



Chemical/Biological Terrorism May 2004

1: Acad Med. 2004 Apr;79(4):366-75.

Guidelines for preclerkship bioterrorism curricula.

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PURPOSE: To develop medical school curriculum guidelines related to bioterrorism to ensure that future medical graduates are armed with the critical knowledge, skills, and attitudes to face this emerging threat. **METHOD:** An Internet-based Delphi survey was performed in 2002 under the auspices of the Association of Medical School Microbiology and Immunology Chairs involving 64 medical educators in microbiology, immunology, and infectious diseases representing 54 U.S. medical schools. A 12-member bioterrorism expert reference panel participated in the final phase of the survey. **RESULTS:** Study participants identified the top educational objectives for the following bioterrorism-related curriculum categories: general issues, biodefense, public health, infection control, infectious diseases, and toxins.

CONCLUSION: The study focused on preparedness training through the development of curricular guidelines in predominantly preclerkship medical education by identifying basic science and clinical laboratory aspects of putative biologic weapons organisms and toxins, clinical manifestations of bioterrorist attacks, treatment strategies, epidemiology, and prophylaxis.

Publication Types: Guideline

PMID: 15044173 [PubMed]

2: Am Fam Physician. 2004 Apr 15;69(8):1860; author reply 1860.

Treatments for patients exposed to bioterrorism agents.

Campos-Outcalt D.

Publication Types: Comment Letter

PMID: 15117009 [PubMed]

3: Am J Epidemiol. 2004 Apr 1;159(7):623-33.

Containing pandemic influenza with antiviral agents.

Longini IM Jr, Halloran ME, Nizam A, Yang Y.

Department of Biostatistics, The Rollins School of Public Health, Emory University, Atlanta, GA, USA. longini@sph.emory.edu

For the first wave of pandemic influenza or a bioterrorist influenza attack, antiviral agents would be one of the few options to contain the epidemic in the United States until adequate supplies of vaccine were available. The authors use stochastic epidemic simulations to investigate the effectiveness of targeted antiviral prophylaxis to contain influenza. In this strategy, close contacts of suspected index influenza cases take antiviral agents prophylactically. The authors compare targeted antiviral prophylaxis with vaccination strategies. They model an influenza pandemic or bioterrorist attack for an agent similar to influenza A virus (H2N2) that caused the Asian influenza pandemic of 1957-1958. In the absence of intervention, the model predicts an influenza illness attack

rate of 33% of the population (95% confidence interval (CI): 30, 37) and an influenza death rate of 0.58 deaths/1,000 persons (95% CI: 0.4, 0.8). With the use of targeted antiviral prophylaxis, if 80% of the exposed persons maintained prophylaxis for up to 8 weeks, the epidemic would be contained, and the model predicts a reduction to an illness attack rate of 2% (95% CI: 0.2, 16) and a death rate of 0.04 deaths/1,000 persons (95% CI: 0.0003, 0.25). Such antiviral prophylaxis is nearly as effective as vaccinating 80% of the population. Vaccinating 80% of the children aged less than 19 years is almost as effective as vaccinating 80% of the population. Targeted antiviral prophylaxis has potential as an effective measure for containing influenza until adequate quantities of vaccine are available.
PMID: 15033640 [PubMed]

4: Am J Transplant. 2003 Aug;3(8):909-12.
SARS, xenotransplantation and bioterrorism: preventing the next epidemic.
Fishman JA.
Publication Types: Editorial
PMID: 12859521 [PubMed]

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The challenge of hospital infection control during a response to bioterrorist attacks.
Grow RW, Rubinson L.
Johns Hopkins Center for Civilian Biodefense Strategies, Johns Hopkins University, Baltimore, Maryland, USA.
PMID: 15040199 [PubMed]

6: Biosecur Bioterror. 2003;1(3):193-202.
Biodefense R&D: anticipating future threats, establishing a strategic environment.
Smith BT, Inglesby TV, O'Toole T.
Johns Hopkins Center for Civilian Biodefense Strategies, Baltimore, Maryland, USA.
bsmith@jhsp.edu
PMID: 15040197 [PubMed]

7: Biosecur Bioterror. 2003;1(3):169-84.
Vaccine liability in the era of bioterrorism.
Mair JS, Mair M.
Center for Law and the Public's Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA. jmair@jhsp.edu
PMID: 15040195 [PubMed]

