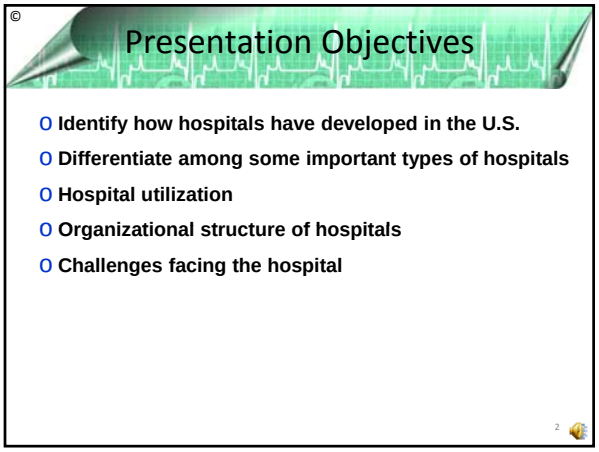
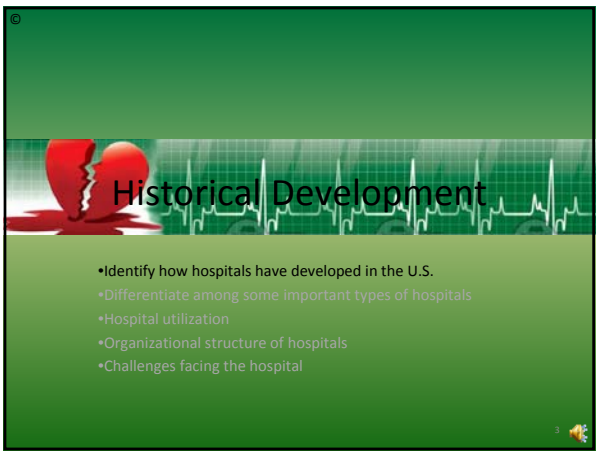

©
Hospitals
1


©
Presentation Objectives
O Identify how hospitals have developed in the U.S.
O Differentiate among some important types of hospitals
O Hospital utilization
O Organizational structure of hospitals
O Challenges facing the hospital
2


©
Historical Development
•Identify how hospitals have developed in the U.S.
•Differentiate among some important types of hospitals
•Hospital utilization
•Organizational structure of hospitals
•Challenges facing the hospital
3

Beginnings …

- Before 1872
  - Primarily religious and charitable hospitals
  - Infirmities in poorhouses
  - By 1873, estimated 178 such hospitals in the US.
- Between 1870 and 1910
  - Development of Biomedical science
  - Evolution into physicians' workshops
  - Spectacular growth of hospitals to 4,300 in 1909

Source: Steven R. 1971: ***American medicine & the public interest***;Yale university press

4

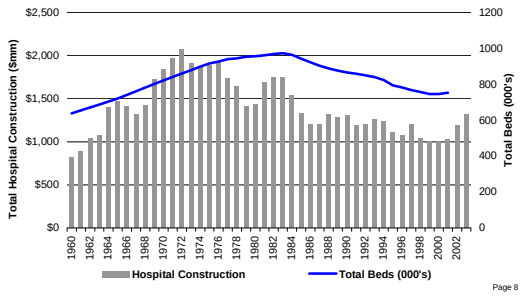
Between 1945-1980

- Second major growth era for hospitals
- Technology
- The Hill-Burton Act stimulated construction of rural hospitals
- Growth of hospital insurance

Source: Steven R. 1971: *American medicine & the public interest*; Yale university press

5

Hospital Construction



Page 8

Source: AHA and U.S. Government.

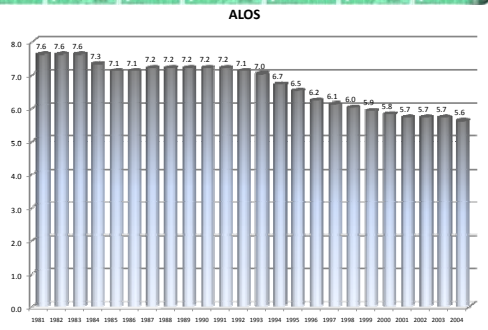
6

After 1980

- Changes in reimbursement mechanisms
  - Declining *occupancy rates*
  - Reduced *length of stay*.
- **Average Length of Stay**
  - ALOS is typically calculated for both commercial and Medicare patient populations. Usually, the nights are counted as single unit for length of stay.

