

Integrated Approaches to Dose Compliance with Biologic Therapies

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Summary

The availability, use, and total spend on specialty pharmaceuticals are growing tremendously. Payers alone cannot manage the cost-effectiveness of these products. Good management requires integration of all the key players – payer, provider, patient, and specialty pharmacy.

Key Points

- The costs for specialty medications have been increasing by 18 to 20 percent annually.
- Biologic therapies have to be used appropriately by both providers and patients in order to achieve appropriate outcomes.
- The four main goals related to specialty pharmaceuticals are: optimize cost management, ensure appropriate use, improve clinical management, and equalize benefits.
- Many different players have a role in helping optimize cost-effective outcomes for biologic therapies – payer (health plan or employer), physician, member (patient), and specialty pharmacy.

BIOTECHNOLOGY TOOLS AND TECHNIQUES are reshaping the drug development process, and opening new research avenues for discovering new treatment options. The biotechnology industry has created more than 200 new therapies and vaccines for patients with rare and chronic conditions such as multiple sclerosis, hemophilia, growth hormone deficiency disorders, rheumatoid arthritis, and various cancers. These products may be administered via infusion, by injection, or orally, and are collectively termed “specialty pharmaceuticals” or “specialty pharmacy products” by health plan payers.¹ Specialty pharmaceuticals also typically require special handling, administration, patient education, and clinical support.

A recent study by the Tufts Center for the Study of Drug Development cites that it takes almost 98 months for a new biologic drug to proceed from clinical development through regulatory review.

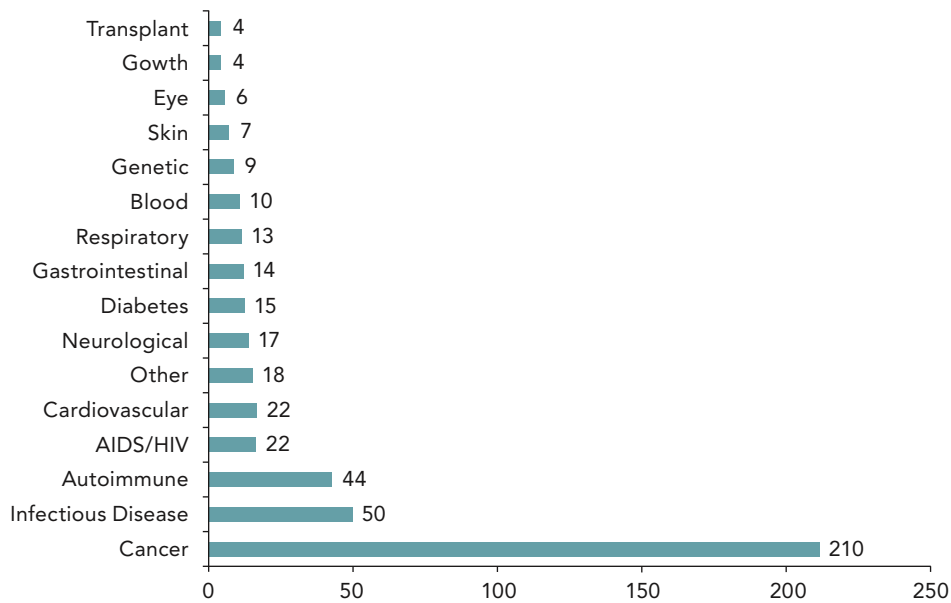
The cost to develop new biotech products is

estimated to average \$1.2 billion, which is much more than a traditional pharmaceutical.² Because the research, development, and manufacturing costs are spread over a limited patient population, these products have a high individual product price.

The public has a somewhat negative image of biotechnology medications because of media influence. In an article published in the *Wall Street Journal*, specialty drug costs are viewed as a side effect of biotechnology medications.³ The public’s perception is that it is all about costs. Providers and managed care plans have to view these products from the value they can provide to patients.

