OPERATIONAL GUIDELINE FOR PREVENTION AND CONTROL OF CRIMEAN CONGO HAEMORRHAGIC FEVER IN AFGHANISTAN
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Preface

The present document has been developed by the Ministry of Public Health (MoPH) of Afghanistan, the World Health Organization (WHO), and other collaborative partners.

The currently available guiding documents and standards of the MoPH-Afghanistan and WHO, for CCHF outbreak control were used as basis of reference to frame the present document.

This publication brings together the existing relevant guidelines, fills knowledge and operational gaps which were not addressed previously, and adapts the information and operational needs to the specific features of Afghan context. The ultimate result is a much needed, ready-to-use, and user-friendly operational guidance.

We hope the document will be of value by providing quick reference and guidance for field outbreak control teams, namely, clinicians, nurses, and surveillance focal points of health facilities, along with the members of the Provincial Emergency Response teams.

Ultimately, it will serve to strengthen the emergency preparedness and response capacity of all health sector partners for the benefit of all men, women, and children of Afghanistan.

Sincerely,

[Signature]

Minister of Public Health – Afghanistan
Acknowledgement

I am grateful to all team members who joined and shared their expertise to develop these guidelines. Particularly, I would like to thank the MoPH team, WHO and other health cluster partners who added their valuable comments and contributions to the draft and shaped the final document.

In addition, special thanks to the EPR Department of MoPH and WHO/EHA/Health Cluster and CSR departments; who initiated and led the process and the General Directorate of Preventive Medicine/Communicable Diseases Control, DEWS, Environmental Health and Health Promotion departments that provided substantial technical support throughout the process.

I would also like to extend my sincere gratitude to the funding partners supporting the multiple EPR interventions for health. My particular thank goes to the European Commission Humanitarian Office (ECHO) for its contribution to make these guidelines become possible.

Sincerely

Director of ANPHI
MOPH Afghanistan
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ARCS</td>
<td>Afghanistan Red Crescent Society</td>
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<td>BPHS</td>
<td>Basic Package Of Health Services</td>
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<tr>
<td>CCHF</td>
<td>Crimean Congo Haemorrhagic fever</td>
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<tr>
<td>CDC</td>
<td>Communicable disease Control</td>
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<tr>
<td>DEWS</td>
<td>Disease Early Warning System</td>
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<tr>
<td>ERP</td>
<td>Emergency Response and Preparedness</td>
</tr>
<tr>
<td>HF</td>
<td>Health Facilities</td>
</tr>
<tr>
<td>HMIS</td>
<td>Health Management Information System</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resource</td>
</tr>
<tr>
<td>IV</td>
<td>Intra Venous</td>
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<tr>
<td>MOPH</td>
<td>Ministry of Public Health</td>
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<tr>
<td>NGOs</td>
<td>Non-Governmental Organizations</td>
</tr>
<tr>
<td>PHD</td>
<td>Provincial Health Department</td>
</tr>
<tr>
<td>RRD</td>
<td>Rural Rehabilitation Department</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard of Procedures</td>
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<tr>
<td>TOR</td>
<td>Terms of Reference</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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Quick guide

While you are reading through the guideline the following icons will help you to make a quick reference of relevant topic of interest.

= Background information

= Objectives

= Definition

= Alerts

= Warning

= Intervention guidelines and procedures at facility level

= Provincial surveillance Officer/Focal point

= Intervention Guidelines and procedures for field Intervention teams

= necessary tools for the intervention procedures

= Guidance for Management team

= Go to

Words described in glossary are printed in blue bold italic fonts
Introduction

1.1. Worldwide distribution and burden due to CCHF

CCHF (Crimean-Congo Haemorrhagic Fever) is a zoonotic disease that continues to be a serious public health problem in many countries. Worldwide distribution of CCHF stretches over much of Asia, extending from the XinJiang region of China to the Middle East and southern Russia, and to focal areas over much of Africa and parts of south-eastern Europe. Therefore, CCHF virus is the most widely distributed agent of severe haemorrhagic fevers known\(^1\) so far. Cases have been reported in Ukraine, Bulgaria, Albania, Serbia & Montenegro (Kosovo), Turkey, Macedonia, Russian Federation, China, Kazakhstan, Tajikistan, Pakistan, Afghanistan, Iran, the United Arab Emirates (UAE), Saudi Arabia and Oman\(^2\) etc. Although there are no established data on CCHF outbreaks and number of cases; the following graph (1) has been developed from the figures given in “Historical cases and outbreaks of CCHF” from HPA (UK) website.

Graph: 1

Like other tick borne zoonotic agents, CCHF virus circulates in nature in an enzootic tick-vertebrate-tick cycle\(^3\). This mostly infects mainly cattle, sheep and goats (reservoirs) and Humans (hosts) are being infected mainly through direct contact with blood or tissues from infected livestock or through tick bites. There for the pastoral communities are under high risk. Although the cases reported in a sporadic pattern; the case fatality rates (CFR) in hospitalized patients have ranged from 9% to as high as 50%\(^4\). CCHF outbreaks constitute a threat to public health services due to its epidemic potential, high CFR and potential for nosocomial outbreaks and the
adversities of treatment and prevention. This might over burden the health sector of the country and bring a remarkable economical hindrance as well.

1.2. Current context of CCHF outbreaks/outbreaks control activities In Afghanistan

Existing information of reported CCHF outbreaks in Afghanistan would give an idea about progress of CCHF outbreaks in Afghanistan.

Table: 1 CCHF cases reported by Disease early warning System (DEWS) of Afghanistan and communicable disease profile of Afghanistan from 1998-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Reported Cases</th>
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<tbody>
<tr>
<td>1998</td>
<td>19</td>
</tr>
<tr>
<td>2000</td>
<td>27</td>
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<tr>
<td>2002</td>
<td>5</td>
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<tr>
<td>2008</td>
<td>30</td>
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<tr>
<td>2009</td>
<td>15</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>26</td>
</tr>
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Graph: 2

There were little notified cases during the past and the graph shows a fluctuating trend of CCHF, this might be due to missed diagnosis and inadequate notification from unreached outbreak areas or out of the sentinel sites. At the same time the average case fatality rate in Afghanistan continue to be around 30%.

Although there is little information about CCHF in Afghanistan; a study done in 2009 in Herat province by a group of professionals from Afghanistan, Egypt, USA and UK revealed, that the sero prevalence of CCHF IgG among the population were 11.2% and among their animals were 75%⁶. Concurrently they found the ticks isolated from the animals were negative for CCHF virus.

These findings together with the observations in Iran show that the transmission due to direct contamination of blood and secretions is common in Afghanistan. Therefore the risk is higher among animal handlers. So we have to emphasize on preventive measures among animal handlers, butchers, veterinarians and health care service staffs.
In future there must more effort to be set on case investigation particularly to identify risk groups, predominant mode of transmission and source of infection. Further more evidence based studies and researches to be conducted to find specific outbreak control mechanism with collaboration of different departments.

**Figure 1: Current surveillance system in Afghanistan**

Under the current health care system in Afghanistan; primary health care facilities (Mobile clinics, Health posts, sub health centers, and Comprehensive Health Centers), District, Provincial and regional public health hospitals and Private hospitals are endow with the health needs of the communities.

The health facilities are governed by the Provincial Health Directorate (PHD) at provincial level and Ministry of Public Health (MoPH) at national level with the assistance of national and international *contracted out* agencies. The current curative health services are not up to the EM regional health service standards and afflicted with inadequate resources and inadequate quality assurance.

The PHDs have a reasonable information sharing systems as follow:

**Disease Early Warning System (DEWS)**

Is one of the existing Surveillance system which collects weekly incidence of highly infectious diseases from well distributed 330 *sentinel sites* (in 2012) across the country with coverage of more than 70% district public health facilities. It also target to increase representation of private sector and introducing community based surveillance in Afghanistan. Under the system the data is analyzed weekly at regional and central level of the country. Weekly morbidity and mortality data and detail *outbreak investigation* and response reports are shared at provincial, regional and central level with all stakeholders including MoPH, NGOs, donors, UN organization, coalition forces and WHO Eastern Mediterranean Regional Offices.

