

H A R V A R D | B U S I N E S S | S C H O O L

Healthcare 101

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What Does the Healthcare Initiative Do?

Improving healthcare is as much a management challenge as a social imperative. The HBS Healthcare Initiative meets this management challenge by fostering distinctive research, multi-disciplinary collaboration and leadership development in the healthcare industry.

Healthcare Industry Week

❑ Tuesday, October 16

- **Biotech and Pharma Panel** | 3:00 – 4:00pm | Aldrich 8
- **Healthcare VC/Entrepreneurship Panel** | 4:00 – 5:00pm | Aldrich 109

❑ Wednesday, October 17

- **Payor and Provider Panel** | 3:30 – 4:30pm | Aldrich 7
- **Trends and the Future of Healthcare IT – Dan Pelino, IBM**
| 5:30 – 6:30pm | Meredith Room

❑ Thursday, October 18

- **Devices and Diagnostics Panel** | 3:30 – 4:30pm | Aldrich 7
- **Mixer at Health Industry Alumni Conference** | 5:45 – 7:00pm | Charles Hotel

❑ Saturday, October 20

- **Deadline to complete poll for alumni mentor program**
- **Email pnore@hbs.edu to get more information**

Healthcare Industry Overview

- ❑ **Total 2011 U.S. healthcare expenditures = \$2.7T**
 - Largest sector of U.S. economy
 - Highest global per-capita expenditure
 - 1% of U.S. population accounts for ~21% of healthcare spending
- ❑ **In other words:**
 - Per-person: \$8,650
 - % GDP: 17.7%
 - Y-O-Y spending growth: +4.9%
 - Nearly doubled in 10 years: 2001 expenditure was \$1.49T
- ❑ **Some economists estimate that healthcare could reach 20% of U.S. GDP by 2020.**
- ❑ **Healthcare is BIG**

Macro Issues Impacting Healthcare

❑ **Government regulation impacts are direct and indirect**

- Testing
- Credentialing
- Prescribing
- Marketing
- Reimbursement
- Reform

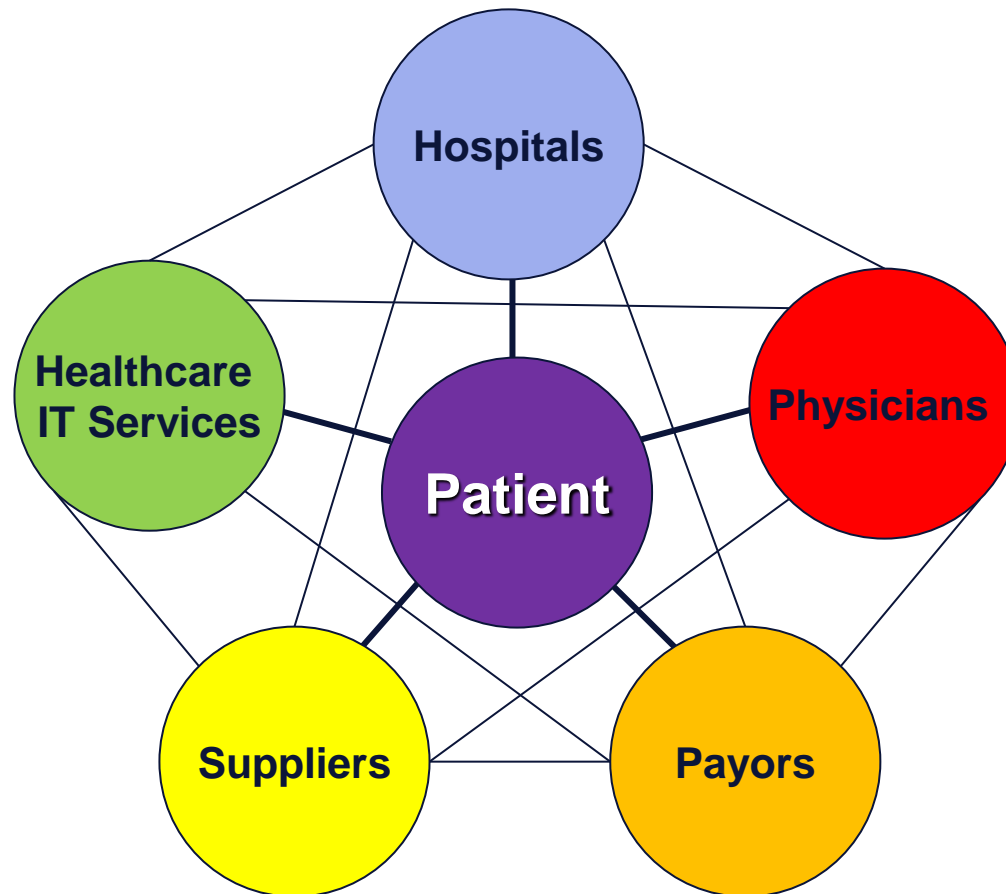
❑ **Customer confusion**

- Who is the customer?
 - The patient? The purchaser? The prescriber? The payor?
- Competing demands
- Complicated money flow

❑ **Demographic shifts**

- Aging of population
- Increase in average life expectancy
- Unhealthy lifestyles and chronic disease

Interplay of Sectors Creates Challenges and Opportunities



Healthcare Industry Sectors

For purposes of this week's discussions, industry sectors are:

❑ Suppliers

- Bio/pharma
- Devices
- Diagnostics
- Durable medical equipment
- Consumer health and wellness products and services

