Healthcare, Inc.

Steve Lindstrom: OLLI Fall Course 2023

<u>Class 5</u>

Pharma

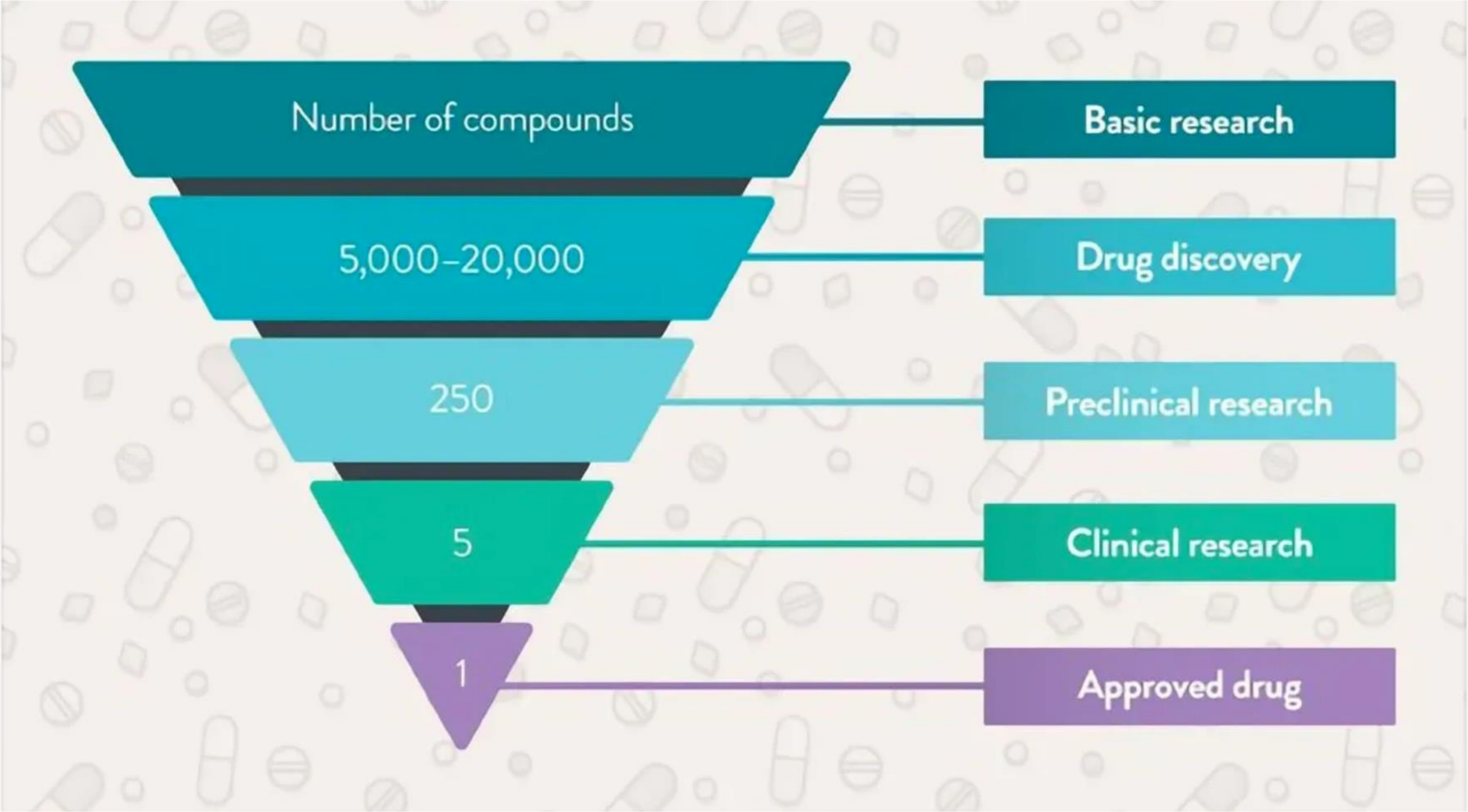
Components of the Pharma Industry

- Core elements
  - Drug discovery and development
  - Manufacturing
  - Marketing and sales
  - Supply chain management
  - Regulatory compliance
- Supporting industries
  - Contract research org (CRO)
  - Contract and generic manufacturing (CMO)
  - Wholesale/ distributors
  - Pharmacy benefit manager (PBM)
  - Retail pharmacies

Background
Stages of drug development

1. Discovery and research
2. Preclinical testing
   a) Lab
   b) Animals
3. Clinical trials- Phase 1
   a) Healthy volunteers
   b) Safety, dosage, how the body handles drug
4. Clinical trials – Phase 2
   a) Patients with disease
   b) Effectiveness, side effects, optimize dosage
5. Clinical trials – Phase 3
   a) Large and diverse group of patients
   b) Safety and effectiveness
   c) Supporting regulatory approval
6. Regulatory Review
7. Post-marketing surveillance Phase 4
   a) Monitoring
   b) Adverse events
   c) Real-world outcomes

Background Stages of drug development



Types of drugs

Prescription drugs:

- Antibiotics
- Antidepressants
- Antipsychotics
- Statins
- ACE inhibitors

OTC drugs:

- Pain relievers
- Cold and flu medications
- Allergy medications
- Antacids
- Laxatives

Generic drugs:

- Amoxicillin
- Ciprofloxacin
- Penicillin
- Citalopram
- Escitalopram
- Fluoxetine
- Atorvastatin
- Simvastatin
- Lisinopril

Biologics:

- Adalimumab (Humira)
- Infliximab (Remicade)
- Rituximab (Rituxan)
- Bevacizumab (Avastin)
- Insulin

Generic vs. Patent Drugs

Generic drug

- The exact same active ingredient as the brand name
- Bioequivalence
- Taken same way
- Offers the same effect
- Do not need to contain the same inactive ingredients
- Sold after patent expires
- Available to patient if Doctor writes a script accordingly
- The industry arose from Hatch-Waxman Act of 1984

Branded drug

- Patent issued with 20-year life
- Extended if long approval period

Generic Market vs. Branded

- Per FDA 91% of Rx Generic
- 80% of spending on Branded
- 32K Generic's approved to date
- Top 10% of drugs by price = 1% of spending

Generic vs. Patent Drugs   Primer on Hatch-Waxman Act 1984

- Abbreviated new drug application (ANDA) process

- Market exclusivity: periods of market exclusivity for both brand-name and generic drugs.

- Patent term extensions: extend their patent terms by up to five years to compensate for delays

- Patent litigation: created a specialized patent litigation process for generic drugs.

Formularies

- List of generic and brand-name drugs approved for coverage by specific health plan
- Updated regularly by team of physicians and pharmacists
- Review adding new drugs and changes and effectiveness of existing drugs
- Create a limited list to achieve higher discounts and rebates

Tiers by out-of-pocket cost

1. Generic
2. Preferred brand name
3. Non-preferred brand name
4. Narrow use and high-cost

Benefits

- Lower costs
- Improved quality of care
- Reduced drug waste

Challenges

- Limited patient choice
- Access to new drugs
- Cost of brand name drugs

Pharma terms

Off Label

- Drug is used for a purpose other than what FDA approved for
  - Dose
  - Condition
  - Population
- Estimated 1/5 Rx
- Based upon physician's experience and knowledge of drug

Black box warning

- Black box on the label
- Serious or life-threatening risks
- Alert patient and physician

Pricing terms

- AWP = Average wholesale price
- Used to set reimbursement rates
- Starting point
- Published by drug manufacturers
  - Cost plus pricing – markup over cost
  - Value-base pricing – perceived value
  - Benchmarking – price of similar drugs
- Pharmacies get lower than AWP
- Charge insurers AWP + dispensing fee/ script

Coupons for Medicare Drug Co-pays

- Not Legal
- Anti-kickback statute prohibits inducement
- Okay under approved patient assistance programs
- Drug companies have devised work around

Top 5 Pharma Companies 2023 public market resources (USD billions)

- Key strategies:
- R & D investments
- Acquiring smaller companies - AbbVie acquired Allergan in 2019 for $63 b
- International markets – Merck in 65 countries
- Investing in digital health - Pfizer partner with IBM Watson Health for AI drug discovery program

Rank	Company	Market Cap	Revenue	Profit	Investment in R& D
1	J & J	402.7	93.8	20.8	10.8
2	Pfizer	240.5	81.3	21.98	8.1
3	AbbVie	281.2	56.2	11.55	23.9
4	Merck & Co.	256.4	51.8	12.35	13.6
4	Eli Lilly & Co.	327.1	57.0	13.58	10.5

