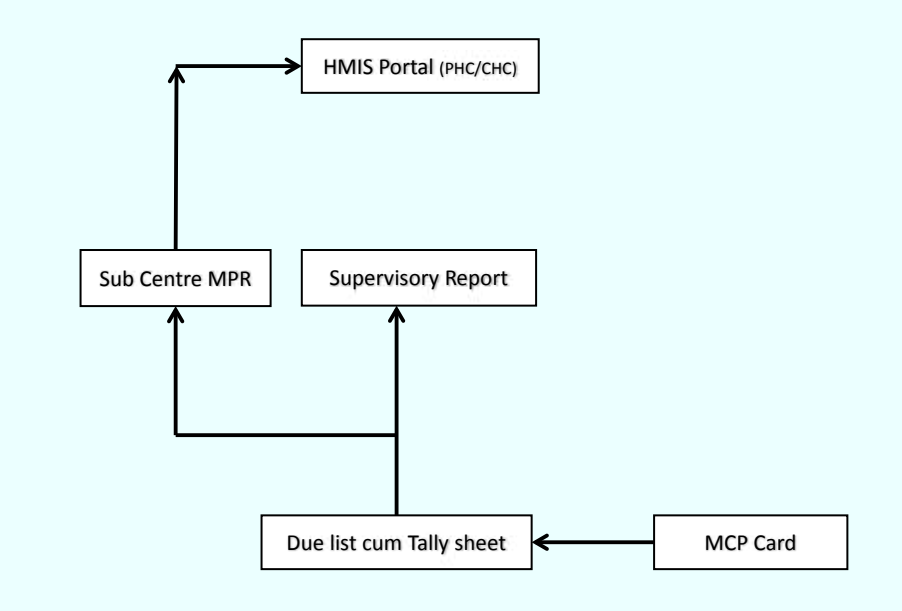
» Contact detail of nearest AEFI management center may be shared with school authorities

6.4 Recording and Reporting

All the recording and reporting formats for special immunization week will include Td10 and Td16 data. The ANM tally sheet will be used to record beneficiary wise details in each immunization week, which will be collated to the sub-centre MPR and will be entered in the HMIS portal in the PHC/ CHC at the block level. A day-wise target achievement report will also be shared. Daily reporting to supervisor will be done separately.

The ANM should be responsible for compilation of block/district and state level reports so that reviews are conducted daily at all levels during immunization week.

Figure 18 : Schematic data flow chart for recording and reporting coverage in Td Immunization Week



6.5 Monitoring and Supervision

» Task forces will be formed on Td immunization at the national, state and district levels for efficient coordination between various departments and to facilitate a robust review mechanism

» A supervisor will be identified at each level (national, state, district and block)

» In addition to officers of the health department, officials from ICDS and Education department should also be involved in supervision

» The supervisor will visit their allotted state/ district/ block/ session sites/ schools during the roll-out phase to review the progress achieved in roll-out of the vaccine, and assess the quality and completeness of coverage

» The supportive supervision mechanism will be strengthened with the inclusion of Td10 and Td16 indicators in GoI's monitoring checklists

» Regular review of data will be done at each level (block, district and state) to assess the achievements of the immunization week, and needful feedback will be provided to improve the performance

- Session site checklists will be used to monitor proper functioning of sessions and logistics (Annexure: RF 1).
- Available records will be examined for information regarding supply, utilization and balance of Td vaccines. AD syringes and droppers will be verified physically to see whether there is a logical association between vaccines, AD syringes and droppers supplied and used.

6.6 Communication, Advocacy and Social Mobilization

Targeted and intensified drives are widely acknowledged to trigger demand generation and bolster service provision within the health landscape. The interventions drawn in the matrix below outline key communication activities for the states to seek guidance from (for implementation of strategy) or undertake in order to strengthen Td10 and Td16 services utilizing immunization drives.

