The revised international health regulations offer a framework that can be used by host countries to organise public health activities for mass gatherings. From June 8, to July 1, 2012, Poland and Ukraine jointly hosted the Union of European Football Associations European Football Championship Finals (Euro 2012). More than 8 million people from around the world congregated to watch the games. Host countries and international public health agencies planned extensively to assess and build capacity in the host countries and to develop effective strategies for dissemination of public health messages. The effectiveness of public health services was maximised through rapid sharing of information between parties, early use of networks of experienced individuals, and the momentum of existing national health programmes. Organisers of future mass gatherings for sporting events should share best practice and their experiences through the WHO International Observer Program. Research about behaviour of large crowds is needed for crowd management and the evidence base translated into practice. A framework to measure and evaluate the legacy of Euro 2012 is needed based on the experiences and the medium-term and long-term benefits of the tournament.

Introduction
Every 4 years a major sporting event—the European Football Championship—is held under the auspices of the Union of European Football Associations (UEFA). For the third time in history, two countries—Poland and Ukraine—jointly hosted the final stage of the European Football Championship 2012 (Euro 2012), from June 8, to July 1, 2012. 16 European football teams competed in 31 matches in eight cities in the two countries (appendix). More than 8 million fans from around the world congregated across stadia and official fan zones to follow the games.1

The tournament was the culmination of years of preparation by the co-hosting countries. Mass gatherings such as Euro 2012 require careful planning to manage acute public health risks with potential international effects.2 Preparations began in 2007, after Poland and Ukraine were chosen to host the tournament. Early preparation enabled the host countries to create a public health legacy, by using the political momentum generated and financial resources to invest in building capacity, targeted health interventions, and risk management strategies. Euro 2012 was also a unique opportunity to further improve collaboration between two large WHO member states in WHO’s European region.

Establishment of a health legacy has featured in several sporting mass gatherings and is an increasing priority for planning authorities.3–5 The key underlying question addressed in this report is not whether organisers should aim to create a legacy, but how. We draw from a small but increasing body of knowledge about the process for other mass gathering events.5–8 The panel shows potential health legacies arising from Euro 2012, and in this report we explain how WHO and its partners collaborated to convert planning and implementation into a legacy with a broad ranging programme of work that addresses infectious, chemical, and non-communicable hazards to health. Using Euro 2012 as an example, we provide technical and policy information that might be useful for planners of future mass gatherings. We also address in key messages the need for further attention, particularly in risk communication and data gathering. The overarching legal and strategic framework of WHO’s work on mass gatherings, including sporting events, religious pilgrimages, cultural events, and music festivals, is the 2005 International Health Regulations, which provide a framework for planning, preparedness, and establishing a legacy of mass gathering events (appendix). These regulations were adopted by the World Health Assembly in May, 2005, and came into force in

Search strategy and selection criteria
We searched PubMed (Jan 1, 2005 to Dec 31, 2013), Embase (Jan 1, 2005 to Dec 31, 2013), the WHO website, and Google. We used the search terms “mass gatherings” or “crowds” in combination with the terms “sporting events” or “football”. We selected publications in English from 2005–13, but did not exclude commonly referenced older publications. We also searched the reference lists of articles identified by this search strategy and selected those relevant to football events and mass gatherings. Review articles and websites about mass gatherings and sporting events are cited to provide more details.

Lancet mass gatherings medicine 3

Euro 2012 European Football Championship Finals: planning for a health legacy


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This is the third in a series of three papers about mass gatherings medicine

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Health legacies arising from Euro 2012

The public health legacy of a mass gathering can be defined as the positive or negative lasting effects resulting from the event. Some potential health legacies from Euro 2012 are:

