ASHE™

Optimizing health care facilities

Health Care Roadmap to Codes and Standards

AHA Education

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American Society for Healthcare Engineering (ASHE)

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The Background

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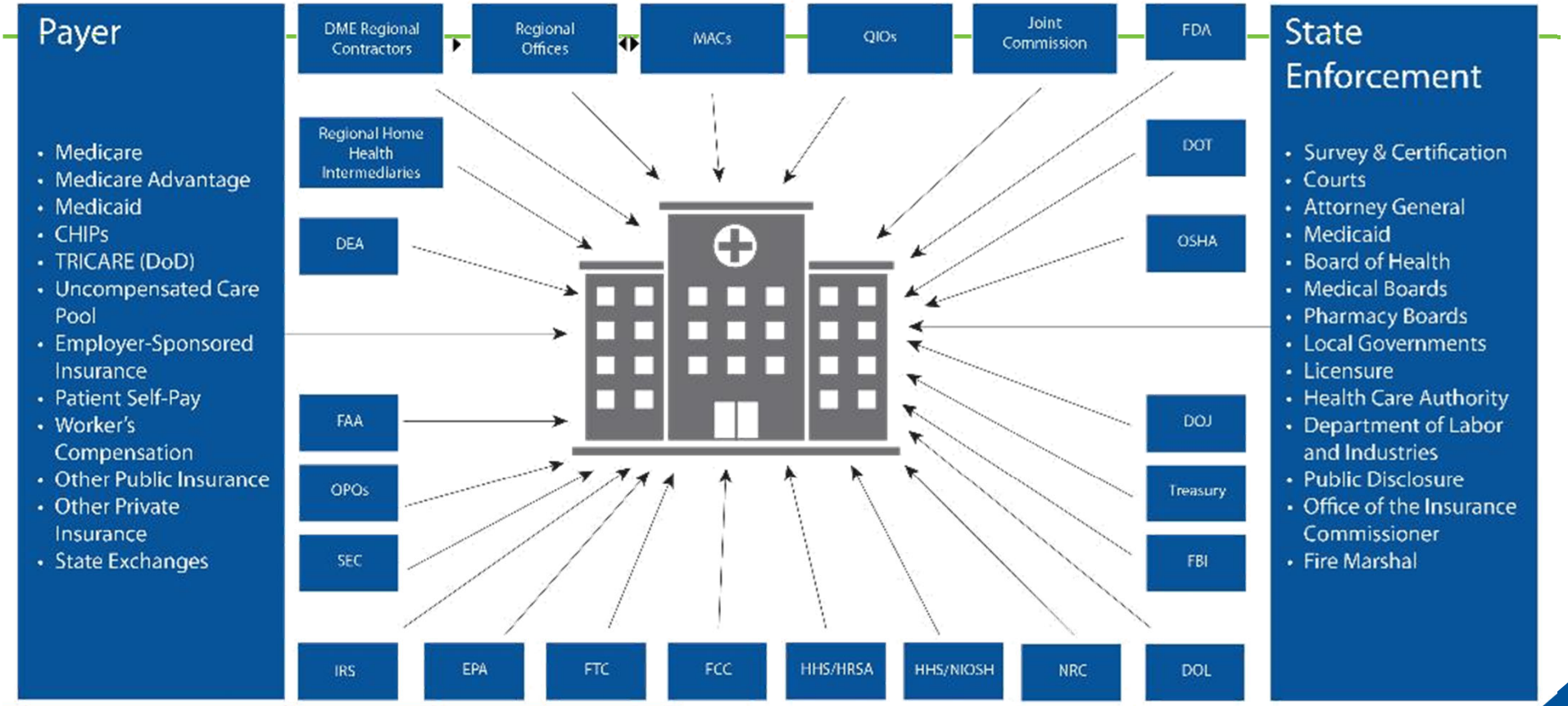
Who regulates hospitals?



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Poor Codes Cost Money without Improving Safety

- **$6 billion** a year wasted in operational costs
- **$10 billion** a year wasted in capital costs
- Small things could have a profound effect nationwide..

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What does a 5.5% operating margin mean?

$1.00 (gross revenue)

-$0.945 (costs)

5.5 cents

$1.00 / 5.5 = 18.18

$1,000,000 X 18.18 = $18,180,000!

But only 20% goes to capital improvement…

So $1,000,000 X 90.90 = $90,900,000!!

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Example

- Citation made to require all penetrations of tack holes to be filled in any fire or smoke barrier throughout the hospital.

