

## One Hospital's Incredible Response to the Aurora, Colorado Shooting

The following article was originally published on Emergency Management's website: [www.emergencymgmt.com/safety/One-Hospitals-Incredible-Response-to-the-Aurora-Colo-Mass-Shooting.html](http://www.emergencymgmt.com/safety/One-Hospitals-Incredible-Response-to-the-Aurora-Colo-Mass-Shooting.html). It highlights the tremendous response the hospital made after a mass shooting shocked their town.

By Elaine Pittman

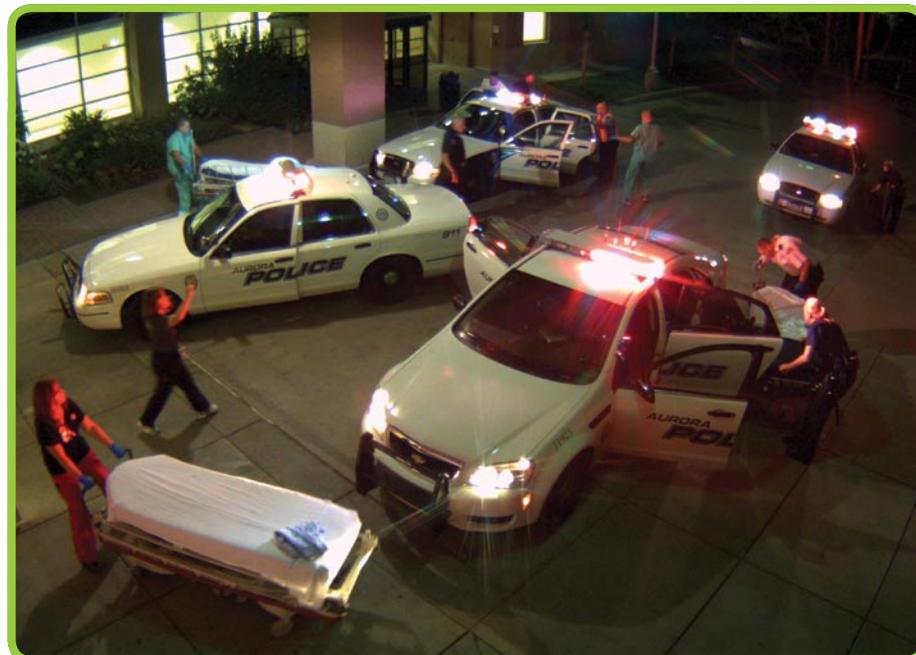
The emergency response to the mass shooting at the movie theater in Aurora, CO., on July 20th follows a quick timeline — and one that probably saved lives. Police officers and firefighters arrived on the scene within about 90 seconds of the first dispatch, and about 15 minutes into the response, the Aurora Police Department requested that people begin to be moved from the scene to health-care facilities.

A few miles away, staff members at the University of Colorado Hospital (UCH) were attending to a full emergency room and a nearly full waiting room unaware of what had taken place at the Aurora Century 16 Movie Theater. In the EMSys, which is used by all Colorado hospitals to track available beds among other things, UCH was on ER divert.

What follows is a look into the University of Colorado Hospital's response, which earned it the Emergency Management's Disaster Humanitarian Preparedness Award.

### Responding to a No-Notice Event

According to police, James Holmes — who was charged with the attack that killed 12 people and injured 58 — entered the movie theater through an emergency exit door at 12:38 a.m. The first 911 call



UCH security cameras captured this image of four police cars arriving in the ambulance bay, each bearing one or two victims. (Image Credit: University of Colorado Hospital)

was made at 12:39 a.m., and Holmes was apprehended by officers at about 12:45.