7

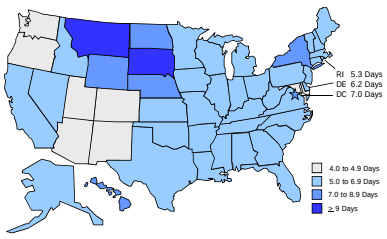
ALOS in Community Hospitals (1981 – 2004)



8

Source: American Hospital Association

Average Length of Stay in Community Hospitals by State 2004



9

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 2004, for community hospitals

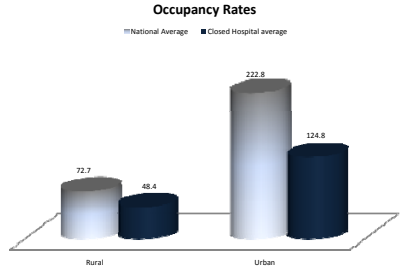
Occupancy Rates

- A measure of the utilization of a hospital's capacity

$$\frac{\text{number of beds occupied}}{\text{total number of beds}}$$

10

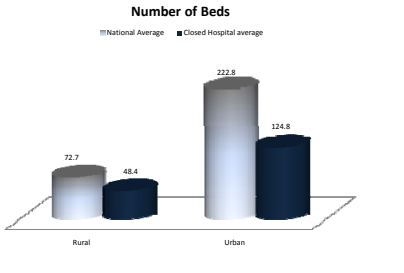
Which Hospitals Closed?



Source: HHS 2000

11

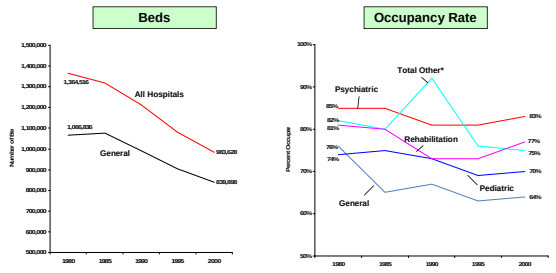
Which Hospitals Closed?



Source: HHS 2000

12

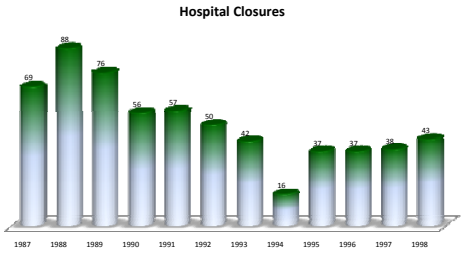
Number of Hospital Beds and Occupancy Rates by Hospital Type, 1980-2000



*Includes specialty hospitals such as TB, Ob-Gyn; eye, ear, nose and throat; orthopedic and chronic disease.
Source: American Hospital Association, personal communication.

13

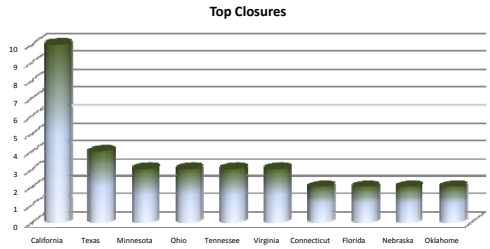
More on Hospital Closures



Source: Dept. of HHS, 2000

14

Geographic Variation



15

Structural Developments

- Emergence of hospital systems, networks, and alliances
  - Horizontal Integration
  - Vertical Integration
- Systems of hospitals
  - Multi-hospital
  - Single, free standing hospitals
- Network
  - a group of hospitals, physicians, other providers, insurers and/or community agencies
- Alliance (usually formed to reduce costs)

16



Hospital Types

- Identify how hospitals have developed in the U.S.
- Differentiate among some important types of hospitals
- Hospital utilization
- Organizational structure of hospitals
- Challenges facing the hospital

17

Definition

- What a hospital is …
  - licensed, certified, public or private, whether organized for profit or not, and devoted primarily for the diagnosis, treatment or care of patients admitted for overnight stay or longer in order to obtain medical care for illness, disease, injury, infirmity, or deformity.
- Registered Hospitals
- What a hospital is not …

18

Hospitals Types

- General
- Specialty
- Rehabilitation and Chronic Diseases
- Psychiatric

Source: AHA

19

Community Hospitals

- **Community hospitals** are defined as all nonfederal, short-term general, and other special hospitals
  - Include academic medical centers or other teaching hospitals
  - Excluded are hospitals not accessible by the general public, such as prison hospitals or college infirmaries.