❑ Payors

- Insurance
- Employers
- Government
- Consumers

❑ Providers

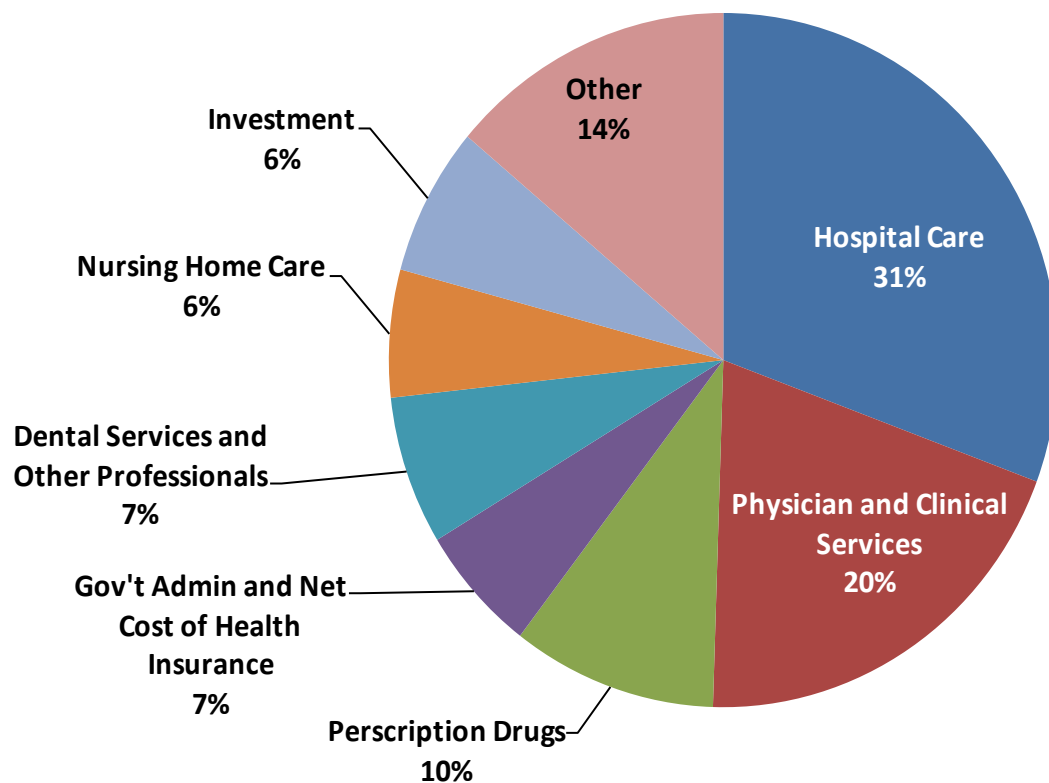
- Hospitals
- Physicians
- Dialysis Services
- Retail and workplace clinics

❑ Healthcare Information Technology (IT) and Services

- IT solutions for consumers, hospitals, payors, and providers
- Technology vendors
- Personal genetic information services

How the \$2.7T is Spent

The Nation's Health Dollar: Where it Went in 2011

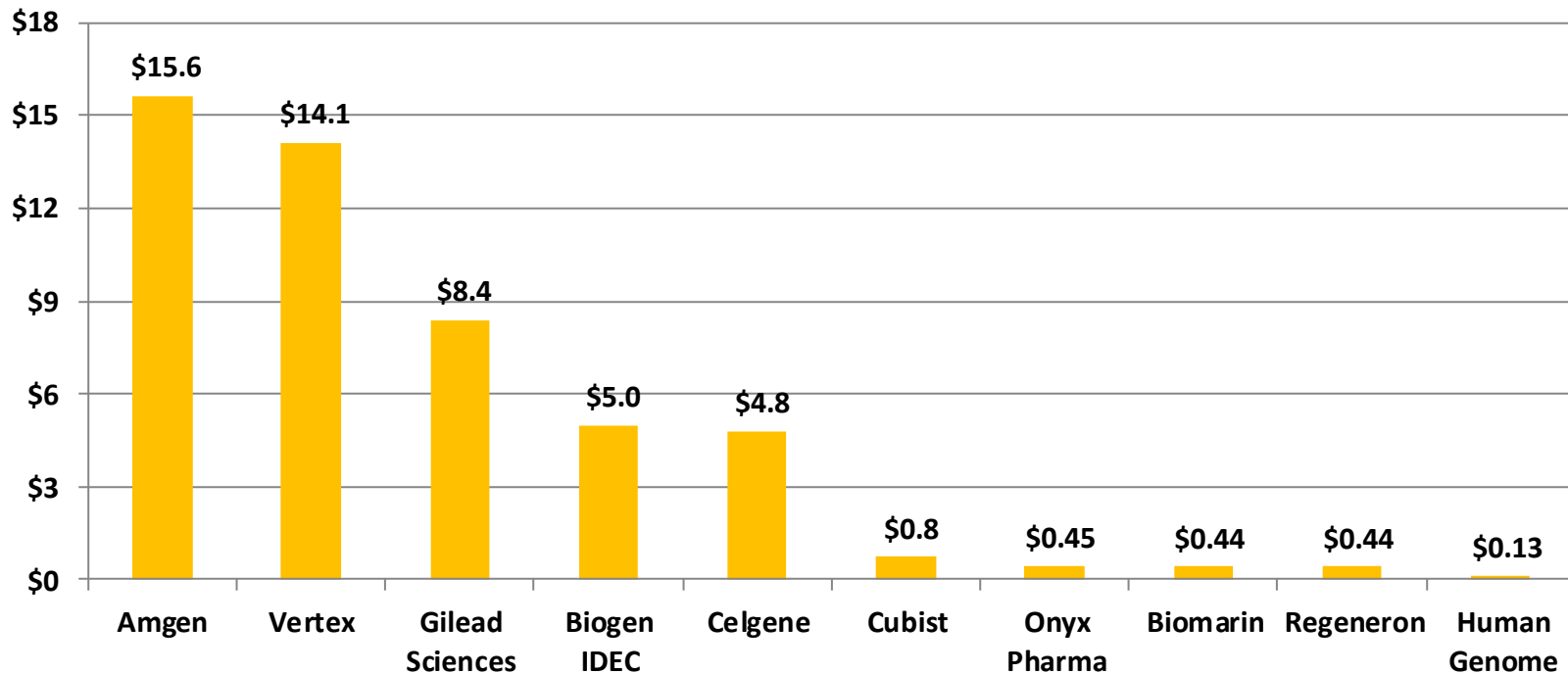


What is a Supplier?

- ❑ **An organization that researches, develops, manufactures and markets products for human (and animal) health**
- ❑ **Types of products include:**
 - **Biologics** – preparations synthesized from living organisms (e.g., insulin)
 - **Pharmaceuticals** - synthetic chemical compounds (e.g., ibuprofen)
 - **Devices** - instruments, tools, machines, or implants that are used to prevent or treat disease or other conditions (e.g., pacemaker, MRI)
 - **Diagnostics** – tools to identify a disease from its signs and symptoms
 - **Durable Medical Equipment (DME)** - medical equipment used in the home to improve quality of living (e.g., wheelchair, oxygen tank)
 - **Consumer Health and Wellness Products and Services** – broad category of products and services for consumers for self-care, typically not requiring physician involvement (e.g., referral, prescription)
- ❑ **Companies can produce multiple kinds of products**
 - **Distinction between pharmaceutical and biotech companies eroding**
 - **Products are converging too, e.g., drug-coated stents**

