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ISSN 2168-8044
It’s Time to Experience the Benefits of the AOHP Listserv!

The AOHP Listserv is a popular tool to facilitate practice-related discussions with your peers. Connect with your colleagues across the nation via email to share best practices and dialogue about the challenges and successes of working in occupational health in the healthcare setting. Read on to see what AOHP members think of this valuable service.

I cannot say enough good about the AOHP Listserv!!! Given that we work in such a highly specialized field with many guidelines to follow (OSHA, CDC, etc.), it has been so helpful to reach out to literally hundreds of nurses who know the field. The Listserv represents many levels of experience as well as job types. It is refreshing to post a question and receive responses from across the nation offering insight. I enjoy “chiming in” when I feel my own expertise has something to contribute. Thank you, AOHP, for providing this benefit!!  

Elizabeth Bennett

Listserv allows me to consult with a huge network of occupational health experts regarding any topic and receive reliable and accurate information in a timely manner. I am always impressed with the responsiveness and insightfulness of AOHP members and their willingness to share their knowledge, opinions, resources, tools, and policies. I utilize Listserv often and am so grateful for this benefit that comes with my AOHP membership! 

Trish Novitski

I look at all of the AOHP Listserv conversations and have found so many useful tips, policies, ideas, etc. I have a separate email folder for the discussions that seem relevant to my practice. I refer to them as needed. Thank you for providing this sharing opportunity. 

Theresa M, Schrantz

The AOHP Listserv group has been so valuable to me. In addition to the wealth of knowledge of the people on the Listserv and their willingness to share, it has also come in very handy when I need to either support current practices or find best practices to build a case to change the way we do things. This is networking at its best! 

Jane Burnson

This is the best support system! 

Mindy Scott

AOHP is one of the most important nursing tools that I have at my fingertips at all times. Many of us work independently in our facilities and don’t often have another person to discuss situations or opportunities for improvement. The Listserv is simple to use, and the participants often send their responses very quickly. I consider the Listserv worth the AOHP annual dues all by itself! 

Barb Ragan

I encourage all AOHP members to join the Listserv! It is so valuable to seek information/practice guidelines/support on a large variety of topics from colleagues around the country and get many responses in a short period of time. I don’t know any other resource for healthcare occupational health in the country quite like it. 

Sarah (Sally) M. Parris

Last April I left a hospital with a well-established Employee Health program in place. I transitioned to a hospital where I was starting Employee Health from the ground up. I quickly learned that I had taken for granted the fact policy and procedure had been laid out for me at my previous organization. I never had used the Listserv until I made the transition to the new organization. I was able to build a solid program from the help and guidance of my peers. This Listserv group has proven to be extremely valuable to me and my organization, and I am so thankful for everyone’s transparency and encouragement. 

Brooke Gibson

For more information about the benefits of your AOHP membership, visit 
http://www.aohp.org/aohp/MEMBER SERVICES/MemberBenefits.aspx or email info@aohp.org.

Joining the AOHP Listserv: This Listserv is for AOHP members only. You must subscribe to be included, even if you were a member of the previous AOHP Listserv. Please visit https://aohp.org/aohp/MEMBER SERVICES/Listserv/Listservsigninpage.aspx to access the subscription form. All requests are subject to approval. You will receive an email confirmation of your request.
MISSION

Provide essential tools that empower members to ensure the health, safety and wellbeing of healthcare workers.
This is accomplished through:

- Advocating for employee health and safety
- Occupational health education and networking opportunities
- Health and safety advancement through best practice and research
- Partnering with employers, regulatory agencies and related associations

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STATEMENT OF EDITORIAL PURPOSE

The occupational health professional in healthcare is vital to ensuring the health, safety and well-being of both employees and patients. The focus of this Journal is to: provide current healthcare information pertinent to the hospital employee health professional; afford a means of networking and sharing for AOHP’s members; and improve the quality of hospital employee health services.

The Association of Occupational Health Professionals in Healthcare and its directors and editor are not responsible for the views expressed in its publication or any inaccuracies that may be contained therein. Materials in the articles are the sole responsibility of the authors.

EDITORIAL GUIDELINES


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Publication deadlines for the Journal of AOHP-in Healthcare:

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OSHA Inspections are on the Rise: Will You be a Target, and Will You be Ready?

As employers, healthcare facilities are aware of their responsibility for knowing the safety standards applicable to their employees and to their businesses. But many managers do not understand their rights and obligations during the actual formal inspection process. In recent years, after adding more than 100 Compliance Safety and Health Officers (CSHOs), the Occupational Safety and Health Administration (OSHA) has been increasing the number of inspections, citations, and litigation it undertakes. In addition, beginning October 16, 2018, healthcare employers with high injury and illness rates should now expect more frequent OSHA inspections in connection with the resurrection of the agency’s Site-Specific Targeting (SST) Program. OSHA will use the SST Program to prioritize healthcare facilities and other establishments for health and safety inspections this year. The new Site-Specific Targeting 2016 (SST-16) Program targets employers whose OSHA 300 log data shows unusually high or unusually low injury rates. The program also targets employers who are required to submit electronic injury data to OSHA and failed to do so.

Who is Affected

As of October 16, 2018, and for the next 12 months, federal OSHA will use employers’ electronic OSHA 300A submissions to target employers for comprehensive, wall-to-wall inspections. These inspections may be safety or health inspections, or both, based on employers’ 2016 OSHA 300A Annual Summary forms. These programmed inspections apply to non-construction workplaces like hospitals and medical centers with 20 or more employees that OSHA selects from among what it calls High-Rate and Low-Rate Establishments. If you are in a state with its own OSHA program, such as Virginia, California, or North Carolina, your state-run program has until April 16, 2019 to either adopt the federal OSHA SST inspection plan or to implement its own targeting policies and procedures.

Targets are Random

The SST-16 directs that “OSHA will create inspection lists of establishments with elevated Days Away, Restricted or Transferred (DART) rate, together with a random sample of establishments that did not provide the required 2016 Form 300A data to OSHA.” The employers inspected are chosen using software that randomly selects the establishments from these categories. According to OSHA, including the non-responding employers will deter other employers from failing to report in order to avoid inspection in the future. Similarly, OSHA will verify the reliability of the 300A data by including a sample of low DART rate establishments.

NOTE: Employers who received a comprehensive safety or health inspection within 36 months of the creation of the SST-16 inspection list will not be targeted for inspection again.

OSHA has not described how an employer can know whether its DART rate is high enough to make it a High-Rate Establishment and subject to the comprehensive inspections. Employers that submitted 2016 Form 300A data should compare their DART rates to the industry average. The Bureau of Labor Statistics (BLS) provides several online resources, such as the Incidence Rate Calculator and Comparison Tool. If your DART rate is above the national average for your North American Industry Classification System (NAICS) code, we recommend you prepare for a comprehensive SST inspection. A listing of NAICS Codes can be viewed by accessing the NAICS home page at https://www.census.gov/eos/www/naics/index.html.

Remember - and be aware - OSHA also intends to inspect a random sample of establishments with low DART rates “to verify the reliability of the Form 300A data reported to OSHA.” All employers must remain vigilant in complying with all applicable OSHA standards.

Accurate Reports are Essential

In addition to maintaining a safe workplace, assure your OSHA 300 log reporting is accurate. In our experience, some employers either over-report by including non-reportable incidents or under-report. Either situation could increase your potential for an inspection.

