Chapter 1
Health development and health security

1. Health development and health security

Strategic objective 1: To reduce the health, social and economic burden of communicable diseases

Issues and challenges

The past year was marked in terms of communicable disease control by two major events: pandemic (H1N1) 2009, a new strain of influenza; and endorsement by the Regional Committee for the Eastern Mediterranean of a new regional target aimed at reducing prevalence of hepatitis B in children under 5 years to less than 1% by 2015. The five programmes under this strategic objective continued their efforts to build country capacities in the different areas of work.

Despite the remarkable progress in strengthening of immunization services in priority countries, and in achieving regional DPT3 coverage of 87% for the first time, and coverage close to or higher than 90% in two priority countries, access to high quality and regular immunization services is still low in several areas, especially Somalia and southern Sudan. As a result, an estimated 2.1 million children in the Region did not receive basic immunizations in 2009, the vast majority of them in five priority countries. Health systems and managerial capacity were further weakened by significant deterioration in the security situation in most of the priority countries.

The 2010 goal for reduction in measles mortality was achieved in the Region 3 years before the target date and most countries have made significant progress toward elimination. However, some countries are still experiencing measles outbreaks. Sustaining the gains to achieve elimination requires regular and timely implementation of follow-up campaigns. Such campaigns require financial commitment from governments and partners. Enhancing measles surveillance, including virus characterization, and moving towards validation of elimination, is becoming a high priority.

Introduction of new vaccines faces severe constraints, especially in the low-income and middle-income countries. Despite 20 years' availability of Hib vaccine, four countries, accounting for 32% of the regional birth cohort, have not yet introduced it. Uptake of pneumococcal and rotavirus vaccine in the Region has been slow. The high price of the vaccines, lack of awareness on the part of decision-makers of the importance of the new vaccines, and the need to strengthen vaccine procurement mechanisms are the main underlying factors for this.

Endemic transmission of wild poliovirus continued in Afghanistan and Pakistan, with cases concentrated in southern Afghanistan and northern Pakistan. The continuing need to strengthen management, and operational gaps in supplementary immunization activities, pose challenges in some areas of Sindh and Balochistan. In addition, large-scale and frequent population movements from infected areas have re-infected poliomyelitis-free areas. Repeated

importations were recorded in the Region but did not result in spread. The epidemic resulting from an importation in southern Sudan in 2008 continued until mid 2009. The risk of importation to polio-free countries continues to be a real challenge, as does the need to secure financial resources and to maintain the commitment of national authorities in all countries.

The Region is challenged by two major groups of tropical diseases: those for which ready-to-use tools are available, such as schistosomiasis and soil-transmitted helminthiasis, and those for which cost-effective control tools do not exist or where large-scale use of existing tools is limited, such as leishmaniasis and human African trypanosomiasis. Despite the availability of effective and cost-effective medicines, the sustained control and elimination of schistosomiasis and lymphatic filariasis remain a challenge in Somalia and Sudan. This ultimately prevents programmes from achieving the main objectives of increasing treatment coverage, ensuring access to the most vulnerable groups and paving the way to move from vertical to horizontal interventions. Outbreaks of leishmaniasis and human African trypanosomiais reflected the challenges and issues faced by the national programmes in Afghanistan, Sudan and Pakistan, where sociopolitical determinants and the state of the health systems affect not only the rapidity of response, but also the capacity to ensure case management on a regular basis.

Substantial progress has been made in terms of reducing public health risks from emerging and remerging infectious diseases. Implementation of the International Health Regulations (2005) is on track and sustainable response capacities have been built for managing epidemics of infectious diseases. However, the prevention and control of emerging infectious diseases continues to face important challenges that might compromise regional health security; in particular countries are still not sufficiently transparent and do not always share information during outbreaks, mainly because of economic considerations. Surveillance capacities, especially for risk analysis and early detection of emerging disease outbreaks, still need strengthening.

The main issues and challenges for vector control concern the capacity to effectively coordinate and implement integrated vector management at country level, the problem of vector resistance to insecticides and the judicious use of insecticides within the framework of integrated vector management. The support of the Small Grants Scheme has resulted in substantial achievements for operational research in communicable diseases. However, there are still major challenges in research capacity and in translation of research results into policy and practice. Research results are also not being published in a comprehensive way. Although the number of publications has increased in the past five years as a result of Regional Office support for capacity-building, the gaps cannot be addressed with the currently available resources.

Achievements towards performance indicator targets in each expected result

In the area of *vaccine preventable diseases and immunization,* the level of 90% routine DPT3 coverage was achieved in 16 countries (target 17 countries), while Yemen, Djibouti and Afghanistan are close to achieving target coverage. The deteriorating security situation in these three countries contributed significantly to the delay in achieving the target. Efforts are being made to improve

the very low vaccination coverage in Somalia and southern Sudan. WHO and partners are providing extensive support to the implementation of child health days in Somalia, which entails multi-antigen vaccination campaigns and other child survival interventions. Comprehensive multiyear plans were developed for the first time in Somalia and southern Sudan, where the EPI programme structure was also established. Funds were mobilized to support the immunization programme in southern Sudan. The target related to expanding immunization services beyond infancy was fully achieved. Currently, 18 out of the 22 countries (82%) are providing routine immunization services beyond infancy. Further expansion is under way with the vaccination activities related to control of pandemic (H1N1) 2009. With regard to government financial contribution to classic EPI vaccines and injection equipment, the 16 countries that are not eligible for support from the GAVI Alliance cover 100% of the related expenses from the national budget. In addition, Afghanistan, Pakistan, northern Sudan and Yemen successfully fulfilled the co-financing criteria for new vaccines under GAVI support.

The Region achieved the target of 90% reduction in estimated measles deaths between 2000 and 2010 (GIVS goal), 3 years earlier than the target, in 2007. Several countries in the Region are well on their way to achieving measles elimination. The second and last phase of the catch-up campaign in Egypt, the last catch-up campaign in the Region, was conducted, with approximately 18 million children aged 2 to 10 years vaccinated and coverage of more than 95% achieved nationwide. The Regional Office developed guidelines for validation of measles elimination and these were field-tested in Islamic Republic of Iran, Jordan and Syrian Arab Republic and will be extensively used in 2010.

Measles vaccination campaigns were instrumental in reducing measles mortality in Afghanistan

Afghanistan and Iraq experienced measles outbreaks in 2009. Rapid implementation of measles vaccination campaigns was instrumental in containing these outbreaks. In Yemen, in order to maintain the low incidence that was achieved after the catch-up campaign, a nationwide measles follow-up campaign was conducted for children aged 9 months to 5 years, except in conflict areas. Follow-up campaigns are also planned for the other countries that have routine measles vaccine coverage below 95%. Regional Office support was a key factor in these achievements, for planning and implementation of the campaigns and establishing the regional partnership for resource mobilization.

17 countries have achieved maternal and neonatal tetanus elimination (target 18 countries). Building on the efforts of 2008, WHO and UNICEF provided technical and financial support to implementation of the supplementary immunization activities in Afghanistan, Pakistan and Yemen. In Somalia, tetanus toxoid vaccination is being provided as part of the child health days.

Tetanus toxoid vaccination is provided as part of the child health days in Somalia

With the introduction of pentavalent vaccine in Afghanistan, the Region achieved the 2009 Hib vaccine introduction target. Pneumococcal conjugate vaccine is currently in use in six countries of the Gulf Cooperation Council and Yemen is expected to introduce it in early 2010. Rotavirus vaccine is in use in three Gulf Cooperation Council countries. In addition, northern Sudan has applied to the GAVI Alliance for introduction of pneumococcal and rotavirus vaccines and Pakistan has applied for introduction of pneumococcal vaccine. Factors in these successes were: the financial support offered by the Alliance, the national commitment to co-financing and the extensive support offered by the Regional Office, in terms of supporting burden of disease assessment, technical support for preparation of applications, preparation of the introduction plan and national capacity-building.

The Regional Office is working hard to enhance introduction of new vaccines, especially in the low-income and middle-income countries. Establishment of a regional pooled vaccine procurement system is under way. Awareness-raising for decision-makers, finalization of the feasibility study for regional pooled vaccine procurement, review of the procurement mechanism in the different countries and analysis of the different procurement options are all being undertaken to support countries in making decisions based on evidence. The regional surveillance network for assessment of burden of diseases preventable by new vaccines is being strengthened and the high quality data generated are being used for advocacy for introduction of new vaccines. The Regional Office is also supporting establishment and strengthening of national immunization technical advisory groups. A regional action plan and a regional guide and tools were developed and shared to ensure standardized and functioning groups.

The regional expected results for vaccine preventable-diseases surveillance, including new vaccines surveillance, and monitoring and evaluation of EPI, were fully achieved. Currently, 12 countries have a nationwide surveillance system that allows them to monitor incidence of the main vaccine-preventable diseases (diphtheria, tetanus and pertussis) and 20 countries are regularly monitoring district level coverage data. All countries currently have well functioning measles/rubella national laboratories and 19 are implementing measles case-based laboratory surveillance. In addition, technical and financial support are being provided to Pakistan and Morocco to replace sentinel measles surveillance with a nationwide case-based surveillance system and efforts are being made to establish sentinel case-based measles surveillance in southern Sudan and Somalia. Twenty (20) countries have identified circulating measles genotype.

With regard to surveillance for diseases preventable by new vaccines, currently 17 countries are implementing bacterial

meningitis surveillance, 5 countries are implementing surveillance of other invasive bacterial diseases (pneumonia and sepsis), and the rotavirus surveillance network covers 13 countries. The data generated were instrumental in decision-making for introduction of rotavirus and pneumococcal vaccines in several countries. National ownership and keenness to have data that support evidence-based decision-making, and the availability of financial resources through the GAVI Alliance were key success factors in introducing new vaccines.

The Region is making progress towards *poliomyelitis eradication*. Polio-free status was maintained in 19 countries. In endemic and re-infected countries, intensified supplementary immunization activities continued using a mix of trivalent (tOPV) and monovalent (mOPV) vaccines as dictated by the epidemiological situation. Campaigns were conducted house-to-house, targeting all children below 5 years of age. Extensive efforts were made to ensure high quality campaigns reaching every child, with special focus on high-risk areas and difficult-to-reach groups. Intensified social mobilization and supervision were ensured and, together with independent monitoring, are used to pinpoint problems to be resolved by the responsible authorities. Efforts were made to achieve the commitment of politicians and community leaders, and multisectoral approaches were implemented to involve governmental and nongovernmental sectors. National immunization days were used to provide other health care services, such as delivery of life-saving vitamin A and deworming tablets, and were coordinated between neighbouring countries to the maximum extent possible.

In Pakistan high level political engagement is clear. HE President Asif Ali Zardari of Pakistan inaugurated national immunization days and his daughter Ms Assefa Bhutto Zardari was nominated as Ambassador for poliomyelitis, the Prime Minister's action plan for enhanced intersectoral collaboration was launched and the Inter-provincial Ministerial Committee on Poliomyelitis Eradication (IPCP) established. Updated provincial plans were prepared and efforts made to ensure their implementation. Out of the 89 cases reported in 2009, nearly half were from security-compromised areas in the northwest. In these areas, efforts were made to improve access through a number of strategies, including negotiation with local and religious leaders and councils,

The polio eradication programme goes far and wide to reach children at risk

administration of short interval additional doses, and vaccination of internally displaced persons at exit points in camps and in the community. Efforts were also made to ensure proper service delivery through improving methods of campaign monitoring. Several innovative communication strategies were developed, including obtaining the support of 12 television channels, issue of free SMS messages, a weekly polio journal for journalists and making polio the theme of the first National Health Journalist Award. The impact of these efforts was reflected in the positive and promotive articles published on polio eradication.

In Afghanistan the political commitment is very evident from the presidential and ministerial levels. However, insecurity is a major issue. Of the 38 cases reported, 34 were from the southern region and were concentrated in only 11 districts. Actions to improve access and coverage included short interval additional doses, a focused district strategy, a high-risk cluster approach and negotiating access and tranquillity periods. Concerted efforts this year to engage traditional and community leaders, as well as nongovernmental organizations contracted by the Government to deliver the basic package of health services, have led to increased access, particularly during some supplementary immunization activities in the second half of the year. However, access continues to fluctuate from round to round.

The outbreak in southern Sudan resulted in 24 cases in 2008 and 40 cases in 2009 (date of onset of last polio case 27 June) with spread to northern Sudan (5 cases) and neighbouring parts of Kenya and Uganda. Actions were taken to curb the outbreak, including provision of technical support, strengthening of the country team, review and update of plans for supplementary immunization activities, provision of logistic support, enhancing surveillance, enlisting local government commitment and ensuring coordination of actions by all partners. Supplementary immunization activities, using mainly mOPV1, have continued to be conducted since May 2008, synchronized with similar activities in neighbouring countries.

Afghanistan, Pakistan and southern Sudan were visited by the international independent evaluation mission to assess major barriers to interrupting poliovirus transmission. The mission highlighted country-specific issues to be addressed in order to achieve eradication and their recommendations are being implemented. The polio-free status of other countries was sustained by preventing large immunity gaps, regular assessment of population immunity of children age 6–23 months, improvement of routine immunization and implementation of supplementary immunization activities, especially in areas with low immunization coverage.

Certification-standard surveillance was maintained in all countries, both at national and subnational levels. All countries (except Lebanon) achieved the target of non-polio AFP rate of at least one per 100 000 population under 15 years and all high-risk countries exceeded 2 per 100 000. In addition to weekly analysis and monitoring of indicators, surveillance reviews were conducted regularly followed by capacity-building to address any gap observed during the reviews. Supplementary surveillance activities, namely environmental monitoring, were implemented in Egypt and established in Pakistan. This meant an increase in the work load of the regional polio laboratory network which has been sustained at a very high standard and all network laboratories were accredited.