20

Some Community Hospital Statistics

Total Number of All U.S. Registered Hospitals	**5,801**
Number of U.S. **Community** Hospitals	**4,908**
Number of Non-government Not-for-Profit **Community** Hospitals	**2,998**
Number of Investor-Owned (For-Profit) **Community** Hospitals	**754**
Number of State and Local Government **Community** Hospitals	**1,156**
Number of Federal Government Hospitals	**243**
Number of Nonfederal Psychiatric Hospitals	**491**
Number of Nonfederal Long Term Care Hospitals	**140**
Number of Hospital Units of Institutions (e.g. Prison Hospitals)	**19**

Source: AHA Hospital Facts 2003 (from 2001 survey)

21

Some Community Hospital Statistics (continued)

Total Staffed Beds in All U.S. Registered Hospitals	**987,440**
Staffed Beds in **Community** Hospitals	**825,966**
Total Admissions in All U.S. Registered Hospitals	**35,644,440**
Admissions in **Community** Hospitals	**33,813,589**
Total Expenses for All U.S. Registered Hospitals	**$426,849,488,000**
Expenses for **Community** Hospitals	**$383,735,757,143**
Number of Rural Community Hospitals	**2,167**
Number of Urban Community Hospitals	**2,741**
Number of Community Hospitals in a System	**2,260**
Number of Community Hospitals in a Network	**1,341**

22

Teaching Hospitals

- The classroom of physicians, nurses, etc…
- Clinical education of medical students and residents
- Primary care to experimental, innovative, and technically sophisticated care
- Research
- Care for the indigent as well as general population
- Typically larger in size
- Approximately 6% of hospitals

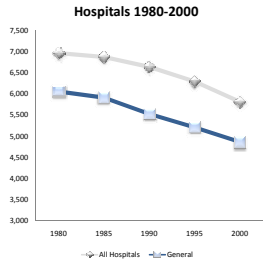
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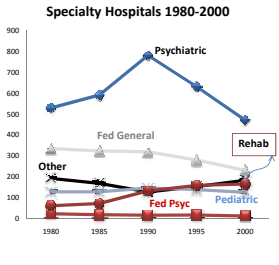
State Owned Hospitals

- These hospitals typically have provided long-term psychiatric and chronic care
- Types of state-owned hospitals
  - Small non-profit hospitals
  - Larger and located in major urban areas
- Financed by general or specific taxes

24

Number of Hospitals by Type, 1980-2000





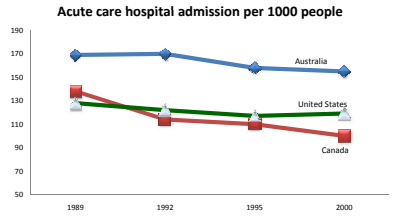
25

General hospital terms & definitions

26

Acute Care

- patient is treated for an immediate and severe episode of illness, for the subsequent treatment of injuries related to an accident or other trauma, or during recovery from surgery



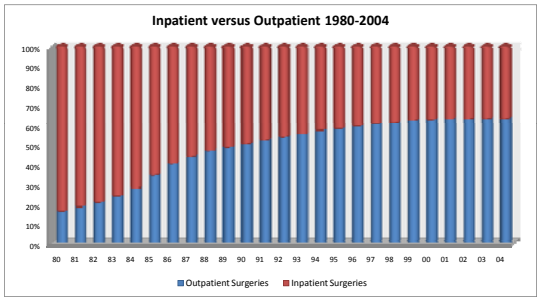
27

Inpatient and Outpatient

- Inpatient Surgery:
  - surgical services provided to patients who remain in the hospital overnight
- Outpatient Surgery:
  - surgical services provided to patients who remain in the hospital overnight
- Outpatient visit
  - care given to a person who is not bedridden. Also called ambulatory care

28

Percentage Share of Inpatient vs. Outpatient Surgeries 1981 – 2004

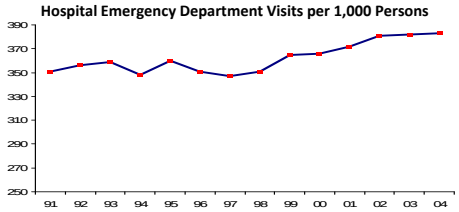


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Source: The Lewin Group analysis of American Hospital Association Annual Survey data for community hospitals

