

# Introduction to Sites of Care

# Different care settings meet variety of patient needs

## Hospital



- Community hospital
- Academic Medical Center (AMCs)
- Emergency departments (EDs)

## Ambulatory Facility



- Physician offices
- Multispecialty clinics
- Retail clinics
- Urgent care centers
- Imaging centers
- Ambulatory surgery centers (ASCs)

## Post-Acute



- Skilled nursing facilities (SNFs)
- Inpatient rehabilitation facilities (IRFs)
- Long-term acute care hospitals (LTACHs)
- Home health agencies (HHAs)
- Hospice care

## Community



- Remote consultations
- Telemedicine services
- E-visits
- Smart phone apps
- Web-based health portals
- Remote monitoring devices and services

# Hospitals provide acute, inpatient care

## Top ten 2017 inpatient procedures

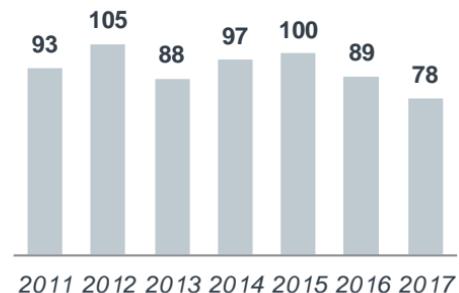
Service Line	Procedure	2017 Volume
Neonatology	Normal new born	2,646,467
Obstetrics	Delivery without complications	2,201,175
General Medicine	Psychiatry	1,278,462
Orthopedics	Joint replacement	980,697
General Medicine	Sepsis	876,388
Obstetrics	C-Section without complications	811,096
Neonatology	Neonate with major problems	765,368
General Medicine	Esophagitis	671,533
Obstetrics	C-Section with complications	524,299
General Medicine	Cellulitis	476,066

# M&A<sup>1</sup> activity is swallowing standalone hospitals

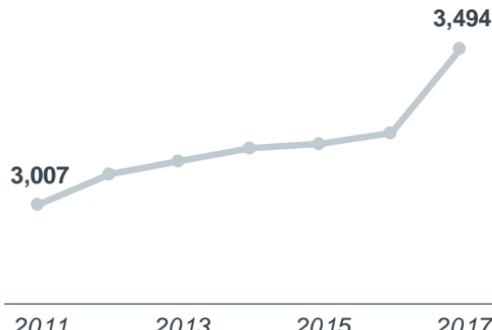
Number of hospitals in health systems is large and growing

## Hospital M&A activity

Total deal volume



## Number of community hospitals part of a health system, 2011-2017



1) Mergers and Acquisitions

Source: Kaufmann Hall, *Hospital Merger and Acquisition Activity Continues Upward Momentum, According to Kaufmann Hall Analysis*; American Hospital Association, "2016 Chartbook: Trends Affecting Hospitals and Health Systems;" American Hospital Association, "Fast Facts on U.S. Hospitals, 2019," available at: <https://www.aha.org/statistics/fast-facts-us-hospitals>; Health Care Advisory Board research and analysis.

# Outpatient care sites offer lower-acuity care

## Outpatient sites of care



HOPD<sup>1</sup>



ASC



MOB<sup>2</sup>



Urgent care



Convenient care clinic

## Top ten 2017 outpatient procedures

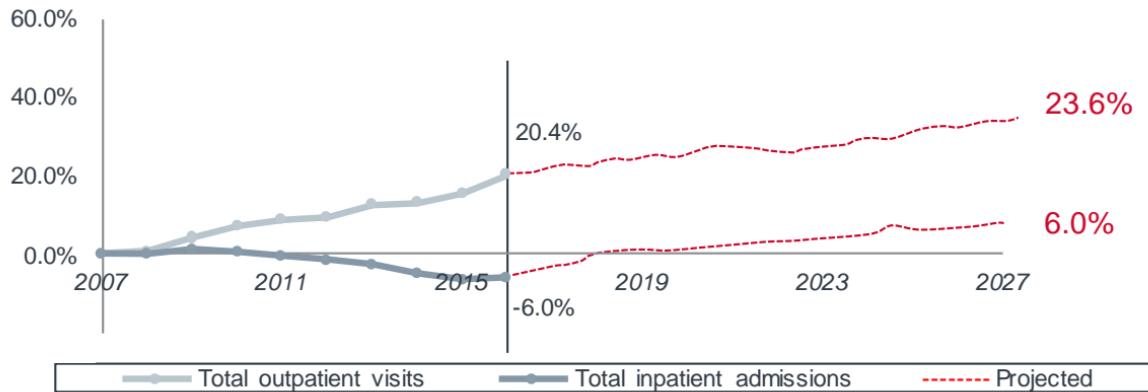
Service Line	Procedure	2017 Volume
Evaluation and Management	Evaluation and management	766,641,059
Lab	Organ/disease panel	107,334,748
Physical Therapy/Rehabilitation	Chiropractic manipulation	95,770,840
Psychiatry	Psychotherapy	84,712,851
Miscellaneous Services	Immunization administration	68,950,459
Lab	Chemistry	66,764,837
Evaluation and Management	Emergency department services	61,725,114
Cardiology	Electrocardiogram	50,505,697
Radiology	Musculoskeletal X-ray	49,335,183

