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Communicable diseases are estimated to be responsible for around one third of all deaths and one third of all illnesses in the Region. Despite successes in eliminating and eradicating some of these diseases in some countries, the Region continues to suffer from a significant burden of communicable diseases which hampers socioeconomic development. The importance of communicable disease control has increased in recent years due to increased travel, trade, migration and emergence of new infections. In addition to the chronic challenges of weak health systems, inadequate commitment and financing for communicable disease control have resulted in delay to achievement of regional targets. Several countries are facing political instability, social unrest, ongoing conflict and insecurity, all of which have an impact on control of communicable diseases. In this section, we address four thematic areas: poliomyelitis eradication; HIV, tuberculosis, malaria and tropical diseases; immunization and vaccines; and health security and regulations.

### **Poliomyelitis eradication**

The poliomyelitis eradication programme is a high priority initiative that is directly supervised by the Regional Director. All countries of the Region are free from polio except Afghanistan and Pakistan where poliovirus circulation has never been stopped. The remaining identified reservoirs of poliovirus in Pakistan are the Quetta block (Pishin, Kilabdella and Quetta) in Baluchistan, Gadap Town in Karachi and Khyber Agency in the Federally Administered Tribal Areas (FATA), while in Afghanistan, Kandahar and Helmand provinces in the southern region are the main reservoirs. Persistent transmission in Pakistan and Afghanistan has held back global polio eradication, and is a threat to polio-free countries. Somalia and Yemen are considered at high risk because insecurity has led to low population immunity resulting in the circulation of vaccine-derived polioviruses. Djibouti, South Sudan and the Syrian Arab Republic are all being kept under close surveillance.

2012 witnessed major achievements. Pakistan reported 58 polio cases in 2012 compared to 198 in 2011 while Afghanistan reported 37 cases compared to 80 in 2011. Pakistan developed and implemented an augmented national emergency action plan, addressing the various challenges, including consistent government oversight, ownership and accountability at each administrative level. Significant efforts and initiatives were made by the programme, particularly the adequate and appropriate use of bivalent oral polio vaccine, introduction of short-interval additional doses, the development of comprehensive sub-district plans, introduction of a surge of support staff by WHO and UNICEF at the implementation level, improvements in the monitoring system through the use of lot quality assurance sampling and maintenance of a very sensitive surveillance system supported by a well-functioning regional reference laboratory. The Government of Afghanistan also developed a national emergency action plan which includes improving management and accountability, reducing inaccessibility, increasing community demand and strengthening routine immunization. Permanent polio vaccination teams and district immunization management teams were put in place in poorly performing districts to

improve routine immunization services in 28 districts. Strong cross-border coordination is needed between both countries in order to: map children who have been missed and identify why they are being missed; reach and vaccinate each and every child across the border; and ensure continuous communication at the operational level and between the two governments. A management and accountability framework has been introduced in the high-risk districts of both Member States.

However, the programme in Pakistan is facing several new challenges, including a ban on vaccination in North and South Waziristan, and resistance from the militant factions in Karachi, Khyber Pakhtunkhwa and parts of the Federally Administered Tribal Areas (FATA). Efforts are needed to de-link the programme from the disinformation being propagated around it and to present a neutral interface. In Afghanistan, conflict and inaccessibility hamper progress. These challenges are currently being addressed by strengthening the communications component of the programme, establishment of the Islamic Advisory Group and strengthening regional ownership of the polio programme. No country is completely immune from reintroduction of polio if transmission remains in Pakistan and Afghanistan. Support from other countries of the Region is critical to success. The Regional Committee pledged to unite for a polio-free Region and one of the challenges for 2013 is to translate that pledge into concrete action.

Somalia remains at high risk of a wild poliovirus outbreak due to the large pool of inaccessible and unvaccinated children if importation were to occur. The major challenge is reaching and vaccinating an estimated 800 000 target children in inaccessible areas due to insecurity. The vaccine-derived poliovirus (cVDPV) outbreak in Yemen is indicative of the large population immunity gap which resulted from chronic low routine immunization coverage and lack of high-quality supplementary immunization activities. In response to the outbreak, Yemen conducted three national immunization days and one subnational immunization day. Oral polio vaccine (OPV) was also added to a measles catch-up campaign.

