School Immunization Programme in Tunisia
Review mission, 18 - 23 January 2010

Final report
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1 Purpose and background of the review mission

Within the context of the Global Immunization Vision and Strategies (GIVS) document produced by WHO and UNICEF in 2005, the expansion of vaccination beyond infancy has been promoted, both in terms of booster doses (ie doses where the primary vaccination occurs in infancy but additional doses are provided in older age groups), and in terms of primary vaccination of older children and adolescents. One of these vaccination delivery strategies is the vaccination of targeted children at schools. WHO has embarked on investigating the existing school based programmes in several countries and from these case studies hopes to develop generic guidelines enabling countries wishing to embark on such a programme an overview of best practices in several settings.

This report focuses on the review of the Tunisian school based vaccination programme, which was reviewed by Drs E. Mohsni (WHO/EMRO) and R. Eggers (WHO/HQ) from 18 - 23 January 2010.

1.1 Acknowledgements

We would like to gratefully acknowledge the assistance provided by Dr Mounira Garbouj, the national Director: School and University Health Department and all her staff, specifically Drs Ali Sliti and Amor Ben Youssef who provided us with full insight and explanation, and the access to the relevant health facilities and schools. We thank the health workers in the facilities and schools for their candid responses and friendly acceptance of all our questions.

Finally, we are grateful to the support by the WHO Country Office and the WHO Representative, Dr Ibrahim Abdel-Rahim, and his staff.

1.2 Purpose

The purpose of this mission was:

- To collaborate with the Ministry of Health and other government institutions in documenting the national school-based immunization programme.
- To collect information on the school-based immunization programme at various levels using structured questions, reported data and observation of processes.
- To synthesize the information collected from Tunisia (and in due course other countries) in order to produce a joint collaborative report on documentation of national school-based immunization programmes.

It should be stressed that the purpose of the visit was to document the routine school immunization programme and that this was not an evaluation.

1.3 Site visits

During the course of this mission, the following sites were visited:

1.3.1 Visit to the MoH School Health Department

The introduction to the school health programme was provided by Director of School Health at the Ministry of Public Health, Dr Mounira Garbouj, who described the policies and practices of the school health programme. Further information was provided by Dr Ali Sliti (responsible for University Health) and Dr Amor Ben Youssef (responsible for School Health). The initial visit was supplemented by a follow-up visit on the last day to review records and data.

1.3.2 Visit to Ariana governorate

The mission proceeded to the Governorate Regional Public Health office, was introduced to the Regional Director for Ariana governorate, and the regional staff responsible for the school health programme. Visits were conducted at the nearby International School of Tunis (a public
school), where a vaccination session of a second year primary class was reviewed, and the neighboring Lyceé Pilote de l’Ariana school, where the documentation was reviewed. This was followed by a meeting at the Ariana Child & Mother Health Care Centre, responsible for the schools visited.

1.3.3 Visit to Zaghouan governorate
The following day, an excursion was made to the Zaghouan Governorate office, where again the regional director and her staff were interviewed. The mission continued by visiting the Oued-El-Rebeh primary school, where a 6th year primary school class was being vaccinated. It was followed by a visit to the Lyceé Ibn Charaf, where records were reviewed and the health staff interviewed.

1.3.4 National Primary Health Care and National EPI Programme
On the last day, the National Primary Health Care programme was interviewed, specifically including the national EPI Manager.

2 Health system context

2.1 Organizational structure of the Ministry of Health

Tunisia’s overall population is around 10,432,500 (2009). The annual birth cohort is 176,356 (2008) and the crude birth rate is approximately 17.7% (2008).

The Ministry of Health contains the Minister Cabinet and 4 main departments:
- Administrative & Financial General Department
- Hospitals General Department
- Technical Cooperation General Department
- Health General Department, which includes 4 technical departments:
  - Hygiene & Environment Protection Department;
  - Primary Health Care Department;
  - School and University Health Department;
  - Private Sector Health Unit.