1) Hospital outpatient department

2) Medical office building

# Outpatient volumes surge as inpatient volumes stagnate

## Change in hospital outpatient visits and inpatient admissions 2007–2027



## CEO Priorities for 2018

Ranked out of 26 priorities

1st

Outpatient Procedural  
Market Share

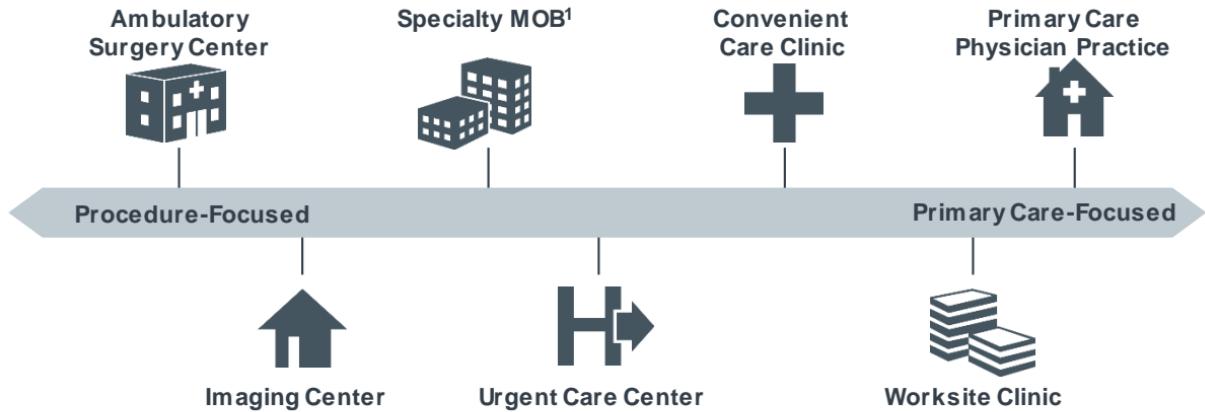
18th

Inpatient Procedural  
Market Share

# Health systems growing networks to meet demand

A variety of ambulatory sites cater to consumer needs

## Components of ambulatory network



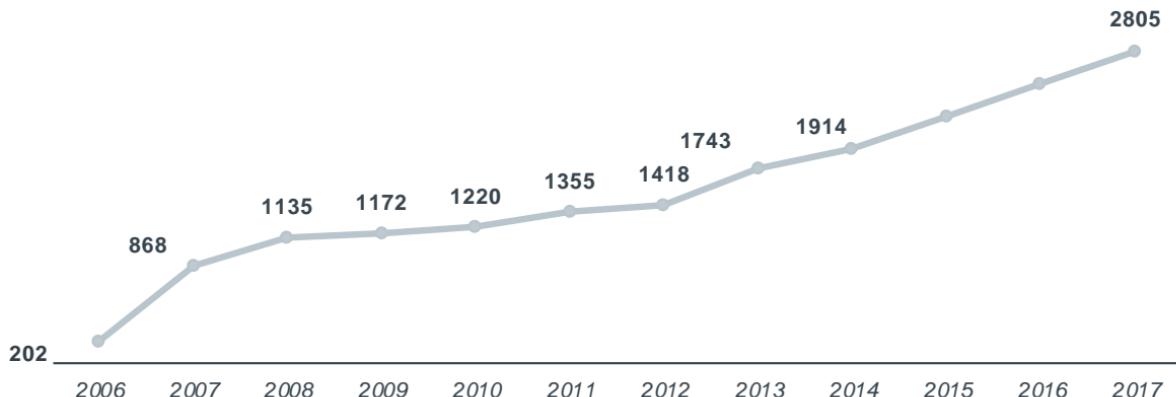
1) Medical office building.