Shortly after 1 a.m., a request for bed counts went out over the EMSys, which automatically paged several members of the UCH staff, including Patrick Conroy, manager of support services for UCH. And at 1:01 a.m., the first patients from the shooting arrived at the Univer-

*"...but what do you tell those family members?"*

continued on page 3

### INSIDE

- ▶ Stryker introduces the Hoffmann 3 external fixator page 2

---

- ▶ Aurora Response article continued page 3

---

- ▶ Learn how to save lives on the battlefield page 4

---

- ▶ Athletic trainers in orthopaedics page 5

---

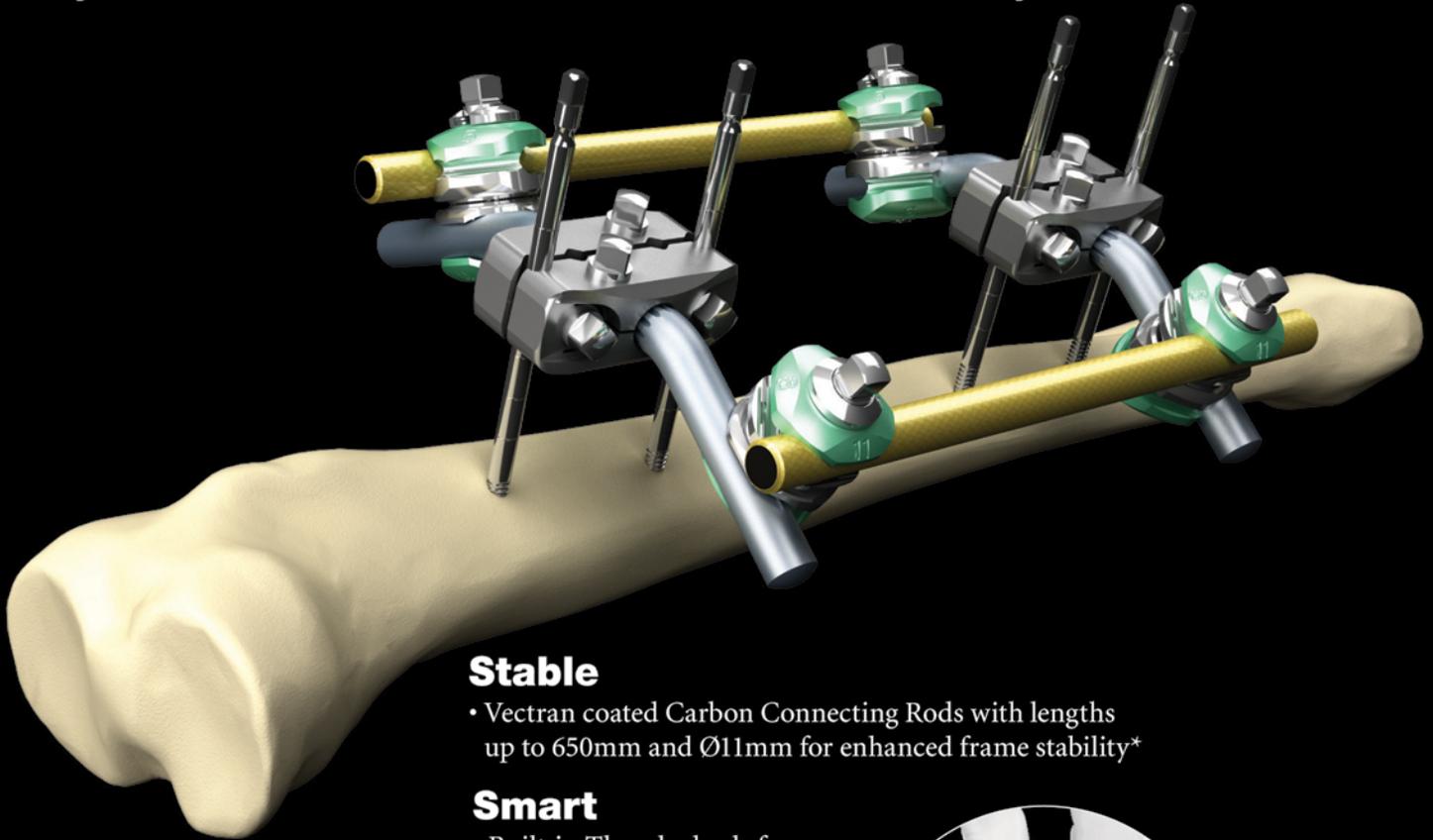
- ▶ Top spring travel ideas page 6

---

- ▶ Plan your retirement the smart way page 7

# Hoffmann® 3

Stryker's most versatile External Fixation System



## Stable

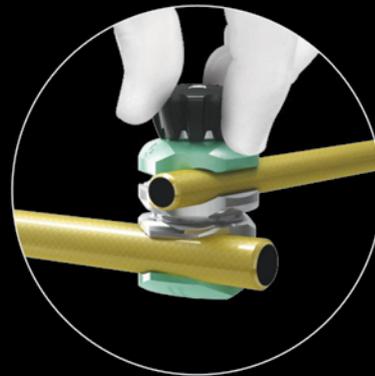
- Vectran coated Carbon Connecting Rods with lengths up to 650mm and Ø11mm for enhanced frame stability\*

