National Trends in Delivery of Health and Long Term Care: Implications for Safety Codes and Standards
Report of a National Summit

July 20, 21, 2010
Holiday Inn –Inner Harbor, Baltimore, Maryland

Co-organized by
National Fire Protection Association
Fire Protection Research Foundation

Abstract

In recognition of the changing landscape of health and long term care, the National Fire Protection Association (NFPA) convened a small working group of leaders in the health care industry representing the American Health Care Association, the American Society for Healthcare Engineering, the Centers for Medicare/Medicaid Services, and the Veteran's Administration among others to consider how best to integrate these emerging issues into the technical committee dialogue for NFPA health care codes and standards.

The result was the recommendation to stage a unique event: on July 21 and 22, 2010, approximately 110 fire protection and safety professionals as well as various stakeholder groups gathered in Baltimore, MD for a Summit entitled "National Trends in Delivery of Health and Long Term Care: Implications for Safety Codes and Standards" (referred to herein as the Summit). The Summit was jointly organized by the Fire Protection Research Foundation and NFPA and was designed to provide leaders in the health care fire safety community an opportunity to pause and reflect on the safety implications of emerging trends in delivery of health care, long term care and personal care.

On the first day of the Summit, nationally recognized keynote speakers challenged the participants on the emerging demographic, technological, and environmental issues facing the health care industry. On the second day, a representative group of NFPA Technical Committee members met with these speakers to discuss the implications of these issues on NFPA's health care codes and standards-most notably NFPA 99, *Standard for Health Care Facilities* and NFPA 101, *Life Safety Code.*

This Report is a summary of the Summit presentations and the Technical Committee member discussions. Appended are the participant list, agenda and presentations.

Thanks are extended to the program committee members:

> Doug Erickson, American Society for Healthcare Engineering
> Tom Jaeger, Jaeger and Associates
> David Klein, Veterans Administration
> James Merrill, Centers for Medicare/Medicaid Services
> Robert Solomon, National Fire Protection Association

And to the event co-sponsors:

> American Society for Healthcare Engineering
> American Health Care Association

National Trends in Delivery of Health and Long Term Care: Implications for Safety Codes and Standards Summary Report of a National Summit

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Background

Significant changes are underway in how delivery of healthcare, long term care, and personal / in home care are being implemented in the United Sates. Many of these changes or trends will intersect with the safety provisions embodied in the National Fire Protection Association (NFPA) health care related documents including NFPA 99, *Standard for Health Care Facilities,* NFPA 101®, *Life Safety Code®,* NFPA 730, *Guide for Premises Security* and NFPA 5000®, *Building Construction and Safety Code®,* among others.

In recognition of the changing landscape of health and long term care delivery models, NFPA convened a small working group of leaders in the health care industry representing the American Health Care Association, the American Society for Healthcare Engineering, the Centers for Medicare/Medicaid Services, and the Veteran's Administration to consider how best to integrate these emerging issues into the technical committee dialogue for NFPA health care codes and standards. The result was a decision to hold a two day Summit of leaders in the health care industry and the NFPA codes and standards development process to review the issues and explore codes and standards impacts. The Summit was held apart from the normal codes and standards change process of NFPA in order to give Technical Committee members the opportunity to pause and reflect on a number of issues facing the industry, including:

 CULTURAL CHANGE IN LONG TERM CARE FACILITIES: The long term care industry is moving towards a model to create "at home" environments rather than traditional "healthcare" or "institutional" environments. Changes to NFPA 101 and NFPA 5000 are in order for this design concept to be fully realized.

NFPA 99 – 2012 EDITION: The complete restructuring and rewrite of NFPA 99 has been a major undertaking. New requirements have been added, criteria have been consolidated into specific Chapters or Sections, and some areas have been scaled back. Gaining familiarity and understanding of the new edition will be a benefit to the Committees.

TRENDS IN HOME HEALTH CARE: Medical care in the home is continuing to reach new levels. Older residents may be staying in their homes longer thus resulting in expanded use of portable oxygen. Novel programs such as the VA foster family program are placing veterans in private homes in lieu of long term care facilities. Ventilators and respirators are among the other types of equipment that are increasingly more commonplace in homes. The extent that this equipment should be required to meet some or all of the performance requirements of NFPA 99 needs to be considered. In addition, are there any code provisions that should be put forth in the areas dealing with single family dwelling rules to address this trend?

SECURITY AND SAFETY CONCERNS IN THE HEALTH CARE ENVIRONMENT: The 2009 edition of NFPA 101 and NFPA 5000 provided expanded criteria for door

locking in hospitals and long term care facilities. The codes now permit door locking for other than clinical needs. NFPA 99, 2012 Edition has proposed new requirements for security in hospitals. It is crucial that the balance between life safety and security be carefully scrutinized and established.

OUTPATIENT/ OFFICE SURGICAL CENTERS: Longer duration and more complex surgical procedures are now being completed as day or outpatient procedures. In addition, these centers are sometimes co-located in office buildings and shopping malls, thus requiring a more detailed code analysis of the configuration. Trends in this area may require a second look at the ambulatory healthcare criteria in the codes.

HOSPITAL DESIGN IN 2010 BEYOND: Layout and configuration of the code-based requirements for hospitals has remained largely unchanged for the past 60 years. More layers of code regulation and criteria are imposed but the need and benefit is not as clearly defined given recent changes in health care delivery. However, much of the diagnostic and treatment process has also changed during this time thus allowing much of the diagnostic evaluation to be done in the patient room. Previously the patient had to be transported to another floor for tests or evaluation. More portable equipment is now located on patient sleeping floors – often times in the corridor. Corridor width, off corridor storage, fold down work stations, MRI, CAT and PET scan spaces and other components and spaces that might be found in a hospital are always under scrutiny – is it too much, too little or just right?

RESIDENTIAL BOARD AND CARE OCCUPANCIES: Aging in place facilities (aka – Assisted Living) are expected to grow as the boomer generation ages. A review of the trends in this area may trigger or identify the need for certain changes in these occupancy rules. Issues such as mainstreaming the population of individuals with certain cognitive disabilities, increased percentages of the frail elderly and other issues must be addressed as the range of housing options is expanded.

The Program Committee met several times over a six month period in 2009/2010 to develop an agenda for a two day Summit to address these issues. Leaders from the health care industry were identified to speak to each of the trends on the first day; leaders from the NFPA Technical Committees on Health Care Occupancies and Residential Board and Care Occupancies for the *Life Safety Code* and Health Care Facilities were invited to attend and participate in discussions on the impact of these trends on the second day of the event. Tom Jaeger, Chairman of the NFPA Board of Directors agreed to serve as overall Summit Chair and The Fire Protection Research Foundation was invited to manage the logistics of the event and to invite the broader health care and NFPA codes and standards community to attend the first day of the Summit.

National Trends in Delivery of
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Agenda

1. Welcome; Summit Goal   Jim Shannon, NFPA

2. Cultural Change In Long Term Care Facilities   Bonnie Kantor, Pioneer Network;

    Gaius Nelson, Nelson Tremain Architects; Karen Schoeneman, CMS

    10:15 – 10:45   Break

3. Trends In Home Health Care Models   Rick Greene, VHA

4. Hospital Design in 2010 and Beyond   Ray Pentecost, Clark Nexsen

    12:30 – 1:30 Lunch

5. Outpatient/Office Surgical Centers   William E. Lindeman, AIA, WEL Designs

    - Changes in Use, Location and Recovery Time

6. Residential Board And Care Occupancies   Dave Kyllo, National Center for Assisted Living

    - The Thin Line Between Personal Care and Nursing Care for Today's And Tomorrow's Occupants

    3:00 – 3:30   Break

7. Overview of NFPA Health Care Related Standards: NFPA 99-2012 Ediiton

                                    Doug Erickson, ASHE

                                    Rich Bielen, NFPA

8. Summary; Impacts for NFPA Codes and Standards

    5:00   Adjourn

Summary of Presentations

The Summit detailed presentations are included in this document as Appendix B and provide a wealth of data and information on each topic.

NFPA Welcome and Summit Goal

James Shannon, President, National Fire Protection Association

Jim Shannon described NFPA's commitment to healthcare safety standards, reaching as far back as 1927, to the *NFPA Building Exits Code* (predecessor to the *Life Safety Code®).* The greatest challenge in standards development is to be responsive to changing societal needs; the health care industry is currently going through a "tectonic shift" and NFPA standards must adjust with it. This Summit provides a unique opportunity to hear the voice of the health care industry, to inform and engage safety stakeholders, and to provide an environment to facilitate the rapid response of NFPA health care codes and standards.

Cultural Change and the Physical Environment

Karen Schoeneman, CMS; Bonnie Kantor, Pioneer Network

Bonnier Kantor presented an overview of the cultural change movement currently being implemented in long term care facilities in the United States. The basic principles of the movement include: honoring individuality of residents and staff; creating a "home-like" environment; and implementing responsive systems to implement this change. This will involve reorganizing the work in nursing homes and renovating the physical environment, which in practical terms will lead to a smaller and more unstructured, resident directed environment. She explained the likely evolution of resident care from provider directed care wherein facility managers make most care decisions, to resident directed care. The movement has had a major impact on the guidance to surveyors, published by the Centers for Medicare/Medicaid Services (CMS). Karen Shoeneman described the impact that the culture change movement has had on CMS in terms of implementing the improvements in quality of life for residents. She gave specific examples of this change: for example the shift away from nursing home tray service toward alternative dining styles including buffet service and resident cooking and clean up. Other examples include the change in nursing home sleeping rooms toward home like décor, and facility layout to include small communal spaces and shortened hallways. CMS is actively implementing culture change concepts in their programs through changes in regulations, surveyor guidelines, and participation in community education and regulatory development activities.

Culture Change in Long Term Care Facilities

Gaius Nelson, Nelson Tremain Architects

Gaius Nelson provided an architect's perspective on the implications of the culture change movement for long term care facility design. He contrasted the traditional "form follows regulation" approach to design (which has resulted in predictable and often sterile layouts) with relationship-enabling environments that reduce scale and create homelike environments with appropriate hierarchy of space. Through the example of the Green House® model style designs, (Green House Model at Traceway, Tupelo, MS) he illustrated how the building layout can enable a more social environment which can foster better mental and consequent physical health and well being. Features include a gathering space with select amenities including a fire place, open kitchen and dining, and limits on the number of individuals in a single facility. He then described situations where the creation of a home like environment can be in conflict with current NFPA codes and standards provisions, specifically: wall décor, corridor obstructions, cooking facilities, and fireplaces, and summarized specific changes to these codes and standards proposed by the National Long Term Care Life Safety Task Force. He encouraged the health care and fire safety communities to work together to implement the concepts of culture change in long term care facilities.

Pushing the Boundaries: Trends in Home Health Care for Veterans with Chronic Disabling Disease
 Rick Greene, Department of Veterans Affairs Office of Geriatrics and Extended Care

Rick Greene described the Veteran's Affairs Department's (VA) shift in emphasis to non-institutional long term care, driven in part by projected large increases in national expenditures on Medicare and Medicaid and the greatly increasing life expectancy, median age and associated disability of veterans. The VA has controlled patient costs to 0.3% per year for the past 7 years through an increased focus on home based primary care, including the concept of medical foster homes for those with complex chronic illnesses. He described the concept of the medial foster home which merges adult foster home concepts with VA home care. Fire and life safety requirements for assisted living facilities are incompatible with these small facilities (which are often times in private single family homes) and requirements have been developed and implemented through a VA Fire and Safety Information Letter IL 10-2009-008. 100 sites will implement medical foster care by 2012. He described the March 3, 2010 Independence at Home Act which will create a model in Medicare similar to the VA's Home Based Patient Care. This should lead to a large increase in the implementation of these concepts as well as the expansion of tele-health and other electronic health technologies to enable rural implementation. He concluded his presentation with a summary of his perspective on national trends in veteran home care: a shift in care from institutions to homes wherever feasible; medical foster homes as an alternative to nursing homes; consumer directed care for veterans (being piloted at this time); and veteran directed home and community based services wherein veteran's families (or

groups thereof) can use VA funds to select and manage a package of consumer directed home care from a State.