8: Biosecur Bioterror. 2003;1(2):139-44.
The psychological impacts of bioterrorism.
Hall MJ, Norwood AE, Ursano RJ, Fullerton CS.
Department of Psychiatry, Uniformed Services University, Bethesda, Maryland, USA.
mhall@usuhs.mil
PMID: 15040192 [PubMed]

9: Biosecur Bioterror. 2003;1(4):247-53.
Syndromic surveillance: the case for skillful investment.
Sosin DM.
Division of Public Health Surveillance and Informatics, Epidemiology Program Office, Centers for Disease Control and Prevention, Atlanta, Georgia, USA.
dms8@cdc.gov
PMID: 15040204 [PubMed]

10: Biosecur Bioterror. 2003;1(4):255-8.
Evaluating the success of terror risk communications.
Fischhoff B, Gonzalez RM, Small DA, Lerner JS.
Department of Social and Decision Sciences, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA. baruch@andrew.cmu.edu

PMID: 15040205 [PubMed]

11: Biosecur Bioterror. 2003;1(4):259-65.

Sources of bioterrorism information among emergency physicians during the 2001 anthrax outbreak.

M'ikanatha NM, Lautenbach E, Kunselman AR, Julian KG, Southwell BG, Allswede M, Rankin JT, Aber RC.

Pennsylvania Department of Health, Harrisburg, Pennsylvania, USA.

nmikanatha@state.pa.us

PMID: 15040206 [PubMed]

12: Biosecur Bioterror. 2003;1(4):273-81.

The role of schools in meeting community needs during bioterrorism.

Stein BD, Tanielian TL, Vaiana ME, Rhodes HJ, Burnam MA.

RAND, Santa Monica, California. stein@rand.org

PMID: 15040208 [PubMed]

13: Biosecur Bioterror. 2003;1(1):1-3.

Toward biosecurity.

O'Toole T, Inglesby TV.

Publication Types: Editorial

PMID: 15040209 [PubMed]

14: Biosecur Bioterror. 2003;1(1):19-26.

Iraq's bio-warfare option: last resort, preemption, or a blackmail weapon?

Haselkorn A.

PMID: 15040211 [PubMed]

15: Biosecur Bioterror. 2003;1(1):27-35.

Biosecurity: responsible stewardship of bioscience in an age of catastrophic terrorism.

Kwik G, Fitzgerald J, Inglesby TV, O'Toole T.

Johns Hopkins Center for Civilian Biodefense Strategies, Baltimore, Maryland, USA.

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Publication Types: Review Review, Tutorial

PMID: 15040212 [PubMed]

16: Biosecur Bioterror. 2003;1(1):37-42.

Comment in:

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Levin DB, Valadares de Amorim G.

Department of Biology, University of Victoria, Victoria, British Columbia, Canada.

dlevin@uvic.ca

PMID: 15040213 [PubMed]

17: Biosecur Bioterror. 2003;1(2):77-81.

If syndromic surveillance is the answer, what is the question?

Reingold A.

Division of Epidemiology, School of Public Health, University of California, Berkeley, USA.

reingold@uclink4.berkeley.edu

PMID: 15040185 [PubMed]

18: Biosecur Bioterror. 2003;1(4):233-7.

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Heymann DL.

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PMID: 15040202 [PubMed]

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Homeland insecurity: building the expertise to defend America from bioterrorism.
[No authors listed]
PMID: 15040201 [PubMed]

20: Biosecur Bioterror. 2003;1(3):221-2.
Comment on:
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Aerosols from insect control measures show dangers of bioterrorism.
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PMID: 15040200 [PubMed]

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Anthrax 2001: observations on the medical and public health response.
Gursky E, Inglesby TV, O'Toole T.
ANSER Institute for Homeland Security, Arlington, Virginia, USA.
Elin.Gursky@anser.org
PMID: 15040187 [PubMed]

22: Biosecur Bioterror. 2003;1(3):155-9.
Interview with Michael Goldblatt, Director, Defense Sciences Office, DARPA.
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Goldblatt M.
Publication Types: Interview
PMID: 15040193 [PubMed]