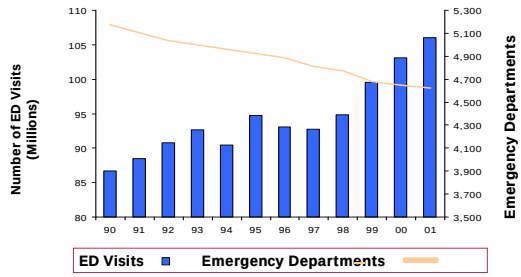
Emergency Departments

- a hospital department responsible for the administration and provision of unscheduled medical or surgical care to patients in need of immediate attention



30

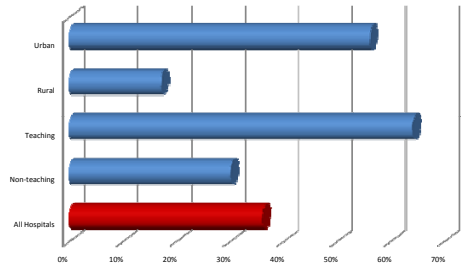
Emergency Department Visits– 2001



31

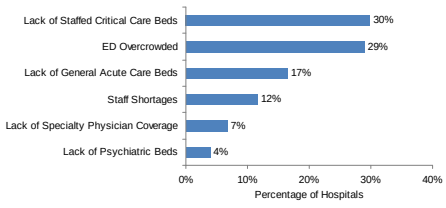
Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1990 – 2001, for community hospitals

Percent of Hospitals Reporting Time on Ambulance Diversion in Last 12 Months



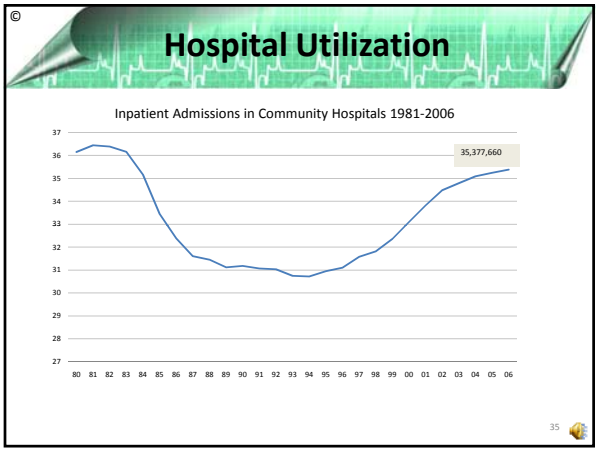
Source: American Hospital Association 2007 Survey of Hospital Leaders.

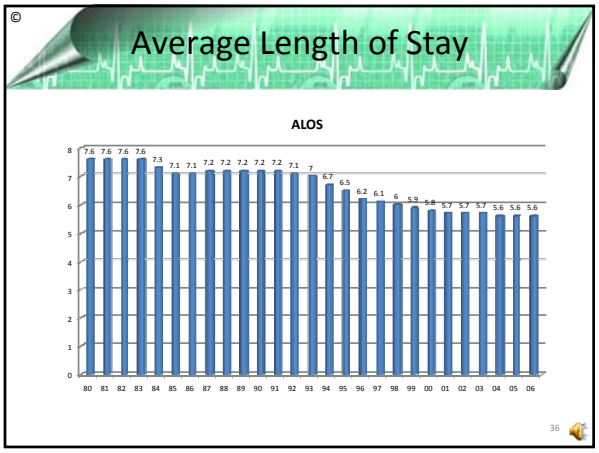
Conditions Hospitals Reported as Number One Factor Contributing to Ambulance Diversions, January 2007



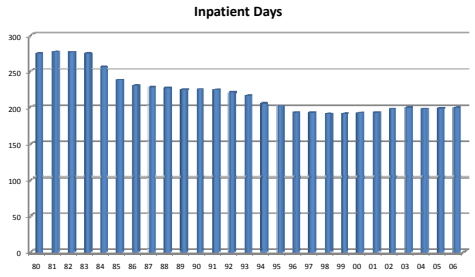
Source: American Hospital Association 2007 Survey of Hospital Leaders.


