

Healthcare Facilities Technicians

Xgen & Millennials - Worker and Leader Succession Planning
Florida Healthcare Engineering Association - October 9, 2019

Presenters

- Mike Canales - Owensboro Community & Technical College, Healthcare Facilities Program Director.

Session Objectives

- Review the Recruitment & Succession Plan Need
- Review Healthcare Facilities Technicians Growing Skillset needs.
- Identify skill sets and growth needs of entry generation
- Present key strategies needed to recruit current generation

Session Objectives Continued.....

- Review current development opportunities for recruiting, engaging, and advancing current and entering technicians
- Review development of Certified Healthcare Facilities Technician (CHFT)
- Present proposed Certified Healthcare Facilities Engineer (CHFE)
- Review precedent and value of academic & professional credentialing.
- ** This Session is focused on entering workers, however, existing technicians will have the most immediate benefit and opportunities!!!**

- “It’s unbelievable how much you don’t know about the game you’ve been playing all your life.” Mickey Mantle

Healthcare and Wonka!



We need a lot of Charlies!!!



We can't afford Augustus Gloops!!!



Industry Growth

- FM(General Industry) Rate of growth is estimated at 12% for next 10 years. (2016)
- Is healthcare Facility Management demand greater?
- Numerous ASHE and Chapter Presentations on aging workforce

Bureau of Labor Statistics 2016-2026

Electricians - 9%

Plumbers - 16%

HVAC - 15%

A Looming Crisis or Here?

- According to a report published by SafeBuilt, it's estimated that roughly 10,000 people will turn 65 every day until 2030. Even those who remain in the workforce past conventional retirement age are still likely to impact their industry in other ways, from physical ability to technological proficiency.
- Will vocational workers work til age 65?
- What might the stock market impact this?
- Unemployment at 50 year low- 3.7%(Sept -2019)

Growing complexity and demands



Computer Technology

- BAS
- CMMS
- Fire
- Nurse call
- Phone
- CAD
- BIM
- Elevators
- Generators
- Chillers



Codes & Standards

- NFPA
- CMS
- ASHRAE
- FGI
- TJC
- DNV
- OSHA
- FCC
- FAA
- State



Operations & Maintenance

- Risk Assessments
- Projects
- Moves
- Work Orders
- Preventive Maintenance
- ICRA
- Life Safety
- Sprinkler/Fire

Some things we rarely use to do/think of in Outpatient?

- ICRA/PCRA
- Above Ceiling Permitting
- ASHRAE 170- Air Ventilation
- ASHRAE 188- Water pathogens
- HIPPA

Some things we rarely use to do/think of in Outpatient? Continued....

- HCAHPS
- Disaster Planning(CMMS Emergency Management - Nov. 2017)
- Environmental Rounds
- Active Shooter

How many facilities directors/managers/supervisors in these buildings?

