Special Contribution

Global Emergency Medicine: A Review of the Literature From 2012

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Abstract

Objectives: The Global Emergency Medicine Literature Review (GEMLR) conducts an annual search of peer-reviewed and grey literature relevant to global emergency medicine (EM) to identify, review, and disseminate the most important new research in this field to a worldwide audience of academics and clinical practitioners.

Methods: This year, our search identified 4,818 articles written in six languages. These articles were distributed among 20 reviewers for initial screening based on their relevance to the field of global EM. Two additional reviewers searched and screened the grey literature. A total of 224 articles were deemed appropriate by at least one reviewer and were approved by their editor for formal scoring of overall quality and importance.

Results: Of the 224 articles that met our predetermined inclusion criteria, 56% were categorized as Emergency Care in Resource-limited Settings, 18% as EM development, and 26% as Disaster and Humanitarian Response. A total of 28 articles received scores of 16 or higher and were selected for formal summary and critique. Inter-rater reliability for two reviewers using our scoring system was good, with an intraclass correlation coefficient of 0.625 (95% confidence interval = 0.512 to 0.711).

Conclusions: In 2012 there were more disaster and humanitarian response articles than in previous years. As in prior years, the majority of articles addressed the acute management of infectious diseases or the care of vulnerable populations such as children and pregnant women.

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n 2012, deadly earthquakes affected Iran, Afghanistan, and the Philippines, while Sri Lanka and southern India saw their deadliest tropical cyclone in years: Nilam. The most destructive storm of 2012, Hur-

ricane Sandy, left a wake of destruction stretching from Jamaica to Quebec. Meanwhile, the ongoing conflict in Syria left thousands dead and contributed more than three million additional internally displaced people to the

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global total.¹ At the same time, interest in formal education and training in emergency medicine (EM) continued to grow in breadth and intensity. In January, Dubai hosted the first Global Network Conference on Emergency Medicine.² In October, Ghana and the African Federation of Emergency Medicine hosted the first African Conference on Emergency Medicine.³ As interest in the field of EM expands, the Global Emergency Medicine Literature Review (GEMLR) strives to ensure that emergency practitioners, from those in academic emergency departments (EDs) to those on the front lines of disaster care, have access to the most current and important research conducted on relevant topics around the world.

The GEMLR began 8 years ago in an attempt to identify and consolidate the best global EM literature into a format that was easy for both academics and practitioners to access and comprehend. This year, our panel of seasoned reviewers includes physicians from Australia, China, Ghana, Lebanon, the United Kingdom, and the United States.

The primary goals of the review are to illustrate best practices, stimulate research, and promote further professionalization in the field of global EM through the identification of important new publications that focus on emergency care in low-resource settings. At the same time, the review is not a formal systematic review, which aims to synthesize the published literature on a specific topic or research question. Each year, the number of quality articles in the field grows significantly, and thus the mission of the review becomes more challenging. The scope of global EM continues to stretch beyond its initial boundaries to include injury prevention, epidemiologic transition, and device implementation. For the 2012 review, we continue to include literature that falls into one of the three following categories: disaster and humanitarian response, emergency care in resource-limited settings, and EM development.

This is the third year that grey literature was included in our search strategy. Grey literature has been defined as any material produced by an organization whose primary function is not publication.⁴ Our goal in performing a grey literature search was to identify new global EM research conducted by government agencies, local or international nongovernment organizations, or other entities that may not have been published in peer-reviewed journals.

METHODS

Each year, the GEMLR editorial board revises a procedure manual that outlines in detail the methodology for its search, screening, scoring, and reviewing processes. Because the GEMLR is a review article, no prior ethical or institutional review board approval was sought for this manuscript. There were nine editors, four advisors, one *Academic Emergency Medicine* representative, and 20 reviewers. As reviewers and editors could not be blinded to the authors of the articles included in the review or their affiliations, both reviewers and editors were recused from scoring or reviewing any articles in which they may have been directly or indirectly involved.

The initial search was conducted in two blocks: the first from January 1 to August 31, 2012, and the second

from September 1 to December 31, 2012. We used Pub-Med to search Medline for original research or review articles that contained at least one "global" search term and one "emergency medicine" search term (Table 1). A hand search of journals that published significant numbers of articles that were included in our prior reviews was also performed. This year, the following journals were included in the hand search: Bulletin of the World Health Organization, Academic Emergency Medicine, Prehospital and Disaster Medicine, Annals of Emergency Medicine, Emergency Medicine Journal, and The Lancet.