Advocacy

- Meeting with private school board members, and faith-based, government school management officials
- Meeting with parent-teachers' groups, teachers, supervisors' groups for enlisting support on Td
- Meeting with local level community-based influencers to inform and ensure support for Td
- Meeting with religious leaders to enlist support for Td
- Invite local influencers and religious leaders for inauguration of school immunization sessions
- Meeting with youth hostels, day-boarding and hostel authorities
- Plan mothers' meetings (during VHSND) dedicated to encourage discussions on Td
- Disseminate key messages on Td to MAS during MAS meetings and UHSNDs

Social Mobilization

- Discussion on Td with mothers/ caregivers during VHSND/ UHSND
- Orientation of MAS in urban areas on Td
- Meeting on Td with residential schools/ youth hostels
- Coordination and orientation meetings/ sensitization meeting with NGOs and CBOs working with children (street children, orphanages, blind schools)
- Make announcements on benefits of Td during school prayers and routine meetings
- Inform the community prior to the Td Immunization week about the session timings through audio announcements/ miking from auto vans and places of worship
- Organise meetings with local youth clubs, women's societies, Nehru Yuva Kendra, NCC and NSS for mobilizing children and care-givers
- Td IEC display in strategic locations-inside schools, notice boards and outside school premises
- Td IEC display during the VHSNDs, in common areas, grocery shops, premises of the PRI, MCD, RWA offices, within school premises and outside school premises, youth clubs
- Identify community level and school level influencers (class monitors/ sports champions / cultural icons) and propagate messages of Td through discussions, talks and interviews

Capacity Building

- Orientation of senior management in schools (Board members, Principals, Head-masters) and supervisors, nodal Teachers of faith-based, private and government-aided schools
- Make presentations on Td, its significance and risks of not immunizing, for parents and teachers

Media/Social Media

- Share Td GIFs, information on schedule and FAQs with parents and teachers WhatsApp groups
- Develop short videos in the local language utilizing influencers (e.g. sport persons, young local musicians and celebrities) on Td and disseminate through Youtube, Facebook and Whatspp
- Display FAQs and one pager on Td in school notice board
- Publish articles on Td in school journals, magazines and monthly updates

Annexure

Annexure 1: Role and responsibilities of stakeholders for adolescent immunization using RBSK program as a supportive platform:

Stakeholders		Roles and responsibilities
Medical officer at Block/PHC	PHC in-charge	» Coordination with RBSK team/education department » Ensure micro-planning with house to house survey after proper demarcation of areas. » Ensure training of ANM and frontline workers » Develop vaccine distribution plan and AVD plan » Orientation of RBSK, education and ICDS team for adolescent immunization » Supportive supervision of teams conducting adolescent immunization » Ensure timely recording and reporting of Td immunization data
	ANM (Sub-center/ catchment area of school)	» Undertake line listing of all 10 and 16-year-old adolescents in schools twice a year. » Coordination with schools in her catchment area about session plan in advance » Organizing immunization session and providing immunization services in adolescent as per micro-plan » Timely recording and reporting » To manage and report AEFI Cases as per guidelines
	Health Supervisor	» Before the activity the supervisor will assist in team formation, site selection, preparation and completeness of micro plan » Will develop a plan of supervision during the activity and share the same with MO, PHC » Will provide on job training/orientation » Will report daily on quality and completeness of program in his/her area » Responsible for compilation and reporting from designated area daily » Supervisors will be selected from existing health supervisors » All supervisors must be - trained before the activity - familiar with his/her area and team - able to travel independently to the field » Good supervision is key to good quality program » Monitoring will be done by District Level Officers and partners agencies

Stakeholders		Roles and responsibilities
RBSK team	ANM/SN	» Support SC-ANM in line-listing and mobilization of school adolescent for Td immunization
	RBSK team in-charge	» Support and synchronization of RI micro-plan with line-listing to support adolescent immunization in schools » Orientation of school/RBSK staff on adolescent immunization » Coordination with PHC team/education department
Education department	**Nodal Teacher**	» Sharing list of class 5th and 10th student with PHC in-charge » Dissemination of information regarding adolescent immunization to students and parents » Support ANM for conducting immunization » Providing list of drop out to ANM conducting session for tracking during VHSND sessions in the area
	Other school staff	» Support Nodal Teacher for above mentioned activities