Hospital Utilization
•Identify how hospitals have developed in the U.S.
•Differentiate among some important types of hospitals
•Hospital utilization
•Organizational structure of hospitals
•Challenges facing the hospital
34


Hospital Utilization
Inpatient Admissions in Community Hospitals 1981-2006
35,377,660
37
36
35
34
33
32
31
30
29
28
27
80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06
35

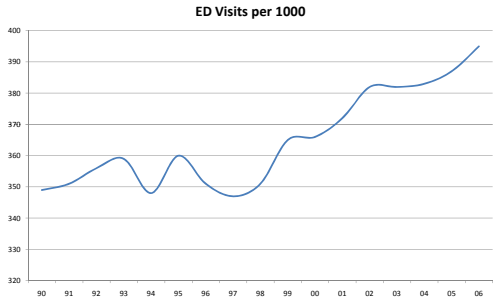

Average Length of Stay
ALOS
7.6 7.6 7.6 7.6 7.3 7.1 7.1 7.2 7.2 7.2 7.2 7.2 7.1 7 6.7 6.5 6.2 6.1 6 5.9 5.8 5.7 5.7 5.7 5.6 5.6 5.6
8
7
6
5
4
3
2
1
0
80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06
36

Hospital Utilization



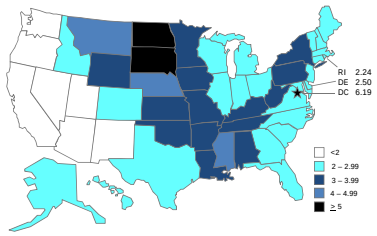
37

Hospital Utilization



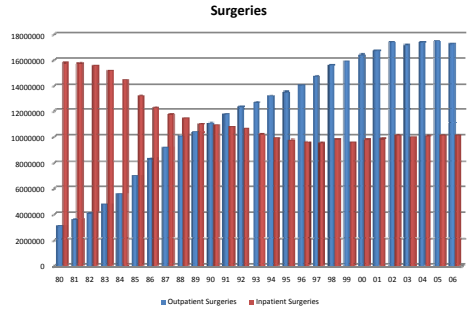
38

Where the beds are …
per 1,000 by State, 2006



Source: Avalere Health analysis of American Hospital Association Annual Survey data, 2006, for community hospitals.
US Census Bureau: National and State Population Estimates, July 1, 2006.
Link: http://www.census.gov/popest/states/tables/NST-EST2006-01.xls.

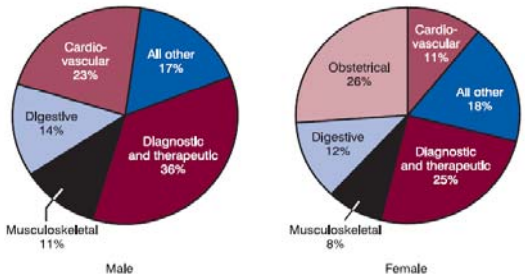
Hospital Based Surgeries



40

Percent distribution of all-listed procedures for hospitalized patients by sex: United States, 2004

(source: CDC)

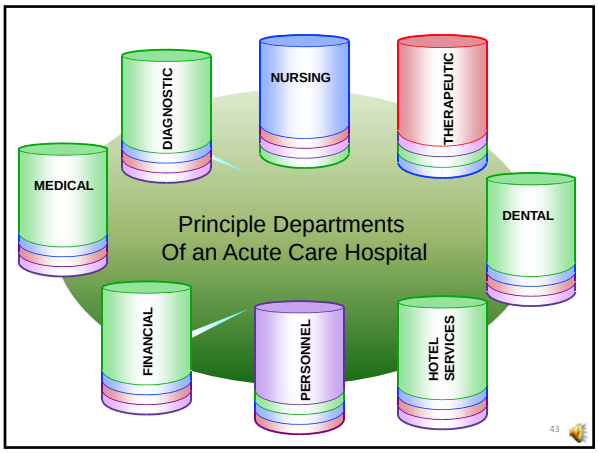


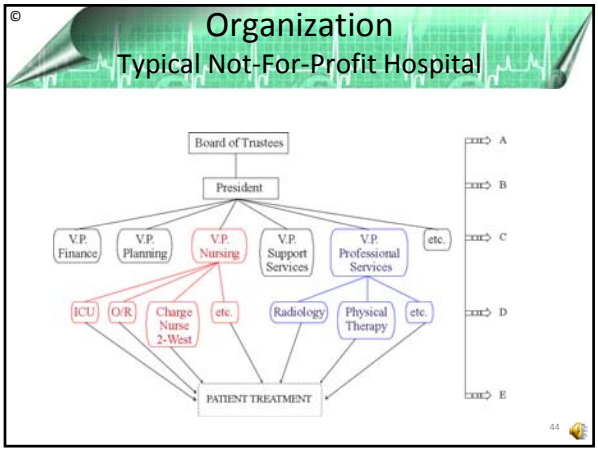
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Hospital Organizational Structure

