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Carl A. Curling
Julia K. Burr
Audrey C. Kelley

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INSTITUTE FOR DEFENSE ANALYSES
4850 Mark Center Drive
Alexandria, Virginia 22311-1882

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Executive Summary

The U.S. Army Office of the Surgeon General (OTSG) asked the Institute for Defense Analyses (IDA) to plan and conduct a table top exercise (TTX) in order to provide representatives to the North Atlantic Treaty Organization (NATO) Military Committee Medical Standardization Board Chemical, Biological, Radiological and Nuclear Medical Working Group (CBRNMedWG) with a mechanism for understanding new international disease reporting requirements contained in the World Health Organization's (WHO) *International Health Regulations (2005)* (hereafter cited in the text as *IHR (2005)*). The objectives of the TTX were (1) to assess the need for NATO to develop guidance for its Joint Force Commanders on their responsibilities for reporting public health events of international concern, and (2) if such a need were determined, to provide the broad tenets of that guidance.

This exercise was conducted as part of the 34th meeting of the CBRNMedWG, held February 11–15, 2013 at NATO headquarters and at Club Militaire Prince Albert in Brussels, Belgium. Participants included each attending NATO member nation's representatives to the CBRNMedWG, a working group organized under the auspices of the Committee of the Chiefs of Military Medical Services in NATO, which in turn advises the Military Committee—NATO's senior military authority—on military medical matters.

Exercise development, planning, and execution were under the auspices of the OTSG and its U.S. delegation and were performed by IDA under IDA Task CA-6-3079, CBRN Casualty Estimation Update of the Medical CBRN Defense Planning and Response Project, co-sponsored by the Joint Staff, Joint Requirements Office (JRO) for CBRN Defense, (J-8/JRO) and OTSG. This paper documents IDA's work on the TTX.

IHR (2005) is an international agreement among nations, the purpose of which is "to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade."[1] Among other things, *IHR (2005)* obligates its signatories to notify WHO—via a designated IHR Focal Point—of any events within their territory that may constitute a public health emergency of international concern, as defined in the agreement. Various working groups within the NATO Standardization Agency, including the CBRNMedWG,

[1] World Health Organization, *International Health Regulations (2005)*, 2nd ed. (Geneva: WHO Press, 2008), 10 (hereafter cited as *IHR (2005)*).

the Force Health Protection Working Group, and the Biological Medical Advisory Council Expert Panel, have expressed concern over *IHR (2005)* and its implications for NATO operations, especially with respect to Restriction of Movement, air evacuation of contagious casualties, and reporting requirements. The latter issue was the focus of the February 2013 TTX.

The exercise proved a useful means of confirming both a need for IHR reporting guidance and identifying some of the issues that should be addressed within that guidance. From the discussion of those issues, the following recommendations emerged:

- While developing guidance or policy, NATO needs to coordinate closely with WHO.
- NATO should designate an IHR Focal Point for the Joint Force Commander at the outset of any operation. The participants recommended that the Commander assign this role to his Medical Advisor.
- NATO's reporting obligations under *IHR (2005)* do not replace or supersede normal reporting within the established chain of command. Thus the Military Treatment Facility commander and the Medical Advisor need to notify military and civil medical authorities at the appropriate level within the host nation, the casualty's nation, and other involved nations.
- With respect to the Rapidly Deployable Outbreak Investigation Team (RDOIT), a specialized NATO capability, it is very possible that WHO would call upon that capability to support its investigations, particularly if they were conducted within a NATO operating area. The group therefore recommended that NATO consider revising the RDOIT tactics, techniques, and procedures to add a requirement for ongoing liaison with WHO.

Contents

1. Introduction

The U.S. Army Office of the Surgeon General (OTSG) asked the Institute for Defense Analyses (IDA) to plan and conduct a table top exercise (TTX) in order to provide representatives to the North Atlantic Treaty Organization (NATO) Military Committee Medical Standardization Board Chemical, Biological, Radiological and Nuclear Medical Working Group (CBRNMedWG) with a mechanism for understanding new international disease reporting requirements contained in the World Health Organization's (WHO) *International Health Regulations (2005)* (hereafter cited in the text as *IHR (2005)*). The objectives of the TTX were (1) to assess the need for NATO to develop guidance for its Joint Force Commanders on their responsibilities for reporting public health events of international concern, and (2) if such a need were determined, to provide the broad tenets of that guidance.

This exercise was conducted as part of the 34th meeting of the CBRNMedWG, held February 11–15, 2013 at NATO headquarters and at Club Militaire Prince Albert in Brussels, Belgium. Participants included each attending NATO member nation's representatives to the CBRNMedWG. Exercise development, planning, and execution were under the auspices of the OTSG and its U.S. delegation and were performed by IDA under IDA Task CA-6-3079, CBRN Casualty Estimation Update of the Medical CBRN Defense Planning & Response Project, co-sponsored by the Joint Staff, Joint Requirements Office (JRO) for CBRN Defense (J-8/JRO) and OTSG. This paper documents IDA's work on the TTX.

A. Background

1. *International Health Regulations (IHR 2005)*

IHR (2005) is an international agreement among nations, the purpose of which is "to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade."[1] Among other things, *IHR (2005)* obligates its signatories to notify WHO of any events

[1] World Health Organization, *International Health Regulations (2005)*, 2nd ed. (Geneva: WHO Press, 2008), 10 (hereafter cited as *IHR (2005)*).

within their territory that may constitute a public health emergency of international concern, as defined in the agreement. The World Health Assembly initially adopted the first International Health Regulations (IHRs) in 1969, in an effort to control the spread of specific diseases.[2] In 1995, due to the growth in international travel and trade, and the emergence or re-emergence of international disease threats and other public health risks, the World Health Assembly called for significant revision of the existing IHRs. After 10 years of development, the World Health Assembly adopted *IHR (2005)* in May 2005, and the regulations entered into force in 2007.[3] All 193 members of WHO are signatories to *IHR (2005)*, including all NATO members.

The focus of *IHR (2005)* is on controlling the international spread of disease.[4] A necessary and critical step in this process is the reporting of "events that may constitute a public health emergency of international concern" to WHO. As defined in *IHR (2005)*, such events are those determined to both to constitute a public health risk to other States through the international spread of disease, and to potentially require a coordinated international response.[5] *IHR (2005)* lists a number of diseases that are either always reportable or reportable in certain circumstances. These include smallpox, poliomyelitis due to wild-type poliovirus, human influenza caused by a new subtype, severe acute respiratory syndrome, cholera, pneumonic plague, yellow fever, viral hemorrhagic fevers, West Nile fever, and other diseases that are of special national or regional concern, such as dengue fever, Rift Valley fever, and meningococcal disease. In addition, any event of potential international public health concern, including those of unknown causes or sources and those involving other events of diseases may be reportable if they are serious, unusual, or unexpected, and/or have a significant risk of international spread.[6]

Chemical, radiological, and nuclear incidents, whether deliberate or accidental in origin, could be included in this final, non-specific category of reportable events, and thus would fall within the purview of the TTX. While not explicitly excluded from consideration, however, the TTX focused on the presentation to NATO medical treatment facilities of individuals suffering from a reportable disease.

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[2] Ibid., 1.

[3] Ibid.

[4] Ibid., Article 2: 10.

[5] Ibid., Article 1: 9.

[6] Ibid., Annex 2: 43.

2. North Atlantic Treaty Organization (NATO) Interest in *IHR (2005)*

The CBRNMedWG is among a plethora of working groups organized under the auspices of the Committee of the Chiefs of Military Medical Services in NATO, which in turn advises the Military Committee—NATO's senior military authority—on military medical matters.

The CBRNMedWG's interest in issues associated with the implementation of *IHR (2005)* was spurred by discussions that began in October 2011 within the NATO Biological Medical Advisory Council Expert Panel (BioMedAC EP). The BioMedAC EP is a body of experts currently subordinate to the CBRNMedWG, established to "provide medical advice on biological threats, biohazards, endemic and emerging diseases, bio-defence and health protection."[7]

Pursuant to a presentation by Dr. Matthew Lim of WHO at the October 2011 meeting of the BioMedAC EP, there was considerable discussion of *IHR (2005)* and its implications for NATO operations, especially with respect to Restriction of Movement, air evacuation of contagious casualties, and reporting requirements. The BioMedAC EP asked COL Robert von Tersch (USA), a member of the U.S. delegation to the BioMedAC EP who also served as the U.S. Department of Defense representative on the U.S. delegation to the *IHR (2005)* negotiations, to develop a "Food for Thought" working paper on the subject, identifying issues that could be of concern to NATO. COL von Tersch provided his "Food for Thought" paper, included herein as Appendix A, to the BioMedAC EP in advance of its meeting in the spring of 2012. The paper outlines a range options for reporting qualifying events under various scenarios, and provides some pros and cons for each option. As discussed in Chapter 2, these options, scenarios, and discussion points were subsequently used as the basis for the small group working sessions within the TTX.

After discussions at its Spring 2012 meeting, the BioMedAC EP offered to conduct a TTX on IHR reporting issues with participation by all members of the CBRNMedWG at the next meeting of the Working Group. The WG chairman accepted this offer, and asked the U.S. Head of Delegation to the CBRNMedWG—the CBRN Medical Staff Officer at OTSG—to take on the task of developing and conducting the exercise. OTSG then requested IDA support on this effort. This paper documents IDA's work in planning and conducting the IHR TTX as part of the U.S. delegation in February 2013.