Annexure 2: Indicative planning matrix for advocacy activities

S. No.	Target Audience	Desired Action	Modalities of engagement	Tools needed / used
1.	Policy makers and programme managers (state / district / block)	Review and support for Td10 & Td16 roll-out	Meetings/ briefing sessions Exposure visits Debriefing on Td10 and Td16 vaccine	Advocacy kit / briefs / report
2.	Education department and schools officials (principals, headmasters, class teachers) and officials of private schools	Support the roll out of Td activities in the school; sensitize the parents and enroll their support	Meetings / briefing sessions	FAQs on Td10 and Td16
3.	Medical officers/ institutions (IAP, IMA, IAPSM, private doctors/ experts)	Orientation on Td10 & Td16	Workshop Meetings/ briefing sessions	FAQs on Td10 and Td16
4.	Public representatives Influencers: religious leaders, teachers, self-help groups, NGOs, CBOs	Awareness about Td10 & Td16 vaccine introduction Knowledge about benefits of Td10 & Td16 vaccine Advocacy with the community on the importance of adolescent immunization	Meetings/ briefing sessions in schools / community	FAQs on Td10 and Td16
5.	Adolescents	Information and knowledge on the importance of adolescent immunization and benefits of Td10 and Td16 vaccine	Orientation in schools / community	FAQs on Td10 and Td16
6.	Media	Awareness about Td10 & Td16 vaccine introduction Knowledge about benefits of Td10 & Td16 vaccine Positive reporting	Media briefings Media sensitization workshops	Media kit developed by states containing: Background note on TT vaccine's replacement with Td; FAQs for media and draft press release

Annexure 3: Role and responsibilities of stakeholders for adolescent immunization through VHSND/UHSND as a platform:

Stakeholders		Roles and responsibilities
Medical officer In-charge Block/ PHC	MO in-charge	» Coordination with ICDS » Ensure micro-planning with headcount survey after proper demarcation of areas. » Ensure training of ANM and frontline workers » Develop vaccine distribution plan for RI sessions » Orientation of ICDS team for adolescent immunization » Supportive supervision of teams conducting adolescent immunization » Ensure timely recording and reporting of adolescent immunization data
	ANM (Sub-center/ catchment area of school)	» Conducting timely head count survey and preparation of due-list of beneficiaries of 10 and 16 years » Ensure inclusion of adolescent of 10 and 16 years as part of the head count survey of AWW and ASHA including both school-going and out-of-school adolescent and undertake line listing of all 10 and 16-year-old adolescents in schools twice a year. » Coordination with AWC in her catchment area about session plan in advance » Organizing immunization session and providing immunization services in adolescent as per micro-plan » Timely recording and reporting of immunization data » To manage the AEFI and report them
	Health Supervisor	» Before the activity, the supervisor will assist in team formation, site selection, preparation and completeness of micro plan » Will develop a plan of supervision during the activity and share the same with MO, PHC » Will provide on job training/orientation » Will report daily on quality and completeness of program in his/her area » Responsible for compilation and reporting from designated area daily » Supervisors will be from existing health supervisors » All supervisors must be - trained before the activity - familiar with his/her area and team - able to travel independently to the field » Good supervision is key to good quality program » Monitoring will be done by District Level Officers and partners agencies
ICDS		» Head count survey of beneficiaries » Advocacy for adolescent immunization at all possible platforms » Mobilization of adolescent to session sites » Support ANM for conducting immunization » Providing list of drop out to ANM conducting session for tracking of beneficiaries

Annexure 3: Role and responsibilities of stakeholders for conducting Td immunization week(s):

Stakeholders		Roles and responsibilities
Medical officer at Block/PHC	PHC in-charge	» Coordination with education department » Ensure micro-planning with assigned vaccinator and date of conducting session in the schools. » Ensure training of ANM and frontline workers » Develop vaccine distribution plan via nearest cold chain point » Orientation of education for adolescent immunization » Supportive supervision of teams conducting adolescent immunization » Ensure timely recording and reporting of Td immunization data
	ANM (Sub-center/ catchment area of school)	» Undertake line listing of all 10 and 16-year-old adolescents in schools twice a year. » Coordination with schools in her catchment area about session plan in advance » Organizing immunization session and providing immunization services in adolescent as per micro-plan » Timely recording and reporting » To manage and report AEFI Cases as per guidelines
	Health Supervisor	» Before the activity the supervisor will assist in team formation, site selection, preparation and completeness of micro plan » Will develop a plan of supervision during the activity and share the same with MO, PHC » Will provide on job training/orientation » Will report daily on quality and completeness of program in his/her area » Responsible for compilation and reporting from designated area daily » Supervisors will be selected from existing health supervisors » All supervisors must be - trained before the activity - familiar with his/her area and team - able to travel independently to the field » Good supervision is key to good quality program » Monitoring will be done by District Level Officers and partners agencies