Supplier: Biotech Companies

Largest Public U.S. Biotechnology Firms by Revenues, 2011



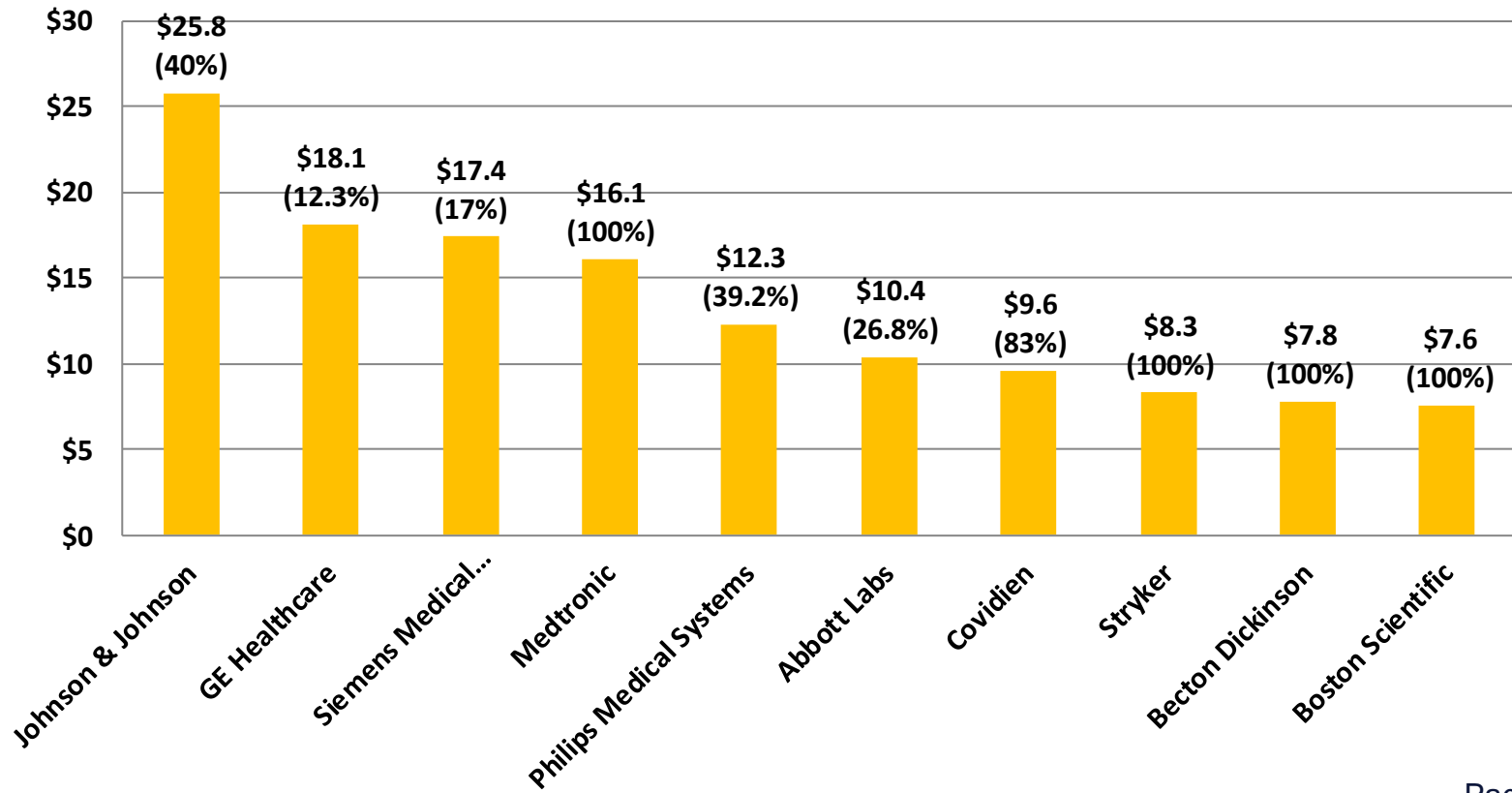
Supplier: Pharma Companies

Largest Global Pharma Companies by U.S. Sales, 2011 (\$B)



Supplier: Medical Device Companies

**Largest Global Medical Device Companies by Medical Device Sales
(and as % of total sales), 2011 (\$B)**



Supplier: Consumer Health & Wellness Products and Services

- ❑ **Includes a range of overlapping categories.**
 - **Products traditionally available in drug stores, such as:**
 - Sunscreen, toothpaste, Band-Aids
 - Over-the-counter drugs (e.g., cough medicine)
 - **Diet and nutrition**
 - Vitamins and supplements
 - Grocery products (e.g., gluten-free foods, chilled/frozen diet meals)
 - Meal-delivery services
 - Weight Watchers
 - **Fitness and exercise**
 - Equipment and apparel
 - Gyms and exercise programs
 - **Incentives, behavior change, and self-monitoring**
 - Apps and websites for tracking progress against health goals
 - Home/portable monitoring devices for glucose, blood pressure, etc.

Key Things to Know About Suppliers

- ❑ **Biotech and pharma products are expensive to develop and produce: \$1B per pill**
 - Long timelines
 - Products that don't make it to market
 - Clinical trials
 - R&D
- ❑ **“Pipeline” is big issue for companies**
 - What products are coming off patent?
 - What new products will be offered?
- ❑ **Regulation impacts all aspects of business**
 - Development
 - Testing
 - Marketing
 - Pricing
 - Reimbursement
- ❑ **Consumer products and services are generally paid for out-of-pocket and have fewer regulation hurdles**

What is a Payor?