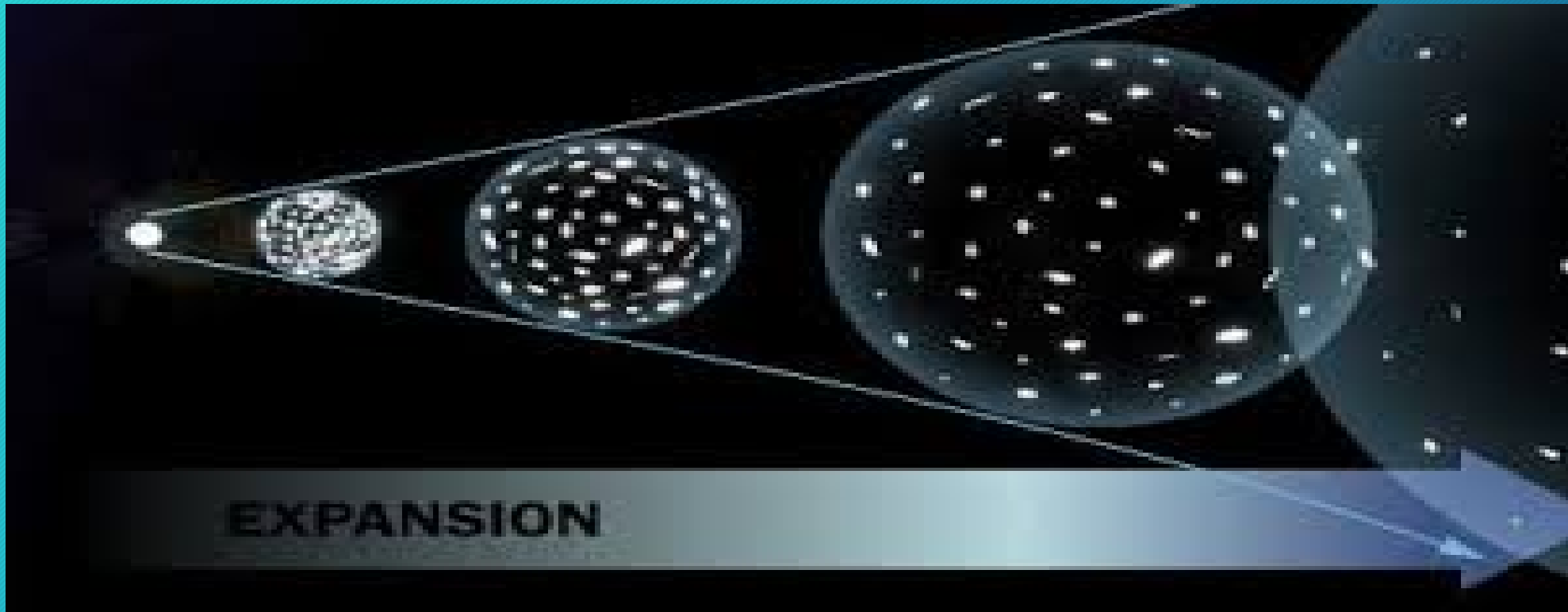
Facilities Tech Skill Sets

- Technology- CMMS, Fire Panel, Nurse Call, BAS, Generator, Security System, etc...!
- Reporting- ICRA/PCRA/ILSM.
- Speaking- Building Managers, Doctors, Nurses, Vendors..
- Writing- Articulate and well summarized

Facilities Tech Skill Sets Continued...

- Codes, Standards, & Compliance.
- Customer Service.
- Critical Thinkers.
- Med Gas, Life Safety, Emergency Management, Basic Ventilation, Basic Electrical, Energy Management

Expanding with no signs of slowing!



CMS Annual Accreditation Report

➤ [2017 AO CMMS Review.pdf](#)

➤ Page 67

Understanding Disparity Rate All Surveys- Hospitals

- Discussion
- 2012 - 44%
- 2013 - 46%
- 2014 - 38%
- 2015 - 37%
- 2016 - 48%

Understanding Physical Environment Disparity Rate

Disparity Comparison ALL COP's vs Physical Environment(PE)

	Hospital %	Critical Access	Psychiatric	Ambulatory
2013	23% / 29%	21% / 27%	25% / 50%	17% / 18%
2014	19% / 32%	9 % / 31%	30% / 20%	23% / 23%
2015	16% / 29%	15% / 37%	50% / 33%	15% / 20%
2016	16% / 26%	27% / 24%	69% / 38%	33% / 17%
2017	23%/35%	24% / 38%	48% / 19%	24% / 19%

Disparity Rate by Survey Area

➤ Physical Environment	35%
➤ Infection Control	6.9%
➤ Governing Body	5.9%
➤ Patient Rights	3.9%
➤ Food and Dietetic Services	2.9%

It can change this quick

- Nursing home deaths: Fla. governor orders nursing, assisted living homes to install generators and ensure environmental control.



NFPA 80 2016 - Qualified Inspector

- 5.2.3.1 - Acceptance testing of fire door and window assemblies shall be performed by a qualified person with knowledge and understanding of the operating components of the type of assembly being subject to testing. Appendix expands requirement for inspection and testing after installation.

New(Nov 2017)Joint Commission Requirement for personnel training.

- EC.03.01.01 - Personnel responsible for the maintenance and testing and use of medical equipment, utility systems, and equipment, fire safety systems, and equipment and the safe handling of hazardous materials and waste are competent and receive continuing education and training.

Looks a bit different!



Not your grandparents nursing home!



