



# Commonwealth Medicine

Clinical Pharmacy Services

## Looking into the crystal ball: How much will new drugs cost you?

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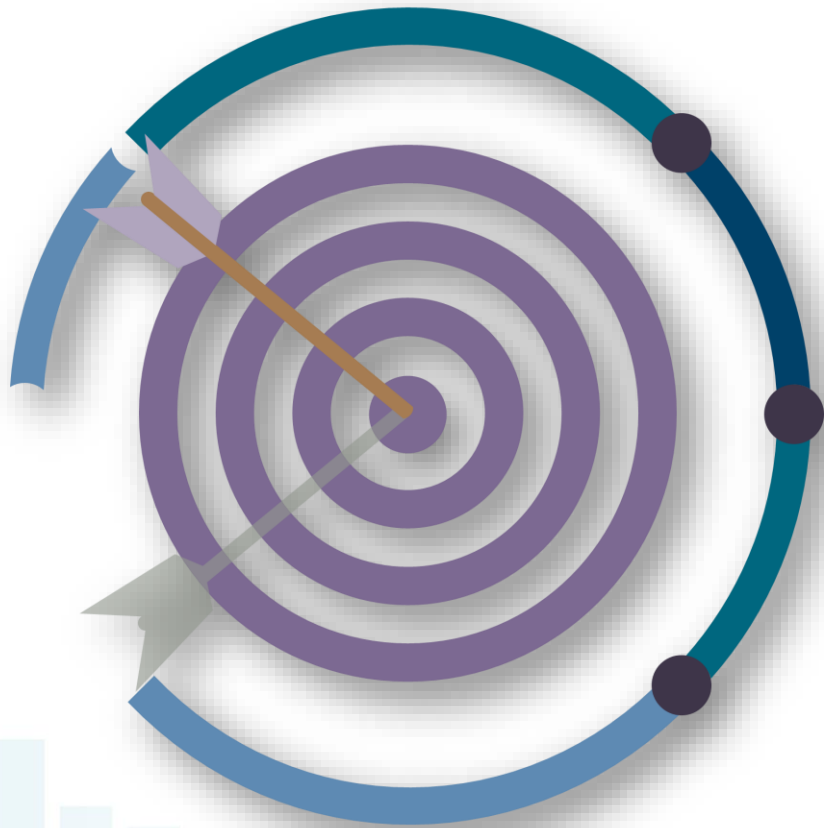
Clinical Pharmacy Services

Commonwealth Medicine

UMass Medical School

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# Objectives



- Review noteworthy trends in pharmaceutical pipeline
- Discuss the importance of customized budget impact forecasting using two case scenarios