Stakeholders		Roles and responsibilities
Education department	Nodal Teacher	» Sharing list of class 5th and 10th student with PHC in-charge » Dissemination of information regarding adolescent immunization to students and parents » Support team and ANM for conducting immunization » Providing list of drop out/absentees to ANM conducting session for tracking during VHSND sessions in the area
	Other school staff	» Support Nodal Teacher for above mentioned activities

SURVEY FORM

Survey Form 1: Area Demarcation for House to House Survey for 10 and 16 Year Adolescents for Td Immunization

State: **District:** **Block/RI Planning Unit:**

Sub Centre/Urban Area: **Name of ANM:** **Name of Supervisor:**

Name of Village/ Hamlet/ Mohalla/ Ward	Total No. of houses in this Village/Urban Area	Total No. ASHAs working in this village/Urban Area	Total No. AWWs working in this village/ Urban Area	Name & Mobile no. of ASHA/ AWW/Link Worker who will do HtH survey in this village/ Urban Area	Total No. of houses allotted to ASHA/ AWW/Link Worker for Survey	Important Landmarks of area allotted to ASHA/ AWW/Link Worker (Name of head of 1st house- 2 prominent landmarks in between – Name of head of Last house allotted for survey)	Date by which survey has to be submitted

Date of submission of survey:

Name and Signature of Supervisor assigned

Name and Signature of Medical Officer:

Survey Form 2: Line List of 10 and 16 Year Adolescents for Td Immunization

State: **District:** **Block/ Planning Unit:** **Date:**

Name of Village/Urban Area:Village/Mohalla/Ward: **Name of Village/Urban Area:**

Survey done by: ASHA/AWW/Link Worker **Name and contact number ASHA/AWW/Link Worker:**

Name and Contact number of ANM of Sub-centre/Urban Area:

S.No	Name of Adolescent	Father's Name/ Mother's Name	Gender Male/ Female	Date of Birth (if available)	Age of Adolescent (Tick mark below in appropriate column for the age of Adolescent)		School going or Out of School	If school going		Td vaccination status Yes/No	If Yes, Date of vaccination
								Name of school	Place of school		
					10th Year	16th Year					

10th year adolescent: An adolescent who is in 10th year and has not completed 10 year (Age: 10 years to 10 year 364th day) on date of house to house survey.

16th year adolescent: An adolescent who is in 16th year and has not completed 16 year (Age: 16 years to 16 year 364th day) on date of house to house survey

Survey Form 3: Validation of House to House Survey of 10 and 16 Year Adolescents for Td Immunization

Validation Done by: **Date of Validation:**

Block/ Planning Unit: **Name of Village/Urban Area :**

Name of ANM of Sub-centre/Urban Area:

Name of Adolescent verified	Age of Adolescent	Father/Mother's name of Adolescent	Whether name of Adolescent is in Survey done? Yes/No (Verify from Survey list of ASHA/AWW/ Link Worker)	Remarks, whether resurvey is required or not?

Signature of supervisor: Signature of Medical Officer i/c:

Note:

Random validation of 5 Adolescents of 10 and 16 Years age in village/Urban Area

If 2 or more missed Adolescents in survey, then resurvey is to be done

Survey Form 4: Due listing of Adolescents for Td Immunization

State: **District:** **Block/ Planning Unit:** **Date:**

Name of Village/Urban Area:Village/Mohalla/Ward: **Name of Village/Urban Area:**

Survey done by: ASHA/AWW/Link Worker **Name and contact number ASHA/AWW/Link Worker:**

Name and Contact number of ANM of Sub-centre/Urban Area:

S.No	Name of Adolescent	Father's Name/ Mother's Name	Gender Male/ Female	Date of Birth (if available)	Age of Adolescent (Tick mark below in appropriate column for the age of Adolescent)		Vaccinated for Td Yes/No	If Yes, Date of vaccination
					10th Year	16th Year		
TOTAL								

10th year adolescent: An adolescent who is in 10th year and has not completed 10 year (Age: 10 years to 10 year 364th day) on date of house to house survey.

