2010 FIFA World Cup Public Health Legacy:

Analysis of the benefits arising from the organisation of a mass gathering

World Health Organization

DEPARTMENT OF HEALTH
Republic of South Africa


World Health
Organization


DEPARTMENT OF HEALTH
Republic of South Africa

Mr Peter Fuhri
head of emergency medical services and disaster management
for the Department of Health in South Africa.

This report is dedicated to the memory of Mr Peter Fuhri, head of emergency medical services and disaster management for the Department of Health in South Africa. Mr. Peter Fuhri will be dearly missed and warmly remembered by the entire health community and in particular, by colleagues and friends. Mr Peter Fuhri will be remembered for his leadership, foresight, active engagement and commitment to ensuring efficient and effective emergency medical services and promoting safety through emergency preparedness.

Mr. Peter Fuhri's contribution to the field of medical emergency services, emergency preparedness and bringing safety to mass gatherings, are notable. To highlight a few globally recognised achievements; it was his organizational abilities and skill that resulted in Mr. Peter Fuhri being at the centre of one of the decades largest mass gatherings, the funeral of Mr Nelson Mandela, in 2014. Mr Mandela's funeral was a major global event attracting over 100 heads of states and many celebrities, the funeral was organised at short notice.
Mr. Peter Fuhri was instrumental to the success of the health organization for the FIFA world cup, 2010, hosted by South Africa. The FIFA world cup is recognised for the strong, effective emergency medical and response services and effective management preparedness, where the World Cup concluded having achieved the objective of ensuring safety. At national level, Mr. Peter Fuhri was responsible for emergency medical service planning for events such as presidential inaugurations. Mr. Peter Fuhri led the medical services team that South Africa was asked to provide for at the heads of state meeting in Equatorial Guinea, in 2013.

Mr. Peter Fuhri influenced his field of expertise a great deal in his country, South Africa, beyond the national level, he was well known for his calm manner, wisdom and many years of experience, which he brought, to enrich the global debate on emergency medical, disaster preparedness and management.

This report pays tribute to the life and work of Mr Peter Fuhri and is symbolic of the legacy that he has left behind, without any doubt, Mr. Peter Fuhri's unique capacities and capabilities should be celebrated by the community of health professionals and the global health community as a whole.

EXECUTIVE SUMMARY

Hosting mass gathering events is likely to generate a large number of benefits for the host.

Traditionally, post-event analyses have emphasized the lessons learned from the successes and challenges encountered in both the preparation phase and event itself. The distribution of these observations is, in this respect, a means to convey knowledge to future organisers. This is particularly relevant in the times of epidemics, such as the current EVD that Africa is struggling with.

Focusing on the "legacy" of these mass gathering events is another way of making the most of such investments and learning from them. Potentially, this approach not only strengthens the national public health systems, but also contributes to increased global health security. This report is a unique attempt to observe the systemic public health legacy generated by the organisation of the 2010 FIFA World Cup for South Africa. As an organised whole[1], the public health system is indeed likely to have benefited in various ways from the 2010 FIFA World Cup. Each public health institution, department and stakeholder's activity as well as each measure or policy adopted in the field, has the potential to impact on the functioning of the whole public health system. In this context, any change in one public health area has the potential to impact the entire system.

Through interviews of stakeholders involved in the organisation of the event as well as complementary document analysis, this report explores areas of legacy, in terms of the activities and processes that have remained beyond the 2010 FIFA World Cup and influenced the organisation of a second mass gathering, the Orange Africa Cup of Nations 2013, in such areas as public health, command and control, surveillance and communication. These will be invaluable lessons for the global community as a

1 Many authors have contributed to the development of the systemic approach. See in particular, WIENER, Norbert, in, «Cybernetics: Or Control and Communication in the Animal and the Machine». Paris, (Hermann & Cie) & Camb. Mass. (MIT Press), 1948. See also, VON BERTALANFFY, Ludwig. « Théorie Générale des Systèmes ». Dunod. 1968 and MORIN, Edgar, who contributed to the development of the complex thinking approach, which underlines the systemic approach in « Introduction à la Pensée Complexe »,Editions du Seuil. Avril 2005.158p. (First edition in 1990 published in the "Editions Sociales Françaises (ESF))".

whole and could be adapted to context of other mass gatherings.

Five main areas of health legacy from FIFA 2010 emerged: legacy as the transfer of national and international knowledge; improved co-operation and communication; improved inter-sectorial working (co-ordination and communication both within departments but also with external actors and organisations); potential for increased trainings and expertise in human resources; improved processes and increased resources (such as guidelines, trainings, infrastructures and SOPs, improved detection and reporting procedures) and improved confidence within the country to host future mass gathering.

From the observation of legacy successes and challenges, the conditions under which long term benefits in the field of public health may be facilitated are discussed. Whilst mass gatherings give an opportunity in terms of political and financial support to build capacity and a lasting legacy, the report concludes that legacy must be planned for from an early stage and embedded into mass gatherings preparations in order to be both evaluated and sustainable.

ACKNOWLEDGMENTS

This report has only been made possible due to the support and wide range of contributions from those involved in the FIFA 2010 World Cup and in the AFCON 2013.

Therefore, we would like to acknowledge and thank all those who have contributed to this project, both in terms of sharing their institutional knowledge and experiences, and for the time taken to contribute. From the National Department of health, the staff of the World Cup and the AFCON, the South African Military Health Services and from the National Institute of Communicable Diseases, these include (in alphabetical order): F.Benson, L.Blumberg, P.Campell, A.Cele, T.Furumela, P.Fuhri, A.Grove, V.Hall, P.Kedama, N.Leboso, L.Leuenberger, Dr Malebona Precious Matsoso, T. Mosala, W.Ramakrishna, B.Steyn, C.Theu, X.Wanda. We would also like to thank staff at all levels of WHO who have supported and contributed to this project. These include:K. Arbuthnott, S.Barber, M.Barbeschi, O.Cosa, N.Isla, E. Mahlehla, M.Mahlangu, G.Marks, M.Nunn, H. Opata, L.Petja, D.Setumo, K.Smallwood

In addition, the staff supporting the FIFA 2012 operations did informed this study and therefore are thanked by the authors, are the following:

Staff of the World Cup 2010 Unit (DOH) particularly Mr Pumzile Kedama (Head), Mr Peter Fuhri, Mrs Linda Woodhead and Dr Liz Leuenberger

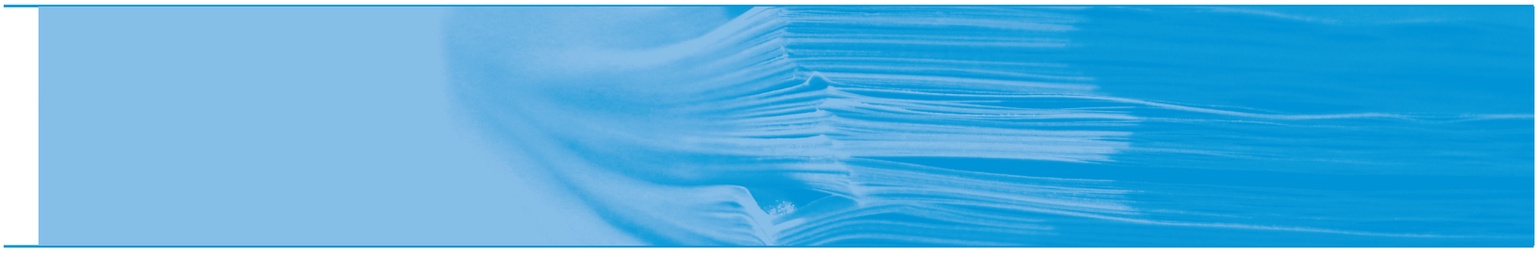
Other DOH staff, particularly the DG Dr Malebona Precious Matsoso, Dr Yogan Pillay, Dr Frew Benson, Dr Charles Mugero, Mr Andries Pretorius, Ms Tsakani Furumele, Mr Wayne Ramkrishna, Ms Penny Campbell and Dr Thabang Mosala

All other DOH staff at the NATHOC

Staff of NICD particularly Dr Lucille Blumberg

Members of the South African Military Health Services (SAMHS) at the NATHOC particularly Dr Ben Steyn and Cll Dave McNally

Other people who assisted us particularly Mr Amos Masondo (Executive Mayor Johannesburg) and Commissioner P. Van der Westhuizer (Head NAT-JOC)



Staff of other United Nations Agencies in South Africa and particularly the United Nations Regional Coordinator Dr Agostinho Zacarias

WHO

WHO South Africa Country Office Staff, for their unstinting support throughout this mission. Special thanks to Dr Stella Anyangwe, Dr Harry Opata, Mr Eugene Mahlehla, Mrs Carol Mohamed, and Ms Lebo Petja

In country 2010 Mass Gathering Team Members Dr Aileen Marty and Dr Stephanie Davis

AFRO Staff, particularly Dr Francis Kasolo, Dr Fernando Da Conceicao Silveira, Mrs Odette Cossa, Dr Patience Mensah, Dr Z. Yoti, Dr Adamou Yada, Dr J. Roungou, Dr Celia Woodfill, Dr Thomas Aisu, Dr Nicholas Eseko and Dr Afework Assefa

MG staff (GAR/Health and Security Interface) in HQ, particularly Dr Isabelle Nuttall, Dr Stella Chungong, Dr Maurizio Barbeschi, Mr Nico Isla, Mr Mark Nunn, Mrs Beverley Conway, Mrs Katie Smallwood, Dr Özlem Lubino and Ramesh Shademani

GAR and other HQ staff, particularly Dr Gerry Moy, Dr Angela Merianos, Mr Rafe Slattery, Dr Mike Ryan, Mr Joel Myhre, Dr Gilles Poumerol, Mrs Chantal Streijffert Garon, Ms Ninglan Wang, Dr Pierre Formenty, Dr Daniel Menucci, Mrs Paula Gomez, Dr Danilo Lo Fo Wong, Mrs Françoise Fontannaz, Mr Gregory Hartl, Ms Aphaluck Bhatiasevi and Dr Daniel Lavanchy

Members of the VIAG who made themselves for on-line consultation during the preparation and operational phases of the World Cup.

2010 FIFA WORLD CUP PUBLIC HEALTH LEGACY

Contents

ACRONYMS USED IN THIS REPORT

AFCON	Africa Cup of Nations
CBRN	Chemical, Biological, Radiological and Nuclear
CHAN	African Nations Championship
FIFA	Fédération Internationale de Football Association
MG	Mass gathering
NATHOC	National Health Operations Centre
NDOH	National Department of Health
NICD	National Institute of Communicable Diseases
PHC	Public Health Cluster
SAMHS	South African Military Health Service
WHO	World Health Organisation
VIAG	The WHO Virtual Interdisciplinary Advisory Group on mass gatherings

INTRODUCTION

Mass gatherings (MGs) are highly visible events, with the potential for serious public health consequences if they are not planned and managed carefully.

Around the world, a great number of individuals and groups have expertise in the preparation of MGs, especially in those Nations who have had the opportunity to host such events. South Africa's experience in staging the 2010 FIFA World Cup is, in this respect, an essential source of knowledge, which can potentially benefit national public health as well as the country's capacity to efficiently organize for other MGs.

In addition to a body of knowledge and lessons identified which can be transferred, the hosting of such an event may have positive effects on the health of a host country population or indeed the public health systems in place.

THE IMPORTANCE OF LESSONS LEARNT AND POTENTIAL HEALTH LEGACY

In order to maximize the potential of this knowledge and expertise, reports on lessons learned are crucial. This practice consists of identifying and documenting the cause of issues that occurred in the implementation of a project, here a public health preparedness plan, so as to improve future practice[2].

Indeed, following the hosting of FIFA 2010, a WHO report on lessons identified through support to South Africa was published[3].The possibility for such experiences to be shared with other countries constitutes a valuable means to disseminate knowledge and to make sure each event can benefit other organisers. The transfer of this knowledge to future hosts of mass gatherings is of great importance and may be viewed as one of the aspects of legacy from hosting such an event.

In addition, health legacy has further been defined in the context of the Olympic Games as "the sustainable, positive health impacts on the host city or country, associated with the hosting of the Olympic Games"[4].
Although, reports in the literature of legacy are less developed, it has gained increasing attention, especially with regards to planning evaluations of health legacy from an early stage and building sustainable legacy into mass gathering planning.

Planning for legacy involves taking necessary measures to generate long standing positive sustainable outcomes. At the same time, external assistance or observation is also likely to benefit from such planning, allowing a better orientation of activities to reach specific needs.

2 Centers for Disease Control and Prevention (CDC). "As a practice, lessons learned include the processes necessary for identification, documentation, validation, and dissemination of lessons learned. Utilization and incorporation of those processes includes identification of applicable lessons learned, documentation of lesson learned, archiving lessons learned, distribution to appropriate personnel, identification of actions that will be taken as a result of the lesson learned, and follow-up to ensure that appropriate actions were taken.", in, CDC Unified Process Practices Guide – Lessons learned. Available at : http://www2a.cdc.gov/cdcup/library/practices_guides/CDC_UP_Lessons_Learned_Practices_Guide.pdf

3 See in particular South Africa's experience as a host of the 2010 FIFA World Cup, in WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. http://www.afro.who.int/index.php?option=com_docman&task=doc_download&gid=6968

4 See symposium in Lausanne in 2002 entitled "The legacy of the Olympic Games 1984- 2000". Definition quoted in DAPENG, Jin. LJUNGQVIST, Arne. TROEDSSON, Hans (eds) "The Health Legacy of the 2008 Beijing Olympic Games. Successes and Recommendations". World Health Organization West Pacific Region. 2010. 191 pages. Chapter 1 "Towards a healthier city with an Olympic health legacy" by TROEDSSON, Hans. LJUNGQVIST, Arne. WEI, Wang. DAPENG, Jin. Pages 4-8. Page 5.

Host countries and their health organisations, along with WHO and other non-governmental actors can contribute to health legacy in the context of MG events.

The most recent WHO strategy[5] outlines the basis for WHO's support for safe and secure mass gatherings. It also presents how WHO hopes to draw global expertise together, through formal and informal collaborations, and advance knowledge and guidance across the field.

This strategy has been supported by a recent Executive Board decision[6], which requests the further development and dissemination of multi-sectorial guidance on planning, management, monitoring and evaluation of all types of mass gathering events. It further makes a specific emphasis on relevant and sustainable preventive measures, including health education and preparedness.

5 Mass Gatherings: Strategic Framework for Action to Protect Public Health 2012-1016, currently awaiting publication.

6 WHO, Executive Board. EB130(3) Global Mass Gatherings: Implications and Opportunities for Global Health Security. 21 January 2012.

BACKGROUND OF THE 2010 FIFA WORLD CUP: THE ROLES OF THE NATIONAL DEPARTMENT OF HEALTH AND WHO

The 2010 FIFA tournament matches involved 32 selected teams and were played in nine cities in eight different provinces. Between 300,000 and 500,000 additional tourists were expected during the World Cup, in addition to the 10 Million visitors that South Africa welcomes each year.

The National Department of Health (NDOH) had the primary responsibility of ensuring, on a 24-hour basis, the availability of a comprehensive health and medical response to public health events, including disaster medicine, for the entire duration of the tournament. In addition, and at the request of South Africa, WHO implemented a number of activities in the field of command and control, surveillance, food safety and safety at points of entry, to support the process of preparation for that event.

A number of structures were established by South Africa to facilitate risk assessment and information-exchange between the various stakeholders involved in the surveillance, alert and response activities. The preparation process led to the creation of the South African NDOH's Public Health Cluster (PHC), a forum established specifically for the assessment and management of public health risk throughout the tournament period. It helped synergise the agencies involved in public health detection and response and facilitate the conduction of multi-disciplinary joint risk assessments of all public health events and discuss risk management decisions accordingly. During the event, at least one WHO representative was present at every meeting of the PHC[7].

In parallel, NDOH activities were co-ordinated by a special World Cup Unit that was the focal point for health planning and response activities[8].

WHO's support started in early 2009, when South Africa's NDOH requested WHO's input on its planning and response activities for the 2009 FIFA Confederation Cup, as well as a review of all relevant health related planning activities. WHO deployed a team to South Africa and presented recommendations for the improvement of preparedness standards and response mechanisms. WHO Country Office

7 WHO. " Report on WHO support to the 2010 FIFA World Cup South Africa". *Ibid.*
8 See Pumzile Kedama's presentation "The work of the Health Planning Unit and Legacy - 2010 FIFA World Cup", given atThe Lancet Conference on Mass Gathering Medicine. October 23-25, 2010, Jeddah, Kingdom of Saudi Arabia.

in South Africa then worked with the NDOH to implement these recommendations[9].

In March 2010, WHO received a further request from NDOH for technical support. After a field mission, plans were reviewed and assistance was provided to NDOH in drafting and developing key documents.

All levels of WHO contributed to the following areas: the training of food handlers and NDOH staff in disease surveillance and response during mass gatherings; facilitating the donation of 3,5 million doses of pandemic influenza vaccines; presentations on public health preparedness for mass gatherings and risk communication; and the production of health advice leaflets.