Immunization campaigns continue to be conducted to protect children across the Region from polio

Coordination activities between neighbouring countries, especially between Afghanistan and Pakistan and in the Horn of Africa were maintained and further strengthened. They included coordination and joint technical advisory group meetings. Certification activities are moving forward in parallel with eradication activities. All certification reports are being submitted by the national certification committees in a timely manner and reviewed by the Regional Certification Committee. All polio-free countries except Somalia have completed Phase 1 of containment activities (survey and inventory activities) and submitted documentation of its quality. The Regional Certification Committee also receives annual progress reports from Pakistan and Afghanistan.

Efforts to improve the quality of life of polio victims are continuing in Pakistan and Yemen. The success of these demonstration projects triggered the development of a regional plan to institutionalize these efforts. This plan was approved by the Regional Committee as an additional strategy for polio eradication. The regional commitment to poliomyelitis eradication is now at its highest level, and continues to be stimulated through regular dissemination of information and updates and by alerting national authorities to developments. The authorities of the two endemic countries are renewing their commitments and adopting various strategies to address the constraints. The goal of stopping transmission in the Region is now closer than ever.

In the area of *tropical diseases*, the Regional Office provided support to Yemen to expand the national schistosomiasis control programme, in particular with regard to the 2009 campaigns and the process of finalizing a multi-partner, mid-term intervention (2010–2015) with the participation of World Bank and other technical partners, including the Schistosomiasis Control Initiative. This mid-term intervention will contribute to enhancing the current national control strategy by scaling up the coverage and strengthening the operational and technical capacity of the national programme, including the monitoring and evaluation systems. It will also enhance its public health

impact by integrating soil-transmitted helminthiasis infection control with the schistosomiasis control programme.

Progress in the eradication of dracunculiasis was notable in southern Sudan; 2508 new cases were reported in 2009 compared to 3358 in 2008, a 25% decrease. The case containment rate rose from 49% in 2008 to 83% in 2009. Overall, these trends can be seen as the result of different factors, including the strengthened surveillance system, and better water sanitation conditions for the at-risk population. However, despite the decrease in incidence, the absolute number of uncontained cases (as of November 2009) was still high (441), mainly due to the security threats affecting the continuity of the guinea worm eradication programme in some of the most endemic areas. The Regional Office supported the implementation of a zero case surveillance system in all guinea worm-free areas, in coordination with the Ministry of Health. Country coordination was strengthened and technical guidance provided to relevant partners in the country to review the guinea worm eradication programme in the north, with the goal of supporting planning. These activities were key to establishing the operational conditions for development of the certification process in the whole country. In coordination with the national partners, the zero case surveillance road map was successfully implemented, covering the first 13 selected counties, standing as priority areas for the first phase. Following the establishment of a cross-border surveillance system between southern Sudan and Ethiopia, the first cross-border coordination meeting was held with support from WHO, with the participation of national programme managers from neighbouring countries (Ethiopia, Kenya and Uganda). Joint actions to address cross-border surveillance needs were identified and a common action plan was endorsed.

The regional incidence of leprosy has declined since 2002, from 4665 to 3820 in 2009. The number of cases rose from 4240 (2008) to 4967 (2009), an increase mainly associated with improvements in the reporting system and strengthened operational coordination between the national programme and implementing partners, such as nongovernmental organizations. The Regional Office renewed its support to three main areas: capacity building, strengthening control activities and provision for multi-drug therapy. Capacity-building for national programme managers from countries with low endemicity took place, in coordination with the Yemen national leprosy elimination programme. The annual meeting of national managers of leprosy control programmes provided the opportunity to illustrate the main strategic and operational components of the enhanced global strategy for further reducing the disease burden due to leprosy 2010–2015 and to discuss its operational implications at the national programme level. The recommendations of the 10th Leprosy Technical Advisory Group, including actions for data collection and reporting and the need to strengthen the current global multi-drug resistance surveillance initiative, were also addressed. Pakistan was selected from the Region to be part of the global network for multidrug-resistant leprosy.

WHO supported southern Sudan to expand coverage of the programme for human African trypanosomiasis, by providing medicines and reagents for screening, diagnosis and treatment of the disease. WHO has compiled data to create a database to elaborate the atlas of human African trypanosomiasis, which maps the

disease at the village level for the last 10 years (2000–2009). This tool is useful to follow up the geographical distribution of the disease and detect any new emerging focus and has been made available to the Ministry of Health to support planning of control activities. A new treatment protocol for late-stage patients based on eflornithine-nifurtimox combination was included in the WHO essential medicines list in 2009. The Ministry of Health has already approved the importation and use of the new combination regimen. This new therapy represents a major improvement in terms of reducing the risk of developing drug resistance. It also provides for a decisive reduction in the workload associated with intravenous infusions since the current schedule will be using 14 instead of 56 injections . The overall situation of human African tryponasomiasis in southern Sudan remains a concern following the withdrawal of most implementing partners in areas where the Ministry of Health has not yet developed the capacity to take over control activities. This emphasizes the need for WHO to support control activities with focus on active case detection in areas where prevalence is estimated to be above 0.5%.

With regard to visceral leishmaniasis, support was given to Sudan by providing diagnostic tests and medicines. WHO responded to the outbreak reported in southern Sudan where some 1000 cases were treated in 2 months. For cutaneous leishmaniasis, WHO assessed the epidemiological situation in several countries (Morocco, Saudi Arabia and Syrian Arab Republic) and recommended new strategies for disease control with focus on active case search and prompt treatment, and supported capacity-building of national staff. Guidelines were revised in countries where the disease is highly prevalent, such as Afghanistan and Iraq.

With regard to *communicable disease surveillance, forecasting and response*, the Regional Office focused on two areas: provision of support to Member States to implement the International Health Regulations (IHR 2005), and support to reduce the opportunity for infection with avian influenza A/H5N1 and pandemic influenza.

In support of capacity-building to detect, assess, notify and respond to events in accordance with IHR 2005, the Regional Office conducted in-depth surveillance assessment missions to six countries (Bahrain, Lebanon, Saudi Arabia, Syrian Arab Republic and Yemen) and provided recommendations and plan of actions to these countries. The Regional Office carried out assessment of the points of entry in three countries (Lebanon, Morocco and Yemen), and supported capacity-building on points of entry in Kuwait and Morocco. Capacity-building was also supported in outbreak investigation and response, laboratory surveillance, packing and shipment of infectious materials and hepatitis B surveillance. The Regional Office monitored and actively provided technical support during outbreak response to meningococcal meningitis, dengue and kala azar (Sudan), avian influenza (Egypt), beri-beri (Somalia), plague (Libyan Arab Jamahiriya) and pandemic (H1N1) 2009 (all countries).

As a result of joint activities and individual efforts, nearly all countries of the Region now have some form of surveillance in place and are making efforts to integrate their surveillance systems. Technical support was provided to over 80% of countries to adapt generic surveillance and communicable disease monitoring tools or

protocols, especially during the pandemic (H1N1) 2009 outbreak.

With regard to reducing opportunities for human infection with influenza (both avian A/H5N1 and pandemic (H1N1) 2009), WHO supported investigation of the reasons for increased incidence of avian influenza A/H5N1 among toddlers and for sustained circulation of the H5N1 virus among the poultry in Egypt. The capacity of the Regional Office to respond to the requests of countries was supported by the Centers for Disease Control and Prevention, Atlanta, and these efforts resulted in new and improved interventions and implementation of effective strategies, and evidence for policy and decision-making.

Following the Director-General's declaration of alert phase 6 (11 June 2009) for pandemic (H1N1) 2009, the Regional Office activated the Strategic Health Operations Centre (SHOC) to coordinate the regional response. The Regional Director facilitated a special session of the Regional Committee on the pandemic in July and follow-up was reported at the fifty-sixth session of the Regional Committee in October. The Regional Committee endorsed resolutions on the pandemic in each session. Information was regularly shared with partners and a web page was provided for easy access to guidelines, training materials, situation updates and other relevant information. Technical tools and information, education and communication materials were developed through regional consultations and discussion sessions with other technical programmes, providing countries with timely technical information. These included interim guidance on public health measures for returning Hajj pilgrims, health system response, setting priorities for related vaccination interventions, community mitigation measures in educational settings, clinical management of virus infection and vaccine deployment, as well as a flowchart for decision-making on school suspensions and closure and algorithms for clinical management of patients and risk communication materials, several of which were used extensively at global level.

As part of the Regional Office's support to planning and preparation for human pandemic influenza at the regional and country levels, missions to establish national influenza centres were completed in Bahrain, Egypt, Morocco, Syrian Arab Republic, Qatar, United Arab Emirates and Yemen. The procedures for sample collection were compiled on CD-ROM and distributed to all influenza laboratories in the Region. The Regional Office continued to publish reports on global research needs and priorities for communicable diseases and interventions, as well as the regional *Weekly Epidemiological Monitor*.

Implementation of *integrated vector management*, the regional strategy for the control and prevention of vector-borne diseases, continued. Ten of the 12 disease-endemic countries now have integrated vector management plans and have established national intersectoral coordination mechanisms and seven have a vector control unit responsible for all vector-borne diseases. In line with the efforts to strengthen capacity in medical entomology and vector control to ensure that countries have the appropriate capacity to implement integrated vector management, the first batch of graduates from the regional MSc course graduated and the second batch was enrolled. A similar course was launched in Pakistan and short training courses in vector control were also conducted.

As part of the efforts to scale up vector control interventions in disease-endemic countries of the Region, support was provided to countries that have indoor residual spraying as their main intervention to use WHO-approved products for safety and impact. Relevant guidelines were made available to countries, and Morocco and Sudan benefited from WHO support on sound pesticide management.

The first graduates of the regional MSc in medical entomology

However, reporting on basic indicators for this intervention still requires a lot of improvement.

In addition to indoor residual spraying, a number of countries in recent years have opted to scale up the use of long-lasting insecticide-treated nets (LLINs). Overall, there has been an increase in the estimated number of people with access to this intervention in the Region, from about 18 million in 2007 to about 34 million people by the end of 2009. Table 1.1 summarizes the number of LLINs distributed in the last 3 years.

With the increased financial resources provided by countries and partners, good progress has been made, notably in Sudan where about 60% of the burden due to vector-borne diseases is found. In southern Sudan for example, it is estimated that about 8 million people (out of a total population of 10 million) now have access to this intervention. However, while countries keep records of the numbers distributed, the population estimated to have access does not take into account the need to replace long-lasting insecticide-treated nets and the population at risk of vector-borne diseases benefitting from this intervention.

These need to be estimated in the future for a meaningful interpretation.

Countries' efforts to scale up both indoor residual spraying and LLINs continue to face the problem of insecticide resistance, with recent reports of vector resistance to pyrethroids in central Sudan. During the current reporting period, follow-up studies were carried out and additional resources were mobilized for Sudan to assess the scale of the problem and identify measures to mitigate the epidemiological impact of resistance.

The *small grants scheme* research programme supported nine projects in 2009: three in leishmaniasis for Afghanistan, Islamic Republic of Iran and Tunisia; two in hepatitis for Afghanistan and Egypt; two in vaccine-preventable diseases for Lebanon and Sudan; one on vector control for Pakistan and one on arboviral diseases for Sudan. Ten articles originating from previously supported projects were published or accepted for publication in peer reviewed journals.

Research results of completed studies were communicated to the control programmes for their use to guide policy and practice in different areas. These included the results of studies on: seroprevalence and risk factors of Crimean–Congo haemorrhagic fever in Afghanistan and the virus genome in Islamic Republic of Iran; stratification of Port Sudan by risk of dengue transmission; evaluation of the adherence of travellers to the international health regulations in Sudan; *Leishmania* vectors in Islamic Republic of Iran and Lebanon; medicines for *Leishmania tropica* in Islamic Republic of Iran; evaluation of rapid diagnostic tests for schistosomiasis in Egypt; and evaluation of the impact of the Blue Nile Health Project on the control of schistosomiasis in Gezira State, Sudan. In the area of vaccine-preventable diseases, results were communicated on the burden of congenital rubella syndrome in Islamic Republic of Iran; prevalence of oncogenic strains of human papilloma virus among females in Pakistan; determination of

Table 1.1 Number of long-lasting insecticide-treated nets (LLINs) distributed in vector-disease endemic countries between 2007 and 2009 and the estimated current population with access to LLINs

Country	2007	2008	2009	Population covered to date[1]
Afghanistan	394 843	961 044	223 288	3 158 350
Djibouti	44 000	130 000	53 000	454 000
Iran, Islamic Republic of	40 000	50 000	80 000	340 000
Morocco[2]	4 759	6 084	3 892	29 470
Pakistan	149 300	840 000	839 400	3 657 400
Somalia	462 000	303 825	476 517	2 484 684
Sudan	2 014 570	2 782 710	6 114 447	21 823 454
Sudan (southern)	704 000	1 026 170	2 115 447	7 691 234
Sudan (northern)	1 310 570	1 756 540	3 999 000	14 132 220
Yemen	381 138	333 251	66 547	1 561 872
Total	3 490 610	5 406 914	7 857 091	33 509 230

[1] An LLIN has a residual life-span of about 3 years; between two and three people use one net

[2] Nets distributed for the control of leishmaniasis

the immune status for measles, mumps and rubella among university students in Lebanon; assessment of the quality of immunization services in Yemen; and assessment of the private sector contribution to immunization in Afghanistan.