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Validating the performance of biological detection equipment: the role of the federal government.
Emanuel PA, Chue C, Kerr L, Cullin D.
Joint Program Executive Office for Chemical and Biological Defense, Department of the Army, Falls Church, Virginia, USA. peter.emanuel@us.army.mil
PMID: 15040191 [PubMed]

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High-throughput laboratories for Homeland and National Security.
Layne SP, Beugelsdijk TJ.
Department of Epidemiology, School of Public Health, University of California, Los Angeles, USA. spl@lvik.ph.ucla.edu
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Microbial forensics: building a national capacity to investigate bioterrorism.
Murch RS.
Institute for Defense Analyses, 4850 Mark Center Drive, Alexandria, VA 22311-1882, USA. rmurch@ida.org
PMID: 15040189 [PubMed]

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The anthrax epidemiologic tool kit: an instrument for public health preparedness.
Reissman DB, Steinberg EB, Magri JM, Jernigan DB.
Bioterrorism Preparedness and Response Program, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA.
Dreissman@cdc.gov
PMID: 15040188 [PubMed]

27: Clin Diagn Lab Immunol. 2003 Jul;10(4):506-13.
Immunological methods for detection and identification of infectious disease and biological warfare agents.

Peruski AH, Peruski LF Jr.

Department of Microbiology and Immunology, Indiana University School of Medicine, Northwest Center, Gary, Indiana 46408, USA. aperuski@iun.edu

Publication Types: Review Review, Tutorial

PMID: 12853377 [PubMed]

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"Not all who wander are lost".

Grey MR.

University of Connecticut School of Medicine, Farmington, USA.

PMID: 15058508 [PubMed]

29: Crit Care Nurse. 2004 Feb;24(1):14; author reply 14.

Comment on:

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Chemical warfare issues.

Hollinger M.

Publication Types: Comment Letter

PMID: 15007887 [PubMed]

30: Curr Drug Targets Infect Disord. 2003 Sep;3(3):255-62.

Vaccine development for potential bioterrorism agents.

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Vaccines are considered to be one of the most effective ways of combating disease caused by bioterrorism agents. Such vaccines must be able to provide protection against pathogens which might enter the body by a number of routes, including the respiratory tract. They should also be able to induce protective immunity rapidly and would ideally be given non-invasively. There are few vaccines which currently meet these requirements. In part, this reflects the low level of research on many bioterrorism agents over the past few decades. Little is known about basic mechanisms of pathogenicity of many of these agents. However, by their very nature these agents cause serious disease, and must be handled in high containment laboratories. This requirement also limits the speed and ease with which research on these pathogens can now take place. Against this background, research on vaccines against potential bioterrorism agents is likely to proceed along two lines. Firstly because the genome sequences of most of the principal bioterrorism agents have either been completed or are close to completion, there is likely to be reliance on the exploitation of this information to devise improved vaccines. A number of groups are working on methodologies to identify vaccine antigens directly from genome sequences. Secondly, there will be a need to formulate such vaccines appropriately for the rapid induction of protective immunity after non-invasive delivery. The prospects for the development of a new generation of bioterrorism vaccines which exploit these technologies are reviewed in this manuscript.

Publication Types: Review Review, Tutorial

PMID: 14529358 [PubMed]

31: Emerg Infect Dis. 2004 Jan;10(1):100-8.

Evaluating detection and diagnostic decision support systems for bioterrorism response.

Bravata DM, Sundaram V, McDonald KM, Smith WM, Szeto H, Schleinitz MD, Owens DK.

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We evaluated the usefulness of detection systems and diagnostic decision support systems for bioterrorism response. We performed a systematic review by searching relevant databases (e.g., MEDLINE) and Web sites for reports of detection systems and diagnostic decision

support systems that could be used during bioterrorism responses. We reviewed over 24,000 citations and identified 55 detection systems and 23 diagnostic decision support systems. Only 35 systems have been evaluated: 4 reported both sensitivity and specificity, 13 were compared to a reference standard, and 31 were evaluated for their timeliness. Most evaluations of detection systems and some evaluations of diagnostic systems for bioterrorism responses are critically deficient. Because false-positive and false-negative rates are unknown for most systems, decision making on the basis of these systems is seriously compromised. We describe a framework for the design of future evaluations of such systems.
PMID: 15078604 [PubMed]

32: Emerg Med Serv. 2004 Apr;33(4):46.
Bioterrorism awareness for EMS.
Patrick RW.

