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Regional Office for the Eastern Mediterranean
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Follow-up to the Special Session of the Regional Committee on Pandemic (H1N1) 2009 and progress on the response

Contents

1. Introduction

The rapid global spread of influenza caused by a novel influenza virus, pandemic (H1N1) 2009, first uncovered in April, prompted WHO to declare an influenza pandemic on 11 June 2009. This is the first declaration of an influenza pandemic in 41 years. The declaration also meant that the world is facing a health crisis of global proportions in which all people and countries are equally at risk.

So far, the severity of this current pandemic remains mild compared to the past influenza pandemics of 1918, 1957 and 1968. However, the virus's origin, speed of spread, transmissibility and severity of illness caused in some otherwise healthy people have not been seen before. The current influenza virus has spread at unprecedented speed across international borders. In past pandemics, influenza viruses have needed more than several months to spread as widely as the new H1N1 virus has spread in only a few weeks. Since the virus was first detected in Mexico and the United States of America between 23 to 26 April, pandemic (H1N1) 2009 spread to all WHO regions around the globe in less than nine weeks.

2. Current situation of pandemic (H1N1) 2009

2.1. Global situation

Globally, over 330 000 confirmed cases of pandemic (H1N1) 2009 were reported to WHO by 155 Member States up to 30 September since the outbreak first unfolded in April 2009. During the same period, at least 4014 deaths were also recorded from the affected countries (Table 1). However, the total number of reported cases represents only a fraction of the true burden of illness caused by this novel influenza virus, since the official case counts of pandemic (H1N1) 2009 are based on laboratory confirmation only. At present, with the virus widely established, many countries have stopped confirming every case that is reported while some countries selectively perform laboratory diagnostic testing of severe and hospitalized cases only. The death rate reported among the laboratory-confirmed cases globally is just over 1%.

Table 1. Laboratory-confirmed cases of pandemic (H1N1) 2009 as officially reported to WHO by States Parties under the International Health Regulations (2005), as of 30 September 2009

Region	Affected countries and territories in the Region	Number of confirmed cases	Number of deaths	Death rate among confirmed cases (%)	Trend
Africa	24	12 018	58	0.4	Increasing
Americas	35	137 147	3 020	2.2	Variable among countries
Eastern Mediterranean	21	12 348	76	0.6	Increasing
Europe	48	53 000	158	0.2	Unchanged
South-East Asia	11	30 293	340	1.1	Increasing
Western Pacific	19	85 299	362	0.4	Decreasing
Total	**158**	**330 105**	**4 014**	**1.2**	

2.2 Situation in the Eastern Mediterranean Region

In the Eastern Mediterranean Region, 21 out of 22 countries are now affected. Kuwait and the United Arab Emirates reported the first confirmed cases in the Region on 25 May 2009. Since then and up to 30 September 2009, 12 343 confirmed cases of pandemic (H1N1) 2009 including 76 deaths were reported in the Region (Table 2). Somalia is the only country in the Region which has not reported any case of pandemic (H1N1) 2009 virus infection so far. The virus reached the Region somewhat later and the epidemic is still in its initiation phase, with focal activities and localized to widespread community outbreaks seen in some countries. The number of human cases of pandemic (H1N1) 2009 is still increasing even in countries that have already been affected for some time. The death rate reported among the laboratory-confirmed cases in the Region is 0.6%.

Table 2. Laboratory-confirmed cases of pandemic (H1N1) 2009 infection reported in the Region, as of 30 September 2009

Country	Date of reporting of first confirmed case	Cumulative number of confirmed cases	Cumulative number of deaths	Trend
Kuwait	25/05/2009	2 459	7	Increasing
United Arab Emirates	25/05/2009	79	0	NA
Bahrain	26/05/2009	348	3	NA
Lebanon	30/05/2009	761	2	NA
Egypt	02/06/2009	932	2	Increasing
Saudi Arabia	03/06/2009	4 119	28	NA
Palestine	10/06/2009	259	1	Increasing
Morocco	13/06/2009	155	0	Increasing
Jordan	16/06/2009	354	0	NA
Qatar	16/06/2009	23	1	NA
Yemen	16/06/2009	210	4	Increasing
Oman	18/06/2009	1 680	19	Increasing
Islamic Republic of Iran	22/06/2009	420	6	Increasing
Tunisia	23/06/2009	73	0	Increasing
Iraq	24/06/2009	338	1	Increasing
Libyan Arab Jamahiriya	04/07/2009	21	0	NA
Syrian Arab Republic	04/07/2009	48	2	Increasing
Afghanistan	08/07/2009	49	0	Increasing
Sudan	17/07/2009	4	0	NA
Pakistan	06/07/2009	2	0	NA
Djibouti	15/08/2009	9	0	NA
Total		**12 343**	**76**	

*As reported by the States Parties to the WHO Regional Office for the Eastern Mediterranean in accordance with the International Health Regulations (IHR) (2005).