Hospital Design in 2010 and Beyond: Drivers, Impacts, and Trends
A. Ray Pentecost III, Clark Nexsen

Ray Pentecost provided an overview of the six major drivers for change in hospital design. First, the Affordable Care Act (healthcare reform) will have a major downward impact on payments to hospitals from both Medicare and private payers. A second key feature of the act is a focus on quality; thus traditional means of cost management will not be sufficient and a new paradigm to reduce demand must be implemented. He described recent research which indicates that three health risk factors influence the incidence of four chronic diseases which cause 50% of deaths worldwide. Healthy environments must impact these risk factors in order to change the paradigm of health care. A third consequence of the act will be the sudden entry of previously uninsured individuals into the health care system; there is currently an inadequate primary care infrastructure for these individuals which will further increase the pressure on hospital emergency rooms. The demographics of health care, both in terms of the aging population and their geographic distribution were described, illustrating the pressure on acute bed availability particularly in the south and west. Another emerging trend in the health field is increased "meaningful use" of electronic health records. He concluded his presentation with a summary of the potential impacts on health care codes and standards including: home settings as sites of regular care; healthcare settings in retail environments; and modular construction materials/methods to allow building infrastructure to be switched over to other uses.

Trends in Outpatient/Office Surgical Centers: Implications for Safety Codes and Standards
 William Lindeman, WEL Designs, PLC
Bill Lindeman began his presentation with an overview of the impact of the current Medicare reimbursement structure on outpatient facility trends. A current trend is increasing disparity between hospital and freestanding facility reimbursement which is leading to increased financial pressure on non affiliated outpatient treatment centers. Similarly, he noted a lack of understanding of the unique nature of these facilities as reflected in the terminology of NFPA codes and standards and in the lack of comprehensive understanding and consistent application of these standards by AHJs, facility owners and operators and the A/E community. He presented several challenges for NFPA health care codes and standards development:

- facilitate the logical development of safe and "high value" outpatient facilities
- establish parameters to define the role that facilities and equipment/systems play in mitigating clinical risk
- develop definitions that facilitate acuity-specific physical environment standards
- expand/sub-categorize standards to permit acuity-specific physical environment response

- educate regulatory and insurance bodies, to encourage broader application (i.e. more regulation) of "more flexible" (i.e. operationally justifiable) codes and standards.

Residential Board and Care Occupancies
Dave Kyllo, National Center for Assisted Living

Dave Kyllo presented an overview of U.S. assisted living facilities, including fire protection features and resident care needs. He reviewed recent regulatory developments related to staffing and facility requirements (reference 2010 NCAL Regulatory Review). He noted the 81% increase in Medicaid spending toward home and community based care between 2001 and 2007 in the context of trends for the future of long term care. Government reimbursement policies will result in more home based care except for the frail elderly and more clinical services for the elderly in assisted living facilities rather than nursing homes. He reinforced previous speaker's emphases on a patient centered form of care and consequent facility design to include flexibility in design incorporating elements of resident privacy, home-like atmospheres, resident choice, and a strong focus on electronic methods of health care monitoring, delivery and record keeping.

NFPA Health Care Facilities Code Update
Doug Ericson, ASHE, Rich Bielen, NFPA

Doug Ericson reviewed the recent changes underway in the current cycle of NFPA 99 to create a full rewrite and reformat into a risk based code with the elimination of occupancy specific chapters. The document has been completely reformatted to establish clear and consistent fire protection criteria for four risk levels of patient care based on the impact of failure of systems. The Technical Committees on Fundamentals, Piped Gas Systems, and Emergency Management have developed major changes to the document including: an existing system requirements chapter; a chapter on fire protection features; a chapter on security; and new requirements on emergency power supply systems, low voltage electrical systems, and maintenance and testing of gas systems. The most recent proposed code was returned to Committee to address several major issues including selective co-ordination, wet locations and scope overlap with NFPA 13.   Activities are underway to address each of these issues and the document is now on cycle for a 2011 publication date.

Summary of Day 2 Technical Committee Discussions

On July 22nd, Summit presenters and members of NFPA Technical Committees on Health Care Occupancies and Residential Board and Care Occupancies for the *Life Safety Code* and Health Care Facilities met to discuss the materials presented the day before. Participants in both sessions are listed in Appendix A. The group met in plenary at the beginning and the end of the day but spent the majority of their time in two breakout sessions: one around the issues likely to impact NFPA 101 Chapters 18-21 on Health Care and Ambulatory Healthcare Occupancies and those likely to impact various issues surrounding NFPA 99 and NFPA 101 Chapters 32-33 on Residential Board and Care Occupancies.

Plenary Session

Tom Jaeger, Summit Chair, reviewed the goal of the day's sessions and charged each break out group to review the materials presented on the previous day with a view to identifying and prioritizing short and longer term issues that will need to be addressed in NFPA 99 and NFPA 101.

NFPA 101, Chapters 18-21 on Health Care Occupancies

Dave Klein, chair of the NFPA Technical Committee on Health Care Occupancies for the Life Safety Code, chaired the session focused on the impacts on NFPA 101. Culture change and its direct impact on nursing home facilities was the major focus of discussion and the specific changes presented by the Pioneer Network in the current code cycle were the focus of the majority of the discussion. These items, which the group identified as priority short term issues to be addressed, were: furniture in corridors; decorations in sleeping rooms and corridors; cooking equipment and separation; curtains and fireplaces. The group discussed a specific action plan to develop code change proposals to address these features in the current cycle.
 In addition, a number of longer term issues were noted for which, although no specific code change proposals are in process, the committee should begin to prepare strategies for their incorporation in the code. They are:
- implications of person directed care on fire safety and limits
- quality of life improvements impact on fire safety
- definition of anesthesia – three classes as defined by the American anesthesia association (also a crossover issue with NFPA 99)
- staff as an explicit fire protection feature - technology augmentation
- health care in retail spaces
- home (foster home) fire protection criteria
- risk-based classification of differing health care occupancies.

Finally, in the course of the discussion on both short and long term code development, the following research questions/issues were identified:
- technical justification behind the 16 or 24 bed limits for the new era long term care models

- UL 300A listing criteria and their relevance to new era long term care models
- risk assessment framework for shared housing occupancy type (Greenhouse model)
- relative risk associated with sub acute short term stays versus long term stays for hospital patients

NFPA 99 Standard on Health Care Facilities
 Mike Crowley, Chair of the NFPA Technical Committee on Fundamentals for Health Care Facilities, chaired the session that focused on NFPA 99.

The committee discussed several topics including isolated power/wet locations, home health care environments, and personal care/nursing homes as potential topics. There was a concern that if NFPA 99 addressed health care in the home, assisted living or foster care, there may not be enough resources from the enforcement community to enforce these regulations. A Committee comment was developed to clarify that this code is not intended to apply to home health care, assisted living, residential care, or foster care. The group also discussed and recommended that the NFPA Standards Council consider the possibility of a new committee project on home health care. The group also discussed several other active code change proposals including the wet location issue, committee jurisdiction and requirements for medical gas; and definitions for major and minor injuries.

Concluding Remarks
Tom Jaeger, Summit Chair, thanked all participants for their contributions to NFPA Health Care Codes and Standards. This Summit is a model for a process to help Technical Committees stay abreast of emerging issues likely to affect their documents.

Appendix A

Participant Lists and Speaker Biographies

National Trends in Delivery of Health and Long Term Care
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Daniel O'Connor, Principal	Schirmer Engineering Corporation	BLD/SAF-HEA
John Rickard, Principal	Olicon Design	BLD/SAF-BCF
Lawrence Sandler, Principal	Med Equipment Comm	HEA-MED
Tom Scheidel, Principal	Compliance Management Service	HEA-HES
David Sine, Non Voting Member	National Center for Patient Safety Rep. National Association of Psychiatric Health Systems	BLD/SAF-HEA
George Stevens, Principal	U.S. Department of Health & Human Services Rep. U.S. Dept. of Health & Human Services/IHS	BLD/SAF-HEA
Saundra Stevens, Principal	Adams County Regional Medical Center	BLD/SAF-HEA
Pete Tately, Principal	Siemens Industry	BLD/SAF-HEA
Michael Widdekind, Principal	Zurich Services Corporation	BLD/SAF-HEA

GUESTS

NAME	COMPANY
Kathleen Almand	Fire Protection Research Foundation
Amy Carpenter	WRT/SAGE
Martin Casey	CMS
Maggie Collins	IDEAS/SAGE
Skip Gregory	Health Facility Consulting
Gary Harding	GBLLC
Bonnie Kantor	Pioneer Network
Robert Mayer	Rothschild Foundation
Evvie Munley	AAHSA
Gaius Nelson,	Nelson – Tremain Partnership
James Peterkin	Heery International
Sue Sadler	Xtralis
Karen Schoeneman	CMS
Robert Solomon	National Fire Protection Association

Speaker biographies

Bonnie Kantor
Bonnie S. Kantor, Sc.D is the Executive Director of the Pioneer Network in Culture Change. The Pioneer Network, formed in 1997, is a national network of change agents pioneering a new vision for long-term care that is life-affirming, satisfying, meaningful and humane. To advance these goals, Pioneer Network supports public policy change; conducts research into the financial and quality outcomes associated with person-directed care; develops and shares adaptable practices that put person before task; creates communication, networking and learning opportunities; coordinates with state coalitions and hosts a national conference.

Prior to joining the Network in January 2007, Bonnie served as the Director of the Office of Geriatrics and Gerontology at the Ohio State University Medical Center for 15 years. She received her doctorate in Health Policy and Management from The Johns Hopkins School of Public Health.

Gaius Nelson
Gaius G. Nelson is president of Nelson●Tremain Partnership, an architectural and consulting practice dedicated to serving the design needs of older people. In 1987 Mr. Nelson helped pioneer the first Household/Neighborhood concept within a skilled nursing setting at Evergreen Retirement Community in Oshkosh, Wisconsin. Since then he has worked to promote non-institutional, resident-focused environments for living, through design, education and policy advocacy.

Mr. Nelson received a Bachelor of Architecture degree from the University of Minnesota and a Master of Science in Architectural Studies degree from the Massachusetts Institute of Technology where he specialized in the research of the built environment and its impact on older people and special needs populations.

Karen Schoeneman
Karen C. Schoeneman is the Deputy Director of the CMS Division of Nursing Homes, which has the responsibility for survey and certification of nursing homes. She manages the Division Clinical Team which has responsibility for the long term care survey process, the interpretive guidelines, and the new Quality Indicators Survey process. She has trained over 5000 surveyors as part of their Basic training course. She has executive produced several CMS live satellite broadcasts including shows on the activities requirements, quality of life, culture change and dementia care, among others. She is a nationally recognized expert in culture change and is the CMS lead for this topic. She is one of the founding members of the Pioneer Network. She was the CMS lead for the CMS/Pioneer Network "Creating Home in the Nursing Home" national public symposium on culture change and the environment requirements, which was held in April 2008.

Rick Greene

Rick Greene is the National Program Manager for Community Residential Care and Medical Foster Home for the Department of Veterans Affairs. He also has responsibility for Rural Health, Indian Health and Adult Day Care Health Services. Prior to joining the VA, he directed the National Family Caregiver Support Program for the Administration on Aging since the legislation was enacted in 2000. He worked for the New Jersey Department of Health for almost 30 years developing health promotion programs for older adults and a comprehensive network of support services for their family caregivers, which became the model for the National Family Caregiver Support Program.