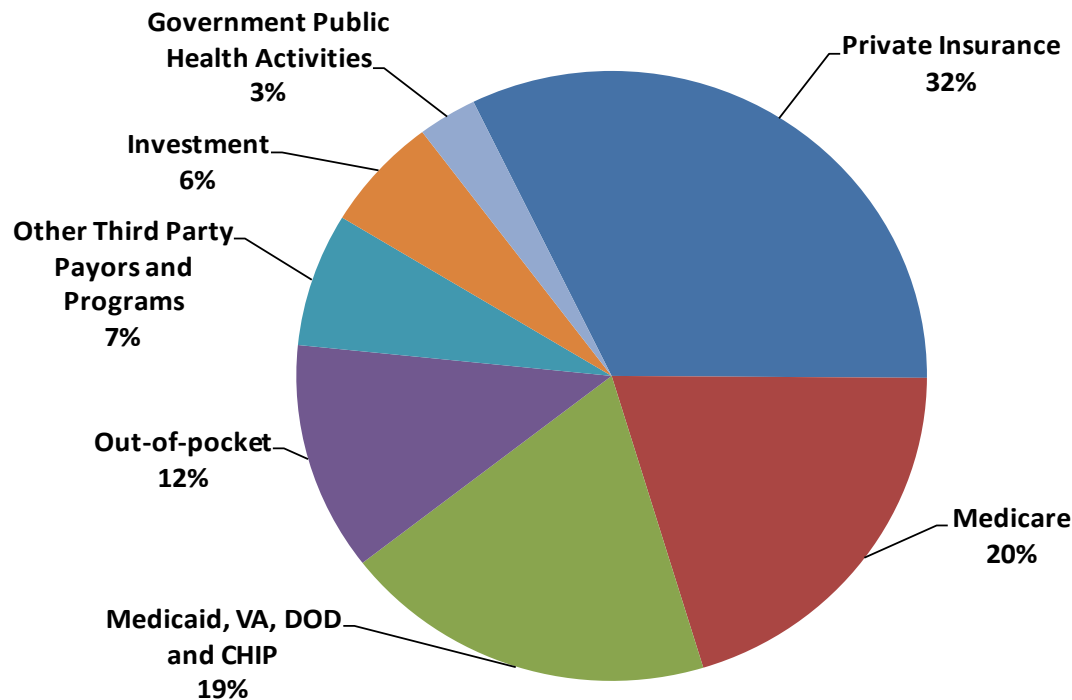
- ❑ **The person, institution or government responsible for payment**
- ❑ **Payors typically include:**
 - **Health insurers** – Companies that provide insurance against illness or bodily injury
 - **Managed care organizations** – A broad term to describe a variety of techniques to reduce the cost and improve the quality of care
- ❑ **But also:**
 - **Employers** – Often pay a portion of the premium; can self-insure as well
 - **Government** – Pays a portion or all of the cost of care for selected people (e.g., elderly, poor, disabled, children, military members)
 - **Consumers** – Are responsible for everything not paid for by all of the above
- ❑ **Most of the Patient Protection and Affordable Care Act (PPACA) is payor reform**
 - **Goal is to provide everyone in US access to some type of insurance**
 - **Will cover an additional 32 million Americans by 2019**
 - **Cost estimated at \$940 billion over 10 years (Congressional Budget Office)**

Brief Summary: The Patient Protection and Affordable Care Act (PPACA)

- ❑ **Passed in March 2010, most elements take effect in 2014**
- ❑ **Insurance coverage:**
 - Requires all Americans to have health insurance or pay a penalty/tax
 - Creates exchanges where individuals and small businesses can buy insurance
 - Supports low-income Americans through financial assistance for buying insurance and expanded Medicaid eligibility
 - Requires firms with 200+ employees to provide coverage to workers and assesses fines on firms with 50+ employees that do not offer coverage
 - Establishes a Medicare bundled payment pilot program
- ❑ **Health plan requirements:**
 - Requires health plans to include a government-specified minimum basic benefit package and to allow coverage of dependent children up to age 26
 - Prohibits health plans from imposing annual and lifetime limits on the dollar value of coverage, from exclusions due to pre-existing conditions, and from rescinding coverage
- ❑ **FDA:**
 - Authorizes FDA to approve generic biologics after 12 years' patent protection
 - Establishes a commission to conduct comparative-effectiveness research

Payors of \$2.7T

The Nation's Health Dollar, CY11: Where it Came From



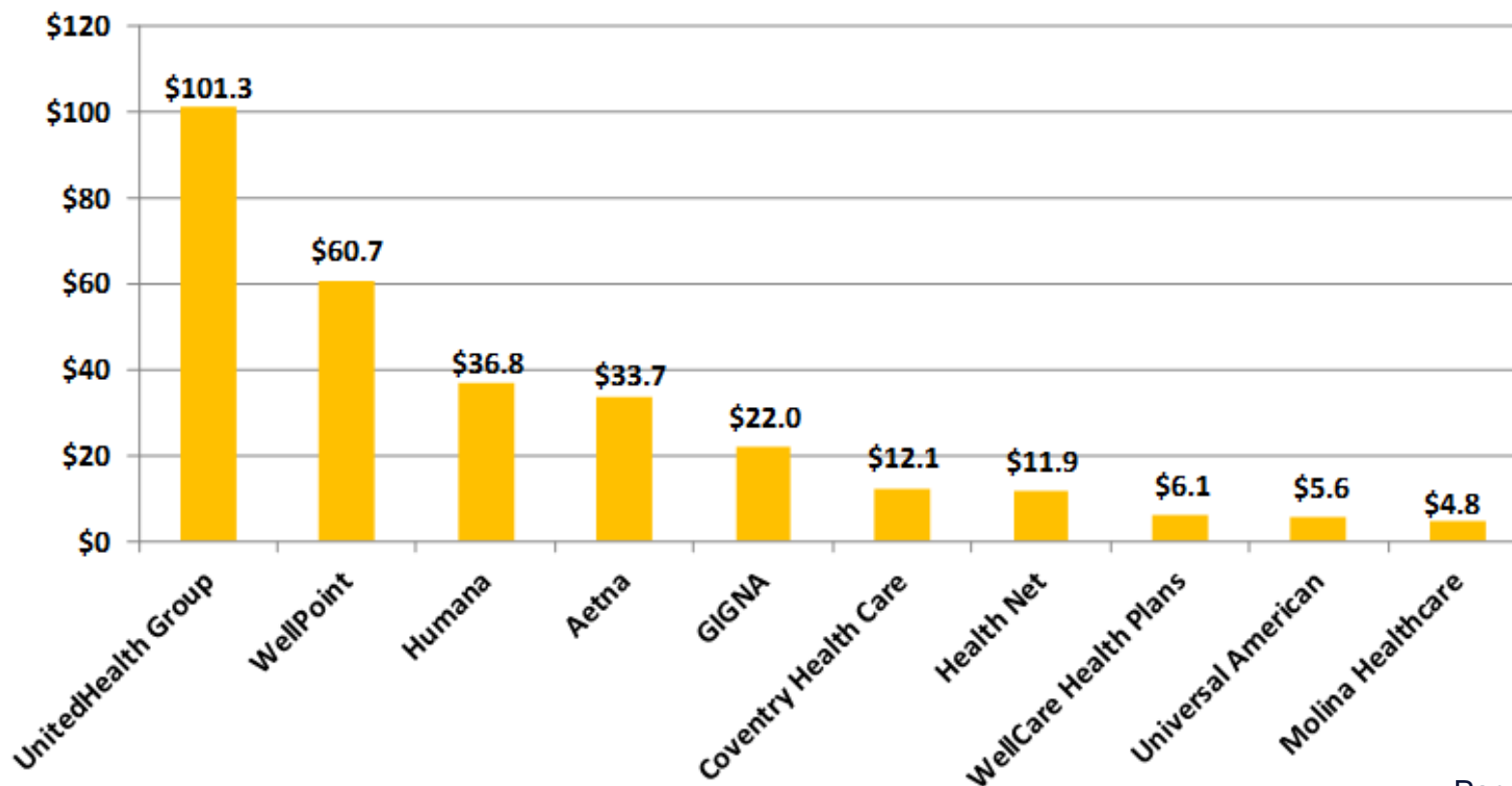
Source: Center for Medicare and Medicaid Services, 2011

Out-of-pocket includes: co-payments, deductibles, and any amounts not covered by health insurance.