In each Governorate, a Regional Health Department exists that includes:
- An administrative and financial unit;
- A regional Primary Health Care (PHC) department;
- A regional department for Hygiene and Environment Protection
- A regional unit for School and University Health

The country is administratively divided into 24 Governorates and 263 Delegations. Under each Regional Health Department, there are several health districts (called “circonscriptions sanitaires”) - a total of 206 health districts countrywide. Each health district is managed by one physician as head of the circonscription (Medecin Chef de Circonscription) assisted by a Primary Health Care Coordinator (Surveillant de Circonscription). Beyond that level, there are 2,083 Primary Health Care centers in Tunisia (averaging 4,958 inhabitant per PHC centre) providing a comprehensive PHC package to the population, including routine immunization, reproductive health, school health, etc.

2.2 Advisory bodies

The National Immunization Technical Advisory Group (NITAG) consists of Tunisian child and public health experts, and has been constituted to review evidence and provide technical expertise to national decisions in the area of immunization. Recently, the Ministry of Health decided that the NITAG would be made responsible to advise on all vaccination policy decisions, including school vaccination policy and others (eg. vaccination in the military). This conceptually reinforces the unified and integrated approach of all immunization interventions.
2.3 **Systems linkages between Health and Education**

As indicated, the School Health Programme is thus entirely located within the Ministry of Health, although strong collaboration exists between the four Ministries involved:
- the Ministry of Higher Education (*Ministere de l’Enseignement Superieur*),
- the Ministry of Youth and Children (*Ministere de la Jeunesse et de l’Enfance*),
- the Ministry of Education (*Ministere de l’Education*), and
- the Ministry of Health (*Ministere de la Sante Publique*).

At all levels, this is especially evident among the latter two in respect of the school health programme:
- At National level: joint circulars and standard operating procedures signed by both Ministers provide clear and unified directives to education and health staff;
- At Governorate level: Annual meetings to plan the implementation of school health services
- At school / health facility level: Joint training workshops are attended by both education and health staff

3 **The School Health Programme (SHP) and school based vaccination**

3.1 **Background and design of the School Health Programme**

In 2009, a total of approximately 2,666,955 students are enrolled in approximately 10,927 schools; this is distributed between
- 3,997 kinder gardens & pre-school institutions (147,632 students),
- 4,570 primary schools (1,022,059 students),
- 1,645 secondary schools (1,055,315 students),
- 220 high schools and universities (341,973 students) and
- 506 other kind of special schools (99,976 students).

A large majority of students are in the public system (98.2% for the primary schools and 94.7% in secondary schools).

At the national level, the School and University Health Department has the overall responsibility of the students’ health in both public and private sectors. It contains:
- A financial and administrative unit;
- A health education unit;
- A capacity building unit;
- A sub-department that includes different specific programmes like adolescents health, dental health, etc.;
- A mental health unit;
- A school health unit;
- A university health unit.

In each Governorate, there are two school health focal points, one medical officer and one nurse. They are under the direct authority of the Regional Health Director and work in collaboration with the Head of the Regional Primary Health Care Department.

In almost all districts, the school health activities are totally integrated within the PHC services and are run by the PHC teams, under the direct authority of the District Health Chief and his assistant. In 1988, a Minister of Health circular instructed all primary health care physicians to allocate one sixth of their time to run the school health activities. A second circular was issued in 1998 increasing this time to one third in a certain number of districts in which new specific school health activities were added (counseling, reproductive health, etc). Immunization
activities are run by the primary health care staff (ie. EPI vaccinators). In few districts (mainly highly populated ones), there are full time school health staff.

In total, school health activities are provided by 1,676 physicians (1/6th or 1/3rd time) (averaging around 6 schools per physician) and 2,545 paramedical staff (averaging 4 schools per staff).