It is important to understand that the issues surrounding bioterrorism and all weapons of mass destruction are complex. In an effort to enhance response to such events, EMS should handle all incidents from the perspective of an all-hazards approach. Prevention, preparation, response and recovery are essential to the safe mitigation of all incidents. Organizations must be prepared. Plan now for a safer tomorrow. Your personnel and communities depend on you.
PMID: 15131906 [PubMed]

33: Emerg Med Serv. 2004 Apr;33(4):55-9.
Botulinum toxin: a bioterrorism weapon.
Hanson D.
dougmh@comcast.net
PMID: 15131908 [PubMed]

34: Emerg Nurse. 2004 Apr;12(1):14-9.
Can we cope? Bioterrorism and the NHS.
Robinson B.
Worthing Hospital, West Sussex.
PMID: 15119250 [PubMed]

35: Epidemiology. 2004 May;15(3):260-261.
Don't Forget the Terror in Bioterrorism.
Kaplan EH.
PMID: 15097003 [PubMed]

36: Evid Rep Technol Assess (Summ). 2004 Apr;(96):1-7.
Regionalization of bioterrorism preparedness and response.
[No authors listed]
PMID: 15133889 [PubMed]

37: Exp Biol Med (Maywood). 2004 Apr;229(4):345-50.
Fate of bioterrorism-relevant viruses and bacteria, including spores, aerosolized into an indoor air environment.
Utrup LJ, Frey AH.
Randomline, Inc, Potomac, Maryland 20854, USA.
An aerosol physics test facility was used in a series of eight experiments to gather an integrated comprehensive broad base of data on the fate of surrogates of microorganisms that cause smallpox, plague, glanders, anthrax, and viral hemorrhagic fevers. The results are directly relevant to the public health issue of how to protect the occupants of buildings against bioterrorism. The test conditions were directly relevant to the indoor air environment situation, and the results can be generalized to buildings that are now occupied. The reductions in concentrations of relevant viruses and bacteria—including gram-negative fermenters and nonfermenters, gram-positive cocci and bacilli, and spores—were substantial and statistically robust. The data show that the bioterrorism-relevant aerosolized viruses and bacteria, including spores, respond like small particulates to the primary (electrical) forces that control the distribution of small particulates in a room. Further, these relevant microorganisms respond like small particulates to means

designed to control airborne particulates. The results could be used to anticipate the effects of a bioterrorist attack on the public health, provide information on means that can be used to minimize such effects, and used to make decisions on how best to protect occupants of specific buildings at minimal cost and with assurance of success.

PMID: 15044718 [PubMed]

38: Hong Kong Med J. 2003 Aug;9(4):307-8.

Propaganda or science? Biological warfare and the people of Iraq.

Roberts IG

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United Kingdom. ian.roberts@lshtm.ac.uk

PMID: 12904625 [PubMed]

39: IDrugs. 2003 Aug;6(8):773-80.

Bioterrorism: a new frontier for drug discovery and development.

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Only a few years ago bioterrorism was considered a remote concern but today it has reached the forefront of the public imagination following recent terrorist attacks around the world. The disaster of September 11 2001, followed by anthrax letters sent via the US postal system, and now the renewed tension in the Middle East, have all brought the possibility of bioterrorism a little closer to reality. A number of biological agents could be used in a terrorist attack, including anthrax, botulinum, plague, smallpox, staphylococcal and streptococcal toxins, and the list of emerging pathogens is evolving rapidly. The serious diseases that these agents produce could cause considerable morbidity and mortality if used in a terrorist attack. This evolving threat presents the medical, public health and scientific communities with pressing challenges. The present research efforts in academia are primarily focused on the basic research on the pathogens that are considered to be bioweapons for terrorist attack. Thus, collaborative efforts between academic institutes, pharmaceutical industries and governmental agencies are warranted to translate basic research into drugs, vaccines and diagnostic tests. This review provides a brief overview of the threat from biological weapons and the current biodefense strategy to prevent and control outbreaks of diseases caused by intentional release of these bioweapons of mass destruction.

Publication Types: Review Review, Tutorial

PMID: 12917773 [PubMed]

40: Int J Toxicol. 2003 Nov-Dec;22(6):465-71.