The current specialty drug spend is \$60 billion annually. This is expected to reach \$99 billion by 2010. The costs for specialty medications have been increasing by 18 to 20 percent annually. Because of the increasing availability of generics, the costs of traditional medications have declined. For many health care plans, the trend is for significant increasing

Exhibit 1: Pipeline View by Therapy Class



With permission from Pharmaceutical Research and Manufacturers of America (PhRMA) 2006
Report: Medicines in Development. Washington, D.C.

costs by both medical and pharmacy benefits for specialty medications.

The aging of the baby boomer generation is one of the factors creating a demand for aging-related disease treatments based on biotechnology. This group has had and will continue to have a significant impact on society. They are having a huge impact on health care because they demand excellence.

Exhibit 1 shows the biotechnology pipeline by therapy class.⁴ The majority of these classes are for aging-related conditions, with oncology agents dominating the pipeline. A notable number of drugs are being developed, or seek new indications, to treat more prevalent conditions, including autoimmune diseases, cardiovascular disorders, diabetes, and neurologic conditions. Of new molecular entities under development and close to market in the fall of 2007, 48 percent were specialty products (Exhibit 2). Many already approved specialty products are being studied for expanded indications.

Health plan coverage of these products may be through medical, pharmacy, or a combination of benefits. Exhibit 3 is from a survey of 82 health plans to determine where particular products are covered.⁵ This division of coverage is raising a dilemma in health plans about how to manage these products overall when some are covered as a pharmacy benefit and others are covered under a medical benefit.

There are four main goals related to specialty pharmaceuticals. These include: optimize cost

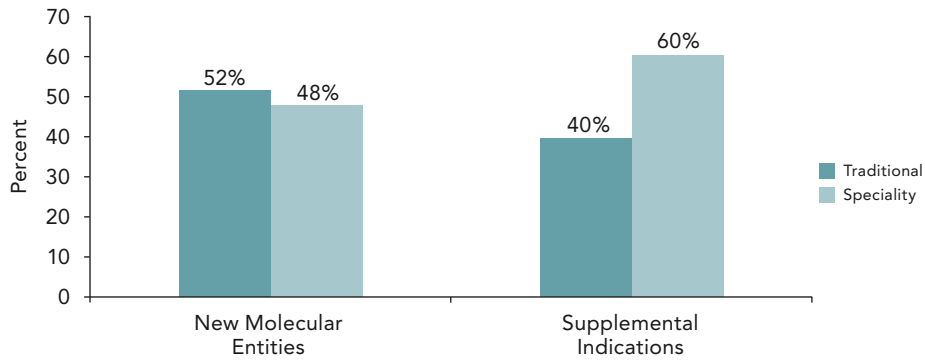
management, ensure appropriate use, improve clinical management, and equalize benefits. Acquisition and distribution costs are managed by contracting as aggressively as possible. To ensure appropriate use, clinical guidelines and criteria, prior authorization, and formulary or preferred product status are all used. Improving clinical management can be done by targeting patient adherence and persistency, and through patient care services, therapy and case management, and tracking outcomes.

To manage specialty pharmaceutical utilization, managed care must ensure the right medication for the right patient at the right time. There are many different processes to do this whether through the health plan, pharmacy benefits manager, or specialty pharmacy.

Patients using specialty pharmaceuticals require advanced clinical management. They need high-tech, high-touch interventions. They need assistance with adherence and persistency to therapy, and education on injection technique, drug storage, side effect management, and disease self-management. Therapy management to optimize outcomes also is needed.

Dose compliance, by the patient and prescriber, impacts successful outcomes. Dose escalation may be needed for disease progression, up-regulation of receptors, or neutralizing antibodies that impact clinical efficacy. Dose reduction (modification of drug dose, schedule, and initiation of supportive care interventions) may be needed because of side effects, individual patient variability, prior treatment,

Exhibit 2: Biotechnology Pipeline
New Molecular Entities and Supplemental Indications in Phase III Development



or co-morbidity. Doses also may need to be increased or decreased because of weight changes. Dose suspension (i.e., holding a dose) may be needed for tolerability, efficacy, economic consideration, or administration incompatibility. As an example, one study found that the dose of infliximab, when used for treating rheumatoid arthritis, had to be increased 42 percent from the 1st to the 12th infusion, and the time between infusions also decreased to maintain efficacy.⁶ Another example is the weight-based dosing of palivizumab monthly throughout the respiratory syncytial season in certain infants. The infant's weight must be monitored prior to each monthly IM injection. Dose escalation in this case is important to administer the correct dose. Restrictions

on dosing for many of the specialized medications may compromise clinical outcomes.