NA: Information not available

2.3 Geographic spread and overall trend

The geographic spread of the pandemic (H1N1) 2009 virus has expanded since the beginning of June 2009. International travel has facilitated geographic spread from the initial foci of infection in Mexico and the United States of America.

There is wide variation of geographic spread among different WHO regions and influenza transmission remains active in all countries of the world. In the South-East Asia Region, countries continue to see regional to widespread geographic activity, with increasing respiratory disease trend in some countries. In the Western Pacific Region, there is, overall, a decreasing trend of influenza-like illness activities with focal increases in some countries. In the Region of the Americas, influenza activity remains widely variable with low levels of influenza-like illness activities observed in most of the countries. However, countries of the northern hemisphere in the Americas are experiencing widespread geographic activities with increasing or unchanged respiratory disease trend. In the African Region, the epidemic is still in its initiation phase and except for South Africa, which appears to have just passed over into a second peak of influenza activity, countries are experiencing localized to regional spread. In the European Region, the situation remains vastly unchanged with a few countries experiencing localized geographic trends.

In the Eastern Mediterranean Region, localized as well as regional influenza activity continues to be reported, with increasing trends reported from the Islamic Republic of Iran, Kuwait, Oman and Saudi Arabia. Limited local transmission is observed in Bahrain, Jordan, Morocco, Palestine and Yemen. In most countries of the Region, cases of pandemic (H1N1) virus infection have been initially identified in urban centres with high intensity of transmission before wider or regional geographic spread within the countries.

2.4 Severity of pandemic influenza

The current influenza pandemic is classified as mild in nature compared to the past pandemics. The overwhelming majority of patients experience mild symptoms and make a full recovery within a week. The epidemiologic and serologic evidence from all outbreak sites shows that the virus remain of low virulence and has not mutated to a more lethal form. The intensity of the disease remains low to moderate, with limited impact on health care services across the globe.

2.5 Morbidity and mortality: epidemiological pattern

Age and sex distribution

To date, the vast majority of cases in the Eastern Mediterranean Region have occurred among adolescents and young adults. The median age of patients is 25 years. Cases ranged in age from less than 1 year to 57 years. Data compiled by the WHO Regional Office for the Eastern Mediterranean show that almost 80% of cases have occurred among the age group of 5–49 years (Figure 1). Males and females are similarly affected in most countries (52% of females versus 48% of males). The picture completely corresponds to what have been observed at the global level. Data from elsewhere also show that the age group of 5–45 years is most commonly affected. The age group of 50–64 years has experienced very few infections, and only 1% of cases occurred in patients aged over 65 years.

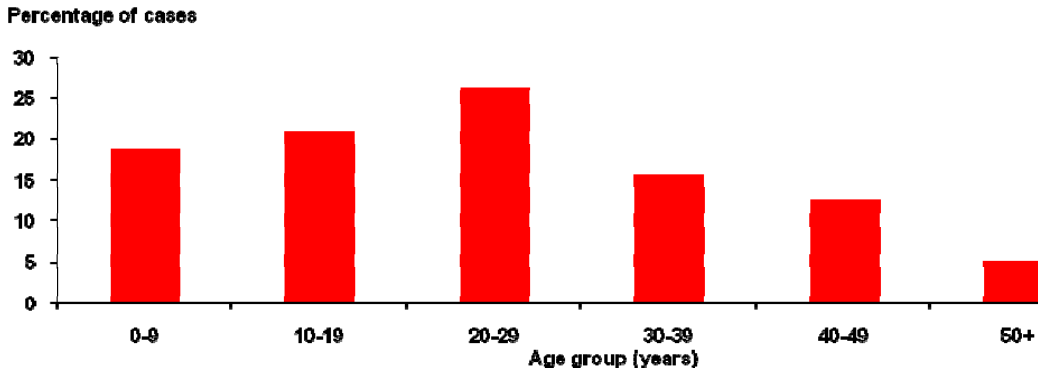

Figure 1. Age distribution of laboratory-confirmed cases reported from the Eastern Mediterranean Region, reported 2 May–31 August 2009 (n=200)

Transmissibility

Varying transmission patterns have been noted across countries. Current estimates of the secondary attack rate of pandemic (H1N1) 2009 infection range from 22% to 33%. Explosive outbreaks and amplifications of cases have been noted in schools and other closed community settings.

