

several billion doses short of the necessary amount. Health authorities worldwide face two main strategies to afford a reasonable chance for utilizing vaccines during a pandemic—pre-emptive stockpiling of vaccines against circulating avian H5N1 strains, or signing an advanced purchase agreement for vaccines with the vaccine manufacturers. Both options are costly and are associated with many unknown influencing factors. We present a mathematical model for the comparison of these two vaccine purchase strategies (advanced purchase agreement vs. pre-pandemic avian H5N1 vaccine stockpiling) in economical terms.

Methods: We modeled each strategy's cost, impact on reduction in morbidity and mortality compared with a non-intervention, base-case scenario, adjusted the benefits to an annual probability of a pandemic as low as 1%, and calculated the relevant cost-benefit ratio. The impact of vaccination on disease spread was assessed according to a systematic review of published dynamic models.

Results: The model showed advanced purchase agreement to be cost saving, with a cost-benefit ratio of 1.81–3.65, depending on the assumed R0. The ratio proved relatively robust in extensive sensitivity analyses. Stockpiling H5N1 vaccine was not cost-saving, with a cost:benefit ratio of 0.25.

Conclusions: Current signing of an advance purchase agreement for future (pandemic phase) vaccine supply is a cost-saving strategy and should be pursued.

Keywords: avian flu; cost-benefit analysis; influenza; pandemic; vaccine

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Do Emergency Medicine Department Healthcare Professionals Feel Ready to Face Pandemics?

Efstratios Photiou

Pronto Soccorso, Ospedale Sant'Antonio, Padova, Italy

Introduction: Much is said about new epidemics for the following reasons: globalization, re-presentation of “past” diseases, etc. An avian influenza pandemic is considered inevitable: 90–100% of infected birds die; as of 16 December 2008, 391 humans were infected (247 deaths; 63.17%). New vaccines with unknown protection rates are prepared. It is predicted that a small percentage of the world's population can be vaccinated. Planning for a pandemic is paramount. Emergency medicine departments (EMDs) can be threatened by infectious diseases.

Objectives: To assess how risk perception may affect attendance pattern/willingness to work during pandemics; to suggest means reducing absentee impact through meeting healthcare professionals' (HCP) needs/perceptions. Healthcare providers were asked to suggest methods to better cope with pandemics and assess how they feel about information/training and protective means during pandemics.

Methods: An anonymous questionnaire was distributed to EMD personnel (physicians, registered nurses, ward clerks) who would be called to respond during epidemics/pandemics.

Results: The overall response rate was 68.9% (110 participants). The suggestions offered to improve work during pandemics were: 43% had no suggestions; 46% said courses/drills, specific protocols, adequate protective means; 8% mentioned epidemics managed by dedicated personnel/facil-

ities; 2% said “pay-for-risk”; and 1% mentioned personnel enhancement during epidemics. The results for the means of gaining information include: 34%, specific epidemics' management training; 29%, generic workshops/courses; 14%, board-written information; 14%, participation in risk assessment prior-to-crisis; 5%, up-to-date information through displays/screens; 3%, Web-acquired information; and 1%, other. The EMDs' protective means of safety results were: 21%, safe; 26%, slightly safe; 27%, don't know, 26%, unsafe.

Conclusions: A lack of concern about pandemics (to build-up); active participation in training/information acquisition helps people feel that they are “part of the system”; timely information, protocols, periodic training/drills, adequate means of protection, and planning beforehand are paramount.

Keywords: avian flu; emergency medicine department; healthcare professionals; pandemic; readiness

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“Recovery”: The Forgotten Stage of Pandemic Planning

Frank Archer; Caroline Spencer

Monash University, Department of Community Emergency Health and Paramedic Practice, Frankston, Victoria Australia

Introduction: In recent years, pandemic planning has attracted much energy and international interest. There are international peak agency plans, national plans, regional plans, and organizational operational plans. These plans may be holistic or focus on specific needs and interests, for instance, general practice perspectives, business recovery, etc. As a component in preparing for the delivery of a unit on disaster recovery in a Graduate Certificate in Emergency Preparedness and Disaster Health program, a range of these plans were reviewed. The outcome is surprising and unsettling.

Methods: A review of selected international pandemic plans, including those of the World Health Organization (WHO), New Zealand, and Australian State and Territory was performed and the “recovery” or “post-pandemic period” component was identified.

Results: The review is difficult to quantify because of the different nature and structure of the various plans. Compared to the preparedness and response phases, little content relating to “recovery” exists in the plans reviewed. The WHO Global Influenza Preparedness Plan on the post-pandemic period refers back to the pre-pandemic phase with no specific consideration of recovery issues. The New Zealand Pandemic Plan only includes three pages of a 196-page document on “recovery”, but includes a framework and refers to business continuity.