One WHO staff member, a surveillance expert, as well as one member of the Virtual Interdisciplinary Advisory Group on Mass Gatherings (the VIAG) were situated within the command and control discipline, to offer direct assistance for three months leading up to the World Cup and the event itself[10].

9 WHO. " Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa. 27 January 2011. Op.Cit. See also, Stella ANYANGWE's presentation "WHO Support before, during and after the World Cup" given at The Lancet Conference on Mass Gathering Medicine. October 23-25, 2010, Jeddah, Kingdom of Saudi Arabia.

10 WHO. " Report on WHO support to the 2010 FIFA World Cup South Africa". Ibid.

SCOPE AND STRUCTURE OF THIS REPORT

Considering these initiatives, the objective of South Africa's NDOH and WHO in this report is to observe the extent to which the 2010 experience has generated public health legacy for both the hosting of future MG events in South Africa and also in more general benefits to the health system.

South Africa's capacity to prepare for another mass gathering event, AFCON 2013, is used as a case study to identify areas of potential legacy from the hosting of FIFA 2010.

AFCON 2013 took place between the 19th of January and the 10th of February 2013, gathering 16 participating African countries and involving 32 matches in five host cities. Although the scope of the event was smaller, many of the same processes were required to plan and manage a safe event. This report explores how the preparation for the AFCON benefited from the legacy of the 2010 World Cup.

In order to meet these objectives, the report is divided into three main sections:

- Section one gives a background to legacy in the context of mass gatherings. It provides a narrative to documented definitions and experiences of legacy. This is essential, as legacy is often asserted to be a product of hosting a mass gathering, but definitions of what is meant by legacy, or the process by which it may occur in different health sectors are not fully developed. This section presents documented findings and understandings of legacy and highlights gaps in our knowledge so far.
- Section two describes the areas of possible legacy from the hosting of the FIFA 2010 World Cup as assessed by the experience of South Africa and using the capacity and institutional lessons learned from this experience in hosting a second mass gathering the AFCON 2013 as a case study. More specifically, it examines legacy through an organisational or systems lens, which makes the project, to our knowledge, one of the first to do so. The project is not designed to be an exhaustive evaluation with defined outcomes, but more of a scoping of what potential areas of legacy could be with a view to informing future planning and evaluation work. Within this section, methods used to identify potential areas of legacy are described, results from the analysis presented and potential barriers and facilitators to legacy are also proposed, to inform future planning. The need to plan for legacy and its subsequent evaluation are highlighted.
- Section three is a compilation of appendices, which provide some of the documents to support information from interviews or other analyses.

SECTION 1.
BACKGROUND TO LEGACY IN THE CONTEXT OF MASS GATHERINGS

THE PUBLIC HEALTH LEGACY OF MASS GATHERINGS IN THE LITERATURE: A REVIEW

This section gives a brief overview of previous documentation of health legacy in the literature, to provide some context for this report and to identify gaps in current knowledge.

Studies on mass gathering (MG) events generally focus on their preparation, the ways they are organised to manage the increased risks in a variety of areas and thus, how they ensure the protection of people attending the event, the local and sometimes the international population[11].

Even though the positive benefits from MG experiences still need to be systematised and promoted[12], a certain number of tools, such as the 2008 WHO guidance document Communicable Disease Alert and Response for Mass Gatherings: Key Considerations[13] or the 2010 Jeddah declaration, which outlines principles for the creation of a new discipline of mass gathering medicine[14], were developed to facilitate the planning of these events and the exchange of expertise in the field.

The desire to make mass events cost-effective may explain the current growing concern over the promotion of long-standing benefits for the host, in a variety of areas from economics to public health, education and culture[15]. Within the literature, however, analyses of the legacies of such MG events are not common, and the methodological tools to identify them appear underdeveloped. A high volume of articles and reports, however, mention and call for the inclusion of principles to foster legacy in

11 In the field of public health see: MEMISH, Ziad. STEPHENS, Gwen. STEFFEN, Robert. AHMED, Qanta. "Emergence of medicine for mass gatherings: lessons from the Hajj". The lancet Infectious Diseases, volume 12, issue 1. Pages 56-65. January 2012. See also, TAM, John. BARBESCHI, Maurizio. SHAPOVALOVA, Natasha, BRIAND, Sylvie. MEMISH, Ziad. KIENY, Marie-Paule."Research agenda for mass gatherings: a call to action ». The lancet Infectious Diseases, volume 12, issue 3. Pages 231-239. March 2012. See also, JOHANSSON, Anders. BATTY, Michael. HAYASHI, Konrad. AL BAR, Osama. MARCOZZI, David.MEMISH, ZIAD. "Crowd andenvironmental management during mass gatherings ». The Lancet Infectious Diseases, volume 12, issue 2. Pages 150-156. February 2012.

12 « Expertise in managing Hajj remains largely unshared because of the lack of appropriate academic frameworks", in, AHMED, Qanta. BARBESCHI, Maurizio. MEMISH, Ziad. « The quest for public health security at Hajj: The WHO Guidelines on communicable disease alert and response during mass gatherings". Travel medicine and infectious disease, volume 7. 2009. Pages 226-230. Page 229. See also, AL RABEEAH, Abdullah. MEMISH,

the planning process[16]. Given that post-event assessment studies in this area are rare and not equally distributed among disciplines, or between the different types of events, future planning for legacy and it's evaluation across different fields is needed.

Recurring events such as the Hajj, organised every year at the same location, offer renewed opportunities to assess the impact of the event on specific fields. For example, in 2012 an editorial in The Lancet stated that "decades of planning for the Hajj have resulted in an advanced health-care system and a pluralistic approach to public health in Saudi Arabia, highlighting the huge benefits of these events to the host nation"[17].

Indeed, this renewed experience has enabled Saudi Arabia to accumulate a certain amount of knowledge on the management of risks to health during MGs. Qanta Ahmed et al. observed in this respect "we suspect Hajj legacy is an influential actor in regional healthcare but is, as yet, an unquantified entity, presenting an important area for further enquiry. [...] We believe Hajj has been a dual driver for the intense development of healthcare in the Kingdom of Saudi Arabia and the arrival of multinational public health medicine to the region."[18]

Observing the legacy of less frequent MG events, organised in different parts of the world, may be more complicated, as there are fewer opportunities to gather data for legacy studies[19].

Much of the documented legacy research developed for MG events has been carried out in the context of the Olympic Games, particularly since 2003 when "legacy" was officially enshrined in the Olympic discourse[20].

The word 'legacy' was first used during Melbourne's 1956 Olympic Games bid proposal[21]. Prior to this, candidate cities would emphasize their strengths in terms of hosting the Games, rather than providing examples of how such events would benefit them in the post-event phase[22].It has been hypothesised that the importance of legacy has grown as the Games have increased in scale and cost as a result of greater TV coverage since the 1960s[23], and therefore cities have looked to wider benefits to justify their bids. In 2003, the IOC amended its charter to add a 14th mission statement requiring a positive legacy for hosts[24]. Legacy has since become an essential selection criteria in the process of reviewing candidate cities' proposals, and the London 2012 Olympics bid made a unique emphasis on the expected lega-

Ziad. ZUMLA, Alimuddin. SHAFI, Shuja. McCLOSKEY, Brian. MOOLLA, Ahmad. BARBESCHI, Maurizio. HEYMANN, David. HORTON, Richard. "Mass Gatherings medicine and global health security". The Lancet, Comment, volume 380, July 2012. 4 pages. Page 3.

13 "The guidelines demonstrate how to assess relevant public health risks, as well as evaluate the capacity of existing systems and services, in anticipation of the surge of public health needs for the duration of the MG.", in, AHMED, Qanta. BARBESCHI, Maurizio. MEMISH, Ziad. Ibid. Page 227.

14 MEMISH, Ziad.AL RABEEAH, Abdullah. "Jeddah Declaration on Mass Gatherings Health". The lancet Infectious Diseases, volume 11, issue 5. Pages 342-343. May 2011.

15 See the categories of legacy below. On the growing concern over MG event's legacies, see: London East Research Institute (LERI), University of East London. "Lasting legacy for London? Assessing the legacy of the

cy of the Games for the city and its population[25]. Following this, the UK Department for Culture, Media and Sport commissioned a meta-evaluation[26] to focus on these legacy promises and observe the extent to which they were fulfilled[27]. As the International Olympic Committee (IOC) notes, the Games can leave a variety of tangible and intangible legacies in the host city and has classified Olympic legacies into five main areas; sporting, social, environmental, urban and economic[28]. Other studies have identified additional areas such as information and education; public life, politics and culture; symbols, memory and history[29]. The list is not exhaustive and it is in this classification context that a number of studies on public health legacy were conducted, in order to assess the benefits of hosting MG events on the local population's health and wellbeing[30].

It has been observed that the public health agenda for each Games is influenced by "local and historical contingencies". For example, one paper noted that the preparation for Athens Olympics in 2004 made a special emphasis on disaster planning as a result of the 9/11 attacks in New York. Similarly, a specific focus was placed on atmospheric pollution during the Beijing Olympics in 2008[31]. For the 2012 London Games, as the bid had planned, the emphasis was placed on the impact of the Games on the level of participation of the local population in sports activities, and the impact this would have on public health.

A number of areas can be analysed when trying to observe the public health legacy of a MG event[32]. Proposed areas of health which could benefit from the hosting of the Games include improved health infrastructure, the development of healthy behaviours, increased participation in sports, and wider access to a country's health system[33].

olympic games and paralympic games". 2007. London. Available at: http://www.uel.ac.uk/londoneast/consultancy/documents/lasting-legacy.pdf
MALFAS, M. THEODORAKI, E. HOULIHAN, B. "Impacts of the olympic games as mega-events". Journal of the Institute of Civil Engineers, volume 157, n°3. 2004. Pages 209-219. See also, KORNBLATT, Tracy. "Setting the bar – Preparing for London's Olympic Legacy". Institute for Public Policy Research (IPPR),Discussion Paper n°8. December 2006.

16 COALTER F. "London Olympics 2012: 'the catalyst that inspires people to lead more active lives'?". Journal of the Royal Society of Health, volume 127, n°3. 2007. Pages 109-110. See also, POYNTER, Gavin. "From Beijing to Bow Creek". Working paper in Urban Studies. London East Research Institute. University of East London. March 2006. 37 pages.

17 The Lancet. « Mass gatherings health- Creating a public health legacy ». Editorial. Volume 380, issue 9836. 7 July 2012.

18 AHMED, Qanta. BARBESCHI, Maurizio. MEMISH, Ziad. « The quest for public health security at Hajj: The WHO Guidelines on communicable disease alert and response during mass gatherings". Travel medicine and infectious disease, volume 7. 2009. Pages 226-230. Page 229.

19 Bauman, Murphy and Matsudo observe that"One of the only existing hard evidence of an Olympic Games effect on population physical activity followed the Sydney 2000 Olympics, which resulted from the comparison between annual representative survey data collected before the event in November 1999 and two months after in November 2000. The results indicated a negligible Olympics-related impact on population level physical activity participation", in, BAUMAN, Adrian. MURPHY, Niamh. MATSUDO, Victor. "Is a Population-Level Physical Activity Legacy of the London 2012 Olympics Likely?". Journal of Physical Activity and Health, volume 9. 2012. Pages 1-4. Page 3. Furthermore, WHO China Representative Dr Michael O'Leary observed that the book already cited, "The Health Legacy of the 2008 Beijing Olympic Games. Successes and Recommenda-

tions" emphasizes on "the need to plan well ahead and to establish clear roles and functions for the various agencies involved in partnerships. They also document the need for a combination of legal frameworks, public health interventions and information campaigns." (See above). Another study, "A Systematic review of the evidence base for developing a physical activity and health legacy from the London 2012 Olympic and paralympic games", by the Centre for Sport, Physical Education & Activity Research (SPEAR), Canterbury Christ Church University (February 2009) emphasizes in the forewords on the necessity to plan in advance to achieve long-lasting legacy following a mass gathering event.

20 See below.

21 McINTOSH, Martha. "The Olympic Bid Process as the Starting Point of the Legacy Development", in , De Moragas, Miquel. Christopher KENNETT, Christopher. PUIG Nuria (eds.), The Legacy of the Olympic Games 1894-2000, Lausanne: InternationalOlympic Committee, 2003. Pages 450-456.

22 GOLD, John, R. GOLD, Margaret. M. "Olympic cities-city agendas, planning, and the world's games 1896-2012". London; Routledge 2007. 368 pages.

23 See POYNTER, Gavin. "From Beijing to Bow Creek". Working paper in Urban Studies. London East Research Institute. University of East London. March 2006. 37 pages. Pages 4 and 7. LEOPKEY, Becca. "The Historical Evolution of Olympic Games Legacy ». Op. Cit. Page 8.

24 As explained by CHAPPELET, Jean-Loup, in, "Olympic environmental concerns as a legacy of the Winter Games". The International Journal of the History of Sport, volume 24, issue 14, 2008. Pages 1884-1902.

25"Post-Games plans for Olympic Park include the creation of a significant legacy project - the London Olympic Institute, which would encompass elite and community sport, culture, the environment, sports science and research.", in,International Olympic Committee (IOC). Report of the IOC Evaluation Committee for the Games of the XXX Olympiad in 2012. 22 March 2005. Lausanne, Switzerland. 126 pages. London bid. Pages 63-82. Page 64. "Post-Games plans for Olympic Park include the creation of a significant legacy project - the London Olympic Institute, which would encompass elite and community sport, culture, the environment, sports science and research.". See also Department for Culture, Media and Sports. "Meta-Evaluation of the Impacts and Legacy of the London 2012 Olympic Games and Paralympic Games Summary of Reports 1 and 2: 'Scope, research questions and strategy' and 'Methods'". April 2011. 26 pages. Figure 1. Page 4.

26 The meta-evaluation was conducted by a consortium led by Grant Thornton, Ecorys, Loughborough University and Oxford Economics. The aim was to develop an analysis of "the additionality, output, results, impacts and associated benefits of the investment in the 2012 Games", as explained in the interim report published in November 2012. Report 4: Interim Evaluation. "Meta-Evaluation of the Impacts and Legacy of the London 2012 Olympic Games and Paralympic Games". Final Report. 256 pages. §1.1, page 1.

27 The meta-evaluation is composed of four reports. Report 1 on "Scope, research questions and data strategy" (30 June 2011). Report 2 on "Methods" (30 June 2011). Report 3 on "Baseline and counterfactual" (31 January 2012) and report 4 (13 November 2012) is the "Interim evaluation". All reports are available at: https://www.gov.uk/government/organisations/department-for-culture-media-sport/series/london-2012-meta-evaluation

28 IOC. « Olympic Legacy». 2013. Lausanne, Switzerland. 73 pages. Page 9.

29 CASHMAN, Richard. "The Bitter-sweet awakening. The legacy of the Sydney 2000 Olympic Games". Sydney: Walla Walla Press. 2005. Cited by Cited by, KAPLANIDOU, Kyriaki. "Examining the importance of Olympic Games legacy aspects among host city residents: A temporal approach". 2009 Post Graduate IOC-Olympic Studies Center Grant. Final report. University of Florida, Department of Tourism, Recreation and Sport Management. 30 December 2010.53 pages.Page 6.

30 JORM, Louisa, VISOTINA, Maria. « The Sydney Olympics: A Win for Public Health". New South Wales Public Health Bulletin, volume 14, n°3. Pages 43-45. See also, The Lancet. "Mass Gathering s Health- Creating a Public Health Legacy". Editorial, volume 380, issue 9836. 7 July 2012. Page 1. See also, McCARTHNEY, Gerry. THOMAS, Sian. THOMSON, Hilary. SCOTT, John. HAMILTON, Val. HANLON, Phil. MORRISON, David. BOND, Lyndal. "The Health and Socioeconomic impacts of major multi-sport events: systematic review (1978-2008)". British Medical Journal, Volume 340, issue 2369, 2010. 9 pages. See also, BROWN, A. MASSEY, J. PORTER, C. "The sports development impact of the 2002 Commonwealth Games: post games report". Manchester Insti-

GAPS IN KNOWLEDGE

This report represents the first documentation of an evaluation of the public health legacy from a FIFA World Cup. Until now there has been no record of analyses examining how the hosting of one mass gathering event has benefited a country in its future organisation of other such events, or in terms of the healthcare or public health system.

This observation of the effect of the legacy from the South Africa 2010 FIFA World Cup on the organisation of the Africa Cup of Nations 2013 is, in this respect, unique. Even though there is limited research into this particular topic, this report looks to provide some foundations from which subsequent research into this issue can be further developed, as well as a practical documentation of legacy evaluation.

tute for Popular Culture, Manchester Metropolitan University, 2004. See also, DAPENG, Jin. LJUNGQVIST, Arne. TROEDSSON, Hans (eds) "The Health Legacy of the 2008 Beijing Olympic Games. Successes and Recommendations". World Health Organization West Pacific Region. 2010. Op.Cit. See also, TSOUROS, Agis. EFSTATHIOU, Panos. (eds). "Mass Gatherings and Public Health. The Experience of the Athens 2004 Olympic Games". WHO/EURO and Greek Ministry of Health and Social Solidarity. 2007. 378 pages.