- Identify how hospitals have developed in the U.S.
- Differentiate among some important types of hospitals
- Hospital utilization
- Organizational structure of hospitals
- Challenges facing the hospital

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DIAGNOSTIC
NURSING
THERAPEUTIC
MEDICAL
DENTAL
Principle Departments
Of an Acute Care Hospital
FINANCIAL
PERSONNEL
HOTEL SERVICES
43


©
Organization
Typical Not-For-Profit Hospital
Board of Trustees
President
V.P. Finance
V.P. Planning
V.P. Nursing
V.P. Support Services
V.P. Professional Services
etc.
ICU
O/R
Charge Nurse 2-West
etc.
Radiology
Physical Therapy
etc.
PATIENT TREATMENT
A
B
C
D
E
44


©
Some more organizational detail
V.P. Finance
o Admissions office
o Budget office
o Cashier's office
o Credit and collection
o General accounting
o Internal audit
o Patient accounting
V.P. Ambulatory Services
o Ambulatory health services
o Communications disorder
Dental services
o Emergency services
o Employee health services
o Hemodialysis center
o Social services
45

Some more organizational detail

V.P. Support Services
- Engineering
- Communications
- Environmental issues
- Laundry
- Power plant
- Safety and security

V.P. Professional Services
- Dietary
- EKG (Electro cardiograph)
- EEG (electro encephalograph)
- Clinical laboratory
- Medical records
- Nuclear medicine
- Pharmacy
- Physical therapy
- Radiology
- Respiratory therapy

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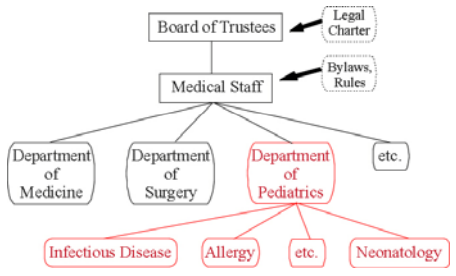
Some more organizational detail

V.P. Materials Management
- Central sterile supplies
- Mailroom
- Print shop
- Purchasing
- Store room

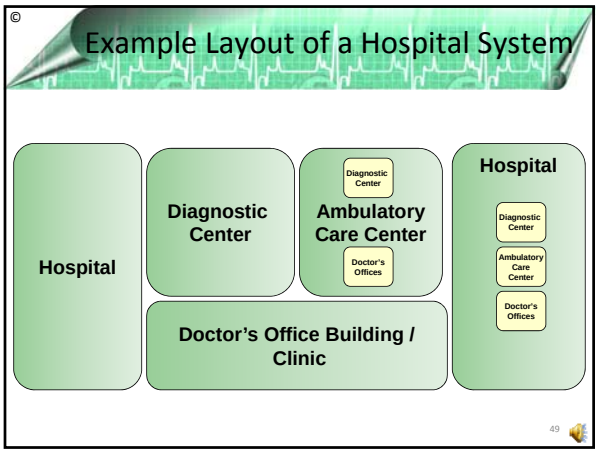
Director Nursing
- Escort service
- Patient units
- Special care units
- Recovery

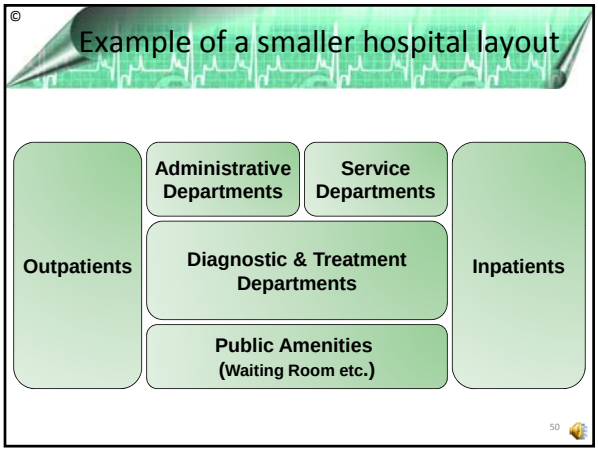
47

Organization of Medical Staff



48


©
Example Layout of a Hospital System
Hospital
Diagnostic Center
Diagnostic Center
Ambulatory Care Center
Doctor's Offices
Doctor's Office Building / Clinic
Hospital
Diagnostic Center
Ambulatory Care Center
Doctor's Offices
49