Mr. Greene is a graduate of Rutgers University where he received a Masters Degree in Social Work.

A. Ray Pentecost

Dr. Ray Pentecost is a licensed Architect and Fellow in the American Institute of Architects. He is Board Certified in the specialty of healthcare architecture by the American College of Healthcare Architects. He now serves as the Director of Healthcare Architecture for Clark Nexsen Architecture & Engineering of Norfolk, Virginia. He was the 2009 national President of the American Institute of Architects – Academy of Architecture of Health, and in 2010 is again serving as the President of that organization.

William Lindeman

William E. Lindeman is the President of WEL Designs PLC, a consulting firm for health care facility development and regulatory conformance. As a licensed architect working with health care providers since 1983, he has been instrumental in the planning and design of millions of square feet of Ambulatory Surgery Centers, medical practice suites, and other health care facilities. He is an active contributor to development of national guidelines for healthcare facility design, and remains instrumental in the development of independent accreditation standards. His company is the Physical Environment Consultant to the Accreditation Association for Ambulatory Health Care.

David Kyllo

David Kyllo is Executive Director of the National Center for Assisted Living (NCAL) – the assisted living voice of the American Health Care Association (AHCA) and an essential resource for long term care professionals. Kyllo is responsible for leading NCAL's advocacy on behalf of a national federation of state affiliates, as well as directing NCAL's education programs, award-winning publications, and quality programs.

Mr. Kyllo has 25 years of experience working in government relations, regulatory and public affairs in Washington, DC. He served with two White House administrations and both the United States House of Representatives and United States Senate. Kyllo joined AHCA 15 years ago. As the association began to focus more on assisted living issues, he made the transition from working for AHCA to NCAL.

A graduate of the University of Northern Iowa, Kyllo frequently lectures on assisted living and long term care issues, having both worked and volunteered in several long term care facilities.

Douglas Erickson

Douglas S. Erickson is the Deputy Executive Director for the American Society for Healthcare Eningeering (ASHE) of the American Hospital Association. He has been providing service to the health care community as a standards writer, facilities manager, codes advocate, and consultant for over 34 years. He is the past director of engineering for the Joint Commission (1977-1981) and past director of design and construction for the American Hospital Association (1985-1995). Mr. Erickson has served on the Guidelines for the Design and Construction of Health Care Facilities since 1978 and is Chairman for the 2010 and 2014 editions. Mr. Erickson is also a member of numerous NFPA technical committees and chairman of NFPA 99's Technical Correlating Committee.

Richard Bielen

Richard P. Bielen is the Division Manager of the Fire Protection Systems Engineering Department of the NFPA. Rich is currently responsible for the NFPA standards on health care including NFPA 99, 99B and 99C, and in addition is responsible for the NFPA security documents.

Mr. Bielen holds a master's degree in fire protection engineering and a bachelor's degree in electrical engineering, both from Worcester Polytechnic Institute. He is also a registered professional engineer in fire protection engineering. Prior to joining NFPA, Mr. Bielen has worked for the Fire Protection Research Foundation, several consulting firms and in the electronics industry.

Appendix B

Summit PowerPoint presentations

Culture Change and the Physical Environment

Karen Schoeneman, CMS
Bonnie Kantor, Pioneer Network
Gaius Nelson, Nelson-Tremain Partnership

What Culture Change Is About:

△ Honoring individuality of residents and staff

△ Creating "home"

△ Person vs. task focus

△ Creating a new way of being and thinking related to aging

△ Creating responsive systems

Creating Responsive Systems includes. . .

△ Re-organizing the work

△ Renovating the Physical Environment to Create Home

In Practical Terms, Culture Change and Resident-Centered Care Result In…

△ Smaller living environments

△ Permanent work assignments and decision making closest to the residents

△ Flattened hierarchy

△ Dismantling daily routines and systems to allow freedom and choice

Culture Change vs. Resident-Directed Care

△ Culture Change is the process of creating home and community

△ Resident-Directed Care is the outcome

Creating Responsive Systems includes. . .

△ **Re-organizing the work**
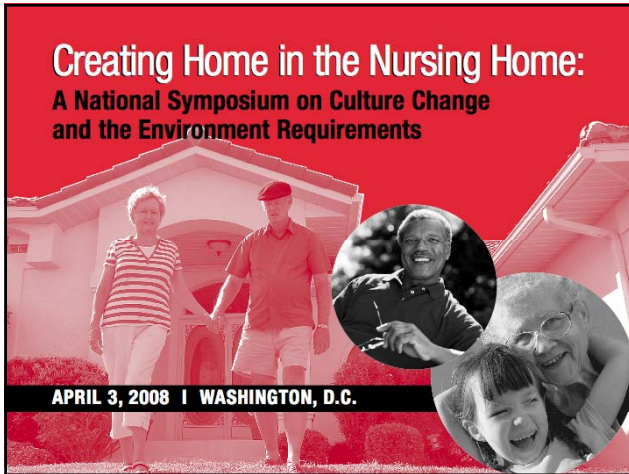
△ Renovating the Physical Environment to Create Home

Provider Directed	Staff Centered	Person Centered	Person Directed
Mgmt. makes most of the decisions with little conscious consideration of the impact on residents.	Staff consult residents or put themselves in residents' place while making the decisions.	Resident preferences or past patterns form basis of decision making about some routines	Residents make decisions every day about their individual routines. When not capable of articulating needs, staff honor observed preferences and lifelong habits.
Residents accommodate staff preferences; are expected to follow existing routines.	Residents accommodate staff much of the time—but have some choices within existing routines and options.	Staff begin to organize routines in order to accommodate resident preferences—articulated or observed.	Staff organize their hours, patterns and assignments to meet resident preferences.

Low   **Continuum of Person-Directedness**   High
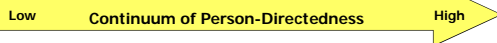
Developed by Mary Tess Crotty, Genesis HealthCare Corp, based on the model by
Susan Misiorski and Joanne Rader, distributed at the Pioneer Institutes, 2005.

Creating Responsive Systems includes. . .

△ Re-organizing the work

△ **Renovating the Physical Environment to Create Home**

Creating Home in the Nursing Home:
A National Symposium on Culture Change and the Environment Requirements

APRIL 3, 2008 I WASHINGTON, D.C.

CMS Revisions to the Guidance to Surveyors: (Interpretive Guidelines)

Δ Response to 2008 Environment Symposium

Δ Intent to provide clarification to surveyors

CMS and Culture Change

Δ Culture Change innovations = improved quality of life which is key part of OBRA law

Δ CMS has been supportive of culture change since the beginning of the movement in 1997

Δ Physical environment changes are key part of improving quality of life, making residents happier/healthier

Δ CMS regs. have rights to choice and homelike environment that are just now beginning to be fulfilled by culture change innovators

Moving away from tray service

Toward New Dining Styles

Buffet   **Frying eggs**

Tasty meatballs

Using the stove

Normal kitchen life

Even washing dishes

Isn't this like home?

Moving away from rooms like this

To rooms like this, homey with personal decorations

wow

Moving from hallways like this

To a variety of homier spaces

8/9/2010

Cat is nice, but this long hallway would be better with some chairs

CMS is getting the word out to surveyors

- △ 5 culture change CMS broadcasts
- △ Audio series "Culture Change for Regulators
- △ Answering CC questions in letters
- △ Central and Regional office speakers on culture change at many conferences
- △ Suggestion to use CMP money for Eden and other CC efforts
- △ CC demonstration grants in new ACA law

Regulations and Codes Grow and Change with Time and Innovation

- △ The OBRA regs. come from another era and address the "institutions" of that day
- △ CMS keeps alert to the need to change and we DO make changes when we become outdated or regs. get in the way of main goal, quality of care and quality of life
- △ Or we add explanations so surveyors are consistent

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More CMS CC Efforts

Δ **Linked with PN for two national symposia on CC and regulatory issues (environment, and dining)**

Δ **Developed Artifacts of CC questionnaire tool**

Δ **Changed 11 regulatory Tags in response to culture change recommendations**

Δ **Participated in LSC Task Force and signed off on recommendations to NFPA**

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Culture Change in Long Term Care Facilities

National Trends in Delivery of
Health and Long Term Care Summit

Implications for Safety Codes and Standards

Gaius G. Nelson
gaius@ntp.cc

President
Nelson·Tremain Partnership
ARCHITECTURE AND DESIGN FOR AGING
Minneapolis, Minnesota, USA

Improving Quality of Life

Involves More Than Safety

- Person-Centered Care
- Dignity
- Privacy
- Security
- Choice
- Control

Personalize one's Environment

Culture Change involves a deep knowledge and understanding of residents and staff

Identity Cases

Form Follows Regulation

The Creation of Unintended Consequences

- Locks in existing models
- Creates repetitive and predictable environments
- Eliminates potential innovation
- Based upon regulatory expedience
- Minimum standards become maximum allowances

Form Follows Regulation

The Institutional Nursing Home Model

Requirement:

- Bedrooms must exit through a corridor
- Minimum 8'-0" clear corridor width
- Visual control from a nurse station
- Cooking facilities considered as hazardous

Result:

- *Double-loaded corridors lined by bedrooms*
- *Straight undifferentiated 8'-0" wide corridors*
- *Dominant nurse station at corridor intersections*
- *Hide the residential center of "home" from daily experience*

Creating Home in the Nursing Home

Relationship Enabling Environments

- Reduce the scale
- Use understandable and identifiable spaces
- Provide the appropriate *Hierarchy of Space*
- Enable movement
- Provide access to nature
- Create places you would want for your loved ones

Living in a Home
Household Model

- Small scale environment
- Ease of access
- All activities of daily living in one setting

Household Plan

Living in a Home
Household Model

- Understandable spaces
- Recognizable from past experience
- Variety of choices

Living in a Home
Household Model

- De-institutionalized clinical resources
- Comfortable, non-threatening environment

Belonging to a Community
Neighborhood Place

- Places to meet others
- Participation in larger group activities
- Variety of activity settings

Living in a Home
The Green House® Model at Traceway

- Independent houses
- 10 private resident rooms
- Specially trained staff provide all care and household duties

DESIGN 2004

Living in a Home
The Green House® Model at Traceway

- Hearth Room
- Open Kitchen & Dining

DESIGN 2004

Remodeling to Create Home
Community Living Center Concept

- Veterans Administration Initiative
  - Maximum 17 residents per *Household*
  - Shared *Neighborhood* service areas

Creating Home
Available Industry Resources

- FGI Guidelines for the Design and Construction of Health Care Facilities
- AIA/AAHSA Desogn for Aging Review
- The Greenhouse Project
- DESIGN - SAGE & Long Term Living Magazine
- Pioneer Network

Focus Areas of LSC Work Groups
Issues Hindering the Creation of Home

- Work Group Subjects
  - Décor
  - Corridors
  - Kitchens
  - Fireplaces

- Areas of focus voted on by National Task Force requiring 2/3 majority approval

Combustible Decorations
Proposal to Increase Allowable Quantity of Decorations

- Personalization and Identity

Combustible Decorations 18.7.5.6
Proposal Comments 101-305

- **Current Requirements:**
  - Flame Retardant
  - In such limited quantities that the hazard of fire…is not present
- **Proposed Requirements:**
  - Flame Retardant or treated with approved fire retardant coating
  - Permitted to be attached to walls or non-rated doors provided:
    - Not exceed 20% of wall & door inside non-sprinklered spaces
    - Not exceed 50% of walls & doors in sprinklered sleeping rooms
    - Not exceed in all other fire sprinklered spaces
    - Permitted on non-rated doors provided no operational interference