# Other competitors helping meet demand for OP care

Retail clinics and independent ASCs are a rapidly growing market

## Estimated total number of retail clinics in the US

2006-2017<sup>1</sup>



## Major operators



Source: "Retail Medical Clinics: From Foe to Friend?," Accenture, 2013, available at [https://www.accenture.com/\\_acnmedia/Accenture-NA-Assets/DotCom/Documents/Global/PDF/DualPub\\_21/Accenture-Retail-Medical-Clinics-From-Foe-to-Friend.pdf](https://www.accenture.com/_acnmedia/Accenture-NA-Assets/DotCom/Documents/Global/PDF/DualPub_21/Accenture-Retail-Medical-Clinics-From-Foe-to-Friend.pdf); "Number of U.S. Retail Health Clinics Will Surpass 2,800 by 2017, Accenture Forecasts," Accenture, November 2015, available at <https://newsroom.accenture.com/news/number-of-us-retail-health-clinics-will-superse-2800-by-2017-accenture-forecasts.htm>; Ritchie, J., "After a Stall, Kroger Could Add Clinics," *Cincinnati Business Courier*, July 5, 2013, available at <http://www.bizjournals.com/cincinatibusinessnews/2013/07/05/after-a-stall-kroger-could-add-clinics.html>; Robeckins, A., "Retail Clinics at Tipping Point," *Modern Healthcare*, May 4, 2013, available at <http://www.modernhealthcare.com/article/20130504/MAGAZINE/305049911>; Advisory Board research and analysis.

<sup>1</sup> 2015-2017 numbers projected; 1,914 clinics as of November 2015; actual growth trajectory depends on preferred payer relations, PCP capacity, and health system partnerships.

# Patients discharged to range of post-acute settings

## Relationship between acute and post-acute providers

### Long-Term Acute Care Hospital (LTACH)

- For patients in need of ongoing acute care services
- Primary services include ventilators and wound care



### Acute Care Hospital



### Inpatient Rehab Facility (IRF)

- Occupational and physical rehabilitation
- Mix shifting from orthopedic to neurological patients

### Skilled Nursing Facility (SNF)

- Primarily for orthopedic/ neurological rehabilitation and the chronically ill



### Home Health Agency (HHA)

- Assistance with daily living activities, but limited clinical support
- Primarily for the elderly and the chronically ill



### Hospice

- Primarily for terminal cancer, Alzheimer's and COPD patients
- Palliative, not curative; most care delivered at home
- Not considered PAC<sup>1</sup> by Medicare
- Dominated by local, faith-based non-profit agencies
- Many HHAs provide hospice care

1) Post-acute care.

# PAC providers face financial challenges ahead

## High PAC costs trigger cost-containment initiatives

### Post-Acute Payment and Utilization Disruption



- Medicare and Medicaid efforts to reduce payment and rein in expenditures underway
- Emphasis on linking reimbursement to quality metrics and patient outcomes, jeopardizing operating margins
- Growth of risk-based delivery models such as bundled payments and ACOs<sup>1</sup>

### Narrowing Referral Networks



- Hospitals paying increased attention to post-discharge care
- Care management leaders seeking to standardize PAC performance measurement, forge affiliation agreements
- PAC providers adding elements of the continuum to become “one stop shop” for referrals

### Complex, Demanding Patient Population



- Burden of chronic disease and greying population driving cost growth
- Expanding Medicare beneficiaries intensifying utilization, raising acuity levels
- Baby Boomers demanding new post-acute care models, amenities and services

1) Accountable care organizations.

# Community health uses tech to facilitate direct care

New unparalleled ability to treat patients in their homes

**Telehealth** represents the interactive, electronic exchange of information for the purpose of diagnosis, intervention, or ongoing care management between a patient and/or health care providers situated remotely.