Preparation is Difficult but Necessary

Although employers can somewhat prepare for an OSHA visit when they self-report fatalities, hospitalizations, and amputations, SST inspections are unannounced and random. SST inspections are comprehensive and not limited to record-keeping practices, potentially hazardous areas, or operations with an elevated DART rate. In healthcare facilities, inspections can focus on clinical areas or support areas like maintenance, dietary, and environmental services. Comprehensive inspections take significant time and resources and usually result in substantial citations and financial penalties.
Proactivity Beats Reactivity

OSHA clearly lays out in the SST-16 how the agency plans to use the injury and illness data it electronically collects from employers. Given the impact of the data on programmed OSHA inspections, employers should proactively monitor and address patterns in their injury and illness rates and carefully ensure they submit accurate records to OSHA. As a practical matter, you should do the right thing and get in compliance now to avoid worry about whether your workplace is on a targeted list. Proactivity is far better than reactivity when it comes to OSHA regulatory compliance.

The SST Program is currently set to expire October 18, 2019, at which time OSHA may renew or replace the program, or let it lapse. In addition to the SST program, OSHA implements national and local emphasis inspection programs to target high-risk hazards and industries.

So, Will You be Ready?

The following tips should help you properly handle OSHA inspections:

Warrant Process

The Fourth Amendment of the U.S. Constitution protects citizens (including employers) from unreasonable searches and seizures. The Fourth Amendment applies to OSHA inspections as well. An employer has the right to refuse an OSHA CSHO entry for an inspection without a warrant, unless imminent danger and disaster exists. Obtaining a warrant usually takes two to three days, and the CSHO usually returns with a different frame of mind about conducting the inspection.

Before an OSHA Inspection

Before OSHA visits your healthcare facility, ensure that: all required OSHA-related posters are posted, including OSHA-3165; all mandated written programs are in place and current; all employees have been trained as required by the standards; and all open and obvious hazardous conditions have been addressed.

Inspection Process

1. Welcome the CSHO when he/she arrives on site, and show the officer to a conference room. You should select a location that is private and located close to the entrance so you do not have to walk the compliance officer through any more of your facility than necessary. If the compliance officer happens to see something that may be a violation, this could provide the basis for a citation and/or expansion of the inspection. Ask to see the compliance officer’s credentials, and make a copy of them.

2. Tell the compliance officer that you need to notify management and safety personnel. The compliance officer should not be allowed to enter the facility without management and safety personnel present.

3. Safety personnel should have equipment on hand to document the visit either by video or photography. Nothing else should be brought into the conference room.

4. You need to understand why OSHA is there. There are three main types of inspections: complaint inspections (conducted in response to a safety complaint filed by an employee); report inspections (conducted in response to a report of an employee death, injury, or illness); and program inspections (conducted under one of OSHA’s emphasis programs, which focus on particular industries or hazards). In some cases, a previous citation might provide the basis for a follow-up inspection.

5. Until 2015, it was the practice of OSHA to look back only three years to establish “repeat” violations under the Occupational Safety and Health Act (OSH Act). In 2015, OSHA increased that period to five years. The U.S. Court of Appeals for the 2nd Circuit reminded us in February 2018 that OSHA is actually not bound by any temporal limitation to establish repeat violations. That means a citation you received in 1997 can be classified as a “repeat” violation today at a cost of $132,598!

6. You also need to know what OSHA intends to do. The inspection should be tailored to the reason for the visit. For example, a complaint inspection should be limited to areas related to the complaint. Program inspections are dictated by the focus of the program — you can obtain more information from OSHA’s website. All inspections should follow OSHA’s Field Operations Manual.

7. You must decide whether to agree to OSHA’s inspection plan. If OSHA identified a legitimate basis for the inspection and an appropriate inspection plan, then you might decide to allow the inspection to begin. However, if you have concerns, you have the right to refuse entry and require OSHA to return with a warrant (unless there is an imminent danger, in which case OSHA must be permitted immediate entry). If you require a warrant, OSHA will have to persuade a judge that its intended inspection is appropriate.

8. Limit the inspection to specific machinery involved, and never agree to a wall-to-wall inspection. In the event that the scope and parameters cannot be agreed upon, you may require the compliance officer to present a warrant before being permitted to conduct the inspection. Employers are often nervous about requiring a warrant; however, you have the right to do so. OSHA understands this, and is not permitted to retaliate against you in any way. Requiring a warrant can be an effective way to impose fair parameters for the inspection.

9. Identify the most direct inspection route possible to avoid giving the compliance officer additional reasons to review areas outside the agreed-upon scope and parameters.

10. The compliance officer will likely request a copy of your OSHA 300 Log, as well as the company’s
safety policies that may be involved in the investigation, including lockout/tagout, respiratory protection, hazard communication, and so forth. Generally, the company has eight hours to produce requested materials.

11. Do not chat with the compliance officer beyond basic courtesy, and refrain from introducing him or her to other personnel unless specifically requested to do so.

12. Once the inspection has started, you are only at the very beginning of the process. Every company should also give some advance thought to its “OSHA plan,” identifying specifically how a request for inspection will be handled long before a compliance officer shows up on the company’s doorstep.

13. The compliance officer is required to conduct a closing conference, which may occur at the conclusion of the inspection activity if no further information or inspections are required, or it may occur on a later date. Hold the closing conference in a conference room.

OSHA violations are serious. Should your healthcare facility be faced with potential violations, ensure that your legal counsel is informed and prepared to assist with the OSHA inspection or citation. In 2019, OSHA penalties for other-than-serious, serious, and failure to abate violations have increased by $326, from $12,934 per violation to $13,260 per violation. The penalty for willful and repeat violations has increased from $129,336 to $132,598, an increase of $3,262. Because there will be countless other important decisions, involve counsel early (preferably, as soon as OSHA arrives).

There's still time to buy the latest version of AOHP's renowned Getting Started Manual

This comprehensive resource provides an overview of essential information the novice occupational health professional needs to promote the health, safety and well-being of healthcare workers. Some areas of occupational health practice that require expertise supported by Getting Started include:

- New regulatory mandates and compliance requirements.
- Health hazards associated with new technologies.
- Emphasis on a safe and healthy worksite.
- Recordkeeping processes and requirements.
- Health assessments and fitness for duty policies.
- Injury prevention and case management to reduce workers’ compensation costs.
- Risk management and loss control.
- Emergency preparedness.

If you purchased the 2014 edition of Getting Started after March 1, 2016, contact Headquarters at info@aohp.org to receive 40% off when you order the 2016 edition Getting Started Manual CD.
Editor’s Column

By Kim Stanchfield, RN, COHN-S
Executive Journal Editor

“Well-Seasoned and Needs Added Seasoning”

Do you remember your first several months in employee health? You were most likely overwhelmed with what you needed to learn and uncertain where to start. For most of us, a wise and “well-seasoned” employee health professional entered our lives and became a colleague, mentor, and friend.

One of the very best of the numerous benefits of being an active member of AOHP is networking with the ever-changing mix of knowledgeable, seasoned employee health professionals and new, enthusiastic colleagues. Personally, I learn from everyone. I realized long ago that, in this job, we will never learn everything; not even come close. But the people we meet and work with along the way make this job the best it can be and pretty darn fun, also!

I attended my first AOHP state chapter meeting as a new employee health professional over 30 years ago. Feeling completely overwhelmed and very under seasoned, I wondered what I could possibly contribute to that group of experienced professionals. I was in awe of everyone’s expertise and envious of their confidence. As I got to know the members better, I learned that some had been in employee health for many years, and some were just like me, with much to learn.

Our chapter was fortunate to have a wonderful leader at that time, Em Hunt. Em had established the Employee Health Program at the University of Virginia several years previously and was the obvious chapter leader. I still remember Em’s words to the group at my first meeting: “No matter how long you have been doing this job, you all have something you can contribute.” Inspired by her words, I jumped in and became very involved in AOHP on the state level. All became trusted colleagues and long-time friends. In time, I became more involved with AOHP on a national level and many more were added to my list of trusted colleagues and good friends. I continue to learn and be inspired by these fine professionals.

Are you new to employee health and AOHP? Are you aware that you have a whole network of wonderful professionals who can assist, advise, and inspire you?