The same language shall apply to existing health care facilities under 19.7.5.6

Combustible Decorations 18.7.5.6
Justification for 101-305

- **Proposed language mirrors Daycare requirements:**
  - Use with occupants not capable of self-preservation
  - Occupancy with defined staffing
  - Use where occupants sleep
- **Combustible Decorations are no more hazardous than other elements allowed within sprinklered health care occupancies:**
  - Combustible Window draperies
  - Combustible Shower curtains
  - Combustible Furniture & mattresses

Creating Meaningful Environments in which to Live

Means of Egress Requirements
Proposal to Permit Seating within Corridors

- Supporting Mobility and Socialization

Means of Egress Requirements
Current Code Requirements

- **18.2.3.4 - not less than 8'-0" clear unobstructed except:**
  - In adjunct areas not intended for patients may be 44" wide
  - Projections on both sides of corridors complying with;
    - Maximum 6" projection
    - 40" or more above floor
    - Maximum 36" width
    - Minimum 48" apart
- **7.3.2.2 - within all Means of Egress**
  - 4 1/2" projection allowed below 38" on both sides (Handrails)

Means of Egress Requirements
Occupant Load & Capacity Calculation for an 8'-0" Corridor

- **Table 7.3.3.1 - Capacity Factor (width per person)**
  - Health Care - Sprinklered
  - 0.2 inch (5 mm)
  - 96"/ 0.2" = 480 people x 2 exits = 960 people

- **Table 7.3.1.2 - Occupant Load Factor**
  - Health Care Use - Sleeping Department
  - 120 sq ft (11.1 sq m) per Occupant
  - 960 people x 120 sq ft = 115,200 sq ft

What About Handrail Access?
Measurement of Means of Egress - Projections

- Handrail are NOT a required part of the egress
  - Only considered in LSC as a projection

- Handrails are typically interrupted throughout facilities
  - Bedroom doorways
  - Closets and other doorways
  - Cross corridors
  - Spaces open to corridors

Handrails have limited potential users
  - Not used by person with walker
  - Not used with electric wheelchair
  - Seldom used with manual wheelchair
  - Sometimes used by capable walkers or those with cane

Seating is arguably a more helpful intervention

Capacity of Means of Egress 18.2.3.4
Proposal Comments 101-265a Log #CP666

- **Within corridors at least 8'-0" wide allow fixed furniture and wheeled equipment that meets all of the following:**
  - Shall not reduce unobstructed width to less than 6'-0"
  - Items located on one side of corridor only
  - Items shall be grouped into areas of less than 50 sq ft
  - Groupings shall be separated by at least 10'-0"
  - Corridors with such groupings are protected by electrically supervised, automatic smoke detection system

The same language shall apply to existing health care facilities under 19.3.6.1

Capacity of Means of Egress 18.2.3.4
Justification for 101-265a Log #CP666

- Currently many types of projections are allowed within corridors
- Projections shall not reduce unobstructed width to less than 6'-0"
- Limited to one side of corridor offers consistency
- Small 50 sq ft groupings match Table 18.3.2.1 Hazardous Area Protection (or lack thereof) requirements
- Only allowed in corridors protected by an electrically supervised, automatic smoke detection system
- Currently furnishing may be unlimited in sprinklered facilities

Improving mobility and access for residents by encouraging ambulation and socialization

Cooking Facilities
Allowing Cooking Equipment Open to Corridors

- Experiencing Activities of Home

Cooking Facilities 18.3.2.5
Proposal Comments 101-277 Log #179

- **Current Requirements:**
  - Domestic cooking equipment used for warming or limited cooking need not be separated for corridors
  - Cooking equipment shall to protected as per NFPA 96

- **Common Interpretations:**
  - All cooking appliances are hazardous areas and require separation from the corridor even when protected according to NFPA 96
  - Only small appliances such as microwaves, hot plates, toasters and nourishment centers are exempt from commercial cooking requirements
  - The only unprotected residential stove allowed in health care is one used exclusively for occupational therapy (NFPA 96 A.1.1.4 (2))

Cooking Facilities 18.3.2.5
Proposal Comments 101-277 Log #179

- **Proposed Requirements:**
  - *Residential* cooking equipment used for warming or limited cooking need not be separated for corridors
  - Residential or commercial equipment used to prepare food for fewer than 24 residents or patients shall meet the following:
    - Cooktop or range equipped with grease collect hood and meets airflow requirements of NFPA 96 sections 8.2.1 & 8.2.2
    - Cooktop or range protected by UL 300A fire suppression system
    - Use of solid fuel shall be prohibited
    - Deep fat frying shall be prohibited
    - Portable fire extinguishers shall be located in kitchen
    - A locked & timed key switch shall be provided for the cooktop
    - An interlock shall be required between range hood and cooktop
    - The portion of the facility served by the cooking facility shall be separated from other areas by a smoke barrier per 18.3.7.3

Cooking Facilities 18.3.2.5
Justification 101-277 Log #179

- There is a current lack of clarity & uniform interpretation across jurisdictions and AHJ's
- Participation in cooking is a integral component of home life
- Open kitchens provide ease of supervision and control by staff
- Risk involves few residents, separated from remainder of the facility
- Equipment is protected by UL300A fire suppression system
  - NIST Special Pub. 1066, 2007 indicated that a single sprinkler head in a residential scale kitchen may adequately protect against fire
- Equipment is protected from operation without staff supervision
- The type of equipment (residential or commercial) does little to impact the nature of hazard - the cooking methods do
- Fires are caused by grease build-up - control of grease is important
  - No deep fat frying is allowed
  - Grease baffles & collection are required

Fireplaces
Proposal to Allow Within Sleeping Compartments
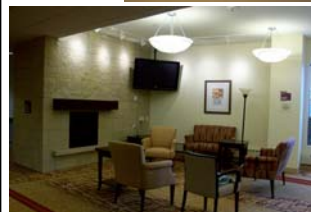
- Socialization Around the Hearth

Fireplaces 18.5.2
Proposal Comments 101-293 Log #183 SAF-HEA

- **Current Requirements:**
  - Fireplaces not allowed within sleeping compartments
  - Fuel-fired heating devices allowed with specific requirements

- **Proposed Requirements:**
  - Permit vented gas fireplaces in sleeping compartments as follows:
    - Installed according to 9.2.2
    - Not permitted within sleeping rooms
    - Smoke compartment protected by supervised automatic sprinklers
    - Controls shall be restricted by locking or located in locked area
    - Carbon monoxide detector provided in or directly outside area

The same language shall apply to existing health care facilities under 19.5.2

Fireplaces 18.5.2
Justification for 101-293 Log #183 SAF-HEA

- Allows an element that is associated with home into social areas of sleeping compartments
- Clarifies that gas log heating devices that appear to be a fireplace are considered to be a heating device
- Provides protections and security for gas fireplace controls beyond those currently required
- Clearly limits solid fuel fireplaces to non-sleeping compartments
- Prohibits fireplace heating devices from sleeping rooms

The hearth provides warmth and a focus for social interaction

Creating Safe Environments for Living
Working Together Towards Meaningful Change
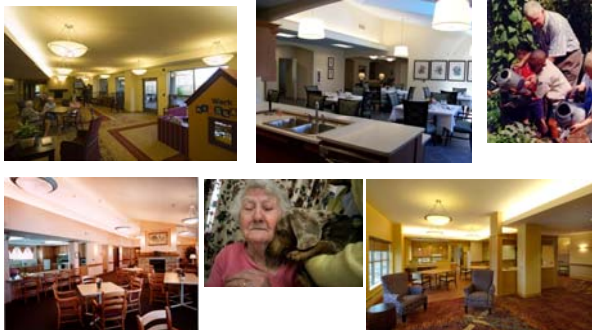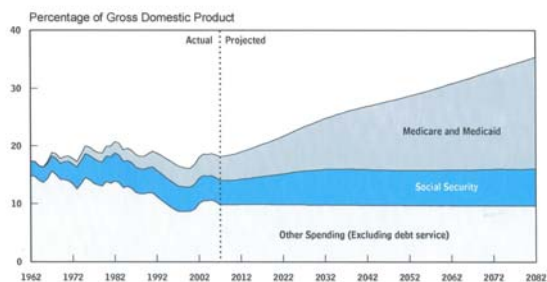
Slide 1

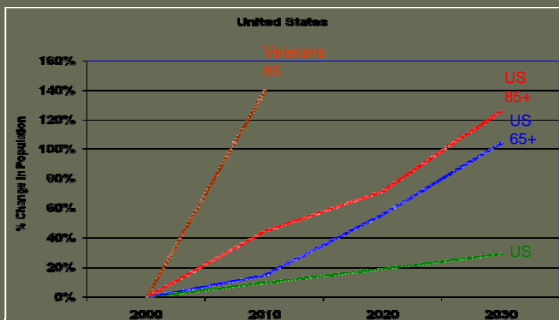1

Slide 2

Pushing the Boundaries

- VA shift to non-institutional long-term care
- Spectrum of home and community services
- What is Home Based Primary Care
- Medical Foster Home: Where Heroes Meet Angels
- Difference between MFH and routine Adult Foster Home, Assisted Living, Residential Care
- Why we need different rules for MFH
- Projected growth of H&CBC: VA MFH growth; Medicare Independence at Home; What next?

2

Slide 3

Federal Spending Under CBO's Alternative Fiscal Scenario

Percentage of Gross Domestic Product

Actual | Projected

Medicare and Medicaid

Social Security

Other Spending (Excluding debt service)

1962 1972 1982 1992 2002 2012 2022 2032 2042 2052 2062 2072 2082

Slide 4

Percent of Change in Population from 2000

United States

4

Increasing Disability with Age

- Percentage with dependency in at least 1 Activity of Daily Living (ADL) [bathing, dressing, toileting, transfer and feeding]
  - Age 65: 10%
  - Age 75: 18%
  - Age 85: 47%

5

Costs of Chronic Disease

- 68% of Medicare $ for 20% with 5+ chronic conditions

- 4+ chronic conditions: 99x risk of hospitalization for ambulatory-care sensitive chronic condition – avoidable
  - Jennifer Wolff et al, "Prevalence, Expenditures, and Complications of Multiple Chronic Conditions in the Elderly, Arch Internal Med;162. Nov 11, 2002.

- 75% of health expenditures for chronic disease (CDC)

- US: 10% of MC population accounts for 65% of cost
- VA: 9% of enrolled Veterans account for 52% of cost

6

The Changing Face of Health Care

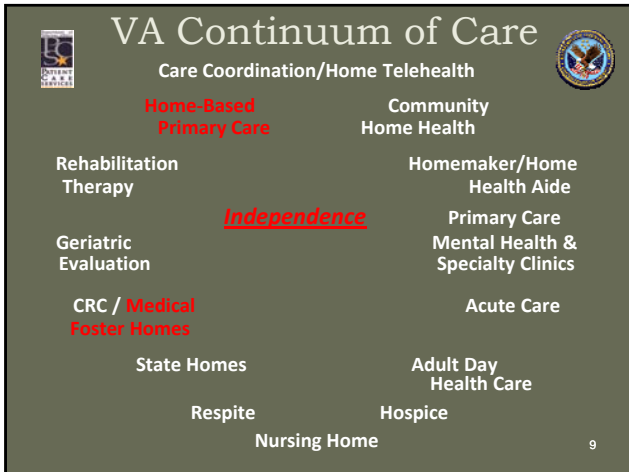| Medicare	1966	2008
Age of Medicare Eligibility	65 yrs	65 yrs
Avg. life expectancy @ 65	4 yrs	20 yrs
Ratio of taxpayers to Medicare beneficiaries	10:1	3:1
# of Medicare beneficiaries	<10 Million	44 Million

7

Congressional Budget Office Report, Dec 2007

- Increase in health care cost, 1998 - 2005
  - VA costs/ patient: rose 1.7% (0.3% /yr)
  - Medicare costs/ patient rose 29.4% (4.4% /yr)
- Highest cost: chronic disabling disease; homebound.
- Elements of VA healthcare system
  - Electronic medical record
  - Quality and performance measures
  - Systems for chronic disabling disease: HBPC; MFH

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VA Continuum of Care

Care Coordination/Home Telehealth

Home-Based Primary Care	**Community Home Health**
Rehabilitation Therapy	**Homemaker/Home Health Aide**
Independence	**Primary Care**
Geriatric Evaluation	**Mental Health & Specialty Clinics**
CRC / Medical Foster Homes	**Acute Care**
State Homes	**Adult Day Health Care**
Respite	**Hospice**
Nursing Home	9

What is VA Home-Based Primary Care (HBPC) ?

