



## Guide to the Study of Intelligence

### Medical Intelligence

by Jonathan D. Clemente, MD

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#### THE BEGINNINGS

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The intersection of medicine, intelligence, and national security dates from the early days of World War II. Alarmed by the rise of totalitarianism in Europe and Japan in the late 1930s, the intelligence elements in the FBI and the Departments of State, War, and Navy stepped up collection of information on foreign military and political developments. In September 1940, the War Department, desiring a comprehensive military intelligence program, directed the chiefs of each of the Army technical services to establish their own intelligence section.<sup>1</sup> These “technical intelligence” sections served as a clearinghouse for foreign technical information between their branch and War Department’s Military Intelligence Division.<sup>2</sup>

With the threat of war, medical officers in the Army Surgeon General’s Preventive Medicine Subdivision were tasked to write about public health in occupied territories for inclusion in an Army field manual on military government. These officers also conducted sanitary surveys of proposed military bases in Newfoundland, Central and South America, and the West Indies deemed essential for Western Hemisphere

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1. By 1940, the traditional Army technical services, in order of seniority, were the Quartermaster Corps, the Corps of Engineers, the Medical Department, the Ordnance Department, the Signal Corps, and the Chemical Warfare Service. These bureaus were responsible for providing supplies, equipment, training, and service in their particular area of expertise. Bidwell, Bruce W. 1986. *History of the Military Intelligence Division, Department of the Army General Staff, 1775-1941*. Frederick, Maryland: University Publications of America, pg. 305.

2. At the start of World War II, the Military Intelligence Division (MID) was part of the War Department, General Staff division broadly responsible for formulating policy and plans related to Army intelligence activities and coordinating with Naval and Army Air Corps Intelligence and the FBI.

defense.<sup>3</sup> In June 1941, the United States Army Surgeon General established a separate “Medical Intelligence Subdivision.”

Like most of the military, the Medical Intelligence Subdivision was unprepared for war in December 1941. But over the next three years, the small staff of medical intelligence physician-analysts contributed the “health and sanitation” chapter for more than 120 Joint Army – Navy Intelligence Studies (JANIS) used for planning Allied military operations.

Initially “medical intelligence” was disseminated to field commanders and military surgeons through a series of Technical Bulletins called “TB-MEDs.” The typical TB-MED detailed public health and sanitation in a particular country, local medical facilities, medical practitioners, and social services. Each TB-MED included an extensive list of diseases of military significance, other serious diseases likely to affect smaller numbers of troops, and diseases causing high morbidity and mortality among the native population. It concluded with recommendations for public health measures designed to mitigate the impact of disease on military operations. World War II was the first war in American history where the number of combat casualties exceeded those from disease and non-battle injuries.

As the war progressed, the scope of medical intelligence activities expanded. Captured enemy medical equipment and drugs were examined in order to improve Allied medical care. Enemy medical personnel were interrogated on medical problems within their ranks. Specially briefed medical officers assigned to the Office of Strategic Services (OSS) were tasked with collecting intelligence on German biological warfare plans and capabilities and on medical conditions inside occupied territory. While lines drawn on military maps might have separated the combatants, nothing prevented the spread of deadly wartime diseases, like epidemic louse-borne typhus, across frontlines.

The medical intelligence program rapidly dissipated at the end of the war as part of demobilization, but remained a function of the Army Surgeon General. In 1947, the nascent CIA began producing medical intelligence reports focused on Communist Bloc medical capabilities and research trends. During the Korean War, the US intelligence community reorganized scientific and technical intelligence activities to clarify lines of responsibility and avoid unneces-

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3. The United States secured the rights to these areas from Britain on September 2, 1940, in exchange for fifty mothballed American destroyers.

sary duplication. On August 14, 1952, Director of Central Intelligence Directive DCID-3/4 codified dividing the scientific and medical intelligence programs into military and civilian spheres.<sup>4</sup>

The U.S. Army Medical Intelligence and Information Agency (USAMIIA) carried the weight of the military medical intelligence program. In 1963, DoD intelligence functions, including medical intelligence, were consolidated under the Defense Intelligence Agency (DIA). However, DIA disbanded its Medical Intelligence Division in 1972 as part of the post-Vietnam War reduction in force. The Army Surgeon General resumed primary responsibility for military medical intelligence.<sup>5</sup>