31 WELLINGS, Kaye. DATTA, Jessica. WILKINSON, Paul. PETTICREW, Mark. "The 2012 Olympics: assessing the public health effect". The Lancet, volume 378, September 24, 2011. Pages 1193-1195. Page 1193.

32 Applicable to all fields of legacy, a distinction has been made between soft and hard legacies. For Holger Preuss, soft legacy refers to the knowledge gained, the networks created, the cultural goods generated. In parallel, 'hard' legacy is associated to "primary structures" such as sport infrastructures, "secondary structures" like the Olympic village and finally, the "tertiary structures" are facilitating means for communication, security, transportation, energy supply or touristic attractions. See PREUSS, Holger. "The conceptualization and measurement of mega sport event legacies". Journal of Sport & Tourism, volume 12, issue 3-4, 2007. Pages 207-227. Cited by, KAPLANIDOU, Kyriaki. "Examining the importance of Olympic Games legacy aspects among host city residents: A temporal approach". Op.Cit. Page 6.

33 BAUMAN, Adrian. MURPHY, Niamh. MATSUDO, Victor. "Is a Population-Level Physical Activity Legacy of the London 2012 Olympics Likely?". Op.Cit.

SECTION 2.
THE SOUTH AFRICAN EXPERIENCE

The next two sections of the report, explore the South African experience and potential areas of public health legacy within the health and related systems. This section first outlines how the areas of potential legacy were identified (methodology), what these were (results) and then discusses how legacy may be facilitated for future events and the importance of planning for legacy.

METHODOLOGY

In order to determine possible areas of public health legacy in South Africa from the 2010 FIFA World Cup, the following methods were used:

- A combination of documentary analysis (to include official reports, policy documents, web-based articles) and formal or informal interviews with key stakeholders to assess how the experience of FIFA 2010 changed current practices, and preparations for AFCON was undertaken. The main focus has been on qualitative data, although where possible quantitative data has been used to complement this. The interviews which took place aimed to cover the following areas with key informants:
- Key informants' understanding of health legacy;
- The role of key informants in FIFA 2010 and/or AFCON2013;
- Where key informants thought the main areas of legacy were from FIFA 2010;
- Within their area of work, areas that were developed for FIFA 2010 and whether these will be used for AFCON 2013, and whether they are used for other events or on a day to day basis;
- Potential barriers and facilitators to legacy.
- The identification of areas where there has been positive or negative legacy in terms of capacity to hold and prepare for a MG. The results are presented as themes which emerged from the analysis of interviews and documents, rather than summarising potential legacies within particular sections for each area of public health (e.g. surveillance, environment, food safety etc.). Documentary and interview analyses are presented together under each theme, in order to triangulate results and present information coherently.
- The identification of areas where health legacy, in terms of planning for MGs and compliance with the International Health Regulations, has translated to more general benefits to the wider health system, in terms of capacity and organizational structures.

RESULTS

Interviews

Eleven key informants were interviewed. The interviews took place in November 2012 and interviewees were from a range of departments, including the NDOH (in alphabetical order, CDC, emergency medical services, environmental health, epidemiology, food safety, ports of entry), the National Institute of Communicable Diseases(NICD), the South African Military Health Service (SAMHS) and those providing medical support at National Stadiums. All key informants had either worked in preparing and running FIFA 2010 or were currently involved with the preparation for AFCON 2013. Six of these key informants have been involved in both mass gathering.

Key informants shared their understanding of "legacy" (for which we currently do not have a standardized definition) and presented their views on areas of expected legacy from FIFA 2010, in terms of planning for another event and broader effects on the health system. From the interviews, participants identified two aspects of legacy: lessons identified and learned through the process of holding a mass gathering; and the benefits to public health in the country, whether in terms of organization and functioning of departments or in better resources (i.e. structural resources, plans and documentation or training of individuals).

From the analysis of these views, six main forms of health legacies in terms of benefits to public health systems and processes were identified and have been divided into the following themes:

- Legacy as the transfer of national and international knowledge
- Improved co-operation and communication
- Improved inter-sectorial working (co-ordination and communication both within departments but also with external actors and organisations)
- Potential for increased training and expertise in human resources
- Improved processes and increased resources (such as guidelines, trainings, infrastructures and SOPs, improved detection and reporting procedures)
- Improved confidence within the country to host another mass gathering.

Documentary Analysis

To observe the public health legacy of the 2010 FIFA World Cup through the lens of the organisation of the 2013 AFCON, a set of documents were analysed. Some were directly provided by experts involved in the organisation and running of both events, while others were published and accessible on the Internet.

Throughout the review, an effort was made to collect comparable documentation on both events. The type of documents used consisted of a combination of guidelines (e.g. food safety or safe food for travellers) and SOPs (e.g. notification of priority health conditions), templates (e.g. risk assessment), tables (e.g. resources deployment for 2013 AFCON), situation reports and organograms. Most importantly, post-event reports providing information on the public health activities developed and procedures implemented as well as recommendations on how to improve the whole mechanism for future events were also provided and analysed[34]. In the open literature, presentations given at Conferences (e.g. Mass Gatherings Conference – Jeddah. 23 – 25 October 2010) and scientific articles were found and used.

Activities, guidelines, processes developed and used during both events were compared, in order to observe changes and improvements.

In the following sub-sections, the themes regarding health legacy identified from interviews are presented. Within each of these themes, results of documentary analysis are summarised and integrated where possible, and used to complement interview findings or to highlight possible inconsistencies. It should be noted that the interviews were conducted in 2012 in the preparation phrase for the AFCON 2013. Therefore, these six forms of legacy are those which participants either proposed would be relevant for AFCON 2013, or are examples of areas where day to day improvements have been seen since 2010 outside of the area of mass gathering preparation. The analysis of documents and information made available after the event gives a different perspective on the legacy, and includes the knowledge of how things actually worked for AFCON.

34 WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. See also,NDOH. 2013 Orange African Cup of Nations- Health and Medical Services. Post Event Report. 9 Pages.

THEMES OF HEALTH LEGACY FROM INTERVIEW AND DOCUMENTARY ANALYSIS

1. Legacy as the transfer of national and international knowledge from hosting mass gatherings

From the interviews, both the transfer of knowledge from previous hosts of mass gatherings to South Africa and also the transfer of knowledge and expertise gained from hosting FIFA 2010 to future mass gatherings hosting was thought to be an important area of legacy for at least five of the key informants. Legacy as the transfer of knowledge was asserted to be either formal (in terms of reports, organised presentations etc.) or informal (through networks).

The interviews revealed that, in preparation for FIFA 2010, some organisers benefited from the exchange of information and lessons learned from hosts of previous international mass gatherings, for example through discussions with the hosts of the Atlanta Olympic games. Others involved in the organisation of FIFA 2010 reported building on experience and lessons identified from managing previous events within South Africa. For example, guidelines had already been developed on food safety control at special events in 2004, as a result of an incident at a previous mass gathering. These, along with previous health promotion messages were adapted and used for FIFA 2010. It was anticipated that for AFCON, the same guidelines would be used as these are not event specific.

During a scientific presentation given at the Lancet Conference on Mass Gatherings in October 2010, the 1995 Rugby World Cup, the 2002 World Summit on Sustainable Development and the 2003 Cricket World Cup[35], were mentioned as reference points in the planning process for FIFA 2010.

Legacy in terms of the sharing of experience and lessons learned from FIFA 2010 has been made available through reports in order to foster "institutional knowledge"[36], and also via the participation of organisers in international

35 KEDAMA, Pumzile. "The work of the Health Planning Unit and Legacy - 2010 FIFA World Cup".Mass Gatherings Conference – Jeddah. 23 – 25 October 2010.Slide 5.
36 KEDAMA, Pumzile."The work of the Health Planning Unit and Legacy - 2010 FIFA World Cup"".Mass Gatherings Conference – Jeddah. 23 – 25 October 2010.Slide 11.

workshops aimed at those holding future mass gatherings. These workshops were also mentioned in the interviews; for example, one key informant mentioned that South Africa had shared its experience by participating in one such observer programme, with organisers of the London Olympics, at the Olympics mass gatherings programme held in London.

Further, the observer programme implemented during nine days of the 2010 World Cup enabled international observers from organising bodies of future mass gatherings to observe health operations[37], as well as to learn about the health security structures and measures implemented for the event. Following the event, the analysis of documents and reports revealed that this programme had been considered a successful means to ensure, on the one hand, that the hosting of a MG by one State can benefit other future organisers, but also that the host can receive feedback from the observers' own experiences[38].

Some interviewees also felt that as a result of planning for FIFA 2010 and using networks available to them, such as the WHO VIAG, they now had the ability to share and be part of a larger international network of mass gatherings organisers. This was identified as an important way to exchange and promote better knowledge.

2. Improved cooperation and coordination

Many key informants felt that hosting FIFA 2010 and the processes this involved improved communication and coordination at different levels. For the purpose of reporting here, these have been split into: co-ordination between provinces and between agencies at provincial and national level; co-ordination with other organisations, for example WHO or NGOs.

37 In the field of command and control, surveillance and alert systems, medical services at event venues and hospitals, infection control, laboratories, outbreak alert and response, environmental health and food safety, incident management and communication, deliberate events and communications. SeeWHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. Op.Cit. Pages 69-70

38 See the list of document produced, presentations given and activities developed, that indicate the practical achievements of the observers' programme, inWHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011.Ibid. Page 71.

2A. Improved coordination between regions/provinces

Three key informants asserted that the FIFA World Cup 2010 experience had improved co-operation between provinces, especially with those bordering provinces containing venues. Examples included joint acquisition of resources and common tenders for the purchasing of equipment for the period of FIFA 2010 and shortly afterwards. Improved communication between provinces and with the national level was also observed in the reporting of communicable diseases and food related incidents, both in terms of reporting upwards but also discussion of these events occurring at a provincial level in national meetings. One key informant also mentioned that there was co-operation between the provinces in terms of physical staffing at border areas where health and security services needed to be managed.

"I think the important thing... is that for the coordination of the event, you've got inter-coordination with ourselves and the provinces... It's one of the positive things... I think in terms of people become more enlightened, I've seen in 2010 people become more enlightened in terms of mass gatherings..."

However, according to official NDOH reports, it is challenging to maintain this coordination. Through the analysis of these reports, two factors can explain this situation. First, provincial coordination centres and the National Health Operations Centre (NATHOC) are not permanent bodies and therefore the cooperation habits developed in MG-specific organisations were lost once the event was over. Furthermore, this continued capacity for better coordination post FIFA 2010 was also not maximised during the 2013 AFCON due to the fact that new provincial coordinators had to be appointed for the event (different to those who performed the roles for FIFA 2010), requiring these co-ordinators the be trained in a very short time[39].

39 NDOH. 2013 Orange African Cup of Nations- Health and Medical Services. Post Event Report. 9 Pages. §5.2.

2B. Improved Communication and Coordination between Organizations (Governmental and non Governmental or UN)

Some views expressed in the interviews also referred to an important improvement in the coordination between South African not-for-profit organisations, which helps during these events in terms of sharing of resources and staff between organisations and areas. However, whether this has continued in terms of sharing of expertise and improved dialogues between agencies is not clear and there is no documentation to reporting this phenomenon during the 2013 AFCON.

The interviews revealed that the coordination and communication between national and international institutions was also thought to be important and strengthened in the context of FIFA 2010. For example, this was the first time that WHO had officially worked on the ground with organisations at a mass gathering event. Some participants mentioned that this was an important part of future work between the organisations for these events.

The Report on WHO support to the 2010 FIFA World Cup South Africa mentioned above and in separate conferences[40], showed how the Organisation worked with the NDOH and the type of technical and scientific guidance it provided in preparation and during the 2010 World Cup. This support was initiated long before the start of the 2010 FIFA World Cup (early 2009 in the context of the 2009 FIFA Confederation Cup), a feature which facilitated the implementation of a variety of trainings and guidance activities with a wide range of national stakeholders. This long period of cooperation facilitated the development of regular communication links and a framework through which technical support could be provided in the context of the hosting of MG events. WHO through its country office and a secondee from Public Health England were invited to support efforts for the AFCON 2013.

Lastly, for FIFA 2010, there was co-operation between the South African department of health, WHO and FIFA in terms of health promotion. For example, the advice for travellers produced was a product endorsed by all three organisations and appeared on all three websites (see appendix 3 – the three fives leaflet). Those involved in the preparations for the AFCON 2013 were hoping to do something similar at the time of the interviews.

40 ANYANGWE, Stella. "WHO Support before, during and after the World Cup". The Lancet Conference on Mass Gathering Medicine. October 23-25, 2010, Jeddah, Kingdom of Saudi Arabia.

3. Improved Inter-Sectorial working

Interviewees also felt that holding FIFA 2010 World Cup had improved the working with other sectors, particularly through inter-departmental communication.

The majority of interviewees emphasized this benefit and mentioned that within departments, interactions were more frequent and this led to a better understanding of the roles and responsibilities of colleagues. It was further reported that, holding such an event was an opportunity to appreciate the work done by all those involved in the preparation of the event in other departments. In this respect, it revealed the importance that different sectors played.

For example, some asserted that now they knew better who to contact for advice on issues outside of their normal work. This information has also been substantiated by documents and reports, which have placed emphasis on the role played by the Public Health Cluster (PHC) in the improvement of inter-sectoral communication[41]. One interviewee felt this was due to the fact that all departments had been given a chance to contribute in the PHC (further details of roles available in corresponding reports)[42] and thus, had an equal importance, leading to a better understanding of colleagues' roles but also a recognition of the participants departments role.

Some examples of where the improved coordination was also deemed to be important, from the interview data, include outbreak investigations, security and CBRN and food safety/environmental health.

For example, key informants mentioned the benefit of the trainings undertaken for FIFA 2010 improving coordination and communication between different sectors and roles in a response to a potential outbreak (see box 2 for example quote). In terms of managing a potential deliberate threat, trainings brought many different sectors together. One participant mentioned it was the first time that food safety and CBRN or deliberate events were considered concurrently in terms of food supplies for a mass gathering and developed SOPs to allow this cross sectorial working to occur.

One interviewee spoke about the CBRN trainings that occurred for the 2010 FIFA World Cup and the benefits these brought in terms of understanding the roles of diverse sectors that work on the same area, for example the security and police departments, fire services, emergency medical staff but also bringing together people from a local and national level (see box 3). This training addressed particular gaps that had been identified in response plans. Further, a course was developed for the emergency medical services which is still running and similar training

41 WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. Op.Cit. Page 33-35 and particularly page 35, paragraph 5.
42 Pretoria, South Africa, 27 January 2011. Ibid. Page 44.

courses were being run in November (which year?) in preparation for AFCON 2013 but also in terms of general capacity building for response to deliberate events in South Africa.

This cooperation was also seen at ground level outside of those areas where trainings occurred. An important outcome mentioned through the interviews was the improved cooperation between organisations, such as emergency medical services and security service like the police in the context of supporting the general functions of the event. It remains unclear, however, whether this benefit was sustainable through documentary analysis, as no reports found focus on this element

"...the training on outbreak response... (this is) where we brought everybody who was responsible together, the ambulance guy, the nurse, infection control and the hospital, the EHP responsible for the investigation, the CDC coordinator. All together in one training venue to discuss their roles and responsibilities and our roles and responsibilities, so I think there's been an increased awareness and I think one of the outcomes of those workshops was to create a communication plan..."

"We had a number of exercises in those cities where... for the first time say a fire chief and the bomb squad commander in that city actually meet each other... so those links were all established before the world cup"

"...it (FIFA 2010) also brought along (that) what we had to do was clarify roles and responsibilities, with regard to the difference between the general public health or let's say bio incidents and the other incidents where bio health is an issue, and where it is necessary to get the health environment to realise that a biological incident is a health issue and they lead, whereas with these this things it's the police and fire which were the lead agencies. But the world cup helped us to get that role clarification sorted out and to be able to coordinate.
...and what I've found, when I first started working with services, I always say, people talk different languages, and if you don't understand my language, the health language is different to the military language, from a policeman's, we used the same words and meant different things by it, and people just function and work much better together when they understand each other's language... (regarding working relationships between sectors) we've seen it change in a week, when people have got to understand each other and got to understand each other's problems and came to accept that everybody's got an equal role..."

In terms of a sustainable legacy, some participants maintained that these improved inter-sectorial relationships had positively affected communication and cooperation within their currently daily work, due to simple things such as knowing who to contact when expertise is needed.

During the AFCON 2013, the same functioning procedures and composition were chosen for the PHC as for during FIFA 2010 (with the exception of the Department of Agriculture, Forestry and Fisheries (DAFF) and representatives from the CDC) .The authors of the report which document the structure for AFCON 2013 further observed that "The risk assessment and surveillance activities led by the PHC generally worked well. Of the seven incidents reported in the Sitrep, all were reported to the PHC meeting within 24 hours. The PHC conducted risk assessment on all seven events, and the reported international events, and was characterised by a positive and collaborative group dynamic" , and thus concluded on a successful reutilisation of the 2010 experience. The report also describes the data flows, and thus the communication links, that contributed to the PHC's daily work. Diagrams which illustrate the different stakeholders and flows of communication for both the FIFA and AFCON event can be found in appendix 1. .