- Comprehensive, longitudinal primary care

- Delivered in the home

- By an Interdisciplinary team: Nurse, Physician, Social Worker, Rehabilitation Therapist Dietitian, Pharmacist, Psychologist

- Targets patients with complex, chronic, disabling disease

- When routine clinic-based care is not effective

For those "too sick to go to clinic"

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HBPC is NOT like Medicare (MC) Home Care

- Different target population
- Different processes
- Different outcomes

- HBPC provides longitudinal comprehensive, interdisciplinary care to veterans with complex chronic disease

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Characteristics of HBPC Population

"Too sick to go to clinic" –

Mean age 78.4 years; 96% male

More than 8 chronic conditions; 24% annual mortality rate

47% dependent in 2 or more Activities of Daily Living (ADL)

47% married; 30% live alone; Caregivers: 30% limited ADL

Mean duration in HBPC 315 days; 3.1 visits/mo; 28 visits/yr

Medicare home care: 31 days; Home Hospice: 73 (2006)

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Disease Prevalence in HBPC

Disease	Percent of patients with disease
Heart disease	72%
Diabetes	48%
Depression	44%
Heart failure	35%
Dementia	33%
Substance abuse	29%
Cancer	29%
Anxiety/Personality Disorder	24%
PTSD	21%
Schizophrenia	20%

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Differences Between VA HBPC & Medicare Home Care

VA Home Based Primary Care	Medicare Home Care
Targets complex chronic disease	Remediable conditions
Comprehensive Primary Care	Specific problem-focused
Skilled care not required	Requires skilled care
Strict homebound not required	Must be homebound
Accepts declining status	Requires improvement
Interdisciplinary team	One or Multidisciplinary
Longitudinal care	Episodic, post-acute care
Reduces hospital days	No definitive impact
Limited geography & intensity	Anywhere; anytime

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2002 Utilization 6 mos Before vs During HBPC

All HBPC programs; n=11,334; days or visits per patient per year

	Before HBPC	During HBPC	Change
Hospital BDOC	14.8	5.6	- 62% P < 0.0001
Nursing home BDOC	26.8	3.2	- 88%
Outpatient visits	31.6	32.2	+ 2%
All home care visits	20.6	73.8	+ 264%

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Costs of Care Before vs During HBPC for 2002 (per patient per year)

	Before HBPC	During HBPC	Change
Total Cost of VA Care	$38,168	$29,036*	- 24% P < 0.0001
Hospital	$18,868	$7026	- 63%
Nursing home	$10,382	$1382	- 87%
Outpatient	$6490	$7140	+ 10%
All home care	$2488	$13,588*	+ 460%

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Slide 17

2007 Utilization Before vs. During HBPC

All HBPC programs; newly enrolled in 2007:
n= 8,231 Care days per patient per year

	Before HBPC	During HBPC	Change
Hospital BDOC	7.4	3.0	- 59 % P < 0.0001
Nursing home BDOC	12.9	1.5	-89 % P < 0.0001
Total Inpatient BDOC	21.4	4.6	-78 % -P < 0.0001

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Slide 18

2009 Utilization Before vs During HBPC

All HBPC programs; newly enrolled in FY2009
(July 1, 2008 through June 30, 2009): n= 15,917
Care days per patient per year

	Before HBPC	During HBPC	Change
Hospital BDOC	6.2	2.5	- 60 % P < 0.001
Nursing home BDOC	8.1	0.8	- 90 % P < 0.001
Total Inpatient BDOC	14.9	3.4	- 77 % P < 0.0001

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Slide 19

Veterans Served Daily in HBPC 2000 to 2009

Avg Daily Attendance

- 2000: 7,312
- 2004: 9,825
- 2006: 12546
- 2007: 14428
- 2008: 16,514
- 2009: 21,056

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Slide 20
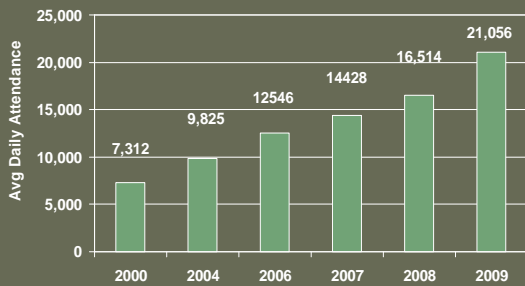
20

21

Medical Foster Home

- When nursing home is the only option, another option, VA MFH provides another option

- Seriously injured veterans from Iraq –

    the _L O N G_ long-term care

22

A Tale of Two Social Workers

- Two social workers at Little Rock VA
- Problem: Veterans in HBPC decline, not safe to live alone, refuse NH
- Opposing ethical principles
- Unsafe at home, or force out of home?
- Solution – find a willing caregiver, meet medical care needs through HBPC
- Pilot 2002 – cautiously optimistic success

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What is Medical Foster Home?

- Merges adult foster home with VA Home Care – Home Based Primary Care or Spinal Cord Injury
- Angel in community takes dependent veteran into their private home, as MFH caregiver
- MFH caregiver provides daily personal assistance and supervision
- VA HBPC provides comprehensive medical care and management; caregiver education
- VA MFH Coordinator provides oversight
- Veteran pays for MFH

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What is different about VA Medical Foster Home?

- ALL residents meet nursing home level of care
- ALL residents have medical complexity
- ALL residents are enrolled in medical home care - VA HBPC or Spinal Cord Injury Care program
- Personal care in a family home, for persons with medical complexity and disability
- This home is the MFH Caregiver's home, lives there
- No more than 3 residents receiving care
- Higher quality, at half the cost of nursing home

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Expanding MFH: Challenges

- Safety of the Veteran is paramount
- Medical Foster Home is a small private home
- Fire and safety requirements for large assisted living facilities – excessive; unaffordable

- Success of MFH is dependent upon fire and safety standards that are both adequate and affordable

-

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Fire and Safety Information Letter

- David Klein and Peter Larrimer guided
- Experience of Oregon and Arkansas
- Developed guidance that ensure safety while being appropriate and affordable for private homes

- **FIRE SAFETY FOR VA MEDICAL FOSTER HOMES   IL 10-2009-008**

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Current Status of MFH Implementation

2008: MFH at 3 VAMCs
Now: 31 active sites, in 21 states
66 sites in 36 states implementing MFH
30 additional VAMC sites planned for 2011/2012

694 Veterans placed since inception
240 current census

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Rising Interest in MFH

- AARP March 2010 – thousands, from every state

- CBS Nightly News – April 12, 2010 – touching story

- Wall Street Journal – April 13, 2010

- Home environment, half the cost of nursing home care

- 3 sites in 2008; now 67 sites in 34 states

* Based on ADC of 35 MFH Veterans. Costs from FY08 MPCR.

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MFH Expansion

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Costs of Care Before vs During HBPC for 2002 (per patient per year)

	Before HBPC	During HBPC	Change
Total Cost of VA Care	**$38,168**	**$29,036***	**- 24%** **P < 0.0001**
Hospital	$18,868	$7026	- 63%
Nursing home	$10,382	$1382	- 87%
Outpatient	$6490	$7140	+ 10%
All home care	$2488	$13,588*	+ 460%

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Impact of HBPC on VA + Medicare

- 2002 HBPC pre/post : 24% reduction in total VA cost
- 2006: 9625 Veterans in HBPC; 6951 in Medicare (MC). Analysis of same Veterans, same time – utilization and cost VA and MC

Findings of COMBINED VA and MC utilization and cost:

1. Enrollment into VA HBPC associated with 25% reduction in combined VA plus Medicare hospital admissions; 36% reduction in VA+MC hospital days.

2. Enrollment into VA HBPC associated with 13.4% reduction in combined VA+MC costs, a drop from $45,980 to $39,796 in total cost (after adding in the costs of HBPC $9113 per pt/yr)

.

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Independence at Home Act

- President signed March 23, 2010
- Model in Medicare like VA HBPC, with economic structure in CMS to support it
- Targets complex chronic disabling disease
- Interdisciplinary, longitudinal care in home
- Geriatric skills, EHR, quality, satisfaction
- Outcomes: Fewer inpatient days, lower total cost, savings shared by home care team

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Impact of Independence at Home

- Success of Independence at Home will establish comprehensive longitudinal home care for those with serious chronic disabling disease – Home Based Primary Care
- Home Based Primary Care in Medicare will create opportunity for Medical Foster Home for all

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What's Next in HBPC?

1. National expansion – 137 VAMCs, 16 to go; ADC up 28% in FY09 to 21,056
2. Satellite expansion – CBOCs 116 and up
3. Rural outreach – ORH, CBOCs, Indian Health Service, community partnerships
4. Telehealth – integrating CCHT, Mobile Electronic Documentation, home monitoring technology
5. Polytrauma/Traumatic Brain Injury

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Rural Emphasis in HBPC Program

- 19 HBPC programs at VA Medical Centers and 30 satellite programs in rural or highly rural
- Similar cost per patient day as urban HBPC
- HBPC programs reduced inpatient days by 70% in rural areas compared to 68% nationally
- Ninety-three HBPC programs (73% of all programs) incorporate home telehealth services

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Collaboration with Indian Health Service

- Target HBPC access for Native American veterans in rural areas
- Geomapping project to identify areas with greatest need
- Implement HBPC sites at VA CBOCs or IHS medical facilities
- Share resources and staffing to provide HBPC services to remote, low-density population areas

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Goals of Rural Initiative

- Improve Access to Non-Institutional Care in Rural Areas via Community Partnerships
- Increase Provision of Cost-Effective Long Term Care
- Respect Veteran's Preferences to Remain in a Home Setting
- Improve Quality and Safety of the Care Provided at Home

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Trends in Home Care

- VA successfully shifting care from institutional to home setting whenever feasible
- VA Home Based Primary Care – better care for the highest cost population, at lower cost
- Medical Foster Home – option to nursing home that is safe, preferable to many, at half the cost
- Independence at Home – Home Based Primary Care in Medicare, will allow MFH

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Slide 41

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Veteran Consumer-Directed Care

- Package will include Budget for Veteran, Case Management, Fiscal Intermediary
- Veteran/Case Worker Determine Service Need and Providers Within Budget
- Providers May Include Family Members
- 30 Grant Applications
- 14 Grants Awarded
- 10 Grants in States with VA Focus
- VHA Supplemented Funding at $10 Million

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Veteran Directed Home & Community Based Services

- VA Participated in AOA Grant Announcement on Nursing Home Diversion
- Veteran Focus in Grant Allows for Agreements Between State Agencies & VAMCs
- VAMCs to Purchase Package of Consumer Directed Home Care from State

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Veteran-Directed Home & Community Based Services Program (VHA)

- **VD-HCBS Program Defined**
- The VD-HCBS program provides Veterans of all ages the opportunity to receive home and community based services in a consumer-directed fashion which enables them to avoid nursing home placement and continue to live in their homes and communities
- Under the VD-HCBS program, the Veteran and Veteran's family caregiver will:
  - manage a flexible budget
  - decide for themselves what mix of services will best meet their personal care needs
  - hire their own personal care aides, including family or neighbors
  - purchase items or services to live independently in the community

- **Current Status of VD-HCBS Program**
- In September 2008, AoA awarded 20 states grants as part of the Nursing Home Diversion Grant Program. 10 of these states applied to participate in the VD-HCBS Program.
- In FY2009, VHA has provided over $11 million to 15 VA Medical Centers in 10 states to develop a VD-HCBS program. These states are: Arkansas, Connecticut, Florida, Massachusetts, Michigan, New Jersey, New York, Texas, Virginia and Washington.
- As of September 2009, VA has commenced Veteran placement in the VD-HCBS program at nine VAMCs, including a young, severely injured TBI Veteran. Currently, over 250 Veterans are receiving services in the VD-HCBS Program

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Veteran Directed HCBS States: FY 2010

- Minnesota
- Illinois
- Kentucky
- Louisiana
- Ohio
- Wisconsin
- Hawaii
- Maine
- South Carolina

- Georgia
- Maryland
- West Virginia
- New Hampshire
- Vermont
- Indiana
- Oregon
- Alabama
- Montana

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Veterans History Project
www.loc.gov/folklife/vets

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"We make a living
by what we get;

We make a life
by what we give."