Future directions

Strengthening of routine vaccination coverage, especially in countries with DPT3 coverage below 90% at national level will continue to be a top priority, with support focused on developing comprehensive multiyear plans, implementing the reach every district (RED) approach and child health days, strengthening monitoring and evaluation systems and improving managerial capacity. Advocacy will be directed towards increasing governments' financial contribution to EPI and strengthening national immunization technical advisory groups. Acceleration of measles elimination will focus on conducting timely follow-up campaigns, strengthening measles surveillance and implementing measles elimination validation activities. The regional strategy for control of hepatitis B will be implemented and introduction of new life-saving vaccines will be accelerated. Priorities for poliomyelitis eradication are interruption of transmission in Afghanistan and Pakistan stopping of circulation in southern Sudan, avoidance of large immunity gaps in polio-free countries, maintenance of certification-standard surveillance in all countries, further strengthening of coordination between neighbouring countries, mobilization of the financial resources required to implement the regional plan for eradication, and enhanced collaboration with EPI.

The success of the tropical disease programmes will require stronger coordination with countries, which can be envisaged only through multi-partner support given the strategic role played by both public and private sector in the control and fight of tropical diseases. Additional technical and operational guidance will be provided in order to ensure national tools are available and applied to guide the prevention and control activities. Where programmes have succeeded in controlling and maintaining low endemic levels, as with schistosomiasis and leprosy, it will be crucial to maintain public health awareness and support from decision-makers. With regard to communicable diseases forecasting and surveillance, lessons learned from the management of pandemic (H1N1) 2009 will be built upon to promote surveillance of influenza-like illness and other acute respiratory infections, to strengthen capacity at regional level and to revise the regional strategy for pandemic preparedness and response. Vector control will focus on ensuring that the remaining disease endemic countries have national integrated vector management plans; and on strengthening capacity to monitor and manage vector resistance to insecticides and to report on basic indicators of interventions. The small grants scheme will place more emphasis on: commissioning institutions to conduct research targeting key challenges facing disease control and supporting multi-country studies tackling these challenges; monitoring and evaluation of the translation of research results into policy and practice; and increasing the publication of research results in peer reviewed journals.

Strategic objective 2: To combat HIV/AIDS, tuberculosis and malaria

Issues and challenges

HIV, tuberculosis and malaria remain important public health problems in the Region, together still accounting for around 200 000 deaths annually. Despite recent improvements, the progress made regarding disease prevention, treatment and care continues to fall short of the set targets.

An estimated 460 000 people were living with HIV in the Region by end 2008. Most countries are in an epidemic state that is low-level or that is concentrated among populations at increased risk. A generalized epidemic state exists in Djibouti, southern Sudan and some areas in Somalia (Table 1.2). Lack of information on magnitude of the disease burden, risk behaviours and HIV prevalence among populations at high risk still hampers effective strategic planning. Stigma and discrimination remain barriers to access for HIV prevention, treatment and care. The Region still has the lowest antiretroviral therapy coverage rate globally.

Coverage and quality of parasitological malaria diagnosis in high burden countries are still very limited. The need to strengthen confirmatory facilities, health information and malaria surveillance systems hampers the ability to provide reliable data on the malaria burden. Further strengthening of capacity is essential. The security risk is an impediment to implementation of planned interventions in areas of several endemic countries, including border zones. This threatens successful control and elimination initiatives and national capacity-building. Tables 1.3 and 1.4 show the current reported malaria morbidity in malaria-free countries and countries targeting elimination, and in countries with a high malaria burden, respectively

The main challenge for tuberculosis control is access to prevention, treatment and care. The case detection rate was 60% in 2008 which is still far below the global target of 70%. Limited involvement of health care providers other than national tuberculosis programmes, particularly private care providers, is the key problem. Other problems include inappropriate diagnosis, sub-optimal laboratory networks, the need to strengthen health systems and inefficient care for patients with multidrug resistant (MDR) tuberculosis. While efforts to address these issues continue, information on the size of tuberculosis burden is also a challenge.

Achievements towards performance indicator targets in each expected result

The Regional Office continued to provide concerted support for scaling up of HIV, malaria and tuberculosis prevention, treatment and care in line with the regional and national strategies. Collaboration with partnerships including the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and enhancement of advocacy were pursued. To assist in mobilizing financial resources for disease control, the Regional Office supported Afghanistan, Djibouti, Pakistan, southern Sudan, Syrian Arab Republic and Yemen in the development of proposals to GFATM in Round 9.

In the area of *HIV/AIDS*, in 2009 antiretroviral therapy (ART) coverage further increased to reach approximately 10% from 5% in 2007. The number of people living

Table 1.2 The burden of HIV in the Eastern Mediterranean Region, 2009

Country	Estimated HIV prevalence in adult population (%)[a]	Estimated number of PLWH[a]	Estimated number of people needing ART based on UNAIDS/WHO methodology[c]	Reported number of people receiving ART[f]
Afghanistan	<0.1[e]	<1 000[e]	NA	19
Bahrain	<0.2	<1 000[b]	NA	40[e]
Djibouti	3.1	16 000	4 500	893
Egypt	<0.1	9 200	2 200	359
Iran, Islamic Republic of	0.2	86 000	19 000	1 181
Iraq	<0.2	NA	NA	6
Jordan	<0.1[e]	<1 000	315[f]	77
Kuwait	<0.2	<1 000	NA	132
Lebanon	0.1	3000	940	362
Libyan Arab Jamahiriya	<0.2	NA	NA	1 200[e]
Morocco	0.1	21 000	5 300	2 614
Oman	<0.2	3 854[e]	NA	412[d]
Pakistan	0.1	96 000	20 000	1 296
Palestine	NA	NA	NA	8
Qatar	<0.2	NA	NA	72
Saudi Arabia	<0.2	NA	NA	865
Somalia	0.5	24 000	6 300	696
Sudan	1.4	320 000	87 000	3 825
Syrian Arab Republic	<0.2	NA	200[g]	100
Tunisia	0.1	3 700	1 000	412
United Arab Emirates	<0.2	NA	NA	121
Yemen	<0.2	20 00 0[e]	3 150[e]	268

NA: information not available
PLHIV: people living with HIV

[a] *Report on the global AIDS epidemic 2008*. Geneva, UNAIDS, 2008
[b] *Report on the global AIDS epidemic 2006*. Geneva, UNAIDS, 2006
[c] *Towards universal access: scaling up priority HIV/AIDS interventions in the health sector. Progress report 2008*. Geneva, WHO/UNAIDS/UNICEF, 2008
[d] Country universal access reports, 2008
[e] National AIDS programme, 2008
[f] National AIDS programme, 2009
[g] Country universal access reports, 2007

with HIV (PLWH) receiving ART increased from around 7150 in 2007 to approximately 15 500. Some countries achieved high coverage, for example Djibouti, Lebanon and Morocco. However, this achievement is masked by the low coverage in countries with the highest burden, such as Pakistan and Sudan. Afghanistan, Palestine, Pakistan, Somalia, Sudan and Yemen benefitted from technical support and training to develop HIV care and treatment services.

The Regional Office conducted a review of HIV testing and counselling policies and practices in the Region, resulting in recommendations for strategies and approaches to ensure availability, quality, acceptability, affordability and utilization of services. In collaboration with UNICEF/Middle East and North Africa, the Regional Office also conducted an in-depth review of national clinical guidelines. The findings of the review will support the development or revision of national guidelines following the

Table 1.3 Parasitologically confirmed cases of malaria in countries with no or sporadic transmission and countries with low malaria endemicity

Country	Cases in 2007		Cases in 2008		Cases in 2009		Species transmitted locally
	Total	Autoch-thonous	Total	Autoch-thonous	Total	Autoch-thonous	
Bahrain	103	0	92	0	104	0	nil
Egypt	30	0	80	0	94	0	nil
Iran, Islamic Republic of[a]	15 712	13 278	11 460	8 349	6 122	3 647	*P. vivax* > *P. falciparum*
Iraq	3	2	6	4	1	0	*P. vivax*
Jordan	83	0	65	0	53	0	nil
Kuwait	317	0	392	0	NA	0	nil
Lebanon	67	0	81	0	72	0	nil
Libyan Arab Jamahiriya	5	0	7	0	28	0	nil
Morocco	75	0	142	0	145	0	nil
Oman	705	4[c]	965	8	898	0	nil
Palestine	0	0	0	0	1	0	nil
Qatar	195	0	216	0	239	0	nil
Saudi Arabia[b]	2 864	467	1 491	61	2 313	58	*P. falciparum* > *P. vivax*
Syrian Arab Republic	37	0	51	0	39	0	nil
Tunisia	39	0	62	0	49	0	nil
United Arab Emirates	2 119	0	2 696	0	3 018	0	nil

NA not available
> Predominance of one species
[a] Endemic areas mainly in the south-east
[b] Endemic areas mainly in the south-west
[c] Introduced vivax cases

Table 1.4 Recorded and estimated cases of malaria in countries with high malaria burden, 2009

Country	Total cases reported	Cases confirmed	Cases estimated[a]	Species transmitted
Afghanistan	390 729	64 880	568 000	*P. vivax* > *P. falciparum*
Djibouti	7 120	2 686	39 000	*P. falciparum* > *P. vivax*
Pakistan	NA	121 360	1 500 000	*P. vivax* > *P. falciparum*
Somalia	NA	NA	609 000	*P. falciparum* > *P. vivax*
Sudan[b]	2 361 188	711 462	5 000 000	*P. falciparum* > *P. vivax*
Yemen	138 579	53 445	287 000	*P. falciparum* > *P. vivax*

NA not available
> Predominance of one species
[a] World Malaria Report 2008
[b] Only 15 northern states

release of new WHO global recommendations on antiretroviral treatment.

The Regional Office continued to support the Middle East and North Africa Harm Reduction Association (MENAHRA), in collaboration with the International Harm Reduction Association (IHRA), for advocacy, capacity-building and strengthening of the role of civil society in scaling up access to HIV prevention, treatment and care for injecting drug users. MENAHRA developed a regional review of the situation of injecting drug users and HIV and developed 3-year and 5-year strategic targets for a scaled-up response.

The Regional Office supported the establishment of a regional knowledge hub on HIV surveillance in Kerman, Islamic Republic of Iran, which carried out capacity-building courses in HIV surveillance methodologies. HIV prevalence and behavioural surveys among high-risk populations were supported in several countries, including Islamic Republic of Iran, Somalia, Sudan, Tunisia and Yemen and technical support was provided to surveillance system development in Palestine, Syrian Arab Republic and Sudan. In collaboration with UNAIDS and the World Bank a regional guide on HIV surveillance in low prevalence and concentrated epidemics was developed in line with the latest developments in HIV surveillance.

Country support was initiated by the Regional Office to facilitate the development of national action plans, aiming at implementation of the regional strategic plan for prevention and control of sexually transmitted infections 2009–2015.

The Regional Office supported the development of national strategic documents for *malaria*, including a strategic plan for malaria elimination for Islamic Republic of Iran, a national strategy of communication for behavioural impact (COMBI) for Yemen and a national strategy for home management of malaria in Sudan. Pakistan also developed a strategy for malaria pre-elimination in the Punjab province, and Afghanistan and Islamic Republic of Iran updated the malaria treatment guidelines.

Capacity-building was supported in malaria planning and management, microscopy and quality assurance, implementation of rapid diagnostic tests and case management. National capacity-building was supported in malaria case management and social mobilization (Yemen), malaria elimination (Morocco), as well as rehabilitation and establishment of information technology infrastructure (Afghanistan). Capacity-building on serological techniques in malaria epidemiology was supported for the seven countries of the Horn of Africa Network for monitoring antimalarial treatment (HANMAT), in collaboration with the US Naval Medical Research Unit No. 3 (NAMRU-3) and the London School of Hygiene and Tropical Medicine.

The Regional Office continued to support cross-border coordination of malaria control between Afghanistan, Islamic Republic of Iran and Pakistan (PIAM-NET); and between Afghanistan and Turkmenistan, in collaboration with the Regional Office for Europe. Yemen developed a 2-year plan of action, aiming at certification of malaria-free status, and a second review mission to Morocco took place.

The Regional Office supported malaria-free countries through provision of artemisinin-based combination therapies (ACTs) for imported falciparum cases. It also supported procurement of quality preventive diagnostic and treatment commodities. With resources from USAID,

a functional network of 71 laboratories was established and rapid diagnostic tests provided to 150 health posts in border districts in Afghanistan.

Three countries (Islamic Republic of Iran, Sudan and Yemen) carried out national malaria prevalence and coverage indicator surveys, which also included serological assays to measure past exposure in areas with low transmission. Islamic Republic of Iran and Sudan added a health facility assessment to those surveys. Activities for monitoring the efficacy of antimalarial drugs were supported in Afghanistan, Pakistan, Sudan and Yemen.

With regard to mobilization of partnership and resources, the Government of France provided support for malaria and leishmaniasis control in Afghanistan. A project financed by the Kuwait Patients' Helping Fund for community-based projects in selected villages in Somalia and Yemen was implemented in collaboration with basic development needs teams. Yemen launched the new treatment policy.

A laboratory technician performs malaria microscopy to confirm a diagnosis at a rural health centre in Afghanistan

In order to address the problem of low *tuberculosis* case detection, the Regional Office pursued the promotion of the Stop Tuberculosis strategy. By end 2009, all national tuberculosis programmes had adopted the strategy and several countries had developed national strategic plans and guidelines. Governmental financial contributions to the national tuberculosis programme have increased, although some countries, such as Afghanistan, Djibouti, Somalia and Sudan, still largely rely on external donors.

The regional laboratory network was expanded. National reference laboratories are present in all countries except Somalia and United Arab Emirates. National reference laboratories in several countries (Islamic Republic of Iran, Jordan, Lebanon, Morocco, Oman, Sudan, Syrian Arab Republic and Tunisia) were linked to supranational reference laboratories. The national reference laboratories of Oman and Aga Khan University of Pakistan were assessed as candidates for designation as supranational reference laboratories. Eighteen countries reported having a nationwide network for direct-smear microscopy with expanding external quality assessment.