43 HALL, Victoria. THOMAS, J. IYALOO, S. BLUMBERG, L. "Keeping Watch: Monitoring Infectious Diseases Risks to the Orange African Cup of Nations 2013". 6 pages.
44 HALL, Victoria. THOMAS, J. IYALOO, S. BLUMBERG, L. "Keeping Watch: Monitoring Infectious Diseases Risks to the Orange African Cup of Nations 2013". Ibid. Page 6.
45 HALL, Victoria. THOMAS, J. IYALOO, S. BLUMBERG, L. "Keeping Watch: Monitoring Infectious Diseases Risks to the Orange African Cup of Nations 2013". Ibid

4. Potential for increased trainings and expertise for human resources

As a result of hosting the FIFA 2010 World Cup, many training exercises were held in preparation of the event with the potential to build in country capacity for managing such events and in addition day to day commitments.

For example, interviewees mentioned trainings held in areas such as life support (e.g. MIMs trainings) and first aid for emergency services and police forces. These trainings are also now used by private health care providers for events, and in interviews this was attributed to the legacy of FIFA 2010

Training also took place with regards to the management of deliberate events and involved multiple sectors – these have been summarised in more detail above in the area of multi-sectorial working but it should also be emphasised that these also built technical expertise within the country.
With regards to food safety, training was undertaken to improve techniques for collecting and analysing samples for FIFA 2010.

Training in collecting standardized samples was also mentioned as an important area of legacy from FIFA 2010 in the area of environmental health. In the field of food safety, no new trainings were developed or implemented for food vendors in preparation of the AFCON 2013. Therefore, the expertise available for the 2013 AFCON, resulted from the trainings organised in preparation of the FIFA World Cup 2010.
The legacy consequently relied on those who had stayed in posts between the two events but also on the standardised content of the trainings provided during the World Cup.

5. Improved Processes and Increased Resources

5A. Standard Operating Procedures (SOPs)

A common feature mentioned in most interviews (nine key informants) was the increased resources generated as a result of planning and preparing for 2010FIFA World Cup. Some mentioned that for their work, specific SOPs had been developed for the 2010 FIFA World Cup. In some cases, it was anticipated that same SOPS for AFCON would be used as for the World Cup. Some SOPs had been used for events, which had occurred in the meantime, such as the ANC election. Further, during the observer programme that was run during the 2010 FIFA World Cup, documentation produced was made available to other countries as a way of sharing this work internationally between MG planners.

In terms of environmental health, it was asserted that the documentation and procedures that would be used for AFCON were in principle the same as those used for FIFA 2010, but adapted for the event in terms of scale.

With regards to food safety, much of the work the FIFA 2010 World Cup was built on existing regulations which had been updated following a previous food borne incident. However, one key informant mentioned that there were additional SOPs developed that formalised the working and associated risks between aspects of CBRN, security and food safety. With regards to the control of infectious disease, interviewees mentioned that SOPs were specifically developed for managing diseases, especially those non-endemic to South Africa as the FIFA 2010 World Cup was an international event.

There were also specific SOPs developed for the management of deliberate events, based on international standards but adapted for the context. One key informant asserted that the process of drafting these SOPs was a learning process and he anticipated that the approach used for AFCON would be similar. With regards to planning for the emergency medical services and staffing at stadia and SOPs for this, these were specifically developed for FIFA 2010 and at the time of interview, these were being used for planning for the AFCON.

"...we used all the 2010 documents as guidelines for AFCON... you must bear in mind that a lot of the coordinators for 2010 are no longer around for AFCON... [with regards to guidelines for stadium medical centres etc., the guidelines were] developed for 2010 because there were a lot of things that were lagging at the time and we felt we should use 2010 for this... for legacy"

"I think what has been happening was some events were happening in pockets, but for the World Cup, this was an international event... so the approach we used for systems and the legacy from that was actually the fact that we could develop documents that could assist in planning any public event..."

The analysis of documents showed that one of the main procedural frameworks which was kept from the 2010 FIFA World Cup to the AFCON, was the organisation of the PHC. Its composition, functioning rules and even the outline for the daily situation reports produced[46] , were kept unchanged.

At the same time, the SOPs for the reporting of priority conditions and the procedure for exceptional reporting[47] were also re-used for the 2013 AFCON[48]. The list itself, containing the 18 priority conditions to be systematically reported during the 2010 World Cup, as well as the notification forms, was also kept in 2013.

46 See NDOH PHC: Situation Report no 31. 5 July 2010, in, WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. Op.Cit. Pages 107-113. See for the 2013 AFCON, NDOH. National Health Operation Center- Public Health Cluster Situation Report, no 23. 10 February 2013. 21 pages. Page 7.

47 Exceptional reporting is "required when incidents are extraordinary or where an incident is of such a nature as to elicit any enquiry or have an extra ordinary impact on health services relating to the event", as explained in NDOH, 2013 Orange African Cup of Nations- Health and Medical Services. Post Event Report. Op. Cit.§5.3. Post event report. Addendum D. National Command and Control Procedures.

48 Standard Operating Procedures for Notification of Priority Health Conditions. 12 pages. See also, HALL, Victoria. THOMAS, J. IYALOO, S. BLUMBERG, Lucille. "Keeping Watch: Monitoring Infectious Diseases Risks to the Orange African Cup of Nations 2013". Ibid.Figure Error! Main Document Only.: Description of Data Flows into the Public Health Cluster.

5B. Improved Processes

A number of key informants mentioned that the 2010 FIFA World Cup was a catalyst for formalising some of the processes for reporting, independently or in conjunction with the development of SOPs. In some areas, this approach had been taken forward so as to remain within the everyday routine and in this respect, it was expected that this same approach would be used during the AFCON.

The formalisation of the steps to conduct risk assessments for communicable diseases is one example of this process and was mentioned both in interviews but also supported by documentary analysis. The template used for the 2010 FIFA World Cup was based on three components (potential impact on FIFA World Cup – National health response – Potential IHR response), each of which were evaluated on a five point scale (from minor to high), as described in the WHO report on its support to the 2010 FIFA World Cup[49]. This procedure, already based on that used at the 2010 Vancouver Winter Olympic Games, was re-used by the PHC in 2013[50].

Further discussions also presented future steps, in particular the will to develop a comprehensive risk management tool, encompassing both an assessment and mitigation components, to improve health security during MGs.

The detection and reporting of incidents are other examples of this formalisation. It was asserted in the interviews that improved techniques for sampling and analyzing food samples were adopted. As a result, those working in this area felt that increased numbers of food borne diseases were indeed reported during the FIFA World Cup 2010. It is however not clear whether this was due to the improved detection system or due to increased cases.

"I think 2010 helped us as a country to shape up... we were doing things before on an ad.hoc basis, but with 2010 we had documents developed, you knew exactly what to do in terms of guiding provinces in what needs to be done... so 2010 helped us in terms of approaches and moving things forward, we are using that now throughout..."

49 WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. Op.Cit. Page 114.
50 NDOH. National Health Operation Center- Public Health Cluster Situation Report, no 23. 10 February 2013. Op. Cit. Page 7.

5C. Physical Resources

The increase in equipment purchased also contributed to the facilitation of legacy, although not all is still in use.
One interviewee mentioned the donation of inflatable emergency tents purchased for the mass gathering to the provinces for disaster preparedness.

6 I mproved confidence to hold another mass gathering

Most interviewees argued that hosting the 2010 FIFA World Cup had increased the national confidence in its capacity to host future similar mass gathering events. This was due to the belief that most of the structures and procedures established and implemented would be transferable for the organisation of a future event.

In a 6th of July 2010 article, "Counting the World Cup Benefits", it was thus reported that the Finance Minister Pravin Gordhan had acknowledged that the "event would also help the country increase its delivery capacity while demonstrating to the world its ability to host major events"[51]. He further added, "History has taught us that hosting events of this magnitude can boost the country's credibility".

51 http://www.southafrica.info/2010/benefits-020710.htm#.UaxHOchOJMs

DISCUSSION

Learning from other fields

Whilst this report cannot go as far as evaluating legacy against agreed indicators, it can highlight where preparation for, and the hosting of, a mass gathering can benefit a country's public health system. It is also recognised that large aspects of legacy and especially any defined end points will be highly contextual, and differ according to different settings with different needs and different health systems' structures.

Therefore, whilst recognising the limitations in how far we can define legacy outcomes in South Africa, we propose that themes of legacy which emerge may be important intermediate steps to achieving improved systems where needed. Whilst not limited to public health, a recent document[52] from the World Bank Institute outlining a framework and guidance for evaluation of capacity development, describes important intermediate outcomes (ICOs) for capacity development programmes which would improve the ability of critical individuals or groups to effect institutional changes towards a given goal. There is some overlap between these ICOs, described as raised awareness, enhanced knowledge or skills, improved consensus and teamwork, strengthened coalitions, enhanced networks and new implementation know-how, and the themes of legacy described in this report.

It is, however, acknowledged that in the world Bank context, these ICOs relate to intermediate capacities in individuals or groups (''change agents'') whereas within this report, some themes of legacy extend to processes or legacy at a more institutional level. Therefore, it is possible that mass gatherings, such as the 2010 FIFA World Cup, can be a means or capacity improvement, and that if defined needs or goals for legacy were set, MGs could be effective in developing institutional and systems capacities in countries. Depending on the context, the goals can be expanded to consider capacity development at the Regional level when dealing with cross cutting themes,

52 The World Bank. World Bank Guide to Evaluating Capacity Development results. December 2012. Pp13-18 http://wbi.worldbank.org/wbi/Data/wbi/wbicms/files/drupal-acquia/wbi/Guide%20to%20Evaluating%20Capacity%20Development%20Results_0.pdf

such as communication and intersectoral approaches.
In future planning for legacy, where development of host country capacities are a given goal, these intermediate capacity outcomes amongst engaged stakeholders could be essential elements within a framework to ensure a better defined legacy.

Although there is currently no in depth analysis on the impact the FIFA 2010 or 2013 AFCON experiences had in raising awareness of public health issues within other sectors and departments within the South African national system, it remains that mass gatherings are real opportunities for different sectors to interact and therefore work together to reach common objectives.
Promoting inter-sectoriality to strengthen public health is not a new goal.
The 1978 Alma Ata Declaration already recognized in its first principle that "health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector".

This governance approach has more recently been promoted through the Health in All Policies (HIAP) discourse. It calls for the promotion of interactions between health and policies from other sectors.
The objective is for other sectors to reach their goals using policies that would also promote health standards and health for all the people.

In 2009, a methodology based on four pillars[53] was developed to assess the level and type of inter-sectoral work in national systems[54]. It is based on the level of exchange of information between sectors, cooper-

53 VALENTINEN, Solar.Moving Forward to Equity In Health What kind of intersectoral action is needed? An approach to an intersectoral typology. Partnership and Intersectoral Action Conference Working Document7th Global Conference on Health Promotion, "Promoting Health and Development: Closing the Implementation Gap", Nairobi, Kenya, 26-30 October 2009.. Quoted by WHO/PAHO, Rockfeller Foundation. AECD. Health in All Policies. Summary of the Experiences of the Americas. 8th Global Conference on Health Promotion, Helsinki, Finland 10-14 June 2013. Page 10. http://www.paho.org/hiap/index.php?option=com_docman&task=doc_view&gid=396&Itemid=

ation in reaching shared goals, coordination to do so and integration which would emerge through a shared policy. This methodology was used to conduct an analysis in 2013 of the state and local experiences on inter-sectoral work in the Americas[55].

Mass gatherings constitute an incentive to bring sectors together. With a common goal, the organisation of the event, all sectors can realize the impact the promotion of health standards has on its sector of activity, in particular the need to have healthy staff to organise, manage and conduct the event. Interaction between sectors is thus a necessity during a mass gathering. The exchange of information is strengthened for the sake of the event's objectives, cooperation and coordination are facilitated by the existence of such objectives to reach together and shared policies can emerge.

In this context, mass gatherings are platforms for the establishment of links and communication relationships between sectors. The challenge is then to maintain the increased collaborations and initial benefits of this approach.

Potential barriers and facilitator to legacy

It appears that hosting a mass gathering event has the potential to create positive public health legacy, but that this is not a given. For example, standard operating procedures, expertise and cooperation habits require initial and further investments to be sustainable. Physical equipment that is purchased requires maintenance, training for use and a role in every day practice. In this section, some potential barriers and facilitators to legacy are identified. These are in part related to the South Africa experience, but many build on other past experience and should be evaluated or tested in future. It is hoped that by highlighting these, processes which may facilitate legacy can be incorporated into planning and potential barriers to legacy can be planned for and mitigated.
Hosting a mass gathering may facilitate legacy through financial investment in a country's systems. At the same time, the higher level of political support to sanction planned

54 This methodology was based on a 2004 study led in the Netherlands , see MEIJEERS, Evert. STEAD, Dominic. "integration: what does it mean and how can it be achieved? A multidisciplinary review" 2004. Quoted by WHO/PAHO, Rockfeller Foundation. AECD. Health in All Policies. Summary of the Experiences of the Americas. 8th Global Conference on Health Promotion, Helsinki, Finland 10-14 June 2013. Page 10.
55 WHO/PAHO, Rockfeller Foundation. AECD. Health in All Policies. Summary of the Experiences of the Americas. 8th Global Conference on Health Promotion, Helsinki, Finland 10-14 June 2013. 68 pages.

actions for improvement, to assess preparedness and to address any gaps found is an essential factor. The length of the mass gatherings and length of time invested in planning and training, along with the level of key stakeholder engagement may be important. For example, increased planning and length of a MG may help ensure that improved processes used in the MG become operational knowledge and are enshrined in daily routine work. The involvement of key stakeholders with local and contextual knowledge, in planning is essential to facilitate adoption of knowledge (such as guidelines) to the local context which in turn enhances creation of positive legacies from such events and ensure that systems are effective and sustainable.

Organising a second MG, building on previous knowledge, could facilitate the creation legacy. For example, a second event could act as an incentive and a vector through which successful habits and mechanisms previously established could be sustained. There may, however, be detrimental side effects resulting from the organisation of a second MG event a few years after a highly visible and important event. An excess of confidence of the host in its capacity to organise the event by relying mostly on the acquis can be an example of this situation. The confidence arising from the 2010 FIFA World Cup, also has the potential to allow a false feeling of preparedness to any future MG event and in this context, confidence in the existence of legacies in all fields could become a rationale for not trying to improve existing processes and structures. This should be carefully monitored and due consideration should be given the aspects of the context that have changed

Another essential element to ensure the creation of legacy is to plan for it in the preparation phase of the event. Planning for legacy may help implement conditions in advance to ensure that successful mechanisms (e.g. the priority disease notification process) can be maintained once the MG event is over. Further, planning allows areas where there is a need to build capacity or improvements in existing systems to be identified as a need, and targeted for legacy development. Some participants asserted that in order to sustain legacy from the event, those actions or plans implemented which improved or built on existing capacities within a given area (rather than rewriting the previous way of operating) are more likely succeed. For example, if new procedures are introduced, a lack of continued financial support after the event may impose the necessity to return to previous procedures. Anticipating and planning for this may help facilitate legacy.

An important recognition from this initial report is that if legacy is to be maintained and indeed thoroughly monitored and evaluated, it needs to be planned for, according to the contextual capacity development needs within any given system.

With regards to the expertise obtained through trainings, it is essential that specific measures are taken to ensure that staff turnover does not lead this expertise being lost. In this context, the organisation of specific train-the-trainers modules during the preparation phase of an event can be a means to ensure that, once the event is over, local trainers can train new-comers.

Evaluation of Legacy

As mentioned, the monitoring and evaluation of legacy would be much improved if it also was planned for. This is likely to go in hand with planning for legacy itself, enabling a proposed framework for expected legacy outcomes and intermediate outcomes within areas of public health to be defined and a framework for ongoing evaluation to be developed.

If evaluation of legacy is planned, it allows the collection of baseline data in the planning phase, to ensure that legacy measurements are feasible in the post-event phase. This may facilitate developments and improvements in methodologies to evaluate legacy and could enable the positive or negative changes observed by the different stakeholders on a multi-year basis, to also be better defined and quantified where this is useful. Planning and budgeting for the evaluation of legacy is also important, especially as one negative legacy from mass gatherings that was observed by participants was "post event fatigue". The outcome of the evaluation should be fed into the subsequent planning to improve its quality.

Conclusion and Future Areas of Work

This report has provided an overview of the potential areas of legacy left from hosting a first mass gathering event, and documented ways in which hosting this event facilitated processes to host a second mass gathering.