Are you well-seasoned? Have you helped a newer professional and member recently and found that you learned as much from the exchange as s/he did? Do you know how valuable sharing your experience can be?

Whether you are new to AOHP or have been with us many years, you are what makes this organization great!

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ABOHN was established in 1972 to provide certification programs for Occupational Health Nurses and is the sole certifying body for Occupational Health Nurses in the United States.

The ABOHN certification examinations have met and maintain the very rigorous standards required for accreditation by the National Commission for Certifying Agencies (NCCA) of the Institute for Credentialing Excellence (ICE).

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No Quick Fix: Safety Cannot be Reverse Engineered

In one of my previous lives, I was an instructor at the U.S. Air Force Emergency Management School. At the same time, my wife taught second grade students at the local elementary school. We used to marvel – and laugh – at how similar some of our students were in terms of looking for seemingly quick ways to finish their work, pass their tests, and avoid really bearing down and studying hard. Like any group, we both had: high achievers – those who would intently focus during class, study at night, and deliberately excel on every assignment; low achievers – those who wouldn’t try at all; and everything in between, including those with a “7-0, good to go” mentality (70% was the passing score on exams during the course).

A Lack of Effort

In my wife’s classes, the second graders who didn’t want to study or work hard during class would usually attempt to complete their assignments in as little time as possible so they could get back to not working, even if it meant getting the answers wrong. If the assignment was homework, these students would usually just not do it at all. In either case, these students would usually find themselves in danger of failing at some point during the school year, an issue easily rectified in most cases by simply doing their work. However, even knowing this, many would still wait until they were danger of failing before actually doing anything about the problem.

In the case of my Air Force students, the same issue usually existed with those who chose not to study or work hard. They would try to sleep during class, not attend study sessions, and not study in their rooms at night. They would simply hope to pass their exams on whatever knowledge they had – and luck. In many cases, these students would find themselves with a failing exam or field demonstration grade (each of which could fail them out of the school) at some point during the 3.5-month course.

When this happened, the failing student’s performance record would be evaluated by the instructor staff and leadership to determine if the student would be allowed to re-test, “recycled” back through the course block he or she failed, or removed from the course altogether, resulting in transfer to a different school or dismissal from the Air Force. Needless to say, anyone wanting to remain in the Air Force would need to prove a reason for the instructor team to allow a retest or recycle. If the student didn’t show any effort during class, didn’t attend study sessions and, overall, didn’t show any interest in even trying to pass, there would be no reason to allow him or her a second chance.

No Quick Fix

With these heightened stakes, many students who failed their exams would try to find a way to invalidate test questions or make up enough points to barely pass. For example, if a student earned a 68% on an exam requiring a 70% to pass, that student might challenge a test question by claiming invalidity to get the two points necessary to pass. Usually, the claim was, “If that invalid test question was thrown out, I would have passed.” In reality, it wasn’t the one test question that made the student fail – even if the question was invalid – but instead the other 15 questions he or she marked incorrectly. Had the student studied, the one question now being claimed to be invalid wouldn’t have made a difference. Instead, the student was attempting to reverse engineer the grade to try to pass the exam.

In another example, for those students who were granted an opportunity to re-test, many would request a review of their failed exam. During these reviews, some of these students would only show interest in the specific questions they missed. Instead of studying the concepts on the exam and seeking a better understanding of all the material, these students were hoping they could simply make up the questions they missed to bring their score up to a passing grade.

There are a number of issues with this idea. For example, the student doesn’t actually gain a better understanding of the testable material. Instead, he or she only learns a handful of specific questions in an effort to barely pass the second try at the exam. Additionally, this concept only works if the test remains the same. If any questions change on the second attempt, there is a significant chance the student will again fail. The only way to become successful in a legitimate, valid, and reliable way is to study, learn the concepts, and gain a broad understanding of the testable material. With all of this said, what does this have to do with safety? Safety, like schoolwork and tests, cannot be reverse engineered.

No Safety Management, No Validity or Reliability

Many organizations track lagging indicators in safety to supposedly determine progress. They set targets for their recordable rates, DART (Days Away, Restricted, or Transferred) rates, or other indicators, and then report them on a recurring basis, often using spreadsheets and...
colorful boxes to illustrate “good” and “bad” rates. However, many organizations will not, even while tracking lagging indicators, have a definite safety management process. Ultimately, without a complete package - hazard analysis, hazard controls, an information/communication program, leading indicators to validate hazard control use and target unsafe behaviors and conditions, lagging indicators to track progress after validating hazard control use, and investigations to follow up on incidents and ensure preventive and corrective measures – trying to affect lagging indicators is like trying to pass a test without ever studying.

I’ve seen many organizations pontificate and argue about why their incident rates are what they are without having analyzed hazards or implemented hazard controls. I’ve seen organizations argue about why employees were injured without ever having trained those employees on hazard control use. I’ve seen some organizations argue about why employees were working unsafely without ever having implemented a hazard control for the process that injured the employee.

Ultimately, without a safety management program, even talking about lagging indicators is a moot point. Like trying to pass a test without making an effort in class or studying, trying to affect incident rates without a safety management program is a lost cause. Furthermore, should a question of the organization’s diligence come up (as in a deposition or otherwise uncomfortable situation), it’s almost impossible to defend a bad lagging indicator without a safety management program to show an effort. Safety cannot be reverse engineered.

**Investigations are Only Part of the Program**

Some organizations with heightened incident rates have asked me for recommendations on how to improve their safety culture. After conferring with them on the need for a hazard analysis, hazard controls, an information program, leading indicators, lagging indicators, and investigations, several of these organizations have attempted to forego a full-circle program and simply investigate the most recent incidents that occurred within their organization. In short, instead of trying to truly understand safety by thoroughly identifying, assessing, and controlling the hazards in their processes, these organizations were attempting to only identify and correct single unsafe conditions or behaviors – after the incident had occurred.

For example, if an employee was injured by not using a hazard control, the intended course of action was to call that employee into a meeting and write a performance improvement plan. While this is a valid course of action as part of a safety management plan (when applicable), my recommendation to them was to determine what the employee was doing, what hazard control was needed, how to communicate that hazard control expectation to the team, and how to validate that all employees are using that hazard control. This, in turn, would allow for safe behaviors and conditions across the whole team instead of simply calling out one employee and hoping that he or she wouldn’t repeat the injury-causing behavior while other employees are still possibly working unsafely.

This is exactly like trying to pass an exam on the second try while only studying the missed questions. It doesn’t provide an understanding of the whole situation; it only allows for a few specific examples. Furthermore, there’s a significant, if not absolute, chance that the next incident will be totally different than the last. Only investigating specific incidents, in a best-case scenario, prevents a few specific incidents from being repeated. It does not, however, create continual improvement in hazard identification, assessment, and control. Again, safety cannot be reverse engineered.

**Don’t Get Stuck in the Past**

It’s unfortunate when organizations get stuck in the past and only focus on lagging indicators. Lagging indicators are simply rates of injuries that have already happened. If we know how and why these incidents occurred, we can transfer this knowledge into our continual hazard analysis, improve our hazard controls, communicate them, and begin to validate their use. With this, we can work toward continually improving safe behaviors and conditions instead of arguing and pontificating over lagging indicators.

I’ve seen many organizations stuck in the rut of trying to make lagging indicators look better by arguing about incident culpability or recordability, all the while without a safety management program to even show due diligence in hazard control. I’ve seen organizations try to improve safety by only following up on specific incidents, as if preventing repeats of those exact scenarios will allow for safe behaviors and conditions without ever identifying, assessing, and controlling hazards.

Safety cannot be reverse engineered. It has to be a proactive effort stemming from the organization’s leadership and integrated into the whole team’s processes and culture. Otherwise, trying to change a safety culture is just like trying to pass a test without studying; we have to put in the hard work up front to achieve positive results. It can’t be done after the fact.