Chapter 2 of this paper describes the development of the exercise, including its objectives, structure, tools, and preparation activities. Chapter 3 describes the conduct of

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[7] From the draft BioMedAC EP Program of Work, dated January 30, 2014. (This purpose statement is currently under revision and subject to imminent change.)

the exercise, the direction given to participants, and the outputs of the plenary and small group sessions. Chapter 4 summarizes the key points of discussion and recommendations that came out of the exercise. Appendix A provides COL von Tersch's "Food for Thought" paper, described above, and Appendix B provides the short read-ahead document that IDA distributed to participants in advance of the exercise. This latter document includes relevant extracts from *IHR (2005)* and gives a brief overview of the exercise structure. Finally, Appendix C through Appendix F provide lists of exercise participants, illustrations, references, and abbreviations.

2. Exercise Development

A. Exercise Objectives

The objectives of the exercise were to

- inform participants of IHR reporting requirements,
- provide an operational context in order to form a common understanding,
- develop a consensus view of issues facing NATO in that context, and
- determine the scope of the guidance NATO should develop for Commanders and/or Medical Advisors with regard to their reporting responsibilities under *IHR (2005)*.

Assuming the exercise participants agreed on the need for guidance, the TTX further sought to determine whether there was a consensus on specific IHR reporting responsibilities and the process to be followed, including but not limited to what reporting actions could and should be taken, who should do the reporting, and when and how that reporting should be done.

B. Read-Ahead Material: *IHR (2005)* Information Reporting Requirements

Article 6 of *IHR (2005)* commits State Party signatories to "notify WHO…by way of the National IHR Focal Point…of all events which may constitute a public health emergency of international concern within its territory." Since NATO is not a State Party, one might wonder why it should have any interest in *IHR (2005)* at all. Throughout the TTX, all of the participants felt that NATO had some obligations under *IHR (2005)*, so the question turned out to be largely rhetorical. Yet we still felt it worth asking during the exercise, as the answers might inform the manner in which NATO meets obligations that are, to some extent, self-imposed.

The reasons for NATO's interest in *IHR (2005)* are several. First, in addition to the obligations conferred upon State Parties, *IHR (2005)* identifies a need for cooperation and coordination with "other competent intergovernmental organizations or international bodies" in the implementation of the agreement.[8] As such an organization, NATO would

[8] *IHR (2005)*, 15.

likely be called upon to assist WHO in responding to any ongoing public health emergency in territory in which it is operating. Second, NATO has a broad interest in the goals of *IHR (2005)* and in cooperating with WHO in achieving them. If unresolved, public health emergencies of international concern may create health risks for NATO personnel and significantly complicate the conduct of NATO operations. Finally, all NATO member nations are signatories to *IHR (2005)* and have associated national obligations that must be met, even when participating in operations under the auspices of the Alliance.

IHR (2005) contains a number of provisions related to the timing, content, and disposition of information reported to WHO. It requires each State Party to establish a National IHR Focal Point, defined as "the national centre, designated by each State Party, which shall be accessible at all times for communications with WHO IHR Contact Points under these Regulations."[9] Under normal circumstances, these IHR Focal Points are the designated conduit for IHR reporting required information with WHO and for coordinating international public health responses. State Parties are obligated to report public health emergencies of international concern, via their IHR Focal Point, within 24 hours of assessment of the event; this IHR reporting includes, to the extent possible, "case definitions, laboratory results, source and type of the risk, number of cases and deaths, conditions affecting the spread of the disease and the health measures employed."[10]

Sources other than IHR Focal Points can also provide reports to WHO, in which case WHO will seek to verify those reports with the relevant State Party. WHO will also disseminate the information it has received to all State Parties and relevant intergovernmental organizations as necessary to coordinate an effective public health response.

In advance of the exercise, IDA extracted the specific provisions of *IHR (2005)* regarding reporting requirements and disseminated them to the CBRNMedWG as read-ahead material. This material is reproduced as Appendix B to this paper.

C. Exercise Structure

The CBRNMedWG gave the United States' delegation a three-hour block of time to conduct the exercise. The exercise began with an introductory plenary session, after which the participants broke into smaller working groups in order to discuss IHR

[9] Ibid., 8.

[10] Ibid., 12.

reporting responsibilities in a variety of scenarios. Finally, the participants reconvened for a plenary discussion and development of recommendations.

During the first plenary session, the IDA team described the purpose and objectives of the exercise and sought to establish baseline familiarity with the IHR reporting requirements. The team also provided a set of questions for participants to keep in mind and consider during subsequent phases of the exercise. Finally, the participants tested the Turning Point voting hardware and software used in the small group sessions through evaluation of a very simple scenario.

The IDA team then divided the CBRNMedWG participants into three smaller groups of 8 to 12 participants each to work through four separate scenarios for which reporting under *IHR (2005)* might be required. The intent of this part of the exercise was to first develop a consensus within each small group as to the nature and extent of NATO's responsibility, and then—following on COL von Tersch's "Food for Thought" paper—to determine the extent to which that responsibility might vary under different scenario conditions. The discussions in each small group were facilitated by a U.S. Service representative and recorded by an IDA team member. The facilitators and recorders in each group were

- Small Group 1: Facilitator – LCDR Thad Sharp, U.S. Joint Staff/Joint Requirements Office for Chemical, Biological, Radiological and Nuclear Defense (J-8/JRO); Recorder – Dr. Carl Curling, IDA
- Small Group 2: Facilitator – MAJ Sean Chickery, U.S. Air Force; Recorder – Dr. Audrey Kelley, IDA
- Small Group 3: Facilitator – Dr. Herbert Wolfe, U.S. Navy; Recorder – Ms. Julia Burr, IDA.

In addition, two subject matter experts, Dr. Dennis Faix, a U.S. Navy officer serving at WHO, and COL/Dr. Dirk Densow (DEU [Germany]), Chairman of the BioMedAC EP, roamed among the small groups to answer questions and help guide the discussion. COL von Tersch was unable to attend because of a scheduling conflict.

Once the small groups completed their work, everyone reconvened in a second plenary session to review and summarize the small group results. After discussion of the issues identified in the small group sessions and identification of the sources of differences, the group as a whole revisited two of the more complex scenarios. Finally, the group developed a series of consensus recommendations that are described in detail in Chapter 4.

D. Voting Hardware/Software

To support this exercise, IDA purchased the Turning Point 2008 polling technology system from Turning Technologies, LLC.[11] This system includes assessment software, hand-held polling input and response devices ("clickers"), and a response receiver. The Turning Point software functions as an add-on feature to Microsoft PowerPoint, which updates an existing presentation in response to inputs from individuals via the response clicker inputs to the receiver.

Response clickers were issued to each participant and tested in the first plenary session. During the small group and second plenary sessions, these clickers allowed each user to select among various defined IHR reporting response options given to them on a projected computer screen; the selections were communicated to the response receiver and, in turn, collated via the Turning Point software, and the results displayed on the projected screen.

Although the system allows assignment and tracking of responses on an individual basis, we chose not to use this function during the exercise. Participant input selections were anonymous.

E. Preparation Activities

To test the planned structure and flow of the exercise, and to determine whether its content met the needs of the OTSG sponsor and NATO, IDA hosted a dry run on January 17, 2013. All prospective members of the U.S. delegation and COL/Dr. Densow participated in the dry run and provided valuable feedback that led to improvements in the actual exercise structure.

[11] www.turningtechnologies.com.

3. Conduct of the Exercise

The IHR TTX was held on February 14, 2013—the next-to-last day of the 34th meeting of the CBRNMedWG—at Club Militaire Prince Albert in Brussels, Belgium. Participants included national representatives from Belgium, Canada, Czech Republic, Denmark, Germany, France, Great Britain, Italy, the Netherlands, Norway, Poland, Turkey, the United States (NATO member nations); and Austria, Serbia, and Switzerland (non-NATO nations). Participants also included the chairmen of the CBRNMedWG, the Force Health Protection Working Group, and the BioMedAC EP, as well as representatives from NATO Allied Command Operations and WHO. A complete list of participants is provided in Appendix C.

This chapter describes the specific content and direction given to participants in the three component parts of the exercise, and presents the outputs of the Turning Point software. The observations and recommendations made during the associated discussions are presented in Chapter 4.

A. First Plenary Session

The first plenary session was divided into three parts: presentation of background information, direction to the participants for subsequent small group sessions, and testing of exercise concepts and the polling technology.

1. Background

The exercise began with a presentation by Dr. Dennis Faix that provided background on the structure of WHO and its operations in Europe, and the history, purpose, and general provisions of *IHR (2005)*. IDA then provided an overview of the key provisions of *IHR (2005)* related to reporting requirements and continued with a discussion of the objectives and structure of the exercise.

Next, IDA presented a set of issues that might influence participants' decisions about whether NATO should report a given event and to whom. Among these were operational security concerns: in some circumstances, NATO may protect and restrict dissemination of specific operational information, such as the exact location of a force or a specific unit. In these cases, reporting may need to be done through alternate means than those outlined in *IHR (2005)*. At the same time, in areas where NATO is conducting operations, the host nation may not have the capability to respond to an outbreak or

contain the spread of disease. In these cases, IHR reporting may need to be done by proxy.