16th year adolescent: An adolescent who is in 16th year and has not completed 16 year (Age: 16 years to 16 year 364th day) on date of house to house survey

School Form 1: Line List of schools for Adolescents Td Immunization

State:	**District:**	**Block/ Planning Unit:**	**Date:**
Name of Sub-centre/ Urban Area:		**Name of Village/Urban Area:**	
Name of school:		**Name of the nodal teacher of the school:**	

S.No	Name of village/ hamlet/ tola/ mohalla/ Ward	Name of school/ educational institute in the area	Set up of the school - SG/ CG/ Govt. Aided/ Pvt/ Religious	Name of the nodal teacher of the school	Class wise No. of estimated beneficiaries in school)		School timings (mention timings separately if timings for 5th and 10th class are in different sessions)
					Class 5	Class 10	
TOTAL							

SG – State Government. CG- Central Government Pvt. - Private

School Form 2: Line List of class 5 and class 10 of schools Adolescents Td Immunization

State: **District:** **Block/ Planning Unit:** **Date:**

Name of Sub-centre/ Urban Area: **Name of Village/Urban Area:** **Name of school:**

Name of the nodal teacher of the school: **Type of school: SG/ CG/ Govt. aided/ Pvt./ Religious**

Class: 5th / 10th

S.No	Name of the student	Father/Mother's name	Name of resident village	Td10/Td16 Vaccination status		If Yes,	
				Yes	**No**	Date of vaccination	Place of vaccination

Note: Use separate sheets for class 5 and class 10 beneficiaries listing

Same form can be used during vaccination day to track the beneficiary wise vaccination status

Signature of class/ nodal teacher: Signature of school Principal:

RF 1: Td Session Site Checklist for Monitors

Activity date: _ _ / _ _ / _ _ **RF 1: Td Session Site Checklist for Monitors** **Td FORM** **State:_____ District:_____ Block/Urban Area:_____ Setting: Urban / Rural ;** **Village/Mohalla/Ward:_____ High Risk Area: Yes / No; Monitor:_____ Designation: _____**						
Organization: Govt / WHO / UNICEF / UNDP / CORE /JSI / LIONS International / Rotary / IFV / FM- IPE / SM Net IPE / Others				**Serial/Team No as per micro-plan**		
General Information	1	Name of the session site visited				
	2	Setting: ENCIRCLE - R = Rural area / U = Urban	R / U	R / U	R / U	R / U
	3	Type of session site: School (E) / outreach (O) / Health Facility (H) / Mobile (M)	E / O / H / M	E / O / H / M	E / O / H / M	E / O / H / M
	4	If school: Govt school (G) / Pvt School (P) / Religious school (R) /	G / P / R / C / O	G / P / R / C / O	G / P / R / C / O	G / P / R / C / O
Area and Manpower	5	Is this a High Risk Area (HRA)?	Y / N	Y / N	Y / N	Y / N
	6	Is this site located as per micro plan?	Y / N	Y / N	Y / N	Y / N
	7	Adequate vaccinators assigned to this session as per number of beneficiaries?	Y / N	Y / N	Y / N	Y / N
	8	Are all vaccinators available as per micro plan?	Y / N	Y / N	Y / N	Y / N
	9	Are all mobilizers as per micro plan?	Y / N	Y / N	Y / N	Y / N
Vaccine and other logistics	10	Adequate Td vaccine vial is present at the site? [Adequate = (target x 1.11)/10 for school sites and ~ 50% of this for outreach sites?]	Y / N	Y / N	Y / N	Y / N
	11	Adequate AD syringe (0.5 ml) is present at the site? [Adequate = target x 1.11 for school sites and ~50% of this for outreach sites?]	Y / N	Y / N	Y / N	Y / N
	12	Is a functional hub cutter available at session site?	Y / N	Y / N	Y / N	Y / N
	13	Number of vials used and children vaccinated as per tally sheet match reasonably?	Y / N	Y / N	Y / N	Y / N