**Health Management Information System (HMIS)**
The system collects and prepares reports on all relevant health related events from all the health facilities to the provincial directorate of health on monthly basis and a quarterly report is forwarded to the MoPH from all the provinces. Although there is a provision for notification of haemorrhagic fever; CCHF has not been separately notified. So the HMIS reporting system might not help to quickly detect the outbreaks.

The current outbreak detection is based on the formal (DEWS) and informal information (from community, medias and politicians). Alerts from the sources are verified by the provincial emergency preparedness and response committee after a preliminary investigation and confirmed after laboratory investigation findings. Immediate control measures are carried out by Provincial early outbreak investigation and response teams. But still there are some setbacks with some coordination and communication hiccups. On top of it security threats and natural barriers hamper the activities. This might lead to a hazardous situation during large outbreaks and other natural disasters like harsh winter and flood.

1.3. Importance of preparedness and development of an operational guideline for CCHF outbreak response

Currently there is a functional system for detection and control of CCHF outbreaks in Afghanistan with some guiding instruments. At the same time there were several constrains identified regarding control of outbreaks in general and CCHF outbreaks in particular; that can be attributed to;

- There is no universally accepted catchment population figure for health facilities to detect the actual incidence rate.
- Unavailability of proper referral system and chances of duplication
- Improper planning due to lack of analysis and integration of different sources of epidemiological data,
- CCHF is broadly categorized into haemorrhagic fevers and sometimes the cases might be miss diagnosed under other haemorrhagic fevers and wise versa
- Difficult access of MOPH staff in insecure areas
- Limited capacity of outbreak investigation amongst field staffs,
- Lack of case management skills and amenities at the field level
- Inadequate awareness among the community at risk
- Inadequate and inconsistent integration of outbreak response plans into the BPHS planning combined with lack of clear strategy for resource mobilization.
- Insufficient intra and inter-sectoral coordination particularly to establish an effective integrated surveillance and response system

While we are appreciating the excellent job done by the health service providers who controlled the CCHF outbreaks in the past; we have to evaluate and strengthen the system as well.

In 2010 initiatives for strengthening the surveillance system were started with “road map for strengthening the system capacity to responds to outbreaks” and development of operational guidelines was defined as an integral part of this initiative aiming to provide a practical guiding document for the health managers and field health staff in Afghanistan.
This operational guideline is trying to strengthen the health system of Afghanistan to efficiently manage outbreaks of CCHF through pragmatic guidance to the health managers and field staff.

This might help us to prevent and efficiently control CCHF outbreaks in future.

1.4. Objectives of the operational guidelines for CCHF outbreak response

- To briefly describe the basic facts, risks, burden and preventable nature, morbidity and mortality trends of CCHF
- To operationally guide the outbreak management teams to prepare, detect, report, verify, identify and control CCHF outbreaks in time
- To improve the capacity of health service providers to efficiently manage CCHF outbreaks
- To guide the health service providers on prevention of spread of CCHF outbreaks and creation of community awareness
- To improve the technical capacity of managerial level staffs of MOPH of Afghanistan through providing necessary technical guidance, in order to efficiently manage and coordinate the outbreaks of CCHF with available resources
- To guide the outbreak control teams to capitalize the lessons learned from the outbreak and improve their future plans and activities
- To guide all the stakeholders to clearly understand their responsibilities during an outbreak and cooperate and collaborate with the national CCHF control coordination mechanism

Key facts of CCHF

The common vector for CCHF virus is ticks of the genus Hyalomma.

The virus is transmitted to humans either directly by Hyalomma ticks or by contact with blood or secretions of infected domestic animals or their meat. (The second mode of transmission is common in Afghanistan)

CCHF virus is primarily a zoonotic virus, which means that the transmission cycle mainly involves ticks and wild or domestic animals.

Cattle, sheep and goats do not become ill after infection but are viraemic for about one week.

During this period of time the virus may be transmitted to humans who have close contact to these animals such as agricultural workers, slaughterhouse workers, cooks and veterinarians.

The virus may be spread into other geographical regions via infected livestock. The virus may also be transmitted from human to human via blood and secretions. This might occur primarily in the hospital setting and the health care workers are mainly at risk in this situation.

Case fatality rates (CFR) in hospitalized patients have ranged from 9% to as high as 50%
1.5. Causative organism, clinical features and communicability

The virus that causes the disease is a tick-borne virus belonging to the family Bunyaviridae, genus Nairovirus.

**Incubation period:**
The incubation period of the virus ranges from 2 to 9 days and depends on host, route of exposure and viral inoculum. A study conducted in South Africa it has been estimated that the time to onset of the disease was 3.2 days after tick-bite, 5 days after contact with infected livestock blood or tissue, and 5.6 days after contact with infected human blood.

**Mode of transmission and communicability:**
The virus is transmitted to humans either directly by Hyalomma ticks or by contact with infected domestic animals. CCHF virus is primarily maintains its existence in the environment via zoonosis, which means that the transmission cycle mainly involves ticks and wild or domestic animals. Cattle, sheep and goats do not become ill after infection but are vireamic for about 1 week. During this period of time the virus may be transmitted to humans who have close contact to these animals such as agricultural workers, slaughterhouse workers, and veterinarians. An especially important biological feature of ticks in general as potential vector/reservoirs of arboviruses is their ability to transmit arboviruses trans-ovarially. Furthermore, the virus may be spread into other geographical regions via infected livestock. Transmission to humans can occur either through tick bites or possibly by crushing engorged infected ticks. Direct contact with virus-contaminated blood or tissues from infected animals or humans is another source of virus transmission and is generally characterized by more severe clinical symptoms and high mortality. The virus may also be transmitted from human to human via blood and secretions which might occurs primarily in the hospital setting and health care workers are mainly at risk.

**Clinical presentation**
Infections by CCHF viruses are associated with a wide spectrum of clinical manifestations such as fever, headache, myalgia, arthralgia, abdominal pain, and vomiting. Sore throat, conjunctivitis, jaundice, pneumonia, encephalopathy, and photophobia, and various sensory and mood alterations may develop. A petechial rash is common and may precede a gross and obvious hemorrhagic diathesis, manifested by large ecchymoses, bleeding from needle-puncture sites, and hemorrhage from multiple other sources. Hemorrhage is the characteristic manifestation, although non hemorrhagic infections are also common.
The typical course of CCHF infection in humans has four distinct phases: incubation, pre-hemorrhagic, hemorrhagic and convalescence period.

Pre-haemorrhagic period
The period is characterized by sudden onset of fever (39-41°C), rigor, severe headache, photophobia, hypotension, relative bradycardia, tachypnea, nausea and abdominal pain. Symptoms of the gastrointestinal tract may also present and lasts for 3-6 days. Most cases are associated with cutaneous flushing or rash.

Haemorrhagic period
Haemorrhagic period is short usually lasts 2-3 days and is characterized by haemorrhage from various sites such as the gastrointestinal, genital-urinary, respiratory tracts and the brain. Skin hemorrhagic manifestations, mucous membrane and conjunctival haemorrhage, may also present.

The convalescence period
The convalescence begins in survivors 10-20 days after the onset of illness and during this period tachycardia, polyneuritis, temporary complete hair loss, xerostomia, poor vision, loss of appetite, poor vision, loss of hearing and loss of memory may present. Hepatomegaly and splenomegaly have been reported to occur in one third of patients. There is no known relapse of the infection.

Laboratory abnormalities may include leucopenia, thrombocytopenia, and raised levels of aspartate aminotransferase and alanine aminotransferase, lactate dehydrogenase and creatinine phosphokinase. Prothrombin time and activated partial thromboplastin time are prolonged and fibrogen is decreased, whereas fibrin degradation products are elevated.

1.6. Risk factors that are facilitating CCHF outbreaks

Human beings are the only known hosts of CCHF virus in which disease is manifested. CCHF cases are distributed mainly among actively working age groups exposed to tick populations.