Responding to criticism that USAMIIA focused more on “information collection” than “intelligence analysis,” Congress briefly eliminated all funding for the agency in 1981. DIA managers appealed to Congress and reached a compromise to re-establish the medical intelligence unit as a tri-service (Army-Navy-Air Force) intelligence activity. In 1982, USAMIIA was renamed the “Armed Forces Medical Intelligence Center” (AFMIC) under executive direction of the Army Surgeon General and Deputy Chief of Staff for Intelligence. In January 1992, Congress authorized the permanent trans-



fer of AFMIC to DIA.<sup>6</sup> AFMIC prepared intelligence assessments and forecasts on foreign military and civilian medical systems, infectious disease and environmental health risks, and biomedical research. These informed military planners and national security policymakers of health risks and foreign health-care capabilities before deploying U.S. forces overseas.<sup>7</sup>

Throughout the 1990s, there was growing concern among senior U.S. leaders over global infectious diseases. The spread of infectious disease was facilitated by a dramatic rise in drug-resistant organisms, a lag in development of antibiotics, environmental degradation, insufficient healthcare infrastructure in developing areas, and the ease of international travel.

The attacks of September 11, 2001, and anthrax attacks a month later, heightened fears that infectious diseases could be weaponized. These events reaffirmed the role that medical intelligence could play in safeguarding the nation’s health by identifying potential man-made biological threats, but also by providing early warning of naturally-occurring foreign diseases from imported food, livestock, immigrants, and returning U.S. troops.

September 11th led to sweeping changes in the US Intelligence Community including the creation of a Director of National Intelligence. Within days of the attack, the Department of Homeland Security was established to coordinate a comprehensive strategy to protect the country from a variety of threats and develop an effective response to attacks and natural disasters. In 2006, AFMIC expanded its support to homeland security by providing intelligence assessments in areas of biological terrorism, biological

4. The Armed Services were assigned responsibility for intelligence production on foreign weapon systems and equipment, military medicine and biological warfare defense. The CIA was given primary responsibility for intelligence production on foreign basic science research, applied research and development, and civilian medicine and public health. Montague, Ludwell Lee. 1992. *General Walter Bedell Smith as Director of Central Intelligence, October 1950-February 1953*. University Park, Pa: Pennsylvania State University Press, pg. 179.

5. Schumeyer, Gerard [COL/USA]. 1996. “Medical Intelligence ... Making a Difference.” *American Intelligence Journal*, Volume 17, no. 1&2, pp. 11-15. In 1979, USAMIIA was relocated from the Forrestal Building in Washington, D.C. to Fort Detrick, Maryland. Fort Detrick has deep ties to the military medicine community. From 1943 until 1969, Fort Detrick was the center for U.S. biological warfare research. Historical tenant’s organizations include the U.S. Army Medical Materiel Agency and the U.S. Army Medical Research Institute of Infectious Diseases. Today it hosts the National Center for Medical Intelligence.

6. *Ibid*, Schumeyer.

7. Colonel Anthony M. Rizzo, Director, National Center for Medical Intelligence: “Meeting Emerging and Constantly Changing Health Threats with a Central Point of Information and Intelligence,” *Military Medical/CBRN Technology*, 2008 Volume: 12 Issue: 5 (August), <http://www.military-medical-technology.com/mmt-archives/24-mmt-2008-volume-12-issue-5/146-national-center-for-medical-intelligence.html>, accessed 4 August 2013.

warfare, counterterrorism, and counterproliferation.<sup>8</sup>

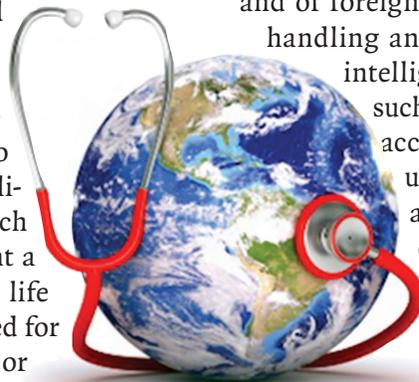
On July 2, 2008, the Armed Forces Medical Intelligence Center was designated the “National Center for Medical Intelligence” (NCMI) to reflect the organization’s wider audience to include those in the White House, Department of State, Homeland Security, and other domestic customers, and foreign partners.<sup>9</sup> Presently, the NCMI serves as the lead DoD activity for the production of medical intelligence responsible for coordinating and preparing “integrated, all-source intelligence for the Department of Defense and other government and international organizations on foreign health threats and other medical issues to protect U.S. interests worldwide.”<sup>10</sup>