Clinical spectrum of infection and evolution

In most countries, the majority of cases were non-febrile, mild in nature and had more episodes of gastrointestinal complaints compared to seasonal influenza. About 50% to 80% of severe cases had underlying health or medical conditions. Severe cases and deaths have occurred in young and previously healthy adults. The majority of deaths (over 71%) have been reported among patients aged 25 to 64 years and the cause of the majority of deaths was severe viral pneumonia.

Hospitalization

Hospitalization rate of cases ranged from 2.6% to as high 11% across various countries. Higher hospitalization rates were observed in the younger age group.

Co-morbidities

A large proportion of hospitalized cases were reported as having one or more underlying health conditions. Data available from Mexico and the United States of America showed that between 50% and 80% of hospitalized patients had one or more co-existing medical condition. The most important risk factors reported include asthma, pregnancy, diabetes, morbid obesity, cardiovascular disease and immuno-compromised patients. In some countries (Australia and New Zealand), indigenous populations seemed to be at greater risk of severe complications than non-indigenous persons.

Case-fatality rate

Worldwide, just over 1% of all laboratory-confirmed cases reported to WHO resulted in death. However, based on surveillance data from some of the first affected countries and mathematical modelling, the case-fatality rate attributable to pandemic (H1N1) 2009 virus infection has been estimated to be between 0.1% and 0.4%. There is variation, though, in case-fatality rates reported among countries. This is partly due to delayed treatment of severe cases, limited access of some

population groups to health care as well as breakdown of health care services due to overwhelming patient surge.

Burden on the health system

To date, the overall impact of pandemic (H1N1) 2009 on health services is considered to be low, although some subnational health services have experienced a moderate impact, i.e. health care demands have put stress on the health care system above the usual levels. Several southern hemisphere countries have identified the need for intensive care as the greatest burden on health services during the winter season. Some cities in these countries reported as high as 15% of its hospitalized cases requiring intensive care while 10% of these cases required mechanical ventilation.

3. Special session of the Regional Committee of Pandemic (H1N1) 2009

A special session of the Regional Committee on pandemic (H1N1) 2009 was held at the Regional Office on Wednesday, 22 July 2009 in order to discuss the "rapid increase in the number of countries struck by the virus, the number of cases, the necessary arrangements to be taken during the session of Umrah and Hajj this year, and the necessary precautionary procedures to be adopted".

Following technical discussions, the Regional Committee issued resolution EM/RCSS1/R.1 in which it requested the Regional Director to implement several activities pertaining to mitigating the impact of the pandemic influenza in the Region. The current implementation status of these activities is shown below.

The regional task force on pandemic (H1N1) 2009 has been expanded into a regional technical committee with representatives from the Member States. The first teleconference with the members of the Regional Technical Committee was held on 29 September. Making use of the Egyptian experience, the teleconference discussed the composite pandemic severity index developed by the regional task force. Once finalized, this index can be used in the Region to measure the severity of pandemic.

A regional outbreak alert and response network has been set up involving a number of regional centres of expertise, and training was conducted for the regional outbreak alert and response team at the Regional Office. The team is coordinated by the Regional Office with support from WHO headquarters. Upon request from Member States, members of the team can be deployed rapidly to any affected country for outbreak control and response operations.

Three consultative meetings and two intercountry workshops have been held at the Regional Office, to support countries in pandemic response. An interim guidance document on clinical management of pandemic (H1N1) 2009 virus infection for countries of the Region was developed through an expert consultative meeting held at the Regional Office on 9–10 September. An interim guidance document on community mitigation measures for pandemic (H1N1) in educational settings was developed through a second consultative meeting held at the Regional Office from 14 to 15 September. The third of these consultative meetings was held on 23–24 September to develop a practical tool to assist countries in preparing their health systems for increased patient surge as expected during the coming winter. The Regional Office has also developed a guideline for use by the Member States on prioritization for vaccination against pandemic influenza.