The following factors might facilitate the CCHF outbreaks:

- High sero prevalence among the animals and presence of potential ticks (vector/reservoirs) from family Ixodidae, and family Argasidae.
- Areas where pastoral groups with poor living conditions.
- Animal handlers without adequate protection practices.
- Health facility and laboratory staffs that are not properly following the universal precautionary principles.

There for the major at-risk groups are farmers living in outbreak areas (almost 90% of the cases in the recent outbreaks in Turkey were farmers), veterinarians, slaughterhouse workers, while laboratory diagnosis staff and health care personnel are also high at-risk groups.
2. Strategies for CCHF control

Technical Report of the Joint inter country workshop on Crimean-Congo Haemorrhagic Fever (CCHF) Prevention and Control (2006) considered the following strategies,

- **Strengthening national and regional surveillance activities** to provide a clearer picture of the CCHF situation in its geographical distribution.

- **Strengthening laboratory and professional capacity of** regions under risk to ensure early diagnosis of CCHF, essential for the containment and clinical management of the disease.

- **Ensuring the availability of Ribavirin** to the provinces at risk of CCHF.

- **Specialized training of health care workers to recognize early symptoms of CCHF** and include the illness in their initial differential diagnosis, thereby ensuring early detection of the disease.

- **Specialized training of occupational categories most at risk of the disease**, e.g. agricultural workers, slaughterhouse workers, veterinarians and health care workers (in the case of nosocomial infections) so they can take appropriate measures to decrease disease risk; isolation facilities should be available in hospitals and strict adherence to safety measures by health care personnel is essential.

- **Heightening community awareness of CCHF** through means of public education campaigns, especially of rural populations, so that people are more informed of the risks and the measures they can take to diminish these risks.

- **Strengthening co-ordination and collaboration between the public health sector and all other relevant sectors - including agriculture, animal husbandry, environment, education and media** – at local, national and international levels – regarding information exchange, technical expertise, surveillance and control strategies, so that a cohesive strategy to combat the disease may be implemented.

- **Integrating advances in scientific knowledge towards the development of novel surveillance and control strategies** – e.g. the effect of climate change on tick populations with regard to predictive modeling of outbreaks;
the genetic characterization of CCHF viral strains with regard to vaccine
design, diagnostics or molecular epidemiology studies

3. Guidelines for routine and emergency CCHF surveillance

Early detection of outbreaks with an efficient surveillance system is the corner stone
of outbreak control. DEWS Afghanistan has a reasonable capacity to detect the
outbreaks at early with its regular reporting from sentinel sites. There is a structure
and trained staff to do analysis of the surveillance data and to start rapid response
initiatives at provincial and national levels.
Guidelines for routine surveillance and early warning of CCHF outbreaks could be
expounded through sets of definitions, standards and procedures. The following sub
topics try to guide us to understand the steps of surveillance activities, detection of
outbreaks and control measures from the health facility to Provincial Health
Directorate (PHD).

3.1. Case definition

For any surveillance system there should be a defined uniform case
definition to detect the cases. The case definition for CCHF in Afghanistan is
defined by Disease Early Warning System is as follows.

Case definition for CCHF

Suspected Cases:
Patient with sudden onset of illness with high-grade fever over 38.5°C for more
than 72 hrs and less than 10 days, especially in CCHF endemic area and among
those in contact with sheep or other livestock (shepherds, butchers, and animal
handlers).
Note that, fever is usually associated with headache and muscle pains and does
not respond to antibiotic or anti-malarial treatment.

Probable case:
Suspected case with acute history of febrile illness 10 days or less AND any two of
the following: thrombocytopenia less than 50,000 /mm$^3$, petechial or purpuric rash,
epistaxis, haematemesis, haemoptysis, blood in stools, ecchymosis, gum bleeding, other
haemorrhagic symptom - AND no known predisposing host factors for
haemorrhagic manifestations.

Confirmed case:
Case with positive diagnosis of CCH virus in blood sample, performed in specially
equipped high bio-safety level laboratories. Positive diagnosis includes,
- Confirmation of presence of IgG or IgM antibodies in serum by ELISA or any
  relevant method.
- Detection of viral nucleic acid by PCR in specimen or isolation of virus.
3.2. **Surveillance data flow and response at field & provincial levels**

**Figure 2:**

The following guidelines give operational guides to the field staff from surveillance focal points and clinicians of health facilities to provincial emergency preparedness and early response committee.

3.3. **Guideline for surveillance focal points of sentinel sites and clinicians/primary health care service provider**

- **Objective:** to ensure that, the quality data is produced and promptly notified from health facility
  - Ensure that you and your team has clear understanding on case detection, notification and diagnosis of CCHF based on the standard case definition above
  - Regularly maintain daily incidence data (among the cases attended to the health facility) of new cases of CCHF on daily incidence chart and carefully observe the changes of case trend.

Be aware of **alert threshold** of CCHF cases.

**Alert threshold of CCHF**

One probable case is an alert and requires an immediate investigation.
- Be aware of importance of notification of suspected alerts of suspected CCHF cases
- Be familiar with notification modes, alert forms and weekly reporting forms

**Annex: B1, 2&3** Daily CCHF with incidence chart, Alert notification format and DEWS weekly reporting format

Use the viral hemorrhagic fever assessment path in **Annex C** to make a diagnosis

- If you observe clustering of clinically diagnosed or suspected CCHF cases; then notify to the provincial surveillance officer as early as possible or to the BPHS implementing agency’s surveillance and outbreak control focal point.

**Annex-D** updated details of provincial surveillance officers

- A hard copy of the notification form should be sent to the provincial surveillance officer as early as possible
- Also recheck and confirm that, the notification reached the surveillance officer
- Take blood samples from all suspected cases before giving any antivirals and properly dispatch them for confirmatory virology tests.

**Standards of Procedures (SOPs) of sample collection and transport**

- Collect 5 ml of venous blood from the patient and centrifuge it and separate serum for analysis of CCHF virus;
- Follow strict sterile and safety precautions.
- If centrifuge is not available, store the blood specimens in the lower compartment of a refrigerator until a clot is formed; then remove the serum (using a Pasteur pipette) and drop it into an empty sterile tube.
- Tightly cover the tube with the provided sterile cap/cork
Transport serum specimens to the lab in triple packing (See figure 3) with ice packs or frozen with dry ice along with a prominent Bio Hazard label and complete lab request form with brief history of the patient.

Figure 3
3.4. Guideline for Provincial surveillance officer

Objective: To ensure efficient surveillance activities in the province to detect outbreaks

- Ensure as a Provincial surveillance officer, you are well capacitated with surveillance procedures, computerized analyzing techniques and sound knowledge on communicable disease control activities
- Train all clinicians and surveillance focal points of the health facilities on case definition, health facility based new case recording, daily summarization and maintenance of daily new case summary chart and threshold levels and proper notification methods
- Ensure all the tools and supplies (Updated Case definitions, Manuals, guidelines, Forms, Charts with median trend curves for each year, recordsregisters, blood sample collection containers) for diagnosis, notification, sample testing and collection are available at each facility
- Update them with on job trainings and regular mentoring during supervision visits
- Ensure regular notifications are received from all facilities under the province, if not remind, visit and rectify the issues related to notification
- Regularly compile the data collected from the surveillance focal points or the clinician or the health care provider of the health facilities and analyze (by time, place and person) to detect any alerts at provincial level
- If any significant alerts are detected during data analysis; clearly verify the same from the source of data
- Share the compiled data and weekly analysis reports and any alert notification with provincial emergency preparedness and response committee in time.
- Forward the same to MOPH in time as softcopy and all hard copies to be filed at provincial surveillance office
- Take the lead and provide necessary technical guidance to the rapid outbreak investigation and early response team of the provincial emergency preparedness and response committee under the instruction of Provincial Health Director.
3.5. Guideline for Provincial Emergency Preparedness and Response Committee (EPR)

Objective: To assess and guide on enhanced surveillance case investigation and response of outbreaks

Once the Provincial surveillance officer shared the details (Time, place and person) of the suspected alert or outbreak with the provincial emergency response committee; it should call for a meeting and plan its activities with the following steps.