Issues in chemical and biological terrorism.

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This manuscript describes the overview presented at the 23rd Annual Meeting of the American College of Toxicology in 2002. Although it is recognized that weapons of mass destruction that can be used against our military and civilian populations include chemical, biological, radiological, and nuclear (CBRN) agents, this overview is limited primarily to chemical and biological (CB) agents. The issues of CB terrorism are discussed in terms of When, What, How, and Who. The US Army has been providing chemical and biological solutions since 1917, and has since 1996 applied these solutions to homeland defense and domestic preparedness. The use of chemical and biological agents as terrorist weapons both in the United States and elsewhere in the world is reviewed. The CB threat spectrum is presented, as is the further categorization of biological threat agents by the Centers for Disease Control and Prevention (CDC). In

addition, the CB agents considered to be a potential threat to our water supply are also presented. These are agents that are water soluble, stable, and resistant to water treatment and/or disinfection. The overview concludes with the chronological accomplishments of ECBC since 1917.

Publication Types: Historical Article Review Review, Tutorial

PMID: 14680993 [PubMed]

41: J Am Acad Dermatol. 2004 Apr;50(4):E8.

Chloracne with acantholytic dyskeratosis associated with herbicides: A new histological variant?

Lee S, Park SG, Lee MG.

Department of Dermatology, Yonsei University Wonju College of Medicine, Wonju, Korea.

Publication Types: Case Reports

PMID: 15034530 [PubMed]

42: J Am Vet Med Assoc. 2004 Apr 1;224(7):1096-104.

The AbCs of bioterrorism for veterinarians, focusing on Category B and C agents.

Davis RG.

Center for Food Security and Public Health, Department of Veterinary Microbiology and Preventive Medicine, College of Veterinary Medicine, Iowa State University Ames, IA 50011, USA.

PMID: 15074854 [PubMed]

43: J Am Vet Med Assoc. 2004 Apr 1;224(7):1084-95.

The AbCs of bioterrorism for veterinarians, focusing on Category A agents.

Davis RG.

Center for Food Security and Public Health, Department of Veterinary Microbiology and Preventive Medicine, College of Veterinary Medicine, Iowa State University, Ames, IA 50011, USA.

PMID: 15074853 [PubMed]

44: J Am Vet Med Assoc. 2004 Mar 1;224(5):650-1.

Mapping our way to quick disaster response. Geographic information system maps aim to protect homeland security.

O'Rourke K.

Publication Types: News

PMID: 15002798 [PubMed]

45: J Intensive Care Med. 2004 Jan-Feb;19(1):22-37.

Nerve agents: a comprehensive review.

Wiener SW, Hoffman RS.

NYC Poison Control Center, Bellevue Hospital Center, New York University Medical Center, and New York University School of Medicine, New York, NY 10016, USA.

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Nerve agents are perhaps the most feared of potential agents of chemical attack. The authors review the history, physical characteristics, pharmacology, clinical effects, and treatment of these agents.

Publication Types: Historical Article Review Review, Tutorial

PMID: 15035752 [PubMed]

46: J Occup Environ Med. 2004 Jan;46(1):77-83.

Clinicians' knowledge, attitudes, and concerns regarding bioterrorism after a brief educational program.

Gershon RR, Qureshi KA, Sepkowitz KA, Gurtman AC, Galea S, Sherman MF.

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We conducted this study to determine the knowledge, attitudes, and intended behaviors of New York City clinicians regarding bioterrorism-related diseases after a brief educational program. Data on clinicians' knowledge and attitudes toward bioterrorism and related diseases were collected using a self-administered questionnaire following a 3.5-hour educational program. Participants (n = 310, 82% response rate) reported increased confidence in recognizing symptoms of bioterrorism-related diseases (89%), in addressing patients' bioterrorism concerns (83%), and ability to treat bioterrorism victims (75%). Despite a high

level of confidence in the efficacy of infection control precautions, participants' knowledge scores regarding safe work practices suggest that additional education is warranted. Educational programs are useful in enhancing the public health response to bioterrorism and its consequences.

PMID: 14724481 [PubMed]

47: JAMA. 2004 Apr 28;291(16):1994-8.