An intercountry workshop on risk communication was held in Cairo from 29 to 30 July in order to support countries developing national risk communication strategies for pandemic influenza. A number of risk communication materials and messages were also developed by the Regional Office and shared with the Member States. An intercountry training workshop was held to support countries in development of a deployment plan for vaccines against pandemic influenza.

The Regional Office is working with NAMRU-3 and a number of other WHO collaborating centres in the Region to set up a surveillance system for influenza-like illness and severe acute respiratory infection. A technical mission was conducted by the Regional Office to Saudi Arabia in August and another mission is planned for Kuwait in October to set up sentinel surveillance for influenza-like illness and severe acute respiratory infection. The Regional Office has also mobilized financial resources in order to support countries of Region to respond to the current influenza pandemic appropriately. A sum of US$ 600 000 has been allocated, so far, to 17 Member States to support the ongoing public health response operations. Other operational frameworks are being used with all other United Nations as well as bilateral agencies in order to support a coordinated health response to the pandemic influenza at country level

Upon request, WHO has conducted technical missions to Egypt, Islamic Republic of Iran, Jordan, Morocco, Syrian Arab Republic and Tunisia to assess capacity for production of seasonal influenza vaccine. Egypt and the Islamic Republic of Iran have already received financial support from headquarters to assess technology to produce vaccine against influenza A (H5N1). Other interested countries in the Region remain in the early stage of building capacity for production of influenza and other vaccines.

All six low-income countries in the Region (Afghanistan, Djibouti, Somalia, Sudan, Pakistan and Yemen) will receive pandemic vaccine from WHO as donations. The Regional Office and headquarters are also engaged in active negotiation with vaccine manufacturers to secure as much pandemic vaccine as possible for the middle-income countries of the Region.

The Regional Office continues to track the regional pandemic situation very closely, and is advising the countries to calibrate their response strategies in accordance with severity assessment. To this end, the Regional Office regularly organizes teleconference with the national IHR focal points and disseminates weekly regional updates.

In consultation with the Ministry of Health of Saudi Arabia, the Regional Office is planning to organize a consultative meeting during the first week of November for heads of medical missions to coordinate precautionary measures for the seasons of Hajj and Umra.

During the Fifty-sixth Session of the Regional Committee, a side meeting has been organized with the Islamic Development Bank to explore possibilities for partnerships in order to develop vaccine manufacturing capacities among interested countries in the Region.

4. Lessons learnt: evidence and implications for future response strategy

Influenza pandemics are understood retrospectively. They spread throughout the world among the susceptible population with the epidemiological equivalent of a tidal wave. Applying the lessons learned to date from this ongoing influenza pandemic can help in driving the future response strategies on the basis of scientific evidence and knowledge gained so far on the virus.

Outbreak timeliness and geographic distribution

Most of the affected countries in the southern hemisphere reported that after mid July, disease activity in most parts of the country decreased (generally, a range of 6–7 weeks from first reports to peak event). In densely populated areas, there was a steep increase in the number of cases, with a sharp peak, followed by a steep decline. Once the virus has swept through a susceptible population, transmission may continue, but at a much lower intensity.

Co-circulation

Evidence from multiple outbreak sites in the southern hemisphere demonstrate that the pandemic (H1N1) 2009 virus can rapidly establish itself as the dominant influenza strain when it is co-circulating with other normal seasonal influenza virus. As of September, 58% of all influenza viruses detected globally have been found to be pandemic (H1N1) 2009 (57% in the northern hemisphere and 89% in the southern hemisphere).

Clinical characteristics

Clinically, this is a virus of extremes. It does not seem to have a middle ground. At one extreme are the mild cases and at the other extreme is a small subset of patients who quickly develop very severe disease. Data continue to show that certain chronic medical conditions, as well as pregnancy, increase the risk of severe and fatal illness.

Impact on health care system

In most of the temperate countries of the southern hemisphere, the pandemic put mild to moderate stress on the health services due to sudden surges of patients in hospitals, emergency department and outpatients during the peak of the outbreak. The overwhelming need for intensive care due to sudden increase in the number of severe cases was reported as the greatest burden on health systems.

Community mitigation measures

The effectiveness of community mitigation measures was difficult to ascertain and no definitive conclusions could be drawn due to variable level of implementation by the countries. The current evidence shows that once transmission is widely established in the community, cancellation or restriction of mass gatherings may not have any effect on limiting transmission.