Other Third Party Payors and Programs includes: worksite healthcare, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, Substance Abuse and Mental Health Services.

Payors

Largest Publicly Listed Insurance Companies by Revenues, 2011 (\$B)



Key Things to Know About Payors

❑ In the US

- **Private insurance is often employer-based: 67% of firms offer insurance**
- **Public programs like Medicare and Medicaid generally set reimbursement trends**
- **Insurance companies tend to be regional instead of national because insurance is regulated on the state level**

❑ Health care insurance systems vary by country

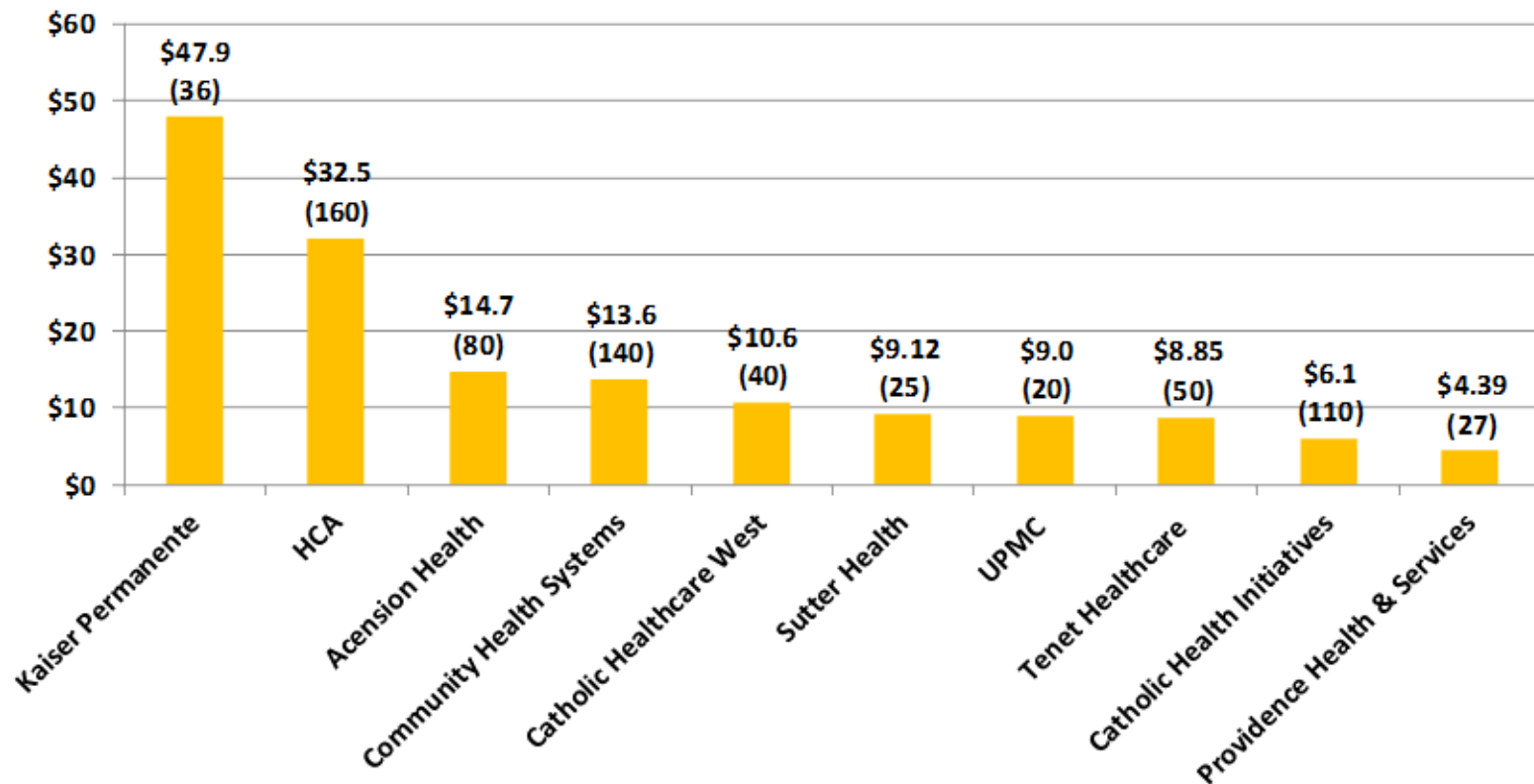
- **Single-payor:** Government pays for all care (financed through taxes), owns many (but not all) hospitals and employs many physicians; used in Great Britain, Spain, Cuba
- **Employer/worker:** Insurance for all residents financed jointly by employers and workers through payroll deduction; used in Germany, France, Belgium, Japan
- **National health insurance:** All citizens pay into government-run program; most providers are private-sector but government controls prices; seen in Canada, Taiwan, South Korea
- **No insurance/out-of-pocket:** Only ~40 countries have established health care systems; in the rest, the poor—most citizens—pay for their own care or go without

What is a Provider?

- ❑ **An organization or person who delivers professional healthcare in a systematic way to an individual**
- ❑ **Providers typically include:**
 - Physicians and nurses
 - Hospitals
- ❑ **But also:**
 - Surgical centers
 - Retail and workplace clinics
 - Dialysis centers
 - Nursing homes
- ❑ **Providers account for more than 60% of total health expenditures**
- ❑ **They are highly fragmented (5,800 hospitals, 850,000 physicians in US), so next page is bit misleading, but...**

Providers - Healthcare Delivery Systems

**Largest Public For-Profit Hospital Chains by Operating Revenues
(and number of hospitals), 2011 (\$B)**



Source: Hospitals: Top Companies, Hoover's Inc., www.hoovers.com, accessed September 2011.

Note: Some companies include long-term care facilities, rehabilitation hospitals, and large clinics in their ownership portfolio.

Kaiser Permanente owns more than 600 medical offices in addition to its 36 hospitals.