One essential point identified is that legacy is in constant construction. Observing some positive changes in the three first years following the 2010 FIFA World Cup and highlighting areas where this experience could not be sustained cannot be seen as a conclusion. Legacy is necessarily a long-term process and the 2014 African Nations Championship will offer new opportunity to build on the 2010 FIFA World Cup's experience and to learn from the 2013 AFCON's successes and challenges

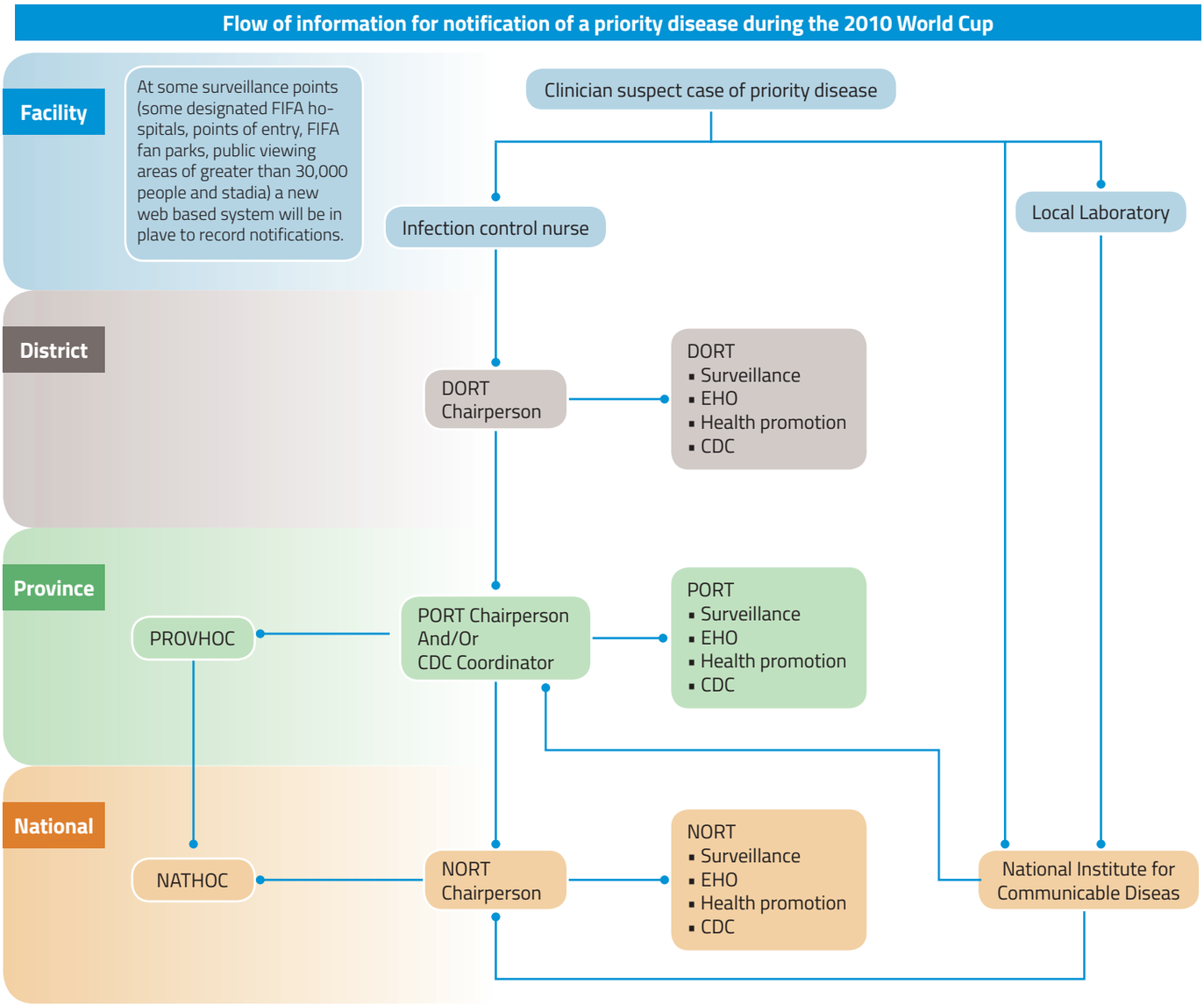
Further, the identification of potential barriers and facilitators to legacy provides areas for consideration for hosts of future MG events, but these areas need to be explored more comprehensively and in different contexts. In order for this to take place, planning for and planning to evaluate health legacy needs to be addressed at an early stage of the mass gathering process. Further work to develop frameworks to embed legacy planning into the mass gathering process and for its evaluation is needed.

SECTION 3.
APPENDICES

APPENDIX 1

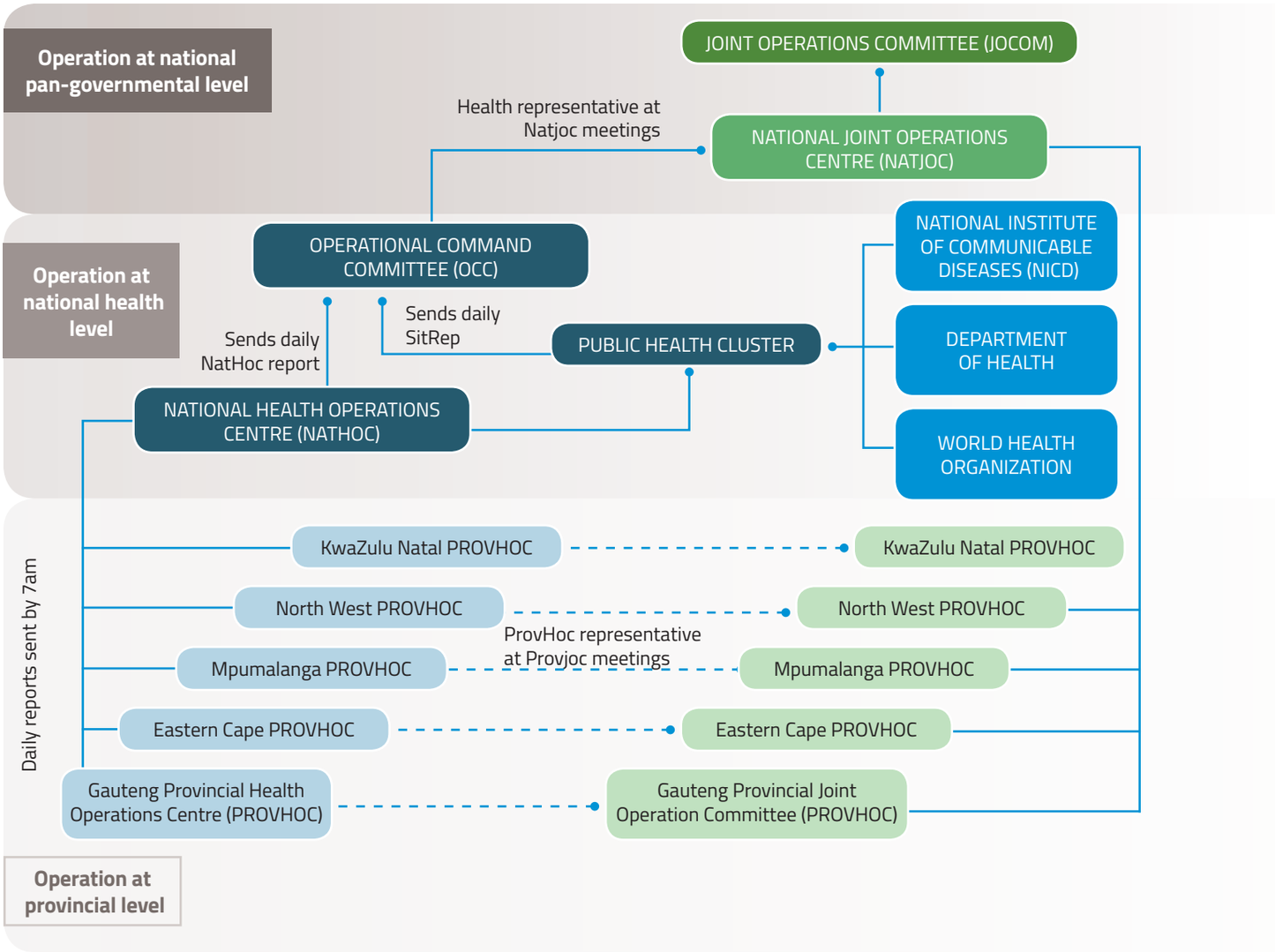
DATA FLOW FOR NOTIFICATION OF A PRIORITY DISEASE DURING THE 2010 WORLD CUP AND 2013 AFCON

Figure 1- 2010 FIFA World Cup



Source : WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. Page 96.

Figure 2 - Flow diagram of the reporting structure for public health during AFCON 2013



APPENDIX 2

2010 FIFA WORLD CUP AND 2013 AFCON'S SITUATION REPORTSWITH RISK ASSESSMENT TEMPLATE

Appendix 2 A- 2010 FIFA World Cup

Source : WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. Pages 107-113.

http://www.afro.who.int/fr/recherche.html?searchword=2010+FIFA&ordering=&searchphrase=all

NATIONAL HEALTH OPERATION CENTER: PUBLIC HEALTH CLUSTER SITUATION REPORT NO. 31

DATE: 5 July 2010

THIS REPORT COVERS: 0800 hrs 4 July 2010 to 0800 hrs 5 July 2010

Present at public health cluster meeting:
Duty Managers (NDOH)
NDOH (CDC, Epidemiology, Food Control, Environmental Health, Communications, Health Promotion)
DAFF
NICD
U.S. Centers for Disease Control and Prevention (CDC)
World Health Organization (WHO)

Meeting chaired and cleared by: Lucille Blumberg

Prepared by: Public Health Cluster

NEW INFORMATION IN THIS REPORT IS IN GREY

IMPORTANT CONTACT DETAILS

All emails should be copied to:

· DUTY MANAGER: **nervecentremgr@hoc.gov.za** and **nervecentremgr2@hoc.gov.za**

· Public Health Cluster Secretariat: **DOH2010@global.co.za** and **Natdohdepdir@hoc.gov.za**

Other contact details for duty manager:· Tel: 012 4844664/4665 Fax: 012 484 4801

A. OVERVIEW

Key epidemiological events in this report:

Event no.	Event Title	Status (Ongoing/ Acute)	Date 1st Reported	Summary
12	Sanitation facilities at Fan Parks	**Acute**	**12/6/2010**	Overall sanitation improved; National Directorate of Environmental Health monitoring situation daily
1	Measles outbreak	**Ongoing**	**1/4/2009**	No change in outbreak intensity
2	Rift Valley fever outbreak	**Ongoing**	**12/2/2010**	Risk of human exposure remains low
4	Meningococcal disease	**Ongoing**	**5/6/2010**	Expected seasonal/sporadic cases of meningococcal disease countrywide, nil clusters
3	Influenza	**Ongoing**	**4/6/2010**	As of June 29 16 influenza B cases and 18 H3N2 cases have been isolated for the current influenza season. Two influenza H1N1 cases have been identified so far. These cases are expected as the influenza season has begun.

B. MEDIA REPORTS

- Drunk drivers on the increase
- Death in Limpopo due to home brewed alcoholic concoction.

C. INTERNATIONAL SURVEILLANCE

- Hemorrhagic fever in the Republic of Congo (5 suspected cases). 3 July follow up: blood samples sent from one suspected case – negative so far for Arenavirus, Marburg, Ebola. However this does not rule out VHF. Update 4 July: four contacts of cases are being monitored
- Disease of unknown aetiology in DRC: 15 deaths reported (reported at meeting 2 July)
- Update 4 July: Re Influenza: Media reports state that surveillance from some other countries in Africa have influenza B as predominant this season
- Media rumour of plague outbreak in Syria

D. PUBLIC HEALTH EVENTS

(Event= any public health incident or threat that may pose a risk to the FIFA 2010 World Cup)

(Acute= any event with sudden onset that may require immediate response)

(Ongoing= any event of a continuous nature where the situation is relatively stable and risk is expected to remain unchanged from day to day)

1. Acute events (these events will be reviewed daily)

EVENT 12					
Title: Sanitation facilities at Fan Parks					
Source: SAMHS					
Description: > ssues identified within sanitation facilities and refuse in Fan Parks several weeks ago >These seem to be improving with nil reports of problems received in last 24 hours					
General assessment: Issues with sanitation and refuse in some provinces appear to be improving					
Risk Assessment					
Potential impact on games					Comments Lack of proper sanitation at fan parks poses a potential public health risk to FIFA 2010 World Cup
	2				
Potential national response					Comments Provision of sanitation facilities lies within municipalities; however, National Environmental Health Unit is monitoring the situation
	2				
Potential IHR response					Comments Situation does not warrant notification to IHR
1					
Plan/Intervention: > National Environmental Health unit has engaged with all municipalities ofconcern > Situation at Fan Parks is being actively monitored					

2. Ongoing events (these events will be analyzed and reported weekly, unless acute change in situation is determined)

EVENT 1					
Title: Ongoing measles outbreak (Country-wide) (This event is updated weekly; last updated on 1 July 2010)					
Source: NICD					
Description: > Country wide outbreak ongoing since April 2009. > Case numbers remain high but appear to be declining, however this may be an artifact resulting from delays in laboratory based surveillance. (Over the coming weeks we will be able to assess whether this is a sustained trend.)					
General assessment: > Measles activity is still ongoing, therefore still posing a risk to visitors. > No new cases in visitors.					
Risk Assessment					
Potential impact on games					Comments Although risk is low, risk of transmission to non-immune people (local and international) particularly in high population density gatherings such as Fan Parks and stadia
	2				
Potential national response					Comments Continued vaccination campaign in-country, being implemented by provinces with national oversight
		3			
Potential IHR response					Comments Is reported to WHO-AFRO under EPI monitoring on a weekly basis, however outbreak currently does not fulfill conditions for notification under IHR
1					
Plan/Intervention: > Continue situation monitoring and measles vaccination (mop-ups) > Travel health advice given to international visitors to have up to date measles immunization > Continue to conduct enhanced surveillance for measles					

EVENT 2

Title: Rift Valley fever outbreak

Source: NICD

Description:

> Ongoing outbreak since Feb 2010 (as of June 29 cumulative cases = 225, deaths = 25)
> Incident human cases have declined
> Last lab confirmed human case 18 June (farmer from Northern Cape) disease acquired in few days prior to date of onset
> DAFF reports no new animal outbreaks since beginning of June; no new areas with confirmed animal cases, except possibly in Western Cape – this is being investigated
> Animal outbreaks in surrounding countries are reported to be under control
> Map provided (on 2 July) shows main locations of animal outbreaks, with animal outbreaks occurring mainly in February, March, and April, and declining from May

General assessment:

> Outbreak activity appears to be decreasing
> Risk of further human exposure remains low

Risk Assessment

Potential impact on games					Comments
1					Major mode of transmission through direct contact with animal tissues, therefore low risk of transmission to World Cup participants, furthermore circulation of virus in animals appears to have decreased

Potential national response					Comments
	2				Multi-sectoral National Outbreak Response Team (MNORT) supporting the provinces

Potential IHR response					Comments
			4		Was notified to WHO under IHR at beginning of outbreak; weekly reports to WHO on status of outbreak continues

Plan/Intervention:

> Provincial CDC coordinators contacted to encourage notification
> Integrated public health response, in collaboration with health and agriculture, (including health education, communication and active surveillance) continues

EVENT 4					
Title: Seasonal/ sporadic meningococcal disease (Event is updated weekly; last updated on 1 July 2010)					
Source: NICD					
Description: > From 4 to 29 June there have been 27 cases country wide, which is within expected range for this season > All sporadic cases, no clusters > Nil significant change in case number from last year > All meningococcal disease cases are followed up with contact tracing and chemoprophylaxis where necessary					
General assessment: > Expected seasonal/sporadic cases of meningococcal disease					
Risk Assessment					
Potential impact on games					Comments So far cases have been sporadic and not FIFA related, however increased population density during FIFA events may increase usual risk of transmission
1					
Potential national response					Comments Cases are responded to at local level, national monitors only
1					
Potential IHR response					Comments nil implications for IHR at present
1					
Plan/Intervention: > Continue to monitor situation					

EVENT 3					
Title: Influenza (seasonal influenza and pandemic (H1N1) 2009 (Event is updated weekly; last updated on 1 July 2010)					
Source: NICD					
Description: > As of 29 June 2010, 16 influenza B cases and 18 A/H3N2 cases have been isolated for the current influenza season. Two influenza pandemic (H1N1) 2009 cases have been identified so far, in Gauteng Province.					
General assessment: > These cases are expected as the influenza season has begun.					
Risk Assessment					
Potential impact on games					Comments very low
1					
Potential national response					Comments Continue vaccination campaigns and influenza prevention messages
	2				
Potential IHR response					Comments Pandemic (H1N1) 2009 is reportable per IHR 2005, and hence cases must be reported to AFRO (WHO)
			4		
Plan/Intervention: > Continue vaccination campaigns for seasonal and Pandemic (H1N1) 2009 influenza, and health messaging as described above > Continue monitoring situation					

RISK ASSESSMENT

The public health cluster of South African National Health Operations Centre (NATHOC) performs a public health Risk Assessment on the items included in this report. The risk assessment consists of three components each evaluated on a five point scale as per the table below.