## Smart

- Built-in Thumbwheels for provisional tightening
- Delta-Couplings for multiple bar or pin sizes

## Simple

- Snap-Fit connections for multiple bar or pin sizes
- Single point of tightening for enhanced efficiency



\*White Paper (NL11-NA-TR-2465): Comparison between the Hoffmann II MRI and the Hoffmann 3 Systems: The mechanical behavior of the connecting rods and a monoplanar bilateral frame. E. Wobmann, MSc; M. A. Behrens, MSc; S. Brianza, PhD; T. Matsushita, MD, DMSc; D. Seligson, MD. Based upon Biomechanical Test Reports from Stryker Trauma AG, Selzach; BML 11-072 and BML 11-059.

**Stryker Quality. Stryker Experience. Stryker Trauma & Extremities.**

Stryker Trauma & Extremities • 325 Corporate Drive, Mahwah, NJ 07430 • [www.strykertrauma.com](http://www.strykertrauma.com)

A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery. The information presented is intended to demonstrate the breadth of Stryker product offerings. A surgeon must always refer to the package insert, product label and/or instructions for use before using any Stryker product. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Stryker representative if you have questions about the availability of Stryker products in your area. Stryker Corporation or its divisions or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: Hoffmann, Stryker. All other trademarks are trademarks of their respective owners or holders.

Copyright © 2012 Stryker. All rights reserved.

NL12-5-42 Rev 0

Visit us at [www.stryker.com/trauma](http://www.stryker.com/trauma)

## Aurora Response *continued from page 1*

sity of Colorado Hospital by private vehicle. That was just the beginning. Conroy said that within about five minutes of the first patients' arrival, police officers began bringing more victims to the hospital for treatment. Within about 15 minutes, nine Aurora Police Department patrol cars each transported between one and three patients to UCH.

"All this happened before an ambulance ever arrived at the hospital with patients," Conroy said. In total, UCH received 23 patients from the Aurora massacre.

Although UCH was originally on ER divert, it eventually made no difference, Conroy said. "One of the takeaways that the local EMS providers are looking at is how we do distribution of patients in no-notice events."

At 1:30 a.m., Conroy assumed the hospital incident commander position under the emergency operations plan. Although staff members were already working from the emergency operations plan, it was formally announced, which triggered internal notifications and call downs.

UCH then began focusing on its initial priorities, including: ensuring there was adequate staff in the ER; offloading patients who were in the emergency department to the post-anesthesia care unit; securing the area; and working with people who were inquiring about loved ones.

To help the public, UCH established a hotline within the first 12 hours of the emergency. It received more than 2,000 calls of people looking for loved ones. UCH worked with other hospitals and its partner, the Tri-County Health Department, to get each health-care facility's patient list so family members could be directed to the correct location.

"The downside of that, a lesson learned," Conroy said, "is if someone is calling for John Smith and John Smith isn't on any of those lists, we have a pretty good idea that John Smith was still on the

scene awaiting the coroner's response, but what do you tell those family members?"

### Reviewing the Response

Other takeaways from UCH's after-action review include that health-care facilities cannot train, exercise and drill too much, especially for a no-notice event, like the mass shooting in Aurora. "A lot of us in the hospital environment tend to believe we will have some level of notice and control of the number of patients that are coming in the door," Conroy said. "Certainly that didn't happen in this event."

UCH conducts a monthly emergency management activity, such as a policy review, drills, training and table top exercises. Conroy said in 2012 the hospital has completed 34 preparedness activities.

Conroy also addressed other implications for health care and emergency management. Unified command is necessary because of the complexities of large health-care organizations. The liaison officer's role also proved to be critical during the response. The liaison officer coordinated with other hospitals, the local governments' EOCs and the Tri-County Health Department. Conroy also said new technologies will help hospitals get a clearer picture of different situations, and more importantly, help filter out what the information means to the organization.