## Patient-to-Provider



E-visits



Wearables



Secure messaging

## Telehealth Modalities

Real-time  
virtual visits

Remote patient  
monitoring

Asynchronous  
store-and-forward

## Provider-to-Provider



E-consults



Second opinion consults

# New care-at-home capabilities on the horizon

Innovative use of technology promising for diagnosis and treatment

Technology Feature	Function	Example Use
Established <ul style="list-style-type: none"> <li>• Camera</li> <li>• Video</li> <li>• Bluetooth peripherals</li> </ul>	<ul style="list-style-type: none"> <li>• Image capture</li> <li>• Audio-visual conferencing</li> <li>• Manual biometric data collection</li> </ul>	<ul style="list-style-type: none"> <li>• Teledermatology store-and-forward</li> <li>• Primary and urgent care virtual visits</li> <li>• Monitoring CHF and COPD patients</li> </ul>
Emerging <ul style="list-style-type: none"> <li>• Smartphone or wearable-based sensors</li> <li>• Ingestible sensors</li> </ul>	<ul style="list-style-type: none"> <li>• Manual and automatic biometric data collection</li> <li>• Automatic biometric data collection</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring heart rate, steps, food intake,</li> <li>• Digestible pill for tracking medication adherence</li> </ul>
Experimental <ul style="list-style-type: none"> <li>• Artificial intelligence and machine learning</li> <li>• Virtual and augmented reality</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnosis and treatment recommendations</li> <li>• Simulated therapy</li> </ul>	<ul style="list-style-type: none"> <li>• Imaging interpretations</li> <li>• Chat bot for mental health</li> <li>• Provider training</li> <li>• Tele-rehabilitation</li> </ul>

# More in the series on providers and sites of care

Two-part webconference series on the basics of care delivery



Introduction to  
Sites of Care

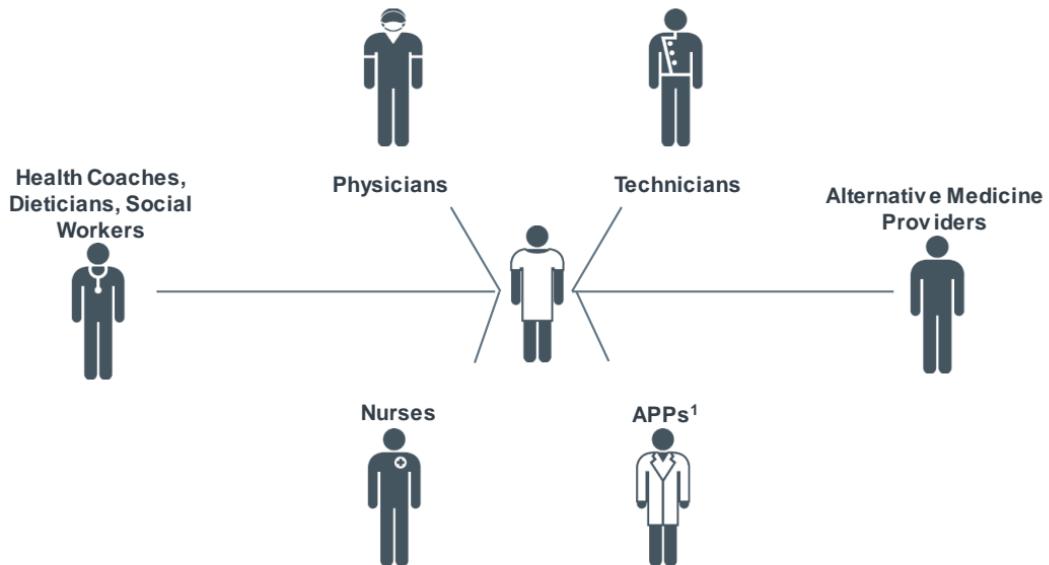


Introduction to  
Caregivers

# Introduction to Caregivers

# Patients interact with a variety of caregivers

Both physicians and non-physicians involved in an episode of care



1) Advance practice providers.

# Two major categories of physicians

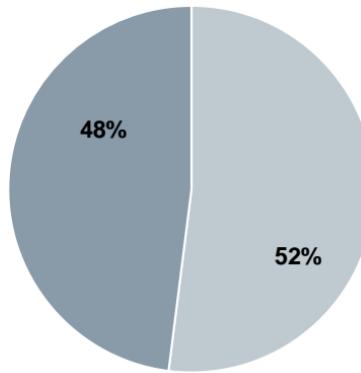
Even split between number of PCPs<sup>1</sup> and Specialists

**Breakdown of PCPs vs. Specialists**

2018

## PCPs

- Generalists
- Typically internists, family practitioners, pediatricians
- First line of defense
- Provide routine care, prevention and screening, as well as chronic disease management



## Specialists

- Narrow areas of expertise
- Often sub-classified into medical specialists, proceduralists, and hospital-based specialists
- Patients often come from PCP referrals
- Provide advanced diagnostics, treatment (including surgery), and ongoing management for acute, rare, or complex conditions

1) Primary care physician.