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**THANK YOU!**

AOHP thanks OSHA for providing the Safe and Sound article on Workplace Violence that was published in the Vol. 38, No. 3 issue of the *Journal*. We look forward to printing additional OSHA articles in upcoming issues.
Exposure Injury Reduction Strategies: Results that Protect Lives

By Linda Good, PhD, RN, COHN-S; Terry Grimmond, FASM, BAgSc, GrDpAdEd&Tr; Jane Burnson, RN, BS; Kerry Cassens, MSN, MPH, RN, COHN-S; Lucy Castellanos, MSN, FNP-BC; Natalie Guynn, MSN, NP-C; Peg Johnson, RN; Dawn Lantz, MSN; Pamela Morcom, BSN, RN; Jill Peralta-Cuellar, RN; Sheri Tadlock, BSN, RN

Since 2011, the Association of Occupational Health Professionals in Healthcare’s (AOHP) EXPO-S.T.O.P. study (Exposure Survey of Trends in Occupational Practice), has provided “high-level” national blood and body fluid exposure data. With Massachusetts and EPINet databases providing valuable detailed “How” data, it is gratifying to see EXPO-S.T.O.P. develop into the largest “How many” survey, with 224 hospitals across 33 states supplying their 2017 percutaneous and mucocutaneous exposure data this year. The national rates, presented at the 2018 AOHP Conference, are shown in the table below:

A study of this breadth assists organizations in comparing their exposure rates with a national rate; however, rate comparisons alone will not bring about the vital goal of eliminating potentially life-threatening body fluid exposures to healthcare workers. To reach this goal, proven “Best Practice” safety strategies must be put into practice and must become the new normal. Each year, the EXPO-S.T.O.P. study has identified hospitals that have achieved exposure rates significantly below the national average. We can learn from the occupational health professionals practicing at these “Exposure Aware” organizations as we progress on our shared journey toward eliminating bloodborne pathogen (BBP) exposures among those in our care.

In 2017, we interviewed clinicians from “Exposure Aware” hospitals, who shared many of their strategies for achieving their remarkably low rates. Common themes emerged: Education and Training; Communication; Implementation; and Engagement. At this year’s AOHP National Conference we wanted to expand on these “Best Practice” tips, so in addition to sharing preliminary 2017 data, we asked audience members to share “What’s Working” and “What’s Not” when it comes to their own experiences with reducing exposure injuries.

We asked participants what innovations they have implemented that have reduced BBP exposures at their facilities. And just as important, the group was asked to share challenges they were still experiencing, recognizing that BBP exposure prevention tests even the most successful programs. In addition, we reached out to colleagues from hospitals recognized as this year’s “Exposure Aware” facilities who were unable to attend the conference, and several took the time to share some of their successful strategies. Once again, responses are grouped to previously identified themes.

Education and Training—Members shared:
- “What worked for us is A LOT OF EDUCATION… at New Hire Orientation, Unit Orientation, Annual Refresh, and every time an employee sustained an exposure.”
- “We have employees complete a module on exposure when a stick or splash occurs.”
- “We emphasize ‘coaching’ rather than a disciplinary focus.”

Communication—Members shared:
- “We had a ‘Go Slow with Sharps’ campaign to raise awareness of risk while using needles and other sharps.”
- “Face Shield is the New Glove” campaign has helped employees incorporate this safety precaution into their everyday practice.”
- “We were able to reduce insulin administration-related sticks from 49% of our injuries to zero by changing to a retractable device. Communicating this success to Administration has made an impression.”

### EXPO-S.T.O.P. 2017 Percutaneous & Mucocutaneous National Exposure Hospital Rates

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<th>Category</th>
<th>Rate/100 Full Time Equivalents (FTE)</th>
<th>Rate/100 Occupied Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percutaneous Exposures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall (All Hospitals)</td>
<td>2.5</td>
<td>27.7</td>
</tr>
<tr>
<td>Non-Teaching Hospital</td>
<td>2.0</td>
<td>16.5</td>
</tr>
<tr>
<td>Teaching Hospital</td>
<td>2.7</td>
<td>32.4</td>
</tr>
<tr>
<td>Mucocutaneous Exposures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall (All Hospitals)</td>
<td>0.87</td>
<td>9.6</td>
</tr>
<tr>
<td>Non-Teaching Hospital</td>
<td>0.72</td>
<td>6.0</td>
</tr>
<tr>
<td>Teaching Hospital</td>
<td>0.93</td>
<td>10.9</td>
</tr>
</tbody>
</table>
• “After standardizing to a ‘Safe Zone’ and a needle accountability process in the OR, daily huddles were implemented, used to identify problems or issues with the new process, correct deviation from standard, and celebrate success.”

Investigation—Members shared:
• “When an exposure happens, the employee is counseled by the Employee Health nurse on HOW and WHY the incident occurred.”
• “We ask the associate to describe in detail how they used the safety device. This is a good way to discover bad habits without being disciplinary.”
• “If any poor practices are discovered, the manager discusses this practice at a staff meeting because others may be doing the same things.”
• “I ask ‘How could this have been prevented?’”

Engagement—Members shared:
• “All blood and body fluid exposures are reported to Environment of Care, Infection Control, and Process Improvement monthly.”
• “Commitment to the ‘Neutral Zone’ by the whole surgical team was key to bringing down exposures in our OR.”
• “When an exposure occurs, we require that the employee’s manager participate in the root cause analysis of what factors went wrong.”
• “We have a commitment by leadership to support the new processes, and monitoring it daily and holding each other accountable have been the key to the success of preventing sharps exposures in our OR.”

In addition to sharing successful initiatives, participants were also open about challenges experienced in the area of BBP exposure. Some of these included:
• Resistance to change in the OR: “Some older surgeons are ‘stuck in their ways’ and won’t consider using a ‘Neutral Zone’ or things like blunt sutures.”
• Cost as a barrier: “Between Group Purchasing contracts and overall financial challenges, it is very difficult to champion change to a new, potentially safer needle.”

• Employees with repeat exposures: “We have employees getting multiple sticks in one year—what is the best way to deal with this?”

One factor acknowledged repeatedly in exposure discussions is that of increased workloads on all staff, including occupational health departments. Ironically, greater workloads mean more exposures in both nurses and doctors, and we believe the stress, rushing, and fatigue that accompany higher workloads may be a contributing factor in the significant rise (19%) in sharps injuries in the last three EXPO-S.T.O.P. national surveys. We also believe that under such stress, fail-proof and simple safety-engineered devices are crucial, as is competency-based training.

A Deeper Look
Several AOHP colleagues shared details of their success in reducing exposures at their facilities.

Jane Burnson, Employee Health at a hospital in the Midwest, shared her experience:
We review all sharps injuries and compile and study the data for trends/issues. We have an ongoing campaign on safety; our mascot is a Porcupine. We have education that starts with orientation and continues through annual Computer Based Learning. We continually place posters at employee entrances that feature safety. We do a deep dive with every sharps injury and identify issues/provide education as indicated. All are reported through our Environment of Care and Infection Prevention committees. We are working on putting together a “Post Exposure Huddle” similar to our “Post Fall Huddle” to gather information immediately after it occurred and to address any safety issues of an urgent nature.

Kerry Cassens, Director of Employee Health at a hospital in the Southwest, shared her experience:
At our 260-bed hospital, there was a problem with preventable sharp injuries (SI) occurring in the Operating Room (OR) and in the Sterile Processing Department (SPD). I had previously met with managers of OR-SPD to discuss SI concerns without resolution of SI, so involved senior leadership to make OR-SPD SI prevention a priority. In response, the OR manager and SPD manager convened a task force, including educator and frontline stuff, to design and implement a sharp safety plan. The plan included creating a “safe zone” in the OR and the circulating nurse removing sharps from the instrument casket prior to return to SPD. Daily huddles were held in OR to review sharp safety process and near misses and to hardwire the new processes. In 12 months pre-implementation there were 13 SI in OR-SPD; in five months post-implementation there have been zero SI events. Keys to success were involving frontline staff, setting clear expectations and processes for sharp safety, and daily monitoring of effort/results.