Based on the linguistic capacity of our reviewers and editors, our search this year was limited to articles published in English, French, German, Spanish, Italian, and Chinese. All studies were limited to human subjects only; news articles and letters were excluded. Articles that had been e-published ahead of print in 2011 and had thus been included in the 2011 review were also excluded.

The total number of articles produced by our PubMed search for 2012 was 2,098: 2,001 English, 31 French, 17 German, 15 Spanish, three Chinese, and three Italian. The total number of articles produced by our hand search for 2012 was 2,748. The 4,818 articles produced by these two searches were divided among the 20 reviewers for initial screening based on their relevance to the field of global EM (as defined by the criteria listed above). A total of 209 articles were each deemed appropriate for formal scoring of their overall quality and importance by at least one reviewer and approved by his or her editor.

For the grey literature search, we used a preidentified list of academic, government, and nongovernment organizations known to be conducting global health research or investigations as part of their work (Table 2). Two reviewers were assigned to systemati-

Table 1 Search Terms

Emergency Medicine	Global
Emergency medicine Refugees Emergency treatment Relief work Rescue work Acute disease Humanitarian Critical illness War Prehospital Conflict Triage Disasters Multiple trauma Injuries Internally displaced persons Emergencies Emergency medical services Resuscitation Critical care Sepsis Shock	World health Developing countries International Global Tropical medicine Third world Middle-income countries Low-income countries Resource-limited settings

cally search the websites of these organizations for needs assessments, program monitoring, evaluation reports, topic reviews, white papers, conference proceedings, and other types of articles that met the predefined screening criteria for relevance to the field of global EM. Through our grey literature search process, we found 15 additional global EM research articles that met the inclusion criteria. These were combined with those identified by the Medline search to create a database of 224 research articles for formal scoring.

Once selected for scoring, the full-text article was obtained and classified as either an original research or review article. Each article was also categorized as emergency care in resource-limited settings, EM development, or disaster and humanitarian response. Emergency care in resource limited settings includes trauma care, acute medical care, triage, and prehospital care in low- and middle-income countries or resource-limited settings of high-income countries. EM development includes research on the development of EM as a specialty, EM educational programs, or emergency medical care systems outside of North America, regardless of the national income level. Disaster and humanitarian response includes research on the care of civilian populations in conflict; disaster mitigation, assessment, and response; and health care of refugees and internally displaced persons.

Each article was then scored by two separate reviewers using a predefined grading scale that assessed for clarity, design, ethics, importance, and impact. Final scoring ranged from 0 to 20 (Table 3), with the mean of the two scores used as the final score for the article. Any article with a score difference between reviewers of greater than two standard deviations above the med-

Table 2 Grey Literature Sources

Academic centers/think tanks

- 1. Global Health Council
- 2. Center for Global Development
- 3. The United Nations University
- 4. RAND Corporation
- 5. The Woodrow Wilson Center
- 6. The Bill and Melinda Gates Foundation
- 7. Center for Global Health Research/University of Toronto
- 8. Emergency Trauma Care Project

NGOs, UN, and government agency websites

- 1. MEASURE Evaluation
- 2. MSF
- 3. Epicentre
- 4. International Rescue Committee
- 5. International Medical Corps
- 6. Oxfam International
- 7. Oxfam Great Britain
- 8. GIZ/GTZ
- 9. International Committee of the Red Cross
- 10. Centers for Disease Control and Prevention
- 11. World Health Organization
- 12. Humanitarian Practice Network
- 13. UN High Commission for Refugees
- 14. UN Development Program
- 15. Inter-Agency Standing Committee
- 16. UNICEF
- 17. JHPIEGO

UN = United Nations.

ian score difference was rescored by an editor. The new score was then used as the final score for the article. Twenty-eight articles had final scores of 16 or greater and were selected for formal review. These articles were then distributed to reviewers who produced summaries and critiques of each article.

RESULTS

Of the 224 articles that met our predetermined inclusion criteria, 56% were categorized as emergency care in resource-limited settings, 18% as EM development, and 26% as disaster and humanitarian response. Approximately 64% of the articles were original research, while the remaining 36% were review articles.