One-year health assessment of adult survivors of Bacillus anthracis infection. Reissman DB, Whitney EA, Taylor TH Jr, Hayslett JA, Dull PM, Arias I, Ashford DA, Bresnitz EA, Tan C, Rosenstein N, Perkins BA.

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CONTEXT: Little is known about potential long-term health effects of bioterrorism-related Bacillus anthracis infection. OBJECTIVE: To describe the relationship between anthrax infection and persistent somatic symptoms among adults surviving bioterrorism-related anthrax disease approximately 1 year after illness onset in 2001. DESIGN, SETTING, AND PARTICIPANTS: Cross-sectional study of 15 of 16 adult survivors from September through December 2002 using a clinical interview, a medical review-of-system questionnaire, 2 standardized self-administered questionnaires, and a review of available medical records. MAIN OUTCOME MEASURES: Health complaints summarized by the body system affected and by symptom categories; psychological distress measured by the Revised 90-Item Symptom Checklist; and health-related quality-of-life indices by the Medical Outcomes Study 36-Item Short-Form Health Survey (version 2). RESULTS: The anthrax survivors reported symptoms affecting multiple body systems, significantly greater overall psychological distress ($P < .001$), and significantly

reduced health-related quality-of-life indices compared with US referent populations. Eight survivors (53%) had not returned to work since their infection. Comparing disease manifestations, inhalational survivors reported significantly lower overall physical health than cutaneous survivors (mean scores, 30 vs 41; $P = .02$). Available medical records could not explain the persisting health complaints. CONCLUSION: The anthrax survivors continued to report significant health problems and poor life adjustment 1 year after onset of bioterrorism-related anthrax disease.

PMID: 15113818 [PubMed]

48: Med Decis Making. 2004 Mar-Apr;24(2):192-206.

A conceptual framework for evaluating information technologies and decision support systems for bioterrorism preparedness and response.

Bravata DM, McDonald KM, Szeto H, Smith WM, Rydzak C, Owens DK.

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OBJECTIVES: The authors sought to develop a conceptual framework for evaluating whether existing information technologies and decision support systems (IT/DSSs) would assist the key decisions faced by clinicians and public health officials preparing for and responding to bioterrorism. METHODS: They reviewed reports of natural and bioterrorism related infectious outbreaks, bioterrorism preparedness exercises, and advice from experts to identify the key decisions, tasks, and information needs of clinicians and public health officials during a bioterrorism response. The authors used task decomposition to identify the subtasks and data requirements of IT/DSSs designed to facilitate a bioterrorism response. They used the results of the task decomposition to develop evaluation criteria for IT/DSSs for bioterrorism preparedness. They then applied these evaluation criteria to 341 reports of 217 existing IT/DSSs that could be used to support a bioterrorism response. Main Results: In response to bioterrorism, clinicians must make decisions in 4 critical domains (diagnosis, management, prevention, and reporting to public health), and public health officials must make decisions in 4 other domains (interpretation of bioterrorism surveillance data, outbreak investigation, outbreak control, and communication). The time horizons and utility functions for these decisions differ. From the task decomposition, the authors identified critical subtasks for each of the 8 decisions. For example, interpretation of diagnostic tests is an important

subtask of diagnostic decision making that requires an understanding of the tests' sensitivity and specificity. Therefore, an evaluation criterion applied to reports of diagnostic IT/DSSs for bioterrorism asked whether the reports described the systems' sensitivity and specificity. Of the 217 existing IT/DSSs that could be used to respond to bioterrorism, 79 studies evaluated 58 systems for at least 1 performance metric. CONCLUSIONS: The authors identified 8 key decisions that clinicians and public health officials must make in response to bioterrorism. When applying the evaluation system to 217 currently available IT/DSSs that could potentially support the decisions of clinicians and public health officials, the authors found that the literature provides little information about the accuracy of these systems.
PMID: 15090105 [PubMed]