Many different players have a role in helping optimize cost-effective outcomes for biologic therapies—payer (health plan or employer), physician, member (patient), and specialty pharmacy. The payer's role is to examine the entire picture and the cost of a particular condition or patient. The payer has to determine the best way to manage costs and set up benefits to drive decisions by their providers. The first and most important thing payers need to do is understand their patient populations. Resources such as central databases of claims and additional data from vendors, such as specialty pharmacies, can identify what is happening with the plan's patient

Exhibit 3: Benefit Coverage of Speciality Pharmaceuticals by Drug Category

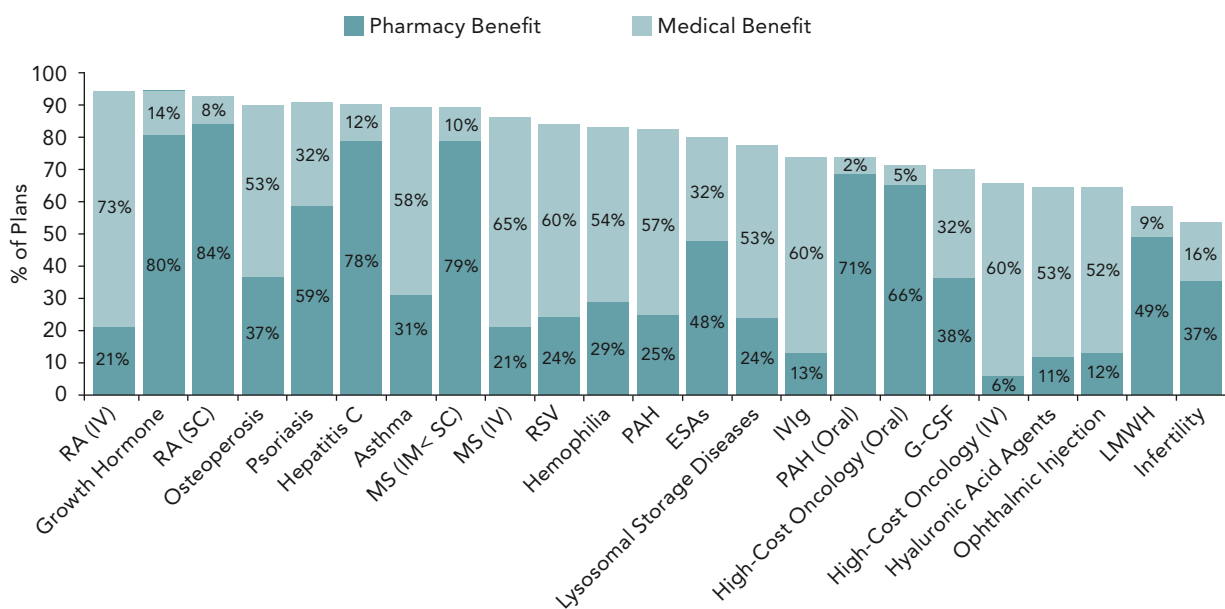
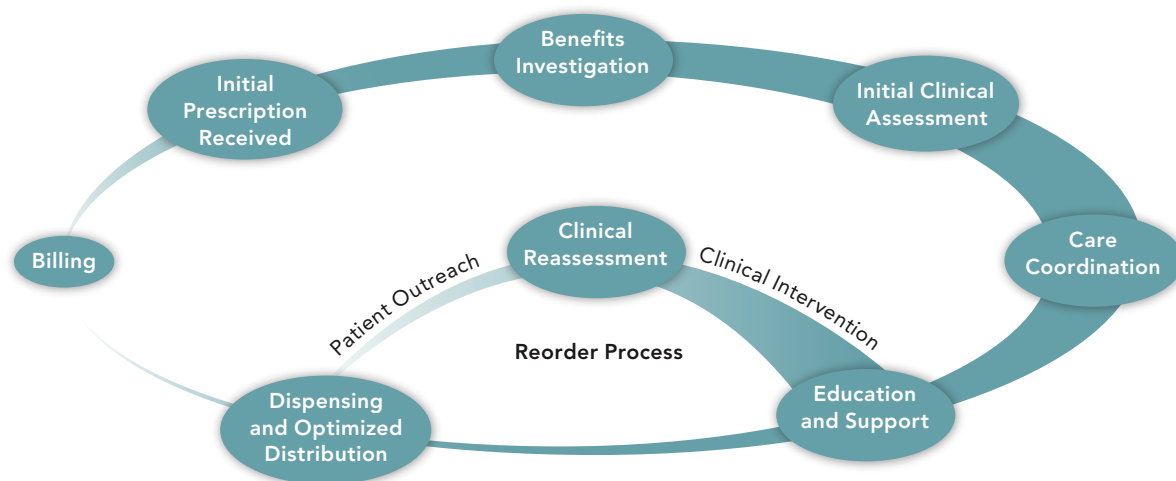