# Why Pipeline Monitoring is Important?

**\$1,000 Pill For Hepatitis C Spurs Debate Over Drug Prices**  
- NPR 12/30/2013

**F.D.A. Approves First Gene-Altering Leukemia Treatment, Costing \$475,000**  
- *The New York Times* 8/30/2017

**At \$2.1 Million, New Gene Therapy Is The Most Expensive Drug Ever**  
- NPR 05/24/2019

**FDA Approving Drugs at Breakneck Speed, Raising Alarm**  
- *Bloomberg News* 12/6/2019

**Wanting More Proof, FDA Delays Decision On Alzheimer's Drug**  
- *Kaiser Health News* 02/1/2021

# Pipeline Overview 2020-2022



**~7,000**  
medications  
in  
development



**~75%**  
potentially  
first-in-class



**~150**  
new drugs  
may be  
approved

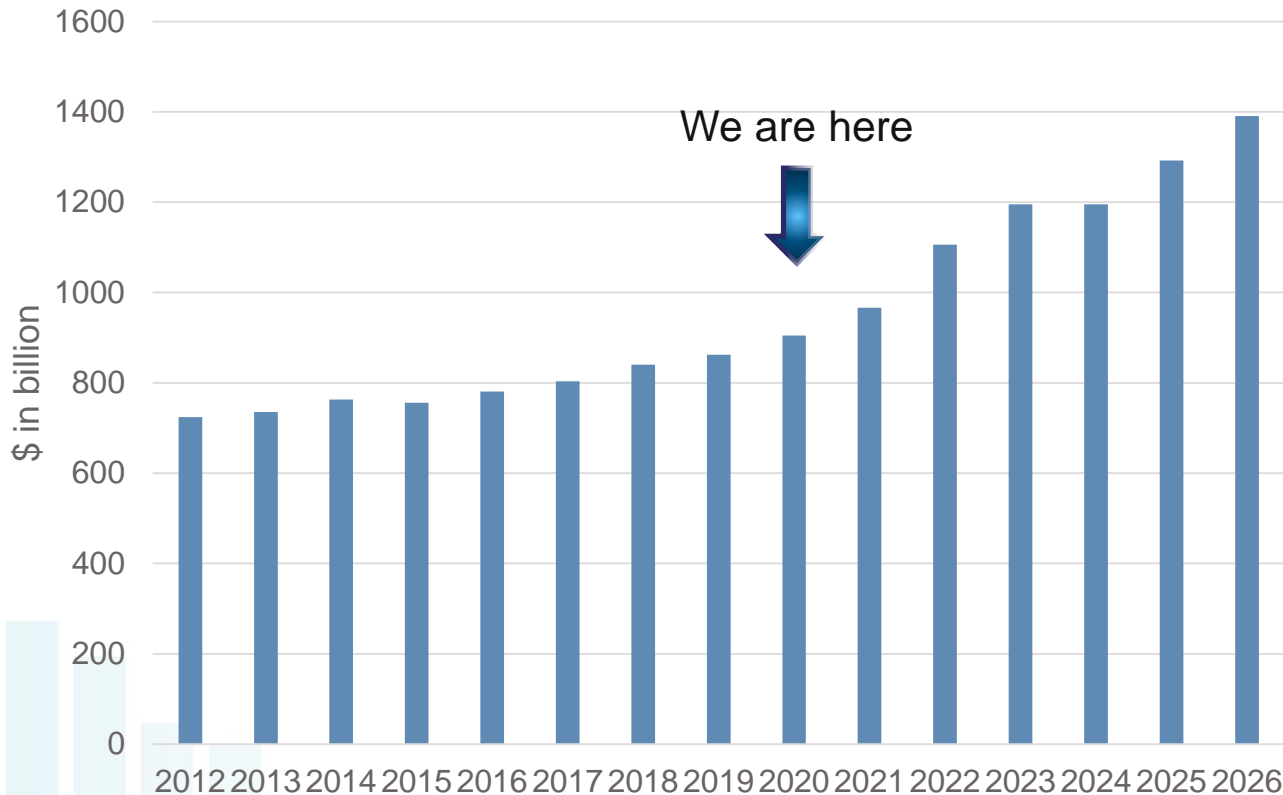


**~80%**  
are specialty  
drugs

# Drug Pipeline Monitoring

## Trends in Drug Spend

Worldwide Total Prescription Drug Sales



## Specialty Drugs

Account for **2%** of Claims, but **50%** of Spend

<https://www.evaluate.com/thought-leadership/pharma/evaluatepharma-world-preview-2020-outlook-2026>  
<https://www.pharmacytimes.com/news/specialty-pharmacy-by-the-numbers>