In 1996, the school-based health programme was restructured, and four distinct areas of work (see Figure 1 on page 7) were identified:

- Regular medical examinations at various critical points of child and adolescent development;
- Health education;
- Vaccination of certain school classes according to an expanded vaccination schedule;
- Counseling groups or "Listening and advising cells" - Les cellules d'ecoute et de conseil (CEC)

In addition the school health personnel visiting the schools have responsibility for general hygiene in the school and food preparation inspection.
### 3.2 School immunization as part of the integrated vaccination programme

The school immunization programme cannot be seen as a stand-alone programme, but rather a continuation of the childhood immunization programme. Both, routine immunization and
school immunization programmes started the same year (1979). The immunization schedule has gone through various changes since that time. Below is the current detailed immunization schedule (see also Annex B on page 18):

Childhood immunization:
- At birth: BCG & HepB
- At 2 months: DPT1, OPV1 & HepB2
- At 3 months: DPT2 & OPV2
- At 6 months: DPT3, OPV3 & HepB3
- At 15 months: Measles 1
- At 18 months: DPT & OPV booster doses

School Immunization:
- At 6 years (1st grade of primary school): OPV & Measles 2
- At 7 years (2nd grade of primary school): Td
- At 12 years (6th grade of primary school): OPV, Td & Rubella (for girls only)
- At 18 years (3rd grade of secondary school): OPV & Td
- For students in medical and nursing high schools: three doses of HepB vaccine are mandatory

Reported coverage figures have been very high for the last decade (99% in the primary schools and 98% in secondary schools). Similarly, the estimated school enrollment rates are also very high: 98% in primary schools (< 16 years of age) and around 86% in secondary schools (from 16 to 18 years of age). Accordingly, the estimated overall coverage rates are 97% and 84% for children under 16 years of age and for those between 16 to 18 years respectively. School enrollment decreases after the 16th year of age, as it is no longer compulsory then. As for the medical and nursing schools, the reported HepB coverage figures are somewhat lower, namely 90% for HepB1, 86% for HepB2 and 82% for HepB3.

Regular meetings - at least quarterly - are arranged between the district and school health care providers, and provide the main means of training and supervision of these groups. In addition, annual meetings are held by the person in charge of school health at Governorate level with the Governorate school health assistant, the PHC representatives for each Governorate, and partners from Education and Social Affairs ministries, totaling more than one hundred persons.

3.3 School entry requirements

At the entry to each level of schooling (ie primary school, secondary school, university), the medical file ("dossier") of the child is reviewed to assure the completeness of the vaccinations required and other requirements. The schools are by law required to only admit those children that have complied with this requirement; if vaccinations are missing, normally parents would be allowed a few days to assure that any missing vaccinations are administered. The medical and academic dossiers are both required to be handed from one school to the next should a child move - again, children without both these records would not be accepted in a new school.

A compulsory pre-school visit is normally done at a health facility (not at the school), but attendance is based on the list of children registered to start schooling. The purpose of this visit is a basic medical check-up, but also to check completeness of primary vaccination and the completion of school medical dossier. In practice, in our review, we found that some components of the school medical dossier would only be completed at a later stage, and only the medical check-up itself, and the concurrence that the child is fit to go to school, would be initially recorded. In one school we visited, the primary vaccination data was entered onto the school medical dossier only at a later stage, when the photocopies of the child vaccination card had been received by the school. Thus, while the school entry requirement in terms of vaccination was in place, the recording of this requirement was sometimes delayed.

3.4 Implementation of the school vaccination
The implementation of school vaccination services is tightly integrated into the primary health care system, as outlined above. To actually vaccinate the school children, the following processes are followed. In the current review, the issues of the pandemic influenza H1N1 vaccine caused considerable changes and challenges to the programme - this impact is summarized below in section 4.4 "Impact of current pandemic influenza H1N1 vaccination and public information" on page 15.

3.4.1 Planning services

At the beginning of each scholastic year, a circular is sent to all schools, private and public, and to all primary health care facilities, signed by both the Minister of Health and the Minister of Education. It reminds the schools and the health workers of the vaccination schedule, and provides any additional information they might need (eg. in the past year, some additional information regarding the pandemic influenza A H1N1 was included in this letter).

At district level, primary health care physicians are assigned to specific schools, and a basic programme of work is developed indicating which physician is allocated to which school on each weekday - a similar process is followed to determine how school health nurses are assigned to education institutions. As indicated before, each public health physician is required to allot 1 - 2 days a week to the school health programme. An example of such a schedule is shown in Figure 2 below.

