



Healthcare Engineering ASHE Advocacy

2008 HESNI Annual Meeting
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What is Advocacy?

- Derived from the Latin, "to call" or "**to voice**".
- From Wikipedia, it is *the act of arguing **on behalf of** a particular issue, idea, person or animal.*
- From Webster's Online, it is *the act or process of pleading **in favor of** or supporting a cause or proposal.*
- From WordReference.com, it is ***active support**; especially the act of pleading or arguing for something.*



ASHE Advocacy

- Board
- Staff
- Advisory Committee
- Local Chapters
- Members

- Past, Present and Future



The Past

- Watched
 - codes and standards
 - Joint Commission
 - CMS
- Reported
 - Newsletter
 - Annual Meeting
 - Letters



The Present

- Comment and Influence
 - Letter writing
 - Researching
 - Proposing
- Communicating
 - Web site
 - ASHE Flash
 - Information Highway



ASHE Web Site

- www.ashe.org
 - [Ask ASHE!](#)
 - [Advisories & Alerts](#)
 - [Legislative Issues](#)
 - [Joint Commission](#)
 - [NFPA](#)
 - [CDC](#)
 - [CMS](#)
 - [AIA](#)
 - [OSHA](#)
 - [EPA](#)
 - [FDA](#)
 - [USP](#)
 - [Alcohol-Based Hand Rubs](#)



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New Codes and Standards

- USP
- ASHRAE
- NFPA
- HGRC/FGI/AIA Guidelines
- HR378
- The JC
- Green Guide



USP <797>

- A standard for sterile compounding.
- Final publication will be in June 2008.



Where did this come from?

- Prior to 2004 there were several sentinel events regarding pharmaceuticals compounded in healthcare facilities.
- From an FDA study, “Fifty-two of the 66 solutions prepared by local pharmacies were contaminated with bacteria and/or fungi, whereas 1 of 34 samples prepared by pharmaceutical manufacturers was contaminated.”
- NIOSH published a paper in 2004, which cited two cases where health care workers were injured due to exposure with antineoplastic agents.
- The industry put a large measure of the blame on the HVAC systems.



USP <797>

- Buffer Area
 - HEPA (factory and field tested), ISO 7.
 - 30 air changes per hour, minimum of 15 air changes per hour through the HVAC system.
 - Air delivered at the ceiling with low returns.
- Ante Area
 - ISO 8.
 - 0.02 to 0.05" or 40 fpm.
 - Pressure or velocity meters documented daily.
 - Hand washing sink



USP <797>

- Hazardous Drugs
 - Class II Type B Biological Safety Cabinet or Class III Compounding Aseptic Isolator.
 - Physically separated ISO 7 room, 0.01 inch water column of negative pressure.
 - ISO 7 positive pressure Ante Room, with a pressure indicator that can be readily monitored.
 - Stored separately in room with 12 air changes per hour of exhaust.
- Compounding Outside of a cleanroom
 - Compounding Aseptic Isolator.
 - At least 12 air changes per hour.



Illinois Pharmacy

- Title 68: Professions and Occupations Chapter VII: Department of Financial and Professional Regulation Part 1330 Pharmacy Practice Act of 1987 Section 1330.99 Parenteral Product Standards.
- “The pharmacy shall have a designated area for preparing sterile parenteral products...It shall be ventilated in a manner not interfering with the proper operation of the parenteral products preparation apparatus.”