Activity date: _ _ / _ _ / _ _ RF 1: Td Session Site Checklist for Monitors Td FORM

State:_____ District:_____ Block/Urban Area:_____ Setting: Urban / Rural ;

Village/Mohalla/Ward:_____ High Risk Area: Yes / No; Monitor:_____ Designation: _____

Organization: Govt / WHO / UNICEF / UNDP / CORE /JSI / LIONS International / Rotary / IFV / FM- IPE / SM Net IPE / Others				Serial/Team No as per micro-plan		
Td vaccine and cold chain	14	Is the vaccine delivered by Alternate vaccine delivery mechanism?	Y / N	Y / N	Y / N	Y / N
	15	Td vaccine vials are stored in vaccine carrier (with 4 ice packs)	Y / N	Y / N	Y / N	Y / N
	16	Td vaccine vial and syringes are all within date of expiry?	Y / N	Y / N	Y / N	Y / N
	17	Is there any vial in unusable stage inside the vaccine carrier?	Y / N	Y / N	Y / N	Y / N
Vaccinators injection practices	18	Time of opening is noted on the label of the vial	Y / N	Y / N	Y / N	Y / N
	19	Is the vaccinator recapping the needle?	Y / N	Y / N	Y / N	Y / N
	20	Is ANM touching the needle of the syringes anytime during drawing and administering vaccine to the child? (Not following aseptic technique)	Y / N	Y / N	Y / N	Y / N
	21	Vaccinators administering the vaccine through I/M route	Y / N	Y / N	Y / N	Y / N
	22	Used syringes are being cut using hub cutter immediately after use?	Y / N	Y / N	Y / N	Y / N
	23	Tally sheet marking being done after vaccinating each child	Y / N	Y / N	Y / N	Y / N
AEFI Mgt	25	If yes, does the kit have adrenaline and insulin syringes? (If No - Immediately ALERT Senior Official)	Y / N	Y / N	Y / N	Y / N
	26	Does the vaccinators know what to do in case of a serious AEFI (primary care, referral and reporting)?	Y / N	Y / N	Y / N	Y / N
	27	Does the vaccinator know the contact number for referral transport?	Y / N	Y / N	Y / N	Y / N
School Specific	28	Has this school identified separate vaccination and observation room/area?	Y / N	Y / N	Y / N	Y / N
	29	Children who are absent or did not receive Td vaccine being noted?	Y / N	Y / N	Y / N	Y / N
Mobilization &	30	Does the vaccination site have visible IEC (Banners/Posters)?	Y / N	Y / N	Y / N	Y / N
	31	Whether social mobilization is being done by house visits to invite beneficiaries?	Y / N	Y / N	Y / N	Y / N
	32	Did the 1st line supervisor visit this site at least once today?	Y / N	Y / N	Y / N	Y / N

Tetanus and adult diphtheria (Td)

Frequently Asked Question (FAQs)

What is Td vaccine?

ANS. Tetanus and adult diphtheria (Td) vaccine is a combination of tetanus and diphtheria with lower concentration of diphtheria antigen (d) as recommended for older children and adults.

What is the need for the replacement of TT with Td vaccine in the Universal Immunization Program?

ANS. As per the lab supported vaccine preventable diseases surveillance data in India, majority of the cases of Diphtheria are occurring in age group 5 years and above (77% and 69% respectively in 2017 and 2018) mostly in unvaccinated (~ 2/3rd). In 2016 diphtheria outbreak in Kerala, nearly 79% cases occurred in >10 years age group. Since 1999, there have been more than 80% reduction in tetanus mortality, however diphtheria outbreaks are increasing which reflect gaps in diphtheria protection.

It is now well established that immunity to diphtheria subsides following the primary series of DTP infant immunization and that booster doses of diphtheria toxoid containing vaccines are needed for continued protection

Why Td vaccine needed for pregnant women when already TT vaccine is administered?