![Figure 2: Schedule of activities for primary health care physicians](image-url)
pupils are made available to the primary health care physician who will use the number of enrolled students to modify their vaccine requests and determine the number of vaccination sessions to be planned. Clearly, not all pupils require vaccinations every year; the vaccination is scheduled as indicated in the national schedule (see Annex B on page 18).

School based vaccinations are given in 2\textsuperscript{nd} quarter of school year (ie Jan - March) except for the vaccinations for medical and nursing schools where Hepatitis B vaccination requiring 3 doses are given. For these, the vaccinations are started in the 1\textsuperscript{st} quarter of the academic year. The other school-based interventions are planned for the other quarters in the year - see Figure 1 on page 7. For example, medical check-ups are generally planned in the 1\textsuperscript{st} quarter (Sept - Dec) of the scholastic year.

3.4.2 Parental consent and information, vaccination refusals

Prior to the planned school vaccination session, a consent form (see Annex C: Consent form and advisory note to parents on page 19) is sent to parents, informing them about the vaccine to be given, and requesting their consent. Parents may consult their own physician to certify any contraindications, which will be accepted by the school, resulting in the exclusion of the child from vaccination. Alternatively, parents may provide proof of previous private vaccination, again resulting in the vaccine not being provided to the child in school. Both these cases are treated as valid exclusions, and their numbers excluded from the denominator. In the case where the consent form is not returned in time, or not completed adequately, consent is assumed and the vaccine is given to the child.

There are virtually no absolute refusers of vaccination in the Tunisian school vaccination programme, as there is a longstanding acceptance of this vaccination, indeed an eagerness to obtain the additional doses.

3.4.3 The vaccination session

The teachers prepare the pupils prior to the vaccination session - in both sites visited, the pupils were well informed about the vaccine they were about to receive and the disease that they were being protected against. The teachers also remained present during the vaccination session, in some cases to console and support frightful pupils, scared of the impending jab.

The vaccination sessions themselves may take place in a separate infirmary, or in the classroom of the relevant class.

Using the class list, a roll call is conducted, to determine who is absent, and the names of the absent pupils noted for further follow up (see below). The parental consent forms are collected and checked, and children with valid contraindications and those already vaccinated (due to certified private vaccination, or those students repeating a year - "\textit{redoublants}") are excluded.

The health workers then administer the vaccines to the eligible pupils, vaccine by vaccine, doing several rounds if more than one vaccine was to be given. No recordkeeping is done at all during this time - the medical dossiers and the pupil held cards indicating the vaccine had been given or the reasons why a vaccine had not been given are completed after the vaccinations had been completed.

3.4.4 Vaccines, syringes and waste disposal

It was noted that although proper clinical practice and aseptic techniques was practiced during the withdrawal of a vaccine dose, and during its administration, the post-injection handling was inadequate. In all cases seen during this review, needles were recapped, exposing the health worker to raised needlestick injury risk. In two out of the three sessions witnessed, the used syringe and needle were discarded in a regular plastic waste bag, not a safety box. Even in the case where a safety box was available, it was only due to the initiative of the health worker, who had saved a few safety boxes from a previous measles campaign. Finally,
injection waste was disposed of by surface burning on the grounds of the facility - this was not further reviewed.

3.4.5 Record keeping and reporting

Each pupil has a school health dossier (see Figure 3 below) which accompanies him/her through the scholastic career. This record is first created at the pre-school compulsory visit, which ensures that the child is fit to attend school, and that the primary vaccination schedule has been completed, thereby fulfilling the school entry requirement. The dossier contains information about all the medical and dental check-ups conducted during schooling as well as minor ailments and accidents and additional investigations conducted. The dates of the primary vaccinations (ie infancy and pre-school) should be transcribed onto this card, although we found that this was not always done, and a photocopy of the primary vaccination series kept attached in lieu.