- Improved implementation of International Health Regulations, through increased communication between National Focal Points in Poland and Ukraine
- Improved core capacity related to the International Health Regulations and ability to detect hazards through increased diagnostic and reporting ability from enhanced laboratory services
- Improved working relations between country border agencies, leading to improved hazard detection at borders, through joint preparation exercises and work throughout the tournament
- Improved private-public partnerships related to public health, through collaboration between UEFA, ministries of health, WHO, and European Centre for Disease Prevention and Control
- Increased awareness of vaccination campaigns, through the use of social media to disseminate information in relation to the tournament
- Health promotion, through alcohol-free stadia and a smoke-free tournament
- Better preparation for future mass gathering events through dissemination of lessons learned in reports, publications, and future training
- Increased preparedness for public health emergencies and chemical, biological, and radiological events through assessments and tests of emergency plans and staff training

June, 2007; they are legally binding for all WHO member states. The regulations establish fundamental global legal requirements for all states with regard to national and international detection, investigation, and response to public health risks, including those that arise from international mass gatherings.

We gathered and collated information about the health aspects of Euro 2012: first, all WHO activities related to pre-event planning and preparedness, and implementation during the football championship; second, collaborations between WHO, the co-hosts, the European Centre for Disease Prevention and Control (ECDC), and UEFA; and third, baseline and event-specific structures for surveillance implemented by Poland and Ukraine for Euro 2012.

We compiled a descriptive review of activities implemented by WHO. We assessed these activities on the basis that they were used for Euro 2012 and that they involved active collaboration with partner organisations and countries. A limitation affecting our conclusions was that the quantitative data came from different sources and were gathered by use of different methods.

Assessment of risks, planning, and preparedness

The setting

Euro 2012 had several distinctive characteristics. It was a large international sports event; it was held in two countries—one country was a member state of the European Union and the other was not—the two countries have different national languages; and the countries have different time zones. As a single mass gatherings event, Euro 2012 therefore needed a great deal of local, national, and international coordination and organisation. UEFA and its local organising committees set out the organisational milestones, requirements, and minimum standards for official tournament sites in Poland and Ukraine, but public health and health-care provision outside of the official stadia were the sole responsibility of the host countries (personal communication).20,21 The large amount of cross-border travel between Poland and Ukraine meant that travel measures implemented at points of entry had to be enhanced to accommodate not only the arrival of visitors from abroad, but also the increased traffic of teams and spectators. Enhanced surveillance at border crossings therefore became a key focus for international collaboration. Lessons learnt from similar mass gatherings were relevant to the organisers of Euro 2012.12–17

Health risks at Euro 2012

Mass gatherings are associated with several risks to health, including infectious and non-infectious threats. Crushes or stampedes caused by crowding, extreme weather (both hot and cold), high stress, instances of terrorism, and disasters have been reported at mass gatherings.16 Outbreaks of infectious disease have also been reported.19–22 Outbreaks have occurred through faecal–oral transmission (including food-borne and water-borne infections); respiratory transmission (including influenza, mumps, tuberculosis, measles, and meningococcal meningitis); zoonotic transmission (including *Escherichia coli* 0157 and leptospirosis); and vector-borne transmission (including malaria, dengue, and chikungunya).19

Health risks to visitors and local communities during Euro 2012 were assessed at an early stage.21–25 Of the health risks identified, most related to the introduction, dissemination, and exportation of endemic or non-endemic infectious diseases; heat and alcohol; food and water safety; and risks from chemical, biological, and radiological hazards. Some vaccine-preventable diseases—such as measles and rubella—presented significant risks in the run-up to the tournament because several countries in Europe had large outbreaks in 2011, and 2012—notably, France, Poland, Spain, UK, and Ukraine. International travel for mass gatherings could increase the risk of spread.26–27 In May and June, 2011, Ukraine reported 17 laboratory-confirmed cases of cholera close to Euro 2012 sites.28 An international team that included mass gatherings experts from WHO and the ECDC travelled to Ukraine to investigate the outbreak, assess any risks posed to the tournament, and propose specific recommendations.