- Hospital hires a contractor to go through facility at a cost of $7,338.00 (1 person, 40 hours plus materials and tax)

Hospital needs to recover that money, so must bill **$667,024.20**

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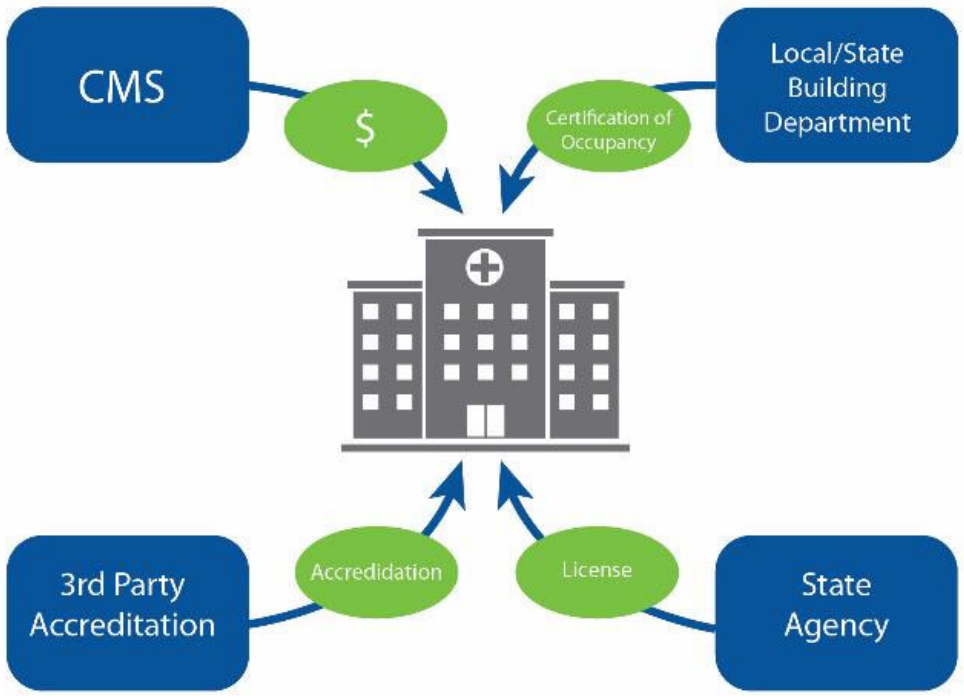
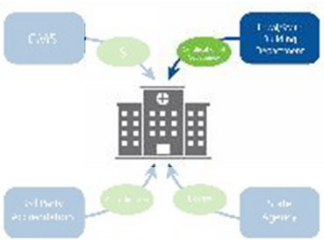
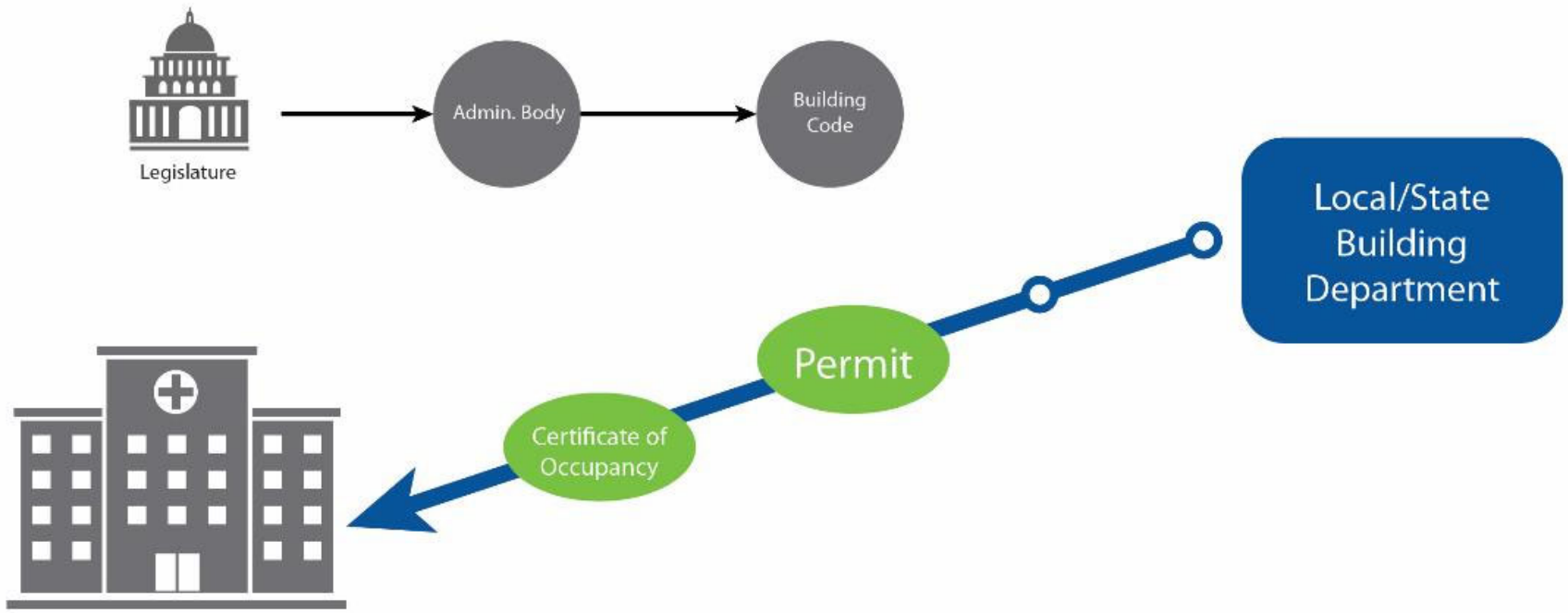
Major Regulators