©
Example of a smaller hospital layout
Outpatients
Administrative Departments
Service Departments
Diagnostic & Treatment Departments
Public Amenities (Waiting Room etc.)
Inpatients
50


©
Best Hospitals
An Aside
Source: Best Hospitals, U.S. News: www.usnews.com
51

Top 10 U.S. Hospitals by Specialty

Rank	Hospital
1	Johns Hopkins Hospital, Baltimore
2	Mayo Clinic, Rochester, Minn.
3	Massachusetts General Hospital, Boston
4	Cleveland Clinic
5	UCLA Medical Center, Los Angeles
6	(TIE) Duke University Medical Center, Durham, N.C.
7	(TIE) University of California, San Francisco Medical Center
8	Barnes-Jewish Hospital, St. Louis
9	(TIE) New York-Presbyterian Hospital
10	(TIE) University of Washington Medical Center, Seattle

Source: U.S. News 2004

Top 10 U.S. Cardiac Hospitals

	Hospital	Reputation score	Mortality ratio	Discharges	R.N. to beds	Technology services (of 9)
1	Cleveland Clinic	73.2%	0.58	13,824	2.12	9
2	Mayo Clinic, Rochester, Minn.	58.2%	0.84	15,729	1.51	9
3	Brigham and Women's Hospital, Boston	32.4%	0.61	7,504	1.64	8.5
4	Duke University Medical Center, Durham, N.C.	34.6%	0.84	10,635	2.55	9
5	Massachusetts General Hospital, Boston	31.3%	0.76	10,568	1.82	9
6	Johns Hopkins Hospital, Baltimore	31.4%	0.79	6,153	1.76	9
7	Emory University Hospital, Atlanta	18.1%	0.85	7,392	1.43	9
8	Texas Heart Institute at St. Luke's Episcopal Hospital, H	13.7%	0.8	10,425	1.39	9
9	Stanford Hospital and Clinics, Stanford, Calif.	18.3%	0.91	4,517	1.56	7
10	Barnes-Jewish Hospital, St. Louis	8.9%	0.81	11,177	1.46	9

Source: Best Hospitals, U.S. News: www.usnews.com

Top 11 Cancer Treatment Hospitals

	Hospital	Reputation score	Mortality ratio	Discharges	R.N.'s to beds	Technology services (of 7)
1	M. D. Anderson Cancer Center, Houston	74.6%	0.77	4,924	2.97	6
2	Memorial Sloan-Kettering Cancer Center,, NY	71.9%	0.73	5,275	2.32	6
3	Johns Hopkins Hospital, Baltimore	38.6%	0.52	1,712	1.76	7
4	Dana-Farber Cancer Institute, Boston	45.4%	0.89	237	3.07	6
5	Mayo Clinic, Rochester, Minn.	30.5%	0.58	4,308	1.51	7
6	University of Chicago Hospitals	9.9%	0.69	1,686	1.86	7
7	Duke University Medical Center, Durham, N.C.	10.9%	0.81	3,082	2.55	7
8	UCLA Medical Center, Los Angeles	8.6%	0.69	1,245	1.94	7
9	University of Michigan Medical Center, Ann Arbor	6.6%	0.48	1,578	1.87	7
10	Vanderbilt University Medical Center, Nashville	6.8%	0.71	1,004	2.24	7
11	H. Lee Moffitt Cancer Center Tampa	3.2%	0.57	1,456	2.52	6

Top 10 Pediatric Hospitals

	Hospital	Reputation score
1	Children's Hospital of Philadelphia	58
2	Children's Hospital Boston	55.4
3	Johns Hopkins Hospital, Baltimore	35.4
4	Children's Hospital of New York-Presbyterian	18
5	Texas Children's Hospital, Houston	13.9
6	Rainbow Babies & Children's Hospital, Cleveland	13.9
7	Children's Hospital of Pittsburgh	12.9
8	Children's Hospital Medical Center, Cincinnati	12.9
9	Children's Hospital, Denver	11.3
10	University of California, San Francisco Medical Center	10.5