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### TEACHING ABOUT THE ROLE OF MEDICAL INTELLIGENCE

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Historically, warfighters and national security policymakers have used finished medical intelligence at the strategic, operational, and tactical level of war. At the strategic level, the objective of medical intelligence is to identify broad trends in foreign military and civilian biomedical research and development that could present a threat to national security, such as life science technologies that can be used for either legitimate medical purposes or bioterrorism. While medical intelligence analysis has focused on traditional nation-state adversaries such as China, North Korea, Russia, and Iran, highly capable non-state and sub-state actors, such as Hezbollah, play a key role in public health in developing areas. Transnational terrorism poses a persistent threat to American national security. In particular, the medical threat from terrorists’ use of low-tech weaponry such as so-called radiological “dirty bombs” must be properly understood.



At the operational and tactical level, the objective of medical intelligence is to detect threats to deployed personnel from infectious diseases, environmental hazards, biowarfare agents, and food and animal borne diseases. Military personnel and aid workers serve overseas in areas where often they have little, if any, natural immunity to endemic diseases like malaria or dengue fever. Stability operations require a high degree of cultural and social interaction, such as sharing of food, lodging, and recreational facilities for extended periods of time, and this increases the exposure to diseases. Such operations frequently occur in areas with significantly degraded public health infrastructure, poor sanitation, and general civil unrest; factors which increase the likelihood of the outbreak of communicable disease. Medical countermeasures can be taken at an early stage to conserve the health of friendly forces and non-combatants.

Through identification and characterization of select highly virulent biological agents and toxins, and of foreign facilities and personnel capable of handling and modifying those agents, medical intelligence analysis can help assure that such potential biowarfare agents are not accidentally released or transferred to unlicensed facilities or hostile non-state actors. Analysis of foreign medical capabilities informs military planners of the levels of host nation support, and optimal locations to construct medical facilities. Careful analysis can identify critical vulnerabilities in an adversary’s medical supply chain, important medical causes of combat ineffectiveness among enemy troops, and diminished operational readiness.

One approach to studying medical intelligence is to examine the role of each of the current major organizational divisions of the National Center for Medical Intelligence.

The NCMI has four major divisions: Infectious Disease, Environmental Health, Global Health Systems, and Medical Science and Technology. Its staff of approximately 150 personnel (including analysts on-site from other federal agencies such as the National Security Agency and National Geospatial-Intelligence Agency) has substantial expertise in a wide range of biomedical, public health, and engineering related fields.

NCMI’s “Infectious Disease Division” forecasts, tracks, and analyzes the occurrence of infectious diseases with high pandemic potential, such as the

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8. *Ibid*, Rizzo.

9. “AFMIC Expands Mission,” *DIAA Log*, November 2008, pg. 6, Defense Intelligence Alumni Association, Hamilton, Virginia, [http://www.diaalumni.org/images/DIAA\\_Nov08\\_Log2.pdf](http://www.diaalumni.org/images/DIAA_Nov08_Log2.pdf), accessed 4 August 2013. Foreign partners include NATO, UK, Canada, and Australia.

10. DoD Instruction 6420.01, March 20, 2009, National Center for Medical Intelligence (NCMI), <http://www.dtic.mil/whs/directives/corres/pdf/642001p.pdf>, accessed 4 August 2004. Joshua Michaud, “National Center for Medical Intelligence,” in Katz, Rebecca, and Raymond A. Zilinskas. 2011. *Encyclopedia of Bioterrorism Defense*. Oxford: Wiley-Blackwell.