- Deploy a pre trained **Outbreak investigation and early response team** (For the composition of the team; see Chapter 6) with necessary investigation tools and early response supplies to visit and investigate relevant sites (Health facility, households of the cases and their farms or livestock breeding places etc.) to verify surveillance data and find out the source and nature of the alert or outbreak,

- Get the weekly feedback from the Outbreak investigation and early response team and do an epidemiological analysis

- If the morbidity and mortality are on the rise; enhance the surveillance activities through mobilizing the available surveillance system and relevant control activities of outbreak investigation and early response team

- Update the MOPH regularly on progress

3.6. Guideline for outbreak investigation and early response team

Objective: To verify the outbreak, enhance surveillance and control of CCHF outbreaks

- The team should verify the alerts with the help of alert verification form and telephone conversations and also collect data from other relevant sources and clinicians.

Annex-E sample case investigation form

**Before visit** to the location for rapid assessment and response;

- be clear about the alert message
- Plan and collect all the contacts to be met and investigated
- Organize all necessary logistic arrangements including appropriate transport and communication facilities
Prepare and take necessary investigation (forms, sample collection materials) Personal protective materials (recommended chemicals and repellents for tick bite prevention) and a megaphone, necessary IEC materials, necessary medicine supplies for health facilities where there are no prepositions.

**During visit** to the suspected source of infection and households of the suspected cases and health facilities;

- In the health facility, examine the suspected cases; collect necessary information from cases, care takers or family members, villagers
- Collect evidence of handling live stocks and their products among cases and contacts
- Collect blood samples from suspected cases
- Examine the animals and the environment for the Ticks
- Provide protective clothes and repellents or DEET to the contacts to prevent further spread by the tick bite
- Organize and train community based organizations on prevention of spread of the disease
- Provide health education and necessary preventive supplies, to the family members and neighbors who share the compound or farm (The details of prevention of spread are described in chapter-5)
- In the health facilities; check diagnostic criteria in use (case definition) and case management procedures (Details of case management procedures are mentioned in chapter-4)
- Also find out about any shortages of medical supplies and support the clinical teams with urgent supplies.

**After visit**, when you are back from the field

- Send the samples to the laboratory as early as possible and track the progress according to scheduled time period
- Never suspend/await the outbreak response and control operations until receiving the lab results

From your confirmed findings; line list the cases according to the standard format given in annex B 3, summarize the relevant findings related to time place and person and identify the clustering of cases and sources

- Discuss the findings with the (provincial) emergency preparedness and response committee and make a preliminary decision until the laboratory report arrives.
Send the feedback to the facility within 24 hours with instructions of standard case management, control measures with necessary supplies.

Keep in touch with the facility and gather updated morbidity and mortality data and also implement an enhanced surveillance with the help of community based focal points/organizations with details needed for line listing.

**During re-visit**

- Assist the facility to manage the cases
- Evaluate the community participation on awareness campaigns and activities on prevention of spread activities based on the given tasks
- Plan and implement an intensive community hygiene promotion program which would help for enhanced surveillance as well

**Follow up**

- Once the laboratory confirmation is available and still the cases and complications are on rising trend; then the situation should be discussed with the provincial emergency response committee and expanded control measures should be taken by strengthening HR (bringing in public health experts and case management specialists) and supplies.
4. Case management

4.1. Clinical Diagnosis

Early diagnosis is essential in terms of case management and prevention of nosocomial and community outbreaks. Differential diagnosis should also be considered for other diseases showing similar symptoms that could be bacterial, viral and other non-infectious diseases. CCHF should be clinically considered in those patients having:

- Compatible clinical manifestations (e.g. Fever, myalgia and bleeding), Epidemiological risk factors such as tick bite, exposure to infected livestock, crushing a tick between two exposed body parts

- Contact with suspected cases of CCHF, outdoor activities in outbreak areas travel or be residents in those areas

- Compatible laboratory findings (low platelet and high white blood cell count, raised levels of aspartate aminotransferase, alanine aminotransferase, lactate dehydrogenase and creatinine phosphokinase).

See annex c for Diagnostic steps for VHF

4.2. Laboratory diagnosis

Laboratory diagnosis of probable cases could be reached using the platelet count, total blood cell count and prothrombin time that are correlate with haemorrhagis symptoms and signs.

Confirmation of CCHF is performed in specially-equipped, high biosafety laboratories. Methods of laboratory diagnosis include

- Antibody detection using enzyme linked immuno assays (ELISA),
- Virus isolation and molecular methods (PCR)
- Viral antigens may be detected From the blood or tissue samples of the patient
IgG and IgM antibodies are detected in serum by ELISA or enzyme linked immunoassay (EIA) from about 7 days after the onset of disease. Specific IgM declines to undetectable levels by 4 months post-infection whereas IgG remains detectable for years thus the immunity could last for long. CCHF virus can be isolated from blood or tissue specimens grown in cell culture during the first five days of illness. Viral antigens may sometimes been shown in tissue samples using immunofluorescence or EIA. The virus isolation methods are being used in patients with fatal disease since these subjects do not usually develop a measurable antibody response. The method of choice of rapid laboratory diagnosis is the reverse transcriptase polymerase chain reaction (RT-PCR) which is sensitive, specific and rapid.

4.3. General management

All suspected cases have to be admitted to hospital and closely monitored for complications. Strengthen clinical and case management of patients with haemorrhagic fevers with necessary stockpiling appropriate drugs and personal protective equipment. Supportive measures are important in the management of CCHF fever, such as

- Oral or intravenous hydration,
- Care full use of medicine, and
- Dietary care with appropriate nutritious semisolid or fluid diet to reduce the complication of intestinal haemorrhage.
- The patient should be cared gently and prevented from any trauma or accidental abrasions.
- All clinically compatible cases can be treated with antiviral drugs.
- Severe cases might need blood or blood product transfusions as well.
4.4. Treatment

- Although there is no recommended antiviral therapy for CCHF; Ribavirin has been used in treatment of established CCHF infection with apparent benefit. Both oral and intravenous formulations seem to be effective\(^\text{10}\).
- Once a case is clinically diagnosed as CCHF in the hospital; treatment can be started with IV ribavirin. The dosage recommended is 30 mg/kg as an initial loading dose, then 15 mg/kg every 6h for 4 days, and then 7.5 mg/kg every 8h for 6 days. The total duration of treatment was 10 days.
- Ribavirin may cause harm or death to the fetus therefore adult female patients who are pregnant or potentially become pregnant should not be treated with ribavirin, or should not start ribavirin until a pregnancy test has shown that the patient is not pregnant. While on treatment with Ribavirin the female patient must use two forms of birth control and be tested for pregnancy every month during the treatment and for 6 months afterwards.
- Intravenous ribavirin therapy requires hospital infrastructure that may not be available in every health care center or in the field, therefore oral therapy can be used where IV therapy is not feasible.
- During the course of CCHF, patients have nausea, vomiting, gut bleeding, haematemesis and melena and hence potentially there might be poor uptake of oral ribavirin. The recommended oral therapy\(^\text{11}\) for Adults:
  - Loading dose of 2000mg orally once
  - Followed by 1000mg orally every 6 hours for 4 days
  - Followed by 500mg orally every 6 hours for 6 days

  Children:
  - Loading dose of 30mg/kg orally once
  - Followed by 15mg/kg every 6 hours for 4 days
  - Followed by 7mg/kg every 6 hours for 6 days

  Prophylactic administration of oral ribavirin to high risk contacts (direct exposure to body fluids) of CCHF patients is NOT recommended.