-Winston Churchill

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Hospital Design
In 2010 And Beyond:
Drivers, Impacts, and Trends

By

A. Ray Pentecost III, DrPH
FAIA, ACHA, LEED AP

Director of Healthcare Architecture, Clark Nexsen
President, AIA Academy of Architecture for Health

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Drivers, Impacts, and Trends

Major Drivers:

1 **Healthcare Reform: Affordable Care Act (ACA)**

2 **Demographics**

3 **Geographics**

4 **Economics**

5 **Informatics**

6 **National Security**

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Drivers, Impacts, and Trends

Major Driver: 1. Healthcare Reform

Predictable Impacts:
1   **Continued downward pressure on payments**

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Drivers, Impacts, and Trends

• Downward pressure on Medicare payment adjustments to hospitals, skilled nursing facilities, and home health providers

• Disproportionate Share Hospital (DSH) payments will be reduced

• Independent Payment Advisory Board "binding" recommendations if Medicare growth exceeds targets

• Similar downward pressure in private payors

Source: Ms. Abby Block, Booz Allen Hamilton, presentation to 2010 AIA-AAH/ ACHA Summer Leadership Summit

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Drivers, Impacts, and Trends

Major Driver: 1. Healthcare Reform

Predictable Impacts:
1   Continued downward pressure on payments
2   Quality is a HIGH PRIORITY

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Drivers, Impacts, and Trends

• 2012 Hospital value-based purchasing (VBP); also for home health, skilled nursing, ambulatory surgery [1]

• Extension: physician quality reporting initiative [1]

• Payment disincentives: preventable hospital admissions and readmissions, "never events list" [1]

• Re-invent the patient handoff process/ experience [2]

• ALOS reduced to generally accepted best practices [2]

Sources: 1 Ms. Abby Block, Booz Allen Hamilton, presentation to 2010 AIA-AAH/ ACHA Summer Leadership Summit
2 Mr. Ken Kaufman, Kaufman Hall, presentation to 2010 AIA-AAH/ ACHA Summer Leadership Summit

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Drivers, Impacts, and Trends

Major Driver: 1. Healthcare Reform

Predictable Impacts:
1   Continued downward pressure on payments
2   Quality is a HIGH PRIORITY
3   Demand is a wild card: more or less???

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Drivers, Impacts, and Trends

• More because of the newly insured, or less because cost management is no longer enough?

• Cost pressure is to converge on Medicare rates
        Insufficient for operations

• Issue not cost management; cost structure [1]
        Lower cost alternative delivery model a must

• The cost issue must involve both supply and demand

Sources: 1 Mr. Ken Kaufman, Kaufman Hall, presentation to 2010 AIA-AAH/ ACHA Summer Leadership Summit

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Drivers, Impacts, and Trends

C3 Collaborating for Health
Design and Health Conference May, 2010…

3four50 message:

1. <u>3</u> risk factors (tobacco, activity, diet)
2. <u>Four</u> chronic diseases (cardiovascular, type 2 diabetes, cancer, chronic lung disease)
3. <u>50%</u> of deaths worldwide

Christine Hancock, Founder, C3 Collaborating for Health

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Drivers, Impacts, and Trends

C3 Collaborating for Health
Design and Health Conference May, 2010…

"Architects, urban planners and transport engineers (among many others) can create environments in which healthy choices are easy choices."

Christine Hancock, Founder, C3 Collaborating for Health

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Drivers, Impacts, and Trends

Major Driver: 2. Demographics

Predictable Impacts:
1   Continued downward pressure on payments
2   Quality is a HIGH PRIORITY
3   Demand is a wild card: more or less???
4   Aging Boomers

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Drivers, Impacts, and Trends

• *"They are three times more worried about a major illness (48%), their ability to pay for healthcare (53%) or winding up in a nursing home (48%), than about dying (17%)."* [1]

• 2030 "over 65" will be 19% of US (1 in 5) [2]

• 31 % of noninstitutionalized seniors live alone [2]

• 65+ population in US will increase 36% 2010-2020 [2]

Sources: 1 Shannon O'Brien, How Baby Boomers will change retirement, About.com Guide
2 A Profile of Older Americans: 2009, DHHS, Administration on Aging

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Drivers, Impacts, and Trends

Major Driver: 2. Demographics

Predictable Impacts:
1   Continued downward pressure on payments
2   Quality is a HIGH PRIORITY
3   Demand is a wild card: more or less???
4   Aging Boomers
5   Suddenly insured

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Drivers, Impacts, and Trends

- 32 million new patients with no primary care MD

- More demand at already crowded EDs

- Inadequate primary care infrastructure in US

- Time lag to address facility and primary care MD shortages

- More Nursing and Medical school capacity

Source: Jay Heflin, Healthcare Reform threatens to cram already overwhelmed emergency rooms, The Hill, 5/15/10

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Drivers, Impacts, and Trends

Major Driver: 2. Demographics

Predictable Impacts:
1   Continued downward pressure on payments
2   Quality is a HIGH PRIORITY
3   Demand is a wild card: more or less???
4   Aging Boomers
5   Suddenly insured
6   Staffing challenges

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Drivers, Impacts, and Trends

- Nursing shortage of 1 million by 2020 [1]

- All 50 states, nursing shortage by 2015 [1]

- Need 30,000 more graduates @ year (30% growth) [2]

- Average nurse age 46.8 in 2004 [3]

- Nurse shortages negatively impacting care in long term care, hospitals, ambulatory care, student care [4]

Sources: 1 Dr. Peter Buerhaus, July/ August 2009 *Health Affairs*
2 March 2008, Council on Physician and Nurse Supply
3 HRSA 2004 National Sample Survey of Registered Nurses
4 Dr. Peter Buerhaus, September/ October 2005 *Nursing Economics*

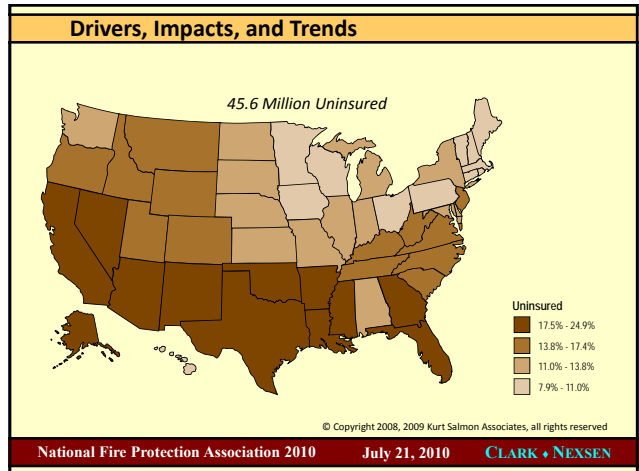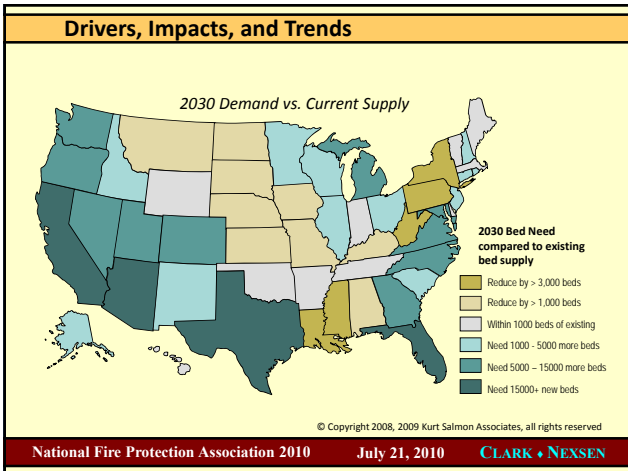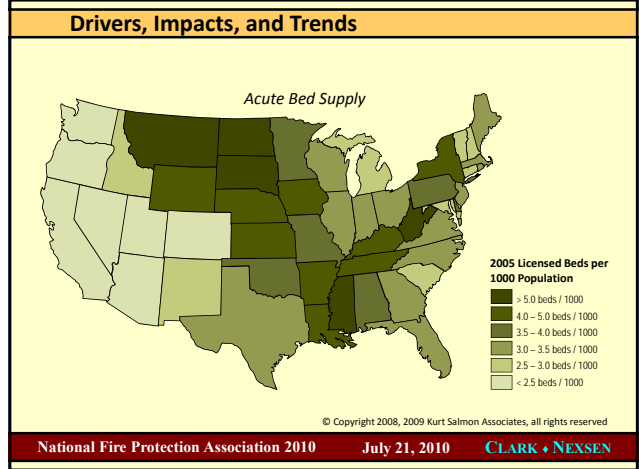National Fire Protection Association 2010   **July 21, 2010**   **CLARK ♦ NEXSEN**

8/9/2010

Slide 1:

Drivers, Impacts, and Trends

Major Driver: **3. Geographics**

Predictable Impacts:
1 Continued downward pressure on payments
2 Quality is a HIGH PRIORITY
3 Demand is a wild card: more or less???
4 Aging Boomers
5 Suddenly insured
6 Staffing challenges
7 Demand moves; facilities?

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Slide 2:

Drivers, Impacts, and Trends

Acute Bed Supply

2005 Licensed Beds per 1000 Population
- > 5.0 beds / 1000
- 4.0 – 5.0 beds / 1000
- 3.5 – 4.0 beds / 1000
- 3.0 – 3.5 beds / 1000
- 2.5 – 3.0 beds / 1000
- < 2.5 beds / 1000

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Slide 3:

Drivers, Impacts, and Trends

2030 Demand vs. Current Supply

2030 Bed Need compared to existing bed supply
- Reduce by > 3,000 beds
- Reduce by > 1,000 beds
- Within 1000 beds of existing
- Need 1000 - 5000 more beds
- Need 5000 – 15000 more beds
- Need 15000+ new beds

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Slide 4:

Drivers, Impacts, and Trends

45.6 Million Uninsured

Uninsured
- 17.5% - 24.9%
- 13.8% - 17.4%
- 11.0% - 13.8%
- 7.9% - 11.0%

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Drivers, Impacts, and Trends

Major Driver: 4: Economics

Predictable Impacts:
1   Continued downward pressure on payments
2   Quality is a HIGH PRIORITY
3   Demand is a wild card: more or less???
4   Aging Boomers
5   Suddenly insured
6   Staffing challenges
7   Demand moves; facilities?
8   Capital and Debt challenges

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Drivers, Impacts, and Trends

• Downward pressure on reimbursement will likely narrow margins; eventually inadequate for break-even

• Capital may be harder to access, or unavailable

• Debt may be only a short term risk: smaller projects?