# There are many different types of specialists

## Three common sub-categories of specialists

### Medical Specialists



- Cardiologists
- Endocrinologists
- Gastroenterologists
- Nephrologists
- Pulmonologists
- Neurologists
- Medical Oncologists

### Procedural Specialists



- General Surgeons
- Orthopedic Surgeons
- Cardiothoracic Surgeons
- Neurosurgeons
- Trauma Surgeons
- Vascular Surgeons
- Plastic Surgeons

### Hospital-Based Specialists



- Anesthesiologists
- Radiologists
- Pathologists
- Hospitalists
- Intensivists
- Neonatologists
- Emergency Physicians

## Interventionalists: another subset of specialists

### Interventional Cardiologists

- *Focus on diagnosis and chronic disease management*
- *Many supplement income with ancillary revenue*

### Interventional Neurologists

- *Focus on procedural revenue, throughput*
- *Hospitals depend on them for profitable referrals*

### Interventional Radiologists

- *Majority of time in hospital, not physician office*
- *Hospitals often employ or contract for services*

# Three most common types of physician employment models

## Physician practice business models

### Independent

- Physicians own their own practice
- "Eat what you kill" entrepreneurial incentives: responsible for practice profit & loss
- Single or multi-specialty
- Small or large group models

### Employed by hospital

- Physicians practice at hospital where they are employees or salaried contractors
- Typically applies to hospital-based physicians such as anesthesiology, emergency, pathology
- Hospital does not own practice assets

### Employed by hospital-owned practice

- Physicians receive salary or incentive-based compensation from hospital that owns their practice
- Hospital manages practice and (usually) owns practice assets
- PCPs and specialists

# Physician employment a growing trend

## Physicians by practice settings, 2016

On their own

17% solo practice owners

In groups

23% Employees of hospital-owned group

34% Hospital employees



## New physicians prefer employment

75%

Final year medical residents who would prefer employment by hospital, medical group, or outpatient clinic

1%

Final year medical residents who would prefer solo practice

## Physician concerns about independence



Business expenses



Managed care



EHR requirements

Source: "2016 Survey of America's Physicians: Practice Patterns & Perspectives", *The Physicians Foundation*, available at <https://physiciansfoundation.org/research-insights/physician-survey>; "2017 Survey: Final-Year Medical Residents," *Merritt Hawkins*, available at <http://www.merrithawkins.com>; Advisory Board research and analysis.

# Non-physician practitioners at front lines of care

## Nurses and physician assistants play important roles

### Nurses



- Provide wide variety of patient care services in ambulatory, inpatient, and post-acute settings:

- Registered Nurse (RN)

- Licensed Practical Nurse (LPN): works under RN or MD supervision

### APPs<sup>1</sup>



- Trained and licensed to practice medicine with limited physician supervision
- May examine patients, diagnose and treat illnesses, order tests, counsel on prevention, write prescriptions
- Requires two years of post-secondary education
- Nurse Practitioner (NP): RN with master's degree
- Physician Assistant (PA): medical professional practicing under a physician

<sup>1</sup>) Advanced practice providers.

# Non-physician practitioners at front lines of care

## Technicians and other caregivers key to care delivery

### Technicians



- Conduct a variety of tests/support functions:
  - Lab Technicians: draw and test blood/fluids
  - Radiology Technologists: Perform ultrasounds, CT, MRI
  - CV<sup>1</sup> Technicians: conduct CV scans such as EKGs
  - Dialysis Technicians: operate dialysis equipment
- Requires high school diploma plus trade certification; some also require associate's degree

### Others



- Includes expanding set of caregivers and support service providers:
  - Alternative medicine: chiropractors, acupuncturists, massage therapists
  - Rehabilitation: physical therapy, occupational therapy, speech therapy
  - Social workers, nutritionists, health coaches, navigators

# More in the series on providers and sites of care

Two-part webconference series on the basics of care delivery



Introduction to  
Sites of Care



Introduction to  
Caregivers



2445 M Street NW, Washington DC 20037  
1-202-266-5600 | [advisory.com](http://advisory.com)