- The value of immune plasma from recovered patients for therapeutic purposes has not been demonstrated, although it has been employed on several occasions.
  - Always check the updated national advice based on antiviral therapy studies.
  - The long-term effects of CCHF infection have not been studied well enough in survivors to determine whether or not specific complications exist. However, recovery is slow.
5. Prevention of spread of CCHF outbreak

5.1. Preventive measures based on mode of transmission

Figure: 5

The above pictogram shows the mode of transmission of CCHF virus between the vectors (Tick), intermediate hosts (small mammals and birds), enhancing host (Ungulates) and the human. We can plan preventive and control measures by breaking the cycles (numbered 1 to 5).
1. The tick vectors are numerous and widespread and tick control with acaricides (chemicals intended to kill ticks) is only a realistic option for well managed livestock production facilities.

2. Persons living in endemic areas should use personal protective measures that include avoidance of areas where tick vectors are abundant and when they are active (spring to fall); regular examination of clothing and skin for ticks, and their removal; and use of repellents. Persons who work with livestock or other animals in the endemic areas can take practical measures to protect themselves. These include the use of repellents on the skin (e.g. DEET) and clothing (e.g. permethrin) and wearing gloves or other protective clothing to prevent skin contact with infected tissue or blood.

3. In addition to protective measures to prevent tick bites; the people handling live stocks and their meat (Butchers, cooks) should take precautions to prevent contamination of secretions and blood of the animals or meat of the animals. This can be done by wearing personal protective clothes (fully covered aprons/clothes), gloves, and masks/clothes covering mouth&nose and protective spectacles as well.

4. When patients with CCHF are admitted to hospital, there is a risk of nosocomial spread of infection. In the past, serious outbreaks have occurred in this way and it is imperative that adequate infection control measures be observed to prevent this disastrous outcome. Healthcare workers are at risk of acquiring infection from sharps injuries during surgical procedures and, in the past, infection has been transmitted to surgeons operating on patients to determine the cause of the abdominal symptoms in the early stages of (at that moment undiagnosed) infection. Healthcare workers who have had contact with tissue or blood from patients with suspected or confirmed CCHF should be followed up with daily temperature and symptom monitoring for at least 14 days after the putative exposure.

5. Patients with suspected or confirmed CCHF should be isolated and cared for using barrier nursing techniques. Specimens of blood or tissues taken for diagnostic purposes should be collected and handled using universal precautions. Sharps (needles and other penetrating surgical instruments) and body wastes should be safely disposed of using appropriate decontamination procedures.

In addition to above preventive measures; care should be taken while handling the dead bodies.

See annex F

6. Organize awareness-raising campaigns on exposure risks and preventive measures for the general public including implementing targeted vector control activities through the following steps.
   - Organize community resources to develop and provide information about prevention and control of CCHF in the community.
   - Identify key messages and communication channels.
   - Evaluate communication activities and take action to improve them as needed.
NB: So far there is no safe and effective vaccine widely available for human use.

5.2. Health education and behavioral change

Behavior is the way in which a person behaves and responds to a particular situation or living environment. This is determined by several factors, among them preemptive perception of the situation and the sense of experience are much influential. If we wanted to make aware of CCHF and the mode of spread of the diseases; we have to spread the knowledge of preventive measures through simple and culturally acceptable mode or media.

- This can be made through child hood or community education or dramas, songs or posters and Media programs and announcements from respectable sources like community leaders.
- Once the knowledge is repeatedly spread through appropriate Medias among the community it will process into attitude change in the community.
- If the environment is conducive for practicing the knowledge it would make a change in their practice and behavior. (E.g. Outbreaks of diseases and adequate availability of locally available protective material supply might improve appropriate personal protective habits)
- Children, women and sensible community members will follow the practice first, and ultimately majority will adopt the healthy habits

To encourage the community on vector control and personal protection; we have select some very important messages regarding the above five preventive steps and formulate them into attractive messages/posters/songs/dramas and publish among right people at right time.

Right message through right media at right place among right people at right time will make a reasonable behavioral change
6. Coordination and Management of CCHF outbreaks

6.1. Management and coordination structures and governance

Under the current coordination system in Afghanistan; CCHF outbreaks within the provinces could be managed by provincial emergency response and preparedness committee. The organizational structure of national, provincial and field level outbreak control task force is described here with two way communication (command and feedback) channels this would prevent duplication of commands and feedbacks during outbreaks.

Figure: 6

Members of the National and Provincial emergency response committee, and Outbreak investigation and early response team are summarized in table 4.
Table: 4

<table>
<thead>
<tr>
<th>Position</th>
<th>National emergency response and preparedness commission</th>
<th>Provincial emergency response and preparedness committee</th>
<th>Outbreak investigation and early response team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Deputy minister of health</td>
<td>Director of Provincial Health Department</td>
<td>DEWS/ CDC officer</td>
</tr>
<tr>
<td></td>
<td>Director of zoonotic diseases/Director of agriculture and animal husbandry</td>
<td>Focal person for zoonotic diseases</td>
<td>Veterinarian and an entomologist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Committee members</th>
<th>ERP directorate</th>
<th>Provincial DEWS officer or CDC officer</th>
<th>One Medical doctor from the health facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director of DEWS</td>
<td></td>
<td>NGOs (BPHS implementer)</td>
<td>One Nurse from HF</td>
</tr>
<tr>
<td>Preventive medicine directorate</td>
<td>UNICEF</td>
<td></td>
<td>One Lab technician</td>
</tr>
<tr>
<td>Curative medicine directorate</td>
<td>WHO (regional health coordinator, regional health cluster coordinator or provincial polio officer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relevant units of WHO/UNICEF and NGOs</td>
<td>ARCS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RRD and other related ministries</td>
<td>RRD and other related directorate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Annex G- Roles and responsibilities of different stakeholders at different levels

### 6.2. Steps of outbreak response

- Rapid assessment and reporting by the outbreak investigation and early response team
  
  For the assessment, use the standard rapid assessment tool and gather the necessary information from appropriate sources. Particularly relevant information about all the suspected or confirmed CCHF cases from the health facility and then detailed case history from the cases and their contact is important to detect the affected persons, place, time of onset and the source of infection

- Identify the constrains and shortages regarding management of the cases (including transportation, human resource and their capacity and supplies)

- Analyze the situation, Identify who, where, when and how affected by the outbreak and prioritize necessary interventions and immediate support needed
- Reinforce the response team with necessary, leadership, HR with specific TORs and supplies (Adequate prepositioning of ribavirin) and logistic support
- Define a target and timeline for the intervention
- Implement the plan with close monitoring
- Regular review of interventions and outcome (preferably daily for CCHF outbreak control) with a response matrix update

Sample emergency response committee management response matrix

<table>
<thead>
<tr>
<th>Recommendations of the Rapid assessment</th>
<th>ERC’s comments/amendments</th>
<th>Action to be taken</th>
<th>Responsible person/unit</th>
<th>Resources needed and provided</th>
<th>Time frame</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommendation 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Communicate the updates and outcome of the outbreak control activities to the higher authorities and the public through appropriate channels
7. Post outbreak activities

7.1. Continuation of enhanced surveillance and health awareness activities
It's mandatory to continue the enhanced surveillance until complete control of outbreak.
The health awareness creating teams should continue to make awareness among the community on control of transmission of CCHF.

7.2. Actions to be taken from the lessons learned
Once the outbreak is under control we have to review all our activities under each management level and consolidate information about constrains faced by our teams and gaps they observed at the field level.
The constrains and gaps should be thoroughly discussed by technical teams and means of preventing such constrains and filling the gaps should be identified and recommendation to be given to the appropriate authorities dealing with such outbreaks in future.

The gaps and weakness of resources should be identified and capacity building programs should be prioritized to successfully face outbreaks in future.

The lessons learned could be used to establish a better outbreak control mechanism in country as well as in countries under similar context.

The identified gaps and recommendations could be used to bring the focus of the donors towards the practical constrains and gaps and plan a better outbreak control mechanism in future.

Long term plans should be developed from the lessons learned, particularly to improve healthy living standards in CCHF outbreak prone areas with better water and sanitation standards.