The Victorian state plan defines recovery as—“recovery commences when the first response measures are taken. The plan aims to provide the necessary support and stimulus to help the Victorian community return to normal living as quickly as possible”. Victorian recovery arrangements include reference to: (1) material and financial assistance; (2) psychosocial and community recovery; (3) economic recovery; and (4) ongoing recovery.

Conclusions: The basis of this apparent deficiency in pandemic planning remains unclear. Hopefully, as these plans

are updated, the next versions may include a greater guide to recovery issues.

Keywords: international; pandemic; planning; preparedness; recovery

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Region-Specific Guidance for the European Rural Population Regarding Avian Influenza

Agoritsa Baka; Ioannis Polychronakis; Elena Riza; Athena Linos

Department of Hygiene and Epidemiology, School of Medicine, University of Athens, Athens, Greece

The continuing outbreaks of avian influenza in poultry and the rising number of human cases in Southeast Asia have created concerns among veterinary and public health authorities. Experts continue to worry about the possibility of H5N1 mutating to a pandemic virus. The World Health Association (WHO) advises on continuing surveillance and preparedness against this emerging threat. The rural population is a priority group for raising awareness, as they play a key role in preventing and controlling outbreaks of avian influenza.

The project European Content for Public Health Awareness of Rural Population on Avian Influenza Prevention (ECORAIP), funded by the European Commission, aimed at region-specific guidance for the rural population for their protection from AI. The project consortium consists of five public health institutions from Cyprus, Germany, Greece, Italy, and Poland.

The project staff reviewed the literature regarding human cases of avian influenza, constructed a list of rural life characteristics that increase the risk of human infection, and explored the existing differences of rural life in the three European regions (Central-North, East, South). The ECORAIP staff also assembled a library of avian influenza campaigns in the EU and compiled a report of best practices for this purpose. Based on the opinion of veterinary, communication, and public health experts and by assessing a number of socio-economic indicators, 10 prioritized characteristics were developed for each region, and a model was created for the rural population.

The guidance created with the assistance of health educators and communicators follows the general presentation of “DO”, “DON’T”, and “WHY” in a user-friendly format. The model was created in English and translated into four languages. It was piloted in European communities in each EU region in order to assess its effectiveness. The model, along with the pilot testing results, will be presented at the Congress.

Keywords: avian influenza; Europe; guidance; public health; rural populations

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An Outcomes-Based Approach for Planning Healthcare Service Delivery during a Pandemic

Sandra Allaire

Alberta Health Services, Calgary, Alberta Canada

Introduction: The goal of pandemic influenza planning is the maintenance of essential healthcare services during the

crisis, but defining “essential” has been incomplete in the literature and planning processes. Effective healthcare delivery during increased demand, especially with diminishing and/or threatened resources as expected in the pandemic scenario, may require rationalizing services for a period of time. A systematic approach for a comprehensive reduction in regular acute care services during a pandemic to focus resources on the most urgent population health needs has been performed.

Methods: An outcomes-based classification scheme of 14 potential outcomes categories was developed, and focus-group tested. Based on expert opinions, health conditions seen in the health region’s three acute care centers, were assigned to one of the outcomes categories. Clinical expertise rank ordered the priority of the outcomes categories. Resources utilized for treating conditions were determined, forecasting which resources may be available if care for some conditions is diverted.

Results: Health conditions, as defined by the International Classification of Diagnoses (ICD)-10, can be assigned into outcomes categories. The outcomes categories and approach provided an equitable framework for comparing conditions across all health specialties. Rank ordering the outcomes categories provides a hierarchy for assigning priority care during pandemic-engendered resource shortages.

Conclusions: A systematic, outcomes-based process defining a hierarchy of conditions to receive focused care delivery, employing, if necessary, equitably diverted professional resources, has been developed. The tool can be used to plan prioritized care delivery to support best population health outcomes in a pandemic scenario.

Keywords: essential healthcare services; outcomes-based; pandemic; planning; population health; prioritized care

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Poster Presentations—Pandemics

(F43) National-Level Organizational Model for Coping with an Epidemic Outbreak

Orna Ben-Natan;¹ David Hassin;¹ Dina Van-Dijk;² Avishay Goldberg²

1. Hillel Yaffe Medical Center, Hadera, Israel

2. Ben-Gurion University of the Negev, Beer Sheva, Israel

Fear affects understanding of new diseases and obstructs the decision-making process. Preparedness requires the construction of an organizational model for coping with an epidemic that will enable full coordination and cooperation between various professional elements within the healthcare system and with the public, in order to reduce the anxiety level and mitigate panic during a state of uncertainty. The purpose of this research was to construct an organizational model for coping with an outbreak of an epidemic on a national level. Research instruments included a closed questionnaire examining the views and perceptions of the public, experts, and professionals on the topic of epidemic, before, during, and after the outbreak. The research population included the general public—801 people forming a representative sample of the population of Israel; 45 are professional decision-makers.