Ten polio-free countries at risk of importation (Djibouti, Egypt, Iraq, Islamic Republic of Iran, Jordan, Libya, Saudi Arabia, Sudan, South Sudan and Syrian Arab Republic) conducted subnational immunization days with a focus on geographic areas with high-risk populations and low routine immunization coverage, in an effort to boost population immunity of high-risk groups. Other vaccination opportunities, such as measles campaigns and Child Health Days, were used to deliver additional doses of oral polio vaccine (OPV) to help boost population immunity.

Key acute flaccid paralysis (AFP) surveillance indicators (i.e. non-polio AFP rate and percentage of adequate stools) at the national level are reaching international certification standards. However, at the subnational level, there are gaps, which are more significant for the

countries that have been polio-free for many years. All the countries of the Region have maintained the expected non-polio AFP rate per 100 000 children under the age of 15 years except for Morocco, which is close to the expected rate. The percentage of AFP cases with adequate stool collection is above the target of 80%, except in Djibouti, Lebanon and Tunisia.

### **HIV, tuberculosis, malaria and tropical diseases**

The HIV epidemic has continued to spread fast through the Region. The latest estimates show that approximately 560 000 people are living with HIV in the Region. Although the overall prevalence in the general population is still low, the proportion of newly infected people among all people living with HIV is the highest globally. AIDS-related deaths have almost doubled in the past decade among both adults and children, reaching a total of 38 400 in 2011. HIV treatment coverage is only 13%, the lowest among WHO regions. Lack of political commitment, inadequate access to health services for populations at higher risk, high stigma and discrimination, and weaknesses of health systems continue to challenge effective control and delivery of care.

WHO focused its support to Member States on the development of HIV testing and treatment guidelines and capacity-building in service delivery. Guidance was provided on service-delivery to populations at higher risk that are difficult to reach with conventional health services and countries were supported to develop novel service-delivery approaches, including through community-based organizations. Collaboration with the regional knowledge hub on HIV surveillance in the Islamic Republic of Iran was maintained to strengthen the institution's role as a regional resource and training centre.

Concerned about the lack of progress in preventing mother-to-child transmission of HIV in the Region, WHO in partnership with UNICEF, UNFPA and UNAIDS launched a regional initiative to eliminate mother-to-child transmission of HIV (eMTCT). The initiative adopts the overall global goals of reducing the number of new HIV infections among children by 90% by 2015, and reducing the number of AIDS-related maternal deaths by 50%, also by 2015. It promotes a comprehensive approach including preventing unintended pregnancies among women living with HIV; preventing transmission of HIV from HIV-infected pregnant women to their children; and providing treatment, care and support to mothers, children and families living with HIV.

In 2011 <sup>1</sup>, 11 countries achieved a tuberculosis case detection rate of 70%, 13 achieved 85% treatment success rate and 12 developed national strategic plans for 2011–2015. The laboratory network was expanded, especially for culture and drug susceptibility testing. Technical support was extended in drug management and promotion of prequalification of pharmaceutical companies. The electronic nominal recording and reporting system (ENRS) is

now being used in five countries and the web-based surveillance system (WEB TBS) was introduced in several countries. Eleven countries received support in conducting surveys to assess the burden of drug-resistant tuberculosis. Review missions were conducted in five countries. Several countries received technical support in conducting surveys and studies to estimate the extent of underreporting of tuberculosis cases and burden.