2009 H1N1 Influenza Pandemic, highly pathogenic H5N1 avian influenza, and the endemic infectious diseases of every country in the world. Baseline data on endemic diseases helps identify the emergence of naturally occurring pathogens and to distinguish them from biological terrorism. Infectious Disease Risk Assessments utilize “a unique methodology that estimates disease risk in terms of its operational impact, including realistic projections of potential days lost on deployments in the absence of appropriate countermeasures.”<sup>11</sup>

NCMI collaborates on strategic bio-surveillance with the Centers for Disease Control and Prevention (CDC), Homeland Security and other federal agencies to share data and analyses regarding possible biological events that could threaten national security. NCMI’s access to multiple sources of classified intelligence is significant since some foreign governments do not report accurate public health data to the press or international health organizations. An April 2009 NCMI intelligence assessment predicted the pandemic potential of H1N1 two months prior to the official declaration by the World Health Organization (WHO) and the CDC.<sup>12</sup> According to one analyst, this assessment “brought valuable planning time and ‘thinking space’ to the U.S. authorities well before the WHO announced its pandemic ratings.”<sup>13</sup> National security policymakers are concerned over the impact of climate change on worldwide infectious disease rates in the developing world. Warmer temperatures can lead to the spread of insect-borne infectious diseases in susceptible populations. The public health infrastructure in impoverished areas is often inadequate to detect disease outbreaks early. A serious outbreak of disease in such an area could quickly overwhelm the local government and result in destabilizing mass



11. *Ibid*, Michaud.

12. Cheryl Pellerin, “Medical Intelligence Center Monitors Health Threats,” *Armed Forces Press Service*, 10 October 2012, <http://www.defense.gov/news/newsarticle.aspx?id=118163>, accessed 4 August 2013.

13. Miller D. 2009. “The US Defense Intelligence Agency’s National Center for Medical Intelligence,” *Journal of the Royal Naval Medical Service*. 95 (2): 89-91.

migrations across international borders.<sup>14</sup>

NCMI’s “Environmental Health Division” assesses environmental risks to military health readiness from air, water, soil, and food contamination in an area of operation. The division analyzes industrial chemical facility hazards, long-term forecasts on trends in foreign environmental health, and prepares “predictive hazard area models” detailing the possible effects of a large-scale release of toxic chemicals or radioactive material.<sup>15</sup> During disaster relief

operations, the division has prepared spot assessments of emerging environmental threats to aid workers such as from particulate matter, asbestos, or volcanic ash. NCMI has studied the threat of chlorine gas in improvised explosive devices in Iraq and potential radiation exposure hazards to military personnel from North Korea’s nuclear testing.<sup>16</sup>

NCMI’s “Global Health Systems Division” evaluates the medical capabilities of countries around the world. It maintains the DoD database on foreign military and civilian medical infrastructures including all medical facilities, laboratories, blood

banks, and pharmaceutical plants.<sup>17</sup> Such information is used to recommend suitable medical facilities to treat U.S. personnel deployed overseas in emergency situations or to assist military planners in avoiding collateral damage to medical sites. “Medical Capabilities Assessments” help determine the combat readiness of foreign armies, the ability of host nations to support deployed U.S. troops, and existing medical infrastructure that might be used in disaster or humanitarian relief operations.<sup>18</sup> This type of medical

14. Jessica Q. Chen, “Climate change reveals disease as a national security threat,” *The Washington Post*, January 30, 2011 Sunday, A-SECTION; Pg. A03, 1407 words, Jessica Q. Chen, [www.washingtonpost.com](http://www.washingtonpost.com), accessed 4 August 2013

15. *Op Cit.*, Michaud; *Op. Cit.*, Damien K.

16. Peter Buxbaum, “Military medical intelligence center gets a new name,” *Government Health/IT News*, 7 July 2008, <http://www.govhealthit.com/news/military-medical-intelligence-center-gets-new-name>, accessed 5 August 2013.

17. *Op. Cit.*, Pellerin.

18. *Op. Cit.*, Michaud. The Medical Capabilities Assessments are

intelligence has implications for ‘strategic warning’ because it considers key logistical preparations for combat operations. Foreign armies preparing for war need to mobilize their medical support system and this may provide a specific warning of impending offensive operations.

NCMI’s “Medical Science and Technology Division” examines foreign civilian and military biomedical research and development, including human performance modification, vaccinations, drugs, and emerging threats from bioengineered disease-causing microbes, naturally occurring emerging infectious diseases, and drug-resistant pathogens. Identifying the medical threat posed by foreign weapons systems facilitates the development of suitable countermeasures. The study of foreign medical countermeasures against nuclear, chemical, and biological agents may provide information on adversary intentions.<sup>19</sup> If a foreign military begins inoculating its soldiers against a specific infectious agent, it could indicate that they are developing a biological warfare capability, planning an attack against a country that already possesses that capability, or merely addressing a legitimate public health concern. Assessments of baseline capabilities and biomedical R&D trends may help discern between these alternatives.