The IDA presentation also noted that operations generally require that NATO maintain a positive relationship and trust with the host nation and with the local population. Moreover, host nation cooperation may be needed to contain the spread of disease or other public health emergency. The larger the initial event or the greater the potential for spread, the more this approach is true. Reporting events to the host nation IHR Focal Point would tend to foster a positive relationship and facilitate trust, and further strengthen host nation response capability. On the other hand, reporting events through other national IHR Focal Points or other proxies could damage NATO's relationship with the host nation and its population.

2. Direction for Small Group Work

Participants were directed to join one of three small groups in the next portion of the exercise. Individuals were allowed to join the group of their choice, although nations with multiple participants were asked to spread themselves among different groups.

The IDA team then gave the groups the primary task of developing a consensus response to the following questions:

- Can and should the group develop guidance to Medical Advisors/Commanders regarding their compliance with the IHR reporting requirements?
- If so, what is that guidance?
- If not, what issues need to be addressed before guidance can be generated, and what program of work is needed to support their resolution?

At the same time, the IDA team asked the participants to consider a number of additional questions and issues in their small group deliberations. These questions were intended to foster discussion of the essential elements of the prospective NATO guidance and, in the case of the Rapidly Deployable Outbreak Investigation Team (RDOIT), identify any requirements for additions to the RDOIT Standardization Agreement (STANAG) 2529, for which the BioMedAC EP is responsible.[12]

[12] The role of the RDOIT in any public health emergency of international concern, as defined by *IHR (2005)*, was of concern to the BioMedAC EP because of its responsibility for maintaining the associated STANAG and because of the particular relevance of its capabilities. Revisions to other STANAGs within the purview of the CBRNMedWG, such as STANAG 2783, Allied Medical Publication 7(D): *Concepts of Operations of Medical Support in Chemical, Biological, Radiological, and Nuclear Environments*, would also need to refer to any new guidance on *IHR (2005)* reporting. However, the

These additional questions were included:

- What is the actual extent and limit of NATO's responsibility for reporting events that occur in a country that is not a NATO member?
- In addition to reporting to WHO, what are the requirements for reporting to the nation within which NATO is operating?
- Does the RDOIT have separate IHR reporting responsibilities?

3. Concept and Technology Testing

Both to test the Turning Point polling technology and to introduce the format of the small group sessions, the final portion of the first plenary session was devoted to walking through two simple scenarios in which reporting might be required under *IHR (2005)* and asking participants to select from among four alternative courses of action.

In the first scenario, the participant was assigned the role of commander of a military hospital within the territory of his or her own nation. That hospital received a patient from the same nation suffering from a disease that is reportable under *IHR (2005)*. Options offered to participants for reporting this case were

- report the case to your national IHR Focal Point,
- report the case to WHO directly,
- do not report the case—it is not your responsibility, and
- write up the case as an interesting anecdote for your professional medical journal.

In this simple set of circumstances, the response mandated by *IHR (2005)* is the first one—because the determining factor is the territory in which the reportable event occurs, commanders should report the case to their own national IHR Focal Point, who in turn would communicate it to WHO. With one exception—a participant who felt the case did not need to be reported—all participants selected the correct course of action.

In the second test scenario, in which the circumstances were the same as the first except the patient was a foreign national, participants were also given the option of reporting the case to the IHR Focal Point in the patient's home nation. Under *IHR (2005)*, however, because the determining factor is not the nationality of the patient but the territory in which the reportable event occurs, the appropriate course of action remains the same as in the first scenario: report the case to the participant's own national IHR

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impact of new IHR reporting guidance on other STANAGs was beyond the immediate scope of the TTX.

Focal Point. As with the first scenario, all but one participant chose this course of action; this single individual felt the case should be reported only to the patient's home nation.

B. Small Group Sessions

The small group sessions, with 8 to 12 participants in each group, were the heart of the exercise, intended to identify scenario factors and operational circumstances that could affect decisions by NATO on whether and how to report public health emergencies of international concern under the auspices of *IHR (2005)*. They were also intended to serve as a forum for identifying and discussing other issues associated with IHR reporting that should be considered when developing guidance for Commanders and Medical Advisors.

In the four scenarios examined during the small group sessions following the first plenary session, NATO forces were portrayed as operating in a non-NATO country termed the "host nation" for the purposes of the exercise, and not in their home nation as in the set of plenary scenarios. One question, then, was whether the concept of reporting via the IHR Focal Point of the nation within which the reportable event occurs should be extended in these scenarios. Consideration was also given to whether the operating environment was permissive or non-permissive.

In all four scenarios, the participants were assigned to the role of commander of a NATO medical unit from the country "Alpha Dominion" deployed as part of a NATO Joint Task Force operating in "Bravo Republic," which receives a patient suffering from an IHR-reportable disease. The national origin of the patient varied in each scenario, from among the following possibilities:

- Alpha Dominion (the participant's home nation)
  - Military Treatment Facility (MTF) provider nation
  - NATO member
  - Signatory to *IHR (2005)*
- Bravo Republic
  - Nation in which NATO is conducting operations (host nation)
  - Not a NATO member
  - May or may not be a signatory to *IHR (2005)*

- Delta Commonwealth
  - Fellow nation within NATO Joint Task Force
  - May or may not be a NATO member
  - Signatory to *IHR (2005)*
- Zeta Democratic Republican Commonwealth
  - Combatant in current conflict
  - Not a NATO member
  - Not a signatory to *IHR (2005)*

In their role as MTF commander, participants were asked to select one of four options for IHR reporting. These options varied somewhat by scenario but were all taken from the common list below:

- Report the case to the participant's National IHR Focal Point;
- Report the case to the host nation's National IHR Focal Point;
- Report the case to the patient's National IHR Focal Point, if different from the above;
- Report the case to the Joint Forces Command (JFC) Medical Advisor; or
- Do not report the case.

The polling software outputs for each of the four scenarios examined are shown in Figure 1 through Figure 4. Each figure shows the scenario conditions, the possible responses, and the distribution of responses within the three small groups.

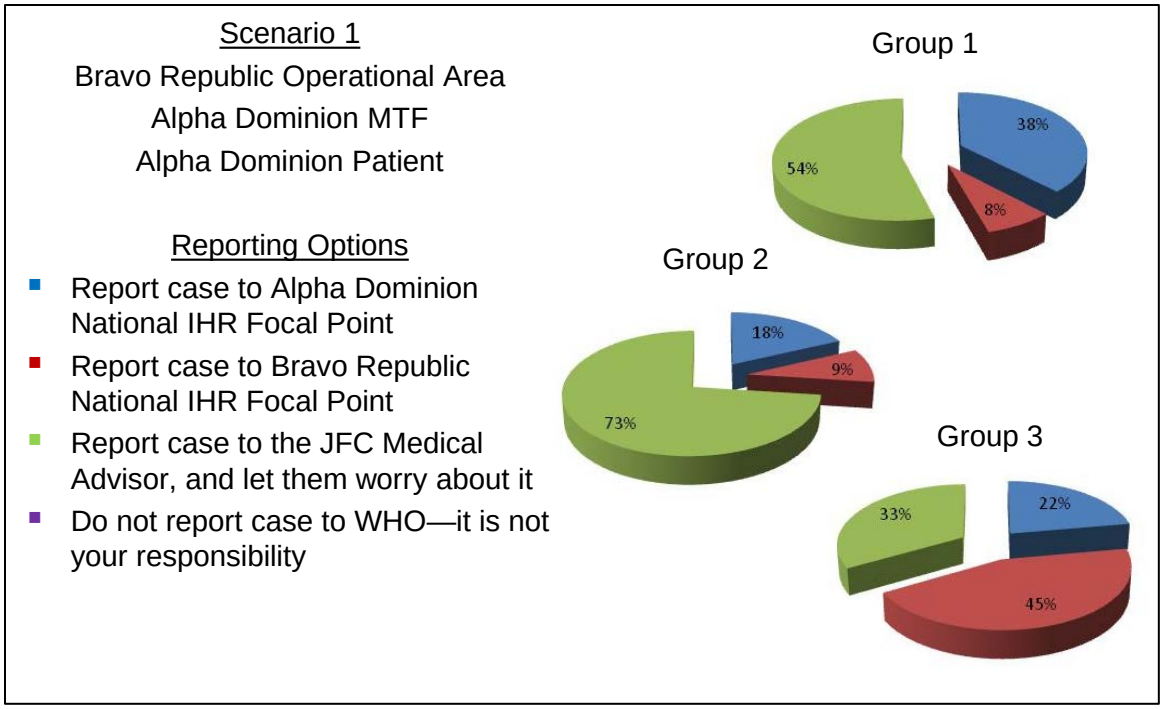


Figure 1. Small Group Scenario 1 Polling

Figure 1 shows the results of participant polling from the first round of small group discussions. The first round was intended to be the simplest: the players were commanding MTFs deployed to a foreign country—not a NATO member in this case—and the patient who presented with a reportable disease was from the player's own country. At this point in the exercise, there was considerable variability in the responses. This suggests that NATO's IHR reporting responsibilities were not commonly defined among the participants at that point, and that perhaps this is indeed an issue where clarification and guidance might be appropriate.