Exhibit 4: The Specialty Pharmacy's Role: Pulling the Plan Together



Courtesy of Dr. Andrews, Caremark Corporation, 2008.

population. Evaluating clinician-patient interaction through chart reviews also can provide valuable information, but is a more costly and time-consuming process. The payer can identify what is leading to successful and unsuccessful outcomes. Once the population is understood, benefit design and support services can be tackled. Utilization management with evidence-based protocols, setting days' supply, member financial responsibility, provider networks, and preferred agents, are all aspects of benefit design to drive costs down and improve outcomes. Support services include case managers and disease management programs who can work with the specialty pharmacy and physicians to achieve the desired outcomes with the patient. Payers can gain insight on how to get the best outcomes with biologics from their providers by peer review of guidelines and use of specialty pharmacies.

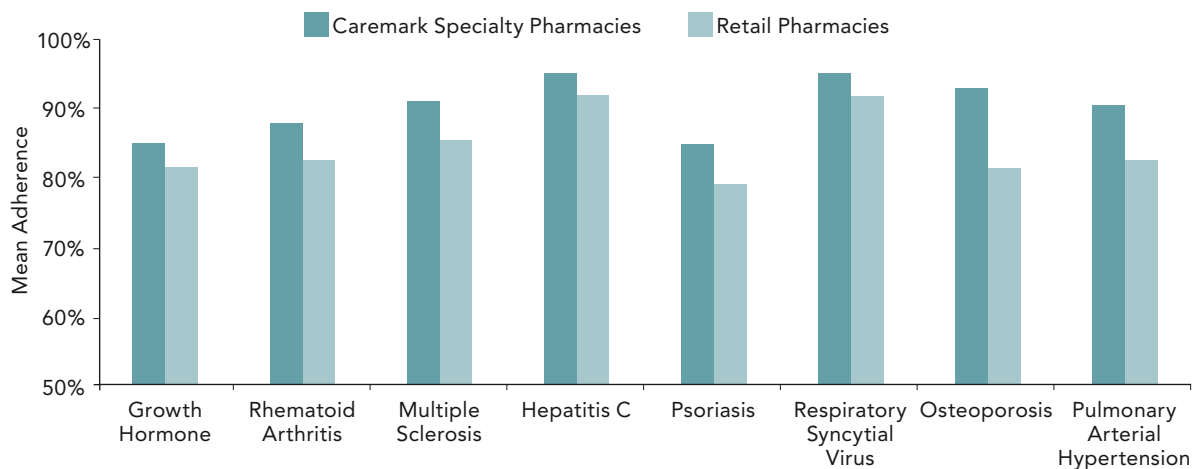
The physician's role is primarily in selecting the right therapy and right dose. The physician has to weigh efficacy, tolerability, and simplicity. Therapies should be selected based on evidence-based guidelines, but this does not always happen. Managed care, pharmacy benefit management companies, and specialty pharmacies struggle to get physicians to prescribe according to guidelines.