The median final score for all articles was 12.5, ranging from 4.5 to 19. The difference in mean scores between Medline (12.6) and grey literature (11.5) articles was not significant (p = 0.069), nor was the difference in mean scores between original research (12.5) and review (12.4) articles (p = 0.700) or the differences in mean scores between emergency care in resource-limited settings (12.4), EM development (13.2), and disaster and humanitarian response (12.1) articles (p = 0.199). Inter-rater reliability for reviewer scoring, measured using the intraclass correlation coefficient, was 0.625 (95% confidence interval = 0.512 to 0.711), considered "good" reliability in the literature.

The top 28 global EM articles for 2012 are listed in Table 4.^{6–34} The complete database of all 224 global EM articles for 2012, as well as full summaries and critical analyses of the top 28 global EM of articles of 2012, can be found in Data Supplements S1 and S2 (available as supporting information in the online version of this article).

DISCUSSION

The most notable difference in the 2012 review, in comparison to previous reviews, was the inclusion of an article from the grey literature. This represented the first time a grey literature article scored above the predefined cutoff for full review. In addition, there were many more disaster and humanitarian response articles than had been selected for final review in previous years. While historically there have been more review articles, this year the majority of the chosen articles were original research articles. Below we summarize some of the 2012 trends in global EM research.

Emergency Care in Resource-limited Settings

As in years past, this category of articles remains the most represented among articles chosen for full review (66%). Highlighting the continued global focus placed on child and maternal mortality, most of the articles were centered on pediatric infectious disease or obstetric care.

Diarrheal illnesses continue to be a major cause of morbidity and mortality worldwide; several of the 2012 articles focused on the diagnosis and management of diarrhea. Lazzerini and Ronfani⁶ performed a systematic review on zinc supplementation in children with acute diarrhea. The authors found that in children less than 6 months of age, there is evidence that zinc

Table 3 Scoring Criteria

	Original Articles	Points	Review Articles	Points
Clarity			Clearly stated purpose for review	2
,			Sufficient background provided	1
			Understandable to nonprofessional	1
			Clear language, appropriate use of tables and figures	1
Design	RCT or observational study with control group	2	Formal meta-analysis or systemic review (including studies with a control group)	2
	No bias in selection of subjects; attempts to limit bias	1	Study selection is clear and reproducible	1
	Adequate blinding of study subjects	1	Article selected by at least two blinded authors	1
	Correct statistical tests used for analysis	1	Data aggregated and/or analyzed appropriately	1
Ethics	Approved by IRB	2		
	Adheres to Declaration of Helsinki	1		
	Consent obtained or waived by IRB	1		
	Authors have no COI	1		
Importance	Results are generalizable to a variety of settings	2	Results are generalizable to a variety of settings	2
	Topic is important	2	Topic is important	2
	Topic is clearly relevant to GEM	1	Topic is relevant to the realm of GEM	1
Impact	Recommendations can be implemented in developing countries	2	Recommendations are applicable across a wide range of different settings	2
	The proposed intervention is cost-effective	1	Intervention studied is cost-effective	1
	NGOs, UN agencies, and other actors would likely change their practice if they were aware of this study	1	NGOs, UN agencies, and other actors would likely change their practice if they were aware of this study	1
	Study results likely to stimulate further research	1	Study results likely to stimulate further research	1

COI = conflict of interest; GEM = global emergency medicine; IRB = institutional review board; NGO = nongovernmental organization; RCT = randomized controlled trial; UN = United Nations.

supplementation is not beneficial and may even be harmful. In children older than 6 months, however, zinc supplementation may shorten the course of diarrhea by 10 hours and reduce the number of children who have continued diarrhea at 7 days. In the subpopulation of children greater than 6 months of age with moderate malnutrition, there is high-quality evidence that zinc supplementation may reduce the length of the episode by slightly more than a day. Furthermore, in their randomized, double-blinded controlled trial, Riaz et al.⁷ found that administration of the probiotic Saccharomyces boulardii shortened the course of diarrhea by 12 hours. Page et al.8 evaluated crystal VC immunochromatography as a rapid diagnostic test for cholera in the Democratic Republic of Congo. In comparison to a modified reference standard, the rapid diagnostic test was reported to have high sensitivity and specificity, making it a potentially useful adjunct in identifying cholera outbreaks.