Big Pharma is Big
Briefly Explore

- Pharmaceutical Companies
- Wholesale
- Pharmacy Benefit Managers (PBM)
- Retail

Pharma

Pharmaceutical

Key market segments and key players

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- Branded Pharmaceuticals (Innovative Pharmaceuticals)
  - Pfizer
  - Roche
  - Novartis
- Generic
  - Teva
  - Mylan
  - Sandoz
- Biopharmaceuticals and Biotechnology
  - Amgen
  - Biogen
  - Regeneron
- Specialty Pharmaceuticals
  - Gilead Sciences
  - Celgene (acquired by Bristol Meyers Squibb
- Contract Research and Manufacturing
  - IQVIA
  - Charles River Laboratories
  - Catalent

Pharma
Big Pharma Disrupters

- Moderna and BioNTech- developed first Covid-19 vaccines, messenger RNA tech
- CRISPR and Beam Therapeutics   gene editing therapies
- Flatiron and Tempus Labs - data and analytics for cancer care

Pharma Regulatory

Big Pharma Challenges

Medicare Drug Price Negotiation

- Medicare spent $378 billion on drugs in Part D 2021
- Medicare spent $50 billion on 10 drugs targeted:
- Takes effect in 2026
- Expected annual savings per year by 2031 $25 billion
- Another set of drugs is added each year
- Law is being challenged constitutionally
- Patent law gaming is an issue

- **Eliquis**, a blood thinner from Bristol-Myers Squibb and Pfizer
- **Enbrel**, an arthritis drug from Amgen
- **Entresto**, a cardiovascular drug from Novartis
- **Farxiga**, a diabetes drug from AstraZeneca
- **Fiasp** and **NovoLog**, versions of a diabetes treatment from Novo Nordisk
- **Imbruvica**, a blood cancer drug from Johnson & Johnson and AbbVie
- **Januvia**, a diabetes drug from Merck & Co.
- **Jardiance**, a diabetes drug from Eli Lilly and Boehringer Ingelheim
- **Stelara**, a psoriasis drug from Johnson & Johnson
- **Xarelto**, a blood thinner from Johnson & Johnson

Pharma Regulatory

Big Pharma Challenges Medicare Drug Price Negotiation

Pros:

1. Potential cost savings out of pocket for seniors
2. Increased access with lower prices
3. Budget control
4. Fair pricing
5. Transparency

Cons:

1. Stifle innovation
2. Drug availability
3. Market impact
4. Uncertainty
5. Impact on Investment
6. Political challenges
7. Negotiation complexity

Pharma Regulatory
US cost of drugs vs. outside US?

RAND CORPORATION
OBJECTIVE ANALYSIS.
EFFECTIVE SOLUTIONS.

International Prescription Drug Price Comparisons

Current Empirical Estimates and Comparisons with Previous Studies

BY ANDREW W. MULCAHY, CHRISTOPHER M. WHALEY, MAHLET GIZAW, DANIEL SCHWAM, NATHANIEL EDENFIELD, ALEJANDRO URIEL BECERRA-ORNELAS

- Findings:
  - US prices 256% of those in the 32 comparison countries combined
  - In comparison with individual countries, US prices ranged from 170% in Mexico to 779% in Turkey
  - Gap larger for brand name drugs
  - US prices were 190% higher than other countries after adjusting for rebates and other discounts
- Why:
  - Lack of government price controls vs. other countries that negotiate prices
  - Bulk purchasing to obtain lower prices
  - Shorter patent terms
  - Different pricing strategies by drug companies by country

Pharma Regulatory
US cost of drugs vs. outside US?

Is it legal to import?

- In general, illegal to import for personal use
- Exceptions:
    - Non-FDA approved OK if approved under “compassionate use”
    - Approved FDA
    - Personal use or family
    - Purchased from a licensed pharmacy
    - Lawfully obtained and dispensed in the foreign country.
    - Original packaging and prescription from a doctor licensed in the foreign country.
    - The total quantity of the drugs imported must not exceed a 90-day supply.
- Consult your doctor
- Do your own research on reputation

R & D Industry
Biopharmaceutical or Innovative Pharma

- Pfizer
- Johnson & Johnson
- Moderna
- Novavax
- Regeneron Pharmaceuticals
- Vertex Pharmaceuticals
- Gilead Sciences
- Bristol-Myers Squibb
- Amgen
- Eli Lilly
- Merck
- Biogen

R & D Industry
Top challenges

- Rising cost
- Long development time
- Clinical trial failures
- Regulatory hurdles
- Intellectual property challenges
- Market access and reimbursement
- Scientific complexity
- Competition
- Drug pricing and affordability
- Healthcare policy and regulation
- Clinical trial recruitment and diversity
- Drug resistance and emerging diseases
- Global expansion and access
- Sustainability and environmental concerns
- Talent acquisition and recruitment
- Data privacy and security

Check In

Pharma Wholesale

Key market segments and key players

- McKesson Corp
- Cardinal Health
- AmerisourceBergen Corp
- Owens & Minor
- Alliance Healthcare(Walgreens Boots Alliance)

Pharma Supply Chain Retail
Key market segments and key players Retail and DTC

Largest 15 U.S. Pharmacies, By Total Prescription Revenues, 2022

Company	Stock Ticker	Estimated 2022 Prescription Revenues (billions)	Share of 2022 Prescription Revenues	Change in Revenues vs. 2021	Primary Dispensing Format(s)
CVS Health Corporation	CVS				
• Retail/LTC pharmacy		$81.1	14.8%	+9.7%	Chain drugstore/Long-term care pharmacy
• Pharmacy Services[1]		$59.0	10.8%	+21.3%	Mail & specialty pharmacy
Walgreens Boots Alliance[2]	WBA	$85.2	15.5%	-5.7%	Chain drugstore / Mail & specialty pharmacy
Cigna (Evernorth/Express Scripts)	CI	$61.3	11.2%	+12.7%	Mail & specialty pharmacy
UnitedHealth Group (OptumRx)	UNH	$37.8	6.9%	+10.4%	Mail & specialty pharmacy / Community pharmacies
Walmart Stores, Inc.[3]	WMT	$24.1	4.4%	+6.1%	Mass merchant with pharmacy / Mail & specialty pharmacy
The Kroger Company[4]	KR	$16.8	3.1%	+10.1%	Supermarket with pharmacy / Specialty pharmacy
Rite Aid Corporation[5]	RAD	$12.9	2.3%	+5.0%	Chain drugstore / Mail & specialty pharmacy
Humana (CenterWell)	HUM	$9.7	1.8%	+7.0%	Mail & specialty pharmacy
Albertsons Companies[6]	ACI	$6.4	1.2%	+17.8%	Supermarket with pharmacy
Publix	Private	$6.1	1.1%	+26.0%	Supermarket with pharmacy
Costco Wholesale Corporation	COST	$3.0	0.6%	+8.2%	Mass merchant with pharmacy
BrightSpring Health Services[7]	Private	$2.8	0.5%	-2.0%	Long-term care pharmacy
Centene (Envolve Health)[8]	CNC	$2.7	0.5%	-38.7%	Specialty pharmacy
Ahold Delhaize[9]	ADRNY	$2.7	0.5%	+4.2%	Supermarket with pharmacy
CarepathRx[10]	Private	$2.4	0.4%	+20.0%	Specialty pharmacy
Subtotal Top 15		$413.9	75.6%		
Total Pharmacy Industry Prescription Revenues		$547.9	100.0%		

Source: Drug Channels Institute

Pharma Supply Chain   Retail

The Lines are blurred

Major Public Companies Operating in U.S. Drug Channels and Primary Roles

		Primary U.S. channel role(s)						
Company	**Stock ticker**	Insurer	Pharmacy benefit manager	Community pharmacy	Mail and/or specialty pharmacy	Healthcare provider	Discount card provider	Pharmaceutical wholesaler
Amazon	AMZN				✓		✓	
AmerisourceBergen	ABC							✓
Cardinal Health	CAH							✓
Centene	CNC	✓	✓		✓	✓		
Cigna	CI	✓	✓		✓	✓	✓	✓
CVS Health	CVS	✓	✓	✓	✓	✓	✓	
Elevance Health	ELV	✓	✓		✓	✓		
GoodRx	GDRX						✓	
Humana	HUM	✓	✓		✓	✓		
Kroger	KR		✓	✓	✓	✓	✓	
McKesson Corporation	MCK				✓		✓	✓
Rite Aid Corporation	RAD		✓	✓	✓		✓	
UnitedHealth Group	UNH	✓	✓	✓	✓	✓	✓	
Walgreens Boots Alliance	WBA			✓	✓	✓	✓	
Walmart	WMT			✓	✓	✓	✓	

Source: *The 2023 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers*. Available at http://drugch.nl/pharmacy

DRUG CHANNELS INSTITUTE

Pharma Retail

Key challenges

- Rising drug costs
  - Increasing steadily
  - Fixed reimbursement for each Rx
- Labor shortages
  - Pharmacists
  - Support staff
- Competition from online pharmacies
  - Price
  - Convenience
- Reimbursement
- Expanding services to maximize the benefit of store traffic
  - Clinics
  - Shots Pharmacists can give most shots
- Investing in technology
- Pharmacy deserts
- PBM's

Pharma Retail

State of the Market

- CVS is dominating growth
- Rite Aid has filed for Chapter 11
- Walgreens CEO “retired” recently
- Big box stores see this as a reason to enter store for other purchase
  - Grocery
  - Consumer goods
  - OTC
- Online and other dis-intermediators rising

Pharma Supply Chain

Definition and roles

PBM

A pharmacy benefit manager (PBM) is a company that manages prescription drug benefits on behalf of health insurers, employers, and other healthcare payers.