Another takeaway Conroy pointed out is the importance of Emergency Support Function 8 (ESF-8). According to the

U.S. Department of Health and Human Services, ESF-8 involves supplemental assistance in identifying and meeting the public health and medical needs of victims of major disasters or public health and medical emergencies. Conroy said that many times, there is an assumption that hospitals will be self-sufficient, but in reality that isn't necessarily true. He added that all hospitals must have a plan for how they will sustain themselves for 96 hours, and although the plans look great on paper, they can't be tested in a real-world environment. For example, hospitals relied on local community support during Hurricane Irene and after the tornadoes struck Joplin, Mo., in 2011.

"Unless there is a good ESF-8 partnership that is up and running and dialed in and active, something is going to ultimately get lost and unfortunately it might be lives," Conroy said.

The Aurora tragedy will continue to be studied from all sides of the emergency management community, but it's important to remember that the response was successful. Conroy said every patient at every hospital survived. (The two fatalities at health-care facilities were deceased before they made it inside a hospital, he said.)

"The bottom line, at least from a hospital perspective, no matter what the lessons we ultimately learned from, we know absolutely without a doubt that internally our response was nothing less than extraordinary," Conroy said.

## Did You Know?

Mass shootings have occurred at an average rate of about one per month since January 2009 until January 2013. There have been 43 mass shootings in 25 states over the past four years — or nearly one per month.

*(The Washington Post)*

## Refresh Your Trauma Skills (part two of a series)

As a civilian orthopaedic surgeon you may never need to manage more than one level-one trauma situation at a time or may never face a natural or man-made disaster. If, however, such a situation did occur, would you know how to most efficiently and effectively save lives with the limited resources at hand?

The Disaster Preparedness and Trauma Care Toolbox, comprised of published, peer-reviewed articles, course materials, newsletters, and an interactive, case-sharing blog, is a valuable resource that brings together the combined experience and knowledge of the Society of Military Orthopaedic Surgeons (SOMOS) membership. These surgeons are well-versed in the care of the combat wounded as it applies to humanitarian assistance and disaster relief. The *SOMOS Core Curriculum* and *Critical Skills List*, key components of the Toolbox, are derived from the objectives of the Combat Extremity Surgical Course, a program taught to military surgeons prior to deployment, and are presented in conjunction with the Wheelless' Online Textbook of Orthopaedics ([www.wheelsonline.com/ortho/12821](http://www.wheelsonline.com/ortho/12821)).

The following excerpt comes from the *SOMOS Core Curriculum* Battlefield/Austere Environment Trauma Systems section which details the management of wound treatment on the battlefield.

### II. Battlefield/Austere Environment Trauma Systems

Levels of casualty care – point of injury to definitive care

Echelon I – initial level of care

Military – self-aid/buddy care, combat medic, battalion aid station, shock trauma platoon

Civilian – medical first responders, on-scene paramedics

Echelon II – mobile facilities with enhanced care (i.e., first level of surgery, blood products)

Echelon III – highest level of care within area of operations

Echelon IV – definitive medical and surgical care outside combat zone or area of operations

Transition zone for patients returning to duty

Patients with severe injury stabilized prior to evacuation to echelon V

Echelon V – hospital in continental U.S.

all resources, including reconstructive and rehabilitative services

Evaluate host nation's capabilities and apply levels of care

Four general scenarios

Key questions

Methods to document patient care – interconnected computer systems to handwritten notes (Fig 2)



Figure 2. Treatment notes written directly on patient's dressing.

Essential to convey critical information to next health team

Notes directly on patient's dressing

Paper records may get lost

Helps next level of care better assess and triage incoming wounded

Current methods used in Operation Iraqi Freedom and Operation Enduring Freedom

Medical logistic system

Must adapt to constant change

Effective management – frugal use of resources, accurate anticipation future demands, creative retrieval of resources

U.S. national incident management system

Military's blood system

Extremity care logistical needs for health care operation

Surgical needs

Inpatient/outpatient needs

Guide to assessing local facilities

Safe transport of patients with extremity wounds

Stabilization

Critical components

Aeromedical evacuation

Casualty, medical, aeromedical evacuations

Order of precedence

Medical evacuation categories

Medical considerations/requirements for transport

To review the section in its entirety, visit: [www.wheelsonline.com/ortho/12798](http://www.wheelsonline.com/ortho/12798).