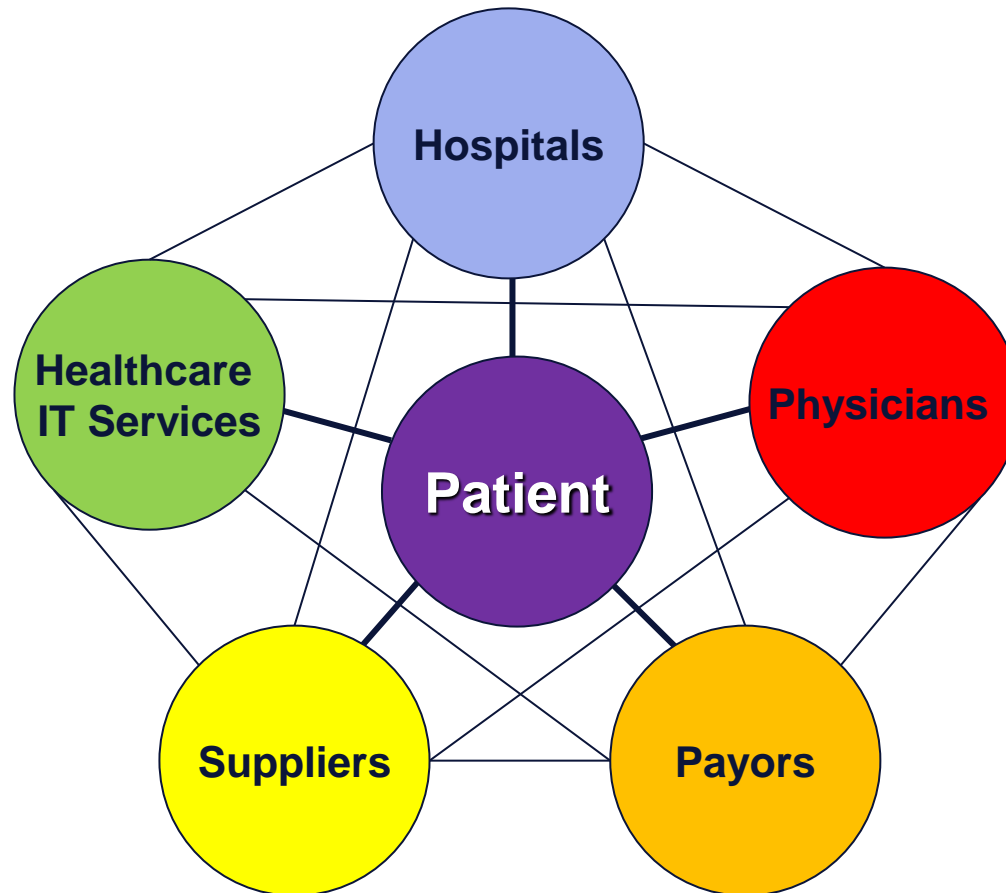
Key Things to Know About Providers

- ❑ **Because they are fragmented, providers don't speak with "one voice"**
 - Academic medical center vs. community hospital
 - For profit vs. not-for-profit (82% of hospitals are nonprofit)
 - Network vs. unaffiliated
 - Government vs. non-government
 - Large group vs. small group
 - Employed by hospitals vs. independent
 - Primary care vs. specialty
 - ❑ **In US, most hospitals do not employ physicians**
 - Physicians are usually part of an association
 - Makes for a complicated dynamic
 - ❑ **Provider shortages exist in some geographies and specialties**
 - 54.4 M Americans live in areas with a shortage of primary care physicians
 - More than 15,000 practitioners are needed to fill the gap
 - Some see potential in disruptive care models, such as retail clinics and telemedicine, to address the shortage problem and improve access to care
- Hospitals (5,800 in US)
- Physicians (850,000 practicing in US)

What are Healthcare Information Technology (IT) Services?

- ❑ **Healthcare IT services play numerous roles.**
 - Can support consumers, hospitals, payors, providers, etc.
 - Provide products and services that aim to help “fix the mess”
- ❑ **Services are generally meant to:**
 - Decrease costs
 - Streamline activities and increasing standardization
 - Improve quality and reduce medical errors
 - Facilitate information flow and interoperability between systems
- ❑ **Home to a lot of industry innovation. Examples include:**
 - **Consumer and/or provider health information companies**
 - **Avado** - cloud-based patient and provider relationship systems
 - **Simplee** - online health bill management and claims tracking
 - **Clinical companies**
 - **23 and Me** – genetic testing
 - **Genomera** – crowd sourcing health studies
 - **Helix Health** – dispensing software
 - **Technology vendors**
 - **3M Health Information, Alter Life Sciences** - integrated electronic health records systems
 - **Medivo** - software to connect patients and providers to personalized medicine trials
 - **Vitality** - cellular-based medication alerts

Interplay of Sectors Creates Challenges and Opportunities



Healthcare Career Advice

- ❑ **Passion for healthcare is a MUST**
- ❑ **Industry is highly diverse and complex**
- ❑ **Career paths can vary widely by segment and by:**
 - Stage of life cycle (product and company)
 - Governance (for profit vs. non profit)
 - Degree of scientific or clinical experience required
- ❑ **Some of the most interesting opportunities are off the beaten path**
- ❑ **Relevant work experience is preferred, but career switchers can be successful**
- ❑ **Don't rely solely on job postings -- networking is key**

Job Prospects by Segment

	Pharma	Biotech	Medical Device
Ease of entry for career switchers	High - especially if bringing sales/marketing from other industries.	More difficult - scientific background helps	High - especially for engineers
Key business drivers	<ul style="list-style-type: none"> • Sales/marketing • R&D 	<ul style="list-style-type: none"> • Research/innovation • Business development (licensing) • Sales and marketing for larger companies only 	<ul style="list-style-type: none"> • Product development • Sales • Marketing has strong sales support element
Industry notes	<ul style="list-style-type: none"> • Very large, global companies • Industry in flux with fewer new products and less productive R&D 	<ul style="list-style-type: none"> • Top few are similar to pharma • Many companies are still in development stage • Do you want company with marketed products? 	<ul style="list-style-type: none"> • A few large companies • Some are divisions of broader healthcare companies • Many smaller organizations
Campus recruiting picture	<ul style="list-style-type: none"> • Several recruit on campus 	<ul style="list-style-type: none"> • Select few campus recruiters • Networking important 	<ul style="list-style-type: none"> • Several recruit on campus • Many opportunities for networked search