Similarly, mathematical models have shown that school closures, when not combined with other mitigation measures, may have marginal effects on epidemic size if schools close too late in the course of a community-wide outbreak. There is still substantial debate over if, when and how school closure policy should be used. At global level, there is no consensus on the scale of the benefits to be expected from school closure.

Use of antiviral medicines

Growing international experience in the treatment of pandemic (H1N1) 2009 virus infection has shown improved clinical outcome when early treatment, preferably within 48 hours after symptom onset, has been instituted with antiviral medicines in patients with severe illness from influenza, as well as those in “at-risk” groups even with mild or uncomplicated influenza.

Pandemic vaccine

Pandemic vaccines have their greatest impact as a preventive strategy when administered before or near the peak incidence of cases in an outbreak. Recent preliminary data from clinical trials

suggest that a single dose of pandemic vaccine may be sufficient to confer immunity in healthy adults and older children, effectively doubling the number of people who can be protected with the current available supply of pandemic vaccine.

5. Planning assumptions for the Eastern Mediterranean Region

Monitoring of outbreaks from different parts of the world has provided some information to draw tentative conclusions about how the influenza pandemic might evolve in the coming months. Making any assumptions for planning is difficult because pandemics are not standard. A number of countries have considered two options in their planning: one for a mild pandemic where health and other services will be able to manage the demand for services; and the other where additional preparations will be needed to ensure that health and other services are able to cope with the increased influx of patients.

The co-circulation of both seasonal influenza virus as well as the pandemic (H1N1) 2009 virus during the coming winter season may trigger a stronger wave of pandemic in countries of the Region. It is impossible to predict when this new wave will sweep the Region, but it seems likely that countries could be hit considerably earlier than is typical for seasonal influenza. Different patterns of morbidity and mortality may emerge as the virus spreads to affect the low-income countries in the Region.

In the event the new wave comes to the Region, many more cases may occur at once. A large number of cases occurring at once, even if only a small proportion of these cases result in severe illness, may be enough to stress the health system. Large numbers of severely ill patients requiring intensive care will likely stress the health system and possibly disrupt the provision of care for other diseases. Some countries have made assumptions that up to a maximum of 30% of their populations could be affected, in a worst case scenario, if a new wave hits the countries entering into winter. Up to 15% of people infected with the pandemic (H1N1) 2009 influenza virus could develop clinical illness, while 1% of those clinically ill may require hospitalization. Up to 25% of those hospitalized may end up in intensive care units.

6. Challenges for countries of the Region

6.1 Surveillance for pandemic (H1N1) 2009

Currently, there is great variation in terms of surveillance capacity among the countries of the Region. The capability of the public health systems in the Region for early detection and identification of any unusual or unexpected health event remains a critical challenge.

6.2 Health care system

The health systems in the Region are at different levels of development. The capacity of the health system to respond and the vulnerability of the population may well determine the severity of disease and therefore its impact on the population.

6.3 Public or mass gatherings

The ongoing influenza pandemic may impose extra concerns and challenges to the public health authorities with regard to hosting religious and other mass gatherings in the Region. All types of mass gathering will require a well formulated operational plan by the health and other allied sectors involved in managing such events. The influx of large numbers of people, combined with any infrastructural changes required to support them, can place a severe strain on public services.

6.4 Access to vaccines

Ensuring equitable access to vaccines for the countries of the Region is a great challenge given the fact that few countries in the Region have either resources or production capacity for pandemic vaccines.

Data on status of access to vaccines for the countries of the Region show that 20 countries have identified their pandemic vaccine needs, totalling approximately 39 million doses of pandemic vaccine. Of these countries, 11 have either entered into a purchase agreement or are close to concluding a purchase agreement with vaccine manufacturers for 19 million doses, using national financial resources. The remaining 9 countries, with an assessed need of 20 million doses, have no definite access to pandemic vaccine. Six of these countries, Afghanistan, Djibouti, Pakistan, Somalia, Sudan and Yemen, are expected to receive pandemic vaccine supply from WHO as donations.

6.5 Access to antiviral medicines

Despite the fact that antiviral medicines are being produced by some countries in the Region, low production capacities, improper distribution strategies and counterfeit drugs may result in irrational use of the medicines.

6.6 Displaced populations

Many countries in the Region are in complex emergency situations. Current estimates are that over 76 million people in the Region are living in countries hit by humanitarian crisis or complex emergencies, with over 10 million people internally displaced. Disrupted health systems, fragile infrastructure, presence of underlying predisposing conditions and poor living conditions may further jeopardize the health status of these vulnerable populations in the event of a large pandemic wave.