## The Growing Role of Athletic Trainers in Orthopaedics

Excerpted from ORTHOPRENEUR® January 2013, and is used with the permission of ORTHOWORLD Inc. Copyright © 2013, ORTHOWORLD Inc. For questions about ORTHOPRENEUR, please contact Julie Vetalice by phone, 440.543.2101 or email, julie@orthoworld.com.

Healthcare reform has forced orthopaedic surgeons to streamline office efficiency and search for new revenue streams. Adding certified athletic trainers is one option.

ORTHOPRENEUR spoke to Forrest Pecha, Director of Clinical Residency at St. Luke's Sports Medicine, on how orthopaedic practices might incorporate athletic trainers as mid-level providers.

"Athletic trainers can do everything from rooming a patient, entering data into electronic medical records, performing injury assessments, educating patients, drawing injections, prepping patients and assisting in procedures," says Pecha. "It's nearly all encompassing in that the athletic trainer can fulfill the roles of other more traditional health care professionals. Hiring an athletic trainer allows you to place a very versatile multi-purpose professional in your practice that has a deep background in musculoskeletal knowledge"

A deeper discussion followed.

**ORTHOPRENEUR:** How do athletic trainers provide value to an orthopaedic practice?

**Forrest Pecha:** They increase patient throughput, improve clinic efficiency and flow, and provide high patient satisfaction.

Athletic trainers have a very high musculoskeletal education level. It's our foundation. When we're working in an orthopaedic or sports medicine practice, we're able to use our musculoskeletal knowledge to support injury assessments and diagnoses of our patients, presenting our findings to the physician. Following their time with the physician, we can give the patient the necessary information about their injury and follow up care. Taking these few steps for the physician allows his or her time with the patient to be spent more effectively. It allows the physician to focus on physician necessary tasks – HPI, diagnosis, and plan of care – and the remaining time to be

spent developing patient relationships.

**ORTHOPRENEUR:** What revenue-generating value does an athletic trainer add to a practice?

**Pecha:** We see our services as both direct and indirect revenue changers. A number of U.S. studies indicate that athletic trainers are increasing patient throughput by 20% to 23% in any given physician practice setting. The increased patient throughput, increased billings and downstream revenue are quite significant when we're increasing practice productivity on average 20%+. That is an indirect revenue share, and it's important to remember that a 20% increase in office throughput should correlate to a 20% increase in other clinic ancillaries.



For more information on how an athletic trainer can add value to your practice and for information on verifying state regulations and finding certified athletic trainers, see [www.orthopreneurpub.com](http://www.orthopreneurpub.com). Or, scan this Quick Code with your smart phone to take you directly to the article.

**ORTHOPRENEUR**  
EMPOWERING TODAY'S ORTHOPAEDIC SURGEON

**THE KNEE**  
Reconstruction,  
Replacement  
and Revision

Editor-in-Chief  
Javad Parvizi, MD, FRCS

“  
...very latest, evidence-based  
look at the knee from a truly  
global perspective.”

**1-800-342-0454**  
Order online today:  
**DataTrace.com/Medical**

**dtp data trace**  
PUBLISHING COMPANY

## Did You Know?

According to the Violence Prevention Center, the annual cost of gun violence in the nation is approximately \$100 billion.

(Northwestern University, Medill Reports)

# Spring into Travel, Top Vacations for the Season

Spring is a great season to explore a new city. US News (travel.usnews.com) compiled a list of the top vacation spots to explore without breaking the bank or dealing with the headache of tourist crowds. Here is a sample of the top cities and why you should go to each.

### San Diego

Home to several spring festivals, San Diego offers a bountiful list of activities in April and May. From the Coronado Flower show, one the West Coast's largest, to one of the country's favorite zoos; you will not be bored on a trip to this SoCal city.

### Orlando

Want to get away with your kids...or even just get away to feel like a kid again? Celebrate your childhood with a trip to Walt Disney World. Spring is the



Jefferson Memorial with Cherry Blossoms, Washington, D.C.

perfect time for Florida travel. You can beat the heat and the summer crowds.

