

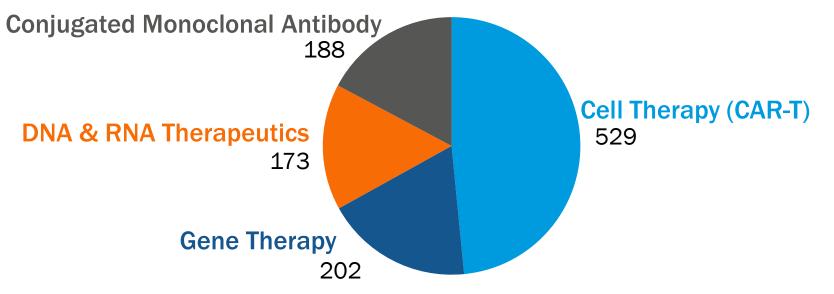
Mortgages for Medical Care? Paying for Cost-Effective Therapies with High Up-Front Costs

Steve Miller, MD Chief Medical Officer, Express Scripts



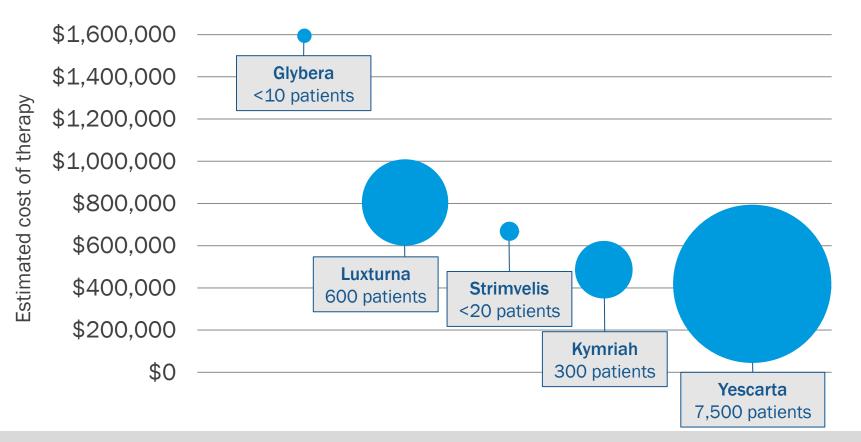
New scientific approaches will lead to more novel but costly medications

Pipeline Products Using Gene-based Mechanisms



Sources: Analysis Group, PhRMA

Fewer patients lead to higher prices



© 2018 Express Scripts. All Rights Reserved.

First products reach the European market, but few patients receive treatment



Inherited retinal dystrophies: Leber Syndrome



Should they be denied care?

First U.S. CAR-T therapies approved for cancers



Cost: \$475,000 Treats lymphoblastic leukemia

- Lethal blood and bone-marrow cancer
- Affects children and young adults



Cost: \$373,000 Treats large B-cell lymphoma

- Aggressive non-Hodgkin lymphoma
- Indicated after other treatments fail

Gene therapy poses unique challenges

- 4,000 diseases linked to gene disorders
- High cost: \$600k-\$1.5M per patient
- Single administration
- Very small patient populations
- Durability periods vary

American healthcare system is ill equipped for this model



American healthcare system is ill equipped

It's not built for one-time or periodic ultra-high-cost medication

Other challenges:

- Distribution
- Reimbursement
- Pricing / Sticker Shock
- Coverage
- Speed / Delays

- Affordability
- Portability
- Market Viability
- Durability / Effectiveness



Stakeholders have varying needs

Payers



- Patient management
- Cost management
- Ensured value
- Payment mechanisms
- Guaranteed outcomes

Patients



- Access
- Affordability

Pharma



- Fair pricing
- Return on investment
- Coverage

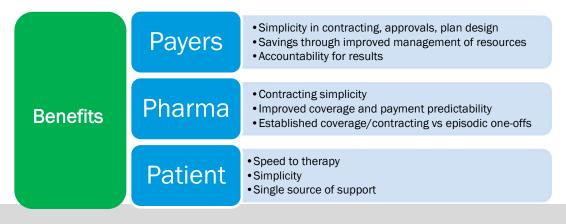
New payment models under consideration



The right solution will enable collaboration among manufacturers, payers, patients and policymakers

Single Solution Provider

Single Provider		Multiple Providers	
Simplicity	VS	Complexity and Fragmentation	
Defined Program Solution	VS	Dozens of Custom Programs	
Established Standards	VS	Varying Standards	
Single Party Contracting	VS	000's of Contracts	
Standardized Criteria and Evaluations	VS	Fragmented and Varying Degrees of Accuracy	
Streamlined Approvals	VS	Multiple Handoffs and Processes	
Established Player with Full Capabilities and Financial Stability	VS	Increased Risk and Uncertainty for All Parties	
Portability Programs are Possible	VS	Portability Unlikely	



Financial Model Examples:

Therapy: Product G Price per administration: \$700k Durability: 5 years

Payer Program Options	Price paid up front	Annual payments	Guarantee	Note
No Program	\$700k	n/a	None	
Amortization Program	\$400k	\$60k annually	5 year durability, ESI tracks outcomes vs established criteria. Annual payments cease in the year outcomes fail to meet criteria.	
Portability Program	\$300k (up front is discounted \$100k vs Amortization Program)	\$60k annually	5 year durability, ESI tracks outcomes vs established criteria. Annual payments cease in the year outcomes fail to meet criteria.	Payer agrees to cover outstanding payments for patients transferring from other Portability Program Participating Payers
Escrow Program	\$650k (up front is discounted \$50k)	n/a	5 year durability, ESI tracks outcomes vs established criteria. Payer receives Annual payments cease in the year outcomes fail to meet criteria.	Manufacturer receives \$300k up front, the balance is escrowed by ESI and paid to manufacturer at rate of \$70k per year. If outcomes fail to meet criteria at any time, the balance is refunded to payer.





Pharmaceuticals are the scalpel of the future

Gene therapies are the next frontier in treatment

Paying for these new technologies will challenge us all



3

Payment models will need to be as innovative as the therapies