This dossier was completed for all the children that received vaccines in school, as well as those that had certified previous vaccinations or contraindications. This recordkeeping was normally done after the vaccination was completed, based on the class list. In addition, each pupil received a child-held card (see Figure 4 & 5), recording the doses that it had received; in theory, the same card should have been returned and re-completed in subsequent vaccination...
sessions; in practice, we found that pupils may be given a new card every year to attach at home to their other vaccination records.

The session statistics were then compiled and entered into the form in the school-based register (*Le Register des Activités de la Sante Scolaire*). On the form, the following items would be recorded (see Figure 7 on page 13):

- Date of vaccination
- School and class vaccinated
- Number of enrolled students
- Number of pupils vaccinated
- Number of pupils absent
- Number of pupils deferred to a later date
- Number of pupils excluded
- Number of vials opened

Absent pupils were recorded in one of two ways:

- If the pupil was going to be followed up by the health worker themselves in a subsequent session, or with a home visit, the health worker would make a note in her notebook regarding the case (see Figure 6 below)

![Figure 6: Notes made by health worker on three absent children to be followed up](image)

- If the pupil was referred to the primary health care facility to be vaccinated, the school health worker would record the name of the pupil in the school-based register in the section relevant to referrals, and would in addition complete a referral form (*Bulletin de visite* - see Annex D: Referral and report-back form on page 20)

In both cases, once a pupil that had been absent had been actually vaccinated, an update of the statistical form in the school-based register would be made, and included in the final report.

3.4.6 Follow-up of absent children

Pupils absent on the day of the vaccination are noted and counted as absent - either in a separate notebook, or in school-based register. During the review, the health workers described the actions they would undertake to assure that the absent pupil would be vaccinated, including the notification of the teacher, a letter sent to the parents and in some cases a direct visit at home if necessary. However, in many cases, follow up is adequately done at next opportunity at school.

3.4.7 Drop-outs, non-compliance and reaching the non-enrolled

As school enrollment is very high, and the rate of refusal very low, there is no formal system of reaching the non-enrolled children. However, due to the stable civic administration and the longstanding health care sector administration, it is likely that non-enrolled children would be rapidly detected and enrolled.
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<th>3M-Exp</th>
<th>3E-GMT1</th>
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**Figure 7: Page from school-based register, recording vaccinations**

School based vaccination programme, Tunisia, 2010
3.5 **Supervision**

Supervision from the regional office, although mentioned and planned, seems to happen relatively infrequently. In most cases the reason for this was cited as a lack of vehicles or fuel. Although the school-based register (*Le Register des Activités de la Sante Scolaire*) does make provision for the entry of supervisory notes, in our review this was not entered in any of the books we had reviewed.

3.6 **Programme monitoring**

The monitoring of the programme relies on the completion of the school-based register summaries, depicted in Figure 7. As these vaccination sessions are discrete activities, this form is completed once all pupils have been reached, frequently within a few days of the actual vaccination session. The forms are sent to the district level school health programme where they are compiled. In one district, this data was entered into a computer and analysed locally; however, in all cases we saw, the transmission of the data to the regional level was actually the paper forms themselves. Again at regional level, in some cases data entry and analyses would occur, but again this was done for own purposes, not for the purpose of transmitting the electronic files.

At national level the final data entry of the individual forms was conducted, and analysed. Coverage figures were calculated based on this data, taking into consideration that the children that were excluded from vaccination due to a valid contraindication or private vaccination outside the school programme were excluded from the denominator.

3.7 **Budget and finance for SHP**

The school health programme's budget comes 100% from the Government. A special budget line for school health exists in MoH budget. This line includes a special item for vaccine and injection equipment as well as other items relating to operational costing and other activities. The budget allocated to vaccines and equipment is directly released to the PHC department that is responsible for supplying the school health department with the required vaccines and injection equipment.

3.8 **University vaccination**

No sites were visited during this review, as the university-based vaccination was beyond the scope of work of this activity. Verbally, the programme was described as a well-integrated activity, run along the lines of the school health programme by primary health care physicians and nurses in the relevant districts, reaching a total of approximately 11,500 medical and nursing students with three doses of hepatitis B vaccine.