Facilities as a Sentinel (Defense)

The Sentinel

- Protects the most vulnerable.
- Codes how build it, standards how we maintain it.
- Continuously on Guard.
- Only one department with possible understanding.

Facilities as Healing Environment (Offense)

Healing

- Air - Comfort, quality, Clean to Dirty, barrier...
- Water - Purity, Temp, Dead legs, ASHRAE 188, Pressure..
- Med Gas -
- Cosmetic/Surfaces
- Noise

Millennial Skillsets

- Like Technology
- Collaborative Approach
- Energy & Idea's
- Desire to Advance
- Want to be part of something “bigger”
- Want to reduce carbon footprint
- Know how to network
- Want Mentoring

Millennial Growth Opportunities

- Need Experience
- Understanding 24 x 7 environment & work ethic
- Understanding complex healthcare customers
- Want career path sooner
- Need Experience

Healthcare Unique Position to Attract Millennials

- Cathedral Building
- 72 degrees
- Mentorship/Experience
- Career Path?
- Technology
- Exposure to many trades/skills
- Consistent work schedule
- Good pay/benefits/stability

Early Recruiting Opportunities

- Home Educators
- Vocational Programs
- Interview/select high aptitude
- Underserved Schools

Early Recruiting Benefits

- Improve technical mix/expense
- Healthcare Facilities Technician first, trade second.
- Tuition reimbursement. Ability to pay out of pocket.
- Better Student- Know why!
- Selection Day

Development Program for Millennial's - The Millennial Manual by Ryan Jenkins.

- 2000 Reading/6000-9000 Playing Games by 21
- Failure/Reward
 1. Give Options
 2. Hints
 3. Give Control
 4. Deliver Development
 5. Promote Collaboration
 6. Communicate Consequences
 7. Highlight Progress

Millennial Recruiting Considerations

- Work to Live orientation.
- **Need for clear advancement steps.**
- Regular encouragement
- Connection to “bigger” purpose/mission - “save the planet”.
- Job hopping tendencies (facilities is multi-faceted)
- Want access to “everything/technology”.
- Accustomed to “being in charge” (outpatient, zone, life safety, beds, etc...)

HFL Program - Management

HFE OR HFT Associates Degree

Leads

HFE/CHFE/CHFE Apprenticeship

Engineer

Trade Program OR Apprenticeship

Tech III

HFT/CHFT/HFT Apprenticeship

Tech II

Building Tech Apprenticeship

Tech I

HFC/CHPEW

Mainly Contractors

HFO/SD1

All Facility Workers/Contractors

Healthcare Facilities Technician/Engineer Career Ladder

Inspire - Entry Workforce

- Shadowing Experiences - HS
- Internships - HS/Vocational
- Safe Day One (SD1)- Comprehensive Orientation.
- Apprenticeship - Home Educators, Graduates, Military
DOL 0301 - Building Maintenance Technician(4000 hours).
- Healthcare Facilities Technician(HFT) - Work, Earn, Learn.
Competency based.
- CHFT at end of Apprenticeship and/or HFT Certificate.
- 2-3 years of experience 4-6 steps of pay/growth.

Promote - Current Workforce - Early-Mid Career

- Certified Healthcare Facilities Technician(CHFT)- Professional Development. (8 Credit hours towards HFT)
 - Healthcare Facilities Technician Certificate- Academic.
 - Trade Specific Education/Apprenticeship.
 - Certified Healthcare Facilities Engineer (CHFE) - Professional Development. (8 Credit hours towards HFE)**
 - Healthcare Facilities Engineer Diploma - Academic.**
 - 4-10 years of career development.
- ** proposed and currently not in place.

Future CHFE - Certified Healthcare Facilities Engineer

- Next level beyond CHFT designed as a “deep dive” into healthcare specific codes, regulations, operations built around specialties and trade groups:
 - Electricians
 - Life Safety
 - HVAC
 - BAS/Energy
 - Plumbing
 - Med Gas
 - Plant
 - Low Voltage - Nurse Call, Telecom, Fire Panels, etc...
 - Water Management/Facility Infection Prevention.