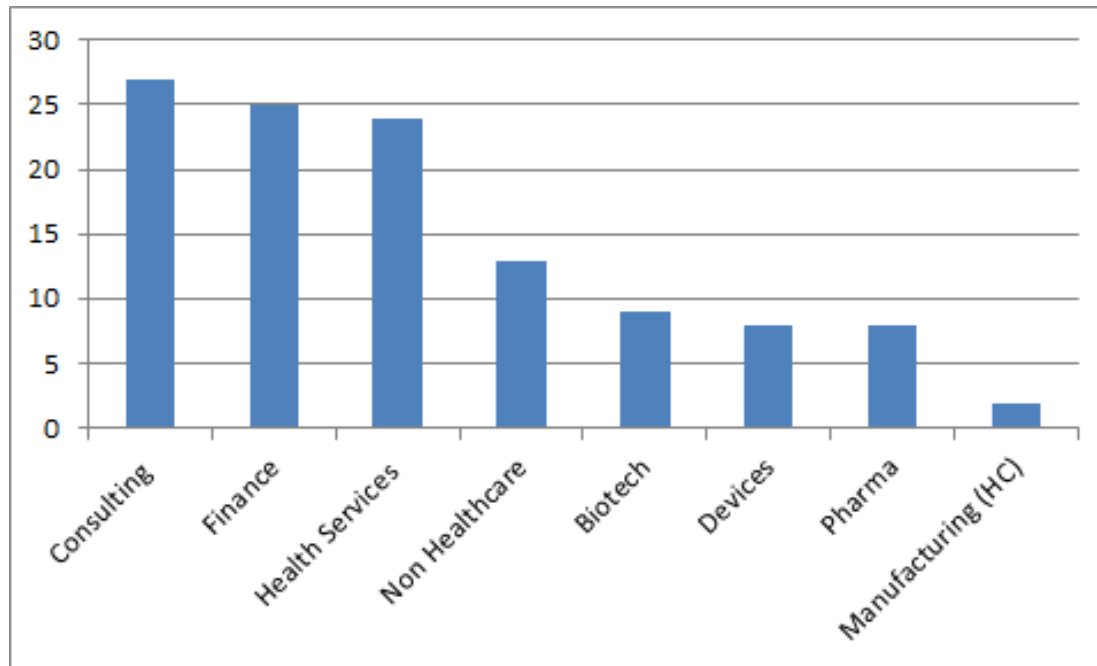
Job Prospects by Segment

	Payor/Provider	VC	Other Health Services
Ease of Entry for Career Switchers	Moderate – companies like prior experience (especially prior consulting)	Difficult - preference for MD or PhD	Moderate – fragmented industry; need to explore to find own opportunities
Key Drivers	<ul style="list-style-type: none"> Improving quality Controlling costs Improving operational efficiency 	<ul style="list-style-type: none"> Evaluation of scientific and commercial potential Economics Financial markets 	<ul style="list-style-type: none"> Improving operational efficiencies Tools/frameworks (e.g., electronic medical records, IT, software, disease management).
Industry Notes	<ul style="list-style-type: none"> Need to be comfortable creating own career path (esp. providers) 	<ul style="list-style-type: none"> Know why VC Do you want to make investments or be an entrepreneur? 	<ul style="list-style-type: none"> Many smaller companies and entrepreneurial opportunities
Campus recruiting picture	<ul style="list-style-type: none"> Few on-campus recruiters Network to create opportunities 	<ul style="list-style-type: none"> Very few postings – almost all opportunities found through networking 	<ul style="list-style-type: none"> Limited on campus options Requires networking

Class of 2012: Healthcare Placement

Of the students interested in healthcare in the Class of 2012 nearly half went to professional services. 20% went into health services and 20% into supplier organizations. 10% found jobs outside the industry.

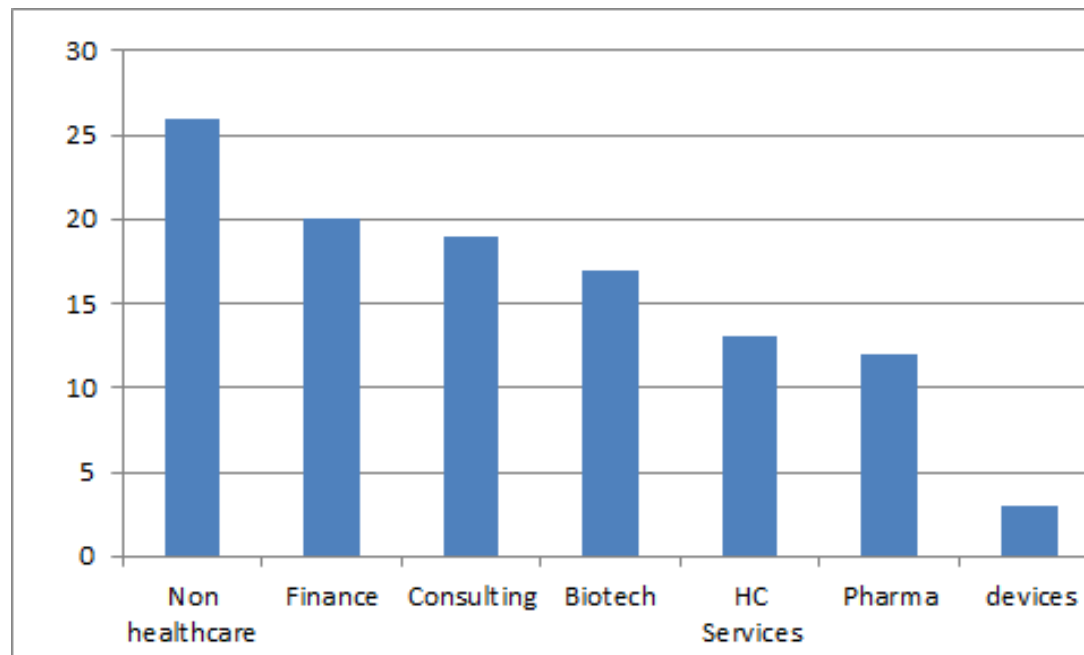
Placement for Those Interested in Healthcare