An estimated 46% of the population was living in areas at risk of local malaria transmission in 2011. Countries reported a total of 6 789 460 malaria cases (see Tables 2 and 3), of which only 16.8% were confirmed parasitologically and the rest were treated based on clinical diagnosis. Six countries accounted for more than 99.5% of the confirmed cases in 2011 (Afghanistan, Pakistan, Somalia, South Sudan, Sudan and Yemen). According to 2010 data, the number of estimated malaria deaths was 15 000. Malaria control and elimination still face several challenges. Access to facilities for parasitological diagnosis in countries with a high burden of malaria is limited and the quality is poor. Resistance to anti-malarial drugs is growing in *P. falciparum* endemic countries. Malaria surveillance, monitoring and evaluation are weak and the compliance of private providers with national treatment guidelines is low. Insecurity, climate change and natural disasters are additional challenges for malaria control; for example the malaria situation in Pakistan has worsened since the heavy floods in 2010. Malaria-free countries also face the challenge of increasing imported malaria resulting from huge population movements, both legal and illegal.

Among the achievements made, Iraq was included among the non-malaria-endemic countries after three years with no reported local transmission. The Islamic Republic of Iran and Saudi Arabia achieved targets of more than 80% coverage of malaria control and elimination interventions. Other countries showed good progress in coverage with malaria interventions such as long-lasting insecticidal nets (LLINs), but have yet to achieve the target of more than 80%. By the end of 2012, the operational coverage of LLINs in Sudan had increased to more than 50%. In Afghanistan, the proportion of households with at least one LLIN increased from 9.9% in 2009 to 43.4% in 2011. In the same period, the proportion of children under 5 years of age who slept under LLINs the night before the survey increased from 2% to 32%. WHO continued to support capacity-building of national programmes through regional trainings on malaria planning and management, microscopy and quality assurance, using polymerase chain reaction (PCR), and elimination. Djibouti finalized a programme review, while the Islamic Republic of Iran, South Sudan, Sudan and Yemen are at different stages of such a review. Programme reviews were also supported in Oman, Qatar and Saudi Arabia. With technical support from WHO at the country and regional level, countries succeeded in signing agreements for extending Global Fund grants.

Several activities were carried out to address vector-borne diseases in the Region. WHO focused its support on the implementation of the regional Framework for action on the sound

management of public health pesticides, on demonstration studies for sustainable alternatives to DDT and on strengthening national vector control capabilities in Member States. Joint work was carried out with countries to develop a regional database on insecticide resistance. A regional consultation on insecticide resistance management was conducted and participating countries agreed to incorporate an insecticide resistance management component into the national integrated vector management strategies and continue to strengthen entomological surveillance.

With regard to neglected tropical diseases, human African trypanosomiasis remains a challenge in South Sudan. The decline achieved in the number of cases over recent years, and the consequently higher proportional cost of treatment per patient, is now making it difficult to get partners involved in control activities. Accessibility during the rainy season represents a major issue for several tropical disease programmes in South Sudan and Sudan.

A 50% reduction was observed in the number of cases of guinea-worm disease in South Sudan in 2012 compared to 2011 and only 179 villages remain endemic. The lymphatic filariasis elimination programmes in Egypt and Yemen completed the elimination phase and capacity was built to assess transmission for elimination verification. Onchocerciasis was certified as having been eliminated from Abu Hamad, the largest endemic focus in Sudan. Praziquantel distribution in the three schistosomiasis-endemic countries (Yemen, Sudan and Somalia) increased by 70% despite the challenge of insecurity. The enhanced global strategy 2011–15 for leprosy elimination and its operational guidelines were translated into Arabic and the strategy is being implemented. The rapid diagnostic field test for visceral leishmaniasis is now widely available and has shortened the treatment from 30 to 15 days.

### [Table 2. &nbsp;  Reported malaria cases in countries with high malaria burden](#)

Table 2. Reported malaria cases in countries with high malaria burden

Country

2010

2011

2012

Total reported cases

Total Confirmed

Total reported cases

Total Confirmed

Total reported cases

Total Confirmed

Afghanistan

392 463

69 397

482 748

77 549

391 365

54 840

Djibouti

3 962

1 019

624

NA

NA

NA

Pakistan

4 281 356

240 591

334 589 <sup>a</sup>

334 589

289 759 <sup>a</sup>

289 759

Somalia

24 553

24 553

41 167

3 351



NA

NA

South Sudan

900 283

900 283

795 784

112 024

1 198 358

NA

Sudan

1 465 496

720 557

1 246 833

506 806

NA

NA

Yemen

198 963

106 697

142 147

90 410

153 981

105 066

NA: not available

aConfirmed cases only

**Table 3. Parasitologically-confirmed cases in countries with no or sporadic transmission and countries with low malaria endemicity**