- Negotiate drug prices
- Create formularies
- Processes claim
- Manages pharmacy network
- Clinical programs, disease management and utilization review

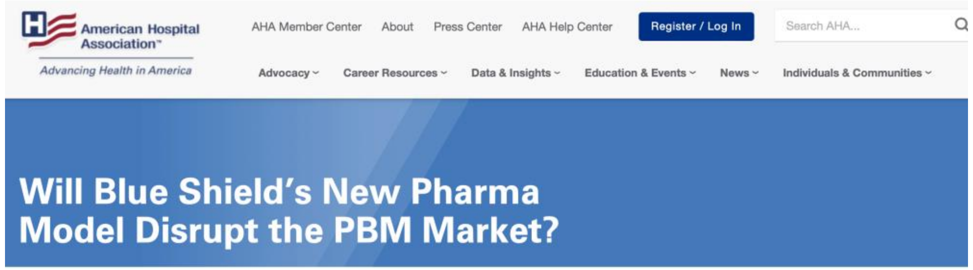
Pharma Supply Chain

PBM

Leading companies with 80% market share

- CVS Caremark
- Express Scripts
- OptumRx (United Health Care)
- Prime Therapeutics

Pharma Supply Chain PBM
Challenges



- Managing specialty drug costs
  - Fastest growing area
  - Over 50% of spend
- Preventing fraud and abuse
  - False information
  - Overutilization
- Alternative PBM models
  - The sponsor pays the same price as the pharmacy is paid =transparency

Pharma

Regulatory

Patent Gaming

Current patent law

- Patent holder has exclusive rights on original patent for 20 years
- Incentivize innovation and development

Patent gaming

- Evergreening – minor modifications to extend protection
- Patent Thickets – multiple patents for manufacturing, method of use and formulation
- Pay for Delay - pay generics to delay release of generic

Healthcare, Inc.

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Class 5

Insurers

Insurers Overview

- Markets served
  - Commercial insurance for employers
  - Individual insurance
    - DTC
    - ACA Marketplace
      - 3.6 mm new consumers entering
      - choosing among 88 plans in a state, 303 plans overall
      - 23 new insurers in 2023, 20 exit
  - Medicare
    - Medicare Advantage
    - Medicare Supplement
  - Medicaid state level contracts

Insurers
Overview Challenges

- Increasing costs of healthcare outstrip ability to increase revenue
- How to move to value-based models of reimbursement
  - Collaboration with providers/hospitals
  - Maintaining profitability
- The collaboration will require a shift in approach
  - Contractor vs. supplier
  - Collaboration
  - How to cut up the profit pie
- Improve the overall consumer experience
  - EOB - how will that work in VBC?
  - Access
  - Pre-authorization
  - No Surprise Act
  - Digital and Telehealth

Insurers
Overview

- Regulation
    - Federal
    - State - Each insurer has to file and work with each state which does not have uniform regulations
- Consolidation
    - Insurers
    - Healthcare providers
        - Hospital systems
        - Provider groups
    - Pharmacies - CVS Aetna
- Competition
    - New entrants
        - Oscar - full stack IT driven
        - Friday Health – ACA for gig workers
        - Bright Health, entered and exited

Insurers
Overview

- Demographics
  - Aging population
  - Increasing prevalence of chronic disease
  - High cost of prescription drugs
- Uninsured and underserved population
- Health disparities
- Social determinates of health addressed

Top 5 for profit Insurers

Market data 2023 or last annual report

Rank	Company	Market Cap ($B)	Revenue ($B)	Profit ($B)	Employees	Members
1	UnitedHealth Group	$468	$324.1	$20.6	378,000	51 million
2	Elevance Health (Anthem)	$105	$155	$.4	100,000	47.5million
3	CVS Health Aetna	$91.3	$91.4	$6	302,000	12.1 million
4	Cigna	$85.6	$180.5	$7.3	70,000	18.2 million
5	Humana	$61.2	$92	$2	95,000	17 million

Nonprofit Health Plans

Rank	Health insurance company	Total health plan enrollment in 2021	States
1	Kaiser Permanente	12,600,000	CO,CA,HI,OR,GA, MD,VA,WA,DC
3	HCSC (including BCBS plans)	4,419,293	IL,MT,NM,OK,TX
7	GuideWell (Florida Blue)	2,491,019	
8	Blue Cross Blue Shield of Michigan	1,337,400	
9	Highmark	1,035,585	PA
10	Blue Cross of North Carolina	897,649	

Nonprofit Health Plans

Rank	Health insurance company	Total health plan enrollment in 2021	States
13	Blue Cross Blue Shield of Massachusetts	794,909	
15	Independence Health Group	774,155	Philadelphia area
16	CareFirst	3,500,000	Mid-Atlantic
17	Tufts Health Harvard Pilgrim Health Care	2,400,000	
18	Horizon Blue Cross Blue Shield of New Jersey	684,988	
33	BlueCross BlueShield of Tennessee	446,079	

Nonprofit Health Plans

Blue Cross Blue Shield

- Blue Cross Blue Shield (BCBS) founded in 1929
- Currently 115 million members in all plans
- 1.7 million doctors' contract with them
- Change in by-laws in 1996 allowing conversion to for profit plans
- 14 have become for-profit in plan roll-ups (e.g., Anthem) and still have kept BCBS licenses.
  - Access to capital
  - Compete more effectively
  - Many were highly contested in each state
- Strongest brand in healthcare

Nonprofit Health Plans

Regional hospital sponsored health plans

- Kaiser Permanente
- Ascension Health
- Cleveland Clinic
- Mayo Clinic
- Intermountain Healthcare
- Geisinger Health System
- Penn Medicine
- Trinity Health
- UPMC

<u>Value Proposition</u>

- More control
- Collaborate with physicians
- Leverage strong local branding
- Compete with Insurers
- Medicare and large local employers
- Quality and coordination
- Access to care