Planning and preparedness

Early planning and preparedness for mass gatherings is important because of the coordination between sectors and improvements to systems needed to deal with potential risks irrespective of the type of hazard.29 Euro 2012 became a focus after the international mass gathering observer programme was convened by WHO during the 2010 FIFA World Cup in South Africa.30 The aim of WHO’s
programme is to transfer knowledge and experience from one event to the organisers of future events. This continuity helps to ensure that each time planning starts for such a mass gathering, host countries can benefit from the lessons learned by other countries. WHO has collaborated with Public Health England to produce a web-based Mass Gathering Toolkit that enables countries to measure and assess their progress in preparing for specific events, covering 12 areas considered essential for mass gathering planning. The Toolkit was translated and provided to both host countries so that they could assess their progress.

The emergency preparedness of public health and medical services in response to many casualty events during mass gatherings has been described previously.34-36 In 2009, Poland, Ukraine, UEFA’s local organising committees, and WHO collaborated with the European Commission Directorate-General for Health and Consumers and the ECDC to strengthen health-system preparedness and to improve international collaboration.32,33 Based on a set of in-country assessments, activities focused specifically on emergency medical preparedness for Euro 2012. The two host countries participated in national training programmes to prevent and manage public health emergencies through emergency preparedness and risk management strategies.

WHO and Ukraine undertook safety evaluations of six officially designated hospitals in four cities for Euro 2012 with the hospital safety index.34,35 Ukraine also created a comprehensive emergency medical services plan that included roughly 100 ambulances, the identification of 2000 dedicated hospital beds, and the creation of three mobile disaster teams in the cities.

International travel health

In collaboration with Poland and Ukraine, WHO and UEFA published and distributed a detailed leaflet about travel health to ticketholders.37 The leaflet was posted on several websites (including those of UEFA, airlines, national ministries of health, and in the official tournament brochure) in six languages and linked from the ECDC website. The travel health messages centred on provision of information about where to go and who to call for health care, key risks for travellers, and relevant recommendations. Specific guidance about routine vaccinations (including for measles and rubella), influenza, food and water safety, diarrhoea, sexually transmitted infections, tuberculosis, and rabies were also provided to visitors. Routine vaccinations were also the subject of a social media campaign by WHO, implemented through national football team physicians with access facilitated by UEFA. WHO urged team physicians to call on their players to use Twitter to raise awareness about the importance of vaccinations. The tweet was disseminated in 15 languages, and read: “Travelling to the UEFA football championship (Euro 2012)? Make sure your vaccinations are up to date”.

Laboratory capacity

Countries hosting mass gatherings are often expected to strengthen capacities for laboratory confirmation and diagnosis of circulating infectious diseases during the event, both in terms of throughput (demand might exceed normal capacity) and diagnostics (should unusual outbreaks occur).3 For Euro 2012, Poland’s assessment of laboratory requirements concluded that during the tournament, microbiological diagnoses would use a laboratory network connected to health-care facilities, provincial and regional laboratories, and other national laboratories in the military and civil protection sectors. Ukraine assessed laboratory services with WHO’s Mass Gathering Tool and planned to enhance microbiological services and improve its capacity to detect, investigate, confirm, characterise, and contain public health risks.

International coordination

In the final preparatory phases for Euro 2012, several meetings were held with Poland, Ukraine, WHO, and ECDC to focus on international support for surveillance and response during the tournament. Such support enabled crucial coordination to ensure that systems would work well together and met all needs. Specific measures taken to increase coordination between the two host nations included the development of standardised templates for reporting of disease data, joint risk assessments, and event-based surveillance. A multicountry workshop about implementation of the international health regulations (held in Kiev in April, 2011) included training for mass gatherings and enabled National Focal Points—centres designated by each nation to liaise with WHO under the International Health Regulations—of Poland and Ukraine to have further discussions about Euro 2012. The meeting focused on technical questions of collaboration, including ensuring mechanisms for case notification, risk communication, and information sharing between stakeholders during Euro 2012. It also included case scenarios for participants to practise real challenges, such as how to detect, assess, and respond to public health events of international concern during a large mass gathering. Many of these initiatives drew substantially on the experiences gained from previous events.3