49: Mil Med. 2004 Feb;169(2):94-6.
A Turkish medical rescue team against nuclear, biological, and chemical weapons.
Kenar L, Karayilanoglu T.
Department of NBC Defense, Gulhane Military Medical Academy, 06018 Ankara, Turkey.
Medical aid is one of the primary responses given in the deliberate release of weapons of mass destruction for both military and terrorist purposes. From this point of view, a nuclear, biological, and chemical (NBC) Medical Rescue Team was established in the structure of Gulhane Military Medical Academy. The staff in the team is composed of physicians, nurses, and paramedics who are assigned in Medical Intervention Units, Medical Nursing Units, and Decontamination Units, respectively. The main aim of this team is to give a medical response including first aid, airway, breathing, and circulation resuscitation, decontamination, and triage under any NBC attack. For this purpose, the communication and coordination between the team members were standardized. Moreover, the team was equipped with the required protective clothing, masks, antidotes, and other drugs and agents used for victims exposed to NBC weapons. Within this concept, the personnel in the team were trained with respect to first aid and treatment of NBC casualties in both theoretical and practical scenario. All of this background information was used in a practical operation held in Gulhane Military Medical Academy under a chemical attack scenario given.
PMID: 15040626 [PubMed]

50: Mod Healthc. 2004 Mar 22;34(12):30-2.
Command and control. State-of-the-art HHS communications facility stands ready to help deploy and coordinate resources, whatever the need may be.
Tieman J.
PMID: 15069901 [PubMed]

51: Nat Rev Microbiol. 2003 Oct;1(1):70-4.
Bioterrorism and biodefence research: changing the focus of microbiology.
Atlas RM.
Center for the Deterrence of Biowarfare and Bioterrorism, University of Louisville, Graduate School, Louisville, Kentucky 40292, USA.
r.atlas@louisville.edu
Fear that terrorists can use biological agents as weapons of mass destruction is significantly impacting the conduct of microbiological research. Abundant new funds are available for biodefence research, and many researchers are racing to enter the field. There are some concerns, however, that a large emphasis on this issue could skew the microbiology research agenda. Furthermore, new responsibilities for safely conducting research with biothreat agents and concern that information might be misused could drive some researchers away from the field.
Publication Types: Review Review, Tutorial
PMID: 15040182 [PubMed]

52: New Sci. 2003 Nov 8-14;180(2420):6-8.
How the US crackdown on bioterror is backfiring.
MacKenzie D.
Publication Types: News
PMID: 14982094 [PubMed]

53: Nurs Ethics. 2004 Jan;11(1):84-7.

Terrorism--the scientific response. March 2003. BMA Memorandum of Evidence to the Science and Technology Committee (HC): Inquiry into The Scientific Response to Terrorism.

[No authors listed]

PMID: 14763653 [PubMed]

54: Prehospital Disaster Med. 2003 Apr-Jun;18(2):45-6.

The international burden of terrorism: an introduction.

Arnold JL.

Publication Types: Editorial

PMID: 15074481 [PubMed]

55: Prehospital Disaster Med. 2003 Apr-Jun;18(2):92-9.

Terrorism in France.

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France has experienced two waves of major terrorist bombings since 1980. In the first wave (1985-1986), eight bombings occurred in Paris, killing 13 and injuring 281. In the second wave (1995-1996), six bombings occurred in Paris and Lyon, killing 10 and injuring 262. Based on lessons learned during these events, France has developed and improved a sophisticated national system for prehospital emergency response to conventional terrorist attacks based on its national emergency medical services (EMS) system, Service d'Aide Medicale Urgente (SAMU). According to the national plan for the emergency medical response to mass-casualty events (White Plan), the major phases of EMS response are: (1) alert; (2) search and rescue; (3) triage of victims and provision of critical care to first priority victims; (4) regulated dispatch of victims to hospitals; and (5) psychological assistance. Following the 1995 Tokyo subway sarin attack, a national plan for the emergency response to chemical and biological events (PIRATOX) was implemented. In 2002, the Ministries of Health and the Interior collaborated to produce a comprehensive national plan (BIOTOX) for the emergency response to chemical, biological, radiological, and nuclear events. Key aspects of BIOTOX are the prehospital provision of specialized advance life support for toxic injuries and the protection of responders in contaminated environments. BIOTOX was successfully used during the 2003 Severe Acute Respiratory Syndrome (SARS) outbreak in France.

Publication Types: Review Review, Tutorial

PMID: 15074489 [PubMed]

56: Prehospital Disaster Med. 2003 Apr-Jun;18(2):106-14.

Terrorism in Japan.