Pneumonia is also an important cause of worldwide morbidity and mortality, particularly in children. Two of the 2012 articles examined pneumonia. Das et al. performed a meta-analysis of the evidence for administering zinc in the treatment of lower respiratory tract infections in children less than 5 years of age, finding that zinc does not improve outcomes in these patients. Singhi et al. examined the incidence of developing hypoxemia in pediatric patients with severe pneumonia. The authors found that over half of initially normoxemic patients in the study cohort became hypoxemic during their hospital stays,

suggesting the need for close monitoring of children under 5 years of age admitted with severe pneumonia.

A number of additional articles included in this year's review focused on communicable diseases. Coulborn et al.11 found that the use of teleradiology in Malawi had a significant effect on the diagnosis and management of tuberculosis. Vinnemeier et al. 12 attempted to create an age-dependent clinical decision algorithm for the diagnosis of Plasmodium falciparum malaria in children in endemic areas. Although such a rule would suffer from poor sensitivity, their study does highlight the importance of using palmar pallor as an indicator of anemia secondary to malaria in their study population. Tougher et al. 13 also focused their research on malaria and found that a subsidy program had a significant impact on the price, availability, and market share of for antimalarial combination therapies in seven countries. Cilliers et al. 14 performed a systematic literature review on the use of anti-inflammatory medications for acute rheumatic fever, finding no evidence to support the use of corticosteroids or intravenous immunoglobulins to prevent or reduce cardiac disease. A systematic literature review of community-acquired bacteremia in admitted febrile patients in South and Southeast Asia identified Salmonella typhi as the most common cause of community acquired bacteremia.¹⁵ Furthermore, they reported that nearly half of S. typhi strains were resistant to first-line drugs.

Maternal mortality continues to be a heavy burden of disease around the world, and several of the 2012

Table 4
GEMLR 2012 Articles

Category	First Author	Title	Journal
Emergency care in resource-limited settings	Tougher	Effect of the Affordable Medicines Facility–malaria (AMFm) on the availability, price, and market share of quality-assured artemisinin-based combination therapies in seven countries: a before-and-after	Lancet
	Kausar	analysis of outlet survey data Nurses in low resource settings save mothers' lives	Am J Mater Child Nurs
	Das	with non-pneumatic anti-shock garment Short-term therapeutic role of zinc in children < 5 years of age hospitalized for severe acute lower respiratory tract infection	Paediatr Respir Rev
	Lazzerini	Oral zinc for treating diarrhoea in children	Cochrane Database Syst Rev
	House	Estimating the weight of children in Kenya: do the Broselow tape and age-based formulas measure up?	Ann Emerg Med
	Riaz	Efficacy and safety of Saccharomyces boulardii in acute childhood diarrhea: a double blind randomized controlled trial	Indian J Pediatr
	Deen	Community-acquired bacterial bloodstream infections in developing countries in south and southeast Asia: a systematic review	Lancet Infect Dis
	Cilliers	Anti-inflammatory treatment for carditis in acute rheumatic fever	Cochrane Database Svst Rev
	Eizadi-Mood	Admission creatine phosphokinase in acute poisoning: is it a predictive factor for the treatment outcome?	J Pakistan Med Assoc
	Singhi	Potential risk of hypoxaemia in patients with severe pneumonia but no hypoxia on initial assessment: a prospective pilot trail	Paediatr Int Child Heal
	Vinnemeier	Predictive value of fever and palmar pallor for P. falciparum Parasitaemia in children from an endemic area	PLoS One
	Coulborn	Feasibility of using teleradiology to improve tuberculosis screening and case management in a district hospital in Malawi	Bull World Health Org
	Ogwang	Community involvement in obstetric emergency management in rural areas: a case of Rukungiri district, western Uganda	BMC Preg Childbirth
	Seward	Association between clean delivery kit use, clean delivery practices, and neonatal survival: pooled analysis of data from three sites in south Asia	PLoS Med
	Liu	The gap in injury mortality rates between urban and rural residents of Hubei province, China	BMC Public Health
	Groen Ameh	Untreated surgical conditions in Sierra Leone The impact of emergency obstetric care training in	Lancet Int J Gynaecol Obstet
	Page	Somaliland, Somalia Evaluation of rapid test for the diagnosis of cholera in	PLos One
EM development	Henry	the absence of a gold standard Prehospital trauma systems reduce mortality in developing	J Trauma Acute
	Sun	countries: a systematic review and meta-analysis The emergency first aid responder system model: using	Care Surg Emerg Med J
	Wachira	community members An analysis of clinical practice in a public emergency	Emerg Med J
	Johnson	departments in Kenya Clinical skills and knowledge requirements of health care providers caring for children in disaster, humanitarian and civic assistance operations: an integrative review of the literature	Prehosp Disaster Med
	Mahabir	Attitudes of ED staff to the presences of family during cardiopulmonary resuscitation: a Trinidad and Tobago perspective	Emerg Med J
	Mosley	What is the impact of structured resuscitation training on healthcare practitioners, their clients, and the wider service?	Med Teach
Disaster and humanitarian	Mahamud	Epidemic cholera in Kakuma Refugee Camp, Kenya, 2009: the importance of sanitation and soap	J Infect Dev Ctries
response	Kirsch	Satisfaction with the humanitarian response to the 2010 Pakistan floods: a call for increased accountability to beneficiaries	Emerg Med J
	Devnani	Factors associated with the willingness of health care personnel to work during an influenza public health emergency: an integrative review	Prehosp Disaster Med
	Zhang	Hyponatraemia in patients with crush syndrome during the Wenchuan earthquake	Emerg Med J