### Washington, D.C.

Every year between late March and early April, the nation's capital bursts with color and the pleasant aroma of thousands of cherry trees. Springtime weath-

er in D.C. compliments the picturesque image of blossoms around the tidal basin and national monuments.

### U.S. Virgin Islands

The U.S. Virgin Islands offers Carnival in April – an extensive festival known as the best celebration in the Caribbean. Also, winter is peak season in the area, so by going in spring you'll score better airfare and hotel rates.

### Vancouver

Beat the summer tourists of Vancouver and head north to Canada for spring. Festivals abound in Vancouver and warm, sunny days will help drag you out of your winter blues.

### Grand Canyon

Want to explore an incredible natural wonder? The Grand Canyon measures approximately 277 miles in length, up to 18 miles in width and a mile deep. Spring travel offers less crowds and easier access to the breathtaking lookouts.

### Charleston

This charming city offers everything from art galleries and boutique shopping to beautiful beaches and amazing weather. Travel in spring and miss the wave of summer travelers.

For additional top picks around the world and top activities for each city, visit US News's Travel page.

## Editorial

...continued from back page

life-threatening disasters, it may be difficult, if not impossible, to follow policies, and this places everyone at future risk. It is easy to envision multiple injured patients with "incomplete" medical records, "non-standard" or no consent forms, undocumented "time-outs," and poorly documented or undocumented interventions. "Substandard" prepping and draping, which would be against normal policy, may easily occur, especially if there are no clean linens or paper drapes available. Staffing may be against policy, because there are insufficient personnel. What do you do if you need to have three patients in an operating room in order to provide "any" meaningful care? How do you provide expectant care? What do you do when the sterilizers are too slow or do not work? Can you clean instruments with alcohol or rinse them off, and what do you do when you run out of implants and suture? How do you manage when you run out of supplies? When is it better to use traction or unlock nails and casts when that is "not how you have ever done it?" Where do you recover patients? Who is in charge?

Please evaluate your hospital by-laws and policies and procedures. Ask that your disaster plan be reviewed and updated, if that is necessary. Encourage and participate in disaster drills and prepare yourself medically and emotionally for the call, "Doctor, we have a disaster! Can you come?"

L. Andrew Koman, MD

ORTHOPAEDICS IN MOTION  
**Motion**  
Orthopaedics

Editor-in-Chief

L. Andrew Koman, MD

Wake Forest University

Managing Editor

Kaitlyn Kelleher

Published by

Data Trace Publishing Company  
PO Box 1239 • Brooklandville, MD 21022

www.datatrace.com

©2013, all rights reserved.

# Smart Retirement Planning for Physicians

It's never too early to think about retiring. Even if you are still struggling to pay off your medical school loans or are wondering where the money will come from to send your own children to college, retirement planning is important. As a physician, you are probably well aware that people are living longer, more active lives. It makes sense to start as early as possible to plan, save and invest for what could be a very long retirement.

To assist you in your planning, here's an overview of tax-favored retirement plans that may be practical for a medical practice

## Defined Benefit Plan

A defined benefit plan, usually referred to as a traditional pension plan, promises to pay a specific monthly retirement benefit to participants for as long as they live. The employer has to make annual contributions to the plan that will be sufficient to fund the promised benefits, which may be calculated based on a formula that includes such factors as age, years of service with the employer and salary. For example, a pension benefit may be equal to a stated percentage of your average salary for the last five years of employment times your total years of service.

One of the primary attractions of a defined benefit plan is that it permits higher contributions for participants who are older since there is less time to fund the promised retirement benefit. This can be a plus for physicians who may have held off starting a retirement plan until their practice became more firmly established. The maximum annual benefit that can be funded under a defined benefit plan is currently \$200,000 (2012 inflation-adjusted limit).

One potential negative associated with a defined benefit plan is that the regulatory, filing and actuarial requirements are

significant, making this type of plan relatively expensive to administer.

## Opting for Flexibility

Unlike a defined benefit plan that promises a fixed retirement benefit to participants, the benefits that a participant in a defined contribution plan receives at retirement will be determined by the participant's individual plan account balance. This amount is based on employee or employer (or both) contributions to the plan and account gains or losses. Maximum "annual additions" (generally employee and employer contributions) to a defined contribution plan account for 2012 are \$50,000.