# Drug Pipeline Monitoring

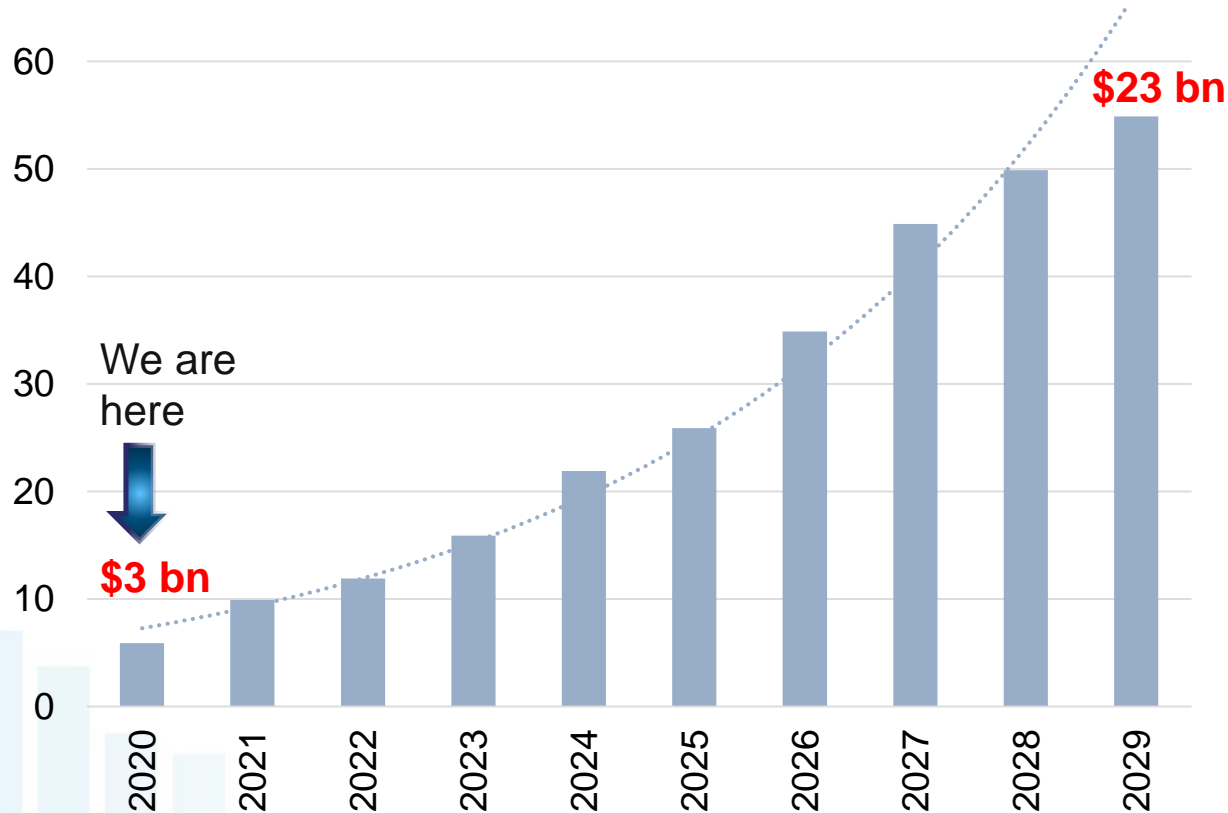
## *Trends in Clinical Research in 2020*

Position	Therapy	R&D Products, N	Trend
1	Anticancer, immunological	3,434	26%↑
2	Anticancer, other	2,510	2%↑
3	Gene therapy	1,273	47%↑
4	Monoclonal antibody	1,009	23%↑
5	Ophthalmological	756	10%↑

# Drug Pipeline Monitoring

## Growth in Gene Therapies in Development

### Total Approved Indications for Cell and Gene Therapies



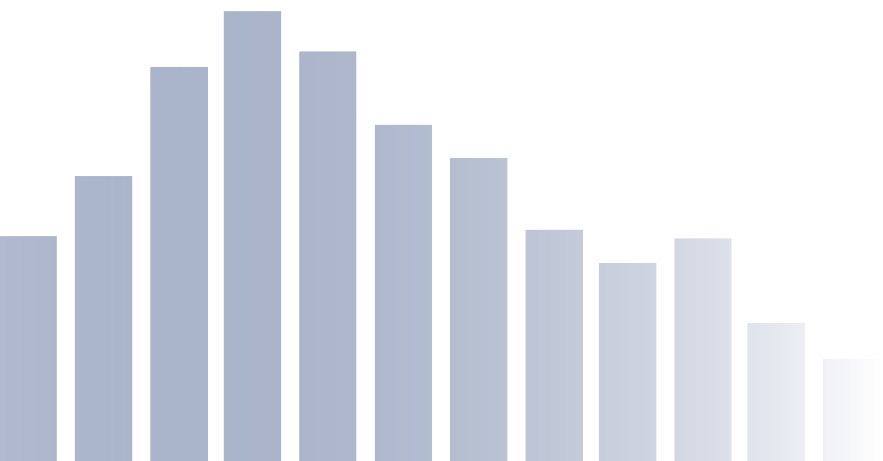
**6**  
Approved Therapies

**>100**  
Diseases Explored

**60+**  
Approved  
Indications by 2030

<http://newdigs.mit.edu/sites/default/files/NEWDIGS-Research-Brief-2020F207v51-PipelineAnalysis.pdf>

# Budget Impact Forecasting





# What Can a Budget Impact Forecast Do for You?



## Budget Impact Forecasting

- Total cost to treat a patient population with new drugs
- Customizable through claims analysis
- Accounts for dynamic pharmaceutical landscape



## Proactive Drug Management Strategies

- Prevents surprises from significant increases in drug spend
- Promotes early engagement with PBMs
- Informs fiscal year budget projections