Class of 2013: Healthcare Internships

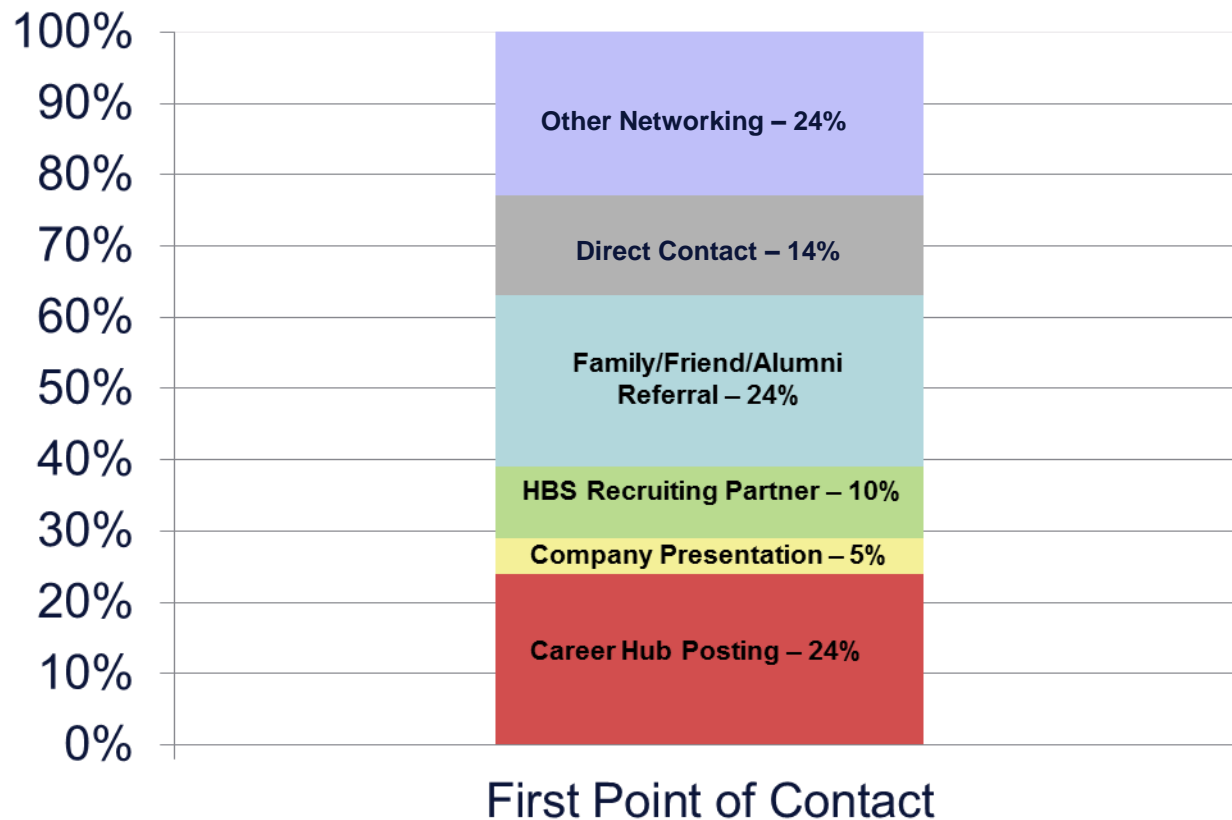
Of the students interested in healthcare in the Class of 2013, 35% went to professional services. 10% went into health services and 30% into supplier organizations. 24% found jobs outside the industry.

Class of 2013 Healthcare Internships



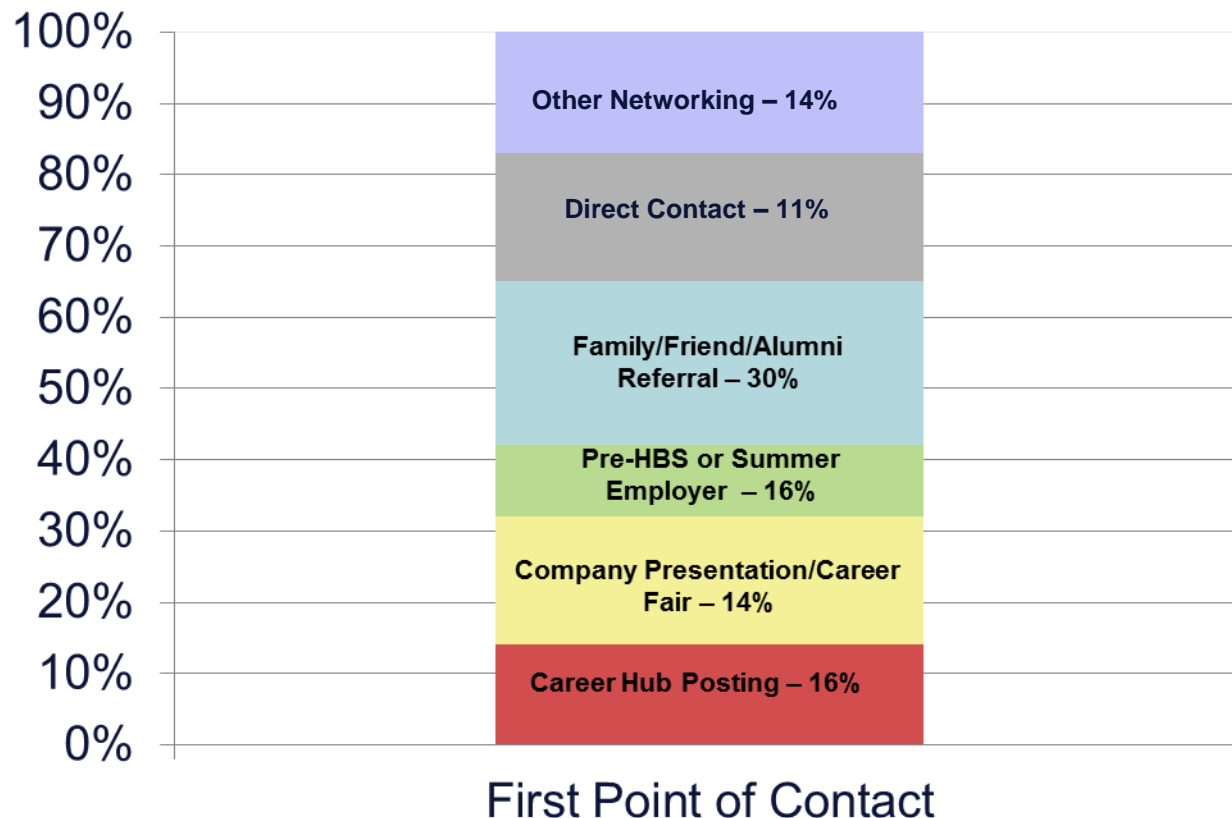
Class of 2012 in Healthcare Biotech/Pharma: First Point of Contact

HBS-facilitated postings and events are a key enabler for positions in healthcare, but individual initiative is important.



Class of 2012 in Healthcare Services: First Point of Contact

HBS-facilitated postings and events are a key enabler for positions in healthcare, but individual initiative is important.



More information on careers?

❑ Career coaches with experience in healthcare

- Sarah Bua

sbua@hbs.edu

- Suzie Rubin

srubin@hbs.edu

- Marty November MD

mnovember@hbs.edu

❑ HBS Healthcare Initiative

- Cara Sterling

csterling@hbs.edu

❑ Online CPD Resources