Check In

Medicare Advantage Marketplace

Enrollment update and key trends

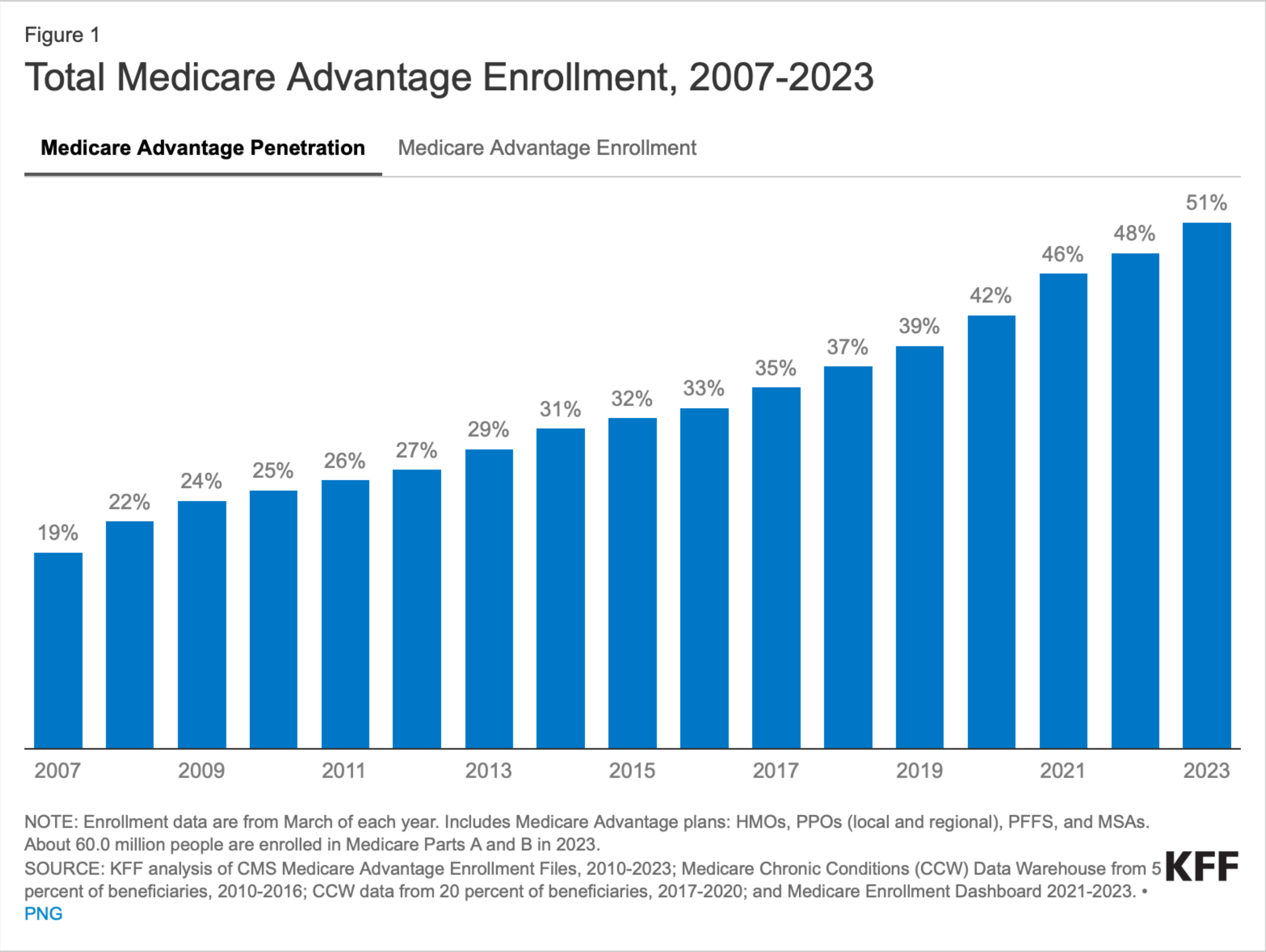
Source: Kaiser Family Foundation article 8/9/23

- 2023 Enrollment
  - 30.8million
  - 51% of Medicare eligible
  - $454 billion federal spending
  - Beneficiaries have average choice of 43 plans
- Highly concentrated enrollment among small number of firms
  - United and Humana account for 47%
  - In 1/3 of counties, these two account for 75% of MA enrollment

Medicare Advantage Marketplace

Growth in enrollment

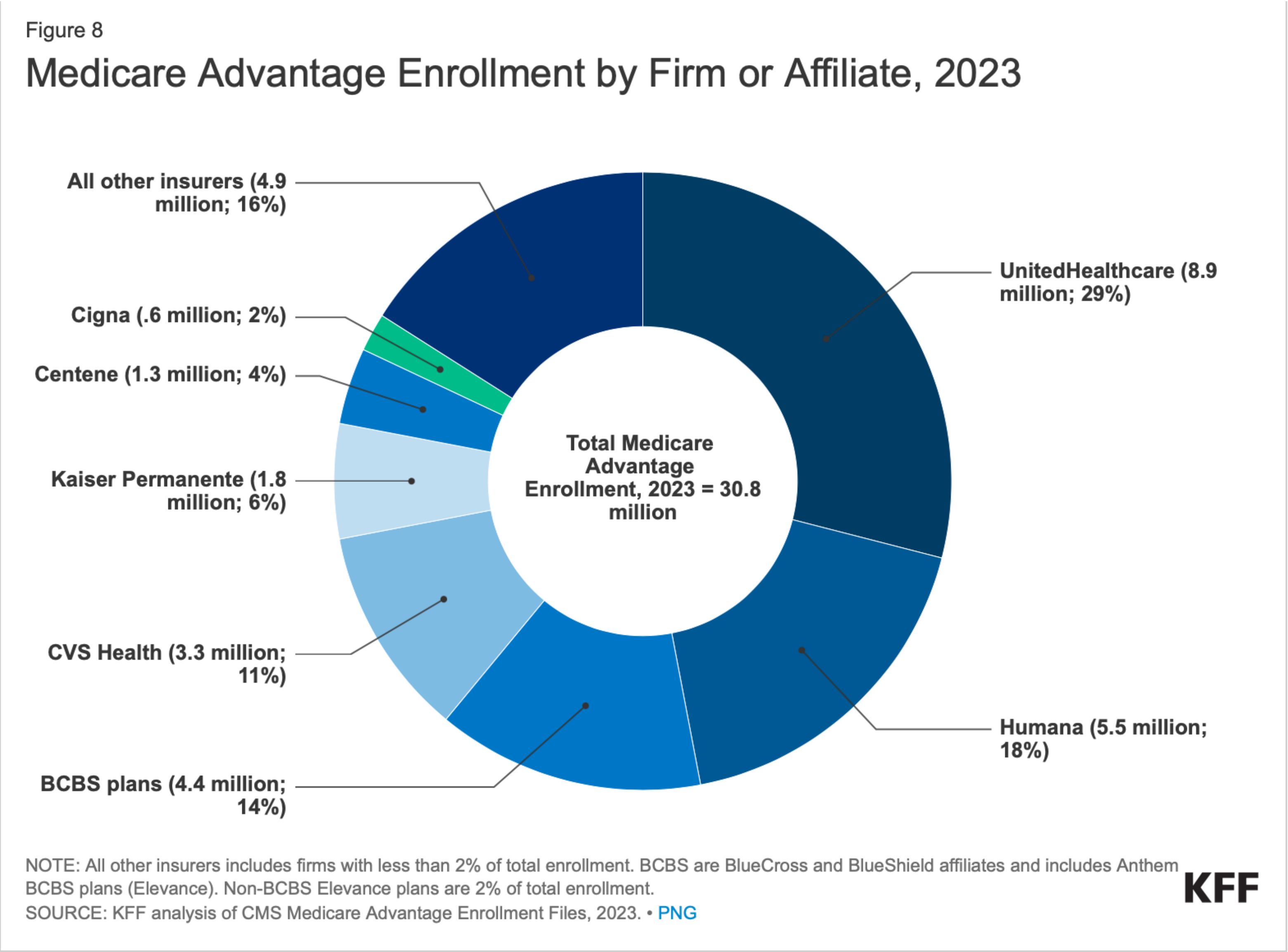
Source: Kaiser Family Foundation article 8/9/23