6.7 Risk communication

Many countries in the Region have developed communication strategies that are mainly aimed at preparation and dissemination of routine information, education and communication materials. However, identification of the right messages, individualizing the materials and utilizing appropriate strategies for communication remain major challenges for the health authorities.

7. Strategic approaches

The current pandemic is spreading faster than any other influenza pandemic in the past. As transmission may resurge in the countries of the Region during the coming winter in the form of a new seasonal wave, it would be prudent for countries to scale up their current level of public health response to reduce mortality and morbidity, limit the burden of pandemic on the health care system and minimize the social and economic impact of pandemic.

Surveillance

The surveillance capacity of Member States needs to be sustained and geared up. Continuous surveillance will be essential to monitor further spread of the pandemic (H1N1) 2009 virus and its burden on health systems. The current focus should be on monitoring the trend of influenza-like illness and severe acute respiratory infections. Virological surveillance for the circulating pandemic or seasonal influenza strains will also be important.

Treatment

The health authorities and, in particular, all the health care facilities in the Region need to adopt and standardize treatment protocol for clinical management of patients infected with pandemic (H1N1) 2009 influenza virus. Using the interim guidance on clinical management of pandemic (H1N1) 2009 virus infection, the countries need to expand and standardize their national clinical management protocols for pandemic (H1N1) 2009 virus infection.

Vaccination

Since the current demand for pandemic vaccine will greatly outstrip supply, all countries in the Region should roll out a time-sensitive plan for vaccine deployment and ensure that mechanisms are in place to provide the vaccine to their populations as rapidly as possible, especially for those that need it most. Each country must also set its own priority groups for vaccination based on its epidemiologic situation and health system objectives for vaccination as per the recommendations of Strategic Advisory Group of Experts on Immunization (SAGE) set up by WHO. Countries should also consider strengthening their national regulatory authorities for fast-track licensing and registration of pandemic vaccines and implementing post-marketing surveillance to assess safety and effectiveness of these vaccines on a periodic basis.

Use of community mitigation measures

Countries should prioritize their community mitigation interventions in accordance with the stage of the epidemic. At the community level, the authorities should apply social distancing measures (such as class suspensions, reducing crowding of the mass transport systems and adjusting working patterns) on the basis of evidence and effectiveness of the interventions.

Restriction of public or mass gatherings

Countries will need to consider the cancellation or restriction of mass gatherings in accordance with the stage of evolution of the epidemic. In all cases, the determining factor should be the consequences of such mass gatherings on further disease transmission in the community. Individual and household level public health measures could be an alternative to cancellation.

In view of the special circumstances and the current threats from pandemic influenza during Hajj and Umra, the public health measures recommended by the international consultative workshop held in Jeddah from 27 to 30 June 2009 should be fully adhered to by all countries wishing to send pilgrims to Saudi Arabia.

Risk communication

Good risk communication will be vital, as underlying causes and risks surrounding the pandemic are not yet clearly understood and recommendations may change as more evidence becomes available. Public health officials need to convey health messages to the general public as well as to health care workers in a strong, consistent, easily understandable and actionable manner.

Infection prevention and control

The current pandemic situation should be utilized to improve infection control programmes in and out of health care facilities. It is critical that health authorities across the Region implement appropriate infection control programmes in order to minimize the possibility of transmission of pandemic (H1N1) 2009 virus infection associated with health care.

Information sharing in accordance with international health regulations

Standardized and coordinated international response will be critical for the management of the pandemic at regional and national levels. Member States will need to maintain information flow with WHO in a consistent and continual manner that may contribute to better understanding of the evolving features of pandemic (H1N1) 2009 virus infection and guide appropriate response strategies.

Leadership of the health sector

Never before, in the history of contemporary public health, have such opportunities emerged for the health sector to demonstrate leadership and commitment to fight a global health threat. Society will count on the leadership of the health sector in every country to guide it wisely and fairly through the complex challenges that lie ahead.

Surge plan for the health system

The health system of each of the countries in the Region will need to have its own surge plan for expanding capacity for providing care to the large influx of patients with influenza-like illnesses that is anticipated in the coming winter. The surge plans must be able to: incorporate changes as and when needed; ensure mobility of health care personnel; support triage of specialized services; and shift additional resources in order to ensure continuity of health care and basic health services provision.