Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
RESULTS: Over 1,700 evacuees were seen by JPS for health care. 4,075 prescriptions were given. Over 250 JPS staff were involved in the response. This strategy has been identified as a best practice model by Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Source: The Official Joint Commission Environment of Care News Source, November, 2006, Vol. 9, Issue 11.

LESSONS LEARNED: Tailoring this surge response provides an opportunity to implement the Centers for Disease Control (CDC) and World Health Organization (WHO) recommendations for a Pandemic/Bioterrorism event. By using small shelters and treating patients through a central clinic rather than the hospital, this approach of protecting the hospital could be effective in controlling outbreaks and cross-contamination.

Publication Number 3-26
Improved Respirator for Protection Against Exposure to Airborne Viruses

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BACKGROUND/OBJECTIVES: With any emergency situation, the role of healthcare workers and first responders is of paramount importance and often exposes them to various unidentified hazards. In recent years, several threats to human health have involved emerging viruses unknown to the human immune system, therefore causing severe diseases with high fatality rates. Examples of such diseases causing viral agents include the SARS coronavirus and the avian influenza A/H5N1, as well as Variola major (smallpox), considered a highly potent bioterrorism tool. All have dramatically amplified the menace pending over these responders and their increasing need for proper respiratory protection, well illustrated by the SARS Commission Final Report on the Toronto outbreak, which concludes that healthcare workers were inadequately protected by authorities. Because of their role, respiratory protection for healthcare workers is of utmost importance and requires the highest possible level of protection, provided by such devices as Self-Contained Breathing Apparatus (SCBAs) or Powered Air Purifying Respirators (PAPRs). However, this type of equipment does not allow for easy stockpiling, and their use might not be realistic in all situations. Most occupational health authorities thus recommend the use of NIOSH certified N95 respirators in situations suspected of involving an airborne infectious hazard. N95 certification requires particulate filtration efficiencies of 95% against an aerosol of inert particles with a mean particle size of 0.3 μm. Considering that most viruses of pathogenic concern are smaller than 0.3 μm, and that the most penetrating particle size through charged fibers shifts towards the nano-sized range, this represents insufficient protection. We combined an iodinated bioactive polymer to the mechanical filtration equivalent of an N95, developing a respirator offering enhanced protection against airborne viruses.

METHODS: Viral Reduction Efficiency (VRE) of respirators was evaluated by full-sized device testing against a viral surrogate, MS2 coliphage (0.25 μm), and an animal virus, human influenza A/H1N1 (0.08-0.12 μm). Collison nebulizers generate a bioaerosol containing 10^4 to 10^6 PFU/m^3 of air, which is then drawn through the respirators at a flow rate of 85 LPM. Effluent is recovered in All Glass Impingers containing phosphate buffer. Studies are usually performed in ambient conditions, although some tests were done at various environmental conditions.

RESULTS: The Iodinated Polymer-containing (IPC) respirator was assessed for its VRE alongside commercial NIOSH-certified respirators in ambient conditions. Against both viral challenges, the IPC demonstrated higher VRE values than other respirators, reducing the viral concentrations by an additional 1 to 3 logs. Similar results were obtained at various environmental conditions.
CONCLUSIONS: The inclusion of a biocide has been shown to improve the VRE performance of the respirator. Our method does not account for fit factor; fit testing should be performed to ensure a proper fit, and thus efficacy of the respirator.

Publication Number 3-27

**Developing a Hospital Template for Implementing Pandemic Influenza Recommendations Using a Regional Infection Control Workgroup**

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ISSUE: The Southwest Texas Regional Advisory Council (STRAC) is an organization responsible for the operation of a comprehensive emergency response system in a twenty-two (22) county, 26,000 square mile area of Southwest Texas. This organization has recognized the importance of Infection Control prior planning and coordination in the rapid facility responses needed in the event of a wide-scale epidemiologic event such as Pandemic Influenza.

PROJECT: There are 53 hospitals covering the STRAC region: 38 general acute care hospital facilities including 3 major trauma centers and 15 specialty facilities. In order to best use limited fiscal resources of the area, and meet the state objectives for pandemic influenza planning, an existing IC workgroup including infection control practitioners from civilian, military and federal facilities as well as representatives of city and regional public health organizations turned its collective resources to developing a unified regional pandemic influenza plan that could be adapted by health care facilities (HCF).

RESULTS: Using the World Health organization (WHO) phases, a hospital template for Pandemic Influenza was developed in coordination with local and regional health authorities. This Pandemic Respiratory Infectious Disease Readiness Plan addressed facility access control, influenza vaccination, surveillance, screening and triage, infection control precautions, communication, education and preparedness efforts was developed for each specific phase. A screening tool was developed that could be used in all facilities for the triage process. Signage and educational materials for both health care providers and patients were developed for just-in-time training and distribution. The template was shared with members at their monthly planning meetings and the documents are posted to the STRAC website.

LESSONS LEARNTED: 1) Without prior planning and the development of specific tools, the implementation phase of an established response plan would be delayed in a crisis setting 2) Facility agreement and buy-in to the process can produce a cohesive community approach to health care crisis response.

Publication Number 3-28

**Ingredients for a Successful HDVRT Drill Using the Influenza Vaccine**

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