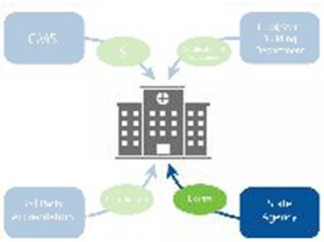


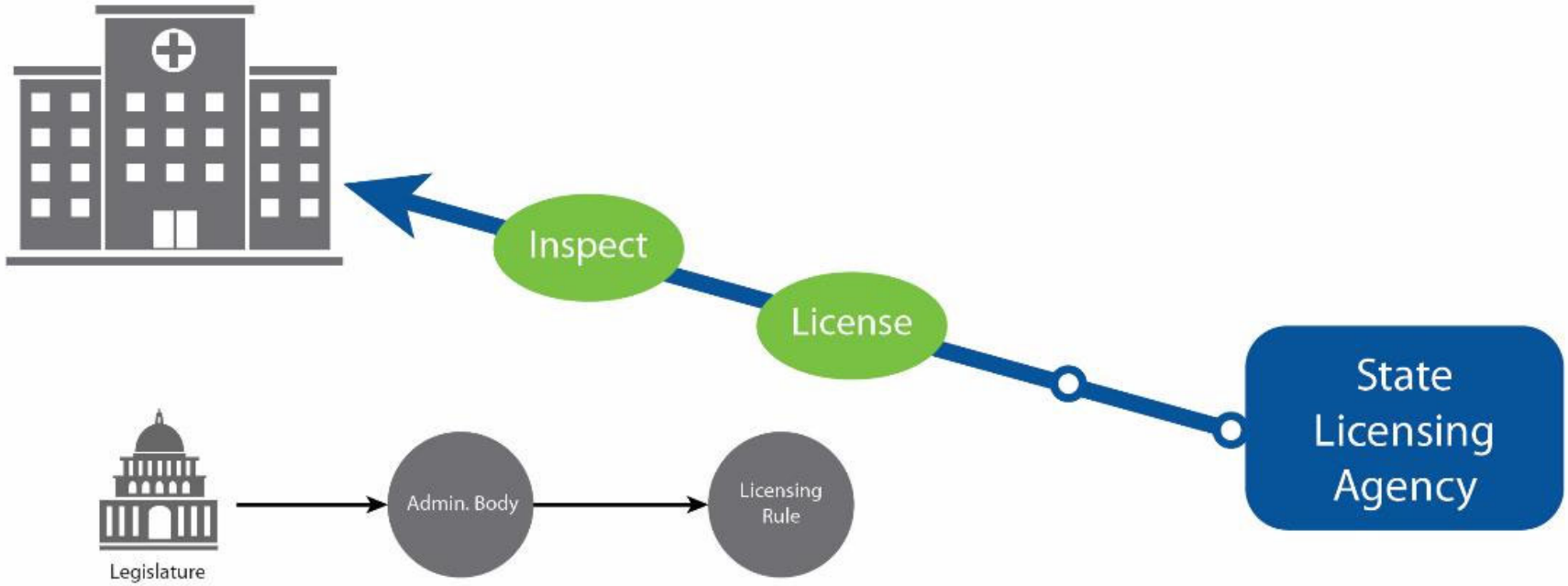
Building Department



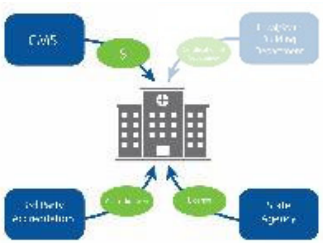


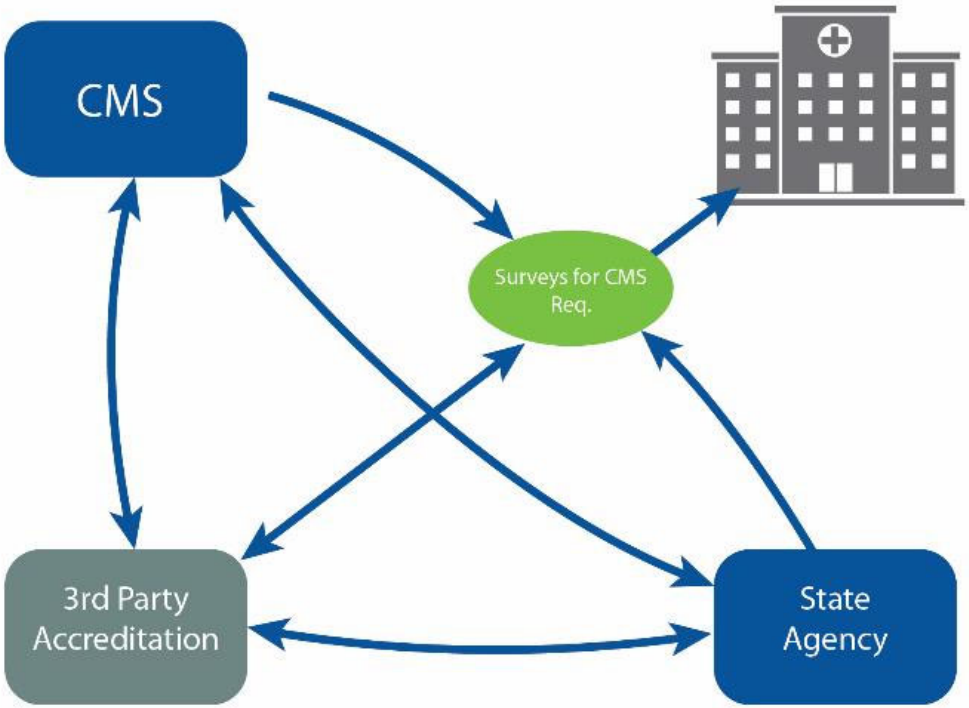
State Licensing Agency



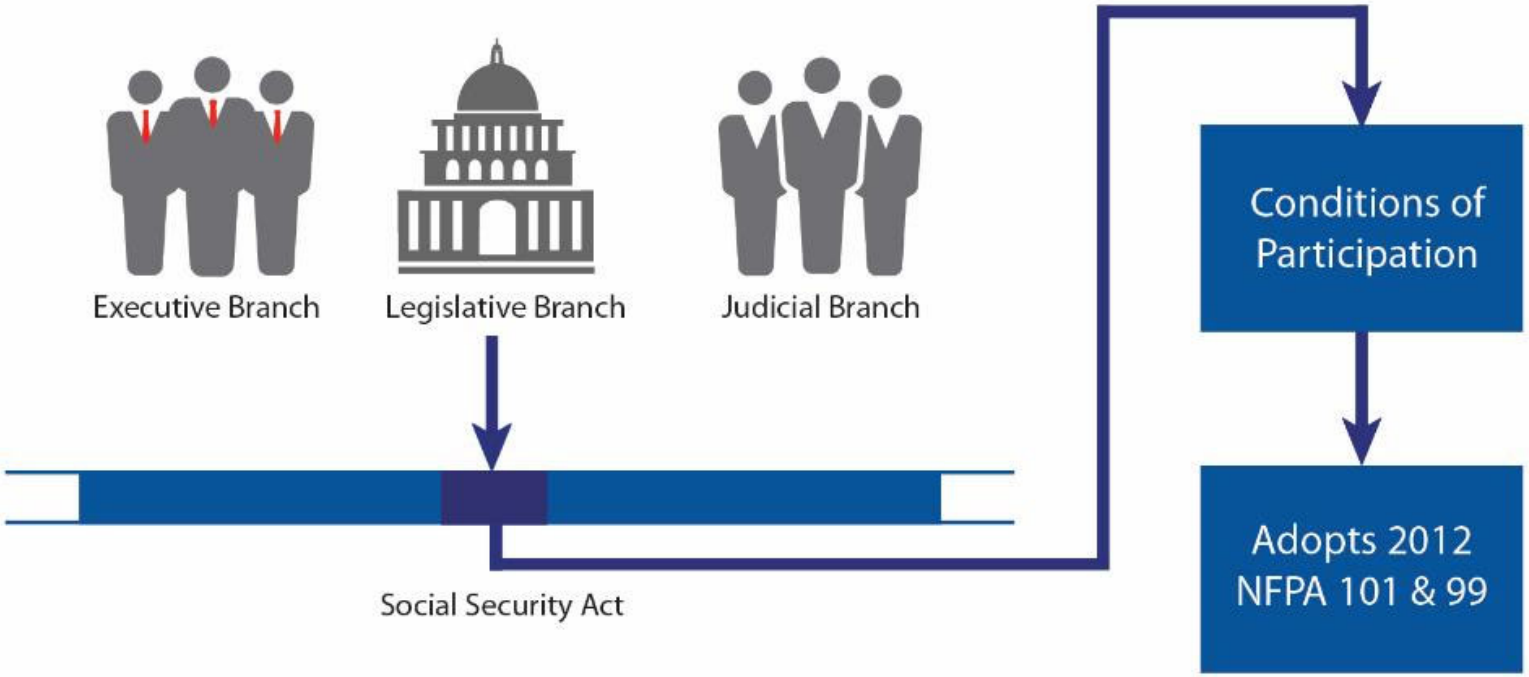


Accreditation

