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# Patient-centric innovation in packaging moves beyond regulatory requirements to deliver brand differentiation and increased sales

Responsive, flexible and innovative patient-centric packaging is a game-changer when fashioning stand-out products that please patients in their new roles as consumers, encourage brand loyalty and provide manufacturers with a leg-up in an increasingly competitive and crowded biopharmaceutical market

**N**ot so long ago, pharmaceutical brand managers considered drug packaging an afterthought. Viewed as a functional commodity, purchased from suppliers and relegated to the final stages of the production process, packaging served only to contain and protect the medication.

Today packaging not only matters, it is quickly becoming one of the most important considerations in the growth and success of any drug product. Manufacturers now consider packaging a core element in the marketing mix, a way to increase sales by product differentiation in a competitive market place. Packaging suppliers are being given a seat at the table, engaged as partners and involved early in drug development to help manufacturers gain information and insights into the targeted customers, therapeutic communities and patient populations.

This sudden paradigm shift is reflected in the expected growth of the pharmaceutical packaging market—driven by the influx of generics, the increasing consumer demand for sophisticated packaging, and robust innovation. The US market is expected to reach revenue of \$19.9 billion in 2020, at a compound annual growth rate (CAGR) of 5.3 percent from 2013 to 2020, according to a report by Frost & Sullivan. The global pharmaceutical packaging industry is mainly concentrated in the United States and Western Europe. Significant changes in pharmaceutical packaging over the next decade will also strongly impact market growth. These include end of patent life drugs, the rapidly growing drug delivery market, and an increased demand due to a readiness on the part of biopharmaceutical manufacturers to utilize packaging and labeling strategically as a medium to protect and promote their products, increase patient adherence, and meet new regulations.

#### **Manufacturers Take Note**

*Not just any packaging, however, has the power to drive brand differentiation and patient loyalty in the current pharmaceutical market. This white paper explains the difference be-*

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tween packaging that just meets regulations and provides little else and innovative, patient-centric packaging that goes well beyond regulations to fulfill patient needs and preferences. We will also explore how insights-based packaging differentiates products by enabling a better user experience, enhanced adherence, the potential for improved outcomes and increased sales.

## CHALLENGES

Market dynamics and patient perceptions in healthcare are changing. As patients shoulder a bigger share of their healthcare costs and make their own product choices, they see themselves as active consumers rather than passive patients. In response, drug companies are making a shift of their own—to a more patient-centric model with the intent of increasing brand recognition, positive patient experience and brand loyalty in much the same way marketers in other consumer-orientated, retail companies have been doing for years.

### What Do Patients as Consumers Want?

“Packaging Matters” is an annual international research study by global packaging company WestRock (formerly known as MWV, prior to the company’s merger with RockTenn in 2015). The study examines the role packaging plays in the marketplace by reviewing consumer purchasing behavior, brand loyalty and overall product satisfaction across market categories. Its results show a direct correlation between packaging usage experience and people’s overall engagement with a product. This study confirmed that 37 percent of consumers have purchased a product more than once because of packaging functionality. However, if people find the experience of using medication packaging frustrating, they are not apt to take the medication as often as they should, which impacts refills or repurchases.

What patients considered important in drug packaging included (in order of importance):

- 1) Keeps the product safe.
- 2) Prevents spilling, leaking or breaking.
- 3) Keeps the product fresh/effective.
- 4) Easy to reclose or reseal.
- 5) Easy to get the right amount out.  
(and tied with)  
Designed to keep my family and me safe.

### What is Innovative Packaging?

Innovative packaging is often defined as “a conversion of normal packaging to perform multiple functions.” In the highly regulated biopharmaceutical industry, manufacturers need a packaging partner that complies with existing regulations and also responds to (or even anticipates) the changes that new drugs, advances in technology and new legislation require. Those new needs can be a catalyst for creativity in designing innovative, patient-centric packaging.

### Child-Resistant (CR) Packaging

A prime example is child-resistant (CR) packaging that’s also senior-friendly. The Packaging Matters study found that 34 percent of people strongly agreed that “packaging designed to keep the product safe and/or protect me and my family” would make them more likely to purchase products from that manufacturer or brand. The study also noted the importance of ease of use. This tells us that innovation in CR packaging, to ensure it’s both user-friendly for adults and child-resistant, can improve patient satisfaction and boost sales.

