EVM (EFFECTIVE VACCINE MANAGEMENT)

RECOMMENDATIONS

Temperature monitoring
- In the Regional Medical Supplies Divisions (RMSD) vaccines are stored in cold rooms and temperature in the cold room should be main-
tained at +2 to +8
- At RMSD level one person should be identified and assigned with the responsibility of day-to-
day vaccine receipts and issues along with re-
frigerator temperature recording and cold chain maintenance.
- All cold rooms should be equipped with built
digital thermometers and 24 hour continued
temperature recorders, manual thermometers, data lodgers and freeze tags etc. The responsi-
ble person should monitor the temperature and
cold chain of vaccines, using the different moni-
toring devices at least twice a day and findings should be recorded twice a day on the cold chain
monitoring sheets provided by the Epidemiology
Unit.
- Data lodger should be read once in two weeks
or when cold chain failure is detected. At the end of every two weeks, recordings of the data
lodger should be printed out in triplicate. One copy should be filed at the RMSD, one copy
should be sent to RDHS (Regional Director of Health services) / RE (Regional Epidemiologist)
and the other copy should be forwarded to the
Epidemiology unit with the Monthly vaccine
stock return.
- At Medical Officer of Health (MOH) or institu-
tional level all vaccines are stored in refrigerators and live vaccines should be stored in the
coldest part (top Shelves) of the refrigerator and
killed or inactivated vaccines at the warmest/
lowest part of the refrigerator.

- A responsible person should be identified to be
in-charge of the vaccine management and main-
tenance of cold chain and to maintain all re-
cords. In the event of this person being absent,
a second and a third person should be identified to attend to the functions.
- All persons allocated for vaccine storage and
temperature monitoring must know correct vaccine storage conditions and temperature monitoring practices. When there is a change in their post or position there should be clearly
defined procedures to follow including docu-
mented handover procedure.

Storage and transport capacity
- All space in the cold room/refrigerators cannot
be used for vaccine storage. Spacing is needed
for proper circulation of cold air and uniform
cooling. About 60% of the internal space is used
for vaccine, diluents and cold packs storage and
the remaining, 40% is left unfilled.
- A separate freezer should be used for freezing
of ice packs at the RMSD. The required number of conditioned cold packs identified for each cold
box should be used to ensure the cold life of the
vaccines.
- The vaccines should be distributed to MOOH
every month, packed in cold boxes. In transporta-
tion of vaccines the shortest possible route
should be taken to reach the MOH/institution
avoiding any undue stoppages/delays en route.

Buildings, equipment and transport
- In RMSDs all these cold rooms should be
equipped with two cooling machines to make sure continuous cold storage when one ma-
chine is out of commission.

Contents

1. Leading Article – Effective Vaccine Management (EVM) Assessment – Sri Lanka (Part III) 1
2. Summary of selected notifiable diseases reported - (24th – 30th October 2015) 3
3. Surveillance of vaccine preventable diseases & AFP - (24th – 30th October 2015) 4
Further, these cold rooms must be equipped with auto start generators to provide uninterrupted electricity in the event of Power failure.

- Adequate number of refrigerators and freezers should be kept as a backup storage in the event of a cold room failure.

**Maintenance**

- The RDHS should make sure that all equipments are in good state of repair by arranging an annual maintenance contract with the local agent for these machines as per guidelines issued by the Epidemiology Unit.

**Stock management**

- At MOH and institutional level, Medical Officers of Health and institutions should send the vaccine stock returns to the RMSD before the 5th of the month. The return should be sent whether stocks are requested or not.
- Officer in-charge of the RMSD should obtain the monthly stock return forms from all institutions in the RDHS division to which vaccines are distributed, before the 5th of the month.
- The return should be adjusted if necessary and the consolidated return should be forwarded to the Epidemiologist by the 5th of every month in consultation with the RDHS/RE.
- Return should be sent to the Epidemiology Unit every month whether stocks are requested or not.
- And also after the receipt of vaccine stocks, vaccine arrival report should be completed by the OIC (Officer In-charge)/RMSD in keeping with the instructions given by the Epidemiology Unit.

**Transport of vaccines to the field clinics**

- Vaccine stocks should be distributed to the clinic centres packed in vaccine carriers with cool packs.
- Vaccine carriers should be used even when the clinic is held in a room adjoining the storage point.
- The correct number of cool packs should be used to maintain the cold life of the vaccine during transport to and from the clinic and during the clinic time.

**Storage of vaccines returned from immunization clinics**

- Stocks of vaccine that have been taken to clinics and brought back unused (unopened vials), should be stored separately from the bulk stocks in a separate box marked as, “returned unopened vials”.
- Returned open vials should be kept in a separate box marked as “returned open vials”.
- These two boxes should be kept in the 2nd shelf of the refrigerator.
- Returned open and unopened OPV vials also should be kept in the same box.
- These returned unopened vials should be taken to the very next clinic and used before using the bulk stocks.