55

Top 10 Neurology & Neurosurgery Hospitals

	Hospital	Reputation score	Mortality ratio	Discharges	R.N.'s to beds	Tech services (of 7)
1	Mayo Clinic, Rochester, Minn.	58.5%	0.95	5,092	1.51	7
2	Massachusetts General Hospital, Boston	52.8%	1.09	3,590	1.82	7
3	Johns Hopkins Hospital, Baltimore	47.0%	0.70	2,555	1.76	7
4	New York-Presbyterian Hospital	45.9%	1.09	5,104	1.41	7
5	University of California, San Francisco Medical Center	33.3%	1.07	1,779	2.02	7
6	Cleveland Clinic	24.3%	0.62	3,377	2.12	7
7	Barnes-Jewish Hospital, St. Louis	13.5%	0.93	4,687	1.46	7
8	UCLA Medical Center, Los Angeles	13.0%	0.93	2,142	1.94	7
9	Hospital of the University of Pennsylvania, Philadelph	15.2%	1.14	2,113	1.79	7
10	St. Joseph's Hospital and Medical Center, Phoenix	13.4%	1.06	3,075	0.91	5

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Top 10 Kidney Hospitals

	Hospital	Reputation score	Mortality ratio	Discharges	R.N.'s to beds	Tech. servs (of 5)
1	Massachusetts General Hospital, Boston	31.3%	0.75	1,151	1.82	5
2	Brigham and Women's Hospital, Boston	29.4%	0.65	795	1.64	5
3	Mayo Clinic, Rochester, Minn.	25.2%	0.83	1,408	1.51	5
4	Johns Hopkins Hospital, Baltimore	25.1%	0.73	912	1.76	4.5
5	New York-Presbyterian Hospital	24.0%	1.22	2,259	1.41	5
6	Cleveland Clinic	23.1%	0.74	1,103	2.12	5
7	UCLA Medical Center, Los Angeles	18.5%	0.63	1,057	1.94	5
8	Duke University Medical Center, Durham, N.C.	16.0%	0.85	1,181	2.55	5
9	Barnes-Jewish Hospital, St. Louis	12.0%	0.77	1,981	1.46	5
10	Hospital of the University of Pennsylvania, Philad	12.4%	0.55	791	1.79	5

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Top 10 Best U.S. Hospitals

1. Johns Hopkins Hospital, Baltimore
2. Mayo Clinic, Rochester, Minn.
3. UCLA Medical Center, Los Angeles
4. Cleveland Clinic
5. Massachusetts General Hospital, Boston
6. New York-Presbyterian Univ. Hosp. of Columbia and Cornell
7. Duke University Medical Center, Durham, N.C.
8. University of California, San Francisco Medical Center
9. Barnes-Jewish Hospital/Washington University, St. Louis
10. Brigham and Women's Hospital, Boston

Source: http://health.usnews.com/usnews/health/best-hospitals/honorroll.htm

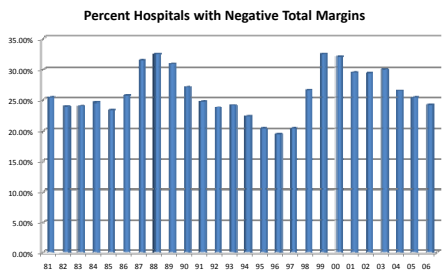
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Challenges

- Identify how hospitals have developed in the U.S.
- Differentiate among some important types of hospitals
- Hospital utilization
- Organizational structure of hospitals
- Challenges facing the hospital Industry

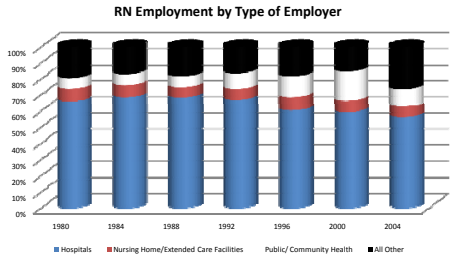
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Finances



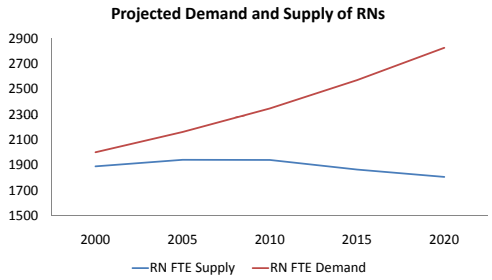
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Nursing Shortage



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Projected RN Shortage



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Other Challenges

- Falling construction and number of beds
- Mergers and horizontal integrations
- Competition with other providers and insurance industry
- Change of technology
- Aging population

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What is likely to happen?

- More integration
- Increased cost of hospital care
- Increasingly larger units within hospitals for patients requiring similar treatments
- Hospitals will increasingly specialize in the types of patients they can best care for ...

Source: Anthony Kovner: Health Care Delivery in the U.S., 2002

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