Table 3. Parasitologically-confirmed cases in countries with no or sporadic transmission and countries with low malaria endemicity

Country

2010

2011

2012

Total reported cases

Autochthonous

Total reported cases

Autochthonous

Total reported cases

Autochthonous

Bahrain

90

0

186

0

NA

NA

Egypt

85

0

116

0

206

0

Iraq

7

0

11

0

NA

NA

Iran, Islamic Republic of

3 031

1 847

3 239

1 710

NA

532

Jordan

61

2

58

0

117

0

Kuwait

343

0

476

0

NA

NA

Lebanon

NA

NA

NA

NA

115

0

Libya

NA

NA

NA



NA

88

0

Morocco

218

0

312

0

359

0

Oman

1 193

24

1 531

13

NA

NA

Palestine

NA

NA

NA

NA

NA

NA

Qatar

440

0

673

0

NA

NA

Saudi Arabia

1 941

29

2 788

69

3 406

83

Syrian Arab Republic

23

0

48

0

42

0

Tunisia

72

0

67

0

79

0

United Arab Emirates

3 264

0

5 242

0

5 165

0

NA: not available

Immunization programmes in the Region are confronted by several challenges. The progress towards coverage targets continues to be affected by the security situation, particularly in Afghanistan, Pakistan, Syrian Arab Republic and Yemen. The global shortage of DTP and DTP-HepB and pentavalent vaccine also affected Egypt, Islamic Republic of Iran and Libya. Inadequate managerial capacity and commitment to routine immunization remained visible challenges in some countries in 2012. High-level support to routine immunization, especially in Afghanistan and Pakistan, is urgently needed. Inadequate financial resources, particularly for implementation of measles and tetanus supplementary immunization, introduction of new vaccines in middle-income countries and co-financing in GAVI eligible countries, and implementation of activities pertaining to improvement of vaccination coverage in countries with low coverage continued to be issues of concern. Allocation of government resources and the support of partners are needed to scale up the response against vaccine-preventable diseases. In this regard the Decade of Vaccines and the Global Vaccine Action Plan represent opportunities for resource mobilization which countries can make use of.

Technical support was extended to countries in a number of areas including: assessment of the different areas of the Expanded Programme on Immunization (EPI) and development of plans for improvement; ensuring an adequate logistics system; introduction of new vaccines; development of applications for support from the GAVI Alliance; strengthening surveillance; and monitoring and evaluation of EPI. Although vaccination coverage data for 2012 are not available yet, preliminary reports indicate that 15 countries in the Region continued to achieve the target of 90% routine vaccination coverage while Djibouti was close to achieving the target. Egypt and Tunisia were able to maintain high routine vaccination coverage above 95%, despite the challenges, and Somalia and South Sudan also saw an increase in coverage. However, the situation in the Syrian Arab Republic is alarming and vaccination coverage has dropped significantly. The third regional vaccination week was successfully implemented in April 2012 with the theme “reaching every community”.

Nine countries reported very low incidence of measles (<5 per million population) and are close to achieving measles elimination (Figure 4). Regarding implementation of the regional measles elimination strategy, fourteen countries achieved above 95% coverage with the first dose of measles-containing vaccine (MCV1) and a second dose (MCV2) is now being implemented in 21 countries following its introduction in Sudan and Djibouti. As for surveillance, all countries have implemented measles case-based laboratory surveillance either nationwide (20 countries) or as sentinel surveillance (Djibouti, Somalia and South Sudan). Local measles genotypes, which are necessary for validating measles elimination, were identified in 22 countries.