Potential impact on FIFA World Cup	**1**	**Minor**	Minor or no risk to the FIFA WC to South Africa or internationally
	2	**Low**	Some risk to the FIFA WC to South Africa or internationally
	3	**Moderate**	Moderate risk to the FIFA WC to South Africa or internationally
	4	**High**	Significant risk to the WC or to SA or Internationally
	5	**Extremely high**	Very Significant Risk to WC/to SA/ Internationally
National health response	**1**	**No response**	Responsibility lies outside national health. National health monitors only
	2	**Minimal health response**	Responsibility lies mainly outside national health. National health provides advice as requested
	3	**Health response**	Responsibility within national health or request for health at national level is anticipated
	4	**Government response**	Size, complexity or nature of the event will require a whole of government response
	5	**Government and International Response**	Size, complexity or nature of the event will require a whole of government response and international support
Potential IHR response	**1**	**No communications required**	No IHR communication or if occurred outside of SA not applicable
	2	**Internal Consultation**	No IHR communication, communication with Province and between National Agencies
	3	**Consultation**	Not notifiable under the IHR. Will be communicated to WHO as an FYI, communication with involved Province(s) and between National Agencies
	4	**Notification**	Notifiable under IHR as determined by IHR decision instrument, communication with all Provinces, and between National Agencies
	5	**Notification and response**	Notifiable under IHR as determined by IHR decision instrument,

E. AGGREGATE NUMBERS PRIORITY CONDITIONS

* Cumulative as of 4 June 2010 ( ) indicates cumulative

2010 WORLD CUP PUBLIC HEALTH SURVEILLANCE DAILY NATIONAL SITUATION SUMMARY REPORT (all figures cumulative since 4 June 2010 are indicated in brackets; referent events are shown in summary table following this report)								
		Easter Cape	Free State	Gauteng	Kwazulu-Natal	Limpopo	Mpumalanga	
Condition to be Notified	New & (Cumulative)							
AFP or Polio	Confirmed	0	0	0	0	0	0	
	Suspect	0	0	0	0	0	0	
Anthrax	Confirmed	0	0	0	0	0	0	
	Suspect	0	0	0	0	0	0	
Cholera	Confirmed	0	0	0 (1)	0	0	0	
	Suspect	0	0	0	0	0	0	
Measles	Confirmed	13 (1,337)	22 (678)	18 (5,018)	63 (3,962)	4 (489)	35 (1,797)	
	Suspect	22	2	5	11	0	0	
Meningococcal disease	Confirmed	1 (4)	0 (1)	1 (31)	0 (0)	0 (0)	0 (0)	
	Suspect	0	0	0	0	0	0	
		Northern Cape	North West	Western cape	National	Comments		
AFP or Polio	Confirmed	0	0	0	0			
	Suspect	0	0	0	1	Awaiting lab results		
Anthrax	Confirmed	0	0	0	0	Nil comment		
	Suspect	0	0	0	0			
Cholera	Confirmed	0	0 (1)	0 (1)	0 (1)	Event resolved and follow up completed, refer to **event 7**		
	Suspect	0	0	0	0			
Measles	Confirmed	9 (321)	8 (11,357)	83 (1,651)	255 (16,423)*	See **event 1***		
	Suspect	0	0	7	29			
Meningococcal disease	Confirmed	0 (0)	0 (2)	0 (2)	2 (38)			
	Suspect	1	0	0	0			

*Laboratory confirmed measles are updated weekly (last updated on 29 June 2010), cumulative since April 2009

2010 WORLD CUP PUBLIC HEALTH SURVEILLANCE DAILY NATIONAL SITUATION SUMMARY REPORT
(all figures cumulative since 4 June 2010 are indicated in brackets; referent events are shown in summary table following this report)

		Easter Cape	Free State	Gauteng	Kwazulu-Natal	Limpopo	Mpumalanga
Condition to be Notified	New & (Cumulative)						
Meningitis, unspecified	Confirmed	0 (2)	0 (1)	0 (10)	0	0	0
	Suspect	0	0	2	0	0	0
Plague	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0	0	0	0
Rabies	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0	0	0	0
Rift Valley Fever	Confirmed	0	0	1 (2)	0	0	0
	Suspect	0	0	0	0	0	0
SARS	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0	0	0	0
Smallpox	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0	0	0	0
Typhoid fever	Confirmed	0 (1)	1 (2)	0 (1)	0 (1)	0	0
	Suspect	0	0	0	0	0	0

		Northern Cape	North West	Western cape	National	Comments
Meningitis, unspecified	Confirmed	0	0	0 (1)	0 (14)	Nil comment
	Suspect	0	0	0	2	
Plague	Confirmed	0	0	0	0	Nil comment
	Suspect	0	0	0	0	
Rabies	Confirmed	0	0	0	0	Nil comment
	Suspect	0	0	0	0	
Rift Valley Fever	Confirmed	1(1)	0	1(1)	3 (4)	See **event 2**
	Suspect	0	0	0	0	
SARS	Confirmed	0	0	0	0	Nil comment
	Suspect	0	0	0	0	
Smallpox	Confirmed	0	0	0	0	Nil comment
	Suspect	0	0	0	0	
Typhoid fever	Confirmed	0	0	0 (1)	1(6)	See **event 6** for previous outbreak status
	Suspect	0	0	0	0	

2010 WORLD CUP PUBLIC HEALTH SURVEILLANCE DAILY NATIONAL SITUATION SUMMARY REPORT
(all figures cumulative since 4 June 2010 are indicated in brackets; referent events are shown in summary table following this report)

		Easter Cape	Free State	Gauteng	Kwazulu-Natal	Limpopo	Mpumalanga
Condition to be Notified	New & (Cumulative)						
VHF eg. Lassa, Arena, Congo fever)	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0	0	0	0
Viral Hepatitis A	Confirmed	0 (7)	0 (1)	1 (23)	1 (18)	0 (1)	1 (2)
	Suspect	0	0	0	0	0	0
Yellow fever	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0	0	0	0
Severe unexplained illness	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0	0	0	0
Cluster of illness with a common source or exposure (e.g. ILI, rash, Meningitis)	Confirmed	0	0	0	0	0	0
	Suspect	0	0	0 (2)	0	0	0
Gastroenteritis in >2 people with common exposure	Confirmed	0	0	0	0	0	0 (117)
	Suspect	0	0 (5)	0	0 (7)	0	0

		Northern Cape	North West	Western cape	National	Comments
VHF eg. Lassa, Arena, Congo fever)	Confirmed	0	0	0	0	Nil comments
	Suspect	0	0	0	0	
Viral Hepatitis A	Confirmed	0 (2)	1 (3)	0 (20)	4 (73)*	Comment* cumulative and national total includes 1 case with unknown province location
	Suspect	0	0	0	0	
Yellow fever	Confirmed	0	0	0	0	
	Suspect	0	0	0	0	Nil comments
Severe unexplained illness	Confirmed	0	0	0	0	
	Suspect	0	0	0	0	Nil comments
Cluster of illness with a common source or exposure (e.g. ILI, rash, Meningitis)	Confirmed	0	0	0	0	
	Suspect	0	0	0	0 (2)	Nil comments
Gastroenteritis in >2 people with common exposure	Confirmed	0	0	0	0 (117)	
	Suspect	0	0	0	0 (12)	

SUMMARY EVENT TABLE FROM PUBLIC HEALTH CLUSTER MEETING SITREPS (1-27)
Definition of terms used in this table

Ongoing: any event of a continuous nature where the situation is relatively stable and risk is expected to remain unchanged from day to day
Acute: any event with sudden onset that may require immediate response)
Monitor: Event appears to be resolved however need to watch that any reoccurrence is attended to immediately
Closed: Event resolved, nil further action required.
Verification required: Event reported, currently insufficient information to establish risk

Event no.	Event Title	Location	Summary Description	Date info 1st received	case count	Status
1	Measles	Countrywide	Ongoing Measles outbreak since 2009 (country-wide)	05.06.10		ongoing
2	RVF	Multiple Provinces	Outbreak of RVF in 5 provinces since Feb 2010; general decline (Most recent case had date of onset 18 June. This was in a farmer). Cases are declining. No new cases since 18 June.	05.06.10	221	ongoing
3	Influenza	Countrywide	16 influenza B cases and 18 H3N2 cases have been isolated for the current influenza season. Two influenza H1N1 case has been identified so far. These cases are expected as the influenza season has begun. Update 4 July: slow increase in incidence, appears to be mostly influenza B (with fewer cases of influenza A H3N2 and H1N1)	05.06.10		ongoing
4	Meningo-coccal Disease	Countrywide	Sporadic cases of meningococcal disease within expected range for season	05.06.10		ongoing
5	Suspected Food poisoning	Mpumalanga	Point source outbreak among school children at a lodge; etiology identified as Bacillus cereus; investigation completed and outbreak contained	05.06.10	100	closed
6	Typhoid Outbreak	Gauteng	Cases had dates of onset since April-May, all linked by identical strains; investigation identified restaurant as suspected common source, environmental samples negative (no further cases since 27 May), no additonal cases after 1 month, however monitoring will continue	05.06.10	8	ongoing
7	Imported Case of Cholera	Gauteng	Single lab confirmed case of Vibrio Cholera SA traveler on return from India; fellow travelers also screened and tested negative, no further cases detected after two incubation periods	10.06.10	1	closed
8	Food Poisoning	Free State	3 cases with common exposure; no samples taken therefore etiology unknown; environmental investigations implicated food storage handling and transportation, these issued resolved	14.06.10	3	closed
9	Food Poisoning	KZN	Mild illness, environmental samples implicated cream buns contaminated with Staphylococcus aureus; Point sources outbreak, no further cases	14.06.10	7	closed
10	Chicken Pox Outbreak	Gauteng	Small number of cases, outbreak in mental health institution;Outbreak contained	09.06.10	n/a	closed
11	Suspected VHF	Northern Cape	34 year old male with sudden onset multi-organ failure admitted and investigated, test for VHF etiologies negative and other cause of illness found	12.06.10	1	closed

Event no.	Event Title	Location	Summary Description	Date info 1st received	case count	Status
12	Adequacy of sanitation facilities at Fan Parks	Multiple Provinces	Overall sanitation improved (further follow-ups to be done in Gauteng); further meetings planned between national directorate of Environmental Health and municipalities, Free State remains a concern for adequacy	13.06.10	n/a	acute
13	Animal Rabies	Gauteng	No human exposure; three dogs confirmed veterinarians following up in Roodepoort; dog 23-25 June immunization campaign completed.	10.06.10	3* dogs	closed
14	Suspected Food Poisoning	Mpumalanga	120 volunteers with mild gastrointestinal illness; likely point source outbreak, lab results from patients negative (no food submitted)	09.06.10	120	closed
15	uspected Food Poisoning	Mpumalanga	4 reported cases of GI illness, security guards at park and ride; etiology unknown	23.06.10	4	closed
16	uspected Food Poisoning	Gauteng	NICD was notified of a suspected food poisoning incident at the Centurion fan fest. A total of 12 cases were reported with gastroenteritis. FELTP residents stationed at Tshwane DOH assisted EHPs with their investigations. No food or clinical specimens were available for testing. No further related cases.	17.06.10	12	closed
17	Suspected Food Poisoning	KZN	Suspected food poisoning at Kwa Mashu PVA: Various food specimens were submitted to NHLS Public Health Laboratory (KZN) for bacterial testing. Results: one stool sample tested negative for bacteria. No specimens were sent for virus or toxin testing.	22.06.10	4	closed
18	SARI	Western Cape	52 yo female from Riversdale had acute onset of shortness of breath post 1 week ILI, tx-ed for pulm edema and flu, transferred to George Hospital and died of renal failure shortly after arrival; throat swabs taken, inlfuenza negative	23.06.10	1	closed
19	ARI, rumored Legionnaire's Disease	KZN	Zululand Observer reported 4 suspected legionnaire's disease cases from a bank in Richards Bay. Presented with cough and headache. District CDC Coordinator investigated 4 further asymptomatic employees seen by doctors. Screening lab test non-specific. Results inconclusive. Urine specimens requested to be sent to NICD for antigen testing (as of 29 June no specimens have been recieved). Environmental investigation report pending. 1 urine sample was received, tested negative for urinary antigen. 2 sputum samples received, tested negative by direct immunoflourescence. They have been submitted for culture and results awaited.	23.06.10	4	monitor
20	Suspected Rabies Case	KZN	1 patient with clinical symtpoms of rabies in Port Shepstone bitten by stray dog 2-3 months ago (died 29 June 2010). Saliva and CSF testing negative, nuchal skin biopsy and brain biopsy conducted. Brain biopsy has come back positive.	29.06.10	1	closed
21	Dog Bite	Gauteng	2 dog bites in Edenvale (both were domestic animals and report awaited), 1 in Hillbrow (awaiting report), increased awareness of rabies may be leading to increased reporting, all dog bite cases received PEP, DAFF has not reported animal rabies in this area	29.06.10	3	monitor

Appendix 2B
2013 AFCON situation report

NATIONAL HEALTH OPERATION CENTER

PUBLIC HEALTH CLUSTER SITUATION REPORT NO.23

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

DATE:10 FEBRUARY 2013

This report covers events from 07H00 09 February 2013 to 07H00 10February 2013

Present at Public Health Cluster meeting:

LIST OF DOH DIRECTORATES REPRESENTED:

- Communicable Disease Control
- Epidemiology and Surveillance
- Environmental Health
- Food Control

List of other departments represented:

List of other agencies represented:

Chairperson for this report: xxxxx

Prepared by: Public Health Cluster

Cleared by: Chairperson

DISTRIBUTION LIST AS PER ANNEXURE A AND MAY NOT BE FURTHER DISTRIBUTED TO ANY OTHER PERSON OR ORGANISATION WITHOUT THE PERMISSION OF THE AFCON PROJECT MANAGER

Any enquires about the content of this report should be sent to the Chairperson

OVERVIEW

Key epidemiological events in this report:

Event no.	Event Title	Status (Ongoing/Acute)	Date 1st Reported	Summary
2	Seasonal Malaria Cases			
3	Suspected Measles			
4	Shigella			
6	Travelers without proof of Yellow Fever vaccination			
7	Suspected food-borne illness			

A. MEDIA REPORTS

- The Beeld, 30/01/2013 reported of local clusters of odyssean malaria in Gauteng, previously reported to the Public Health Cluster, see Event 2.
- The Namibian, 30/01/2013 reported 18 confirmed measles in 8 villages Onippa constituency Namibia. Health teams vaccination the affected population.
- New Vision, 30/01/2013 reported 28 cases of Cholera including 2 deaths in 6 villages in Nabbi District Uganda since January 2013.
- The Star, 06/02/2013 reported six malaria cases including one death in Gauteng, (Kempton and Bronkhorstspruit). The six were diagnosed with the diseases without having travelled to areas with a high risk of malaria. Previously reported to the Public Health Cluster, see Event 2.

C. INTERNATIONAL SURVEILLANCE

1

Events of priority diseases reported from other African Nations:

- Yellow fever outbreak in Sudan and Chad.
- Ongoing measles outbreak in DRC.
- Cholera in West African Region, Niger, Guinea, Sierra Leone, Ghana and Democratic Republic of Congo (DRC).
- Ebola Fever in DRC.
- Rift Valley Fever in Mauritania.
- Marburg Fever in Uganda.
- Cholera cases in Angola (ProMed).
- Three (3) cases of bacterial Meningitis in Algeria.
- Cholera cases in Zambia.

2

Risk of spread of above events to South Africa:

Risks assessed and action taken where appropriate. Report summarizing risk assessment of international events is attached as Appendix B.

3

Public Health Events in South Africa with significant risk of International spread:

None currently.

D. PUBLIC HEALTH EVENTS

Event = Any public health incident or threat that may pose a risk to the AFCON 2013 Tournament.

Acute = Any event with sudden onset that may require immediate response.

Ongoing = Any event of a continuous nature where the situation is relatively stable and risk is expected to remain unchanged from day to day.

Seasonal = Public health concerns that would occur irrespective of the tournament.

1. ACUTE EVENTS
(these events will be reviewed daily)

EVENT 7					
Title:					
Source:					
Description:					
General assessment:					
Risk Assessment					
Potential impact on games					Comments
1					
Potential national response					Comments
1					
Potential IHR response					Comments
1					
Plan:					

EVENT 6					
Title: Travelers coming without proof of Yellow Fever vaccination					
Source:					
Description:					
General assessment:					
Risk Assessment					
Potential impact on games					Comments
1					
Potential national response					Comments
1					
Potential IHR response					Comments
1					
Plan:					

2. ONGOING EVENTS
(these events will be analysed and reported weekly, unless acute change in situation is determined).

EVENT 2					
Title: Ongoing Seasonal Malaria cases					
Source:					
Description:					
General assessment:					
Risk Assessment					
Potential impact on games					Comments
1					
Potential national response					Comments
1					
Potential IHR response					Comments
1					
Plan: Healthcare facilities to be on high alert for malaria cases.					