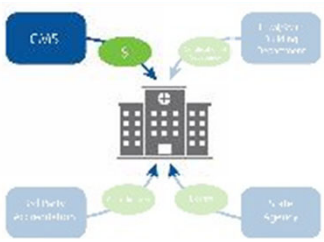


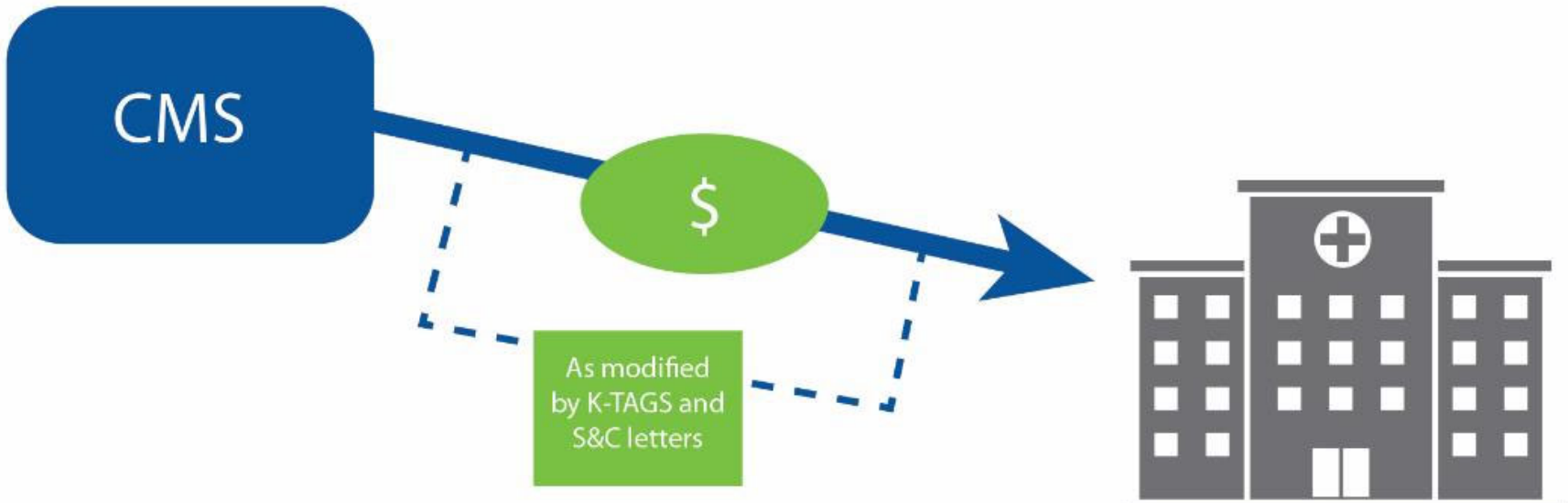


Conditions of Participation



CMS





What are the Conditions of Participation (COPs)?

COPs Based on Provider Types

- PART 403—SPECIAL PROGRAMS AND PROJECTS
- PART 416—AMBULATORY SURGICAL SERVICES
- PART 418—HOSPICE CARE
- PART 460—PROGRAMS OF ALL INCLUSIVE CARE FOR THE ELDERLY (PACE)
- PART 482—CONDITIONS OF PARTICIPATION FOR HOSPITALS
- PART 483—REQUIREMENTS FOR STATES AND LONG TERM CARE FACILITIES
- PART 485—CONDITIONS OF PARTICIPATION: SPECIALIZED PROVIDERS