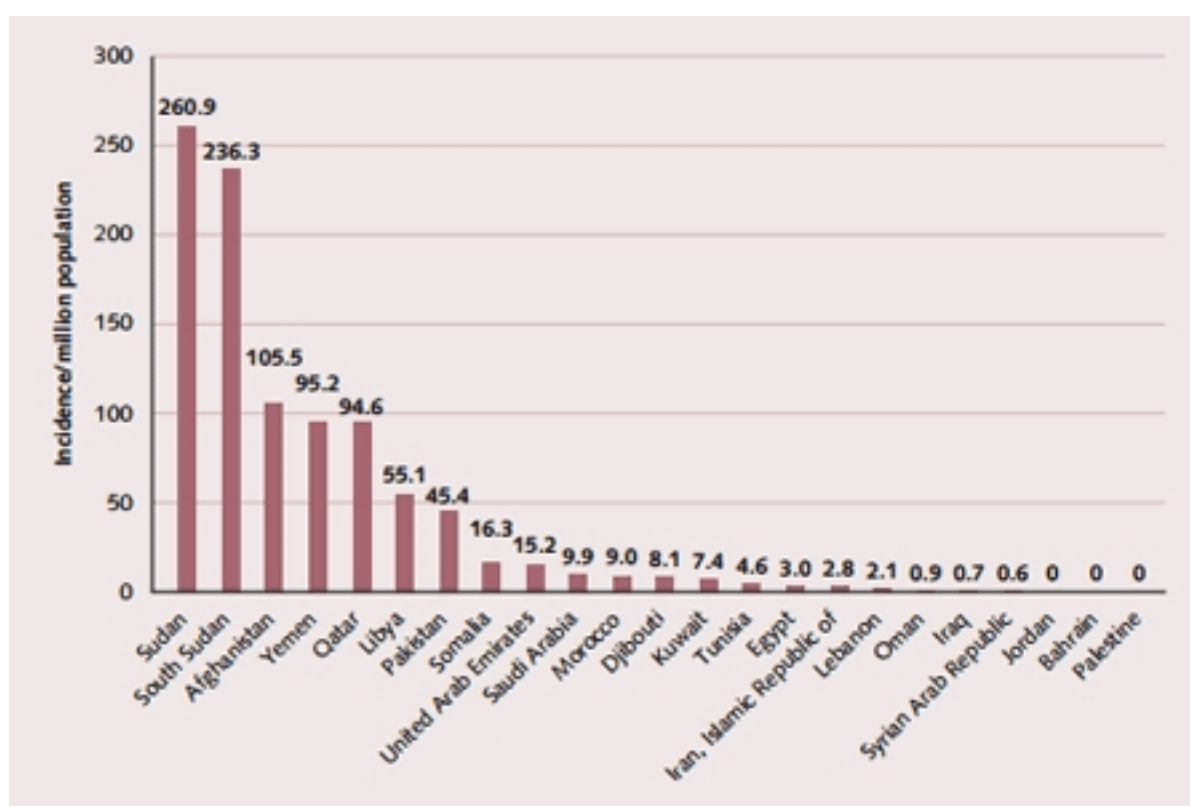


Figure 4 Incidence rate per million population of confirmed measles cases, 2012

### Immunization and vaccines

Introduction of new life-saving vaccines made further progress in 2012. Hib vaccine is now in use in 20 countries and is expected to be introduced in the remaining countries soon. Pneumococcal conjugate vaccine is now in use in 11 countries and rotavirus vaccine in 7 countries. The first phase of a meningococcal A conjugate vaccine campaign in Sudan was

implemented. Pneumococcal and rotavirus vaccines are expected to be introduced soon in more countries thanks to the support of the GAVI Alliance. The main challenge facing new vaccines introduction is the unaffordability of the new vaccines for middle-income countries. WHO is working to enhance new vaccines introduction, particularly in middle-income countries through establishing a regional pooled vaccine procurement system, advocacy for allocation of more national resources and strengthening evidence-based decision-making and national immunization technical advisory groups.