As the small group sessions progressed, the individual groups quickly achieved consensus. As shown in Figure 2 through Figure 4, by the final round of play, the groups were in general agreement as to which IHR reporting option was most appropriate.

Scenario 2

Bravo Republic Operational Area

Alpha Dominion MTF

Bravo Republic Patient

Reporting Options

- Report case to Alpha Dominion National IHR Focal Point
- Report case to Bravo Republic National IHR Focal Point
- Report case to the JFC Medical Advisor, and let them worry about it
- Do not report case to WHO—it is not your responsibility

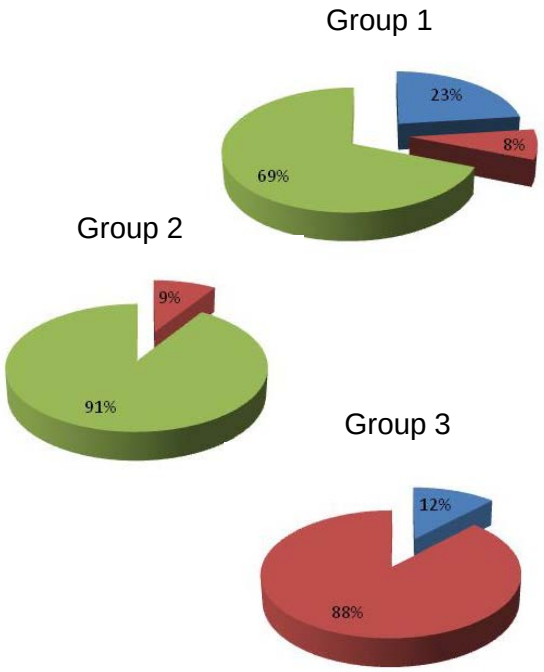


Figure 2. Small Group Scenario 2 Polling

Scenario 3

Bravo Republic Operational Area

Alpha Dominion MTF

Delta Commonwealth Patient

Reporting Options

- Report case to Alpha Dominion National IHR Focal Point
- Report case to Bravo Republic National IHR Focal Point
- Report case to Delta Commonwealth National IHR Focal Points, who does not report it to WHO
- Report case to the JFC Medical Advisor, and let them worry about it

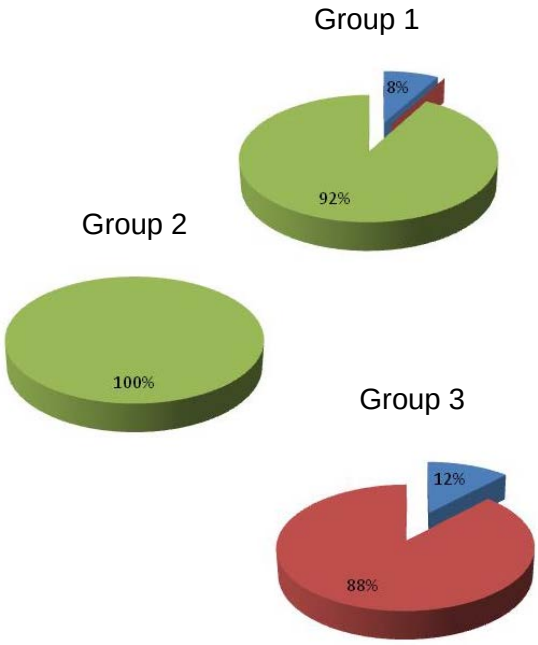
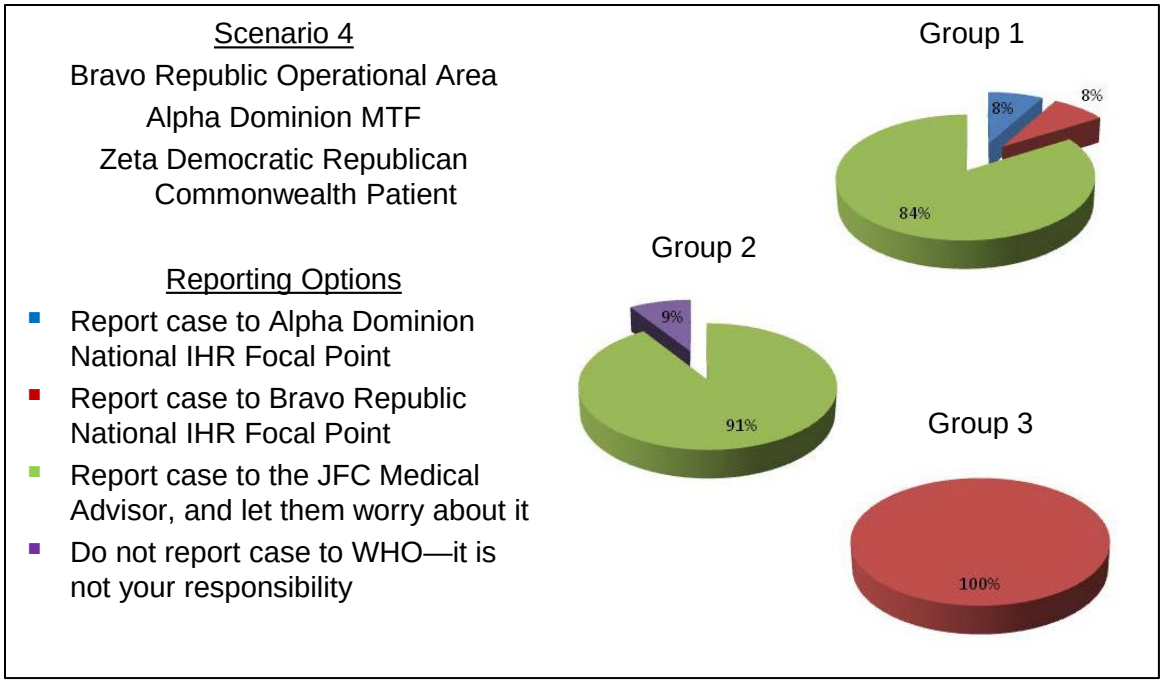


Figure 3. Small Group Scenario 3 Polling



Note: The TurningPoint software outputs for Scenario 4 showed that 9% of Group 2 chose to not report the case to WHO. Since Group 2 had 11 people, this represents a selection by a single individual. Because this result is inconsistent with prior results, we believe it to be a mistaken selection or malfunction with the system.

Figure 4. Small Group Scenario 4 Polling

The consensus selection differed among the groups and was a function of the assumptions made during their deliberations. Groups 1 and 2 followed the guidance regarding their role as MTF commander very strictly, and decided that their individual responsibility was to report up their chain to the JFC Medical Advisor, who would effectively function as NATO's designated IHR Focal Point. Group 3 took a higher level perspective and discussed the responsibilities of the JFC Medical Advisor under the terms of the IHRs. They decided that NATO's responsibility was to report the event to the IHR Focal Point within the nation where the operation was underway—in this case, Bravo Republic.

C. Second Plenary Session

After the small group sessions, we returned to a second plenary session and re-examined some of the scenarios discussed earlier to determine the source of variation in the consensus response. We then revisited the final two scenarios under a common assumption that the participant was to respond strictly from the perspective of an MTF commander. As shown in Figure 5 and Figure 6, with this assumption in place, there was again a growing consensus around a single response—report to the JFC Medical Advisor.

Scenario 3

Bravo Republic Operational Area

Alpha Dominion MTF

Delta Commonwealth Patient

Reporting Options

- Report case to Alpha Dominion National IHR Focal Point
- Report case to Bravo Republic National IHR Focal Point
- Report case to Delta Commonwealth National IHR Focal Points, who does not report it to WHO
- Report case to the JFC Medical Advisor, and let them worry about it

Plenary Group

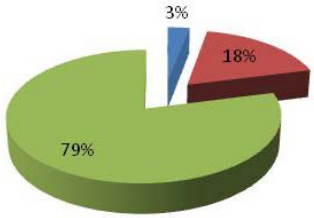


Figure 5. Second Plenary Session Round 1 Polling

Scenario 4

Bravo Republic Operational Area

Alpha Dominion MTF

Zeta Democratic Republican Commonwealth Patient

Reporting Options

- Report case to Alpha Dominion National IHR Focal Point
- Report case to Bravo Republic National IHR Focal Point
- Report case to the JFC Medical Advisor, and let them worry about it
- Do not report case to WHO—it is not your responsibility

Plenary Group

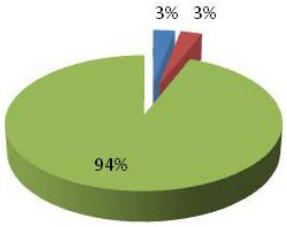


Figure 6. Second Plenary Session Round 2 Polling

4. Exercise Summary, Observations, and Recommendations

A. Summary

From the outset of the exercise, there was a strong consensus among the participants that NATO did indeed have reporting obligations under *IHR (2005)*, so to some extent the objectives of the exercise were met *a priori*: indeed, NATO should develop guidance for its Commanders and Medical Advisors regarding their obligations under *IHR (2005)*. However, as summarized in Figure 7, the participants began with some difference of opinion regarding IHR reporting responsibilities, and the discussions that led to the resolution of these differences provided valuable insights and observations for the future development of the requested guidance. This chapter presents the key points and observations made during the course of the small group and plenary discussions and the recommendations that ultimately came out of the exercise.