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Although the 1995 Tokyo subway sarin attack probably was the most widely reported terrorist event in Japan to date (5,500 injured, 12 dead), the country has suffered numerous other large terrorism-related events in recent decades, including bombings of the headquarters of Mitsubishi Heavy Industries in Tokyo in 1974 (207 injured, 8 dead), the Hokkaido Prefectural Government office building in Sapporo in 1976 (80 injured, 2 dead), and the Yosakoi-Soran Festival in Sapporo in 2000 (10 injured, none dead). Japan also has experienced two other mass-casualty terrorist events involving chemical releases, including the 1994 Matsumoto sarin attack (600 injured, 7 dead) and the 1998 Wakayama arsenic incident (67 injured, 4 dead). Until 1995, emergency management in Japan focused on planning and preparedness at the local level for the frequent disasters caused by natural events. Since that time, substantial progress has been made in advancing emergency planning and preparedness for terrorism-related events, including the designation of disaster centers in each prefecture, the implementation of several education and training programs for nuclear, biological, and chemical terrorism, and the establishment of a national Anti terrorism Office within the Ministry of Health, Labor, and Welfare.

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PMID: 15074491 [PubMed]

57: Prehospital Disaster Med. 2003 Apr-Jun;18(2):127-32.

Terrorism in Taiwan, Republic of China.

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The Republic of China on the island of Taiwan has experienced at least 20 terrorist events since 1979, including 13 aircraft hijackings and five bombings. Factors responsible for the relatively small burden of terrorism on Taiwan in the past include tight military control over political dissent until 1987, a warming relationship with the People's Republic of China in the 1990s, political inclusion of major internal cultural groups, geographic isolation, and a lack of other significant international enemies. Nevertheless, today Taiwan faces a new prospect of terrorism by adversaries of the United States and its allies and by an international paradigm shift in the types of weapons used by terrorists. National emergency management has been enhanced significantly since the Ji Ji earthquake in 1999, including the assignment of lead government agencies to the planning and preparedness for specific types of terrorist events involving nuclear, biological, and/or chemical releases. Other significant improvements at the operations level, include the establishment of two national disaster medical assistance teams, four urban search and rescue teams, 13 local disaster medical assistance teams, and eight chemical emergency response hospitals. Future challenges include improving the coordination of inter-agency response at the national level and the quantity and quality of local disaster response assets.

PMID: 15074495 [PubMed]

58: Science. 2004 Apr 16;304(5669):359.

An uncertain call to arms.

Fraser CM.

Publication Types: Editorial

PMID: 15087509 [PubMed]

59: Semin Perioper Nurs. 2001 Oct;10(4):167-74.

Bioterrorism: an overview.

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How real is the threat of bioterrorism? Experts may disagree on the likelihood of use, but the possibility cannot be totally dismissed. Complacent ignorance of a low-probability, high-cost risk is dangerous and can result in devastating global consequences. This is a US government work. There are no restrictions on its use.

PMID: 15129614 [PubMed]

60: Skinmed. 2003 Sep-Oct;2(5):297-303.

Chemical warfare agents: their past and continuing threat and evolving therapies. Part II of II. Smith KJ, Skelton H.

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Chemical warfare agents are ideal weapons for terrorists and for use in military operations against both civilian populations and troops. Thus, there have been efforts by the United States in cooperation with other concerned nations to develop animal models to understand the pathophysiology of the injuries induced by these agents, and to develop suitable animal models for testing of pre-and post-exposure protectants and therapies. Sulfur mustard remains the most significant chemical warfare agent that produces cutaneous injuries. Institution of standard recommendations prior to threatened exposure or after exposure are something that we need to be aware of in the world we live in. In addition, pre-and post-exposure therapies now being studied offer hope for moderating the mortality and morbidity that can result from chemical exposure.

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PMID: 14673262 [PubMed]

61: Trends Biotechnol. 2003 Aug;21(8):338-45.

What can spores do for us?

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Many organisms have the ability to form spores, a remarkable phase in their life cycles. Compared with vegetative cells, spores have several advantages (e.g. resistance to toxic compounds, temperature, desiccation and radiation) making them well suited to various applications. The applications of spores that first spring to mind are bio-warfare and the related, but more positive, field of biological control. Although they are often considered metabolically inert, spores can also be used as biocatalysts. Other uses for spores are found in the fields of probiotics, tumour detection and treatment, biosensing and in the "war against drugs".

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