### **Health security and regulations**

In 2012, there was an unprecedented rise in the incidence of emerging and re-emerging communicable diseases, posing constant threats to regional health security. Outbreaks occurred periodically throughout the year affecting a large number of countries and causing some of the worst human misery ever seen in the Region. The outbreaks included avian influenza A (H5N1) in Egypt, cholera in Iraq and Somalia, Crimean-Congo haemorrhagic fever in Afghanistan and Pakistan, diphtheria in Sudan, measles in Afghanistan, Pakistan and Somalia, nodding syndrome and hepatitis E in South Sudan, yellow fever in Sudan, West Nile virus infection in Tunisia and the influenza outbreak seen towards the end of the year in Palestine and Yemen caused by influenza A (H1N1). The emergence of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in Jordan, Qatar and Saudi Arabia with a high case fatality rate, on top of these outbreaks, was a stark reminder of the increase in epidemic-prone emerging diseases in the Region. While the looming threat of a pandemic from avian influenza still persists in the Region, the appearance of MERS-CoV in humans greatly underscored the vulnerability of the Region to the threat of emerging diseases. The ongoing conflicts and chronic humanitarian emergencies prevailing in many countries and resulting in large numbers of displaced populations are among the major risk factors for the spread of new diseases.

Early detection and rapid response to contain epidemic threats from emerging diseases remain the biggest challenge. WHO has continued to provide strategic technical support to countries to develop, strengthen and maintain adequate surveillance and response capacity to detect assess and respond to public health events of both national and international concern. As part of the ongoing efforts to improve the Region's collective preparedness and response capacities, WHO invested in improving sub-regional and local capacities for epidemic intelligence and risk assessment for informed public health actions to contain epidemic threats. Pakistan received support in organizing an international conference on dengue fever which led to recommendations on surveillance, detection, management, vector control, behavioural interventions and emergency response in outbreaks.

WHO coordinated with its Global Outbreak Alert and Response Network (GOARN) partner institutions and WHO collaborating centres for the deployment of experts and laboratory



resources for outbreak response and containment operations in a number of countries at risk of international spread of epidemics where the national outbreak response operations are not adequate to contain the threats of international spread given the size and magnitude of these outbreaks. These included yellow fever in Sudan, nodding syndrome in South Sudan, Middle East respiratory syndrome coronavirus (MERS-CoV) in Jordan, Qatar and Saudi Arabia and severe influenza in Palestine. In order to further strengthen the infection prevention and control programme in the Region, consultations were held to develop tools for surveillance of health-care associated infections and guidelines for preventing infections associated with health care from acute viral haemorrhagic fevers.

The International Health Regulations 2005 (IHR) are an international legal agreement binding on all WHO Member States. All State Parties in the Region, except the Islamic Republic of Iran, fell short of the implementation goals for June 2012. Requests for a 2-year extension supported by plans of implementation were submitted by 17 Member States. Three (Libya, Pakistan and United Arab Emirates) submitted only requests for extension and one country (Somalia) has not complied with the extension requirements. Countries have faced a number of challenges during the implementation of regulations. These include: lack of supportive public health laws and other legal and administrative instruments; insufficient coordination among the different stakeholders at country level and with neighbouring countries; high turnover of qualified personnel; and insufficient financial capacity to cover planned activities.

There was marked progress in developing and sustaining several of the requirements for implementation of the regulations in the Region, with regional implementation of the requirements estimated at 67%, based on data collected through the 2011 monitoring questionnaire. However, many requirements remain a challenge and need further work. These include: implementing the new legislation and national policies put in place to facilitate the implementation of the regulations; testing existing coordination mechanisms among the different stakeholders; evaluating the early warning function of the indicator-based surveillance; establishing event-based surveillance; and strengthening cross-border surveillance. Furthermore, programmes for protecting health care workers and monitoring systems for antimicrobial resistance need to be established. National preparedness and response plans need to be tested. Many requirements in the general obligations, as well as effective surveillance and response at points of entry also need to be fulfilled. Meeting the requirements for detecting and responding to foodborne disease and food contamination and in detecting and responding to chemical and radionuclear emergencies are other areas that need to be considered. Effective communications, coordination and collaboration among different sectors and enhancement of human resources are vital to efficient application of the regulations.

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<sup>1</sup> For tuberculosis case detection, WHO receives data a year later, thus case detection data relate to 2011 and treatment outcome data to 2012.

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