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## CONCLUSIONS

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The National Center for Medical Intelligence “provides timely warning and projection of significant infectious disease and environmental health risks to U.S. personnel abroad and within the United States; analysis of foreign developments in life science technology and countermeasure development; and analysis on health trends, foreign health diplomacy, military and civilian health system capabilities, and biosafety and biosecurity policies.”<sup>20</sup> As demonstrated by the 2003 SARS outbreak, the 2009 influenza pandemic, and the spread of multi-drug resistant tuberculosis, infectious diseases are not constrained by international borders. Left unchecked, such outbreaks can spread rapidly across the globe with significant adverse impact on economic and social stability. With its unique mission, NCMI produces biomedical and

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the descendants of the World War II Technical Bulletin-Medical series.

19. Op. Cit., Michaud.

20. DoD Directive 6490.02E, Comprehensive Health Surveillance, 8 February 2012, <http://www.dtic.mil/whs/directives/corres/pdf/649002e.pdf>, accessed 4 August 2013

environmental related assessments that are critical to military force and homeland health protection.

Instructors teaching about medical intelligence may ask their students to consider how various public health, environmental, and social factors might impact military operations, disaster relief, or broader national security interests.

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## READINGS FOR INSTRUCTORS

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The literature on the role and mission of medical intelligence is unfortunately scant. Study of the subject should begin with the U.S. Army Medical Department’s official history of medical intelligence during World War II written by the Division’s wartime chief, Dr. Gaylord Anderson. (Gaylord Anderson, “Medical Intelligence,” Chapter V in Medical Department, United States Army, *Preventive Medicine in World War II*, Volume IX, Special Fields, Office of the Surgeon General, Department of the Army, Washington, D.C., 1969.) Although dense, the chapter provides an exceptional overview of the conceptual origins and early development of the U.S. medical intelligence program in response to the wartime demands of the first truly global conflict. For a ground level view of medical intelligence activities during World War II see Henze, Carlo. “Recollections of a Medical Intelligence Officer in World War II.” *Bulletin of the New York Academy of Medicine* 49, no. 11 (Nov. 1973): 960-973, or Jarcho, Saul. “Historical Perspectives of Medical Intelligence” *Bulletin of the New York Academy of Medicine* 67, no. 5 (Sep.-Oct. 1991): 501-506.

For a discussion of the post-war organization of U.S. medical intelligence and an historical overview of the role of medical intelligence at the strategic, operational, and tactical level during the Cold War, the reader is referred to my own article: Clemente, Jonathan D. “The Fate of an Orphan: The Hawley Board and the Debates over the Postwar Organization of Medical Intelligence.” *Intelligence and National Security* 20, no. 2 (Jun. 2005): 264-287.

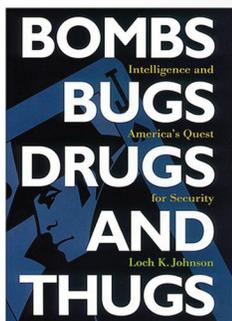
Several declassified articles from the CIA’s in-house journal *Studies in Intelligence* discuss aspects of medical and life science support to the Intelligence Community. These are available on the CIA website at <https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi>.

Warren F. Carey and Myles Maxfield, “Intelligence Implications of Disease,” (*Studies in Intelligence*, Volume 16, No. 2, Spring 1972, pp. 71-78) illustrates the problems

of monitoring the public health situation in denied areas.

James B. Petro, "Intelligence Support to the Life Science Community: Mitigating Threats from Bioterrorism," (*Studies in Intelligence*, Volume 48, No. 3, 2004, pp. 57-68).

Former AFMIC health analyst Denis Kaufman has written an insightful analysis of the role and mission of medical intelligence from the perspective of the late 1990s: Kaufman, Denis C. 2001. *Medical Intelligence: A Theater Engagement Tool*. Report no. A360983. Carlisle Barracks, PA: U.S. Army War College. 21 Feb. 2001, <http://www.dtic.mil/dtic/tr/fulltext/u2/a389063.pdf>, accessed 6 August 2013.