ANS. The use of Td rather TT is recommended during pregnancy to protect against maternal and neonatal tetanus & diphtheria during prenatal care. Vaccination during pregnancy also serves to boost immunity and increase the duration of protection in those pregnant women who had not received the full set of recommended booster doses. Td also boost decreasing diphtheria immunity in addition to assuring tetanus protection, and help to curtail diphtheria outbreaks.

What is the presentations of Td vaccine?

ANS. The table below illustrates the details of Td vaccine that will be used under Universal Immunization Program (UIP):-

Vaccine	Td
Presentation	10 dose Vial
Shelf Life	24-36 Months

Is Td a new vaccine?

ANS. Td is not a new vaccine. 133 countries are using Td vaccine in the national immunization schedule.

What is the sensitivity, storage procedure & handling process, wastage rate for Td vaccine?

ANS.

- Td is a freeze sensitive vaccine. No reconstitution required for Td vaccine.
- Td vaccine to be stored between +2 to +8 degree Celsius in ILR.
- Shake test is applicable to Td vaccine, to check freezing of Td vaccine. If you find any frozen vial of Td vaccine in ILR do not use the vial.
- The wastage rate for Td vaccine is 10 %.

Is open vial policy applicable to Td vaccine?

ANS. Open vial policy is applicable to Td vaccine.

What is the dose, route & site of administration for Td vaccine?

ANS.

Dose	0.5 ml
Route	Intramuscular
Site of Administration	Upper Arm

Will there be an additional cold chain storage capacity requirement?

ANS. There will not be any requirement for additional cold chain space to accommodate Td vaccine as same vial sizes (10 dose vials) are used to replace existing TT vaccine.

Will the replacement of TT with Td vaccine impact the immunization schedule?

ANS. The existing UIP schedule for TT will be followed for Td as well.

What should be done with the remaining balance of TT vaccine in the country?

ANS. If remaining stock of TT vaccine still meets all validity requirements, it should to be used first and then begin using Td vaccine. There is no need to discard or recall stocks of available TT vaccine

Where to report Td vaccine in MCP cards, HMIS & MCTS tool, Tally Sheets and Due lists?

ANS. Revision of all recording and reporting formats (MCP card, due list, tally sheets, RCH registers, micro-plans, AEFI formats etc.) replacing TT with Td is to be done.

If the same has been revised to include Td doses, it should be recorded at appropriate columns (at 10 years & 16 years for children and Td-1, Td-2 and Td-B for pregnant women). If not done: Td doses should be recorded at the place of TT doses.

The replacement of TT with Td vaccine may need a clear communication strategy and training of ANMs. How can this be handled?

ANS. The replacement of TT with Td vaccine does not require a wide scale communication strategy as its usage and schedule is same as that of TT. The replacement will simply be an exchange of one vaccine product for another in the programme, with no change in targets population or schedule. Therefore, a simple orientation of medical officers, programme managers and ANMs will be sufficient.

Is it safe to use Td vaccine during pregnancy?

ANS. Both tetanus and diphtheria toxoid containing vaccines are safe for use in pregnancy. These vaccines have been used for decades and there is no evidence of adverse outcomes or risk to the fetus from the vaccination during pregnancy. However, local reactions at the site of injection may occur.

Do Td vaccine require different measures for AEFI surveillance than already existing?

ANS. There is always need for good AEFI monitoring for all vaccines. AEFI surveillance to be done for all vaccines under UIP. This implies for Td vaccine as well.

If a woman or adolescent has received TT vaccine in the past, can Td be used for the next dose(s)? What will be the validity of previous TT doses? Should I repeat previous doses?

ANS. Yes, Td vaccine can be given as a subsequent dose following TT, and all previous TT doses will remain valid. There is no need to re-start the series.

What are the recommended strategies to improve Td immunization?

ANS. This document has suggested three strategies as given below:

Does state need to adopt all three strategies?

ANS. No. State can adopt any one and/or more than one strategies as per the state's need and resource availability.

IMMUNIZATION
TECHNICAL SUPPORT UNIT
Ministry of Health & Family Welfare