Member engagement is pivotal to success in achieving outcomes. If patients are not engaged in the success of their therapies, no other program or intervention is going to be effective. Patients must adhere to treatment regimen. A tailored, patient-specific approach is necessary to optimize treatment outcomes. Tailored education will optimize understanding. The treatment plan needs to fit the member's lifestyle.

The specialty pharmacy can help pull many of the stakeholders together to achieve the desired endpoints (Exhibit 4). They work with the health plan to determine the goals, how the medication is covered to avoid loopholes and control utilization, and can work with both medical and pharmacy benefits. They can communicate the health plan's goals to patients and providers. For an individual patient, the specialty pharmacy will look for anything that could positively or negatively affect the therapy outcomes. For a particular medication, the specialty pharmacy will determine adherence, adverse effect, and efficacy potential. If something is amiss, the specialty pharmacy will work with the appropriate person to correct problems. Also, they may look at what other services the patient might need to support them through therapy (i.e., nursing, physical therapy, etc).

Another role for payers and specialty pharmacy is utilization management. This is determining whether patients should be treated and with what agent. Once on therapy, someone has to address if the patients are achieving goals and should continue with therapy. Overall, about 25 percent of specialty medication utilization is inappropriate. Inappropriate utilization has a significant financial impact. In one Caremark analysis of 52 clients, the clients would have spent \$8 million more over the course of one year without utilization management. Although one might assume that providers learn over time under utilization management programs to practice according to guidelines, this is not true. One Caremark survey found up to 35 percent of inappropriate prescribing for respiratory syncytial

Exhibit 5: Achieving Better Adherence by Utilizing a Specialty Pharmacy



Caremark Analytics and Outcomes 2007 analysis.

virus therapy over several years in the same physician population.

Dose consolidation programs are another service of specialty pharmacy. Medications where this can be applied have nonlinear pricing across dosage strengths. An example is lenalidomide where utilizing the most cost effective dosage strengths to make higher doses can save money. A 15 mg dose might cost \$800 if three 5 mg capsules were used or \$550 if a 10 mg and a 5 mg capsule were used. For some medications, this can simplify the regimen for patients.

Another service of specialty pharmacies is an adherence program. The specialized attention the patient receives from this type of program improves adherence (Exhibit 5). There is a positive correlation between adherence and total medical costs. Even within the first year, there are positive impacts on costs.

Conclusion

Everyone has a role to play in managing the appropriate and cost effective use of specialty pharmaceuticals. Payers must drive change but they cannot work alone. Payers can work with their providers to develop a plan that works to ensure provider adherence. Providers need to be educated on treatment guidelines and processes. Pay for performance has a role in improving quality measures. Payers have to continually evaluate progress and make changes to optimize financial and clinical outcomes. **JMCM**

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References

1. Lipsy RJ, Fuller MG, Roski J, Mansukani S. Anticipating the future: how the emergence of innovative biologic agents impacts benefit design, utilization, and provider relations. *J Manag Care Pharm.* 2004;10(3 Suppl):S4-9.
2. Tufts Center for the Study of Drug Development. Impact Report 2006. Nov/Dec; 8(6).
3. Chase M. The Wall Street Journal. 3/20/08.
4. Pharmaceutical Research and Manufacturers of America (PhRMA). 2006 Report: Medicines in Development. Washington, D.C.
5. EMD Serono Injectables Digest™; 4th ed. Rockland, MD:EMD Serono;2008.
6. Abarca J, Malone DC, Armstrong EP, et al. Longitudinal analysis of the use of etanercept versus infliximab determined from medical chart audit. *J Manag Care Pharm.* 2004;10:538-42.