3.9 **Vaccine and cold chain management and logistics for SHP**

Vaccines distribution and management for the school health programme are completely integrated with the routine immunization programme vaccines. The estimation of vaccine needs is based on data compiled on school attendance for the previous year (info provided by the schools).

All vaccines required for the school immunization activities are supplied by the Primary Health Department, together with the EPI programme needs. Every three years, the school health department provides the Primary Health Department with their estimated needs. These needs are added to the EPI programmes estimated needs and submitted to the Central Drug Department that has the monopoly for vaccine procurement in the country. This department launches an international tender for three years and contracts the selected suppliers (based on the recommendations of a national procurement committee that includes representatives from...
the NRA, the NITAG and the PHC department). Every year, the School Health Department establish its annual needs for the different vaccines needed in collaboration with the Ministry of Education, establish a distribution table (based on the needs of each governorate) and send it to the PHC department. The PHC department will therefore proceed in December (as school immunization activities happen during the first quarter of each year) with the distribution of the vaccines needed for school immunization to the different governorates, based on above mentioned table, and together with the vaccines required for the routine immunization programme.

Vaccines intended to school immunization are stored at all levels together with those intended to the routine EPI programme. Vaccines left over from the school vaccination activities are routed to the routine EPI programme (for OPV, Td and Measles) or sent back to the governorate level and kept for next scholastic year (rubella vaccine).

4 Impact of current pandemic influenza H1N1 vaccination and public information

The current review visit occurred during the period directly following the distribution of the pandemic influenza A H1N1 vaccines. The Ministry of Health had originally planned to include this vaccine into the regular school based programme in this current year, and had indicated this on the advisory letter to parents at the beginning of the year. This however, resulted in an inordinately large number of parents refusing overall school vaccination in this year, as they had become wary of the H1N1 vaccine through the public media, especially also broadcasts from mainland France. Only once it was clarified that the H1N1 vaccine would not be given within the school programme, but as a routine vaccine, did parents agree to the school vaccination as in previous years.

This episode demonstrated that the school based programme relies heavily on the notion that it is given in the same way that it has been done for many years, and indicates that any changes in the school-based programme would have to be carefully prepared with adequate communication to assure that parents continue the full trust they currently display towards this system.

5 Findings and conclusions

In general, the school vaccination programme in Tunisia is achieving high degree of performance. It benefits a lot from the clear government policy and engagement for health and education, translated into a well structured and strong Primary Health System, with in particular a strong PHC centre network offering a high geographical, social and economical accessibility to all the population; added to that the high dedication and ownership of the staff at all levels, in particular those on the field. It benefits as well as very much from the excellent coordination and collaboration with a couple of other extra-health partners, like Ministry of Education, Ministry of High Education, Ministry of Social Affairs, Ministry of Information, etc. The contribution of all these extra-health partners to the success of the school health programme in the country can be easily seen at the different administrative levels, as it is described in section 2.3 on page 5.

The high level of education of the parents and the students, their adhesion to the national immunization programme, and the trust they have into the public health system in particular for the preventive programmes, are among the major success factors of the Tunisian School Health Programme.

Nevertheless, there is a room for improvement in particular in the area of monitoring and reporting where so far no standardized reporting system have been developed yet. Some local initiatives were seen on the field but are often not efficiently utilized, with a lot of duplication in particular in terms of re-entering the same crude and basic information at higher
administrative levels where sometimes aggregate data exists already at the lower level. Lack of standardized monitoring system and tools might result in reducing the whole data management at lower levels to only transmitting information to higher levels without any data analysis. Added to that, supervision needs to be given the importance it deserves at all levels. The same apply to sharing the information with the other departments involved in school immunization as well as the feedback back to the different lower levels.

A special attention deserves as well to be given to catching up those children that leave the school system before having completed their immunization schedule, in particular between the end of the basic school (primary school) and the secondary school. According to information we got, an important proportion of these children are enrolled into professional schools, that have not unfortunately so far been included into the school immunization programme. A special attention may as well be given to the Rubella vaccination programme as it seems that the current school enrollment rate of girls at the time this vaccine is provided (6th level of the primary school = 12 years old) is below 90%. Bringing this vaccine down to the first grade of the primary school might provide a better community protection as the school enrollment rate at this stage is much higher (>99%), as it is actually being considered by the national EPI programme and recommended by the NITAG.