The Global Drug Facility provided quality-assured medicines to a large number of the countries through grants or direct procurement. National tuberculosis programmes adapted the WHO-recommended revised recording and reporting forms and the forms are used nationwide in seven countries (Djibouti, Jordan, Egypt, Islamic Republic of Iran, Iraq, Morocco and Syrian Arab Republic), where its use has led to improved contact management of tuberculosis patients. Several countries expanded the use of the Electronic Nominal Tuberculosis

Registration System (Egypt, Jordan, Iraq, Oman, Somalia, Syrian Arab Republic and Yemen).

In line with the strengthening of surveillance, the estimated burden of tuberculosis was revisited. The innovative capture–recapture study was conducted in Egypt and Syrian Arab Republic with international partners. The public–private mix approach is expanding in many countries as a tool to involve more health care providers. The Practical Approach to Lung Health was introduced nationwide in Morocco and is expanding in other countries.

The Regional Office continued to place emphasis on care for patients with multidrug-resistant tuberculosis. In response to resolution WHA62.15, the Regional Committee endorsed a resolution on multidrug-resistant and extensively drug-resistant tuberculosis (EM/RC56/10) and adopted a regional strategy. The Green Light Committee provided technical support to MDR-management projects in the Region.

National Stop Tuberculosis partnerships were established in eight countries (Afghanistan, Egypt, Islamic Republic of Iran, Jordan, Morocco, Pakistan, Sudan and Syrian Arab Republic) to generate support for patients, awareness improvement and advocacy, among other areas. A Million Youth March to Stop TB took place around the Region for World TB Day, to promote support for tuberculosis patients. Donor support, mainly from the GFATM, was used to improve implementation quality and enhance country level capacity.

As a result of cumulative efforts, tuberculosis incidence has shown a reduction by 7.2% (116 per 100 000 population relative to a baseline of 125 per 100 000 in 1990). A good decline in prevalence and mortality has been reported as well (55% and 62% of the baseline rates, respectively). The regional average treatment success rate further improved to reach 88%, higher than the global target of 85%. Five countries of the Region have achieved both targets (treatment success and case detection rate): Egypt, Morocco, Oman, Syrian Arab Republic and Tunisia.

At the same time, factors that affect further progress were identified, including the need to ensure sustainable financing

Patients receive tuberculosis medicines at a tuberculosis clinic in Somalia

and to improve government financing for tuberculosis control. Inefficient use of human resources in care and lack of legislation to ensure notification of all cases are also identified as critical gaps.

The small grants scheme continued to support the generation of new knowledge on HIV, tuberculosis and malaria, evaluation of improved tools, interventions and public health policies, strengthening of research capacity, and dissemination and translation of results into policy. The scheme accepted seven proposals and supported capacity-building in protocol development and scientific writing, and in data analysis to estimate the tuberculosis burden. Research results were communicated to control programmes to guide policy and practice. These included the results of studies on the different risk groups for HIV in Sudan; accessibility to HIV testing and barriers towards antiretroviral treatment in Pakistan, Sudan and Yemen; quality of care for HIV in Sudan; evaluation of home-based management of malaria in Afghanistan; malaria vector control in Sudan and Morocco; anti-malarial medicines in Sudan; evaluation of the outcome of placental malaria and the contribution of the private sector in malaria control in Yemen; the extent of under-reporting of tuberculosis from the public and private sectors in Afghanistan and Pakistan; active case finding among contacts in Afghanistan, Islamic Republic of Iran, Pakistan and Sudan; molecular characterization of *Mycobacterium* isolates in Oman; and prevalence of HIV infection among tuberculosis patients and pathways to care for HIV co-infected TB patients in Egypt.

Future directions

Expansion of services to achieve universal access to HIV, malaria and tuberculosis care is the key strategic direction. The Regional Office will complete implementation of its strategic plan 2006–2010 for HIV/AIDS and develop a new plan 2010–2015. It will support malaria-endemic countries in the development of national strategies for partnerships and surveillance and will focus on improving tuberculosis case detection and care for patients with MDR-tuberculosis. Health systems strengthening will remain a critical strategic direction. The Regional Office will seek to maximize health sector contribution to HIV prevention, continue human resources development through capacity-building, and enhance integration of tuberculosis care into primary health care. Collaboration with partners, particularly GFATM, will remain critical for scaling up of HIV, malaria and tuberculosis care.

Strategic objective 3: To prevent and reduce disease, disability and premature death from chronic noncommunicable conditions, mental disorders, violence and injuries

Issues and challenges

The rising burden of noncommunicable diseases, mental, neurological and substance use disorders and injuries represents a serious challenge across the Region. There is increasing recognition that the renewed vision for primary health care must take into account the rising burden of these diseases, otherwise equity and equality in health will not be possible. While countries have made

some progress in documenting information in the area of communicable diseases, similar knowledge of noncommunicable diseases is lacking because of the absence of a robust noncommunicable disease surveillance system. The feasibility of strengthening the existing national surveillance systems with the addition of a noncommunicable diseases, neurological and substance use component is challenging. The global initiative to eliminate avoidable blindness by 2020–VISION 2020: The Right to Sight– has reached the half way point. However, elimination of avoidable blindness remains a challenge, with high prevalence of eye diseases. Eye care is not integrated at all levels of health care, especially in primary health care.

Mental, neurological and substance use disorders account for an estimated 11.2% of the total burden of disease in the Region; addition of self-inflicted injuries increases this to 12.4%. Community-based studies carried out in countries of the Region show estimated prevalence rates for mental, neurological and substance use disorders in adults ranging from 8.2% to 16.6%, with rates of common disorders significantly higher in women. Yet only 2% of health budgets is provided for mental health. Even this is inefficiently and inequitably utilized in providing institutional care, catering to only 7% of the population in need while consuming more than 50% of the human and financial resources.

Injuries have shown manifold increase in magnitude and severity and are now the leading cause of death in certain age groups in many countries. Among all injury causes of death, deaths due to road traffic injuries have shown a rising trend in the preceding year and the Region now occupies first place globally in terms of deaths per 100 000 population (Figure 1.1).

Major challenges to the prevention and control of noncommunicable diseases, mental, neurological and substance use disorders, injuries, disability and preventable blindness include the multiplicity of sectors involved and consequent lack of ownership of the public health agenda; insufficient political commitment and understanding; fragmented data collection systems; limited resources and capacities, particularly for injury prevention and disability management interventions; and ineffective and insufficient pre-hospital and hospital-based trauma care services. The pandemic (H1N1) 2009 resulted in reduced availability of resources for access to quality care for prevention and management of chronic conditions, injuries, mental, neurological and substance use disorders and physical disabilities. Reorientation of the health system to integrate the prevention and promotion components of these conditions, and establishment of multisectoral mechanisms within the existing health systems, are crucial milestones that need to be achieved.

Achievements towards performance indicator targets in each expected result

A major achievement in the area of *noncommunicable diseases* was the endorsement by the Regional Committee of the regional strategy for cancer prevention and control (EM/RC56/R.4). A regional framework for adaptation of the strategy was developed and is being used to support countries in establishing or updating national cancer control plans (Bahrain, Egypt, Kuwait, Oman, Qatar, Saudi Arabia, Sudan and Yemen). Recognizing the huge gaps and shortages in the areas of cancer registration and palliative care, capacity-building took place, in collaboration

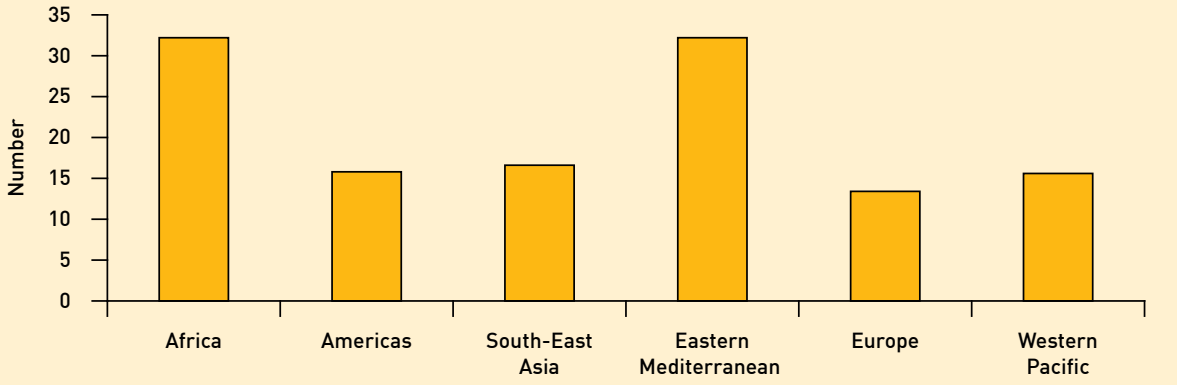


Figure 1.1 Deaths due to road traffic injuries (per 100 000 population) by WHO region, 2007

Source: *Global status report on road safety. Time for action*. Geneva, World Health Organization, 2009.

with the Gulf Cooperation Council and International Agency for Research on Cancer. In the area of cancer control, screening for breast cancer is considered a priority intervention in the Region. Technical support was provided to Kuwait, Oman, Saudi Arabia and Yemen to assess breast cancer screening programmes. Major focus was placed on supporting countries to develop the noncommunicable disease database and strengthen surveillance, with capacity-building in four more countries for the Stepwise survey (Lebanon, Libyan Arab Jamahiriya, Palestine and Yemen) and in two countries on the new noncommunicable disease surveillance framework (Bahrain and Qatar).

Twelve countries have now established a national unit and programme for noncommunicable diseases (Bahrain, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia and Syrian Arab Republic) with resources allocation either being initiated or in process. The Regional Office provided guidance and support to develop resources and strengthen programmes. Major focus was placed on monitoring noncommunicable diseases and their determinants in line with the action plan (2008–2013) and supporting countries to implement the plan. In collaboration with WHO headquarters, integration of noncommunicable diseases into primary health care using the newly developed WHO protocols was piloted in three countries (Bahrain, Syrian Arab

Republic, Sudan) to assess the feasibility and cost-effectiveness of using integrated protocols. Capacity-assessment was preceded by a primary health care survey to assess suitability for integration. The Regional Office was actively engaged, with other WHO regions and headquarters, in the planning process for developing survey tools to assess country capacity for noncommunicable diseases control. The tools were piloted in three countries Bahrain, Kuwait and Qatar to determine specific regional needs and modifications. Assessment of national cancer control capacity was also piloted in six countries. The Regional Office participated in the Western Asia Regional Ministerial Meeting, "Addressing noncommunicable diseases and injuries: major challenges to sustainable development in the 21st century", held in Doha, to address the need to include noncommunicable diseases and injuries in national development agendas and the Millennium Development Goals.

Tobacco cessation is a fundamental component of noncommunicable disease control. The need for more systematic and focused work in this area in the Region was well illustrated by the WHO report on the global tobacco epidemic, 2009 which exposed the lack of availability of cessation services and experience in this field (Figure 1.2). Cessation is not targeted as a separate measure of tobacco control as all available evidence shows that cessation services are more effective when they are coordinated with other tobacco control measures. Activities were conducted in light of previous achievements and situation analyses, taking into consideration the long-term commitment and obligations of Member States under the Framework Convention on Tobacco Control. WHO guidelines on cessation, providing a background for all national level cessation work, were translated into Arabic, and constitute the only official document available to governments in Arabic to support their activities. Technical

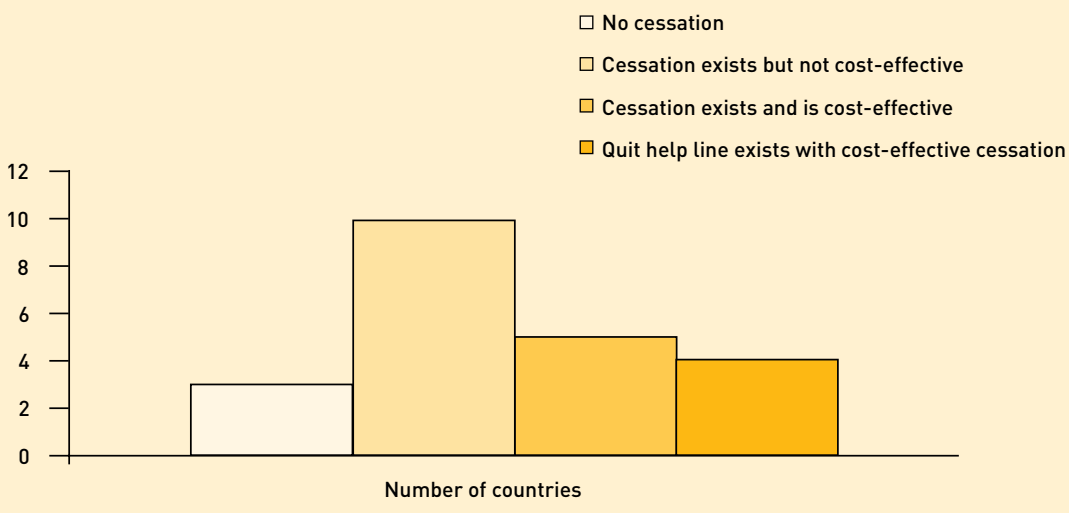


Figure 1.2 Tobacco cessation services in the Eastern Mediterranean Region

Source: *WHO report on the global tobacco epidemic, 2009. Implementing smoke-free environments.* Geneva, World Health Organization, 2009.

support was provided to Jordan, Saudi Arabia and Yemen in evaluating their cessation programmes and recommendations made as part of the comprehensive evaluation of the tobacco control programme. Responding to the growing demand by Member States, the Regional Office is finalizing an agreement with a UK-based medical school to evaluate cessation services in more countries of the Region, focusing on introducing integration and capacity-building. A regional advocacy document on the health benefits of cessation and three film spots for broadcast on television channels were developed, as well as generic health warnings in support of cessation which were distributed to all for use on tobacco packs.