EVENT 3					
Title: Suspected Measles					
Source:					
Description:					
General assessment:					
Risk Assessment					
Potential impact on games					Comments
1					
Potential national response					Comments
1					
Potential IHR response					Comments
1					
Plan: Await laboratory confirmation and monitor the situation.					

EVENT 4					
Title: Shigella flexneri Ib outbreak KwaZakhele/New Brighton, Eastern Cape Province					
Source: NICD					
Description:					
General assessment:					
Risk Assessment					
Potential impact on games					Comments
1					
Potential national response					Comments
1					
Potential IHR response					Comments
1					
Plan: Healthcare facilities to be on high alert for malaria cases.					

EXPLANATION OF RISK ASSESSMENT PROCESS

The public health cluster of South African National Health Operations Centre (NATHOC) performs a public health Risk Assessment on the items included in this report. The risk assessment consists of three components each evaluated on a five point scale as per the table below.

Potential impact on Orange AFCON	**1**	**Minor**	Minor or no risk to the ORANGE AFCON to South Africa or internationally
	2	**Low**	Some risk to the ORANGE AFCON to South Africa or internationally
	3	**Moderate**	Moderate risk to the ORANGE AFCON to South Africa or internationally
	4	**High**	Significant risk to the ORANGE AFCON or to SA or Internationally
	5	**Extremely high**	Very Significant Risk to ORANGE AFCON/to SA/ Internationally
National health response	**1**	**No response**	Responsibility lies outside national health. National health monitors only
	2	**Minimal health response**	Responsibility lies mainly outside national health. National health provides advice as requested
	3	**Health response**	Responsibility within national health or request for health at national level is anticipated
	4	**Government response**	Size, complexity or nature of the event will require a whole of government response.
	5	**Government and International Response**	Size, complexity or nature of the event will require a whole of government response and international support
Potential IHR response	**1**	**No communications required**	No IHR communication or if occurred outside of SA not applicable
	2	**Internal Consultation**	No IHR communication. communication with Province and between National Agencies.
	3	**Consultation**	Not notifiable under the IHR. Will be communicated to WHO as an FYI, communication with involved Province(s) and between National Agencies
	4	**Notification**	Notifiable under IHR as determined by IHR decision instrument. communication with all Provinces, and between National Agencies
	5	**Notification and response**	Notifiable under IHR as determined by IHR decision instrument.

2013 AFCON PUBLIC HEALTH SURVEILLANCE

DAILY NATIONAL SITUATION SUMMARY REPORT

(Aggregate numbers of priority conditionsreported to date are shown in brackets on the table)

Table 1:
Reports of selected priority health conditions by province (last update 08 February 2013, 05h00)

Condition	Status	SA Total	Province										Comments
			Eastern Cape	Free State	Gauteng	KwaZulu	Limpopo	Mpumalanga	Northern Cape	North West	Western Cape	Unknown	
Anthrax	Suspected												
	Confirmed												
Botulism	Suspected												
	Confirmed												
Cholera	Suspected												
	Confirmed												
Viral Hepatitis	Suspected												
	Confirmed												

Condition	Status	SA Total	Province										Comments
			Eastern Cape	Free State	Gauteng	KwaZulu	Limpopo	Mpumalanga	Northern Cape	North West	Western Cape	Unknown	
Malaria	Suspected												
	Confirmed												
Measles	Suspected												
	Confirmed												
Meningitis	Suspected												
	Confirmed												
Meningococcal disease	Suspected												
	Confirmed												
Plague	Suspected												
	Confirmed												
Polio (or AFP)	Suspected												
	Confirmed												
Rabies	Suspected												
	Confirmed												
SARS	Suspected												
	Confirmed												
Severe Unexplained Illness (SUI)	Suspected												
	Confirmed												
Smallpox	Suspected												
	Confirmed												
Typhoid	Suspected												
	Confirmed												

Viral Haemorrhagic Fevers (VHF):													
Condition	Status	SA Total	Province										Comments
			Eastern Cape	Free State	Gauteng	KwaZulu	Limpopo	Mpumalanga	Northern Cape	North West	Western Cape	Unknown	
*Rift Valley Fever	Suspected												
	Confirmed												
*CCHF	Suspected												
	Confirmed												
*Other VHFs	Suspected												
	Confirmed												
*Yellow fever	Suspected												
	Confirmed												
Gastroenteritis in ≥ 2 people with common exposure (e.g. food poisoning)	Suspected												
	Confirmed												
Typhoid	Suspected												
	Confirmed												

Data provided by NICD and NATHOC. All efforts have been made to consolidate and cross-check data, however, due to time constraints and reporting lags, some inconsistencies may occur.
The provinces that are participating in the tournament are highlighted in yellow.

SUMMARY EVENT TABLE FROM PUBLIC HEALTH CLUSTER MEETING SITREPS

Definition of terms used in this table:

Ongoing: Any event of a continuous nature where the situation is relatively stable and risk is expected to remain unchanged from day to day.

Acute: Any event with sudden onset that may require immediate response.

Monitor: Event appears to be resolved however need to watch that any reoccurrence is attended to immediately.

Closed: Event resolved, nil further action required.

Verification required: Event reported, currently insufficient information to establish risk.

Seasonal: Public health concerns that would occur irrespective of the tournament.

Event no.	Event Title	Location	Summary Description	Date info 1st received	Case Count	Status
1	Crimean Congo Haemorrhagic Fever (CCHF)	Free State & North West				Closed
2	Seasonal Malaria Cases	Multiple Provinces				Ongoing, Seasonal
3	Suspected Measles	KZN & Mpumalanga				Acute
4	Shigella	New Brighton/ Kwazakele - Nelson Manadela Bay Metro				Monitor
5	Diarrhoeal Outbreak	Cape Town Western Cape				Closed, expected seasonal increases
6	Travelers without proof of Yellow Fever vaccination	Gauteng, Mpumalanga, Eastern Cape				
7	Suspected food-borne illness	Mpumalanga				

Appendix B
2013 AFCON situation report

RISK ASSESSMENT OF THE IMPACT OF INFECTIOUS DISEASE OUTBREAKS EVENTS IN AFRICA ON THE AFCON, VERSION 3 PREPARED 29/01/2013

Most of the events reported below were still considered 'current' by WHO at the beginning of January 2013, however the information provided on some of these events is old and may suggest the outbreak is considered closed at a local level. If new events are reported that occur outside South Africa and are considered to potentially impact South Africa during AFCON these will be risk assessed and this document will be updated to reflect the changes. If the status of any of the events in table 1 changes considerably during the AFCON, then the risk assessment will be updated if necessary.

Table 1:
Overview of international events assessed for their impact on the AFCON

Event no.	Public health event	Country	Date outbreak declared	Status/date last updated	Risk to AFCON(1-5)
1	Cholera outbreak	Democratic Republic of Congo	July 2012	July update	1
2	Cholera outbreak	Ghana	June 2012	June update	1
3	Cholera outbreak	Guinea	February 2012	August update	1
4	Cholera outbreak	Niger	March 2012	Oct update	1
5	Cholera outbreak	Sierra Leone	February 2012	Nov update	1
6	Ebola outbreak	Democratic Republic of Congo	July 2012	Oct update	1
7	Marburg Fever outbreak	Uganda	October 2012	Closed	1
8	Measles outbreak	Democratic Republic of Congo	2012	January 2013	1
9	Rift Valley Fever	Mauritania	January 2012	Nov 2012	1
10	Yellow Fever Outbreak	Chad	October 2012	Dec 2012	1
11	Yellow Fever Outbreak	Sudan	October 2012	Nov 2012	1
12	Cholera outbreak	Angola		January 2013	

RISK ASSESSMENT PROCESS

All the events reported in table 1 were considered to warrant risk assessment.

The risk assessment is undertaken by the AFCON public health cluster team.

The aim of this report is to document the risk assessment process for each of these events and report any action taken by public health authorities in response to this assessment.

Proposed criteria for risk assessment:

- Transmissibility and pathogenicity (severity of disease if infected) of infectious agent
- Characteristics of outbreak at source – number of cases, geographical location and status (ongoing outbreak?)
- Likelihood of visitors from affected areas visiting South Africa during AFCON period
- Existence of screening precautions for disease/pathogen at border control?
- Potential for pathogen to spread within South Africa if imported

EVENT 1					
Title: Cholera in the Democratic Republic of Congo					
Source: WHO					
Description: An outbreak of cholera in the North Kivu province of DRC was declared in July 2012. Cholera is endemic in the province however, a substantial increase in cases was observed and with the occurrence of armed conflict in the province resulting in population displacement, there is increased concern regarding international spread. The outbreak is still considered ongoing. No update on the number of cases has been made available to WHO (3443 cases reported by 23/07/2012).					
Assessment of Risk of importation into South Africa ▪ DRC is participating in AFCON and therefore SA likely to receive visitors from DRC ▪ The outbreak was localized to Northern areas of DRC ▪ The population affected are unlikely to be travelling to South Africa ▪ The outbreak may be on the decline, as no recent data is provided.					
Assessment of risk of spread in South Africa ▪ Cholera is highly transmissible in areas with poor water and sanitation facilities, and therefore could be highly transmissible in certain settlements in South Africa.					
Risk Assessment					
Potential impact on games					Comments: Minor risk of importation.
1					
Plan: ▪ No action currently required based on above assessment					

EVENT 2

Title: Cholera in Ghana

Source: WHO

Description: An outbreak of cholera in Northern Ghana (Kassena-Nankana and Kassena-Nankana West Districts) was reported in June 2012. 120 cases including 4 deaths were reported by 24/06/2012. Cholera outbreaks are unusual in Northern Ghana, and are more commonly localized to the south. No update on cases was available however the outbreak is still reported to be current.

Assessment of Risk of importation into South Africa

- Ghana is participating in AFCON and therefore SA is likely to received visitors from Ghana
- The outbreak appears to have been small and localized to a small area of the country
- the outbreak may also be considered closed at the local level as no recent updates have been provided

Assessment of risk of spread in South Africa

- Cholera is highly transmissible in areas with poor water and sanitation facilities, and therefore could be highly transmissible in certain settlements in South Africa.

Risk Assessment

Potential impact on games					Comments: Minor risk of importation.
1					

Plan:

- No action currently required based on above assessment

EVENT 3

Title: Cholera in Guinea

Source: WHO

Description: The outbreak was first reported in February 2012, and started in an area bordering Sierra Leone. 2861 cases including 78 deaths reported by 23/08/2012. No updates have been provided on case numbers or the location of cases. Outbreak continued into October, peaking in September, declined by the end of 2012. Unclear if declared over.

Assessment of Risk of importation into South Africa

- Guinea is not participating in AFCON therefore SA unlikely to receive many visitors from Guinea
- Outbreak was on the decline end 2012, and may have been closed

Assessment of risk of spread in South Africa

- Cholera is highly transmissible in areas with poor water and sanitation facilities, and therefore could be highly transmissible in certain settlements in South Africa.

Risk Assessment

Potential impact on games					Comments: Minor risk of importation.
1					

Plan:

- No action currently required based on above assessment

EVENT 4					
Title: Cholera in Niger					
Source: WHO					
Description: The outbreak was first reported in March 2012. By October 2012 1871 cases including 44 deaths had been reported. Cases occurred in 12 of the 42 districts, localized to the south-west of the country. No new data has been provided since October.					
Assessment of Risk of importation into South Africa ▪ Niger is participating in AFCON and therefore SA is may receive visitors from Niger related to AFCON ▪ The outbreak is relatively small-scale					
Assessment of risk of spread in South Africa ▪ Cholera is highly transmissible in areas with poor water and sanitation facilities, and therefore could be highly transmissible in certain settlements in South Africa.					
Risk Assessment					
Potential impact on games					Comments: Minor risk of importation.
1					
Plan: ▪ No action currently required based on above assessment					

EVENT 5					
Title: Cholera in Sierra Leone					
Source: WHO					
Description: the outbreak was first declared in February 2012. As of 6 November 2012, MOHS Sierra Leone have reported 22 503 cases including 293 deaths from 12 out of 13 districts (including Freetown) located in the four regions. The number of new cases has been decreasing since week 34.					
Assessment of Risk of importation into South Africa ▪ Sierra Leone is not participating in AFCON and therefore South Africa is unlikely to receive many visitors from Sierra Leone related to AFCON ▪ This is a large-scale national outbreak, with all regions of the country affected ▪ Sierra Leone is a considerable distance from South Africa and does not share land borders ▪ Outbreak on the decline					
Assessment of risk of spread in South Africa ▪ Cholera is highly transmissible in areas with poor water and sanitation facilities, and therefore could be highly transmissible in certain settlements in South Africa.					
Risk Assessment					
Potential impact on games					Comments: Minor risk of importation.
1					
Plan: ▪ No action currently required based on above assessment					

EVENT 6

Title: Ebola Fever outbreak Democratic Republic of Congo

Source: WHO

Description: An outbreak of Ebola Viral Hemorrhagic Syndrome began in July 2012 in Province Oriental, in the east of the country. As at 27/10/2012, 76 cases, including 36 deaths, have been reported. Cases remained localized to the Province Orientale. No update on cases has been provided since 27/10/2012 .

Assessment of Risk of importation into South Africa

- DRC is participating in AFCON so an increase in visitors from DRC is anticipated
- Relatively small numbers of cases have been reported
- Cases are localized in the east of the country, away from Kinshasa
- Cases are transmissible when symptomatic
- The outbreak has been declared over by WHO, although there is always a possibility of another VHF outbreak

Assessment of risk of spread in South Africa

- With rapid detection and swift action to implement appropriate infection control for cases and their contacts, particularly in health care facilities, transmission could be contained.

Risk Assessment

Potential impact on games					Comments: minor risk as outbreak closed
1					

Plan:

- No action required as outbreak closed

EVENT 7

Title: Marburg Fever outbreak in Uganda

Source: WHO

Description: the outbreak was first reported on 19th October 2012, localized to the South Western Kabale district. 14 cases including 6 deaths were reported by 27/10/2012. Most of these cases were reported to be members of the same family. The Ministry of Health declared the outbreak over on January 16th 2013, after 2 consecutive 21 day incubation periods had passed without further incident cases.

Assessment of Risk of importation into South Africa

- Uganda is not participating in AFCON so SA is unlikely to receive many visitors from Uganda related to AFCON.
- The outbreak was declared over by the Minister of Health on 16/01/2013.

Assessment of risk of spread in South Africa

- With rapid detection and swift action to implement appropriate infection control for cases and their contacts, particularly in health care facilities, transmission could be contained.

Risk Assessment

Potential impact on games					Comments: Minor risk of importation.
1					

Plan:

- No action required as no current risk.

EVENT 8

Title: Measles outbreak in Democratic Republic of Congo

Source: Media report

Description: A measles epidemic in the North East (Maniema and North Kivu provinces) has been ongoing since 2012 with 1691 cases reported in Maniema province and 650 in North Kivu province. The outbreak is continuing with over 100 cases including 11 deaths between 1st and 13th January 2013.

Assessment of Risk of importation into South Africa

- DRC is participating in AFCON so SA is likely to receive visitors from there
- The outbreak is localized to a small area of DRC (North East) and less likely to receive visitors f rom here

Assessment of risk of spread in South Africa

- Anticipated low levels of susceptibility in SA as measles vaccination routinely administered in childhood (and high coverage) and recent widespread outbreak in 2010-11
- Possibly that international visitors during AFCON may be susceptible

Risk Assessment

Potential impact on games					Comments: minor risk of importation and restricted spread if imported due to high immunity levels in SA
1					

Plan:

- No action currently required based on above assessment.

EVENT 9

Title: Rift Valley Fever in Mauritania

Source: WHO

Description: between January and November 2012 36 cases of Rift Valley Fever, including 18 deaths were reported by the Mauritanian Ministry of Health. Cases are localized to the south west of the country. This event was last updated on 18/11/2012.

Assessment of Risk of importation into South Africa

- Mauritania is not participating in AFCON so SA is unlikely to receive many visitors from Mauritania related to AFCON.
- Mauritania is a considerable distance away from SA and therefore little concern regarding importation of mosquitoes or infected animals.

Assessment of risk of spread in South Africa

- RVF is endemic in South Africa, last outbreak in 2010
- There is a risk of introduction to indigenous mosquitoes if an infected traveler enters South Africa and is bitten.

Risk Assessment

Potential impact on games					Comments: Minor risk of importation.
1					

Plan:

- No action currently required based on above assessment

EVENT 10

Title: Yellow Fever in Chad

Source: WHO

Description: 139 suspected Yellow Fever cases (at least 2 confirmed) and nine deaths were reported by the Chad Yellow Fever Surveillance system on 26/12/2012. The outbreak is localized to the region bordering Darfur State, Sudan, where a YF outbreak has been occurring since October 2012. Approximately 270,000 Sudanese refugees live in refugee camps in the Chad border regions. The outbreak in Chad appears to have started in early December 2012. Field investigation is ongoing, and a mass vaccination campaign is planned for January 2013. No more recent updates are available.

Assessment of Risk of importation into South Africa

- Chad is not participating in AFCON so SA is unlikely to receive many visitors from Chad related to AFCON.
- At least some of the cases are likely to be refugees living in refugee camps and are therefore unlikely to travel to South Africa during AFCON
- YF vaccination is a requirement of entry to SA for visitors from endemic countries.