Implementation of public health measures during Euro 2012

Operational periods for both host countries began in late May, 2012, and ended in July, 2012. In both countries, national operations centres were established to coordinate tournament activities. Enhanced surveillance is a key requirement at mass gatherings.3,35,37 Poland and Ukraine both improved their routine disease surveillance systems. Indicator-based systems for surveillance in both countries were strengthened through a higher frequency of reporting; immediate notification of priority diseases, syndromes, or unusual events; and wide sharing of epidemiological reports (including with international
organisations such as WHO and ECDC. Enhanced surveillance was implemented in all host cities and other important locations (e.g. points of entry and tourist destinations) or for key notifiable diseases from the country (personal communication). 18

Figure 1 shows how indicator-based surveillance information was shared during Euro 2012 within Poland’s National Institute of Public Health. Event-based surveillance at local and state levels, and at points of entry, was also included in Poland’s enhanced surveillance for Euro 2012. Once information reached the Ministry of Health, it would be assessed daily and, if required, discussed at the meetings of the National Coordination Committee for Euro 2012, a high-level body charged with decision making for the operational period of Euro 2012.

Ukraine planned a constant service for disease surveillance and risk assessment during the tournament period. This process would be managed through a virtual operations centre that gathered enhanced surveillance from the four host cities and Odessa (as a tourist destination) and reported to the central sanitary epidemiological station and WHO on a daily basis. Priority diseases were notified immediately to the central level in line with Ukraine’s standard emergency procedures for the tournament. Figure 2 shows how indicator-based surveillance information was shared in Ukraine during Euro 2012. Information was also shared each day between Poland and Ukraine. Other interactions, which occurred at many levels, included daily communications between the international health regulations National Focal Points to discuss ongoing public health events.

The event phase, for WHO purposes, ran from June 1 to July 8, 2012. WHO activities during this period were undertaken from four locations: the headquarters in Geneva, the WHO Regional Office for Europe in Copenhagen, and the Poland and Ukraine country offices. The appendix shows WHO’s Euro 2012 management structure and UEFA’s concept of operations for Euro 2012.

Daily interactions occurred between many partner organisations for Euro 2012. The Polish and Ukrainian ministries of health participated in a daily all-hazard risk assessment at the national operations centres; provided relevant, non-confidential international event-based surveillance; and provided specific mass gathering expertise. In Ukraine, primary data and risk assessments were reported between WHO and the Ministry of Health each day.

The ECDC shared situation reports and risk assessments every day; supported validation and information exchange; provided technical support for surveillance and response for mass gatherings, including through the WHO Virtual Interdisciplinary Advisory Group; placed a European Programme for Intervention Epidemiology Training fellow at the WHO Ukraine Country Office, who contributed to daily event and media surveillance and risk assessment during Euro 2012; and participated in weekly WHO summary teleconferences.

WHO was given a seat at UEFA’s virtual operations centre and provided input to UEFA’s concept of operations, daily assessments of information about UEFA operations management system, and received UEFA Operational assessments of risk.

The ECDC tailored epidemic intelligence for infectious diseases throughout the tournament by screening and searching the web. To do so, ECDC used services such as MediSYS, PULS, and The Global Public Health Intelligence Network, and the communicable disease network of EpiNorth. The ECDC produced a daily bulletin of relevant information based on validated and non-validated sources and shared it with Poland, Ukraine, and WHO to supplement their own surveillance.

Event-based surveillance was also done by WHO to support national structures in Ukraine (figure 3). Each day, WHO assessed risks to public health in terms of potential effect on Euro 2012, requirements of a national response, potential response under the international health regulations, and potential effect on the hosts. These assessments were shared across WHO regions, with partner organisations such as the ECDC, and with WHO’s mass gathering expert network: the Virtual International Advisory Group.

Public health interventions at Euro 2012: preliminary results

During the tournament, no significant threats to public health were detected in either host country and minimum effect was noted on the surge capacity of health-care services. Reports for WHO suggest that the health-care services were well organised and coped well with the influx of visitors. 19 Several analyses can be done with data gathered at mass gatherings.