Medicare Advantage Marketplace

Competition breakout

Source: Kaiser Family Foundation article 8/9/23



Medicare Advantage Marketplace

Issues

Source: Kaiser Family Foundation article 8/9/23

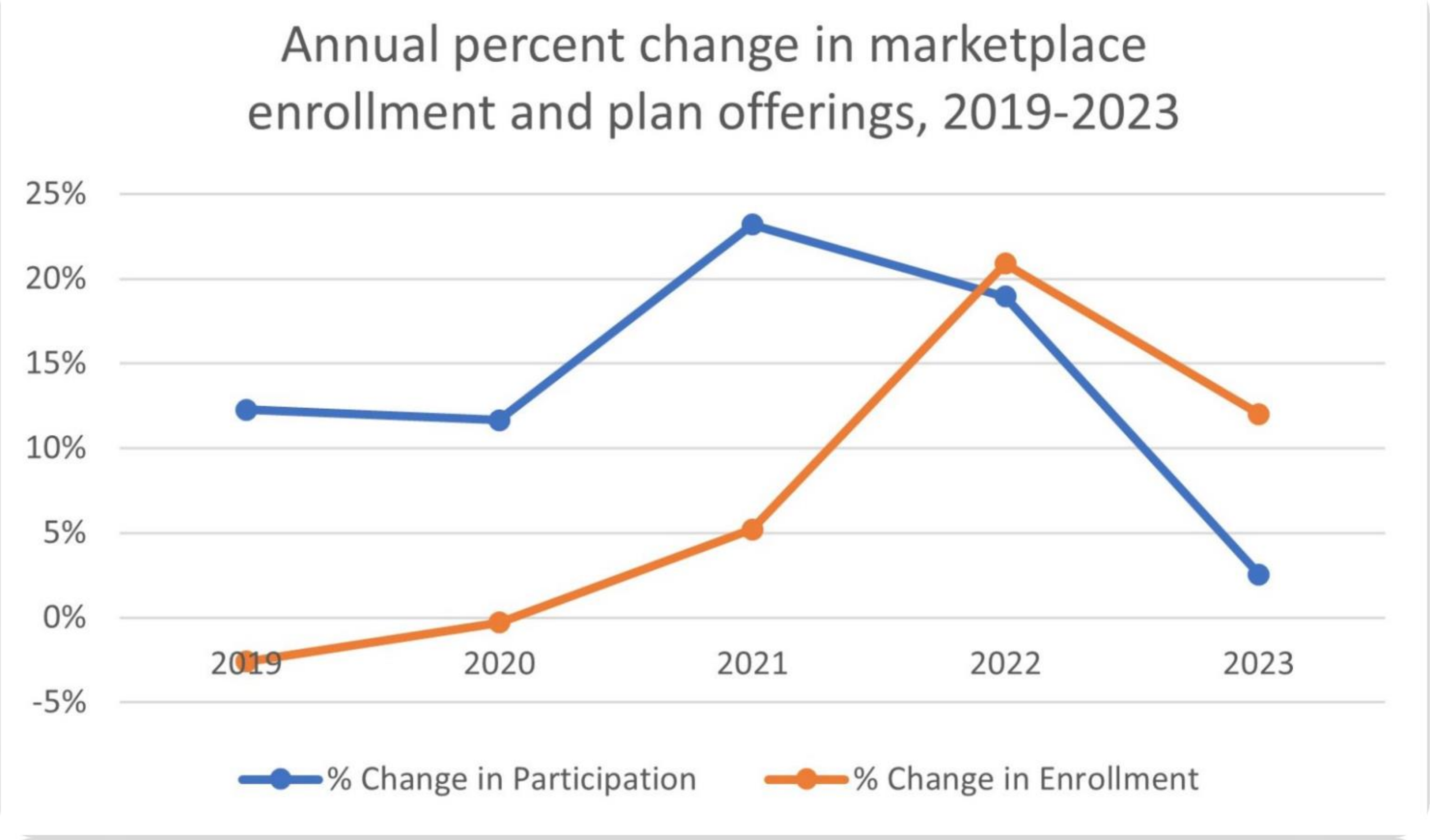
- Highly competitive marketplace
  - Change plans each year seamlessly
  - Compete on costs and additional benefits
  - Star Ratings are important for marketing and financially
- Payments
  - Current payments to plans higher than for similar beneficiaries
  - Relevant as to how the current Medicare payment scheme is going to work going forward
  - Is it controlling costs better than standard Medicare
  - Difficult to compare due to data aggregation
- Focus on:
  - Quality of care
  - Access to providers
  - Patient outcomes
  - Patients with special needs

ACA Marketplace

Current Issues:

- Enhanced subsidies drive enrollment - 4/5 enrollees have subsidy
- Loss of Medicaid by millions of people could drive new enrollment
- Current enrollment estimated at 18.2 million
- 1.5 million individuals in ACA non-compliant plans, short term limited plans
- Median premium increases 6% for 2024

ACA Marketplace



Check In

Insurers

Digital Disruption

Source: “Digital Insights” Deloitte, 2022

- Investments flowing in
  - Venture capital
  - M & A
  - IPO
- Disruption
  - New business models
  - Technologies
  - Consumer agency
- 3 Categories
  - Chronic condition management
  - Care navigation
  - Digital benefits

Deloitte model predicts a shift to digital health

FIGURE 1

Based on our model, we predict a quarter of health plans' net profits will shift toward digital health entrants over the next 10 years

The win-win (2021–2025)

- Digital health entrants are helping health plans lower costs, increase efficiencies, and improve quality in three categories—chronic condition management, care navigation, and digital benefits.
- Based on our model, we estimate health plans may earn US$450 million in additional net profits in 2022, aided by partnerships with digital health entrants; this will likely increase to US$1.5 billion into 2025.

The plateau (2025–2027)

- Digital health entrants will likely gain stronger capabilities and continue to grow. Major health plan customers—both commercial (e.g., employers) and government (e.g., Medicare Advantage)—likely to increasingly contract with digital health entrants.
- If this holds, we project digital entrants will dent approximately US$15 billion in health plans' net profits by 2027. Combined with a sustained lowering of medical costs, health plan profits will plateau in the next five to seven years.

The new normal (2027–2030)

- By the end of this decade, health plans will likely head toward a new normal of attenuating profitability.
- As the Future of Health trends proliferate, digital health entrants will continue to drive business growth, as the locus of competition shifts from managing risk to well-being as the main value proposition for customers.
- As a result, according to our model, more than a quarter of health plans' net profits will shift toward digital health entrants by the end of this decade.

Source: Deloitte analysis.

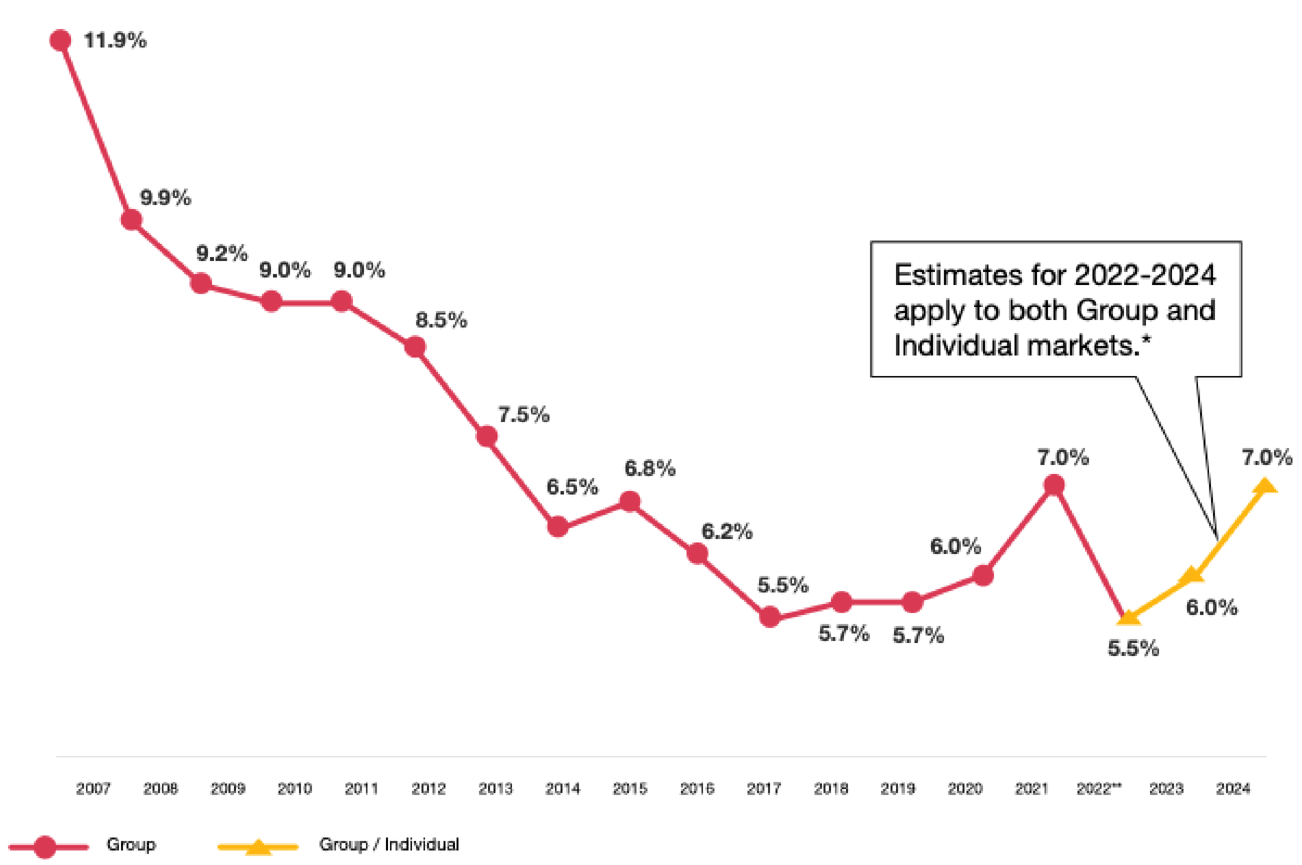
Competition Healthcare Insurers

Source: AMA Competition In health insurance: A comprehensive study of US Markets
Data: Commercial Enrollment in PPO, HMO, POS, ACA, MA