Assessment of risk of spread in South Africa

- South Africa contains susceptible vectors and these could become infected if the virus is introduced by a traveler infected with the virus.

Risk Assessment

Potential impact on games					Comments: minor risk as outbreak closed
1					

Plan:

- Maintain continued vigilance at border entry points to ensure travelers from endemic countries or those with current outbreaks have been appropriately vaccinated prior to entry.

EVENT 11

Title: Yellow Fever in Sudan

Source: WHO

Description: the outbreak was declared on 23/10/2012. By 29/11/2012 677 cases have been reported including 164 deaths, and cases were localized to Southern Darfur. No update on the number of cases has been provided on EMS since 29/11/2012.

Assessment of Risk of importation into South Africa

- Sudan is not participating in AFCON so SA is unlikely to receive many visitors from Sudan related to AFCON.
- The affected region is experiencing considerable instability and population displacements and residents are unlikely to travel to South Africa
- YF vaccination is a requirement of entry to SA for visitors from endemic countries

Assessment of risk of spread in South Africa

- South Africa contains susceptible vectors and these could become infected if the virus is introduced by a traveler infected with the virus.

Risk Assessment

Potential impact on games					Comments: Minor risk of importation.
1					

Plan:

- Maintain continued vigilance at border entry points to ensure travelers from endemic countries or those with current outbreaks have been appropriately vaccinated prior to entry.

EVENT 12					
Title: Cholera in Angola					
Source: Media report					
Description: Ongoing outbreak of cholera in Uige, northern city with 235 cases recorded between 01st and 24th of January 2013.					
Assessment of Risk of importation into South Africa ▪ Angola is participating in AFCON and therefore SA is likely to received visitors from Angola ▪ The outbreak appears to have been small and localized to a small area of the country ▪ Risk assessment will depend on further information.					
Assessment of risk of spread in South Africa ▪ Cholera is highly transmissible in areas with poor water and sanitation facilities, and therefore could be highly transmissible in certain settlements in South Africa.					
Risk Assessment					
Potential impact on games					Comments:
Plan: ▪ Collect more information on the outbreak (WHO).					

APPENDIX 3

HEALTH PROMOTION CAMPAIGNS

Appendix 3 A - A Guide to safe food for travellers

What to do if you get diarrhoea

Most diarrhoeal attacks are self-limited and clear up in a few days. Diarrhoea may be accompanied by nausea, vomiting and/or fever. **The important thing is to avoid becoming dehydrated. Ensure that you always drink sufficient amounts of fluids. This is extremely important for children.** If the child is restless or irritable, or shows signs of strong thirst, or has sunken eyes, or dry skin with reduced elasticity, dehydration is already progressing and immediate medical attention should be sought. Should bowel movements be very frequent, very watery or contain blood, or last beyond 3 days you should seek medical help.

As soon as diarrhoea starts, drink more fluids, such as Oral Rehydration Salt (ORS)* solution , boiled, treated or bottled water, weak tea, soups or other safe fluids. **Avoid any drinks that tend to remove more water from the body, including coffee, overly sweetened drinks, some medicinal teas and alcohol.**

AGE GROUP	AMOUNT OF FLUIDS OR ORS TO DRINK
Children less than 2 years	Up to ½ cup after each loose stool
Children 2-10 years	Up to 1 cup after each loose stool
Older children and adults	Unlimited amount

Contrary to common belief, **medicines which reduce bowel movements are not recommended.** In children, these preparations should never be used as they may cause intestinal obstruction.

* If ORS are not available, mix 6 teaspoons of sugar plus one level teaspoon of salt in one litre of safe water («taste of tears») and drink as indicated in the table.

Each day millions of people become ill and thousands die from a preventable foodborne disease

The advice given in this leaflet is important for every traveller, and of particular importance for high-risk groups i.e. infants and young children, pregnant women, elderly and immunocompromised individuals, including those with HIV/AIDS; persons in these groups are particularly susceptible to foodborne diseases.

Remember: Prevention is better than cure

The WHO Five Keys to Safer Food global message is adapted in this guide to specifically address the health concerns associated with travel.

The Five Keys to Safer Food global message is available at:
www.who.int/foodsafety/consumer/5keys/en

World Health Organization's International Advisory Group on Mass Gatherings:
www.who.int/csr/mass_gatherings/en

World Health Organization

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

Published by the South African Department of Health in collaboration with the Regional Office for Africa, World Health Organization
For further information contact:
Telephone nr: +27 12 3120185 or +27 12 3120159
E-mail address: campbp@health.gov.za or thabec@health.gov.za

WELCOME TO SOUTH AFRICA
HOST TO THE 2010 FIFA WORLD CUP™

A GUIDE ON **SAFE FOOD** FOR TRAVELLERS

How to avoid illnesses caused by unsafe food and drink and what to do if you get diarrhoea

World Health Organization

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

Source: WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. Page 126.

Appendix 3 B - Prevention of Foodborne Diseases: Five Keys to Safer Food

Prevention of Foodborne Diseases: Five Keys to Safer Food

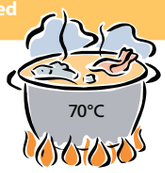
Before leaving home consult your physician for advice on the various diseases to which you may be exposed at your destination, and the need for vaccinations or other preventive measures. Make sure you carry in your luggage Oral Rehydration Salts (ORS), and any other medicines you may require during your travel.

Keep clean

Wash your hands often and always before handling and consuming food.

Dangerous microorganisms are widely found in soil, water, animals and people and can be carried on hands and transferred to food. While visiting food markets, be aware of this when touching raw food and in particular raw meat, and wash hands after handling these foods. These markets often include live animals which can transmit a number of diseases including avian influenza ("bird flu"). Therefore avoid handling or close contact with these animals.

Food should be cooked thoroughly



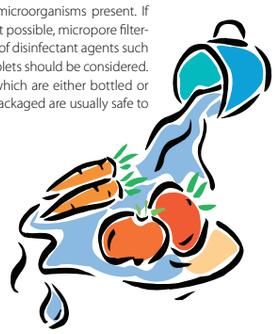
In general, **make sure your food has been thoroughly cooked and remains steaming hot.** In particular, avoid raw seafood, poultry meat that is still red or where the juices are pink, and minced meat/burgers that are still rare because they contain harmful bacteria throughout. Dangerous microorganisms are killed by proper cooking which is one of the most effective ways to make food safe. However, it is critical that all parts of the food be thoroughly cooked, i.e. reaching 70° C in all parts.

Choose safe water and food

Ice cream, drinking water, ice cubes and raw milk can easily be contaminated with dangerous microorganisms or chemicals if they are made from contaminated ingredients. If in doubt avoid them.

Peel all fruits and vegetables if eaten raw. Avoid those with damaged skin because toxic chemicals can be formed in damaged and mouldy foods. Green-leafed vegetables (e.g. green salads) can contain dangerous microorganisms which are difficult to remove. If in doubt about the hygienic conditions of such vegetables, avoid them.

If available, bottled water is the safer choice for drinking water but always check the seal to ensure it has not been tampered with. **When the safety of drinking water is doubtful, bring it to a vigorous boil.** This will kill all dangerous microorganisms present. If boiling is not possible, micropore filtering and use of disinfectant agents such as iodine tablets should be considered. Beverages which are either bottled or otherwise packaged are usually safe to drink.

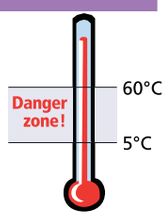


Raw and cooked food should be separated

When frequenting street food vendors or buffets in hotels and restaurants, **make sure that cooked food is not in contact with raw food that could contaminate it. Avoid any uncooked food, apart from fruits and vegetables that can be peeled or shelled.**

Dishes containing raw or undercooked eggs, such as home-made mayonnaise, some sauces and some desserts (e.g. mousse) may be dangerous. Raw food can contain dangerous microorganisms which could contaminate cooked food through direct contact. This may reintroduce disease-causing bacteria into safe, cooked food.

Food should be kept at safe temperatures

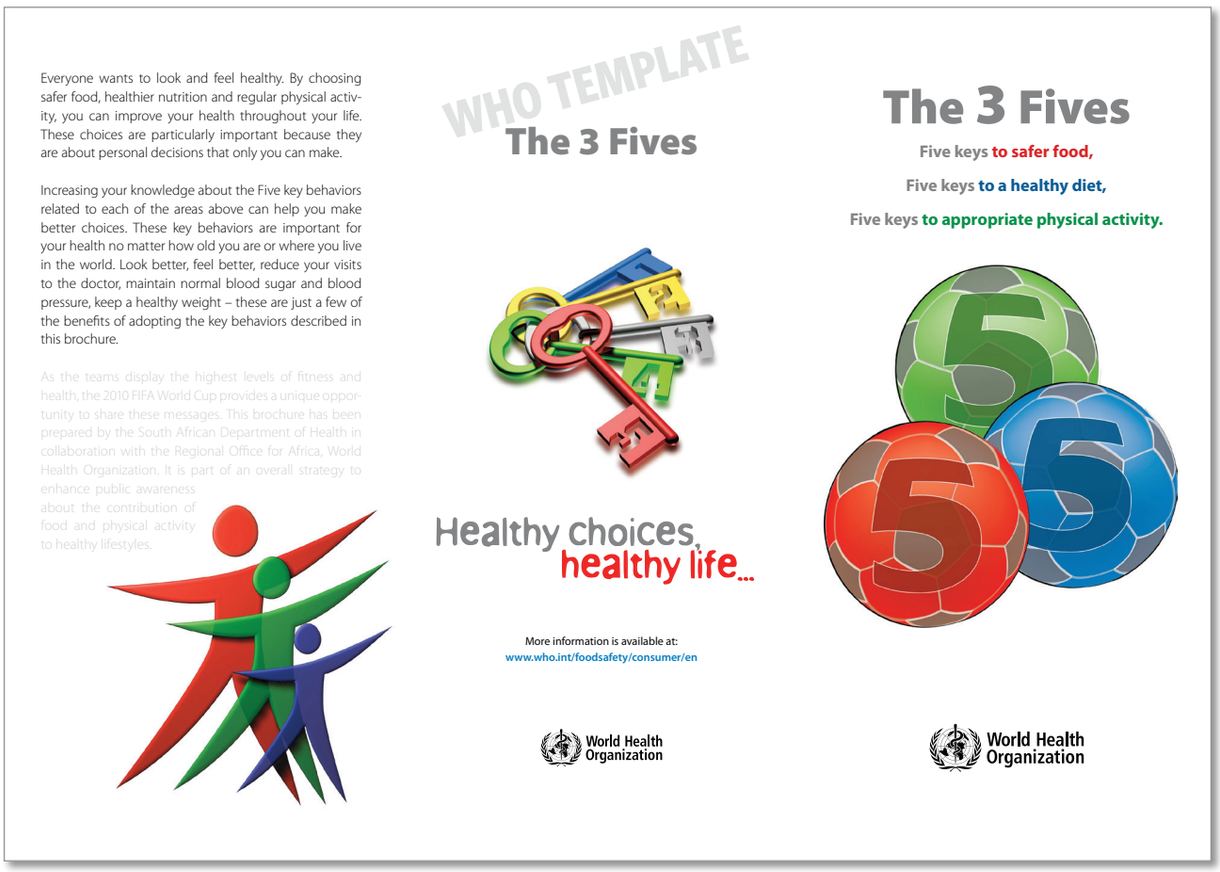


Cooked food held at room temperature for several hours constitutes another major risk for foodborne illness. **Avoid these foods at buffets, markets, restaurants and street vendors if they are not kept hot or refrigerated/on ice.**

Microorganisms can multiply very quickly if food is stored at room temperature. By holding food refrigerated or on ice (at temperatures below 5°C) or piping hot (above 60°C) the growth of microorganisms is slowed down or stopped.

Source: WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. Page 127.

Appendice 3 C - The three five leaflet



Everyone wants to look and feel healthy. By choosing safer food, healthier nutrition and regular physical activity, you can improve your health throughout your life. These choices are particularly important because they are about personal decisions that only you can make.

Increasing your knowledge about the Five key behaviors related to each of the areas above can help you make better choices. These key behaviors are important for your health no matter how old you are or where you live in the world. Look better, feel better, reduce your visits to the doctor, maintain normal blood sugar and blood pressure, keep a healthy weight – these are just a few of the benefits of adopting the key behaviors described in this brochure.

As the teams display the highest levels of fitness and health, the 2010 FIFA World Cup provides a unique opportunity to share these messages. This brochure has been prepared by the South African Department of Health in collaboration with the Regional Office for Africa, World Health Organization. It is part of an overall strategy to enhance public awareness about the contribution of food and physical activity to healthy lifestyles.

Source: WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. Pages 128-129

Five Keys to safer food

1. Keep clean
- Wash your hands with soap before handling food and often during food preparation
- Wash your hands with soap after using the toilets
- Wash and sanitize all surfaces and equipment used for food preparation
- Protect kitchen areas and food from insects, pests and other animals

2. Separate raw and cooked
- Separate raw meat, poultry and seafood from other foods
- Use separate equipment and utensils such as knives and cutting boards for handling raw foods
- Store food in containers to avoid contact between raw and prepared foods

3. Cook thoroughly
- Cook food thoroughly, especially meat, poultry, eggs and seafood
- Bring foods like soups and stews to boiling to make sure that they have reached 70°C. For meat and poultry, make sure that juices are clear, not pink. Ideally, use a thermometer
- Reheat cooked food thoroughly
- Avoid overcooking when frying, grilling or baking food as this may produce toxic chemicals

4. Keep food at safe temperatures
- Do not leave cooked food at room temperature for more than 2 hours
- Refrigerate promptly all cooked and perishable food (preferably below 5°C)
- Keep cooked food piping hot (more than 60°C) prior to serving
- Do not store food too long even in the refrigerator
- Do not thaw frozen food at room temperature

5. Use safe water and raw materials
- Use safe water or treat it to make it safe
- Select fresh and wholesome foods
- Choose foods processed for safety, such as pasteurized milk
- Wash fruits and vegetables, especially if eaten raw
- Do not use food beyond its expiry date

Five Keys to a healthy diet

1. Give your baby only breast milk for the first 6 months of life
- From birth to 6 months of age your baby should receive only breast milk, day and night
- Breast feed your baby whenever the baby feels hungry

2. Eat a variety of foods
- Eat a combination of different foods: staple foods, legumes, vegetables, fruits and foods from animals

3. Eat plenty of vegetables and fruits
- Consume a wide variety of vegetables and fruits (more than 400 g per day)
- Eat raw vegetables and fruits as snacks instead of snacks that are high in sugars or fat
- When cooking vegetables and fruits, avoid overcooking as this can lead to loss of important vitamins
- Canned or dried vegetables and fruits may be used, but choose varieties without added salt or sugars

4. Eat moderate amounts of fats and oils
- Choose unsaturated vegetable oils (e.g. olive, soy, sunflower, corn) rather than animal fats or oils high in saturated fats (e.g. coconut and palm oil)
- Choose white meat (e.g. poultry) and fish that are generally low in fats rather than red meat
- Limit consumption of processed meats and luncheon meats that are high in fat and salts
- Use low- or reduced-fat milk and dairy products, where possible
- Avoid processed, baked, and fried foods that contain industrial trans fatty acids

5. Eat less salt and sugars
- Cook and prepare foods with as little salt as possible
- Avoid foods with high salt content
- Limit the intake of soft drinks and fruit drinks sweetened with sugars
- Choose fresh fruits for snacks instead of sweet foods and confectionery (e.g. cookies and cakes)

Five Keys to appropriate physical activity

1. If you are not physically active, it's not too late to start regular physical activity and reduce sedentary activities
- Find a physical activity that is FUN
- Gradually increase your participation in physical activity
- Be active with family members - in the home and outside
- Try to sit for shorter periods during your daily activities

2. Be physically active every day in as many ways as you can
- Walk to the local shops
- Take the stairs instead of the lift
- Get off the bus early and walk

3. Do at least 150 minutes of moderate-intensity physical activity each week
- Make physical activity part of your regular routine
- Organise to meet friends for physical activity together
- Do some physical activity at lunch time with colleagues
- Cleaning, gardening, walking and dancing are all good examples of moderate-intensity physical activity

4. If you can, enjoy some regular vigorous-intensity physical activity for extra health and fitness benefits
- Vigorous physical activity can come from sports such as football, badminton or basketball and activities such as aerobics, running and swimming
- Join a team or club to play a sport that you enjoy
- Ride a bike to work instead of taking the car

5. School-aged young people should engage in at least 60 minutes of moderate– to vigorous-intensity physical activity each day
- Encourage young people to participate in sport and physical activity for fun
- Provide young people with a safe and supportive environment for physical activity
- Expose young people to a broad range of physical activities at school and at home

Source: WHO. "Report on WHO support to the 2010 FIFA World Cup South Africa". Pretoria, South Africa, 27 January 2011. 256 pages. Pages 128-129


World Health
Organization


DEPARTMENT OF HEALTH
Republic of South Africa