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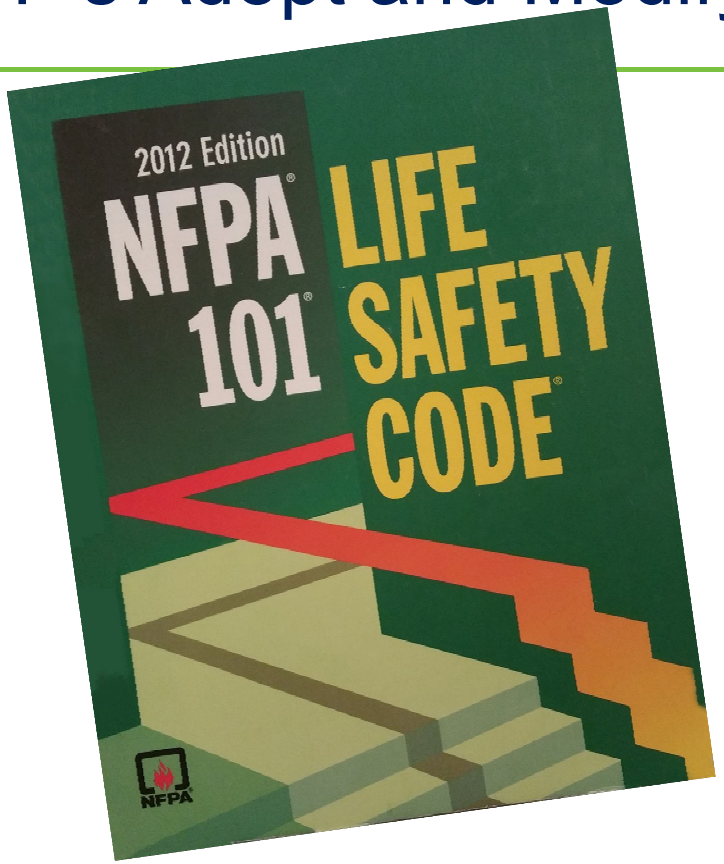
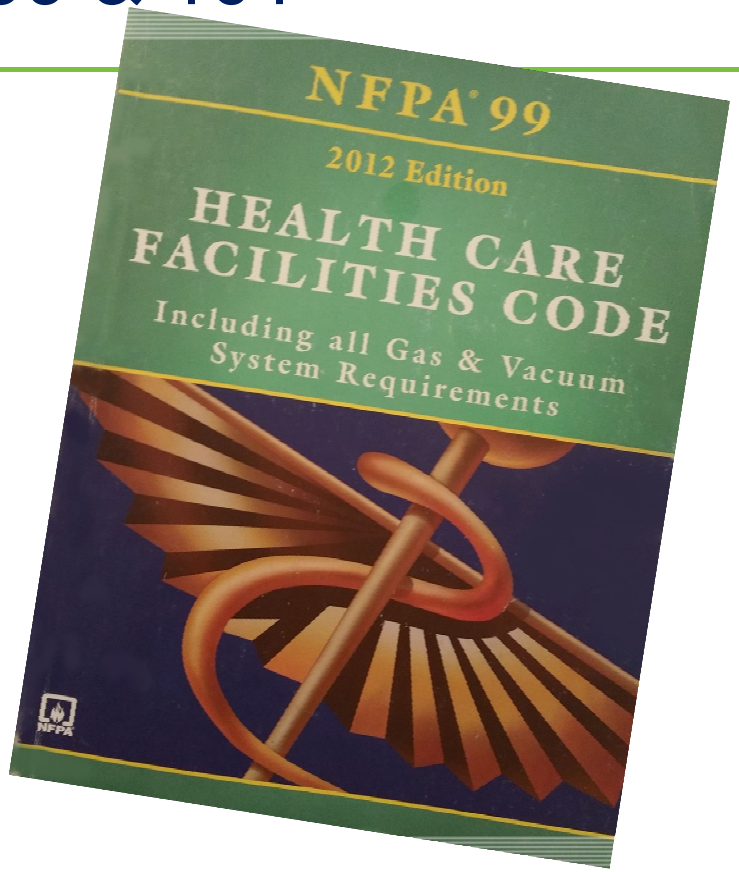
COP's Adopt and Modify 99 & 101





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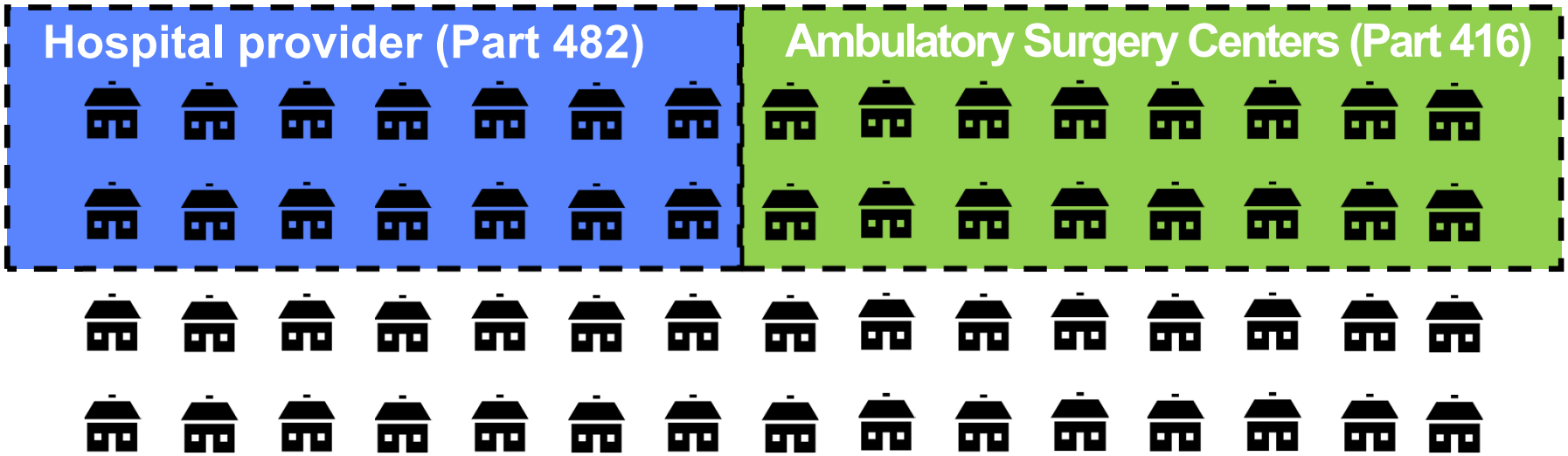
PART 416 - Ambulatory Surgical Services