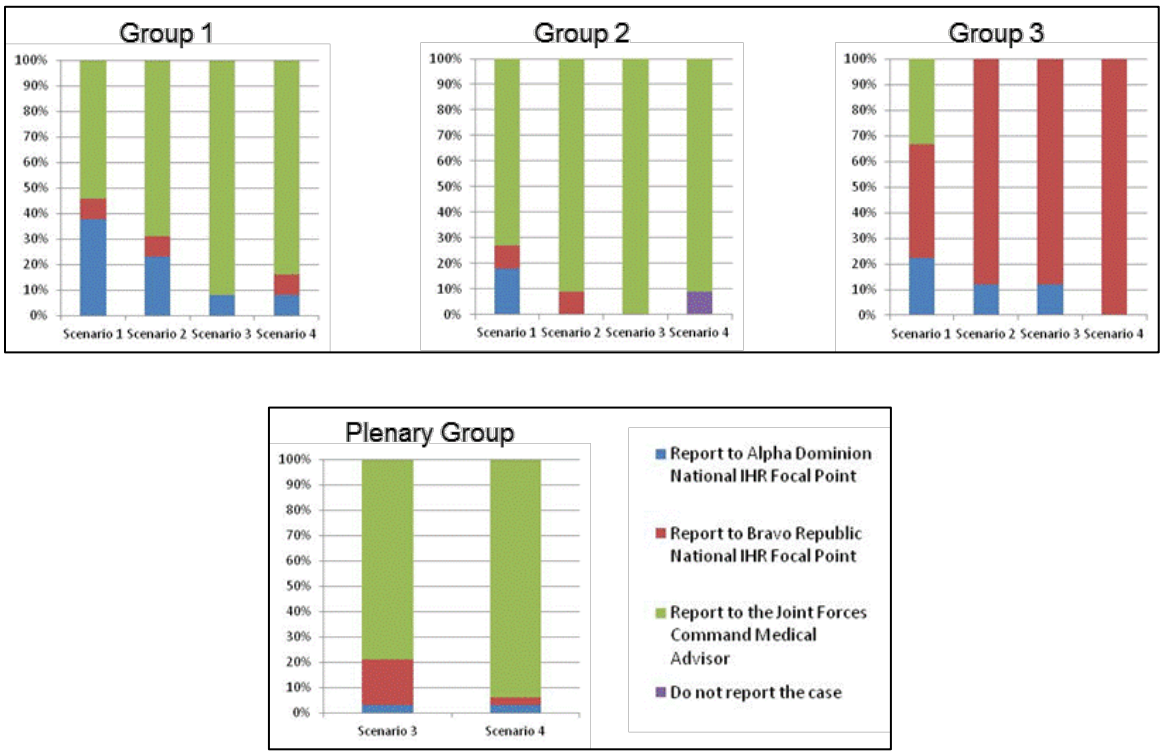


Figure 7. Small Group and Second Plenary Session Polling Summary

As it happened, the factor that varied within the different scenarios—the nationality of the patient—was of much less importance to the participants than other factors, such as their specific responsibility in the role of MTF commander. This was true even in Group 3, where discussions focused on the mechanism by which WHO should be notified; here, the primary consideration was not the patient's nationality, but whether the host nation had a functioning government capable of meeting its own obligations under *IHR (2005)*. If so, Group 3 collectively felt that the case should be reported to the host nation's IHR Focal Point.

B. Observations

The plenary and small group discussions generated several observations that should be considered when developing guidance on reporting responsibilities under *IHR (2005)*. These observations were of three types: planning considerations, utilization of specialized NATO capabilities, and general observations.

1. *IHR (2005)* and Medical Planning

NATO would be considered a relevant intergovernmental organization by WHO and, as such, is responsible for reporting events of which they are aware, even those that occur on non-NATO soil during NATO operations. These IHR reporting obligations must be considered when planning for deployment.

Preparations for deployment must include consideration of *IHR (2005)*. During the planning phase of an operation, NATO needs to identify the host nation's IHR Focal Point, if one exists, and designate responsibility for IHR reporting within the NATO command structure. Plans for implementation of IHR reporting should also be included in any Status of Forces Agreement (SOFA).

- In the planning process, medical planners should know the designated IHR Focal Points in the host nation and within the JFC.
- The medical annex (Annex Q) of the operational plan should
  - dictate the notification procedures for the MTFs;
  - require that notifiable disease cases be reported, within operational constraints;
  - require a report to the host nation and all nations involved.
- When the host nation does not or cannot designate an IHR Focal Point, the NATO Joint Forces Medical Advisor may need to assume that role. For example, this may be necessary when the host nation does not have a functioning government.

2. *IHR (2005)* and Specialized NATO Capabilities

Reporting under *IHR (2005)* can trigger a variety of WHO-directed response activities. In areas where NATO is operating, WHO could be expected to request support activities from NATO; in particular, utilization of specific, relevant capabilities such as the RDOIT. While NATO should consider all requests for support, the actual support provided would be the decision of the commander and based upon the military situation at the time of event, the types of support requested, and the type of operation. Considerations for the provision of NATO support to a WHO response to a public health emergency of international concern include

- the situation on the ground, and whether provision of that support would interfere with NATO's ongoing operations and missions;
- the type of mission and the urgency of controlling the outbreak within the operational context; and
- the capabilities of the host nation in controlling the outbreak.

The RDOIT is a particularly relevant specialized NATO capability. In some scenarios, it may be asked to serve as the primary WHO response to reported events. Reporting rules for the RDOIT should be consistent with those for other NATO medical personnel and facilities and defined in the operational plan.

NATO has recently established the Deployment Health Surveillance Capability (DHSC) in Munich, Germany for the purpose of consolidating and analyzing biosurveillance information collected from NATO forces. Discussions during the exercise speculated on the potential role of the DHSC under *IHR (2005)*. Although the ongoing coordination between the DHSC and WHO was considered an important part of the process of interaction between NATO and WHO, at the time the exercise was conducted it was regarded by participants as too slow to be responsive to meet the requirements of *IHR (2005)*. As the DHSC capability develops, it could be used more actively to support NATO's IHR reporting requirements.

3. General Observations

There was very strong consensus among the exercise participants that reporting done under the auspices of *IHR (2005)* is in addition to—and does not replace—routine and prescribed information reporting done throughout the military chain of command. This consensus was the core driver of the responses seen in the small group polling.

Further, the group agreed that the following actions should be taken in response to the scenarios provided, and in the following order:

- the host nation would make the required reports via their WHO-designated representative, and

- the nation of care (i.e., the "owner" of the MTF) would make the required reports via their WHO-designated representative.

There may be a conflict between the JFC operational security requirements and the IHR reporting needs. The discussion made it clear that the participants do not want to reveal vulnerabilities, and that the commander would dictate the level of information that would be provided. Any conflicts between operational security requirements and IHR reporting requirements should be resolved by the Joint Force Commander.

If both the host nation and the JFC have designated IHR Focal Points, there may be the potential for multiple reporting of a single incident. Requirements for patient confidentiality compound the issue. When possible, sufficient location and demographic information should be reported to allow deconfliction in the event of multiple reporting. However, in general, it would be better to have double reporting than no reporting.

At the same time, the information reported may be limited if it is determined the event/casualty was due to a hostile action. In some cases, prisoner of war rules may apply, as may Geneva Convention or Red Cross/Red Crescent requirements to notify the patient's nation.

C. Recommendations

The small group sessions and plenary voting during the exercise was useful primarily for identifying both a need for IHR reporting guidance and some of the issues that should be addressed within that guidance. Variation in scenario elements regarding the NATO nation in command of the MTF, nationality of the patient, or area of operation were less important than questions about the IHR reporting process itself. From the discussion of those issues, a number of recommendations emerged:

- First, while developing guidance or formulating an Alliance policy with respect to *IHR (2005)*, NATO needs to coordinate closely with WHO.
- Second, since NATO is essentially acting in the role of a State Party, it should designate an IHR Focal Point for the Joint Force Commander at the outset of any operation. The participants recommended that the Commander assign this role to his Medical Advisor.
- Third, NATO's reporting obligations under *IHR (2005)* do not replace or supersede normal reporting within the established chain of command. Thus, both the MTF commander and the Medical Advisor need to notify military and civil medical authorities at the appropriate level within the host nation, the casualty's nation, and other involved nations.
- Finally, with respect to the RDOIT, it is very possible that WHO would call upon that capability to support its investigations, particularly if they were

conducted within a NATO operating area. The group therefore recommended that NATO consider revising the RDOIT tactics, techniques, and procedures to add a requirement for ongoing liaison with WHO.

Appendix A
"International Health Regulations Food for Thought" Paper

As requested by the Biological Medical Advisory Council Expert Panel (BioMedAC EP), Colonel Robert von Tersch (U.S. Army) authored the paper "International Health Regulations Food for Thought," which outlines various operational scenarios in which reporting under IHR (2005) might be required and discusses issues that should be considered when NATO decides when and how to report a public health emergency of international concern to the World Health Organization (WHO). This paper was posted to the BioMedAC EP forum on the NATO Standardization Agency (NSA) website in the spring of 2012 and subsequently served as the basis for the small group scenarios and response options in the IHR Table Top Exercise (TTX).

The "Food for Thought" paper is presented in its entirety in this appendix, without modification.