For a broad view of the national security implications of global disease see: Johnson, Loch K. 2002. *Bombs, Bugs, Drugs, and Thugs: Intelligence and America's Quest for Security*.

New York, London: New York University Press.

For a discussion of the role of medical intelligence in the 1982 "Yellow Rain" controversy – the allegations that the former Soviet Union used tricothecene mycotoxins as a biological weapon in Laos and Afghanistan see:

Barton, Rod. 2006. *The Weapons Detective: The Inside Story of Australia's Top Weapons Inspector*. Melbourne: Black Inc. Agenda.

Pribbenow, Merle L. 2006. "Yellow Rain: Lessons from an Earlier WMD Controversy" *International Journal of Intelligence and CounterIntelligence*. 19 (4): 737-745.

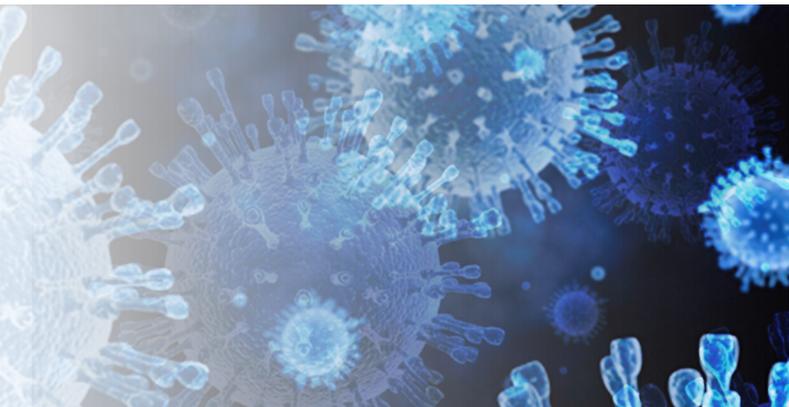
A number of National Intelligence Council assessments dealing with global health issues can be found on The Office of the Director of National Intelligence (ODNI) website <http://www.dni.gov/index.php/about/organization/national-intelligence-council-nic-publications>, including:

- Global Trends 2030: Alternative Worlds
- 2008: Strategic Implications of Global Health
- 2003: SARS: Down But Still a Threat
- 2002: The Next Wave of HIV/AIDS: Nigeria, Ethiopia, Russia, India, and China

- 2000: The Global Infectious Disease Threat and Its Implications for the United States  
Examples of declassified AFMIC medical intelligence assessments, such as "Health Services Assessment: Iraq, March 2002," can be found on DIA's FOIA Electronic Reading Room, <http://www.dia.mil/public-affairs/foia/reading-room/>.

Examples of more recent unclassified NCMI assessments such as "Worldwide: New 2009-H1N1 Influenza Virus Poses Potential Threat to U.S. Forces," 1 May 2009, can be found posted on [www.globalsecurity.org](http://www.globalsecurity.org).

An example of an unclassified NCMI Environ-



mental Health Risk Assessment "Haiti: Environmental Health Risk," 14 January 2010, can be found at [http://www.med.navy.mil/sites/nmcp/Clinics/nepmu2/Documents/DIA%20Haiti\\_Environmental%20Health%20Risk.pdf](http://www.med.navy.mil/sites/nmcp/Clinics/nepmu2/Documents/DIA%20Haiti_Environmental%20Health%20Risk.pdf).

Examples of AFMIC-era Medical Capabilities Studies for Iran and the former Soviet Union can be found on the Digital National Security Archive Collection, The U.S. intelligence community organization, operations and management, 1947-1989. <http://nsarchive.chadwyck.com>. The DNSA is a paid electronic database available through many academic libraries.



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mental Health Risk Assessment "Haiti: Environmental Health Risk," 14 January 2010, can be found at [http://www.med.navy.mil/sites/nmcp/Clinics/nepmu2/Documents/DIA%20Haiti\\_Environmental%20Health%20Risk.pdf](http://www.med.navy.mil/sites/nmcp/Clinics/nepmu2/Documents/DIA%20Haiti_Environmental%20Health%20Risk.pdf).