There are several types of defined contribution plans. Some of the more common ones are:

- Profit sharing plans. This type of plan allows discretionary annual employer contributions.
- 401(k) plans. This popular plan allows employer contributions and employee salary deferrals. The 2012 elective deferral limit is \$17,000, plus a \$5,500 limitation on catch-up contributions for those age 50 or older.

## Other Types of Retirement Plans

- SIMPLE IRA plans. A Savings Incentive Match Plan for Employees can be an attractive option if you have

100 or fewer employees and want to offer employee pretax salary deferral contributions. Generally, SIMPLE plans have low administrative costs and start-up expenses compared to other retirement plans. They also have minimal filing and compliance requirements.

- Simplified Employee Pension IRA (SEP-IRA) plans. As the employer, you can make annual contributions for each eligible employee that are generally tax deductible. However, the SEP-IRA gives you flexibility to change the amount you contribute based on your practice's financial performance. This type of flexibility allows you to conserve your cash when practice revenue is in a downturn and resume contributions in years when business improves.

## Talk to Us

We can work with you to determine what type of retirement plan will make the most sense for your practice and help ensure your financial security in retirement. Please contact a member of our Health Care Team at 317.472.2200 or [info@somersetcpas.com](mailto:info@somersetcpas.com).

*This article is provided by Somerset CPA's Health Care Team. This document is not intended or written to be used, and cannot be used, for the purpose of avoiding tax penalties that may be imposed on the taxpayer.*

## Did You Know?

The Virginia Tech massacre was the deadliest school shooting in the United States. Thirty-two people were killed and 17 others were wounded on April 16, 2007. The killing of 26 people, including 20 children, at a Connecticut elementary school was the second deadliest school shooting in the United States.

(NBC News)



P.O. Box 1239  
Brooklandville, MD 21022-9978

PRESORTED  
STANDARD  
U.S. POSTAGE  
PAID  
MONTEZUMA, IA  
PERMIT NO. 30

## Editorial: Local Disasters



As recent events, such as the shooting at Sandy Hook Elementary school have demonstrated, disasters and life-changing emergencies can occur anywhere and at any time. As orthopaedic surgeons, are we prepared; are our hospitals prepared? We have the surgical expertise to perform extremely complex reconstructive procedures and damage-control stabilization followed by processes that allow subsequent reconstruction. In a disaster, many of these processes are not applicable. Successful management requires in-place and rehearsed disaster management protocols that mobilize medical personnel to pre-assigned roles, that make available sufficient equipment and supplies, that have plans in place to expedite these processes, that pre-position patient holding capacity, and that provide for triage needs.

Even the smallest hospital needs a disas-

ter process with a staff mobilization phone tree and contingency plans. Hospital by-laws and policy and procedure manuals should address operating requirements in extreme circumstances and the impact with and without state or federal disaster designation or the implementation of martial law. It may be necessary to alter traditional policies, streamline or eliminate operating room policies and procedures, and prepare for the implementation of medical treatment that is not current "standard care." How those issues will be treated may save lives, decrease provider angst, and protect providers and patients. For example, where will you put bodies once the morgue is full? How will you function if the electronic medical record is out of service?

In the aftermath of a disaster, significant psychological, legal, procedural, and medical-legal ramifications may occur. As many as possible of these potential scenarios should be anticipated and managed

preemptively. Staff and providers may experience varying degrees of post-traumatic stress, grief, and guilt. The sequela will be proportional to the number of casualties and the types of wounds. For example, treating pregnant women and children in horrific conditions with loss of life and limb may be particularly difficult. I am still occasionally haunted by the memory of a two-year-old who sustained a shotgun blast to the lower leg and foot that required an amputation in spite of our almost unlimited microvascular capability. This event occurred almost 30 years ago. Recognizing that the choices were correct does not mitigate the psychological stress. Imagine this multiplied 10 to 50 times, where supplies and capabilities are limited and there are no avenues of referral.

If hospital by-laws and policies are not appropriately designed to encompass disasters, the hospital and individual practitioners may be at significant risk. In even small

*continued on page 6*