Based on the practical legal issues, recommendations to be made to strengthen the current legislation and regulation of food handling establishments/vendors with regular implementation mechanism.

Continue with regular evaluations and strengthen surveillance, prevention, preparedness and control mechanism,
### Annex A: Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alert threshold</strong></td>
<td>A pre-determined number of reported cases or a reported incidence rate of a disease, above which the situation is defined as an alert. It can be differ depending on the context of the disease burden of the location</td>
</tr>
<tr>
<td><strong>Attack rate</strong></td>
<td>The proportion of a group that experiences the outcome under study over a given period^1^</td>
</tr>
<tr>
<td><strong>Case definition</strong></td>
<td>A set of criteria (not necessarily diagnostic criteria) that must be fulfilled in order to identify a person as representing a case of a particular disease</td>
</tr>
<tr>
<td><strong>Case fatality rate</strong></td>
<td>The proportion of cases of a specified condition that is fatal within a specified time. Case fatality rate = \frac{\text{number of deaths from a disease in a given period}}{\text{number of diagnosed cases of that disease in same period}} \times 100%</td>
</tr>
<tr>
<td><strong>Codan unit</strong></td>
<td>A wireless communication system used in Afghanistan for communicating daily health emergency information from provinces to central health department</td>
</tr>
<tr>
<td><strong>Contracted out</strong></td>
<td>Arrange for work to be done by another organization.</td>
</tr>
<tr>
<td><strong>Endemic disease</strong></td>
<td>The constant presence of a disease or infectious agent within a given geographic area or population group</td>
</tr>
<tr>
<td><strong>Enzootic</strong></td>
<td>Regularly affecting animals in a particular district or at a particular season.</td>
</tr>
<tr>
<td><strong>Epidemic</strong></td>
<td>The occurrence of an illness or cases, specific health-related behavior, or other health-related events in a community or region of clearly in excess of normal expectancy</td>
</tr>
<tr>
<td><strong>Epidemiology</strong></td>
<td>The study of the occurrence and distribution of health-related states or events in specified populations, including the study of the determinants influencing such states, and the application of this knowledge to control the health problems</td>
</tr>
<tr>
<td><strong>Incidence</strong></td>
<td>The number of instances of illness commencing, or of persons falling ill, during a given period in a specified population</td>
</tr>
<tr>
<td><strong>Incidence rate</strong></td>
<td>The rate at which new events occur in a population. The numerator is the number of new events that occur in a defined period or other physical span</td>
</tr>
<tr>
<td><strong>Incubation period</strong></td>
<td>The time interval between invasion by an infectious agent and appearance of the first sign or symptom of the disease in question</td>
</tr>
<tr>
<td><strong>Informal information</strong></td>
<td>Facts from an informal source that have not been arranged and/or transformed to provide the basis for interpretation</td>
</tr>
<tr>
<td><strong>Morbidity</strong></td>
<td>A measure of a sickness measured by the number of affected person, the illnesses experienced by the persons and the duration of the illness</td>
</tr>
<tr>
<td><strong>Mortality</strong></td>
<td>numbers of deaths and/or rates by age, sex, cause, and sometimes other variables</td>
</tr>
<tr>
<td><strong>Notifiable diseases</strong></td>
<td>A disease deemed of sufficient importance to the public health to require that its occurrence be reported to health authorities</td>
</tr>
<tr>
<td><strong>Outbreak</strong></td>
<td>An epidemic limited to localized increase in the incidence of a disease, e.g. in a village, town, or closed institution;</td>
</tr>
<tr>
<td><strong>Outbreak investigation</strong></td>
<td>The investigation procedure undertaken by trained staffs to detect the persons, time, place and source of the outbreak in order to implement an effective control mechanism</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>outbreak threshold</strong></td>
<td>The outbreak threshold is a pre-determined number of reported measles cases or a reported incidence rate above which the situation is defined as an outbreak</td>
</tr>
<tr>
<td><strong>Prevalence</strong></td>
<td>A measure of disease occurrence: the total number of individuals who have an attribute or disease at a particular time (it may be a particular period) divided by the population at risk of having the attribute or disease at that time or midway through the period</td>
</tr>
<tr>
<td><strong>Sentinel surveillance</strong></td>
<td>Surveillance based on selected population samples chosen to represent the relevant experience of particular groups</td>
</tr>
<tr>
<td><strong>Surveillance</strong></td>
<td>Systematic and continuous collection, analysis, and interpretation of data, closely integrated with the timely and coherent dissemination of the results and assessment to those who have the right to know so that action can be taken</td>
</tr>
<tr>
<td><strong>Surveillance focal point</strong></td>
<td>The person assigned to do the surveillance activity within an area or an institution</td>
</tr>
<tr>
<td><strong>Transmission</strong></td>
<td>Any mechanism by which an (infectious) agent is spread from a source or reservoir to another person</td>
</tr>
</tbody>
</table>

**Annex B1: Sample CCHF incidence chart**

**Daily CCHF incidence chart**

Month________Year________
Annex B2:  
**Sample Alert notification form**

<table>
<thead>
<tr>
<th>Date: ____________</th>
<th>Region_________________</th>
<th>Province________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>District __________</td>
<td>Health Facility/camp___________________</td>
<td></td>
</tr>
<tr>
<td>Name of focal point __________________</td>
<td>Contact number ____________________</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Address</th>
<th>Complaints/signs and symptoms</th>
<th>Suspected disease</th>
<th>Date of onset</th>
<th>Outcome *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td>3</td>
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<td>4</td>
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<td></td>
</tr>
</tbody>
</table>

Annex B3:  
**DEWS Weekly reporting format**

**Surveillance Reporting Form for Morbidity (Diseases) and Mortality (death)**  
*Bring to PHD office on every Saturday*

<table>
<thead>
<tr>
<th>Province Name/Code:</th>
<th>District Name/Code:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town/Village/Camp:</td>
<td>Facility Name/Code:</td>
</tr>
<tr>
<td>NGO/Donor:</td>
<td></td>
</tr>
</tbody>
</table>

**Epidemiological Week**___ from Saturday: ____/____/2012 to Friday_____/_____/2012

**Name & phone #:********

<table>
<thead>
<tr>
<th>Events Under Surveillance</th>
<th>Male/Less than 5 years old</th>
<th>Female/Less than 5 years old</th>
<th>Male/ 5 years old and over</th>
<th>Female/ 5 years old and over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cases</td>
<td>Deaths</td>
<td>Cases</td>
<td>Deaths</td>
</tr>
<tr>
<td>1 ARI- Cough and cold</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ARI- Pneumonia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Acute watery Diarrhoea</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Bloody Diarrhoea</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 AWD w Dehydration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Suspected Meningitis (SIC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Health Event</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Susp. Acute Viral Hepatitis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Suspected Measles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Suspected Pertussis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Probable Diphtheria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Tetanus/ Neonatal Tetanus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Acute Flaccid Paralysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Suspected Malaria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Suspected Typhoid Fever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Susp. Hemorrhagic Fever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Pregnancy-related deaths</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DEWS Disease**

**TOTAL New Clients/ Deaths**

- Please include only those cases that were examined/admitted during the surveillance week and deaths that occurred during the surveillance week. Each case should be counted only once.
- Write "0" (zero) if you had no case or death of any of the Health Events listed in the form.
- Deaths should be reported only under "Deaths", NOT under "Cases", and please fill the following table for each reported death.

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Cause</th>
<th>Residence/ Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Investigate with history and lab specimen single cases of suspected avian influenza, CCHF, measles, pertussis, diphtheria, AFP, meningitis and hemorrhagic fever and search for other cases. Similarly, investigate clusters of pneumonia, bloody diarrhea, hepatitis, malaria, and CCHF and increasing trends of ARI and diarrhea.
A) Does the patient have a fever [> 38 °C] or history of fever in previous 24 hours AND has returned from (or is currently residing in) a VHF endemic area within 21 days? OR
B) Does the patient have a fever [> 38 °C] or history of fever in previous 24 hours AND has cared for / come into contact with body fluids of / handled clinical specimens from a live or dead individual or animal known or strongly suspected to have a VHF?