The recent experience with H1N1 vaccine deployment, that resulted in delaying the distribution of the required quantities of school vaccine needs (because of the limited distribution and storage capacity at different levels) might be used to rethink about the currently used school immunization strategy that consists in concentrating the whole school immunization programme into the second scholastic quarter. Spreading this activity all over the scholastic year might be considered in particular in some governorates, in particular those that have enough human capacity to conduct the required school health activities in parallel. This exercise might constitute an important training and preparation for the future where new vaccines, requiring more cold chain space, will be introduced.

In terms of injection safety, additional policies should be put in place to assure the safe handling and disposal of the sharps waste produced in the school vaccination programme. This should include the avoidance of recapping of needles, the disposal in adequate sharps waste boxes and the final destruction in incinerators or deep burial in line with national policies on infectious and sharps waste management.
Annex A: Persons and sites visited

WHO Country Office:
• WR: Dr Ibrahim Abdel-Rahim
• NPO: Dr Ali Garraoui

National School & University Health Department:
• Director: Dr Mounira Garbouj
• Responsible for University Health: Dr Ali Sliti
• Responsible for School Health: Dr Amor Ben Youssef

National Primary Health Care Department:
• Director: Dr Mongi Hamrouni
• National EPI Manager: Dr Mohamed Ben Ghorbal

Ariana Governorate:
• Regional Health Director: Dr Mohamed Oueslati
• Head of the Regional PHC Department: Dr Borhane Alouini
• Regional School & University Health Coordinator: Dr Ferial Garali
• Assistant Regional School & University Health Coordinator: Mr Taoufik Torkhani
• Head of Ariana Child & Mother Health Care Centre: Dr Faouzia Ouzini

Zaghouan Governorate:
• Regional Health Director: Dr Najla Bouden
• Head of the Regional PHC Department: Dr Allala Farhani
• Regional School & University Health Coordinator: Dr Nabil Ouerfelli
• Assistant Regional PHC Department Head: Mr Ahmed Abdallah
• Assistant Regional School & University Health Coordinator: Mr Ezzine Othmane
Annex B: Full vaccination schedule

### LA VACCINATION DES FEMMES ENCEINTES NON IMMUNISEES

<table>
<thead>
<tr>
<th>Période</th>
<th>Vaccination et rappel</th>
<th>Le vaccin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Au 1er mois de la grossesse</td>
<td>dT1</td>
<td>Association de deux vaccins contre la Diphtérie et le Tétanos</td>
</tr>
<tr>
<td>Quatre semaines au moins après le dT1</td>
<td>dT2</td>
<td></td>
</tr>
<tr>
<td>Un an après le dT2</td>
<td>dT3</td>
<td></td>
</tr>
<tr>
<td>Cinq ans après le dT3</td>
<td>dT4</td>
<td></td>
</tr>
<tr>
<td>Cinq ans après le dT4</td>
<td>dT5</td>
<td></td>
</tr>
</tbody>
</table>