- Highly concentrated markets
  - Rose from 71% to 74% 2014-2021
- Expansion of smaller firms into new markets
  - Larger firms get smaller
  - Smaller get bigger
- Markets are ripe for the exercise of market power
- Almost all states that have a BC/BS plan, local or national, have a top market share
- DOJ and local AG shut down to large mergers in 2015
  - Anthem acquire CIGNA
  - Aetna acquire Humana

Medical Cost Trends

Figure 1: PwC Health Research Institute medical cost trends, 2009-2024
HRI projects medical cost trend to be 7.0% in 2024, up from 6.0% in 2023



Source: PwC Health Research Institute medical cost trends, 2009-2024

Medical Cost Trends

- Inflators
  - Inflationary impacts on healthcare providers
  - Increasing cost of pharmaceutical
- Deflators
  - Biosimilars coming to market
  - Shift in site of care

Medical Cost Trends

- Trends - developing
  - Total cost of care management   VBC
  - COVID-19
  - Health equity
  - Behavioral Health
  - CMS Price Transparency Rule
  - Medicaid redetermination


Q&A

Case Study


Hope Changes Lives
We're in relentless pursuit of scientific breakthroughs and revolutionary medicines
that will create a healthier world for everyone.

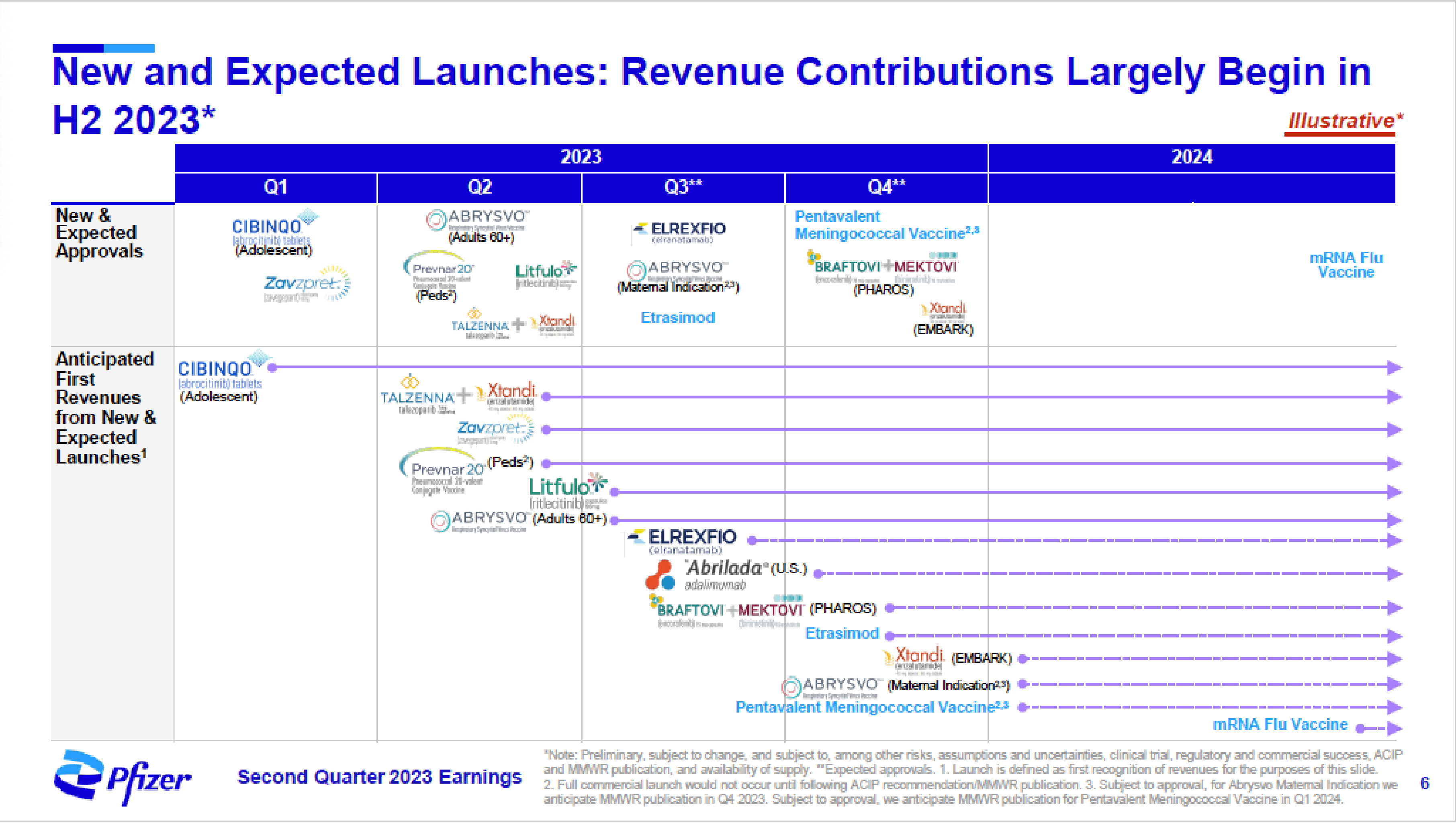
Pharmaceutical Industry

Case Study Pfizer

- Financial Performance 2022
  - $100 billion Revenue ($41 b in 2020)
  - $31 billion net income ($9.1 b in 2020)
- Meds delivered to 1.3 billion lives
- Since 2019 decreased median in-human approval development for new medicines from 9-5 years in 2022
- 18% clinical success rate
- 19 new products introduced in 18-month period