In the area of *violence, injuries and disabilities*, achievements had a very strategic outlook, yet it will be seen in the years to come whether actions follow at national level to lessen the burden of injuries and effectively manage disabilities. A major achievement was the endorsement of a landmark resolution (EM/RC56/R.7) by the Regional Committee on the growing public health concern of road traffic injuries, on which, for the first time, the Regional Director was requested to report regularly. Another major achievement was the completion of a multi-country exercise conducted in 20 countries to collect data on different aspects of road safety, including: the application of cost-effective interventions; injury surveillance systems; and pre-hospital and hospital-based trauma care systems. The findings were published in a global status report and a regional status report was prepared for release in 2010.

The Arabic version of the *World report on child injury prevention* was launched, with the participation of children from the Region and culminating in the Eastern Mediterranean Children's Declaration

on Child Injury Prevention: Keep Kids Safe. Availability of data on all forms of injuries has always been a demanding challenge. The Regional Office provided technical support to a number of countries to develop injury surveillance systems (Islamic Republic of Iran, Iraq, Jordan, Oman, Pakistan, Saudi Arabia, Tunisia and Yemen). In order to develop a baseline on the magnitude of all forms of injuries, a series of national household surveys was initiated, the first of which was conducted in Egypt. Technical support was provided to Islamic Republic of Iran, Jordan and

Syrian Arab Republic to establish the International Classification of Functioning, Disability and Health, while translation into Arabic of the classification and of the children and youth version is in process. On the issue of child abuse and neglect, the Regional Office co-sponsored a regional ministerial conference in Saudi Arabia in which 18 Member States participated and which resulted in a ministerial declaration calling for intersectoral policy development and implementation of multisectoral programmes for prevention of child abuse.

Capacity-building for Ministry of Health focal points, public health practitioners and representatives from academia of 13 countries was conducted using the WHO TEACH-VIP curriculum. This resulted in a strategic partnership between the programme managers and academia for building sustainable capacities. A mentoring programme was established by WHO headquarters in close collaboration with the regions. The Regional Office participated actively in this one-year mentoring programme aimed at building capacities in injury prevention planning, programme implementation and evaluation. As a result of a regional multisectoral meeting engaging ministries of health, interior and transport, eight countries (Afghanistan, Egypt, Islamic Republic of Iran, Iraq, Lebanon, Oman, Qatar, Saudi Arabia) developed national multisectoral plans and reflected these in the biennial collaborative plans with WHO 2010–2011. The injury prevention and control plans for Jordan, Pakistan and Yemen were reviewed and updated to respond to the changing dynamics of injury causes. A joint plan was prepared with the CBI programme to integrate injury prevention interventions in areas implementing such initiatives.

Despite the limited resources available, some major milestones in disability and rehabilitation were attained. Consequent to a regional planning workshop on prosthetics and orthotics programmes, five countries developed plans to enhance their capacities and made plans to provide cost-effective prosthesis and orthotics to countries in need. After the United Nations Convention on the Rights of Persons with Disabilities came into force in May 2008, a consortium of nongovernmental organizations working for disability and rehabilitation was developed to position the issue of disability high on political agendas. The regional task force on disability submitted its first report to the Regional Director on its activities and prospective vision. The Regional Office was the first to develop a regional framework on community-based rehabilitation through a participatory process with countries and regional experts. The framework is being implemented as a pilot in three countries (Afghanistan, Islamic Republic of Iran snd Pakistan). Egypt developed a national plan for a joint programme with the United Nations on promotion of rights of persons with disabilities (2009–2013), with financial support from UNDP. WHO, together with UNDP and ILO, will provide technical support to the Ministry of Social Development in

implementing this plan. In trauma care, six countries (Egypt, Iraq, Pakistan, Qatar, Saudi Arabia and United Arab Emirates) received technical and financial support to develop an effective pre-hospital and hospital-based trauma care system to serve all individuals with all forms of injuries. The Department of Emergency Medicine, Aga Khan University, Karachi (Pakistan), which serves around 10 million people, was upgraded with WHO technical and financial support with the aim of enhancing indigenous capacities in trauma care among countries of the Region.

The launch of the *mental health* gap action programme (mhGAP) in October 2008 by the Director-General helped in raising the visibility of mental health. Eight countries (Afghanistan, Djibouti, Egypt, Islamic Republic of Iran, Jordan, Pakistan, Sudan and Yemen) were identified for intensified support in this programme, which is aimed at bridging the gap between needs and optimal provisions for mental health care. One of the important components of the programme is assessment of needs and capacities. Fifteen countries have completed the assessment of mental health systems using the WHO instrument WHO AIMS and a regional report was developed to provide an overview of the strengths and gaps of mental health systems in countries of the Region and to promote evidence-based planning.

Policies and legislation provide the necessary basis for development of services. A draft regional strategy for maternal, child and adolescent mental health was developed in consultation with Member States and experts from the Region and beyond. Technical support was provided to several countries (Afghanistan, Bahrain, Jordan, Oman, Qatar, Syrian Arab Republic, Sudan, United Arab Emirates) to develop evidence-based policies and strategies for mental health and substance abuse. Technical support was provided to Egypt for finalization of mental health legislation to ensure provision of services while safe-guarding the rights of service users. While most countries have a mental health focal point nominated by the Ministry of Health, fewer than half the countries (Afghanistan, Bahrain, Egypt, Islamic Republic of Iran, Jordan, Morocco, Palestine, Sudan and Tunisia) have a dedicated unit within the Ministry of Health with a budget, and this is a goal which needs to be pursued further. All countries increased their allocation for mental health and substance abuse in absolute terms. However, the evidence suggests that the median allocation for mental health as a proportion of the overall national health spending is 2%, with only US$ 0.15 per capita expenditure, half the global median of US$ 0.30 per capita.

Support was provided for scaling-up of mental health services, including in developing proposals for implementation of community-based, integrated and holistic mental health care in line with the mental health gap action programme. Integration of a mental health component in primary health care is important to the overall vision of mental health and in this regard a package for training of primary health care personnel in recognition and management of common mental disorders was developed and shared with countries. Capacity-building for primary health care personnel, using this training package, was supported in Afghanistan, Pakistan, Somalia and Sudan.

The chain-free initiative, aimed at providing mental health services in a humane manner and respecting the rights and dignity of service users and their families, was initiated in Sudan while the existing initiative was expanded to all regions of Somalia and to two sites

in Afghanistan. Technical support was provided to Pakistan and Palestine for developing and implementing mental health and psychosocial support programmes and services during emergencies, while capacity for responding to emergencies was enhanced in several countries (Afghanistan, Iraq, Jordan, Lebanon, Pakistan, Palestine, Somalia, Sudan and Syrian Arab Republic).

In order to generate evidence to support action, a systematic review of suicide in the Region was conducted and a multisite study protocol finalized. A systematic review of nutrition and mental health is nearing completion and a regional report on epilepsy was finalized.

To strengthen advocacy for the prevention of *blindness* programme, the Regional Office celebrated World Sight Day 8 October at the Library of Alexandria, in collaboration with the Ministry of Health, Egypt, IMPACT-EMR, the International Agency for Prevention of Blindness (IAPB), Susanne Mubarak Centre and other partners and the media under the theme 'Gender and eye health–equal access to care'. Advocacy materials were developed and distributed to all countries. Following endorsement by the World Health Assembly of the action plan on prevention of avoidable blindness, the Regional Office provided technical support for the development of national plans for comprehensive eye care. These were developed in 21 countries with the support of WHO and IAPB and implementation of the plans is under way with focus on the district level. In collaboration with IMPACT-EMR and IAPB, a consultation was held to develop guidelines for school eye health. The Regional Office also supported capacity-building for the development of public health control strategies for glaucoma.

National capacities were built in comprehensive eye health and blindness prevention under VISION 2020 (Somalia) and national eye care planning (Palestine, Pakistan). The rapid assessment of avoidable blindness (RAAB) survey was conducted in Egypt, Libyan Arab Jamahiriya, Sudan and Yemen, and eye camps for cataract surgeries were supported in Somalia in collaboration with Al Manhal Charitable Organization. In order to expand partnerships with all interested organizations working in the prevention of blindness programme, the Regional Office is working with the Islamic Development Bank, International Islamic Relief Organization and the Federation of Islamic Medical Associations to support the eye care and prevention of blindness programme in priority countries.

Future directions

Models of noncommunicable disease prevention have been tried in the Region with limited success. A range of factors seems to be responsible for an unfavourable outcome which needs to be properly researched. WHO will continue to support countries to develop an integrated approach, in order to ensure comprehensiveness, address the specific health needs of people with chronic illness and promote early detection. The Regional Office will continue to focus on fostering intersectoral collaboration in prevention of noncommunicable diseases where community-based interventions will be extended to address risk factors and foster healthy lifestyle changes. Focus will be placed on addressing the six objectives of the noncommunicable disease action plan (2008–2013) and developing and implementing national action plans. Capacity-building will continue in integration of noncommunicable disease into primary health care, prevention and control and surveillance. Conduct of

national country capacity assessments will be supported. Special attention will be paid to building national capacity in cancer registration and to strengthening palliative care services.

Collaboration needs to be strengthened and resource mobilization enhanced. Partnership with media to highlight the issues of noncommunicable diseases, injuries and mental health disorders will contribute to this. Partnership with stakeholders in governmental, private, nongovernmental and civil society sectors, including the media, to promote mental health literacy and overcome stigma and discrimination will be pursued. Focus will also be placed on the implementation of global and regional resolutions and recommendations, as well as of the package of services being developed as part of the mhGAP programme, through supporting development of country plans. It is hoped that, with the adoption of the Framework Convention on Tobacco Control guidelines on tobacco cessation, more resources will be made available for this area of work to support national needs and bridge already existing gaps at national level. The efforts of the Regional Office to support the integration of cessation services, including the availability of nicotine replacement therapy, into national health systems, especially primary health care, will continue. The Regional Office will continue to work with partners to establish a sustainable and equitable comprehensive eye care system as an integral part of the national health system based on the principles of primary health care.

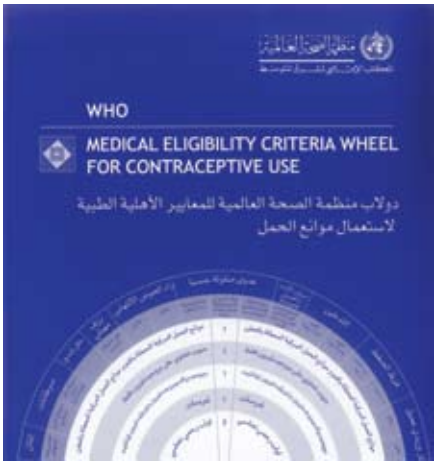
Strategic objective 4: To reduce morbidity and mortality and improve health during key stages of life, including pregnancy, childbirth, the neonatal period, childhood and adolescence, and improve sexual and reproductive health and promote active and healthy ageing for all individuals

Issues and challenges

This strategic objective aims at strengthening the core service components of primary health care and reducing an enormous burden of disease, while intensifying action towards reaching key health-related Millennium Development Goals (especially goals 4 and 5) and meeting relevant international commitments. The situation in the Region is worsening for some markers, such as the incidence of HIV and other sexually transmitted infections among young people, and progress is slow for others, such as maternal, neonatal and child mortality. The unmet need for contraception is large and growing in several countries, resulting in a high total fertility rate.

Some Member States are still not on track to achieve the internationally agreed goals and targets concerned with health protection and promotion in key stages of life. Political will is flagging and resources are insufficient to achieve these goals. Those who are most

affected, such as poor children, women and the elderly, have limited influence on decision-makers and often cannot access health care. Competing health priorities, vertical and disease-oriented approaches and lack of coordination between governments and development partners result in programme fragmentation, missed opportunities and inefficient use of human and financial resources.



Creating networks and alliances for expanding health-promoting schools in the community and research are important strategies for promoting the health of school students as a critical approach for family and community health protection and promotion. Age-friendly cities and communities and age-friendly primary health care are also crucial to meeting the health needs in relation to the visible growth in the ageing population.

Achievements towards performance indicator targets in each expected result

In *maternal and neonatal health*, The Regional Office addressed special attention to building national capacities in promoting maternal and newborn health through ensuring skilled care for every birth; improving information and reporting systems; strengthening the implementation of best practices in reproductive health programmes, especially maternal health and family planning; and improving knowledge and skills on life-saving practices through community-based programmes.

The number of countries adapting and using the guidelines on integrating management for pregnancy and childbirth increased from 5 to 10 (Afghanistan, Egypt, Iraq, Islamic Republic of Iran, Morocco,

Making pregnancy safer: women in Somalia attend a rural maternal and child health clinic

Pakistan, Oman, Sudan, Syrian Arab Republic and Yemen). Specific attention was focused on the eight priority countries with regard to the Millennium Development Goals. The Regional Office continued to support capacity-building in making pregnancy safer, specifically, development of technical competence in WHO evidence-based health system interventions for scaling up maternal and newborn health care in six countries (Afghanistan, Qatar, Somalia, Sudan, United Arab Emirates and Yemen). Responding to the need for investment in building national human resources capacity in maternal and newborn health, the Regional Office extended its support to recruit local and international staff to support programme development and implementation activities in Afghanistan, Iraq, Palestine (Gaza Strip), Morocco, Pakistan Sudan, Somalia and Yemen. The challenge of providing life-saving obstetric surgery for the most deprived segments of populations is extreme due to the shortage of physicians in poor communities. Recognizing this, the Regional Office supported capacity-building for Afghanistan, Somalia and Sudan in enhancing access to human resources for maternal and neonatal survival through task-shifting, by training of front-line health workers in emergency obstetric care, in a course run by the Karolinska Institute, Sweden.