Advance - Mid to Late Career

- More than one CHFE (i.e. Electrical & Life Safety)**
- Healthcare Facilities Technician Diploma & Associates - Soft Skills/Finances/Intro to Leadership.**
- Healthcare Facilities Engineer Degree - Soft Skills/Finances/Intro to Leadership.**
- Healthcare Facilities Leadership Academic Path.
- Transfer to various Bachelor/Master Programs from HFT/HFE/HFL
- 11-30 year career time frame.

** proposed and currently not in place.

Safe Day One-Healthcare Orientation & Safety

- **Safe Day One(SD1)**- This online training program in Spanish & English is targeted for contractors and employees providing construction, equipment, and/or maintenance and operations. SD1 is an in depth orientation to the healthcare facilities environment that includes:
 - Infection Prevention
 - Interim Life Safety
 - Blood Borne Pathogens
 - Healthcare specific OSHA awareness
 - Patient Awareness
 - And other healthcare specific training.
 -
- While SD1 is not an accredited course, it does provide critical information and is validated through testing. A certificate is issued after successfully completing. Prepares for ASHE's contractor Worker Test/Certification. Most if not all healthcare facilities require some type of healthcare orientation prior to allowing individuals to work at the facility. This is a fee based program.

Building Maintenance Apprenticeship

- [DOL Code 0310](#)

Healthcare Facilities Technician (HFT) Academic Certificate

- The primary benefit of the HFT Certificate would be for those working as a healthcare facilities technician or desire to enter or advance positions in the healthcare facilities services profession. Because an academic certificate is industry specific, college entrance testing (English, Reading, Math) is not required. Allowing for ease of access and an opportunity for building academic confidence.

HFT Course Outline

HFT Courses	Description	Credit Hours
• HFO 100	Healthcare Facilities Orientation OR SD1	1
• HFL 100	Introduction to Healthcare Facilities Management	3
• HFL 120	Infection Prevention & Control	2
• Lab 1	Life Safety & Medical Gas	(4)
• Lab 2	Healthcare Ventilation & Electrical	(4)
• HFT Cap 1	Life Safety & Medical Gas	2
• HFT Cap 2	Healthcare Ventilation & Electrical	2

Total 18 (10 paid)

Will accept Approved Apprenticeship, CHFT, OR Competency Checklist for lab 1 & 2.
Approximately \$2000.00 Value.

Medical Gas - Ventilation - Electrical - Life Safety Competency/Practicums

- Ventilation & Electrical
- Medical Gas & Life Safety

Proposed Certified Healthcare Facilities Technician(CHFT)

- The primary benefit of the CHFT would be to provide a national certification to demonstrate commitment and professional growth. Those obtaining the CHFT would need be expected to maintain the certification through approved technical and professional courses and material.

Case Study Benefits of Credentials

- Measures Engagement
- Promotes Credibility
- Value to Organizations (Not all do!)
- Continuous Education

Certified Healthcare Facilities Technician(CHFT) - Available 2020

- The primary benefit of the CHFT would be to provide a national certification to demonstrate commitment and professional growth. Those obtaining the CHFT would be expected to maintain the certification through approved technical and professional courses and material.
- Establish Foundational Healthcare Specific baseline.
- Advancement and promotion tool.
- Continuous Education.
- Establish professional credibility.
- CHFT will count for HFT Academic Credit/Competencies.

CHFT Six Pillars

- Infection Prevention (10%)
- Healthcare Departments and Special Features (10%)
- Life Safety (24%)
- Medical Gas (15%)
- Ventilation (24%)
- Electrical (17%)

AWESOME CHFT Test Questions

- Accreditation - Addresses historical issues.
- Why - Support the WHY we need to know this (i.e. tied to code).
- Engage - Creates engagement by connecting job/task to profession.
- Save Lives - Potential for question or knowledge gained to save lives.
- Ownership - Increase ownership of the building and standards.
- Meaningful - Question is instructional and relevant.
- Everyone - Reaches the widest possible audience/technician.

CHFE - Which one first?