IDPH Pharmacy Ventilation

- Pharmacy Suite
- A) Filters:
 - i) Central ventilation systems shall be provided with prefilters having a minimum efficiency of..... 30%
 - and final filters having a minimum efficiency of..... 90%
 - ii) Units which recirculate air within a room shall be provided with filters having a minimum efficiency of 30%
- B) Space Design Conditions:
 - i) Temperature, drybulb..... 75°
 - ii) Relative Humidity, winter, minimum..... 30%
 - iii) Relative Humidity, summer, maximum..... 60%
- C) Air Circulation:
 - i) Total air supplied to each space shall be as required to maintain space design conditions.
 - ii) Outdoor air supplied shall be no less than 20% of the total air supplied.
- D) Space Pressurization Ventilation system shall be designed and balanced so that space pressure, in relation to surrounding areas of the building, is..... neutral
- E) Recirculation of air within room permitted..... yes



Guidelines 2006 Pharmacy

- 4 air changes per hour
- Positive pressure



Recent Evidence

- From, "I.V. admixture contamination rates: Traditional practice site versus a class 1000 cleanroom," published in the *American Journal of Health-System Pharmacists*—Volume 62 Nov 15, 2005,
 - "The most important variable affecting microbial contamination of admixtures was the aseptic technique of personnel, not the environment in which the drugs were compounded."



ASHE Concerns

- Increase ceiling diffuser coverage from 5-15% to 15-20%
- Increase estimated construction costs from \$50/SF to \$250/SF
- Operating & maintenance cost will increase
- No evidence of improved outcomes or safety



Washington State

- Pharmacy board about to adopt USP <797>.
- Advocacy gathers data and testifies.
- Adoption halted.

The logo graphic consists of a vertical black line on the left, a horizontal black line at the bottom, and three overlapping squares: a yellow one at the top left, a red one at the middle left, and a blue one at the bottom left. The word "ASHRAE" is written in a large, blue, sans-serif font to the right of the vertical line.

ASHRAE

- Focus:
 - Refrigeration processes, and
 - Indoor environments.
- Content:
 - Methods of test, and
 - Performance criteria.
- Types:
 - Method of Measurement or Test,
 - Standard Design, or
 - Standard Practice.
- www.ashrae.org



Recent Proposals

- G29P – Risk Management
- S90.1 – Energy Efficiency
- S170P – Healthcare Ventilation
- S180P - Maintenance
- S188P - Legionellosis
- S189.2P – Green Healthcare
- S191P – Water Conservation
- www.ashrae.org



ASHRAE Guideline 29P

- Guideline for Risk Management of Public Health and Safety in Buildings



ASHRAE 90.1 - 2010

- Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings
- Current edition weak on healthcare
- 2010 to be more inclusive and applicable



ASHRAE 170P

- Ventilation of Health Care Facilities .
- Fourth public review draft.
- Similar but not identical to The Guidelines.



Why is this important?

- HGRC, NFPA, State Codes
- FGI, ASHE and ASHRAE



4th Public Review

- **Closed May 5, 2008**
- Reserve cooling
- Air handling unit design
- Pressure alarms
- Exhaust discharges
- Filter efficiencies
- Space temperature/humidity



ASHRAE 180P

- Standard Practice for Inspection and Maintenance of HVAC Systems



ASHRAE 188P

- Prevention Practices for Legionellosis Associated with Building Water Systems



ASHRAE 189.2P

- **Design, Construction and Operation of Green High Performance Health Care Facilities.**
- The purpose of this standard is to prescribe the procedures, methods and documentation requirements for the design, construction and operation of high performance green health care facilities.



ASHRAE 191P

- Standard for the Conservation of Water Use in Building, Site and Mechanical Systems

The logo graphic consists of a vertical black line intersecting a horizontal black line. To the left of the intersection, there are three overlapping squares: a yellow one at the top, a red one in the middle, and a blue one at the bottom. The text 'NFPA' is positioned to the right of the vertical line, in a blue, sans-serif font.

NFPA

- 70 – 2008 (published)
- 90A – 2009 (closed)
- 99 – 2010 (opens this summer)
- 101 – 2009 (closed)

- www.nfpa.org



NFPA 99

- Healthcare Code
 - Electrical Equipment
 - Electrical Systems
 - Emergency Management
 - Environmental Safety
 - Mechanical Systems
 - Medical Gas Systems
 - Technology



NFPA 99

- "... the NFPA standard originated as number of individual pamphlets that were cobbled together to form a single comprehensive document in the early 1980's. ...NFPA is undergoing a full review and rebuilding of NFPA 99 to produce an integrated document that is scalable for a variety of care settings, while being robust enough to address existing and the emerging risk management needs of each healthcare delivery methodology."