- Ambulatory Surgery Centers
  - "Distinct Entity"
  - Physical Environment
    - Separate recovery and waiting room
    - Emergency equipment and personnel
    - NFPA 101 and NFPA 99
  - § 416.54 Emergency Preparedness

https://www.law.cornell.edu/cfr/text/42/416.44

Ambulatory Provider types



Part 482 - Hospitals

- § 482.41 Physical Environment
  - Adoption, change in definition – 1 (or More)
  - Roller Latches
  - ABHR
  - Sprinkler 10-hour rule
  - 36" Sill Height
  - Adoption of NFPA 99, 2012
- § 482.15 Emergency Preparedness

https://www.law.cornell.edu/cfr/text/42/482.41

Part 485 – Specialized Providers

- Physical Environment COPs for Various Providers
- 42 CFR 485.62 Comprehensive Outpatient Rehabilitation Facilities
- 42 CFR 485.623 Critical Access Hospitals
- 42 CFR 485.723 - Clinics, Rehabilitation Agencies, and Public Health Agencies as Providers of Outpatient Physical Therapy and Speech-Language Pathology Services
- 42 CFR 485.920 Community Mental Health Centers (CMHCs)

Subpart B - Comprehensive Outpatient Rehabilitation Facilities

- Physical Environment
  - Safe, functional, accessible and comfortable environment
    - Fire alarm system
    - Lights supported by emergency power source
  - “Sufficient suitable space” to provide care
  - Space for meeting, therapy, personal care and dining.

https://www.law.cornell.edu/cfr/text/42/485.62

Subpart F - Critical Access Hospitals

- Must Meet Life Safety Code (same as part 482)
- Must be located no closer than 35 miles from other hospital
- Maximum of 25 Inpatient Beds
- Allowed to use “swing beds” used for LTC
- May have additional 10 Psychiatric Beds (Distinct Unit)
- May have addition 10 Rehabilitation Beds (Distinct Unit)
- Must provide emergency services (on call within 30 minutes)*
- Must not exceed 96 hours acute inpatient care per patient (annual average)

https://www.law.cornell.edu/cfr/text/42/part-485/subpart-F

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101 and 99 Required by CMS

Part	Facility type	NFPA 101 and NFPA 99 req'd
403	Religious Nonmedical Health Care Institutions	yes
416	Ambulatory Surgery Centers	yes
418	Hospice (services)	yes
460	PACE	yes
482	Hospitals	yes
483	Long Term Care (Nursing Home)	yes
485	Comprehensive Outpatient Rehab. Facility (CORF)	no
	Critical Access Hospitals	yes
	Providers of Outpatient therapy	no
	Community Mental Health Centers	no
494	Rural Health Clinics	no
494	ESRD (Dialysis Centers)	yes

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Resolving Code Conflicts

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Unified Codes Process Diagram
Unified Codes
President
ICC
Congress
PCORI
IPAB
CMS
Essential Health Benefits Package
Government Health Benefit Exchanges
Health Insurance CO-OP
Physicians
Patients
New Government
Expanded Government
Private
New Relationships

Which Edition do I use?