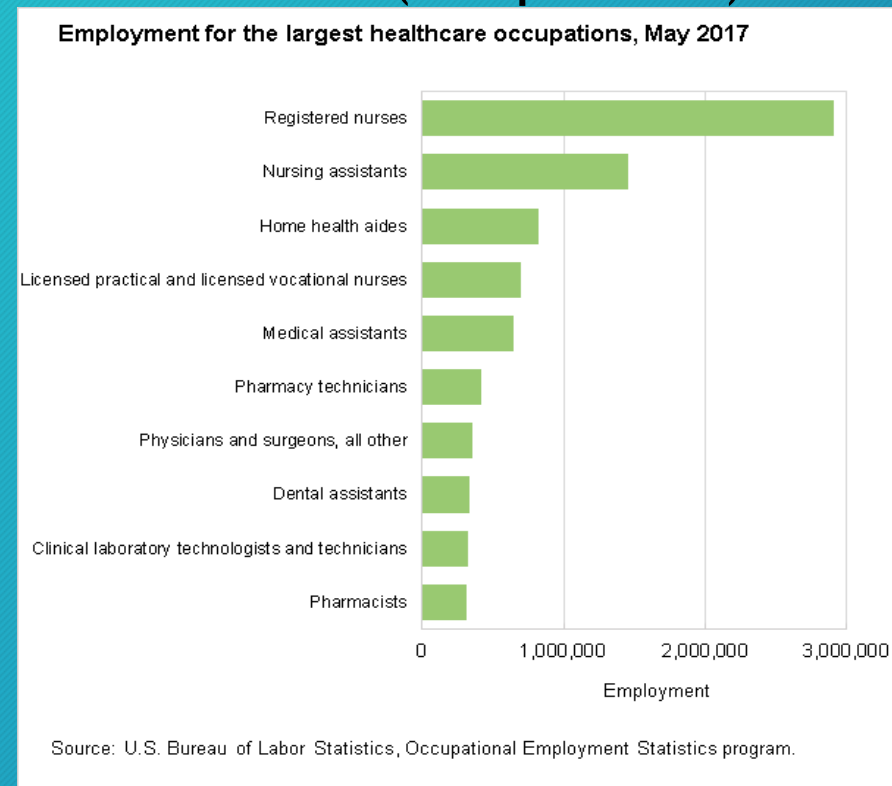
Future Healthcare Facilities Technician/Engineer AAS

- The primary benefit of the HFT/HFE AAS would be to broaden the technicians analytical, English, reading, math, communication, and industry specific skills. These additional skills would enhance employability and industry professionalism.
- Those completing this program would also make for very good candidates to enter the HFL program(Leadership).

Credits from CHFT & CHFE would count for up to 16 credit hours!!!

The Academic Credential Mandate

- Radiology, Lab, Surgical Tech, Pharmacy Tech, Sterilization Tech, Medical Nursing Assistant -MNA(Outpatient)-etc..



Justification for Credentialing Mandate

- Complexity- and growing
- Current process too long for competency(30-40 yrs? - HFM)
- Continuing professional development needed throughout career
- Clinical Involvement- ICRA/Ventilation/Ligature/Med Gas/Water Borne/Indoor Air Hydration, etc...
- Precedence all around
- Current Silo mentality
- Expanding outpatient complexity
- Need to recruit best early(aptitude)- grow our own.
- Decades of same accreditation issues

ASHE & ASHE Chapter Benefits of Academic & PD Credential Requirement

- Increased ASHE Membership.
- Increased CHFM's
- Increased State Chapter Membership.
- Improved Chapter Participation.
- Education opportunity and delivery closer to home.
- ASHE/Chapter diversity(Age, Race, Gender)
- Career Ladder
- Improved overall succession planning.

Healthcare Benefits of Academic Credential & PD Requirement

- Improved Regulatory Awareness/Response.
- Improved Accreditation.
- Improved Infection Prevention Awareness, Response, and Engagement.
- Improved Succession Planning.
- Improved Career Pathway.
- Increased use of technology(younger generation).
- Increased Comprehensive Healthcare Facilities Awareness.
- Increased Qualified employee's/hiring pool.
- Opportunity for rural facilities to “grow own”.
- Rounded development

IHFEA - Institute for Healthcare Facilities Engineering Advancement

- Inspire, promote, and advance career paths and standards of excellence for the healthcare facilities engineering technician profession.



Eric Hofler

- “In times of change, the LEARNERS inherit the earth, while the LEARNED find themselves beautifully equipped to deal with a world that no longer exists.”

Questions & Answers?



For More Information Contact

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