The new 99

- Organized around risk
- A unified and structured document
- A “first stop” for healthcare
- References other codes and standards
- Suitable for adoption



Risk Categories

- Category 1 – Failure will result in imminent mortality or morbidity.
- Category 2 - Failure could eventually result in mortality or morbidity.
- Category 3 - Failure might result in discomfort or inconvenience.
- Category 4 – No impact on patient, staff or visitors.



Schedule

- **Proposal Closing:** 11/26/2007
- **Report on Proposals:** 6/20/2008
Comment Closing: 8/29/2008
- **Report on Comments:** 2/20/2009
- **Notice of Intent to Make a Motion:** 4/3/2009
- **Posting of Certified NITMAM:** 5/1/2009
- **Revised Edition Date:** 2010



AIA Guidelines

- Public comment period: May 15 to September 30, 2008.
- Comments may be made by anyone
 - FGI Web site www.fgiguideelines.org
 - Justification and contact information



Changes

- ICU Toilet Rooms
- Cancer Care (Bone Marrow)
- Ventilation Table
 - Laboratory Ventilation
 - Isolation Rooms



HR 378 Patient Lift Bill

- **Nurse and Patient Safety & Protection Act of 2007:**

To direct the Secretary of Labor to issue an occupational safety and health standard to reduce injuries to patients, direct-care registered nurses, and other health care providers by establishing a safe patient handling.



The JC Emergency Management

- Not count non-compliance with the new emergency management standards in accreditation decisions during 2008.
 - Assess capacities
 - Usage of supplies and resources
 - Build local relationships within the community.
- Following are the specific EPs that this applies to:
 - EC.4.11, EP.9 & 10
 - EC.4.12, EP.6
 - EC.4.13, EP 7
 - EC.4.14, EP.8 & 10
 - EC.4.15, EP.2, 3 & 5
 - EC.4.16, EP.2 & 3
 - EC.4.17, EP.4
 - EC.4.18, EP.4, 5 & 6



Official Statement

- According to Gail Weinberger, Director, Accreditation & Certification Policy & Administration at The Joint Commission, "non-compliance with these requirements will continue to be cited in an organization's report and will be required to be addressed in an Evidence of Standards Compliance (ESC). However, they will not be included in the count of the Requirements for Improvement contributing towards a Conditional Accreditation or a Preliminary Denial of Accreditation decision."



ASHE Advocacy

- ASHE, along with many individuals and organizations wrote letters and provided information to The Joint Commission identifying areas where full compliance with the 2008 Emergency Management Standards is proving to be difficult if not impossible to achieve. Gail also mentioned "letters were included in the materials presented to the Accreditation Committee, and contributed to the Committee's decision."
- ASHE encourages organizations to use this opportunity to continue to assess and develop their Emergency Management program, and build the relationships with community resources to assist with meeting the healthcare organizations mission when responding to an emergency or unusual event.



Green Guide for Healthcare

- **More user-friendly tool** - grouped by facility department.
- **Up to date** - alignment with the 2008 revision of LEED®
- **Expanded scope** - emissions reporting, low-impact grounds maintenance, sustainable food service, and purchasing policies.
- **Emphasis on continuous improvement** - goal setting, periodic performance evaluations, aspirational innovation points.
- **Emphasis on Integrated Operations and Education** - cross-departmental structure, ongoing education.
- <http://www.gghc.org>



The Future

- Active participants
 - creating codes and standards.
- People like you are taking part
 - committees and sub-committees
 - testifying at hearings
 - gathering data



The Call

- To voice on behalf of healthcare engineering in favor of codes and standards that actively support our mission.



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