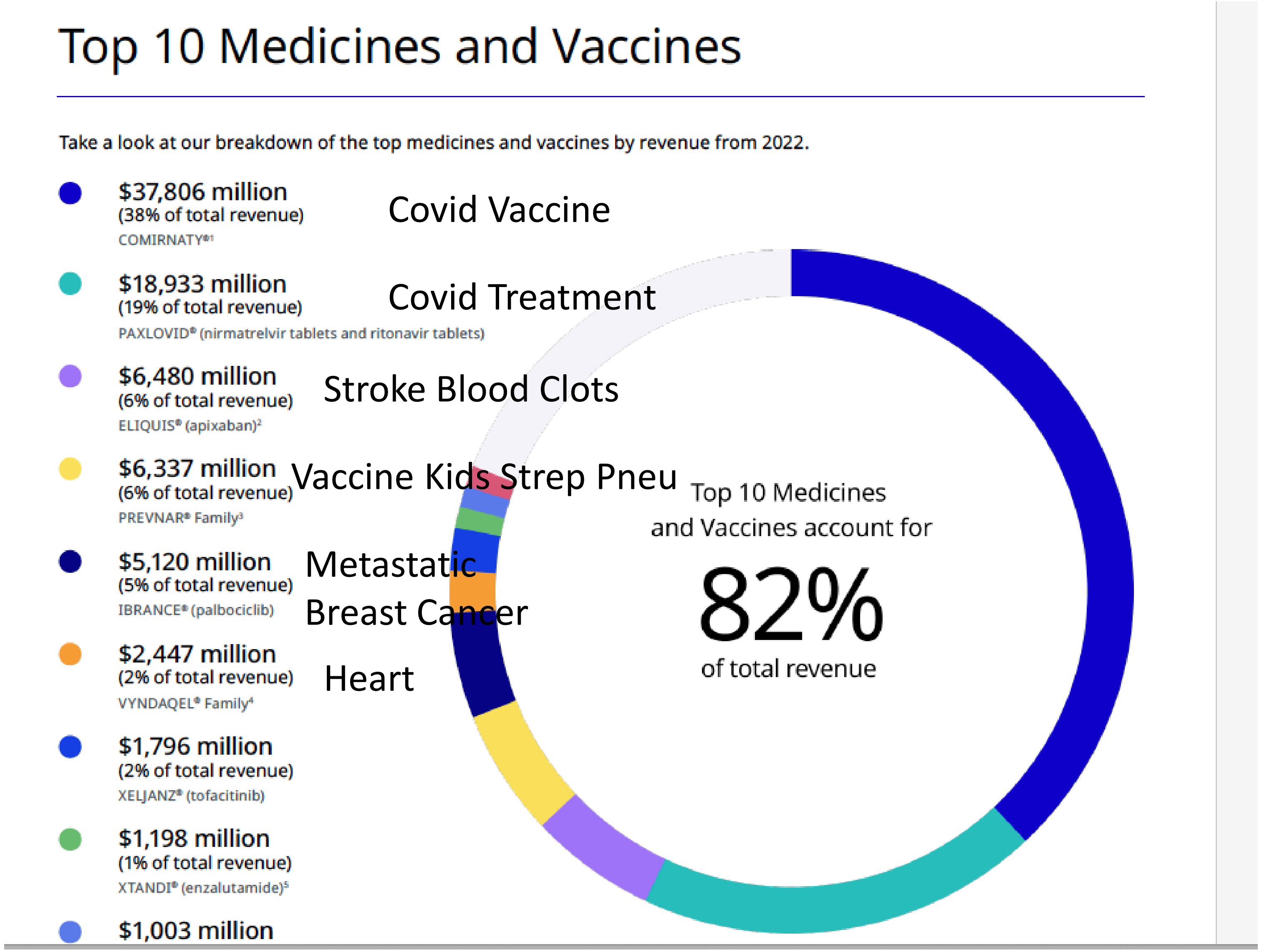
Pharmaceutical Industry

Case Study Pfizer   New drug launches



Pharmaceutical Industry

Case Study Pfizer



Pharmaceutical Industry
Case Study Pfizer Challenges / Opportunities

- Sustaining growth in leading drugs
  - Oncology and rare diseases growth leader
  - Internal medicine = steady performer
- Increasing competition
- Battle over patents
- Decline in vaccine sales??
- Strong brand/ loyal customer base
- Investments in digital for products and supply chain
- Leverage leadership with BioNTech in COVID=19 development

Pharma Retail
Case Study CVS Health

Pharma Retail
Case Study CVS Health Strategy Highlights

Well-positioned for growth

- Retail stores 9,800
- Aetna Insurance
  - 3.8 million members
  - 22.1 million commercial, 12.7 million dental
- Caremark
  - PBM 13.1 million members
  - Mail order
- Oak Street
  - Value based primary care for Medicare and underserved populations
  - Acquired Feb 23 $10.6 Billion
  - Proven value-based model
  - 600 primary care docs, 169 medical centers, 21 states
  - Canopy, integrated tech solution

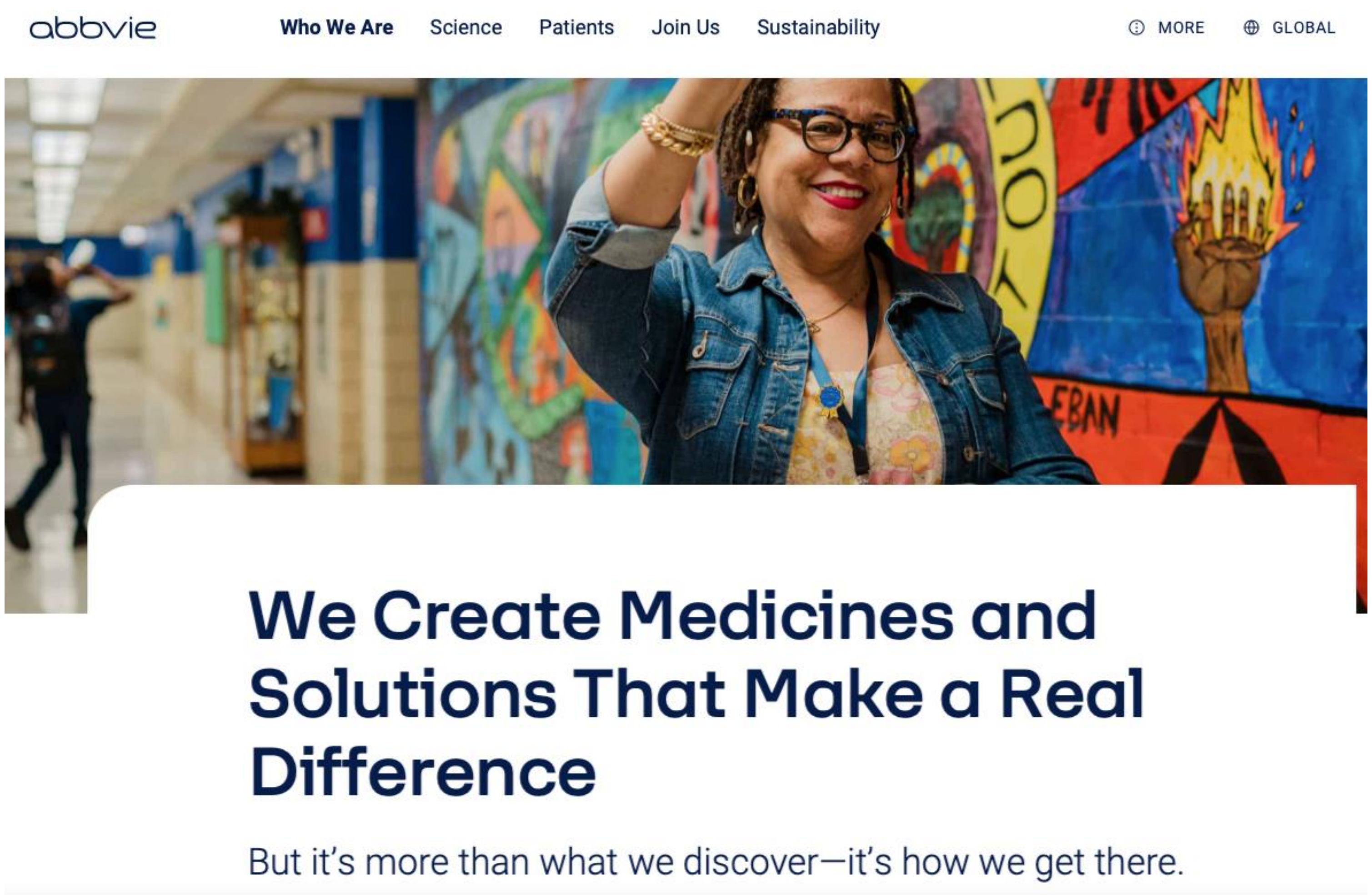
- Signify Health
  - Acquired March 23 $8 Billion
  - Enabling clinicians into home, chronic condition management, gaps in care, social determinants of health
  - 10,000 clinicians, 50 states, 2.5 times with patient than average visit with primary care provider
- Stable and high performing management team

Pharma

Retail disrupters

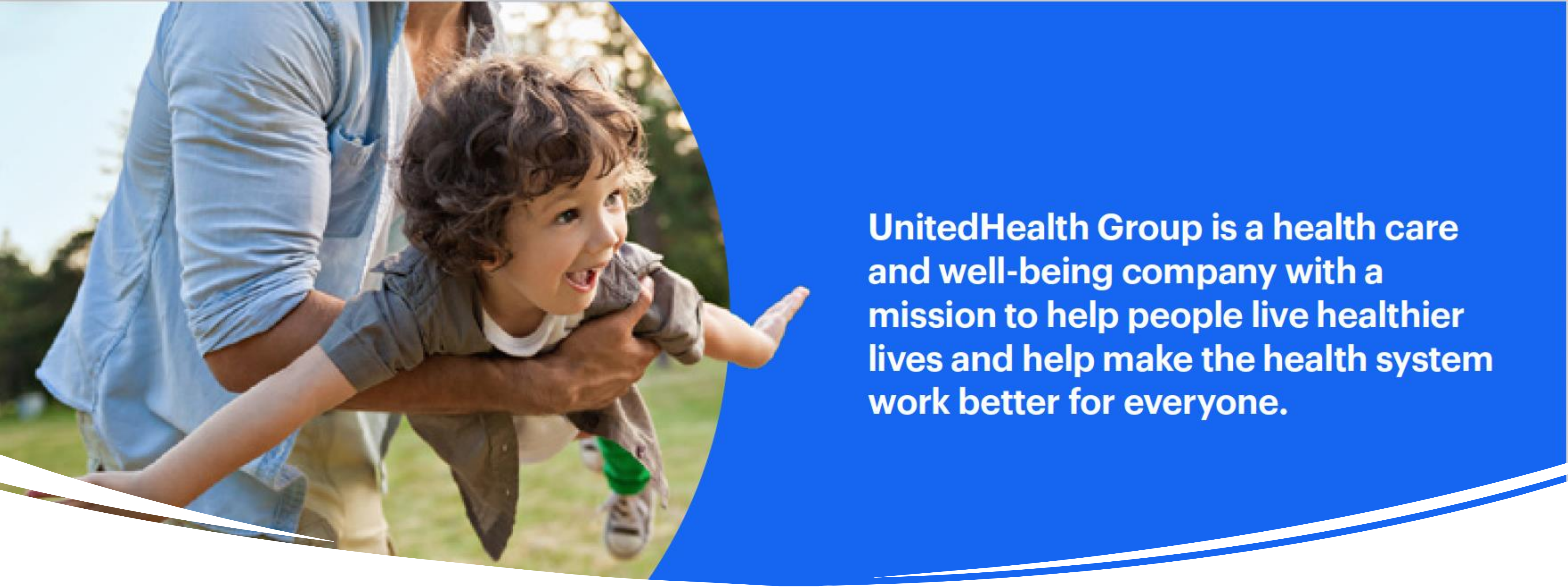
- Online pharmacies
  - Amazon Rx $5 initiative
  - Walgreens.com
  - CVS.com
  - Cost Plus Drug Company
    - Mark Cuban
    - transparency
    - cost plus 15% and $5 dispensing fee
- Direct to Consumer DTC
  - Hims & Hers birth control, hair loss, anxiety and depression, skin care
  - Nurx   birth control
  - Roman   erectile disfunction
- Central fill delivery hubs
- Drones and other same day delivery
- Expanding role of pharmacists

Case Study


abbvie
Who We Are
Science
Patients
Join Us
Sustainability
MORE
GLOBAL
We Create Medicines and Solutions That Make a Real Difference
But it’s more than what we discover—it’s how we get there.