OR and Emergency Department are where currently 30% of our SI occur. It is important to stress consistent monthly trending of sharp injuries. We have implemented a team member safety committee site specific with follow up for every injury. We engaged the medical chief of staff at each of the hospital sites so we can stress the importance of safety for providers. Last, if an injury occurs, the team member is required to sit with the Employee Health nurse where coaching regarding safe injection practices occurs, return demonstrations are completed, and the injured healthcare worker has an opportunity to provide feedback regarding opportunities for improvement.

Pamela Morcom, Supervisor, Employee Health at a hospital in the Pacific Northwest, related her experience:
In 2008 we made several changes that have resulted in a reduction in both Sharp Injuries (SI) and splash exposures. The first change was to implement needles with a retractable feature. Prior to this time, 49% of our needlesticks were from insulin syringes that were not retractable. Since implementation, our insulin administra-
tion-related SI rates have gone to zero. Splashes were increasing, so we developed our education program “Face Shield is the New Glove”. Staff are to wear the mask with face shield when disposing of body fluids, flushing J-peg, emptying hemovacs, or any other time there is a chance of a splash. We reinforce education when rounding with the Safety Officers. We also educate staff to slow down whenever they have a sharp in their hand and to speak up if they see a co-worker doing something unsafe. After a needle-stick or body fluid splash, Employee Health writes up Lessons Learned, which includes an SBAR to review what went wrong. These are sent to the Charge Nurses to review with staff at their huddles. Anytime we are looking at a new product, staff trial it and give their feedback.

Jill Peralta-Cuellar, Manager, Employee Health Services at a hospital on the West Coast, related her experience:

We use a process known as Collaborative Injury Prevention (CIP) for all types of employee injuries and find it especially effective for sharps injuries and blood exposures. The CIP group is above and beyond the incident investigation that is done routinely by the management team. The CIP meeting occurs with the employee, the employee’s manager/director, and the Employee Health RN. What will trigger the engagement of the CIP is when one of the following happens in a 12-month period:

• There have been 3 injuries reported.
• 2 injuries with 1 or both going to claim.
• 2 or more of the same injury (sometimes we will extend the look-back period if they have had one or more sharps or blood exposures in the past).

I mentioned this in the discussion because, at times, staff will have more than one blood exposure or sharps injury, especially in high risk areas such as Operating Room or Diagnostic Imaging. We find that the CIP groups have been highly successful in coming up with new ideas to look at the situations related to the exposure/injury, eliminate risk factors, and bring risky habits forward so they are openly discussed and problem solved.

Sheri Tadlock, Supervisor of Occupational Health at a hospital in the Midwest, related her experience:

My campaign to reduce body substance exposures (BSE) began in January of 2017. I had only been in my position since November of 2015. I have worked at my facility for 39+ years, mostly as a bedside nurse. When I came to this position, I was naïve and appalled by all of the needle sticks because we have had safety needles for many years. My first step was to audit supplies to verify that all of the needles were safety needles. I identified four that were not; all four are used to draw medication for anesthesia or procedures and changed prior to being used for the patient.

My second step was to collect data and report the data to committees that included staff as well as management. As I began reporting to the various committees, I would comment if the stick/splash/exposure was preventable. Many groups I speak to are mandated, such as the Environmental Safety Committee and Pharmacy Therapeutics and Infection Committee. These committees are comprised of management and physicians, not necessarily end users.

Early in 2017, I presented my data to our Nurse Quality and Nurse Practice Committee. This committee is made up of one bedside nurse from each nursing unit. I present my data to them biannually.

I am required to review the incident with each employee and complete the “Body Substance Exposure Employee Counseling and Instruction Sheet”. It is at this time I have chosen to speak with the employee to see if they have any thoughts or ideas as to how this BSE could have been prevented. I also ask if they have any questions or concerns. Many times, it is simple as demonstrating how a passive safety device works or teaching younger staff how to “pop” the tab on the newer port-a-cath hubs.

Natalie Guynn, Occupational Health Nurse Practitioner at a large teaching hospital in the Southeast, had a success story regarding resources:

Although our facility and workload have grown over the last 10 years, we’ve had minimal changes in Occupational Health staffing. Our exposures were steady, but zero being our aim, we needed to increase our prevention programs and offer additional support to staff.

We lobbied hard, and our facility created a position for an Occupational Health Prevention Specialist. With this newly created role, we will focus more time on decreasing blood and body fluid exposures. This individual is an RN with clinical experience and knowledge of OSHA laws. She will work directly with employees experiencing exposures and managers of departments, and will also reach out to committees within our facility. She will meet with vendors that provide products to our health system to ensure we are providing the best products and educational resources for our staff. We are excited to see the changes we can make for the safety of those we serve. With extra resources we will strive to reduce the number of incidents and cost of injuries to the health system. We will provide feedback in the future as this position was filled in July 2018.

Also, in addition to this position, because of our patient volume increase, we are incorporating several additional clinical staff from the float pool to assist in our clinic.

The above comments show that a reduction in exposures requires a steely resolve, having zero as our aim, and incorporating “Best Practice” strategies into the daily work of our employees. But it is difficult to achieve alone — it requires teamwork with colleagues with similar determination. Finding “champions” in clinical units and the OR is es-
sential. And we encourage those experiencing challenges to partner with and be encouraged by those who have overcome similar issues.

Leadership support is also a vital factor as confirmed by Gershon, who states, “Employees who perceived strong senior leadership support for safety and who received high levels of safety-related feedback and training were half as likely to experience blood or body fluid exposure incidents.”

We need to remember that what we are doing is required by law. With the requirement to annually seek and evaluate safer technologies to assist in reducing staff exposures, the OSHA 2001 Needlestick Safety and Prevention Act adds legal force behind our continued efforts to protect our colleagues.

About the Authors
Linda Good* and Terry Grimmond** are lead investigators on the AOHP Expo-S.T.O.P. study. Jane Burnson, Kerry Cassens, Lucy Castellanos, Natalie Guynn, Peg Johnson, Dawn Lantz, Pamela Morcom, Jill Peralta-Cuellar, and Sheri Tadlock are AOHP members who shared their experiences with exposure reduction.

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References
Safety Engineered Device Usage and Activation in Six Western U.S. Hospitals

By Terry Grimmond, FASM, BAgSc, GrDpAdEd&Tr

Abstract

Background. The 2001 Needlestick Safety and Prevention Act requires U.S. healthcare facilities to use safety engineered devices (SED) to protect healthcare workers. However, a recent increase in U.S. occupational exposures may indicate SED use may be sub-optimal. This post-disposal audit (PDA) examined sharps container contents to ascertain the frequency and correctness of SED use in a sample of hospitals in the Western United States.

Methods. Reusable sharps containers (RSC) were selected from hospitals serviced by a licensed processing facility in Fresno, CA in September 2018. Using established PDA methodology and wearing protective apparel, the operator opened and decanted RSC, separated hollow-bore needles (HBN) from other sharps, and enumerated HBN into: capped/uncapped non-SED; activated/non-activated/tampered SED; and blunt non-activatable draw-up SED. WinPepi version 2.78 was used to calculate probability (set at ≤0.05) and rate ratios (RR) at 95% confidence limits.

Results. 435 liters of contents from 30 RSC from six hospitals contained 2,089 HBN comprising: 429 (21%) non-SED; 1,493 (72%) activatable SED; and 167 (8%) draw-up SED. Of the activatable SED: 1,442 (96.6%) were activated correctly; 50 (3.3%) were not activated (or partially); and 1 was (0.1%) tampered with. Of Total HBN: 20.5% were not SED; 10.6% were discarded “sharp”; and 12.4% of needles were capped. Results varied widely among hospitals.