"The purpose and scope of the IHRs (2005) are, "to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade."

Covering, "...illness or medical condition, irrespective of origin or source, that presents or could present significant harm to humans".

"Each State Party shall notify WHO, by the most efficient means of communication available, by way of the National IHR Focal Point, and within 24 hours of assessment of public health information, of all events which may constitute a public health emergency of international concern within its territory in accordance with the decision instrument, as well as any health measure implemented in response to those events."

Public health concerns covered by the IHRs:

Whether biological, chemical or radionuclear in origin or source,
Whether potentially transmitted by:
Persons (e.g. SARS, influenza, polio, Ebola)
Goods, food, animals (including zoonotic disease risks)
Vectors (e.g. plague, yellow fever, West Nile fever), or
Environment (e.g. radionuclear releases, chemical spills or other contamination)

NATO current engagement:

- Afghanistan
- Kosovo
- Mediterranean Sea – Straits of Gibraltar (detecting terrorist activity)
- Horn of Africa (counter-piracy)
- African Union – Somalia

Scenarios:

- A NATO donating country soldier (i.e. NATO member country) contracts an IHRs reportable disease while in theater, obtains treatment in own country's medical treatment facility.
    - Options for reporting of infection to the WHO
        - NATO donating country (soldier's home country, NATO member)
            - PROs
                - Proper channel is used to report the infection – National IHR focal point (public health point of contact (POC)) reporting to WHO thereby maintaining, if necessary, the anonymity of force location.
                - Ensures that infection is reported to proper agencies/channels and thus possibly preventing communicable disease spread.
                - Upholding the IHRs
            - Unclear
                - May or may not prevent the spread of the infectious disease. Determined by the host and donating country response. If the donating country does not inform the host country and also does not properly secure potential infectious

agents/contaminants, additional NATO personnel and the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.

- Depends on the size of the outbreak. If a large number of NATO soldiers are infected it may not only affect NATO combat power, but it may also be more important (than if a single NATO soldier is infected) to inform the host country for both preventing the spread of disease as well as quelling potential host country unrest.
- Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.

- CONs
  - Infection may be misconstrued as introduced into the country by the donating military.
  - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
  - May further fuel occupation sentiment, if this is the current country opinion.

- NATO
  - PROs
    - Ensures proper reporting of infection to relevant agencies/channels.
    - Upholding the IHRs.
    - Individual country may not be released to report NATO soldier's country of origin.
  - Unclear
    - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, additional NATO personnel, and the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host

country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
    - Depends on the size of the outbreak. If a large number of NATO soldiers are infected it may not only affect NATO combat power, but it may also be more important (than if a single NATO soldier is infected) to inform the host country for both preventing the spread of disease as well as quelling potential host country unrest.
    - Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.
  - CONs
    - Donating country, if identified, possibly looses anonymity of force location (if not already known) and is potentially subject to focused criticism.
    - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with NATO forces.
    - May lead to NATO boycott resulting from distrust and leading to unrest.
    - Infection may be misconstrued as introduced into the country by NATO forces.
- Host nation
  - PROs
    - Facilitates trust and fosters relationship with donating country and NATO forces.
    - Enables host country to practice real-time response to infectious disease occurrence/outbreak.
    - May facilitate the strengthening of the host nation's Ministry of Health capability to respond to an outbreak.
  - CONs
    - May not be properly reported due to health, economic, and/or regional instability, and therefore facilitating communicable disease spread.
    - Appropriate threat level response may not be realized and/or initiated, thus facilitating communicable disease.

- A NATO donating country soldier (i.e. NATO member country) contracts an IHRs reportable disease while in theater, obtains treatment in other NATO country's medical treatment facility.
  - Options for reporting of infection to the WHO
    - NATO donating country – soldier's home country – NATO member
      - PROs

        - Provides infectious disease awareness to NATO donating country – enables donating country to make appropriate decisions regarding continued involvement in area(s) of potential risk from infectious disease.
        - Proper channel is used to report the infection – National IHR Focal POC reporting to the WHO thereby maintaining, if necessary, the anonymity of force location.
        - Upholds the IHRs
    - Unclear
        - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
        - Depends on the size of the outbreak. If a large number of NATO soldiers are infected it may not only affect NATO combat power, but it may also be more important (than if a single NATO soldier is infected) to inform the host country for both preventing the spread of disease as well as quelling potential host country unrest.
        - Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.
    - CONs
        - Infection may be misconstrued as introduced into the country by NATO forces.
        - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
        - May further fuel occupation sentiment, if this is the current country opinion.
- NATO donating country's medical treatment facility
    - PROs
        - Ensures proper reporting of the disease to the WHO – thus upholding the IHRs

- Provides infectious disease awareness to NATO donating country – enables donating country to make appropriate medical decisions regarding continued involvement in area(s) of potential risk from infectious disease and handling of medical cases.
- Proper channel is used to report the infection – public health POC reporting to the WHO thereby maintaining, if necessary, the anonymity of force location.
- Upholds the IHRs

- Unclear
  - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
  - Depends on the size of the outbreak. If a large number of NATO soldiers are infected it may not only affect NATO combat power, but it may also be more important (than if a single NATO soldier is infected) to inform the host country for both preventing the spread of disease as well as quelling potential host country unrest.
  - Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.

- CONs
  - The country whose treatment facility was utilized for treatment may or may not own responsibility for reporting, therefore potentially permitting the spread of infectious disease.
  - Infection may be misconstrued as introduced into the country by NATO forces.
  - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
  - May further fuel occupation sentiment, if this is the current country opinion.

- Host nation
  - PROs
    - Facilitates (if shared by NATO) trust and fosters relationship with donating country and NATO forces.
    - Enables host country to practice real-time response to infectious disease occurrence/outbreak.
    - May facilitate the strengthening of the host nation's Ministry of Health capability to respond to an outbreak.
  - CONs
    - May not be properly reported due to health, economic, and/or regional instability, and therefore facilitating communicable disease spread.
    - Appropriate threat level response may not be realized and/or initiated, thus facilitating communicable disease.

- A NATO donating country's soldier deployed with another donating country's NATO troops contracts an IHR reportable disease while in theater and enters the medical treatment facility belonging to the NATO country that the soldier was deployed with OR belonging to the soldier's home NATO country OR belonging to a medical treatment facility belonging to a third NATO country.
  - NATO donating country (NATO member country supporting the medical treatment facility or donating the soldier)
    - PROs
      - Proper channel is used to report the infection – National IHR focal point (public health point of contact (POC)) reporting to WHO thereby maintaining, if necessary, the anonymity of force location.
      - Ensures that infection is reported to proper agencies/channels and thus possibly preventing communicable disease spread.
      - Upholding the IHRs
    - Unclear
      - May or may not prevent the spread of the infectious disease. Determined by the host and donating country response. If the donating country does not inform the host country and also does not properly secure potential infectious agents/contaminants, additional NATO personnel and the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
      - Depends on the size of the outbreak. If a large number of NATO soldiers are infected it may not only affect NATO combat power, but it may also be more important (than if a single NATO soldier is infected) to inform the host country for both preventing the spread of disease as well as quelling potential host country unrest.

- Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.

- CONs
  - Infection may be misconstrued as introduced into the country by the donating military.
  - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
  - May further fuel occupation sentiment, if this is the current country opinion.

- NATO
  - PROs
    - Ensures proper reporting of infection to relevant agencies/channels.
    - Upholding the IHRs.
    - Individual country may not be released to report NATO soldier's country of origin.
  - Unclear
    - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, additional NATO personnel, and the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
    - Depends on the size of the outbreak. If a large number of NATO soldiers are infected it may not only affect NATO combat power, but it may also be more important (than if a single NATO soldier is infected) to inform the host country for both preventing the spread of disease as well as quelling potential host country unrest.
    - Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties

not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.

- CONs
  - Donating country, if identified, possibly looses anonymity of force location (if not already known) and is potentially subject to focused criticism.
  - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with NATO forces.
  - May lead to NATO boycott resulting from distrust and leading to unrest.
  - Infection may be misconstrued as introduced into the country by NATO forces.

- Host nation
  - PROs
    - Facilitates trust and fosters relationship with donating country and NATO forces.
    - Enables host country to practice real-time response to infectious disease occurrence/outbreak.
    - May facilitate the strengthening of the host nation's Ministry of Health capability to respond to an outbreak.
  - CONs
    - May not be properly reported due to health, economic, and/or regional instability, and therefore facilitating communicable disease spread.
    - Appropriate threat level response may not be realized and/or initiated, thus facilitating communicable disease.