• Alternative cost structures to create margins will have to emerge

• Incentives (green energy) may be more important

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Drivers, Impacts, and Trends

Major Driver: 5. Informatics

Predictable Impacts:
1   Continued downward pressure on payments
2   Quality is a HIGH PRIORITY
3   Demand is a wild card: more or less???
4   Aging Boomers
5   Suddenly insured
6   Staffing challenges
7   Demand moves; facilities?
8   Capital and Debt challenges
9   Electronic Health Record backbone

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Drivers, Impacts, and Trends

• Financial incentives in the ACA to adopt the "meaningful use" of electronic health records (EHR) with financial incentives, hospitals and MDs (1)

• EHRs will likely be used for measuring performance in the healthcare system (1)

• Patient-centered medical home (PCMH) model uses EHRs to link primary care w/rest of the system (Geisinger, Veterans Administration, others) (1)

Source: 1 Ms. Abby Block, Booz Allen Hamilton, presentation to 2010 AIA-AAH/ ACHA Summer Leadership Summit

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Drivers, Impacts, and Trends

From a 2008 presentation to the ACGME by Malcolm/ Lewis on the Kaiser Permanente IT system

9 companies
27 divisions (equivalent)
453 facilities
173,000 MDs and employees
203,000 desktops
4,700 terabytes of information, and increasing

LIBRARY OF CONGRESS STORAGE: 17-20 TERABYTES

Source: 1 Ms Christine Malcolm, presentation to 2010 AIA-AAH/ ACHA Summer Leadership Summit

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Drivers, Impacts, and Trends

- Wal-Mart will begin selling EHR for $25,000 [1]

- Wal-Mart in healthcare? [1]
  - 400 clinics few years (extreme referral potential!)
  - $4 generic drugs (shoppers saved $1 billion)
  - Optometry centers: 6 million patients
  - 130 million shoppers every week

- World's # 1 retailer, 8,400 stores, 2.1 mill. empl. [2]

- Main servers: all on the Internet – X2! [1]

Source: 1 Ron Galloway, Wal-Mart and the Future of Healthcare, March 25, 2009
        2 Answers.Com, Wal-Mart Stores Inc.

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Drivers, Impacts, and Trends

Major Driver: 6. National Security

Predictable Impacts:
1 Continued downward pressure on payments
2 Quality is a HIGH PRIORITY
3 Demand is a wild card: more or less???
4 Aging Boomers
5 Suddenly insured
6 Staffing challenges
7 Demand moves; facilities?
8 Capital and Debt challenges
9 Electronic Health Record backbone
10 The unbalanced wheel

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Drivers, Impacts, and Trends

Whatever else we achieve:

Healthcare costs must come down.

The cold war taught us a lot about unbalanced economies.

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Drivers, Impacts, and Trends

The days of

incremental change

are over.

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Drivers, Impacts, and Trends

Trends: more than one path to success

1 Systems survive (2-300?); linkages are key
2 Research drives design: quality will have new value
3 Facility performance will be key: care & operations
4 Low cost settings will flourish; convenience rules
5 Facilities will be" Information-Technology" centric
6 Creative hospital re-use and recycling
7 New delivery settings will re-define the continuum
8 Flexibility in design will be a given
9 Salutogenic principles emerge in all building types
10 DEEsign will matter in healthcare; branding

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Drivers, Impacts, and Trends

Potential Code Issues:

1 Home settings: sites of regular care
2 Mixed occupancies: healthcare settings in retail
3 More fragmentation in healthcare: low cost pieces
4 Competing interests: cost, care, safety, sustainable
5 Linkage to rigorous design research programs
6 Health based codes
7 Continuing emphasis on worker safety
8 Technology dependence: personal vs. facility
9 Non-institutional settings for intellectually disabled
10 Modular construction materials/ methods

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Trends in Outpatient/Office Surgical Centers

Implications for Safety Codes and Standards

William Lindeman, WEL Designs PLC

weldesigns@Gmail.com

The Outpatient/Clinical Crystal Ball

- Healthcare facility requirements today are driven by reimbursement, far more than by clinical need or inherent risk
- Lines blurring between outpatient and traditionally inpatient procedures
  - CMS endorses 23:59 "recovery rule," everyone follows
- Recent governmental trends favor Hospital Based facilities over freestanding outpatient ones
  - Higher payment to Hospital facilities for same care
  - Some States reviving and/or strengthening prohibitions against non-hospital facilities
  - CMS "witch hunt" of non-hospital ASCs
- Existing freestanding non-hospital facilities will continue in use, for now . . . many transitioning to hospital ownership

---

The Outpatient/Clinical Crystal Ball

- Physicians "struggling" to maintain income,
  - ASC development, increasingly at absolute minimum requirements
  - Resurgence of "Boutique" clinical practices
  - Shrinking "supply" of physicians
  - Complex office-based procedures to offer care at lower cost and increase market share

- as government action tries to take it away.
  - Medicare "savings" at expense of physician professional fees – with private carriers happy to come along
  - Decoupling of inflation & ASC facility fees
  - Increasing disparity between Hospital and freestanding facility reimbursement

---

The Outpatient/Clinical Crystal Ball

- The Current Crisis In Making

  - Demand is increasingly isolated from real need and personal cost/savings

  - Official Position: control health care cost while improving quality and availability

  - Official Action: Increase Health Care cost by shifting care to higher cost sites and eliminating risk-based exclusion of insurance benefits

The Outpatient/Clinical Crystal Ball

▸ Alternate future extreme realities
  ◦ The government makes everything so efficient the debt is reduced, and unlimited high quality health care is available and "free" for all

  ◦ The experiment fails and the problem continues, worsened by accumulated debt and regulations that will not go away; increased likelihood of personal, State, and Federal financial crisis

  ◦ Something else in between . . . with a little luck

The Outpatient/Clinical Crystal Ball

▸ Alternate future realities
  ◦ Logic is applied, and prevails. Health Care evolves to a value-based model where access to baseline clinical needs is the national priority, and industry trends are to provide care in the most affordable & safe environment (S & A) with practitioners neither over or under-qualified for the task.
    · Acuity/Care need-based facilities (minimal fixed overhead)
    · Technology in lieu of care givers (minimal staff overhead) . . . the "PTM" ??
  ◦ The ever-popular "higher tier" for those who can & choose to afford it.

Outpatient Health Care Trends

▸ Increased regulatory demands, combined with shrinking reimbursement will continue to push higher acuity procedures in to lower cost &/or less regulated facilities.
▸ Very few healthcare services are truly dependant on a facility . . . facilities at most contribute to, or work against, the safe provision of care. Any procedure can be performed anywhere.
▸ Healthcare related safety can best be served by regulations and standards universally applied without sacrificing "value based" economies and efficiencies; cost Vs. benefit

Outpatient /Clinical facility evolution; NFPA's part

▸ Address issues and challenges with current "standards set:"
  ◦ Not applied till they are adopted by AHJs – accumulated updates can shock the system
  ◦ Not broadly understood and/or consistently applied by AHJs, Architects, or Engineers
  ◦ Seldom understood by facility users, relative to maintaining compliance & operational issues
  ◦ Perception that reduced standards put occupants at higher risk (politically touchy)
  ◦ Perpetual approval of existing systems marginalizes newer standards

Outpatient /Clinical facility evolution; NFPA's part

▸ Address issues and challenges with current "standards set:"
  ◦ NFPA Definitions/Terminology out of sync with Health Care meaning or generic/confusing
    • Mechanical Ventilation
    • Assisted Mechanical Ventilation
    • Critical Life Support
    • Critical Care
    • Exit
    • Area
    • Invasive
    • Anesthetizing location
    • Procedure Room

Outpatient /Clinical facility evolution; NFPA's part

▸ Basic Fixes: expanded definitions; better coordination with AHJs; trouble shoot "problem standards."
  ◦ Piped Medical Gas: shut off valves & capacity based requirements.
  ◦ Type 1 EES distribution

Outpatient /Clinical facility evolution; NFPA's part

▸ Facilitate the logical development of safe and "high value" outpatient facilities
  ◦ Establish parameters through which facilities and equipment/systems play in mitigating clinical risk
  ◦ Develop definitions that facilitate acuity-specific physical environment standards
  ◦ Expand/sub-categorize standards to permit acuity-specific physical environment response
  ◦ Educate regulatory and insurance bodies, to encourage broader application (i.e. more regulation) of "more flexible" (i.e. operationally justifiable) codes and standards.

Trends in Outpatient/Office Surgical Centers
Implications for Safety Codes and Standards

William Lindeman, WEL Designs PLC

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National Center for Assisted Living
Your National Assisted Living Leader for Advocacy, Knowledge, Education and Professional Development

National Fire Protection Association Health Care Summit

July 21, 2010

David Kyllo
National Center for Assisted Living

Assisted Living Properties

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

- Average years open = 13.3
- Properties have an average 54 units.
- Average monthly cost = $3,022 or $36,264 annual (single occupancy.)
- Average monthly cost dementia care unit = $4,200.
- Ownership of operating units
  - 59% Private For Profit
  - 12.6% Publicly Held For Profit
  - 25.7% Non-profit
  - 1.3% Government sponsored

Sprinklers and Smoke Detectors

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

For Buildings Built 1996 to Present --

- 97% Sprinkled in common areas
- 96% sprinkled in all rooms.
- 100% Smoke detectors in common areas
- 99% in all rooms.

Assisted Living Residents

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

- Average Age = 86.9
- Average Age at Move-in = 84.6
- 73.6% Female; 26.4% Male
- Average Income = $27,260
- Average Assets (including home) = $431,020
- Median Income = $18,972
- Median Assets (including home) = $205,000

Assisted Living Costs & Resident Income

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

- Average annual cost of all AL communities = $36,264 (single occupancy)
- Average annual cost dementia care unit = $50,400
  - Can be > $100,000 in high-cost areas.
- Median resident income (all residents) = $18,972
- Median resident assets (including home) = $205,000

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Prior Residence

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

- Private home/apartment   70%
- Nursing home   9%
- Retirement/IL   9%
- Family residence   7%
- Different ALF or group home   5%

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Assisted Living Residents

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

- Average Length of Stay = 28.3 months
- Median Length of Stay = 21 months
- Average annual resident turnover = 42%
- 62% within 10 miles of their previous residence.
- 22% of residents made the decision to move independently; 49% partially involved; others made the decision for resident 25% of the time.

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Health Conditions

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

Condition	%
Hypertension	66%
Arthritis	42%
Alzheimer's/Dementia	38%
Coronary Heart Disease	33%
Depression	30%
Osteoporosis	27%
Macular Deg./Glaucoma	19%
Diabetes	17%
Stroke	14%

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Activities of Daily Living Dependence
ALF Data from 2009 ALFA, ASHA, AAHSA, NCAL & NIC Survey

ADL	ALF	NF
• Bathing	64%	96%
• Dressing	39%	90%
• Toileting	26%	84%
• Transfer	19%	80%
• Eating	12%	53%

- 81% of ALF residents need help with meds.
  (Average 9.9 meds daily – 7.6 prescriptions and 2.3 OTCs)

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Other Care Issues

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

- Residents need assistance with 4.5 Instrumental Activities of Daily Living on average with 4 out of 5 needing help with housework, laundry, medications, transportation and meal preparation
- 54% use a walking device (cane, walker, etc.) and 22% use a wheelchair (12% some time; 10% full time)
- 31% bladder incontinent; 14% bowel incontinent
- 92% of communities arrange for /provide hospice care

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Staffing

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

- The average number of staff (Full Time Equivalents) per 100 residents is 63.5 FTEs for all property types (freestanding, dementia care, skilled nursing, CCRC)
- For dementia care alone, the average number of staff is 79.1 FTEs per 100 residents.