In order to support monitoring of maternal morbidity and mortality and strengthen national capacity in addressing related public health issues, the Regional Office expanded its technical support to build national maternal mortality surveillance systems in Islamic Republic of Iran, Morocco, Lebanon, Syrian Arab Republic and Tunisia. Making emergency obstetric care available and accessible to all women when and where they require is critically important for reducing maternal and neonatal mortality. Recognizing the need for transfer of technical know-how in this area, WHO published a handbook on monitoring emergency obstetric care. To facilitate its adoption and use in countries, the handbook was translated into Arabic.

Training in emergency obstetric care for front-line health workers in conflict-affected areas will improve survival rates for mothers and newborn babies

With regard to protection and promotion of *child health*, the Region has witnessed around a 26% decline in under-5 child deaths since 1990. Progress towards achieving Millennium Development Goal 4 has remained slow in six countries (Afghanistan, Djibouti, Iraq, Pakistan, Somalia and Sudan), where 80% of child deaths in the Region take place and the decrease in under-5 mortality rate is less than a third of its level in 1990. The challenge of accelerating the achievement of goal 4 in these countries is substantial. Lack of financial and human resources required for promoting child health, coupled with shifting priorities, remained a major obstacle to progress in this area.

Further progress was made in the implementation of integrated management of child health (IMCI) strategy to improve the quality of primary child health care services. This has now reached 65% of all primary health care facilities in the 13 reporting countries, where the strategy has been introduced in more than half of all districts. Continued investment was made in the area of IMCI pre-service education, addressing the issue of sustainability and responding to the increased demand of the teaching institutions. An IMCI pre-service education package was completed including guides on orientation, planning and evaluation, teaching sessions, e-lectures and a question bank for student assessments. Support was provided to build national capacity in introducing and evaluating the IMCI pre-service education. Forty-five medical schools have now introduced IMCI into their teaching programmes.

Vaccination cards ensure child immunizations are up to date

A health worker checks the health of a young infant in the Islamic Republic of Iran

The Regional Office launched the "teleconsultation and continued medical education via video conferencing" initiative. This will establish linkages between teaching institutions and remote deprived areas in order to improve the knowledge and skills of child health care providers working in these locations. A joint project was established in Egypt in collaboration with UNDP, Alexandria University, and the ministries of telecommunication and health, linking the Department of Paediatrics of Al Shatby University Hospital with Siwa Oasis.

The Regional Office worked closely with countries in building the capacity of child health staff in Saudi Arabia and Tunisia in planning for IMCI implementation at district level, using the planning guide developed by the Regional Office. Six countries are using the regional package on infant and young child feeding and capacity-building of physicians in Morocco and Yemen in line with this package took place.

Recognizing the need to improve the accessibility of newborn and child care, an intercountry orientation was conducted on use of the new WHO/UNICEF training materials on care for newborn and child at home by community health workers, and national plans of action to implement this package were developed. The orientation highlighted the need to adapt the special training for health providers with low or no literacy, and to plan and monitor health system supportive elements that are essential for relevant community interventions. Supportive national policies on which services and medicines community health workers would be allowed to deliver, availability of medicines and supplies, feedback and motivation schemes by the health system and community, were highlighted as priority issues.

While the issue of *adolescent health* and development has received the attention of the international community, it has not yet been recognized as a priority public health issue in many countries of the Region. In order to determine priority issues for promoting adolescent health and development in countries, the Regional Office conducted a regional situation analysis which highlighted the scarcity of age- and gender-specific data. Inadequate information on priority adolescent health and development issues, the absence of a relevant management structure within ministries of health in many countries and implementation of fragmented activities by multiple players, are all major challenges revealed by this activity. With these facts in mind, the Regional Office developed its vision for adolescent health and a regional road map that: indicates the need for, and suggests the mandate of, an adolescent health management structure within the Ministry of Health; indicates the role of the Ministry of Health in promoting adolescent health and development; demonstrates a comprehensive stepwise and phased approach that respects the multisectorality of adolescent health interventions; and describes the principles of adolescent health services. Mapping of adolescent health programmes within the Region was also conducted to guide efforts aimed at advocating for establishing an adolescent health management structure within ministries of health. As a result, two countries officially established an adolescent health programme (Sudan, Yemen).

Recognizing the need to provide evidence as a first step to guide adolescent health programme establishment and planning, the Regional Office developed a situation and response analysis tool (SARA) to guide countries in this process. The SARA report will serve as a baseline for adolescent health in the Region. It includes sections on relevant demographic, socio-cultural, economic and health indicators, as well as analysis of the response to adolescent health needs in terms of policies, legislation, strategies and interventions. The vision and progress were shared with countries and consensus obtained on the regional directions for adolescent health.

The Regional Office continued to provide technical support to *school health*. Countries are actively engaged in expanding national networks of health-promoting schools and

implementing the Global School Health Survey – an important tool to identify behavioural risk factors among adolescents. Technical support was provided to the 2nd Gulf Conference on School Health, held in Bahrain. The electronic tools for the regional network of health-promoting schools were reviewed and revised in collaboration with the countries and a set of methods to facilitate evaluation of health-promoting schools was also developed. A technical review of medical screening activities for schoolchildren in Oman was conducted. The Regional Office continued to advocate for the integration in schools of the school policy framework on implementation of the WHO global strategy on diet, physical activity and health. This policy has received increased attention and has been adopted in most countries.

With regard to *reproductive health and research*, the Regional Office maintained its technical support of national efforts to accelerate progress towards the attainment of international development goals and targets related to sexual and reproductive health, in line with the global reproductive health strategy. Five countries (Afghanistan, Djibouti, Jordan, Somalia and Yemen) developed their national strategies and programmes to achieve universal access to reproductive health care and started implementation. In-depth review of the national reproductive health strategy and programme implementation took place in Afghanistan, Pakistan, Sudan and Yemen and necessary actions were outlined. In order to ensure synergy among partner agencies while supporting national efforts to scale up national reproductive health programmes, a joint WHO/Partners conceptual plan of action and country workplans on implementing best practices in reproductive health were formulated.

Information, reporting and surveillance systems of national reproductive health programmes are still inadequate and inefficient in identifying the major determinants of reproductive health in most countries. In response to this situation, a framework for monitoring and evaluation of reproductive health programmes in the Eastern Mediterranean Region was developed. This guide document aims to strengthen technical capacity and to facilitate the obtaining of relevant and reliable data and information to monitor progress and evaluate performance of national reproductive health programmes. To put theory into practice, 18 country workplans aimed at strengthening reproductive health monitoring and evaluation were subsequently developed.

National capacity-building in reproductive health operational research was conducted for the first time, benefitting four countries (Jordan, Lebanon, Palestine and Syrian Arab Republic). Capacity-building in gender and rights in reproductive health continued to be supported in collaboration with the Institute for Women, Gender and Development Studies, Ahfad University for Women, Khartoum, Sudan. Five countries (Afghanistan, Egypt, Morocco, Sudan and Yemen) as well as three countries from the African Region have so far benefitted from this.

Recognizing the critical role of research in generating the evidence required for programme development and implementation, the Regional Office continued its support for relevant priority research activities. The Centre of Human Reproduction Research and Studies, National Family and Population Office, in Ariana, Tunisia, was designated a WHO collaborating centre for reproductive health research and training.

In support of *active and healthy ageing*, the regional survey on active, healthy ageing and old age care revealed increasing awareness among decision-makers and programme managers of the major challenges in promoting healthy ageing and the required response of the health sector at the national level. Eight countries have now developed policies on provision of comprehensive services for the elderly through primary health care. Four countries (Egypt, Islamic Republic of Iran, Jordan and Libyan Arab Jamahiriya) have successfully established multisectoral partnerships and shared vision through development of national strategies. Meanwhile, extensive efforts are being exerted to scale up the development of national strategies in another six countries (Bahrain, Oman, Morocco, Pakistan, Syrian Arab Republic and Tunisia). Five cities (Amman, Jordan; Tripoli, Lebanon; Islamabad, Pakistan; and Hamah and Deir Atiyeh, Syrian Arab Republic) showed interest in adopting the WHO age-friendly cities initiative. Extensive advocacy efforts were made to support other cities to adopt this initiative in Bahrain, Egypt and Libyan Arab Jamahiriya, and technical support was provided to evaluate national programmes and activities in Syrian Arab Republic and United Arab Emirates.

Efforts for closer cooperation and coordination for improving age-friendly primary health care were made with the South-East Asia Regional Office. The WHO tool kit on age-friendly primary health care is being adapted and translated in several countries. Egypt, with WHO's technical support, prepared a curriculum for training of primary health care workers on age-friendly principles and practices. The Regional Office developed a draft regional guideline on age-friendly legislation which was one of the main references used in preparing Al Riyadh Charter on Elderly Care, adopted in Riyadh, Saudi Arabia, in March 2009.

Future directions

Approaches to achieving this strategic objective require a country-led planning and implementation process for scaling up towards universal access to, and coverage by, maternal, newborn, child, adolescent, reproductive and ageing health care. Programmes and interventions must be integrated and harmonized, especially at the primary health care level. A continuum of care must be ensured throughout the life course, at home and in the community, by the health care system, with priority given to marginalized and underserved groups. Community-based interventions have to be promoted in order to increase the demand for services. The different roles and needs of women and men should be given due attention in order to optimize health outcomes. Member States and partners must commit resources and prioritize national action, with intensified advocacy and the mobilization of all partners around one concrete plan at the country level.

Strategic objective 5: To reduce the health consequences of emergencies, disasters, crises and conflicts, and minimize their social and economic impact

Issues and challenges

As in previous years, efforts under this strategic objective targeted emergency preparedness and disaster risk reduction, improved response, readiness and recovery, all aimed at health and human security and development. In addition to ongoing complex humanitarian emergencies in Afghanistan, Iraq, Palestine, Somalia and Sudan, the Region witnessed the human displacement of over 2.5 million people in northern and north-western Pakistan within a period of just a few weeks and of 200 000 people in northern Yemen. Renewed conflict displaced 350 000–400 000 people in southern Sudan, where 5 million people are now in need of humanitarian assistance, in addition to the existing burden of refugees from neighbouring Democratic Republic of the Congo. This is a largely ignored crisis. Somalia entered its eighteenth year of conflict, with a generation of children now coming of age without ever having lived through a single year of peace. The global financial and economic crisis exacerbated the existing vulnerabilities and complex emergency situations in transitional economies. The related increases in unemployment and fall in remittances further compounded existing complex and protracted emergencies, particularly in Afghanistan, Pakistan, Somalia and Yemen.

Somalia has endured 18 years of conflict, with devastating impact on a generation of children

Hostilities in the Gaza Strip, followed by the imposition of a blockade and tight access restrictions, severely restricted access to health care. Similarly the exit of international nongovernmental organizations from Darfur created a critical health availability gap. Acute drought in Djibouti and Syrian Arab Republic stretched thinner the limited resources of partners and host governments. The threat of pandemic (H1N1) 2009 added to the stress on low and middle-income countries.

Violations of international humanitarian law, including the Geneva Conventions, and security restrictions curtailing access to health services and basic amenities continued as the decade ended, exacerbating the challenges faced by vulnerable populations. The increasing frequency, magnitude and scope of the crises in the Region underscore the need to advocate for additional resources to support preparedness, response and recovery efforts, and the availability of humanitarian space to provide relief assistance, particularly within the health sector. Resources to support humanitarian health activities in crisis-affected countries continue to fail to meet the needs on the ground. Humanitarian health appeals in

A WHO-supported field hospital is erected in Somalia

all countries continue to be grossly under-funded. Funding available to the health cluster for the crises in Afghanistan and Somalia was at the lowest in several years.

Achievements towards performance indicator targets in each expected result

Under emergency preparedness and risk reduction, technical support was provided to Djibouti, Iraq, Jordan, Palestine, Pakistan, Somalia, Sudan, Syrian Arab Republic and Yemen in formulation of strategies and plans using an all hazards approach. Countries synergized efforts toward risk reduction for the health sector, with Oman taking the lead as the pilot country by investing in making health facilities structurally safer and capable of retaining functionality in the face of emergencies. A regional framework and health facility safety checklist were developed and a safe hospitals programme was instituted in Iraq, Oman, Pakistan, Sudan and Yemen.

In on-going humanitarian crises, WHO continued to lead the humanitarian response and coordination in the health sector, including communicable diseases and environmental health, with assistance from health partners in Afghanistan, Iraq, Palestine, Pakistan, Somalia, Sudan and Yemen. In tandem, strategic and technical support was provided to countries in transition, namely Afghanistan, Iraq, Pakistan, Somalia and Sudan in the area of health systems recovery.

Institutional capacity development continued with WHO's flagship public health pre-deployment training for national counterparts and stakeholders. Efforts in health cluster training and support included contingency planning and conduct of courses on management of public health in emergencies and health cluster coordination, focusing on emergency preparedness, response and recovery. At the regional level, operational capacity was strengthened through procurement of specialist response equipment, regional contingency planning, and continued regional interagency coordination and collaboration with other UN agencies. With incremental gains in security and peace on the ground, early recovery and rehabilitation activities in the health sector continued in Afghanistan, Iraq, Pakistan, Somalia and Sudan.

Future directions

Growing risks and vulnerabilities, urbanization, economic and social stressors, and an increase in the frequency, magnitude and impact of complex emergencies and natural disasters continue to threaten and scale back developmental gains in the Region. Evidence-based emergency preparedness strategies, policies and plans based on community resilience, vulnerability analysis and risk reduction using an all hazards approach, the only cost-effective and sustainable measure for the future, will be expanded. Advocacy for critical health needs and health care delivery challenges in protracted crisis situations will be increased,

as will coordination with stakeholders at the regional level. Increased focus will be placed on institutional capacity-building in terms of training, contingency planning, stockpiling and other response readiness interventions to improve predictability and effectiveness of emergency response. The Regional Office will also focus on documenting practice-based evidence and facilitating culturally relevant operational research to support community-based disaster preparedness and guide application of best practices in the areas of preparedness, response and recovery.