- A NATO donating country soldier contracts an IHRs reportable disease while in theater and enters a host nation medical treatment facility.
  - Options for reporting of infection to the WHO
    - NATO member country – soldier's home country
      - PROs
        - Ensures that infection is reported to proper agencies/channels and thus possibly preventing communicable disease spread.
        - Provides infectious disease awareness to NATO donating country – enables donating country to make appropriate decisions regarding continued involvement in area(s) of potential risk from infectious disease.
        - Proper channel is used to report the infection – public health POC reporting to the WHO and thereby maintaining, if necessary, the anonymity of force location.
        - Upholding the IHRs.
      - CONs

        - Infection may be misconstrued as introduced into the country by the donating military, especially if the infection is reported by NATO as opposed to the treating country/host country.
        - Host country Ministry of Health (if established and functioning) would likely prefer to be included in the reporting thereby fostering distrust with donating country and/or NATO forces.
        - May further fuel occupation sentiment, if this is the current country opinion.
    - NATO
        - PROs
            - Ensures that infection is reported to proper agencies/channels and thus possibly preventing communicable disease spread.
            - Upholding the IHRs.
        - CONs
            - Infection may be misconstrued as introduced into the country by the donating military, especially if the infection is reported by NATO as opposed to the treating country/host country.
            - Host country Ministry of Health (if established and functioning) would likely prefer to be included in the reporting thereby fostering distrust with donating country and/or NATO forces.
            - May further fuel occupation sentiment, if this is the current country opinion.
            - Donating country, if identified, looses anonymity of force location (if not already known).
    - Host nation medical treatment facility
        - PROs
            - Facilitates trust and fosters relationship with donating country and NATO forces – may be most important in this instance as it indicates that NATO trusts the host nation's health diagnosis and reporting capabilities.
            - Enables host country to practice real-time response to infectious disease occurrence/outbreak.
            - May facilitate the strengthening of the host nation's Ministry of Health capability to respond to an outbreak.
        - CONs
            - May not be properly reported due to health, economic, and/or regional instability, and therefore facilitating communicable disease spread.
            - Appropriate threat level response may not be realized and/or initiated, thus facilitating communicable disease.
- A host country soldier contracts an IHRs reportable disease while in theater and enters a NATO medical treatment facility.
    - NATO country medical treatment facility
        - PROs
            - Ensures proper reporting of the disease to the WHO – thus upholding the IHRs

        - Provides infectious disease awareness to NATO donating countries – enables donating country to make appropriate decisions regarding continued involvement in area(s) of potential risk from infectious disease
        - Upholds the IHRs
    - Unclear
        - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, the NATO personnel and host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
        - Depends on the size of the outbreak. If a large number of NATO soldiers are infected it may not only affect NATO combat power, but it may also be more important (than if a single NATO soldier is infected) to inform the host country for both preventing the spread of disease as well as quelling potential host country unrest.
        - Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.
    - CONs
        - Infection may be misconstrued as introduced into the country by NATO forces.
        - Host country Ministry of Health (if established and functioning) would likely prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
        - May further fuel occupation sentiment, if this is the current country opinion, especially if excluded from communications regarding infection/outbreak, which was potentially diagnosed and treated in the NATO hospital.
- NATO – not treating soldier
    - PROs
        - Ensures proper reporting of the disease to the WHO – thus upholding the IHRs

        - Provides infectious disease awareness to NATO donating country – enables donating country to make appropriate decisions regarding continued involvement in area(s) of potential risk from infectious disease
        - Upholds the IHRs
    - Unclear
        - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, additional NATO personnel and the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
    - CONs
        - Infection may be misconstrued as introduced into the country by NATO forces.
        - Host country Ministry of Health (if established and functioning) would likely prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
        - May further fuel occupation sentiment, if this is the current country opinion, especially if excluded from communications regarding infection/outbreak, which was potentially diagnosed and treated in a NATO hospital.
- Host nation
    - PROs
        - Enables host country to practice real-time response to infectious disease occurrence/outbreak.
        - May facilitate the strengthening of the host nation's Ministry of Health/disease tracking and reporting capabilities.
    - CONs
        - May not be properly reported due to health, economic, and/or regional instability, and therefore facilitating communicable disease spread.
        - Appropriate threat level response may not be initiated, thus facilitating communicable disease.
        - Potential conspiracy theory that NATO treatment facility infected host soldier.

- A host country civilian contracts an IHRs reportable disease while in theater and enters a NATO medical treatment facility.
    - NATO country treating the host country civilian
        - PROs

        - Ensures proper reporting of the disease to the WHO – thus upholding the IHRs
        - Provides infectious disease awareness to NATO donating country – enables donating country to make appropriate decisions regarding continued involvement in area(s) of potential risk from infectious disease
        - Upholds the IHRs
    - Unclear
        - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
        - Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.
    - CONs
        - Infection may be misconstrued as introduced into the country by NATO forces and spread to the civilian population.
        - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
        - May further fuel occupation sentiment, if this is the current country opinion, especially if excluded from communications regarding infection/outbreak.
- NATO – non-medical components
    - PROs
        - Ensures proper reporting of the disease to the WHO – thus upholding the IHRs
        - Provides infectious disease awareness to NATO donating country – enables donating country to make appropriate decisions regarding continued involvement in area(s) of potential risk from infectious disease
        - Upholds the IHRs
    - Unclear

        - May or may not prevent the spread of the infectious disease. Determined by the host and NATO country response. If the NATO country does not inform the host country and also does not properly secure potential infectious agents/contaminants, the host country populous may be at risk for infection. If the host country is informed of the infection, depending upon the ability of the host country to respond, the infection may be better contained or the host country may not be properly equipped to deal with such an outbreak and therefore may insight unrest (at a minimum) or more depending upon the host country response.
        - Depends on the virulence and transmissibility of the disease. The lower the virulence and transmissibility the less important it is to report to the host country – as this may significantly limit the number of individuals who are infected. Increased transmissibility may indicate that there are additional casualties not yet presenting with symptoms, thus potentially leading to host nation NATO boycott resulting from distrust of diagnosis. Increased virulence may heighten the threat level and thus host and donating country concern.
    - CONs
        - Infection may be misconstrued as introduced into the country by NATO forces.
        - Host country Ministry of Health (if established and functioning) may prefer to be included in the diagnosis/treatment and reporting thereby fostering distrust with donating country and/or NATO forces.
        - May further fuel occupation sentiment, if this is the current country opinion, especially if excluded from communications regarding infection/outbreak.
- Host nation
    - PROs
        - Facilitates trust and fosters relationship with donating country and NATO forces.
        - Enables host country to practice real-time response to infectious disease occurrence/outbreak.
        - May facilitate the strengthening of the host nation's Ministry of Health.
    - CONs
        - May not be properly reported due to health, economic, and/or regional instability, and therefore facilitating communicable disease spread.
        - Appropriate threat level response may not be initiated, thus facilitating communicable disease.
        - Potential conspiracy theory that NATO treatment facility infected host nation civilians.

Appendix B
Read Ahead

Prior to the conduct of the International Health Regulations (IHR) Table Top Exercise (TTX) in February 2013, IDA posted a read-ahead document to the CBRN Medical Working Group forum of the NATO Standardization Agency (NSA) web site. The purpose of this document was to familiarize Working Group delegates with the IHRs and to provide them with an overview of the planned exercise. This read-ahead document is reproduced below.

International Health Regulations
Table Top Exercise
34th Meeting of the NATO CBRN Medical Working Group

"The purpose and scope of the IHR [International Health Regulations] (2005) are "to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade." The IHR (2005) contain a range of innovations, including: (a) a scope not limited to any specific disease or manner of transmission, but covering "illness or medical condition, irrespective of origin or source, that presents or could present significant harm to humans"; (b) State Party obligations to develop certain minimum core public health capacities; (c) obligations on States Parties to notify WHO of events that may constitute a public health emergency of international concern according to defined criteria; (d) provisions authorizing WHO to take into consideration unofficial reports of public health events and to obtain verification from States Parties concerning such events; (e) procedures for the determination by the Director-General of a "public health emergency of international concern" and issuance of corresponding temporary recommendations, after taking into account the views of an Emergency Committee; (f) protection of the human rights of persons and travelers [sic]; and (g) the establishment of

National IHR Focal Points and WHO IHR Contact Points for urgent communications between States Parties and WHO." (IHR 2005)

Compliance with the IHR places unusual strains upon commanders of medical treatment facilities deployed in support of NATO missions. In particular, what is the responsibility of a medical officer from one country, operating in a second country under NATO authority, to report a case of a WHO "Notifiable" disease that occurs in a patient from yet a third country?

The TTX attempts to determine whether NATO should develop guidance for the Medical Advisor on compliance with IHR reporting requirements. If it is determined that there is wide agreement on who is responsible for reporting, and that agreement is in compliance with the IHR, then there is no requirement for further guidance. If there is not clear agreement on the proper action, or if the agreed upon action is not in compliance with the IHR, then perhaps guidance should be developed.

Reporting and response requirements are included in IHR 2005 at:

- Article 6 Notification
  - Each State Party shall assess events occurring within its territory by using the decision instrument in Annex 2. Each State Party shall notify WHO, by the most efficient means of communication available, by way of the National IHR Focal Point, and within 24 hours of assessment of public health information, of all events which may constitute a public health emergency of international concern within its territory in accordance with the decision instrument, as well as any health measure implemented in response to those events. If the notification received by WHO involves the competency of the International Atomic Energy Agency (IAEA), WHO shall immediately notify the IAEA.
  - Following a notification, a State Party shall continue to communicate to WHO timely, accurate and sufficiently detailed public health information available to it on the notified event, where possible including case definitions, laboratory results, source and type of the risk, number of cases and deaths, conditions affecting the spread of the disease and the health measures employed; and report, when necessary, the difficulties faced and support needed in responding to the potential public health emergency of international concern.
- Article 7 Information-sharing during unexpected or unusual public health events

- If a State Party has evidence of an unexpected or unusual public health event within its territory, irrespective of origin or source, which may constitute a public health emergency of international concern, it shall provide to WHO all relevant public health information. In such a case, the provisions of Article 6 shall apply in full.