NO to A and B

Yes to A only

Yes to B

NO to ALL ADDITIONAL QUESTIONS

Yes to ANY ADDITIONAL QUESTION

POSSIBILITY OF VHF ISOLATE PATIENT IN A SIDEROOM

Yes; consult with senior infection control officer to take necessary precautions

Malaria

If patient fails to improve or deteriorates, with AMT; consider

Other diagnosis;

Continuing fever?

Yes

Negative; maintain possibility of VHF until alternative diagnosis

Positive; Special care with full public health actions

Urgent VHF screen (EDTA & serum), Urgent Malaria investigation
Urgent local investigations (inform lab of VHF likelihood) as normally appropriate, including blood cultures

High possibility of VHF isolate patient in a

Urgent Malaria investigation, including blood

Launch initial public health actions – including notification of suspected case and identification of contacts

Does the patient has bruising OR bleeding OR uncontrolled diarrhoea OR uncontrolled vomiting?

No

Yes; consult with senior infection control officer to take necessary precautions and transfer to special ICU

Urgent Malaria investigation, including blood

Malaria

If patient fails to improve or deteriorates, with AMT; consider

Other diagnosis;

Yes; consult with senior infection control officer to take necessary precautions

Malaria

ADDITIONAL QUESTIONS:

Has the patient lived or worked in basic rural conditions where Lassa fever is endemic i.e. West/Central Africa?
Has the patient travelled to any area where there is a current VHF outbreak?
Has the patient travelled in an area endemic for Crimean-Congo Haemorrhagic Fever and either received a tick bite or crushed a tick with their bare hands?
Has the patient visited caves or mines in a VHF endemic area? Has the patient had a fever [> 38 °C] persisting after 72 hours of appropriate antimalarial or antimicrobials?
### Annex D: Surveillance focal points by Regions, Provinces and Districts (To be updated)

<table>
<thead>
<tr>
<th>Name</th>
<th>Post Title</th>
<th>Region</th>
<th>Contact No</th>
<th>E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Dr. Bashir Noormal</td>
<td>General Director ANPHI</td>
<td>National</td>
<td>700281134</td>
<td><a href="mailto:noormalb@yahoo.com">noormalb@yahoo.com</a></td>
</tr>
<tr>
<td>2 Dr. Mir Islam Sayed</td>
<td>Surveillance/ DEWS Director</td>
<td>National</td>
<td>700290955</td>
<td><a href="mailto:km_islam2001@yahoo.com">km_islam2001@yahoo.com</a></td>
</tr>
<tr>
<td>3 Dr. Naqibullah Ziar</td>
<td>Deputy Surveillance Director</td>
<td>National</td>
<td>799001491</td>
<td><a href="mailto:ziarhaleem@gmail.com">ziarhaleem@gmail.com</a></td>
</tr>
<tr>
<td>4 Dr. Mohammad Nadir SAHAK</td>
<td>National professional officer</td>
<td>National</td>
<td>708892177</td>
<td><a href="mailto:sahakm@who.int">sahakm@who.int</a></td>
</tr>
<tr>
<td>5 Dr. Ahmad Farid Ghiasi</td>
<td>National professional officer</td>
<td>National</td>
<td>700602174</td>
<td><a href="mailto:ghiasia@afg.emro.who.int">ghiasia@afg.emro.who.int</a></td>
</tr>
<tr>
<td>6 Dr. Nawid Musarat</td>
<td>Regional DEWS Coordinator</td>
<td>Center</td>
<td>799413160</td>
<td><a href="mailto:nawidmusarat@gmail.com">nawidmusarat@gmail.com</a></td>
</tr>
<tr>
<td>7 Dr. Aimal Alkozai</td>
<td>Regional DEWS Coordinator</td>
<td>East</td>
<td>700606303</td>
<td><a href="mailto:aimal.alkozai@gmail.com">aimal.alkozai@gmail.com</a></td>
</tr>
<tr>
<td>8 Dr. Naeem Rahimi</td>
<td>Regional DEWS Coordinator</td>
<td>North</td>
<td>789469627</td>
<td><a href="mailto:dews.northregion@gmail.com">dews.northregion@gmail.com</a></td>
</tr>
<tr>
<td>9 Dr Mohd Sarwar Firozi</td>
<td>Regional DEWS Coordinator</td>
<td>South</td>
<td>703009008</td>
<td><a href="mailto:sarwarfirozi@gmail.com">sarwarfirozi@gmail.com</a></td>
</tr>
<tr>
<td>10 Dr. Zarif Ahmad Akbarian</td>
<td>Regional DEWS Coordinator</td>
<td>West</td>
<td>783734350</td>
<td><a href="mailto:dews.westregion@gmail.com">dews.westregion@gmail.com</a></td>
</tr>
<tr>
<td>11 Dr. M. Afzal Khosti</td>
<td>Regional DEWS Coordinator</td>
<td>Southeast</td>
<td>700933102</td>
<td><a href="mailto:dews.southeastregion@gmail.com">dews.southeastregion@gmail.com</a></td>
</tr>
<tr>
<td>12 Dr. Salim Saha</td>
<td>Regional DEWS Coordinator</td>
<td>Northeast</td>
<td>797367387</td>
<td><a href="mailto:dews.northeastregion@gmail.com">dews.northeastregion@gmail.com</a></td>
</tr>
<tr>
<td>13 Dr. Jamaludin Ahadi</td>
<td>Regional DEWS Coordinator</td>
<td>Central west</td>
<td>783734322</td>
<td><a href="mailto:dews.centralwestregion@gmail.com">dews.centralwestregion@gmail.com</a></td>
</tr>
</tbody>
</table>
Annex E: Sample case investigation form

Sample case/cluster investigation form

<table>
<thead>
<tr>
<th>Province:</th>
<th>Date/time of first report:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Who Reported?</td>
</tr>
<tr>
<td>District:</td>
<td>Village/town:</td>
</tr>
<tr>
<td>Date of investigation:</td>
<td>Distance from Center of Province:</td>
</tr>
<tr>
<td>Name of the nearest health facility:</td>
<td>Total population of the area:</td>
</tr>
<tr>
<td></td>
<td>Number at risk:</td>
</tr>
<tr>
<td>Name of the team leader:</td>
<td>DPTHH coverage of the area:</td>
</tr>
<tr>
<td>Telephone number:</td>
<td>OPV3 coverage:</td>
</tr>
<tr>
<td></td>
<td>Measles Coverage of the area:</td>
</tr>
</tbody>
</table>

| Health event/suspected disease (tick one box only) | Symptoms and signs (several boxes can be ticked) |
Operational guidelines for CCHF outbreak response in Afghanistan

- Acute diarrhoea
- Acute bloody diarrhoea
- Suspected CCHF
- Suspected measles
- Suspected rubella
- Suspected pertussis
- Suspected diphtheria
- Suspected meningitis
- Acute lower respiratory infection
- Acute jaundice syndrome
- Hepatitis
- Acute hemorrhagic fever syndrome
- Acute flaccid paralysis (suspected poliomyelitis)
- Suspected malaria
- Adult tetanus
- CCHF fever
- Unexplained fever
- Unexplained cluster of health events
- Other (specify): _______________

Team Members:

- 3 or more loose stools per 24 hours
- loose stools with blood
- fever
- rash
- other skin lesion
- cough
- vomiting
- yellow eyes and/or skin
- neck stiffness
- convulsions or seizures
- muscle weakness
- increased secretions (e.g. sweating or drooling)
- altered level of consciousness
- other (specify): _______________

GPS
Ev:
N:
L:

Total number of cases reported:
Total number of cases investigated:
Total number of deaths reported:

Response:

Surrounding Villages
In case of town please mention the number of street and house

(a) Age: by days (for newborn), months (for infants), and years
(b) Sex: M for male; F for female;
(c) Date (day/month/year)
(d) Records using the following codes: I = currently ill, R = recovering or recovered, D = died, L = lost to follow-up, U = unknown.
(e) Record using the following codes: B = blood, S = stool, C = cerebrospinal fluid, U = urine, R = respiratory specimen, O = other.