Reimbursement

- 2012 NFPA 101
- 2012 NFPA 99
  - Older referenced codes

Occupancy

- 2015 Building Code
  - 2015 NFPA 99
  - 2015 LSC
    - 2015 or older codes

Tip: https://www.iccsafe.org/[state]/

IBC Chapter 34

70—14	National Electrical Code	108.3, 415.11.1.8, 904.3.1, 907.6.1, 909.12.2, 909.16.3, 1205.4.1, 2701.1, 2702.1.2, G501.4, G1001.6, H106.1, H106.2, K101, K111.1
72—13	National Fire Alarm and Signaling Code	407.4.4.3, 407.4.4.5, 407.4.4.5.1, 901.6, 903.4.1, 904.3.5, 907.2, 907.2.6, 907.2.11, 907.2.13.2, 907.3, 907.3.3, 907.3.4, 907.5.2.1.2, 907.5.2.2, 907.5.2.2.5, 907.6, 907.6.1, 907.6.2, 907.6.6, 907.7, 907.7.1, 907.7.2, 907.2.9.3, 911.1.5, 2702.2.4, 3005.5, 3007.7
80—13	Standard for Fire Doors and Other Opening Protectives	410.3.5, 509.4.2, 716.5, 716.5.7, 716.5.8.1, 716.5.9.2, 716.6, 716.6.4, 1010.1.4.3
82—14	Standard on Incinerators and Waste and Linen Handling Systems and Equipment	713.13
85—15	Boiler and Combustion System Hazards Code	415.8.1
92—15	Standard for Smoke Control Systems	909.7, 909.8
99—15	Health Care Facilities Code	407.10, 425.1
101—15	Life Safety Code	1029.6.2
105—13	Standard for Smoke Door Assemblies and Other Opening Protectives	405.4.2, 710.5.2.2, 716.5.3.1, 909.20.4.1
110—13	Standard for Emergency and Standby Power Systems	2702.1.2
111—13	Standard on Stored Electrical Energy Emergency and Standby Power Systems	2702.1.2
120—15	Standard for Fire Prevention and Control in Coal Mines	426.1

NFPA (any) Chapter 2

(1)*Documents referenced in this chapter, or portion of such documents, shall only be applicable to the extent called for within other chapters of this *Code*.
(2) Where the requirements of a referenced code or standard differ from the requirements of this *Code*, the requirements of this *Code* shall govern.
(3)*Existing buildings or installations that do not comply with the provisions of the codes or standards referenced in this chapter shall be permitted to be continued in service, provided that the lack of conformity with these documents does not present a serious hazard to the occupants as determined by the authority having jurisdiction.

2.2* NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2010 edition.

NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*, 2010 edition.

NFPA 12, *Standard on Carbon Dioxide Extinguishing Systems*, 2011 edition.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems*, 2009 edition.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2010 edition.

NFPA 90B, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems*, 2012 edition.

NFPA 91, *Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids*, 2010 edition.

NFPA 92, *Standard for Smoke Control Systems*, 2012 edition.

NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*, 2011 edition.

NFPA 99, *Health Care Facilities Code*, 2012 edition.

NFPA 101A, *Guide on Alternative Approaches to Life Safety*, 2010 edition.

NFPA 105, *Standard for Smoke Door Assemblies and Other Opening Protectives*, 2010 edition.

NFPA 110, *Standard for Emergency and Standby Power Systems*, 2010 edition.

NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*, 2010 edition.

NFPA 160, *Standard for the Use of Flame Effects Before an Audience*, 2011 edition.

NFPA 170, *Standard for Fire Safety and Emergency Symbols*, 2009 edition.

NFPA 204, *Standard for Smoke and Heat Venting*, 2012 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel–Burning Appliances*, 2010 edition.

NFPA 220, *Standard on Types of Building Construction*, 2012

Responsible Facility Authority (Med Gas)

5.3.6.23.1.4 The responsible facility authority shall review the inspection and testing records prior to the use of any systems to ensure that all findings and results of the inspection and testing have been successfully completed.

5.3.6.23.1.5 All documentation pertaining to inspections and testing shall be maintained on-site within the facility.

5.3.6.23.1.6 The responsible facility authority shall review the inspection and testing records prior to the use of all systems to ensure that all findings and results of the inspection and testing have been successfully completed.

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State Advocacy Profile

Who has the authority to license hospitals?

Who adopts the State Building Code?

Who adopts the State Fire Code?

Who adopts the State Electrical Code?

Who adopts the FGI Guidelines?

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The specifics

- Referenced Code _____
- Agency _____
- What is the rule / citation of law? _____
- Which edition is adopted? _____
- Are there amendments? _____

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Conditions of Participation

NFPA 101 :	2012 Edition
NFPA 1:	Not Referenced
NFPA 13:	2010 Edition
NFPA 70:	2011 Edition
NFPA 72:	2010 Edition
NFPA 101A:	2013 Edition
NFPA 99:	2012 Edition
ASHRAE 170:	2008 Edition

Certification

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Certified Health Care Physical Environment Worker

Uneducated Construction Workers Could Be a Threat

5% of deaths resulting from health care-associated infections are estimated to be related to construction

Become certified and help stop the spread of infection today

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Minimize Patient's Risk

Promote ASHE certification

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Patient Safety is our #1 Priority

ASHE Certified Workers are

- Visible in health care
- Educated
- Protective of the health care environment
- Understanding of patients physical environment needs

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Specifications

A201-2017 General Conditions of the Contract for Construction

3.9 Superintendent

REVISE § 3.9.1 The Contractor shall employ a superintendent that is a Certified Healthcare Constructor as certified by the American Hospital Association Certification Center and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor

REVISE § 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work.All employees and other persons carrying out the work shall possess a valid Certified Health Care Physical Environment Worker certification from the American Society for Health Care Engineering. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

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Tools mentioned in this presentation can be found at:

www.ashe.org/tools

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www.ashe.org/education

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