Figure 1: Provision of indicator-based surveillance information during Euro 2012 in Poland, within the National Institute of Public Health

A medical committee was established in each host city. These committees included representatives from hospitals, outpatient clinics, sanitary inspections, medical rescue units, and other rescue services. The coordinator of medical care and rescue was part of the National Medical Committee UEFA Euro 2012—a body coordinating preparations and actions during the tournament.
WHO’s risk assessments
On the basis of indicator-based surveillance received by Poland and Ukraine during the event, 69 risk assessments were done for new or ongoing public health risks.\(^2\) In Poland, of the 30 risks assessed, almost all were related to infectious and food-borne diseases (96%). In the Ukraine, 39 new or ongoing risks were assessed. Infectious and food-borne disease were the most common risks assessed (82%, with most related to a measles outbreak), and the remainder were related to potential chemical and radiological threats (all non-deliberate). All new or ongoing public health risks were deemed to have little or low effect on the tournament, with the exception of a case of legionnaire’s disease (deemed to be of potential moderate effect on the tournament).

Official and unofficial media sources were monitored, both as part of event-based surveillance and to gauge interest in the event. Overall, WHO assessed 170 media articles related to the tournament and documented these articles in internal situational reports (figure 4), with most related to communicable disease, violence and injuries, and patient safety.

Data from routine and event-based surveillance
According to nationally reported data, 1299 cases of acute gastroenteritis occurred in host cities in Ukraine during Euro 2012, but the daily reporting remained consistently below the epidemic threshold determined by Ukraine (personal communication). 109 cases of measles were reported in Ukraine host cities during the tournament, of which only one occurred in a foreign visitor. This number represented roughly 10% of new cases reported across Ukraine over the same period.\(^3\)

Data from the two countries gathered from official venues and health-care facilities dedicated to Euro 2012 show that increased referrals to health care were associated with official match days (personal communication; table). Although data gathering at stadia was restricted to the days when matches took place, data from fan-zones were gathered every day. On match days, 3–7 times as many patient presentations from stadia and fan-zones occurred compared with baseline (no match in either country). On match days in the neighbouring country, the use of medical services still increased, but to a lesser degree: 1.5–4 times the baseline. Match days with crowd unrest were associated with more medical interventions than usual for match days, but had no effect on hospital admissions. This result might be explained by the absence of severe crowd disturbances during the tournament; the effect of severe disturbances might differ greatly.

In Ukraine, 1350 people sought medical help during the tournament (from emergency medical services, outpatients, and hospitals), a mean of 56 cases per day (appendix). Of those presenting, around 57% were thought to be foreign and 43% Ukrainian. Only 2% of patient presentations were ascribed to infectious diseases (personal communication).

However, this finding might be a result of different healthcare seeking behaviour for infectious complaints.

Key lessons for organisers of mass gatherings
Euro 2012 provides several important lessons for future organisers of mass gatherings. These lessons are applicable to all mass gatherings and require further attention from the public health community.

Figure 2: How surveillance data were shared from the local to the regional and central levels in Ukraine during Euro 2012
The three control levels are used at all times in Ukraine, but during the tournament, epidemiological data were reported more frequently (daily, rather than weekly) for assessment and action in the context of Euro 2012 and the International Health Regulations. Times show the deadline for reporting surveillance information each day. SESs are units run by the Ministry of Health, which are responsible for all disease surveillance activities. SES=Sanitary Epidemiological station.

Figure 3: Sources of event-based and indicator-based surveillance
Early planning is better planning. The FIFA 2010 World Cup and subsequent publications that codified the World Cup experience were useful for those involved in planning and preparing for Euro 2012, both for WHO and for the host countries. Early planning and preparedness activities involving co-hosts result in sustainable benefits if they exploit the momentum of ongoing national programmes to focus on the upcoming event. Collaborative projects for emergency preparedness and crisis management began with generic assessments, which stimulated a series of follow-up activities to prepare health systems for Euro 2012 and to further update the development of national action plans for health crises. Partner organisations, countries, and specific event-focused organisations should develop relationships with each other as early as possible when organising a mass gathering event. Links between WHO and UEFA enabled the two organisations to amend their plans to accommodate joint activities and to identify specific areas where a health legacy could be created.