**Vaccine management**

- All workers who are assigned for vaccine management should know the correct procedure for the shake test

**The shake test**

- The shake test is used to determine if the vaccine has been frozen.
- During the process of freezing, vaccine tends to flocculate (i.e., virus particles stick together to form larger clumps).
- When a vial of vaccine which has been frozen and then thawed is shaken and then allowed to sediment, it will sediment more quickly than the same vaccine from the same manufacturer which has not been frozen.
- The shake test is best conducted using a vial of vaccine which you have frozen solid yourself and do not intend to use.
- This vial can be used as a frozen “control” against which to compare vaccines in doubt.
- Whenever the “control” vial sediments significantly faster than the test vial, then the test vial is acceptable.
- If the sedimentation rates are the same, however, then the test vial should not be used.
- Remember, the shake test can only be conducted on “test” and “control” vials from the same manufacturer.

**Sources**

1. Sri Lanka EVM Assessment July 2015-Findings and recommendations of the assessment team


Compiled by Dr. T. N. Yapa of the Epidemiology Unit
Table 1: Selected notifiable diseases reported by Medical Officers of Health

<table>
<thead>
<tr>
<th>Disease</th>
<th>Colombo</th>
<th>Gampaha</th>
<th>Kandy</th>
<th>Kataragama</th>
<th>Kalpitiya</th>
<th>Kelani</th>
<th>Kandy</th>
<th>Kataragama</th>
<th>Kalpitiya</th>
<th>Gampaha</th>
<th>Colombo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dengue Fever</td>
<td>166</td>
<td>0</td>
<td>84</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>166</td>
</tr>
<tr>
<td>Measles</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Meningitis</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pertussis</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poliomyelitis</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chickenpox</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Typhus Fever</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Leprosy</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Human Rabies</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Viral Hepatitis</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Encephalitis</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dysentery</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Enteric Fever</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poisoning</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: The table above shows the weekly notifiable diseases reported by Medical Officers of Health in Sri Lanka for the period from 24th to 30th October 2015 (44th Week). The data includes the number of cases reported in various cities across the country.

Source: Weekly Reports of Communicable Diseases (WRCD)
### Disease Preventable Diseases & AFP

#### Table 2: Vaccine-Preventable Diseases & AFP

**24th – 30th Oct 2015 (44th Week)**

<table>
<thead>
<tr>
<th>Disease</th>
<th>No. of Cases by Province</th>
<th>Number of cases during current week in 2015</th>
<th>Number of cases during same week in 2014</th>
<th>Total number of cases to date in 2015</th>
<th>Total number of cases to date in 2014</th>
<th>Difference between the number of cases to date in 2014 &amp; 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFP*</td>
<td>00 00 00 00 00 00 00 00 00</td>
<td>00 01 61 72</td>
<td>-15.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diphtheria</td>
<td>02 00 00 00 00 01 01 01 01</td>
<td>06 03 333 585</td>
<td>-43.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mumps</td>
<td>03 02 05 01 02 03 00 03 04</td>
<td>23 23 2410 2882</td>
<td>-16.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubella</td>
<td>00 00 00 00 00 00 00 00 00</td>
<td>00 00 08 17</td>
<td>-53.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRS**</td>
<td>00 00 00 00 00 00 00 00 00</td>
<td>00 00 00 04</td>
<td>-100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus</td>
<td>00 00 00 00 00 00 00 00 00</td>
<td>00 00 14 12</td>
<td>+16.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neonatal Tetanus</td>
<td>00 00 00 00 00 00 00 00 00</td>
<td>00 00 00 00</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japanese Encephalitis</td>
<td>01 00 00 00 00 00 00 00 00</td>
<td>00 00 10 22</td>
<td>-54.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>25 03 09 01 04 25 13 11 28</td>
<td>119 237 8339 8299</td>
<td>+1.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Key to Table 1 & 2

**Provinces:**
- **W:** Western,
- **C:** Central,
- **S:** Southern,
- **N:** North,
- **E:** East,
- **NC:** North Central,
- **NW:** North Western,
- **U:** Uva,
- **Sab:** Sabaragamuwa.

**RDHS Divisions:**
- **CB:** Colombo,
- **GM:** Gampaha,
- **KL:** Kalutara,
- **KD:** Kandy,
- **ML:** Matale,
- **NE:** Nuwara Eliya,
- **KL:** Galle,
- **HB:** Hambantota,
- **MT:** Matale,
- **JJ:** Jaffna,
- **KN:** Killinochchi,
- **M:** Mannar,
- **VA:** Vavuniya,
- **MU:** Mullaitivu,
- **BT:** Batticaloa,
- **AM:** Ampara,
- **TR:** Trincomalee,
- **KJ:** Kalmunai,
- **RU:** Kurunegala,
- **PU:** Puttalam,
- **AP:** Anuradhapura,
- **PO:** Polonnaruwa,
- **BD:** Badulla,
- **MO:** Moneragala,
- **RP:** Ratnapura,
- **KG:** Kegalle.

**Data Sources:**
- **Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps, Rubella, CRS,
- **Special Surveillance:** AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
- **CRS** = Congenital Rubella Syndrome

**AFP** and all clinically confirmed Vaccine Preventable Diseases except Tuberculosis and Mumps should be investigated by the MOH

---

**Dengue Prevention and Control Health Messages**

**Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them**

---

**Notes:**

- The printing of this publication is funded by the World Health Organization (WHO).

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@slt.net.lk. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication.

---

**ON STATE SERVICE**

---

**Dr. P. Palihawadana**

**Chief Epidemiologist**

**Epidemiology Unit**

**231, De Saram Place**

**Colombo 10**