Strategic objective 6: To promote health and development, and prevent or reduce risk factors for health conditions associated with use of tobacco, alcohol, drugs and other psychoactive substances, unhealthy diets, physical inactivity and unsafe sex

Issues and challenges

Public health witnessed yet another year of immense challenges. The threat of pandemic (HINI) 2009, the global economic recession, the negative impact of climate change on health and the increasing vulnerabilities due to man-made and natural disasters are but some of the challenges manifested in compromised health and quality of life and increasing health inequities. These challenges are much more pronounced in the Eastern Mediterranean Region than any other WHO region, as revealed by the Burden of Disease Database published in 2008, where the rising burden of noncommunicable diseases (mostly due to an unabated increase in risk factors), the widening gap in promotive and preventive approaches compared with increasing reliance on curative care, and the complex emergency situations prevailing in seven countries make the population more prone to ill-health than any other WHO region. Health promotion, therefore, continues to struggle to position itself strategically and effectively and to articulate a mandate that enables it to be embraced by the findings of the Commission on Social Determinants of Health and World Health Report 2008. Political and development agendas continue to favour linear service delivery which is almost always inclined in favour of the curative-oriented or medical model approach. This translates into a huge resource gap between promotive/preventive programmes and curative programmes.

The success of the renewed vision for primary health care, therefore, will largely depend on the way the approach transforms itself to embrace health promotion and multisectoral action so that determinants lying outside the health sector are addressed. Each year vast resources are spent trying to modify human behaviours. While some interventions are successful, many fall short of their goals. Research shows that those interventions most likely to achieve desired outcomes are based on a clear understanding of targeted health behaviours, and the environmental context in which they occur. Health educators in the Region demonstrate enthusiasm, dedication and hard work. However, they also face a number of challenges. These include access to appropriate up-to-date tools on how to

engage in effective health education practice and confusion as to how health education can meaningfully contribute to the goals of health promotion.

Achievements towards performance indicator targets in each expected result

Strategic achievements in *health promotion* included the 7th Global Conference on Health Promotion, held in Nairobi, Kenya, which provided opportunity for health promotion experts in the African Region and Eastern Mediterranean Region to showcase their achievements. The Regional Office provided financial support for the conference as well as substantial technical support in planning and organization. This included the track on health literacy and health behaviour and input to the practical toolkit and the primer for mainstreaming health promotion which were presented in the conference. The conference concluded with the Nairobi Call for Action aimed at bridging the implementation gap in health promotion.

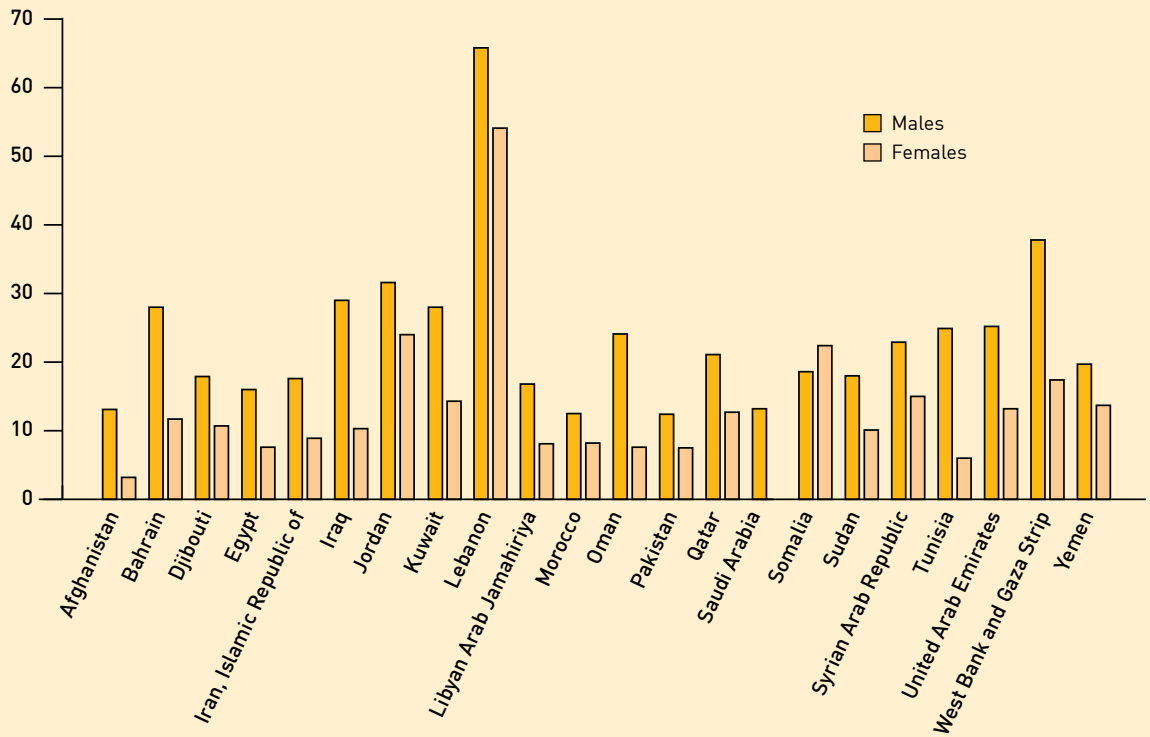
Building capacities among policy-makers and programme managers in health promotion planning, implementation and evaluation was the major focus of WHO's work with the countries. Fifteen countries benefitted from the knowledge and skills-based health promotion short course developed in collaboration with the Department of Health Services Australia. Other important initiatives were the introduction of health promotion diploma courses for programme managers and mid-level policy makers, in collaboration with the American University of Beirut, Lebanon and Health Services Academy, Pakistan, and conclusion of the 4-year PhD programme in community dentistry for dental surgeons from Islamic Republic of Iran, in collaboration with University of Helsinki. The Regional Office also developed a network of experts, academics and programme managers on health promotion with the aim of sharing knowledge, expertise and best practices, and also to extend support to countries where health promotion programmes are not fully developed.

In order to improve the finance base for health promotion programmes, the Regional Office started developing a regional health promotion financing framework in collaboration with the Regional Office for South-East Asia. Major focus was placed on supporting countries to develop national multisectoral health promotion strategies and plans. Plans and policies were developed in six countries (Bahrain, Jordan, Oman, Tunisia, Yemen and United Arab Emirates). The national strategic plan for Bahrain is a unique experience in the Region as it embraces a "whole of government" approach. Technical support was also provided to develop national plans for seven countries (Bahrain, Jordan, Islamic Republic of Iran, Lebanon, Morocco, Pakistan and Sudan) for oral health promotion, including water and salt fluoridation.

In order to find out the level of exposure of the population to different risk factors, risk factor surveys were conducted in three countries (Jordan, Oman and Syrian Arab Republic). These are in addition to the Stepwise surveillance now established in 11 countries. The Oman Healthy Lifestyle Project addressing three risk factors (tobacco, physical inactivity and unhealthy diet) was evaluated to assess the impact of the project on these risk factors. Five countries (Bahrain, Jordan, Islamic Republic of Iran, Lebanon and Morocco) were supported to conduct surveys at national level to upgrade the DMFT (decayed, missing and filled

teeth) index. To address physical inactivity and unhealthy diet, the two most important risk factors for communicable diseases, the Regional Office developed, through an extensive consultation process, a regional framework for developing national action plans for implementation of the global strategy on diet, physical activity and health. The positioning of health promotion to embrace the social determinants of health and primary health care was pursued, with the development, in collaboration with primary health care and community-based initiatives programmes, of a best practice case studies monograph addressing the social determinants of health. Training packages were developed for different levels of community workers and professionals for implementation of community-based initiatives interventions, particularly those addressing the determinants of health, as was an extensive evaluation tool for evaluating health promotion actions addressing the determinants of health in community-based initiatives programme areas.

Tobacco continued to be the most important risk factor causing ill-health, and *tobacco control* continues to be a challenge for the Region (Figure 1.3). Although there was increase in donor support, not all countries were covered by this increase. However, the increase in human resources at regional level allowed for increased presence at country level and better support to national level activities. As the Region moves closer towards the adoption of a second international treaty on tobacco control with a protocol on the illicit tobacco trade, the Regional Office

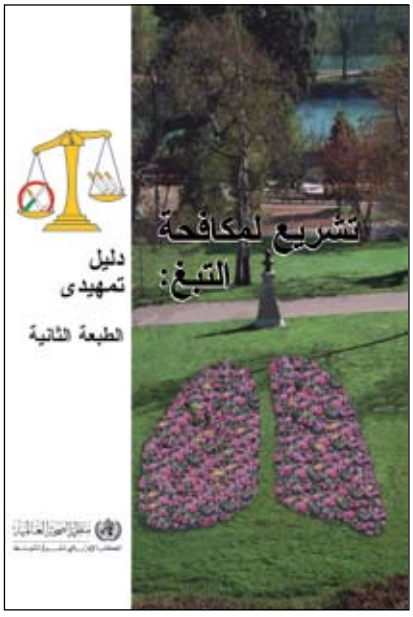


Source: Global Youth Tobacco Survey data (2001–2006). *WHO Report on the Global Tobacco Epidemic, 2008. The MPOWER package*. Geneva, World Health Organization, 2008.

Figure 1.3 Prevalence of tobacco use among young males and females (13–15 years)

expanded its efforts in areas such as taxation and implementation of the Framework Convention on Tobacco Control guidelines at national level.

Major focus was placed on supporting the completion of legislation in line with the Convention, mapping of obligations and finalizing a way forward, extending joint work with the Framework Convention Secretariat to cover needs assessment in countries, and providing technical support to strengthen national capacity and develop comprehensive plans of action. Egypt and Pakistan, in particular, were supported under the Bloomberg Initiative to Reduce Tobacco Use to complete their action plans on tobacco control and to strengthen implementation of the Convention with regard to demand reduction. Draft tobacco control legislation was reviewed for Egypt, Lebanon, Pakistan, Sudan, Syrian Arab Republic and Tunisia, and model legislation was developed in Arabic to support implementation of the Convention. Sixteen countries developed roadmaps for future implementation of the Convention and capacity-building to support the implementation of the Global Tobacco Surveillance System continued. Technical support was provided for development of national capacity and plans of action in Egypt, Pakistan, Saudi Arabia, Tunisia and Yemen, and for multisectorality in Egypt, Islamic Republic of Iran and Jordan. In order to enhance political support for tobacco control, parliamentarian work was supported in Egypt, Lebanon, Pakistan and Syrian Arab Republic. To enhance visibility of the work of tobacco control and attract media attention for prevention and control, television spots were produced in Arabic, English and French, World No Tobacco Day was promoted at regional and national levels, capacity was built among media personnel in collaboration with the Framework Convention Alliance and Johns Hopkins University, and two successful international tobacco control advertisements were adapted.



Substance abuse has been shown to contribute to major mental and physical illnesses in the Region. The Regional Advisory Panel on the Impact of Drug Abuse (RAPID) provided input to the global strategy on reducing the harmful use of alcohol, in accordance with resolution WHA61.4, and reviewed the Arabic translation/adaptation of the alcohol, smoking and substance involvement screening test (ASSIST) and opioid substitution treatment guidelines. The Arabic translation of ASSIST is now available and ready to be piloted in countries. The text was also translated into Farsi.

In order to enhance capacity among countries to effectively tackle the issue of substance abuse, technical support was provided to build local capacities in completion of the global survey on alcohol and health and the WHO ATLAS questionnaire on resources for treatment and prevention of substance use disorders.

The country profiles on alcohol use and substance use management resources were developed on the basis of the information collected and collated and were shared with countries for validation. It is expected that these profiles will help in development of evidence-based policies and strategies. The opioid substitution treatment guidelines developed by WHO are shared with the countries and technical support is being provided to adapt the guidelines for country use in Islamic Republic of Iran, Lebanon and Pakistan, with involvement of the WHO collaborating centre and Middle East and North Africa Harm Reduction Association (MENAHRA). In order to respond to the limited indigenous capacities in some countries, an 11-week training course was developed on mental health and substance abuse in primary health care and was conducted in Somalia to build up the local capacity to provide evidence-based and ethical care to the population.

Health education forms an important part of the health promotion activities currently occurring in countries of the Region. These activities are taking place in schools, workplaces, clinics and communities and include topics such as healthy eating, physical activity, tobacco use, mental health, HIV and safety. In response to the challenges mentioned, a number of countries expressed a need to strengthen capacity and skills in health education practice. A review was conducted of the current profiles of health educators and of the process of developing and evaluating health education interventions, in order to clearly identify the gaps and address them effectively. Two key achievements were realized as part of this work: a foundation paper providing a thorough review of models, tools and approaches, as well as core competencies of health educators and a framework describing how simultaneous actions on behaviour change and healthy public policies contribute to health promotion and are necessary to achieve desired behaviour change; and tools to review the process of developing health education interventions. So far the review was implemented in five countries (Bahrain, Egypt, Lebanon, Syrian Arab Republic and Tunisia). The preliminary results of the reviews show that health educators face a number of challenges in fulfilling their function: the place of health education within the Ministry of Health; the resources allocated to health education programmes; the profile of health educators; and continuing confusion about what health education is in relation to health promotion and other related disciplines. Training materials were developed on various topics, such as social marketing adapted to the regional context and a communication and health education guide for pandemic (H1N1) 2009, and campaign materials addressing child obesity in the United Arab Emirates were reviewed.