articles focused on the acute management of obstetric emergencies. First, Kausar et al. 16 found that a nonpneumatic antishock garment could be used effectively by nurse midwives to reduce hemorrhage, decrease emergency cesarean rates, and lower maternal mortality in patients with hypovolemic shock from uterine atony. This device is similar to military antishock trousers and could be a useful first aid measure. Second Ameh et al.¹⁷ evaluated the effect of a 3- to 4-day "emergency obstetric and newborn care" training course on the skills and knowledge of maternity and newborn health care providers in Somaliland. Third, in their descriptive study from rural Uganda, Ogwang et al. 18 demonstrated that use of community practices and support services for obstetric emergencies is influenced by employment status and quality of maternal health care. And finally, Seward et al. 19 examined the association between clean delivery kit use or clean delivery practices and neonatal mortality among home births in Bangladesh, India, and Nepal, showing that clean kits and practices can lower mortality in a child's first 28 days of life.

Injury now exceeds communicable illnesses as a leading cause of death in many countries. Liu et al. 1 demonstrated clear urban–rural disparities in the age and sex demographics of injured patients, as well as in the types of injuries and injury mortality rates in China, with higher mortality in the rural areas. Groen et al. 2 used a population-based household survey to assess surgical needs and to identify surgically preventable deaths in resource-limited countries. The authors found a high prevalence of untreated surgical conditions and attributed nearly a quarter of all deaths in their sample to poor access to surgical care.

Poisoning is also an important cause of injury in many developing countries, and Eizadi-Mood et al.²³ performed a prospective observational study on patients with acute poisoning in Iran, demonstrating that admission creatine phosphokinase was a predictor of poor outcomes in poisoned patients. Creatine phosphokinase may be an important prognostic laboratory indicator in this population.

Care for the pediatric population was again highlighted in an article by House et al.²⁴ The authors compared the commonly used with age-based formulas for estimating weight of children in Kenya and found that that the Broselow tape was the better predictor of pediatric weight.

EM Development

This year, 21% of the articles selected for full review were from the EM development category. Two of these articles highlight the importance of prehospital care. Henry and Reingold²⁵ performed a systematic review and meta-analysis of published data on the effectiveness of prehospital trauma systems in emerging and developing countries. They found that prehospital trauma care interventions are associated with a 25% decrease in mortality in these settings. Sun and Wallis²⁶ published a narrative analysis and postintervention survey describing the establishment of a first responder system in a violent, resource-poor urban district in South Africa. The authors concluded that utilizing locally supported and trained community-based first

responders is a cost-effective method for delivering appropriate lifesaving interventions in emergent out-of-hospital situations.

Resuscitation was the subject of two of the EM development articles. An observational survey found that there was a strong belief by ED physicians and nurses in Trinidad and Tobago public hospitals that family members should not be present during cardiopulmonary resuscitation.²⁷ Mosley et al.²⁸ performed a literature review on the effect of structured resuscitation training programs on knowledge and skill acquisition as well as clinical outcomes. The authors demonstrated that structured resuscitation training consistently improved the knowledge and skills of participants and that knowledge and skills begin to deteriorate starting at 3 months after the training. In settings where structured resuscitation training programs were institutional and no prior training existed, a clear improvement in clinical management and mortality was identified.²⁸

Wachira et al.²⁹ published the first descriptive study of the profile and disposition of patients presenting to large public EDs in Kenya. Their analysis demonstrates a need for gathering basic data on presenting complaints and diagnoses of patients cared for in Kenyan EDs. In addition, they found that most ED care was limited to noncritical cases, and sicker patients admitted to the hospital often had to wait for transfer to inpatient units before receiving important interventions.