**Line list of suspected cases**

Province: ______________ District: ______________ Village: _____________

Estimated population_________ Informant: __________________________

Nearest health facility____________________

<table>
<thead>
<tr>
<th>No</th>
<th>Full Name</th>
<th>age</th>
<th>sex</th>
<th>Symptoms and signs</th>
<th>Date of onset</th>
<th>Treatment given</th>
<th>history of disease contact or travel or source*</th>
<th>Outcome **</th>
<th>If died; Date of death</th>
</tr>
</thead>
</table>
**= Any relevant case/contact/travel history or suspected source suggested by the informant

**= Sick/Recovered/Died

### Information collected from the health facility registration books on the suspected disease

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of the cases this week</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of the cases for the last week</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of the cases in the same week of the last year (☼)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average number of the cases for the last 3 years</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☼ please mention if there was an outbreak of the disease in the same weeks of last year

### Outbreak investigation (information recorded from the village’s graveyard visit)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of the new children graves:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of the new adult graves:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Death cases confirmed by the village Mullah Imam in last 2 weeks

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of new children deaths:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of the new adults deaths:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Draw Map of the Area below:
Annex F
Safe Burial Practices

There is risk of transmission in the health facility when a CCHF patient dies because the bodies and body fluids of deceased CCHF patients remain contagious for several days after death. Family and community members are also at risk if burial practices involved touching and washing the body.

1. Prepare the Body Safely
Burial should take place as soon as possible after the body is prepared in the health facility. Health facility staff should:

- Be aware of the family’s cultural practices and religious beliefs.
- Help the family understand why some practices cannot be done because they place the family or others at risk for exposure.
- Counsel the family about why special steps need to be taken to protect the family and community from illness.

If the body is prepared without giving information and support to the family and the community, they may not want to bring other family members to the health facility in the future. They may think that if the patient dies, the body will not be returned to them.

Identify a family member who has influence with the rest of the family and who can make sure family members avoid dangerous practices such as washing or touching the body.

2. To prepare the body in the health facility:

2.1. Wear protective clothing as recommended for staff in the patient isolation area. Use thick rubber gloves as the second pair (or outer layer) of gloves.
2.2. Spray the body and the area around it with 1:10 bleach solution.
2.3. Place the body in a “body bag” (mortuary sack) and close it securely. Spray the body bag with 1:10 bleach solution.
2.4. If body bags are not available, wrap the body in two thickness of cotton cloth and soak with 1:10 bleach solution. Then wrap the body in plastic sheeting. Seal the wrapping with plastic tape. Spray the body bag as in Step 3. Place the body in a coffin if one is available.
2.5. Transport the body to the burial site as soon as possible. Assign a health officer or health facility staff person to accompany the body to ensure that the safety precautions remain secure during the journey.

3. Transport the Body Safely
Isolation Precautions should remain in force when the body is being transported to the burial site.

3.1. Plan to take the shortest route possible for security purposes and to limit any possibility of disease transmission through accidental contact.
3.2. Any health facility staff that must touch or carry the body during transport should wear the same protective clothing as is worn in the isolation area. Note: The driver does not need to wear protective clothing if there is no contact with the body.
3.3. Take a closed container or sprayer with 1:10 bleach solution in the event of any accidental contact with the body or infectious body fluids. Also use it to clean up spills in the transport vehicle.
4. **Prepare Burial Site**

4.1. The grave should be at least 2 meters deep.
4.2. Explain to the family that viewing the body is not possible. Help them to understand the reason for limiting the burial ceremony to family only.

5. **Disinfect the Vehicle after Transporting the Body**

5.1. The staff person who disinfects the vehicle must wear protective clothing.
5.2. Rinse the interior of the vehicle where the body was carried with 1:10 bleach solution.
5.3. Let it soak for 10 minutes.
5.4. Rinse well with clean water and let the vehicle air-dry. Be sure to rinse well because the solution is corrosive to the vehicle.
## Annex G: Broad TORs of stake holders before during and after outbreaks

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov. Health department</td>
<td><strong>Before outbreak</strong>&lt;br&gt;1. Develop an Outbreak preparedness plan and ensure all the resources(Money, man, Material and Management with regular pre seasonal review) are arranged from community to national level.&lt;br&gt;2. Ensure routine surveillance system is efficiently functional (train, implement and regularly M&amp;E the process of notification, analysis, alert Investigation and outbreak control activities)&lt;br&gt;3. Ensure adequate prepositioning of necessary emergency supplies according to the expected incidence&lt;br&gt;4. Ensure existence and functional standard laboratory investigation net working&lt;br&gt;5. Train all the clinicians on standard Case management and technical support</td>
</tr>
<tr>
<td>Gov. Education department</td>
<td><strong>Before outbreak</strong>&lt;br&gt;1. Participate and contribute to outbreak preparedness&lt;br&gt;2. Spread the knowledge of CCHF preventive measures through regular education system and special campaigns</td>
</tr>
<tr>
<td>Gov. Agriculture and livelihood development department</td>
<td><strong>Before outbreak</strong>&lt;br&gt;1. Ensure regular vector control measures are taken in the outbreak prone areas through community based vector control programmes.&lt;br&gt;2. Well maintain the logistics and supplies for the communities under risk&lt;br&gt;3. Prevent the hazards due to the use of chemicals&lt;br&gt;4. Introduce suitable biological and physical control measures&lt;br&gt;5. Enforce all available legislatives to control the malpractices and strengthen the legislations</td>
</tr>
<tr>
<td>Private business community, funding agents and financial supporters</td>
<td><strong>Before outbreak</strong>&lt;br&gt;1. Support the communities in outbreak prone areas with micro financing/revolving funds to maintain their farms&lt;br&gt;Support the small scale farmers ,Butchers and cooks to maintain minimum standard procedures of handling animals and their products&lt;br&gt;Support community based vector control activities and trainings</td>
</tr>
</tbody>
</table>
| NGOs and UN agencies | 1. Support relevant Government departments in the process of planning, implementation and maintenance of health, Agriculture and livelihood development projects (Fund, HR, Supplies, technical advice and management.) | 1. Support the government departments with technical advice, HR, supplies and logistics  
2. Bring more outbreak control and case management teams  
3. Support the monitoring and evaluation of outbreak | 1. Identify the gaps in outbreak control and support for a sustainable solution |
| Community organizations and public | 1. Understand their basic priorities and develop community based organizations, plans and implementation teams  
2. Arrange all possible resources from the community and get support from micro financing agencies, NGOs and UN agencies and Implementation of community based CCHF preventive measures  
3. Organize active community based teams for tick elimination and making awareness about safe handling of animal and their products | 1. Support health and Agriculture departments to control the outbreak through supporting all the efforts made by them  
2. Follow the instructions given by the departments | |
| Gov. Departments of Law and order | 1. Develop and implement necessary public laws related to animal husbandry and animal product handling  
2. Make the public to be aware of the laws and follow | 1. Strictly implement the rules | 1. Identify the gaps in laws and implementation and rectify them |
1 Crimean–Congo Hemorrhagic Fever (CCHF) Virus, version 2, Virginia Bioinformatics Institute, 2006


4 Crimean–Congo Hemorrhagic Fever, Fact sheet, CDC, Oct 2012

5 Communicable disease profile, Afghanistan and neighbouring countries,WHO, January 2002

6 Crimean–Congo Hemorrhagic Fever, Afghanistan 2009, Mir Lais Mustafa et.al, Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 17, No. 10, October 2011


8 Disease early warning system, Ministry of public health of Afghanistan, 2006

9 Report of the OIE ad hoc group meeting on Crimean Congo haemorrhagic fever (CCHF), Paris 16-17 Feb 2010

10 Crimean–Congo haemorrhagic fever, Fact sheet N°208, WHO November 2011

11 Communicable disease toolkit Iraq crisis, WHO, march 2003