- Article 9 Other reports
  - WHO may take into account reports from sources other than notifications or consultations and shall assess these reports according to established epidemiological principles and then communicate information on the event to the State Party in whose territory the event is allegedly occurring. Before taking any action based on such reports, WHO shall consult with and attempt to obtain verification from the State Party in whose territory the event is allegedly occurring in accordance with the procedure set forth in Article 10. To this end, WHO shall make the information received available to the States Parties and only where it is duly justified may WHO maintain the confidentiality of the source. This information will be used in accordance with the procedure set forth in Article 11.
- Article 10 Verification
  - WHO shall request, in accordance with Article 9, verification from a State Party of reports from sources other than notifications or consultations of events which may constitute a public health emergency of international concern allegedly occurring in the State's territory. In such cases, WHO shall inform the State Party concerned regarding the reports it is seeking to verify.
- Article 11 Provision of information by WHO
  - Subject to paragraph 2 of this Article, WHO shall send to all States Parties and, as appropriate, to relevant intergovernmental organizations, as soon as possible and by the most efficient means available, in confidence, such public health information which it has received under Articles 5 to 10 inclusive and which is necessary to enable States Parties to respond to a public health risk. WHO should communicate information to other States Parties that might help them in preventing the occurrence of similar incidents.
- Article 13 Public health response
  - At the request of a State Party, WHO shall collaborate in the response to public health risks and other events by providing technical guidance and assistance and by assessing the effectiveness of the control measures in

place, including the mobilization of international teams of experts for on-site assistance, when necessary.

  - If WHO, in consultation with the States Parties concerned as provided in Article 12, determines that a public health emergency of international concern is occurring, it may offer, in addition to the support indicated in paragraph 3 of this Article, further assistance to the State Party, including an assessment of the severity of the international risk and the adequacy of control measures. Such collaboration may include the offer to mobilize international assistance in order to support the national authorities in conducting and coordinating on-site assessments. When requested by the State Party, WHO shall provide information supporting such an offer.

- Article 14 Cooperation of WHO with intergovernmental organizations and international bodies
  - WHO shall cooperate and coordinate its activities, as appropriate, with other competent intergovernmental organizations or international bodies in the implementation of these Regulations, including through the conclusion of agreements and other similar arrangements.
  - In cases in which notification or verification of, or response to, an event is primarily within the competence of other intergovernmental organizations or international bodies, WHO shall coordinate its activities with such organizations or bodies in order to ensure the application of adequate measures for the protection of public health.
- Article 15 Temporary recommendations
  - If it has been determined in accordance with Article 12 that a public health emergency of international concern is occurring, the Director-General shall issue temporary recommendations in accordance with the procedure set out in Article 49. Such temporary recommendations may be modified or extended as appropriate, including after it has been determined that a public health emergency of international concern has ended, at which time other temporary recommendations may be issued as necessary for the purpose of preventing or promptly detecting its recurrence.
  - Temporary recommendations may include health measures to be implemented by the State Party experiencing the public health emergency of international concern, or by other States Parties, regarding persons, baggage, cargo, containers, conveyances, goods and/or postal parcels to prevent or reduce the international spread of disease and avoid unnecessary interference with international traffic.

The IHR document has a very useful decision tool, which defines a clear process on deciding [that] a disease is "reportable." This is assumed as a baseline for this TTX: A reportable disease case has been identified. The real question is "Who is responsible for reporting the disease to the WHO (or the National Focal Point)?" A related question is "Who is responsible for the follow-on actions implicit in the disease reporting?"

The structure of the TTX is very simple: Each player is defined as the Medical Advisor for a deployed NATO medical unit. Each player is requested to identify the appropriate channel to report a disease case for four different national origins:

1. Patient is a citizen of same country as the player.
2. Patient is a citizen of the host nation.
3. Patient is a citizen of a NATO country, not the same country as the player.
4. Patient is a citizen of a non-NATO country that is not the host nation.

The options for reporting are equally simple:

1. Report the case to NATO HQ?
2. Report the case to the player's National IHR Focal Point?
3. Report the case to the Host Nation's National IHR Focal Point?
4. Report the case to the patient's National IHR Focal Point?

(The fifth choice, to not report the case, is not presented as it is clearly not in compliance with the IHR.)

As an introduction to the TTX, we pose the question about how disease reporting is done in each player's nation, for patients who are citizens of that nation and for patients who are citizens of other NATO nations being treated away from home.

After the main questions have been addressed, we can expand the discussion to consider the implications of the occurrence of reportable events in each of the four cases, and what additional actions NATO might have to take.

Some of the questions to be addressed in the course of the exercise include:

- What is the actual extent and limit of NATO's responsibility for reporting events that occur in a country that is not a NATO member?
- In addition to reporting to WHO, what are the requirements for reporting to the nation within which NATO is operating?
- Does the RDOIT have separate reporting responsibilities?

From the responses to the four cases considered in rounds 1 through 4, can we develop guidance to the commanders regarding their compliance with the IHRs (where guidance is defined as what they have to do to be in compliance)?

- If so, what is that guidance?
- If not, what issues need to be addressed before guidance can be generated, and what program of work is needed to support their resolution?

Appendix C
IHR Table Top Exercise (TTX) Participants

CBRN Medical Working Group	
Chairman	Colonel Frederic Dorandeu (FR)
Secretary	Commander (N) Denis Roquelet (FR)

North Atlantic Treaty Organization Nations	
Belgium	Aide de Camp Dirk Pauwels
Canada	Commander Rod Brittain
Czech Republic	Mr. Jiri Kassa Major Jaroslav Pejchal Major Radek Krupka
Denmark	Major Anders Toelboell
France	Colonel Francois Thibault Mr. Francis Herodin Lieutenant Colonel Jean Ulrich Mullot
Germany	Colonel Dirk Densow
Italy	Colonel Vincenzo La Gioia
Netherlands	Commander Jacob Boreel Mrs. Marijke Valstar Lieutenant Colonel Angela Hume
Norway	Mr. Olaf Scheel Mr. Per Ballangrud
Poland	Colonel Oktawiusz Antkowiak
Turkey	Major Zeki Ilker Kunak
United Kingdom	Group Captain Andy Green Wing Commander Mark Dray Surgeon Commander Steve Bland Major Gareth Hattersley

(list continued on next page)

North Atlantic Treaty Organization Nations (cont'd)	
United States	Lieutenant Colonel Ricardo Reyes
	Ms. Julia Burr
	Major Sean Chickery
	Dr. Carl Curling
	Dr. Dennis Faix
	Dr. Audrey Kelley
	Mr. Richard Prouty
	Lieutenant Commander Thad Sharp
	Mr. James Smith
	Dr. Herbert Wolfe
	Colonel Timothy Woodruff

Commands	
Allied Command Operations (ACO)	Lieutenant Colonel Ladislav Slechta
	Lieutenant Colonel Michael Rogney
Allied Command Transformation (ACT)	Major Norbert Holysz

Non-NATO Nations	
Austria	Colonel Alois Benc
Serbia	Colonel Srdjan Lazic
	Prof. Branka Djurovic
Switzerland	Colonel Sergei Bankoul

Appendix D
Illustrations

Figures

Appendix E
References

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Appendix F
Abbreviations

BioMedAC EP	Biological Medical Advisory Council Expert Panel
CBRN	Chemical, Biological, Radiological and Nuclear
CBRNMedWG	Chemical, Biological, Radiological and Nuclear Medical Working Group
DEU	Germany (ISO 3166-1 alpha-3 code)
DHSC	Deployment Health Surveillance Capability
IAEA	International Atomic Energy Agency
IDA	Institute for Defense Analyses
IHR	International Health Regulations
JFC	Joint Forces Command
JRO	Joint Requirements Office
MTF	Medical Treatment Facility
NATO	North Atlantic Treaty Organization
NSA	NATO Standardization Agency
OTSG	U.S. Army Office of the Surgeon General
POC	Point of Contact
RDOIT	Rapidly Deployable Outbreak Investigation Team
SOFA	Status of Forces Agreement
STANAG	Standardization Agreement
TTX	Table Top Exercise
U.S.	United States
USA	United States Army
WHO	World Health Organization

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Carl A. Curling, Julia K. Burr, Audrey C. Kelley

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14. ABSTRACT

At the annual meeting of the NATO Chemical, Biological, Radiological and Nuclear Medical Working Group (CBRNMedWG) in February 2013, IDA conducted a table top exercise to provide national representatives with a mechanism for understanding new international disease reporting requirements contained in the World Health Organization's (WHO) International Health Regulations of 2005 (IHR (2005)). The objectives were (1) to assess the need for NATO to develop guidance for its Joint Force Commanders on their responsibilities to report public health events of international concern; and (2) if such a need was determined, to provide the broad tenets of that guidance. A number of recommendations emerged from the exercise: (1) NATO should work with WHO to coordinate the development of guidance; (2) NATO should designate an IHR national focal point to serve as a conduit for reporting; (3) reporting within the normal chain of command must continue, to include notification of all nations involved; (4) NATO has specialized capabilities that may be called upon to assist WHO in its response to public health events, and NATO should consider revising the tactics, techniques, and procedures associated with these capabilities to provide for ongoing coordination with WHO.

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