Case Study
AbbVie Humira anti-inflammatory drug for arthritis

- 2016 coming off patent (311 applied for 165 granted)
- Current list price/year of $50K coming down
- Blocked competitors with legal exploitation of patent law
- Next 6 years drug price kept rising
- Today, most lucrative drug in history $114billion in revenue since 2016
- Knock off drug that was FDA approved will coming on market this year with 9 competitors
- AbbVie increased price 30 times over past 20 years



Case Study United Health Group

Insurers

Case Study
United Healthcare

- Dominate market share
- Strong financials
- Vertical and Horizontal expansion
- Growth priorities
  - Value-based comprehensive care delivery
    - 70 million employed or aligned physicians serving 20+ million people
    - Transitioning from FFS
    - Integrate all aspects of care

Insurers

Case Study
United Healthcare

- Health benefits
  - 51 million people in commercial and government plans
  - Innovative benefits
- Health technology
  - Use of clinical data and intelligence for improvements
  - Simplify admin
- Health financial services
  - Streamline payment processes
  - Integrate end to end banking to get providers paid faster
- Pharmacy Services
  - Most common touchpoint of care
  - PBM role
  - DTC
  - Integration with all other providers

Insurers

Case Study
United Healthcare

- Key Segments
  - Optum Horizontal
    - Serve UHC and others
    - 120 million consumers
    - 9/10 hospitals, 67,000 pharmacies
    - 4/5 health plans
    - Government all 50 states
    - Life Sciences 100 global life science companies

Insurers

Case Study
United Healthcare

- Key Segments
  - United Healthcare Vertical
    - 51 million members worldwide
    - 250,000 employers
    - All states
    - Healthcare providers
      - 1.7 million physicians and care professionals
      - 6,400 hospitals and other care facilities
    - 3 business sectors
      - Employer and Individual
      - Medicare and retirement
      - Community and state

Insurers

Case Study UnitedHealthcare

Challenges

- Controlling medical cost
- Regulation
  - Enforcement
  - Complexity
  - 50 state-level regulations
  - New laws
- Labor force
  - Shortages
  - Burnout
  - Wages

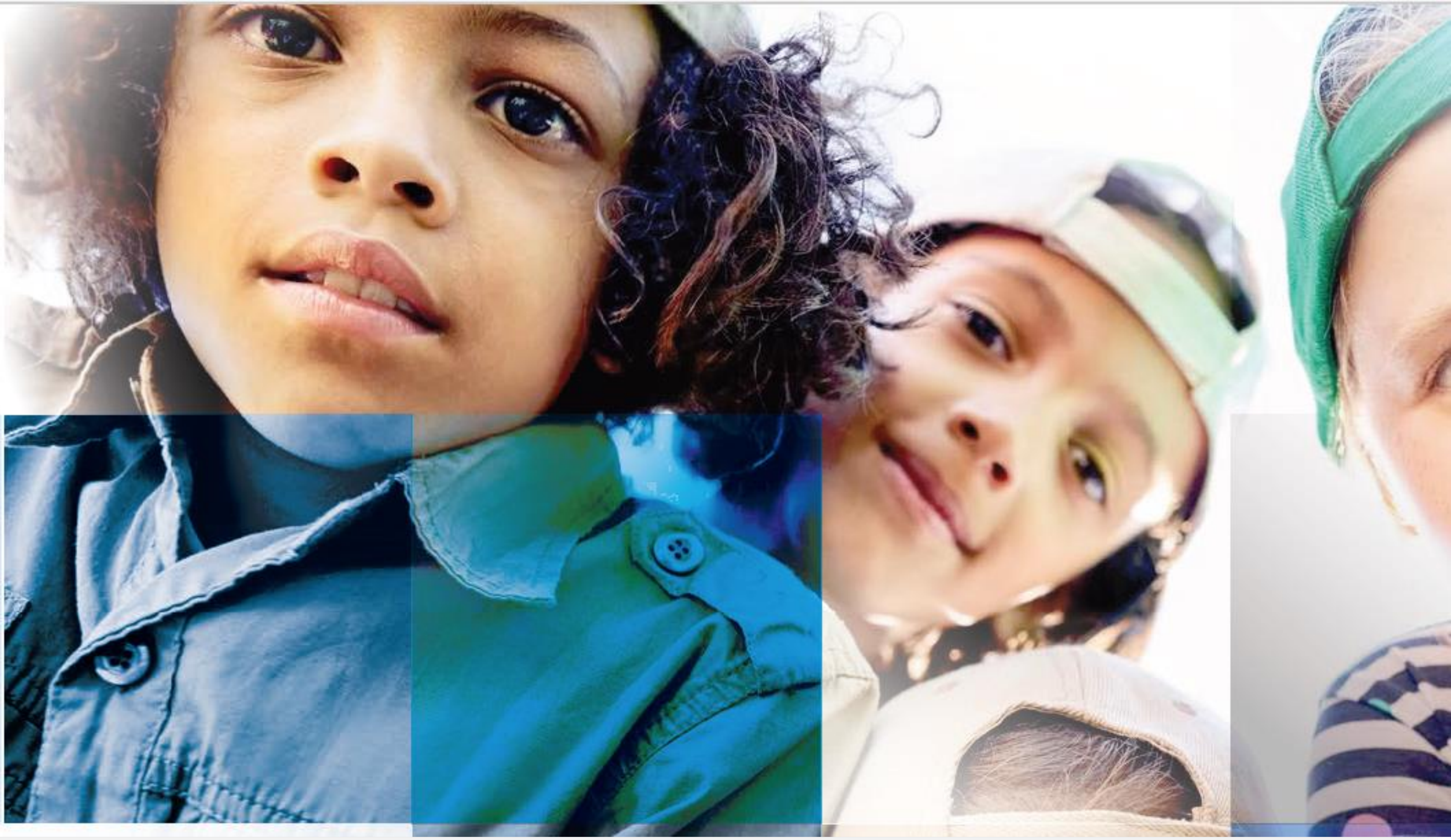
Insurers

Case Study
UnitedHealthcare

Challenges

- Public health events
- Cybersecurity
- Relationships with providers
- Macro economics conditions
- Innovative disrupters

HCSC
Health Care Service Corporation



Case Study Health Care Service Corporation

Insurers

Case Study HCSC

Health Care Services Corporation, a Mutual Legal Reserve Company

- Largest customer-owned health insurer in US
- 60 offices over 5 states
- History: Chicago Plan for Hospital Care 1937
  - BC/BS IL
  - Acquired
    - Texas (1998)
    - New Mexico (2001)
    - Oklahoma (2005)
    - Montana (2013).
- 26,000 employees

Insurers

Case Study

HCSC

Key Strategies

- Commitment to communities
- Partnering with providers for Value-based care
- Focus on access to care and wellness
- Affordability
- Financials

(in millions)	2022	2021
Premium revenues	49,304.0	45,900.1
Benefit expenses	42,845.2	40,919.3
Total administrative and other expenses	5,495.3	4,495.8
Net Underwriting gain	**963.5**	**485.0**
Net investment income	801.9	710.4
Net realized capital losses	(285.4)	(116.8)
Income before federal income tax expense (benefit)	**1,519.0**	**1,057.1**
Federal income tax (benefit) expense	50.3	(169.1)
Net Income	**1,468.7**	**1,226.1**

Source: Statutory Filings