Conclusions. Although most SED were activated fully, the proportion of HBN that were not SED (one-fifth) or were disposed of “sharp” or capped (one-quarter), indicates increased use of SED and greater adherence to work-practice policies are required. PDA are a valuable adjunct to sharps injury (SI) reduction strategies.

Keywords: Safety engineered devices, activation, sharps injury, needlestick, work practice, regulations, occupational, healthcare

Introduction

Safety engineered devices (SED) can significantly reduce exposure risk, and the Occupational Safety and Health Administration (OSHA) 2001 Needlestick Safety and Prevention Act (NSPA) requires U.S. healthcare facilities to implement SED and work practice controls to reduce employee exposure. However, in 2012, all U.S. databases showed that the profound impact of the NSPA on SI rates in 2001 had not been sustained. In 2013, the author hypothesized that healthcare workers (HCV) must not be using SED as frequently or as correctly as believed, and conducted a pilot SED audit in Florida and found half the HBN in sharps containers were not SED, and 22% of the SED present were not activated correctly.7 In September 2018 at the Association of Occupational Health Professionals in Healthcare (AOHP) National Conference, it was revealed that U.S. SI had fallen only 7% since 2001 and have increased significantly each year from 2015 to 2017. So the question again arose – is the increasing SI due to infrequent SED use and/or low activation rates? In the safest clinical setting, ideally the contents of sharps containers would show zero to very few non-SED (i.e. no capped or uncapped needles of any type – attached to syringes or not) and all activatable SED activated. This paper presents the results of a second SED audit conducted in the Western United States to ascertain if SED use is sub-optimal.

Methods

Approval was obtained from a licensed facility for processing reusable sharps containers (RSC) (Daniels Health, Fresno, CA) to examine the contents of RSC arriving from hospitals in the region. 5 RSC of 14.5 fill-line liters capacity were selected, as clinical units have the highest availability and use of SED. Approval was obtained from a licensed processing facility (Sharpsmart, Daniels Health) arriving from hospitals as they arrived during the study, and the author was unaware of hospital names until RSC were selected. Patient-room RSC were selected from transporters arriving from each hospital, as it is isolated from factory staff. Patient-room RSC were selected from clinical units that used SED as frequently or as correctly as believed, and conducted a pilot SED audit in Florida and found half the HBN in sharps containers were not SED, and 22% of the SED present were not activated correctly.7 Using an established protocol for post-disposal audits (PDA), the operator wore a face shield, long-sleeve gown, thick apron, covered leather shoes, and heavy-duty gloves. Each RSC was opened and the contents gently decant-
ed onto a large stainless-steel bench with raised edges to prevent sharps spill-off and for operator protection. Only HBN devices were enumerated, as these have the greatest risk of blood-borne pathogen (BBP) transmission.\textsuperscript{1,11} Using long tongs, the contents of each RSC were sorted item by item into:

- Hollow-bore SED
  - Activatable
    - Correctly and fully activated
    - Partially activated or non-activated
    - Tampered with (safety mechanism removed)
  - Non-activatable (blunt draw-up needles or blunt plastic cannulae)
- Hollow-bore Non-SED
  - Uncapped needles
  - Uncapped needle-syringes
  - Capped needles
- Capped needle-syringes
- Solid sharps and solid SED (e.g. suture needles, scissors, scalpels, auto-retract lancets)
- Non-sharp wastes (e.g. syringes, wrapping, gloves, containers, trays, tourniquets)

Safety engineered devices connected by tubing to a non-SED HBN were classified as “non-SED”. Upon completion of the audit, sharps waste was returned to the factory system for destruction and disposal. WinPePi v2.78 was used to statistically compare results between studies.\textsuperscript{12} Pearson’s $\chi^2$ test was used for the analysis of proportions; $P$ values were 2-sided; statistical significance set at $P \leq 0.05$; and risk ratios calculated at 95% confidence limits.

### Table 1. Number of hospitals, RSC, liters of sharps and HBN examined

<table>
<thead>
<tr>
<th>Region</th>
<th>Number hospitals</th>
<th>Number RSC</th>
<th>Liters of sharps</th>
<th>Number HBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. West</td>
<td>6</td>
<td>30</td>
<td>435</td>
<td>2,089</td>
</tr>
</tbody>
</table>

RSC reusable sharps containers; HBN hollow bore needles

### Table 2. Number and proportion of devices by hospital and device sub-category

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Non-safety HBN</th>
<th>SED requiring Activation</th>
<th>Total HBN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uncapped needles</td>
<td>Uncapped Syr-Ndl</td>
<td>Capped needles</td>
</tr>
<tr>
<td>1 (CA)</td>
<td>46</td>
<td>18</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>9.3%</td>
<td>3.6%</td>
<td>24.7%</td>
</tr>
<tr>
<td></td>
<td>19.4%</td>
<td>7.6%</td>
<td>51.5%</td>
</tr>
<tr>
<td>2 (CA)</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>3 (CA)</td>
<td>12</td>
<td>3</td>
<td>61</td>
</tr>
<tr>
<td>4 (CA)</td>
<td>6.0%</td>
<td>1.8%</td>
<td>2.1%</td>
</tr>
<tr>
<td>5 (CA)</td>
<td>6.0%</td>
<td>1.8%</td>
<td>2.1%</td>
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<tr>
<td>6 (CA)</td>
<td>8.0%</td>
<td>4.3%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td>84</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>4.1%</td>
<td>4.0%</td>
<td>9.1%</td>
</tr>
<tr>
<td></td>
<td>20.0%</td>
<td>19.6%</td>
<td>44.5%</td>
</tr>
</tbody>
</table>

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DISCUSSION
The results of this study are significantly improved on those of the 2013 SED audit in Florida.7 It is not clear whether the improvement is due to time, regional differences in work-practice policies, SED availability, or HCW behavior. Notwithstanding the reasons, Table 3 shows that, compared to the earlier study, the 2018 study shows: SED use was higher (P <0.001); SED were fully-activated more frequently (P <0.001); uncapped needles were fewer (P <0.001); capped needles were fewer (P <0.001); and total sharps discarded “sharp” were fewer (P <0.001). Thus, 2018 results indicate sharps practices are significantly safer over those of 2013, with most importantly, the overall percentage of devices being disposed “sharp” being reduced by 75% (Table 3). With such an improvement, why then is the national SI rate increasing? Perhaps the answer is in the quality of SED or the quality of SED education. Or both.

Quality of SED
In addition to asking, “Are we using SED frequently enough?”, we should ask, “Are we using the safest, clinically-acceptable SED available?”

It is logical that, with increasing use of SED, they will be involved in an increasing proportion of SI.13 And it is reasonable to assume that most of these SI will occur prior to SED activation (i.e. during the procedure when the device is sharp). However, if we examine EPI-Net data on SED SI, it shows that a good proportion of SED SI occur during and after activation.13 And EPINet data from 2014-2017 found 20% of SED SI occur after activation,13 which indicates that the activated mechanism is failing to protect the user. SI during and after SED activation has risen significantly from 34% in the four years 2004-2007, to 50% in 2014-2017 (p <0.001).13 This increase may indicate that HCW workloads are causing HCW to not activate the mechanisms mindfully, as sharps injuries increase when HCW are rushed, stressed, or fatigued.14-17 With SI and workloads increasing, a more aggressive stand is needed nationally. We must consider moving to semi- and fully-auto SED whenever staff evaluations find them clinically acceptable.18,19

What Level of SED Use and Activation Should Be Our Target?