An article by Johnson et al.³⁰ spans the categories of EM development and disaster and humanitarian response, focusing on the development of training programs for military personnel providing pediatric care during disasters and humanitarian and civil assistance operations. Based on their review of the literature, the authors concluded that such a curriculum should incorporate specific education on infectious diseases, vaccinations, malnutrition, sanitation, and care of injuries.

Disaster and Humanitarian Response

Whereas last year this category did not have any articles selected for final review, this year 14% of the chosen articles were from the disaster and humanitarian response category. Two articles focused on natural disasters, while the other two highlighted findings from infectious disease epidemics.

Kirsch et al.³¹ performed a multistage randomized cluster sample survey to evaluate recipient satisfaction of humanitarian aid in the first 6 months following the 2010 Pakistan floods. The authors found that fewer than 20% of respondents were satisfied with the response. Zhang et al.³² performed a retrospective study in 17 reference hospitals after the Wenchuan earthquake and described the prevalence of hyponatremia as well as its effect on outcomes among earthquake victims. They found that hyponatremia was associated with high morbidity and mortality for earthquake victims with crush syndrome.

Within the past decade there have been three major influenza-like public health emergencies: severe acute respiratory syndrome, avian influenza, and the H1N1 pandemic influenza. Devnani³³ published an integrative

review of factors influencing the willingness of health care providers to work during public health emergencies such as these with important implications for disaster and pandemic planning at the hospital, regional, and national level.

Cholera still remains a significant public health concern among displaced populations such as in refugee camps. Mahamud et al.³⁴ conducted a case–control study at Kakuma Refugee Camp in Kenya and found that the provision of soap, education on hand hygiene, and cleaning water storage containers may be cost-effective interventions to prevent cholera. This article is a validation of prior work, confirming that hand washing and use of soap are effective means of combating cholera epidemics.

CONCLUSIONS

Global emergency medicine is a field that is rapidly growing in both depth and breadth. As the specialty expands, the body of literature it produces continues to increase and diversify. The articles chosen represent examples of both high-quality and high-impact EM research currently being conducted across the globe. While not an exhaustive list of all global EM articles, this review highlights a sampling of the most current and relevant literature in the field. We hope these articles will promote evidence-based practice, encourage global discourse, and further research in global EM.

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APPENDIX

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DR JEREMY BROWN TO DIRECT NIH OFFICE OF EMERGENCY CARE RESEARCH

The National Institutes of Health has announced in a press release that Jeremy Brown, MD, has been chosen to be the first permanent director of its Office of Emergency Care Research (OECR). Established in 2012 under NIH's National Institute of General Medical Sciences, OECR is a focal point for basic, clinical and translational emergency care research and training across NIH. It coordinates, catalyzes, and communicates about NIH funding opportunities in emergency care research and fosters the training of future researchers in this field. Dr. Brown is currently an associate professor of emergency medicine and chief of the clinical research section in the Department of Emergency Medicine at The George Washington University (GWU). He works clinically as an attending physician at the Washington D.C. VA Medical Center. His NIH appointment will begin in July. Dr. Brown will also represent NIH in government wide efforts to improve the nation's emergency care system. Alan E. Jones, MD, president of the Society for Academic Emergency Medicine, expressed the satisfaction of the emergency medicine community at the establishment of OECR and at Dr. Brown's selection as its first permanent director. "SAEM, along with other emergency medicine organizations, has been very involved in efforts to create a dedicated centralized national office for emergency care research. We are delighted at the progress that has been made since the announcement of OECR's creation last year, and congratulate Dr. Jeremy Brown on his well-deserved appointment as its first director." Dr. Brown is ready for the challenge of heading OECR. "I am excited to join this world-class institution and lead its efforts to improve emergency care in the U.S.," he says. "To pursue this goal, I look forward to partnering with all of the NIH institutes and centers, other government agencies, and a wide range of researchers and clinicians." Dr. Brown replaces Walter J. Koroshetz, M.D., deputy director of the National Institute of Neurological Disorders and Stroke, who had served as OECR's acting director since its inception.