# Budget Impact Forecast



## Patients

Study population characteristics

Epidemiological estimates

Health plan-specific estimates



## Uptake

Prescriber and patient acceptance

Alternatives

Utilization management

Timing of market entry



## Cost

Competitor cost

Analyst insights

Unique drug characteristics

Population size

# Forecasting Case Scenario #1

## Chronic Kidney Disease

Drug Characteristics	Example
Drug name	Roxadustat
Mechanism of action	HIF-PH inhibitor
Route of administration	Oral
Proposed indication	Anemia of chronic kidney disease
Disease Prevalence	~452,500 (US); ICD10: D63.1
Competitors	Injectable ESAs, investigational HIF-PH inhibitors
Unique feature	First-in-class oral treatment for anemia
Anticipated launch date	March 20, 2021

ESA=erythropoiesis-stimulating agents, HIF-PH=hypoxia-inducible factor prolyl hydroxylase

# Budget Impact in Year 1

## *Roxadustat*

### Drug Assessment

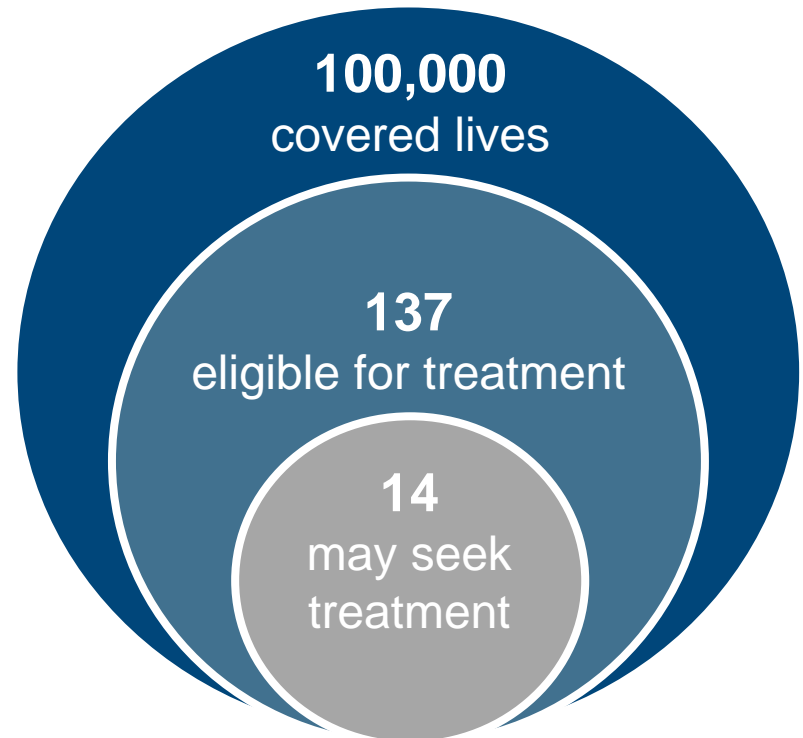
- Estimated cost: \$6,500/year
- Cost offset from alternatives

### Budget Impact

- \$40,950 in year 1
- FY22: \$61,425

### Formulary Management

- Prior authorization, step therapy
- Preferred product selection



# Forecasting Case Scenario #2

## *Hemophilia*

Drug Characteristics	Example
Drug name	Roctavian® (valoctocogene roxaparvovec)
Mechanism of action	Gene therapy
Route of administration	Intravenous
Proposed indication	Severe hemophilia A
Disease Prevalence	~8,500 (US); ICD10: D66
Competitors	Factor VIII concentrate, emicizumab
Unique feature	Once-time, curative treatment
Anticipated launch date	2022

# Budget Impact in Year 1

*Roctavian*<sup>®</sup> (*valoctocogene roxaparvovec*)

## Drug Assessment

- Estimated cost: \$2.5 million
- Cost offset from alternatives

## Budget Impact

- \$2.35 million in year 1
- FY22: \$2.35 million

## Formulary Management

- Prior authorization
- Value-based contracts



# Conclusion

## Health plans may be impacted by

- Blockbuster drug that impacts 1-2 members
- High-cost drug that impacts hundreds of members



## Benefit of advanced intelligence

- Proactive utilization management
- Creative contract negotiations (e.g., value- or outcomes-based)
- Incorporate projected increases into rate setting

# Clinical Pharmacy Services



## Our Clinical Team

- 12 PharmDs
- 5 board-certified
- 7 with residency training



## Experience

- 20+ years in managed care
- **10+ years of monitoring drug pipeline**
- **5+ years in budget impact forecasting**



## Publications and Presentations

- 10 peer-reviewed journal articles
- 18 poster presentations
- 29 regional/ national podium presentations



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