SED Usage. Several HBN clinical procedures (e.g. some biopsy needles, pediatric sharps, pre-filled syringes, spinal needles) do not yet have commercially-available SED. Thus, it is not yet possible to achieve “100% SED usage” in an acute care hospital. In this study, the overall SED usage rate was 79.5%; i.e. 20.5% of HBN were non-SED (capped and uncapped). Stringer states that an SED usage of 93% meant that too many non-SED were still being used.9 However, not even a 100% score on SED usage may be acceptable as not all safety devices are safe.20,21

In the 30 years of SED development there have been several “generations” with each new generation being safer, commonly via one-handed semi-auto or fully automated activation.18,19,22 In the United States, United Kingdom, and British Columbia it is a violation of regulations to continue to use SI-prone SED when a safer, clinically acceptable SED is commercially available for evaluation.2,23,24

SED Activation. Non-activated SED carry the same SI risk as non-SED.20 Although activation rates of 95%-100% can be achieved with semi-auto and auto SED,20 acceptable activation rates have not yet been defined. However, 100% activation should be the target.9,19,20 For SI to decrease, SED must be activated correctly every time.21 as 32% of SI can be prevented if all SED are activated.19

Activated SED not only reduce the original user’s risk; they also reduce the risk for downstream exposure to others.22 It is poor use of resources to evaluate SED, pay their extra cost, educate staff in their use, and then use them as conventional devices. Non-activation indicates either: staff dissatisfaction with the SED (perhaps through non-involvement in the selection process); or inadequate education and training in SED use.20,25

The Targets. After conducting SED audits in 80 hospitals in the United States,7 United Kingdom,26 Australia,10 and Canada (unpublished), the author believes that, with safe SED selection, effective work-practice policies, and heightened education, the following targets are achievable and should be adopted:

• SED usage rate of 100%
• Zero SED tampering
• Non-SED usage rate of <2% of all HBN (i.e. 98% of all HBN should be SED)

The <2% non-SED allows for: HBN procedures where no commercial SED are yet available or deemed clinically unsuitable; capped/uncapped needles to be occasionally removed from syringes (e.g. replaced by another needle).

In this study; one hospital almost achieved the <2% non-SED target (with

<table>
<thead>
<tr>
<th>Table 3. Statistical comparison of 2018 (West) and 2013 (Florida) SED studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Activatable SED</strong></td>
</tr>
<tr>
<td>Correctly activated</td>
</tr>
<tr>
<td>Non-activated</td>
</tr>
<tr>
<td>Tampered</td>
</tr>
<tr>
<td><strong>All HBN</strong></td>
</tr>
<tr>
<td>Uncapped needles</td>
</tr>
<tr>
<td>Capped needles</td>
</tr>
<tr>
<td>Devices disposed “sharp”</td>
</tr>
</tbody>
</table>
3%); no hospital achieved 100% SED activation (highest was 98.5%); and 5 of 6 hospitals achieved zero tampered SED. In unpublished studies within the United States, of 29 hospitals the author has sampled, 8 achieved <2% non-SED; and 2 achieved 100% SED activation. No hospital has yet achieved both. The targets listed above are achievable.

But, simply meeting these targets will not ensure SI will be minimized. As stated earlier, to reduce SI rates significantly, these targets need be supplemented by adopting two additional aggressive strategies:

- **Moving to semi-auto or auto SED.** These safety mechanisms require nil or minimal user action and are associated with significantly lower SI rates.9,18,20,27,28,29

- **Instituting staff-wide competency-based SED training and education.**22,26,27,30,31 And, as the decision to not activate an SED is made by the individual, hospital sharps policies should ensure that staff take ownership for their own safety.27

### Post-disposal Audits

Post-disposal audits of SED usage and activation are not new,9,20, 20,25,30,32 and when conducted using a safe, established methodology, are a useful adjunct to SI investigation. Sharps injury databases, either institutional or national, give valuable insights of SED involvement in the injury, but such databases are dependent on voluntary reporting and only show data on devices causing SI; they do not give an indication of SED use and activation in near-misses or when no injury occurred.19 Likewise, purchasing reports cannot give SED usage and activation. Post-disposal audits can serve this purpose and, if conducted or commissioned by individual hospitals or in larger national studies, can assist with defining and targeting additional SI prevention strategies, particularly comprehensive, competency-based education and training19,22,25,27,30,31 with continuous education reinforcement being essential.19

Non-activation or non-use of SED may also lead to discovery of user-dissatisfaction through non-involvement in the selection process.22,30 When sharps containers are source-labelled, activation rates can be traced back to the clinical unit from which they came and, following staff interviews, retraining and/or SED changes can be specifically targeted.

The OSHA NSPA prohibits needle recap-ping and needle removal2, and PDA can include valuable information on these prohibited actions.7,20 PDA can also highlight the need for national SED legislation.10

### Tampering of SED

Tampered SED (removal of the safety mechanism) was evident in one SED in one hospital of this study. It has been found previously in several hospitals in two PDA22,26 and sought but not found in two other PDA.7,10 It is hoped it is a rare occurrence as it indicates user frustration and the belief the SED is safer without the safety mechanism.22 It may also indicate the user (or staff group) was not involved in the evaluation process and/or the hospital was part of a larger purchasing group which made the decision for them.22 Tampering, like non-activation, renders the SED a conventional device, is financially wasteful, and likely increases user risk. When tampered SED are detected, they need to be source-investigated to interview and work with the dissatisfied users.22

### Study Limitations and Strengths

Limitations of the study included: the exclusion of solid sharps (e.g. sutures); the exclusion, when noticed, of surgical or laboratory RSC; the usage and activation of SED at the 6 hospitals may not be representative of all hospitals regionally or nationally; results from the selected RSC may not reflect the hospital’s sharps practices as a whole; it is not possible to determine whether the significant improvement in results of this study over the Florida study is due to differences in study-hospitals’ policies, purchasing, or HCW behavior; the finding of capped needles does not confirm these needles were recapped after use, as capped needles may have been removed from syringes to allow fitting of other needles; it was not possible to determine if some uncapped needles had lost their caps in the decanting process; with some capped needles, capped syringe-needles, and capped non-activated SED, it was not possible to tell if they had been discarded unused; also, it was not possible to know whether the sharp-user’s risk assessment dictated that SED were not required, not appropriate, or not available in certain procedures.

Strengths of the study were in: the number of sharps containers selected; the number and selection process of the hospitals sampled; the separate enumeration of blunt draw-up safety needles; the enumeration of tampered SED; and the enumeration of capped and uncapped needles.

### Conclusions

- SED activation in all 6 hospitals was at a high level.
- A >98% proportion of SED usage should be the target in all hospitals (non-SED <2%).
- The reasons for the national increase in SI are not fully explained by these results.
- Less user-dependent SED and more competency-based learning may be indicated.
- Post-disposal audits provide valuable SED usage and activation data.

### Acknowledgements

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Terry Grimmond, FASM, BAgSc, GrDpAdEd&Tr is Director, Grimmond and Associates, Hamilton, New Zealand. Corresponding Author: Terry Grimmond; terry@terrygrimmond.com

### Conflict of Interest Statement

None declared

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References


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Developing predictive models for return to work using the Military Power, Performance and Prevention (MP3) musculoskeletal injury risk algorithm: a study protocol for an injury risk assessment programme

By Daniel I Rhon, Deydre S Teyhen, Scott W Shaffer, Stephen L Goffar, Kyle Kiesel, Phil P Plisky

Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/injuryprev-2016-042234).

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Caring for the Caregivers: Making the Case for Mindfulness-Based Wellness Programming to Support Nurses and Prevent Staff Turnover

By Sara Belton, PhD, BScN, RN

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AOHP Awards and Scholarships

Julie Schmid Research Scholarship
The Association of Occupational Health Professionals in Healthcare invites proposals for an original research project on current and/or anticipated issues in hospital or healthcare-related occupational health. The Research Scholarship Award is $2,000. Proposals from non-members are welcome. The proposal deadline is July 1. Visit the AOHP website for more information at www.aohp.org.