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Residents Moving Out

Data from ALFA, ASHA, AAHSA, NCAL & NIC
2009 Overview of Assisted Living

• Nursing home	59%
• Home	9%
• Another ALF	11%
• Relative's home	5%
• Hospital (other than short term)	7%
• Independent living	4%
• Hospice	2%
• Other	4%

One-third (33%) of residents die in the assisted living setting.

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Understanding the Assisted Living State Regulatory Environment

- Common regulatory themes exist
- Still have significant variations in scope of care
- States set floors and ceilings of care and some have multiple ceilings
- Physical plant requirements also vary but all states monitor for safety

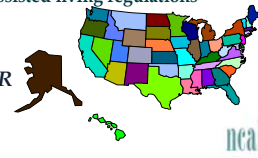*NCAL State Regulatory Review*
available at : www.ncal.org

State Use of the Various Codes

- NFPA 101 is referenced in 37 state
- NFPA's Board & Care and Limited Care Occupancies referenced in 28 states
- IBC is used in 50 states
  - 26 States adopt statewide
  - 24 states adopt by each jurisdiction
  - IBC referenced in 10 state's assisted living regulations

*Data courtesy of Dan Purgiel,*
LRS Architects in Portland, OR

State Regulatory Trends

- Twenty-two states reported AL regulatory/Medicaid policy changes in 2009. Eight states made major changes or overhauled rules. Trends:
- Higher standards for Alzheimer's/dementia care.
- Life safety, emergency preparedness.
- Disclosure & staff training.
- Medication management.

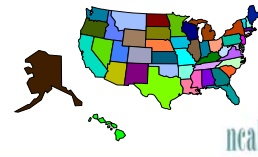*NCAL State Regulatory Review*
available at : www.ncal.org
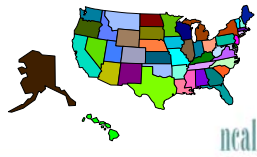
State Regulatory Trends *(2)*

Additional focal points of policy change:
- Criminal Background Checks
- Resident assessment/service plans.
- Medicaid policy.
- Move-in/move-out rules.
- Reporting requirements.
- Resident rights.

NCAL State Regulatory Review,
2010 edition available
March 2010 at: www.ncal.org

Medicaid and Assisted Living

- Rates often inadequate.
- Payment for AL Incomplete (housing, food, utilities not covered; SSI check insufficient to fill gap.)
- Many recent Federal initiatives, regulations tend to exclude AL.
- NCAL study of State Medicaid rates, payment issues released in October.

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NCAL Medicaid Payment & Policy Study

Trends: The shift to Home & Community Based Care

- Medicaid nursing facility census: 896,495 in Dec. 2008:
  - 8.3% less than Dec. 2001.
- Number of assisted living residents receiving Medicaid LTC services: 131,000 in 2009:
  - 43.7% more than in 2002.
- Medicaid spending for NH care is still much greater, but spending for HCB care is growing much faster:
  - From FY 2001–2007, Medicaid spending for HCB care rose 81.5% while spending for NH care rose 9.8%.
  - In FY 2007, $16.7 billion spent on HCB care v. $46.9 billion for NH care.

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LTC Housing Supply:
Beds Per 1,000 People 65 and Older

	Licensed AL/RC	NFs
U.S.	25.7	44.1
Oregon	45.3	25.5
Michigan	36	36.4
Alabama	15.2	42.1
Kansas	19.9	64.6

Source: "State Medicaid Reimbursement Policies and Practices in Assisted Living," Robert Mollica, National Center for Assisted Living/AHCA, September 2009. Available at www.ncal.org.

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HCBS as a Percentage of Medicaid Long Term Care Spending

	Percent HCBS
U.S.	31%
Oregon	57%
Michigan	19%
Alabama	13%
Kansas	35%

Source: "State Medicaid Reimbursement Policies and Practices in Assisted Living," Robert Mollica, National Center for Assisted Living/AHCA, September 2009. Available at www.ncal.org.

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Where will Seniors Live in the Future?

- The number of frail elderly living in their own homes for longer periods of time will increase –
  - Consumer preference
  - State policy changes
  - Federal policy changes
  - Technology
  - Financial pressures
- Government is trying to keep people out of nursing homes now and the pressure to keep people out of assisted living will increase in the future.

Assisted Living Residents in the Future

- Residents will come to assisted living older, more frail and with more needs.
- Residents will require more nursing care.
- There will be a continued push to "age in place" and never move.
- Residents will receive therapy services in assisted living settings.
- There will be niche markets for younger residents with certain disabilities.
- Residents will self-direct their care

Assisted Living Buildings in the Future

- Dozens or hundreds of models
- People will group together to build their own distinct boutique ALFs
- Multiple group ALFs of 10,000 square feet or less will be more common (similar to the Green House Model) and "neighborhoods"
- ALL Single occupancy with an emphasis on privacy. Doors will be closed.
- WiFi, Cable, Phone, etc. in every apartment
- Remote assessment and diagnostics will be common place.

Assisted Living Buildings in the Future

- Licenses may be flexible (Independent, Assisted Living, Skilled Nursing)
- On demand food service available 24/7
- Robotics will be used
- ALFs will need to be even more residential in nature
- Anything that looks or feels institutional will be rejected by consumers
- What is called "culture change" today will be standard operating practice for all LTC

A Question From Assisted Living Developers

- What construction technologies are being developed that reduce costs and increase safety?

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Looking Ahead: What is Clear

- E-Prescribing
- Electronic Health Records
- More on-line disclosure of information
- New service models and delivery sites
- Increasing acuity
- Increased state oversight

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Looking Ahead: What is Unclear

- Uniform assessments
- Uniform outcome measurements
- LTC financing reform
- Federal regulation
- Legal changes
- How CMS will define HCBS settings
- The declining economy's impact on assisted living

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NCAL's New Web site – www.ncal.org

- Assisted Living Research and Studies
- News
- NCAL Publications
- Labor, Workforce & OSHA Resources
- Legislative Updates

- Practice Guidelines and Training Tools
- Webinar and Event Info.
- Quality Resource
- Consumer Resources
- And more…

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NFPA 99, Health Care Facilities Code-Update

- Typically 3 year cycle-i.e. ..., 1993, 1996, 1999, 2002, 2005, 2012?
- What happened?

NFPA 99, Health Care Facilities Code-Update

- After 2005 edition we entered a 4 ½ year (A2009 cycle-2010 edition).
- Reformatted the standard into a risk-based code.
- Eliminated the occupancies chapters
- Added 6 new chapters

NFPA 99, Health Care Facilities Code-Update

- Chapter 1: Administration (FUN)
- Chapter 2: Referenced Publications (FUN)
- Chapter 3: Definitions (FUN-but other TC's will have definitions also)
- Chapter 4: Fundamentals (FUN)
- Chapter 5: Gas and Vacuum Systems (PIP)
- Chapter 6: Electrical Systems (ELS)
- Chapter 7: Information Technology and Communications Systems (ELS)
- Chapter 8: Plumbing (MEC)

NFPA 99, Health Care Facilities Code-Update

- Chapter 9: Heating (MEC)
- Chapter 10: Electrical Equipment (MED)
- Chapter 11: Gas Equipment (MED)
- Chapter 12: Healthcare Emergency Management (HES)
- Chapter 13: Security Management (HES)
- Chapter 14: Hyperbaric Facilities (HYP)
- Chapter 15: Features of Fire Protection (FUN)

NFPA 99, Health Care Facilities Code-Update

- Went to NFPA Annual Meeting in June 2009
- NFPA 99 was returned to Committee by the membership
- Why?
  - New material
  - Wet locations
  - Selective co-ordination
  - Live taps
  - Scope creep with NFPA 13(exclusions of sprinklers in bathrooms and closets)
  - Ozone sterilizers

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NFPA 99, Health Care Facilities Code-Update

- TCC met and discussed what cycle to enter
- Choose to enter the A2011
- Reviewed all existing public proposals
- TC's took the ROC draft and used that as a starting point
- Discussed the "sticking points" from the return and took action

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NFPA 99, Health Care Facilities Code-Update

- Could not resolve several issues
  - Selective co-ordination
  - Wet locations
  - Scope creep with NFPA 13
- Selective co-ordination is open for public comment
- NFPA Research Foundation project to look at wet location issue
- Intercommittee task group to look at NFPA 13 scope creep

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NFPA 99, Health Care Facilities Code-Update

- Where are we now?
- ROP is complete
- Open for public comments now
  - Close date is 9/3/10
  - NITMAN closing date is 4/8/11
  - Association meeting in Boston, June 12-16, 2011
- Health Care Facilities Code-2012 edition

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Global Goals and Changes

- Modernize the document – 30 year old content
- Clear and consistent set of criteria
- Establish four risk levels of patient care
- All chapters will have the same look
- Establish a section for existing system requirements

2008 WSCBE on NFPA 99

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Categories of Patient Risk

- Category 1

  Facility systems in which failure of such equipment or system is likely to cause major injury or death of patients or caregivers shall be designed to meet system category 1 as defined in this standard.

- Annex Material

  Systems are expected to work or be available at all times to support patient needs.

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Categories of Patient Risk

- Category 2

  Facility systems in which failure of such equipment is likely to cause minor injury to patients or caregivers shall be designed to meet system category 2 as defined in this standard.

- Annex Material

  Systems are expected to provide a high level of reliability; however, limited short durations of equipment downtime can be tolerated without significant impact on patient care. Category 2 systems support patient needs, but are not critical for life support.

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Categories of Patient Risk

- Category 3

  Facility systems in which failure of such equipment is not likely to cause injury to the patients or caregivers, but may cause patient discomfort shall be designed to meet system category 3 as defined in this standard.

- Annex Material

  Normal building system reliabilities are expected. Such systems support patient's needs but failure of such equipment would not immediately effect patient care. Such equipment is not critical for life support.

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Categories of Patient Risk

- Category 4
  Facility systems in which failure of such equipment would have no impact on patient care shall be designed to meet system category 4 as defined in this standard.
- Annex Material
  Such systems have no impact on patient care and would not be noticeable to patients in the event of failure. There are no minimum requirements for such equipment.

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TC on Fundamentals

- Definitions
  Anesthetizing locations
  Wet locations
- Emergency Power Supply Systems
  Eliminated Emergency System Heading
  Changed Equipment System to Equipment Branch
  Overcurrent Protection Devices (Access and Location)
- Low Voltage Electrical Systems
- New chapter on fire protection features
- Revised section on flammable germicides and antiseptic (TIA)

2008 WSCBE on NFPA 99

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TC – Piped Gas Systems

- Working with NFPA 55 on bulk oxygen requirements

- Testing requirements for cryogenic liquid systems and all other systems

- Maintenance and Testing of Installed Systems

- Testing of Articulating Booms

2008 WSCBE on NFPA 99

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TC- Emergency Management

- New Chapter on Security
  - Based on the foundations of NFPA 730, Guide for Premises Security
  - Facility shall conduct a Security Vulnerability Assessment (SVA)
  - Defines responsible person

2008 WSCBE on NFPA 99

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NFPA Questions?

**Thank you for your time
and attention!**

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