With regard to data generation on the health risk factors of schoolchildren, implementation of the Global School Health Survey was expanded, in collaboration with CDC, Atlanta and WHO headquarters. A key challenge is sustaining funds to enable implementation of the survey on a three-year basis to enable systematic trend analysis and development of relevant policies and programmes addressing key risk factor. The survey covered Palestinian refugee camps (in Jordan, Lebanon, Palestine and Syrian Arab Republic), as well as Pakistan, Syrian Arab Republic, Sudan, Tunisia and Yemen. A second round was also initiated in Morocco, Oman and United Arab Emirates.

The Regional Office sustained its work in school settings through three key activities: development of a guide to implement the

WHO school policy framework on diet and physical activity and of plans of action in 16 countries to develop and implement a policy or a programme to promote balanced diet and physical activity; capacity-building of teachers, in partnership with ISESCO, on health education concepts and tools, including tobacco control; and development of health education materials for school settings on pandemic (H1N1) 2009 and emergency preparedness.

Future directions

The Regional Office will continue to advocate for allocation of resources to health promotion and education; and to create opportunities and mechanisms where health promotion can be embraced to address the social determinants of health and create evidence for effective decision-making. Emphasis will be placed on: creating frameworks and mechanisms for implementation of the Nairobi Call for Action; providing guidance and standards on proactive use of health literacy in reaching out to individuals; curtailing the use/production of tobacco and illicit drugs through legislation, taxation and policy dialogue and engaging the media in a more proactive manner; mainstreaming health promotion through multisectoral and multi-stakeholder engagement; effective positioning of health education and initiatives aimed at behaviour change; and enhancing the financial resource base for health promotion, health education and risk factor reduction. Efforts will also focus on strengthening the multisectoral approach to tobacco control at national level which will facilitate the implementation of non-health measures to control tobacco use. Recognizing the role health education plays in pursuing health promotion, the Regional Office will continue to provide technical support for strengthening capacity of health educators and the development of health education materials for schoolchildren.

Strategic objective 8: To promote a healthier environment, intensify primary prevention and influence public policies in all sectors so as to address the root causes of environmental threats to health

Issues and challenges

Most of the disease burden in the Region could be reduced through the availability of environmental health interventions and strategies. However, health systems are not identifying the environmental determinants of health as a priority for improving public health. Rapid changes in lifestyles, urbanization and energy consumption could even have greater public health consequences in the future than at present, if the health sector fails to act on the emerging environmental hazards to health. This Region is one of the most vulnerable regions to climate change because of its arid nature and reliance on rain-fed food production. The Region is still struggling with traditional problems, such as water contamination and insecurity of drinking-water supplies, solid waste, indoor and outdoor air pollution, liquid waste management, and inadequate policies and public awareness for influencing these

policies. The arid nature of the Region poses demanding challenges, such as water shortage, extreme temperature changes and dust storms, which will increase with climate change. For effective health sector action, risks have to be reduced in the sectors and the settings where they occur – homes, schools, workplaces and cities, and in sectors such as energy, transport, industry and agriculture. In order to counter the economic and developmental determinants of environmental health risks, health must be at the centre of intersectoral action. A range of actions is required, both in the health sector itself and across sectors. Many countries need to develop their national environmental health preparedness plans for emergencies, and to improve the access to environmental health information for decision-making.

Achievements towards performance indicator targets in each expected result

Promoting WHO's environmental health norms and guidelines continued to be at the top of the priorities of the Centre for Environmental Health Activities (CEHA). Activities and services were offered to help countries in adopting WHO guidelines on drinking-water quality, wastewater reuse, and health care and solid waste management. Technical support was provided to the second phase of the regional initiative on water safety plans, with replicable models developed in Islamic Republic of Iran, Jordan and Oman. The WHO manual on water safety plans was translated into Arabic and Farsi, and capacity-building for the third phase of the initiative was supported. Technical and capacity-building support was provided for the promotion and adoption of the WHO guidelines on safe wastewater use in Bahrain, Egypt, Islamic Republic of Iran, Jordan, Morocco, Saudi Arabia, Syrian Arab Republic and Tunisia.

Pilot projects for development of model hospital plans were implemented in selected hospitals in Yemen. Also, equipment for treatment of health care and immunization waste was procured for two hospitals in Djibouti. CEHA also provided technical support to Oman and Syrian Arab Republic in the development of national guidelines on health care waste management.

With regard to support for countries to develop policies and actions, and to encourage and motivate the implementation of environmental health measures in healthy settings, including workplaces, schools, homes and the community, technical support was provided to several countries to adopt/adapt the WHO initiative on healthy workplaces. Member States of the Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates) have officially adopted the initiative, which has been widely accepted by the ministries of health and ministries of labour. Technical support and advocacy tools were provided to countries to develop and update national strategies and plans of action for occupational health and safety in accordance with the global plan of action on workers health 2008–2017. A survey questionnaire was distributed to countries to help develop the baseline data needed for developing national frameworks, following adoption of the regional framework for implementing the global plan of action in 2008. Technical support was provided to Kuwait, Oman, Pakistan and Yemen to strengthen national occupational health and safety systems and services, as well as technical and financial support for production of information materials. Protection and promotion of health care

workers is attracting increasing attention due to the active advocacy of WHO.

Regional and national activities were carried out to support countries in building capacity to develop policies and plans of action for strengthening environmental health and occupational health services in Afghanistan, Islamic Republic of Iran, Syrian Arab Republic, Sudan, Pakistan, United Arab Emirates and Yemen. A number of countries developed environmental health plans of action. CEHA also supported capacity-building to familiarize health professionals with the guidance and initiatives for influencing policies in other sectors. Laboratory support was provided to Afghanistan, Somalia and Yemen to strengthen environmental health surveillance, and to Islamic Republic of Iran, Saudi Arabia and Tunisia to develop policies and plans of action in the fields of electromagnetic frequency and nonionizing radiation. CEHA supported a study to assess the health impacts of development projects and policies and developed a strategic framework for action in this regard in four major sectors in Tunisia. CEHA provided technical support to Afghanistan and United Arab Emirates in formulating their national environmental health strategies.

Increased access to worldwide published environmental and health research (80% compared with 75% in 2008) was made available to professionals and institutions in Iraq, Jordan, Palestine and Yemen through Online Access to Research in the Environment (OARE) (in collaboration with UNEP and AGFUND) and the Health InterNetwork Access to Research Initiative (HINARI). The health and environment information centre of Iraq was further supported and started to provide its information services to users in all governorates.

Support for countries to protect health from the effects of climate change through development of regional frameworks for health sector action was a major focus of CEHA's attention. Technical support was provided for implementing a regional capacity-building initiative on health and climate change in Egypt, Islamic Republic of Iran, Lebanon, Morocco, Oman, Saudi Arabia, Syrian Arab Republic and Tunisia. Further support was provided to some of these countries to participate in the preparation of the health chapters of the National Communications to the United Nations Framework Convention on Climate Change, and to initiate health vulnerability assessments to climate change.

Future directions

Technical guidance and support will continue to be provided to countries for capacity-building, research and technology transfer, conduct of environmental health vulnerability assessment and situation analyses and to facilitate adoption of WHO guidance on different aspects of environmental health. WHO will continue to: support development and implementation of national frameworks for action on climate changes and health; strengthen capacity for monitoring trends and assessing the risks and health impacts of environmental and socioeconomic development; and improve access to reliable information to support national environmental health strategies and actions. Technical guidance and support will be provided to: improve chemical safety systems; secure basic occupational health services and integrate them into primary health care systems; operationalize healthy workplaces at national level; and protect and promote the health of health care workers.

Strategic objective 9: To improve nutrition, food safety and food security, throughout the life-course, and in support of public health and sustainable development

Issues and challenges

The burden of disease associated with inadequate nutrition continues to grow in countries of the Region. As in many developing regions, there is unprecedented nutritional and demographic transition, with a broad shift in disease burden. While problems of under-nutrition still exist, the burden of overweight, obesity and diet-related chronic diseases is increasing. This nutrition transition has already started to have a negative impact on health systems. Malnutrition remains the most serious health problem with consequences that are too grave to be ignored. It is the single biggest contributor to child mortality and thus to the 15% of the global burden of newborn and child mortality that occurs in the Region. It is estimated that 50% of deaths in children under 5 years of age is attributable to mild to moderate malnutrition. Several micronutrient deficiencies are still being reported from many countries, including iron, iodine, zinc, calcium, folic acid and vitamin A and D deficiencies.

Food safety issues are international and multisectoral. All sectors must be engaged in food safety risk management, food safety should be addressed throughout the continuum from "farm to fork", and any decision or approach should be science-based. In 2009, several global food contaminations were reported, the most notable being the contamination with melamine of infant milk formula manufactured in China. Food safety is a major public health issue in the Region, both for consumers and for manufacturers; almost all countries lack consumer protection legislation. Most of the food safety units in ministries of health require further technical development and capacity-building.

A child in Somalia is screened for malnutrition

Achievements towards performance indicator targets in each expected result

The Regional Office prepared a draft regional strategy and plan of action in nutrition which was launched in collaboration with sister UN Agencies and Member States. The draft strategy, which is the first in the Region, identifies the key health and nutrition challenges and sets forth guiding principles for countries through an active action plan and recommended interventions.

The new WHO child growth standards were introduced at national level in two

countries (Afghanistan and United Arab Emirates) bringing the total to 16 countries, and capacity-building in the Syrian Arab Republic was supported in collaboration with UNICEF. These standards have re-emphasized the importance of growth monitoring as an effective intervention to ensure proper infant and young child nutrition.

Capacity-building in nutrition surveillance was supported with participation of all countries and the support of key partners – CDC, UNICEF, FAO, World Food Programme and Johns Hopkins University. However, the availability of data on the prevalence of different nutritional disorders and the progress of interventions is a priority issue and efforts were made to upgrade the current regional databases. Sharing of information with national counterparts was also enhanced. Recommendations adopted at intercountry meetings with regard to the various technical issues relating to the database were implemented.

Development of national nutrition strategies and action plans was supported in Egypt, Jordan, Libyan Arab Jamahiriya, Qatar and United Arab Emirates. A national nutrition strategy was also developed for Somalia with the involvement of all United Nations agencies with a strategic drive towards improving the nutritional situation of the people, especially children and women. A framework was developed for a national nutritional survey in Iraq, in coordination with UNICEF, FAO and the World Food Programme.

In view of the escalating effects of the emergency situations and food crisis on food and nutrition security in at least eight countries, support was provided for capacity-building of country teams for effective preparedness and response. Four countries received support from the United Nations Central Emergency Response Fund (CERF)

A nutrition assessment exercise in Afghanistan

to respond to the food crisis and address national food and nutritional polices and strategies. Due to complex emergencies in several countries surveillance of emerging nutritional challenges will continue to be a priority.

With regard to improving micronutrient status of populations, technical review of the national project on flour and oil fortification by micronutrients in Morocco was undertaken and recommendations submitted to the Global Alliance for Improved Nutrition, which granted financial support to the project. Technical support was also provided to Jordan and United Arab Emirates to assess the situation with regard to salt iodization, in coordination with ICCIDD. The Regional Office also provided technical support to Afghanistan to submit a project proposal in nutrition to the Spanish Fund, in coordination with other agencies. The funds received are being programmed to support elimination of malnutrition among young children and women.

Technical support was provided to governments and partners affected by conflict and crisis to develop guidelines for managing moderate and severe malnutrition. The guidelines were tested in Sudan and will be revised for adoption by other countries.

International and national multisectoral food safety collaboration was enhanced in Member States of the Gulf Cooperation Council where work was initiated on development of a common food law to enhance food safety and security. Most countries have now participated in the global salmonella serotyping to improve detection, prevention, management of foodborne diseases and monitoring of food safety and quality. Most countries are members of WHO Global Foodborne Infections (formerly Salmonella Surveillance) Network and have laboratory capacity to identify and serotype salmonella and other related bacteria. Through its international training course, the Network supported laboratory capacity-building in epidemiological surveillance and hazard monitoring.

Pulsenet continued to provide support for capacity-building in molecular identification of zoonotic and nonzoonotic microbes to strengthen the surveillance of foodborne disease. Tunisia conducted a total diet study for food chemical risk analysis and exposure assessment. Apart from the countries in complex emergency situations, most countries now have adequate laboratory ability to detect common chemical hazards in food. Countries actively participated in Codex Alimentarius commissions and other international standard setting bodies. Many countries strengthened their microbiological and chemical laboratories to enable participation in the international food safety surveillance network. Following implementation of the International Health Regulations 2005 many Member States have integrated foodborne disease surveillance within their national disease surveillance. However, availability of foodborne disease and monitoring data remains limited.

The "Five keys to safer food" posters were translated into several languages of the Region and field applications were carried out in several countries. CEHA continued to provide support to countries in adopting WHO food hygiene practices, in collaboration with ISESCO. All countries are members of the International Food Safety Authorities Network (INFOSAN) and INFOSAN emergency network for rapid food alert systems.

Future directions

The draft regional strategy on nutrition will be submitted to the 57th Session of the Regional Committee for the Eastern Mediterranean for endorsement. The focus of the proposed strategy is to improve nutritional status of the population, particularly in early life, by preventing and treating malnutrition among pregnant women and children aged up to 2 years, promoting adequate micronutrient intake, integrate actions to address determinants of obesity and noncommunicable diseases, promote safe and healthy food choices, provide comprehensive nutrition information and education to consumers, improve nutrition services in the health sector, monitor and evaluate progress and outcomes, and increase political commitment. Special attention will also be given to emergency preparedness.

Food safety activities will focus on provision of technical guidance and support for strengthening capacities and monitoring food safety. Risk assessment capacity in food safety will be strengthened, and regulatory and legislative activities at national level will be enhanced. Harmonization of food safety systems in the Region will be an important focus. Organizational aspects of food safety and control systems, revision of food laws, regulations and standards, and introduction of the "Three 5s" posters and dissemination of the "Five keys to safer food" approach to promote consumer education in all sectors of the community will be accelerated.