Other Awards and Scholarship Offerings
AOHP proudly offers several additional opportunities for members and non-members alike. Do you or someone you know deserve to be nominated? Do you want to earn a free conference registration to attend the 2019 National Conference? Nominate someone or apply TODAY!

- AOHP Business Recognition Award – Recognizes a business(es) that supports occupational health professionals, and their membership and participation in AOHP. Nominations close July 1.
- Honorary Membership Award - Recognizes a person(s) who is supportive of AOHP and has made a significant contribution to the field of occupational health in healthcare. Nominations close August 15.
- Joyce Safian Scholarship Award - A $500 scholarship to be used for educational purposes. This scholarship recognizes a past or present association officer who best portrays an occupational health professional in healthcare role model. Nominations close July 1.
- National Award for Extraordinary Member - Recognizes an association member who has demonstrated extraordinary leadership in the field of occupational health in healthcare. Nominations close July 1.
- Sandra Bobbitt Continuing Education Scholarship - Provides annual continuing education scholarships to subsidize the educational efforts of members. Nominations close July 1.
- Ann Stinson President’s Award for Association Excellence – Recognizes a chapter which has demonstrated outstanding performance and enhanced the image of occupational health professionals. Nominations close July 1.

Consider applying for the AOHP awards and scholarships available to you. Learn more at http://www.aohp.org/aohp/ABOUTAOHP/AwardsScholarships.aspx.
Serious adverse events after immunizations are rare. We review the case of a man who, 50 years earlier, experienced a serious adverse neurologic event 2 weeks after receiving influenza vaccine. He had received no subsequent seasonal influenza vaccinations, but after the risks and benefits were considered, he was vaccinated without adverse event that season.

Neurologic adverse events following immunization (AEFIs), such as encephalitis or acute disseminated encephalomyelitis (ADEM), developing after influenza vaccination have been observed but are rare. It is challenging to determine the causal relationship between an influenza vaccination and an AEFI. A 2011 review of causal association between an influenza vaccination and an AEFI found that 4 cases of ADEM had possible causal association with modern-era influenza vaccines in adults, it is more likely to be diagnosed as multiple sclerosis than as an independent recurrence of ADEM.

The influenza vaccine that this patient received in 1969 was a bivalent product that included A2/Aichi/2/68 and B/Massachusetts/3/66 antigens cultured in embryonated chicken eggs. It is unclear how the 1969 vaccine compares with modern-era influenza vaccines in terms of rates of rare AEFIs and how medical experts assessed causality after the AEFI that resulted in the patient’s exemption from all future influenza vaccinations, nearly 50 years ago. However, AEFI causality assessments have become more rigorous over time, under United States and World Health Organization guidelines.

We examine 1 example of an AEFI in a patient who was subsequently issued a medical exemption from future vaccinations. The patient’s original AEFI was documented in 1969. Meningoencephalitis developed in the patient, a 29-year-old member of the US military, 2 weeks after receiving seasonal influenza vaccine. After a brief hospitalization and supportive care, he recovered without sequelae. The patient was given a medical exemption from subsequent influenza vaccinations for the remainder of his time in the military. For the next 48 years, he declined nearly all vaccinations. (In 2011, the patient did receive 1 dose of a vaccine unrelated to influenza.) In September 2017, at 77 years of age, the patient expressed concern to his primary care physician about his level of protection against infections because he was considering moving to an assisted living facility. After discussing risks and benefits with his healthcare providers, he agreed to receive pneumococcal conjugate vaccine 13 in October 2017, followed 1 month later by seasonal influenza vaccine (ccIIV4; Flucelvax; Seqirus, Summit, NJ, USA). He reported feeling well over the subsequent 3 months of follow-up and anticipates that in the fall of 2018 he will receive pneumococcal polysaccharide vaccine 23 and seasonal influenza vaccine.

The influenza vaccine that this patient received in 1969 was a bivalent product that included A2/Aichi/2/68 and B/Massachusetts/3/66 antigens cultured in embryonated chicken eggs. It is unclear how the 1969 vaccine compares with modern-era influenza vaccines in terms of rates of rare AEFIs and how medical experts assessed causality after the AEFI that resulted in the patient’s exemption from all future influenza vaccinations, nearly 50 years ago. However, AEFI causality assessments have become more rigorous over time, under United States and World Health Organization guidelines.

providers may be challenged to determine if, when, and how to administer vaccines to a patient who has had a serious AEFI. Although it may seem easiest and safest to permanently exempt persons from further vaccination, doing so may inappropriately deprive them of disease protection because factors relevant to risk and benefit change over time. We propose that vaccine exemptions should be revisited regularly, regardless of how long they have been in effect.

Acknowledgment

We are grateful to the patient described in this report, who has given his consent to share this information.

About the Author

Dr. Ryan is currently the medical director of the Pacific Region Office of the Defense Health Agency Immunization Healthcare Branch and an adjunct professor at the University of California San Diego School of Medicine. Many of her research publications focus on infectious diseases of military importance.

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References


Disclosures

You Can Be a ROC Star!

AOHP Recruit Our Colleagues (ROC) –
A Better and Greater Campaign.

The Recruit Our Colleagues (ROC) campaign is back, and it's bigger and better than ever! ROC is a great way for members to help AOHP grow while earning rewards that can be used toward education and membership. The new ROC campaign offers five levels of individual awards, as well as an award for the chapter recruiting the most new members.

AOHP members are the organization’s most valuable asset, and the best way to spread the word about the value and benefits of our organization. When looking for ways to recruit new members to AOHP, consider the following:

• Connect with colleagues in your own organization who are not AOHP members. AOHP is not just for nurses. Reach out to physicians and advanced practice professionals who are involved in your occupational health program.
• Connect with providers outside your organization who partner with you in your program.
• Reach out to colleagues from other facilities in your local area.
• Obtain a list of facilities in your chapter’s geographic area, and make “cold calls” to the occupational/employee health employees in those facilities. (Lists were recently provided to chapter presidents). Briefly introduce them to AOHP and refer them to the AOHP website, or offer to send them information. Be sure to let them know what you value about your membership in AOHP.
• Connect with occupational/employee health providers in non-hospital facilities such as clinics and post-acute care.

The new ROC campaign offers a grand prize that includes free registration to the next AOHP National Conference, three nights hotel, airfare reimbursement up to $250, round trip transportation from the airport to the conference hotel (up to $50), and a free AOHP membership for the following year. The total value of this prize is approximately $1,500.

The current ROC campaign period runs from July 1, 2018 through June 30, 2019. There is still plenty of time to work toward a ROC reward, so get busy!

LET’S ROC! The following ROC awards are available:

• **The Whole Shebang** – one award to the member recruiting the most new members (must recruit at least 10 to qualify).
• **Kit and Caboodle** – awarded to members recruiting 10 or more new members, but not the winner of The Whole Shebang.
• **Half Kit and Caboodle** – awarded to members recruiting six to nine new members.
• **Caboodle** – awarded to members recruiting three to five new members.
• **Feather in My Cap** – awarded to members recruiting one to two new members.
• **Pie in the Sky Chapter Award** – awarded to the chapter recruiting the most new members.


Every new member strengthens our organization. Participate in our ROC Revival by sharing the benefits of AOHP membership with your colleagues, and earn rewards that will benefit your practice. For more information, visit www.aohp.org, call Headquarters at 800-362-4347, or email info@aohp.org.

***In order to count as your recruit, new members must list your name as their recruiter when completing their AOHP Membership Application!

Let’s ROC someone’s world!!! Recruit Our Colleagues!
Reach out and share the benefits of AOHP membership with your area colleagues.
WHILE YOU LOOK AFTER OTHERS, WHO LOOKS AFTER YOU? We do.

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• Health and safety advancement through best practice and research.
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