### LA VACCINATION DE L’ENFANT

<table>
<thead>
<tr>
<th>Période</th>
<th>Vaccination et rappel</th>
<th>Le vaccin</th>
</tr>
</thead>
<tbody>
<tr>
<td>A la naissance</td>
<td>BCG</td>
<td>- Vaccination contre la tuberculose une seule dose après la naissance</td>
</tr>
<tr>
<td></td>
<td>HVB 1</td>
<td>- Anti-hépatite B 1ère injection</td>
</tr>
<tr>
<td>A 2 mois</td>
<td>dTCP 1</td>
<td>- 1ère prise des vaccins contre la diphtérie, le tétanos, la coqueluche et la poliomyélite</td>
</tr>
<tr>
<td></td>
<td>HVB 2</td>
<td>- 2ème dose de vaccin anti-hépatite B</td>
</tr>
<tr>
<td>A 3 mois</td>
<td>dTCP 2</td>
<td>- 3ème prise des vaccins DTCP</td>
</tr>
<tr>
<td>A 6 mois</td>
<td>dTCP 3</td>
<td>- 4ème prise des vaccins contre la diphtérie, le tétanos, la coqueluche et la poliomyélite</td>
</tr>
<tr>
<td></td>
<td>HVB 3</td>
<td>- 5ème dose de vaccin anti-hépatite B</td>
</tr>
<tr>
<td>A 15 mois</td>
<td>R 1</td>
<td>1ère prise des vaccins contre la rougeole</td>
</tr>
<tr>
<td>A 18 mois</td>
<td>dTCP rappel</td>
<td>Rappel par les vaccins contre la diphtérie, le tétanos, la coqueluche et la poliomyélite</td>
</tr>
</tbody>
</table>

### LE CALENDRIER VACCINAL SCOLAIRE ET UNIVERSITAIRE

<table>
<thead>
<tr>
<th>Niveau d'études</th>
<th>Classe</th>
<th>Rappel</th>
<th>Le vaccin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1er cycle de l'enseignement de base</td>
<td>1ère année</td>
<td>P, R</td>
<td>Rappel par les vaccins contre la poliomyélite et la rougeole</td>
</tr>
<tr>
<td></td>
<td>2ème année</td>
<td>dT</td>
<td>Rappel par les vaccins contre la diphtérie et le tétanos</td>
</tr>
<tr>
<td></td>
<td>6ème année</td>
<td>dT, P</td>
<td>Rappel par les vaccins contre la diphtérie, le tétanos, et la poliomyélite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R + Rub (filles)</td>
<td>Vaccination contre la rubéole pour les filles exclusivement</td>
</tr>
<tr>
<td>Secondaire</td>
<td>3ème année</td>
<td>dT, P</td>
<td>Rappel par les vaccins contre la diphtérie, le tétanos, et la poliomyélite</td>
</tr>
<tr>
<td>Supérieures</td>
<td>Les futurs professionnels de la santé</td>
<td>HVB</td>
<td>Vaccin Anti-hépatite B</td>
</tr>
</tbody>
</table>
Annex C: Consent form and advisory note to parents

<table>
<thead>
<tr>
<th>Niveau d’étude</th>
<th>Niveau de classe</th>
<th>Vaccin contre (Rappel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enseignement de Base</td>
<td>1ère Année</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1ère Année</td>
<td>Poliomyélite</td>
</tr>
<tr>
<td></td>
<td>1ère Année</td>
<td>Rougeole</td>
</tr>
<tr>
<td></td>
<td>2ème Année</td>
<td>Diphtérie + Tétanos (dT)</td>
</tr>
<tr>
<td></td>
<td>6ème Année</td>
<td>Diphtérie + Tétanos (dT)</td>
</tr>
<tr>
<td></td>
<td>6ème Année</td>
<td>Poliomyélite</td>
</tr>
<tr>
<td></td>
<td>6ème Année</td>
<td>Rubéole (les filles exclusivement)</td>
</tr>
<tr>
<td>Enseignement Secondaire</td>
<td>3ème Année</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3ème Année</td>
<td>Poliomyélite</td>
</tr>
</tbody>
</table>

1) Cette vaccination concerne tous les élèves ne présentant pas de contre-indications médicales. Toute contre-indication signalée par les parents ou l’élève devra être attestée par un certificat médical délivré par le médecin traitant.

2) En cas de vaccination récente par le médecin traitant, prière d’en faire préciser la nature, la date ainsi que le numéro du lot par la présentation d’un certificat médical.

Le médecin scolaire

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Je soussigné (e) ........................................ père (ou mère ou tuteur) de l’élève .......................................................... certifie avoir pris connaissance de l’avis ci-joint relatif au calendrier vaccinal en milieu scolaire.

Date ......................................................... Signature

Conception 1997-Revision 2008 -Imprimerie 2009
Annex D: Referral and report-back form