The 2005 International Health Regulations can be used by host countries to drive activities for mass gatherings from planning to implementation. In Euro 2012, this principle was shown several times. Under the framework provided by the regulations, Ukraine reviewed its laboratory capacity and worked with WHO to assess the need for additional capacity for Euro 2012. Poland strengthened its implementation of the International Health Regulations at points of entry, and seven airports were assessed and notified to WHO as meeting the requirements according to these regulations.

During the tournament, standardised daily reports shared between the co-hosts and WHO included details of risk assessments and requirements under International Health Regulations. These reports facilitated a change in focus from a national to an international point of view and enabled all parties to communicate with shared understanding and terminology. International Health Regulations also provided a means through which the tournament co-hosts could, if needed, mount an international response. National Focal Points in Poland and Ukraine were included in national plans and received additional training to enable them to quickly share International Health Regulation information during the tournament. The International Health Regulations could also be used to assess the health legacy of a mass gathering, but this approach should be studied further to develop an appropriate evaluation framework and test it against other assessment methods.

Many shortcomings identified from Euro 2012 will help to address future needs for research and data gatherings at mass gatherings.

The development of a minimum dataset, with an agreed approach to classify the presenting complaints of attendees, would enable data to be compared across events and locations. Further reporting of patients’ presentations might contribute to a better understanding by the mass gatherings research community of possible associations between patient complaints (eg, alcohol use and injuries). Increased coverage of reporting, including from healthcare centres beyond official mass gathering venues, could also improve information about presentation rates. Estimates of the number of people expected to attend a mass gathering could be made more accurate by further collaborations with partner organisations such as UEFA.

Last, although much of the enhanced surveillance focused on infectious diseases, they contributed to only a small proportion of presentations at official Euro 2012 venues. This finding is similar to the situation at the London Olympics 2013. Further studies should also assess the gathering of follow-up data from visitors for a longer period to account for the incubation periods of infectious diseases.

Future developments

Health advice for people travelling between countries and the communication of health risks to visitors to mass gathering need further research, as shown by an analysis of Euro 2012. During Euro 2012, WHO piloted new mechanisms to distribute messages about travel health and the effectiveness of these efforts should be investigated.

Organisers of mass gatherings should make every effort to share their experiences—through the WHO international observer programme and other means—so that organisers of future gatherings can plan as best as possible. The role of the organiser should not end when the event ends: the value of sharing best practice with other organisers cannot be understated.
Another promising subject of research is the behaviour and physics of large crowds, and the contribution of this research to the management of crowds at mass gatherings.13,14,25–30 A detailed analysis of crowd behaviour at Euro 2012 was beyond the scope of this paper, but a clear need exists to bridge the gap between academic studies and practices at mass gatherings.

Work should be done to document the legacy of mass gatherings and frameworks should be developed to include health legacy in the planning of these events. 2 years on from Euro 2012, it is still too early to comprehensively measure the medium-term and long-term benefits of activities undertaken for the tournament. At present, WHO is developing a framework to measure and evaluate the legacy of mass gatherings and this framework will be applied to assess the lasting legacy of Euro 2012.

Contributors

BM, DH, MB, ZM, and AZ initiated the series. All authors revised the report.

Declaration of interests

We declare that we have no competing interests.

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References


3 Weed M, Coren E, Fiore J, et al. Developing a physical activity legacy in the planning of these events. 2 years on from Euro 2012, it is still too early to comprehensively measure the medium-term and long-term benefits of activities undertaken for the tournament. At present, WHO is developing a framework to measure and evaluate the legacy of mass gatherings and this framework will be applied to assess the lasting legacy of Euro 2012.

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References


5 Murphy NM, Bauman A. Mass sporting and physical activity events—are they “bread and circuses” or public health interventions to increase population levels of physical activity? J Phys Act Health 2007; 4:193–202.


38 Chief Sanitary Inspectorate, Poland. Functioning of infectious diseases’ surveillance on human population during UEFA Euro 2012 final tournament. Presentation delivered at Coordination meeting for operational international early warning and response to health threats with cross-border dimensions during the Euro 2012, Warsaw, 9th February 2012.