CR packaging is not new—it dates back to the passage of the United States Poison Prevention Packaging Act of 1970. Still, poisoning is currently the fifth leading cause of unintentional injury death for children and adolescents in the European region, according to the World Health Organization. Medications available at home are associated with the greatest risk of death to children (in high income countries). And in the US, every year more than 60,000 children are admitted to the emergency room after ingesting unsecured medication. The good news is CR medication packaging is one of the best documented successes in preventing the unintentional poisoning of children—helping to stop children from gaining access to medications even after they have gotten hold of a package.

### Designing and Developing Packaging

Developing CR packaging that is compliant with regulations as well as satisfying to patients requires package design expertise as well as extensive patient research to tease out what benefits certain features can provide, according to Hung Le, vice president of Global Innovation Engagement, WestRock Home, Health & Beauty.

“We always begin with the patient,” Le said in a recent interview with Pharmaceutical Executive. “When packaging design integrates patients’ needs and preferences into the design, it serves more of a purpose than packaging that simply contains medication or meets a regulation. In the case of CR design, what eventually develops is packaging that keeps children safer, improves ease-of-use for adults, and provides a positive patient experience.”

A separate quantitative patient preference study conducted by WestRock in 2014 showed that even adults without children living in the home appreciated and recognized the importance of CR packaging. Ease of use was also a factor among older and/or adults without children and they didn’t feel they should have to give up one attribute for another.

## SOLUTIONS

### Case Study: HiMark® CR Nasal Pump

In the middle of 2015, CR packaging that meets recent US Consumer Product Safety Commission regulations is entering the market for over-the-counter and prescription drug products containing more or the equivalent of 0.08 milligrams of imidazolines in a single package. Imidazolines are found in more than

40 commonly used eye drops and nasal sprays. The regulations will likely affect the sale of nearly 60 million units of product currently sold in the US on an annual basis.

WestRock developed the HiMark® CR Nasal Pump proactively in anticipation of these regulations.

During the development of the nasal pump, three concepts were tested with patients, and the preferred design was refined based on their feedback. The end result yielded a package that met the needs of both children and seniors, taking dexterity and cognitive skills into account. Specific features that were incorporated include:

- Use of a simple range of motion to open the pump, without requiring extreme precision, which made the package truly senior-friendly.
- Audible indication that the product was locked.
- Integration of the CR feature into the pump versus the over cap, ensuring the highest level of protection for children by preventing access to the medication, even if the over cap was left off or lost.

### Addressing Adherence

Using the same patient-centric packaging development methodology, the packaging industry is also addressing another critical healthcare challenge: medication adherence. Consider:

- Half of all people in the US and EU do not take their medicines as prescribed.
- Poor adherence can lead to worsening of disease, serious and avoidable health risks, increased hospitalizations and even death.
- The annual cost of non-adherence in the US is estimated to be \$317 billion and \$125 billion in the EU.

Le explained that packaging is uniquely able to address the adherence challenge because patients interact with it every day. WestRock's medication packaging can serve as the foundation for a pharmaceutical brand's adherence program when it incorporates reminder cues (like a calendared blister), disease and treatment education, consistent reinforcement, and links to other adherence initiatives. Le added that WestRock's patient-centric adherence medication packaging has been proven by peer-reviewed research to improve adherence.

Child-resistance and adherence-enhancing features can be used together in innovative packaging design. In 2013, WestRock introduced Optilock® technology, a CR locking mechanism that transforms adherence packaging by enabling a significantly smaller CR package.

### Differentiation through design

WestRock's packaging is customizable, which enables pharmaceutical companies to develop brand-specific solutions that fit the unique needs of each medication and patient population, as well as regulatory requirements.

"We work closely with our customers to review brand challenges, map the patient experience and provide the resources and expertise needed to develop packaging solutions that enable brand differentiation and patient loyalty," Le said.

- i. WestRock Packaging Matters™ Study, 2014.
- ii. The Child Safety Report Card Europe 2012. The European Child Safety Alliance.
- iii. European Report on Injury Prevention 2008. World Health Organization.
- iv. Centers for Disease Control and Prevention. Put Your Medicines Up and Away and Out of Sight.
- v. World Report On Child Injury Prevention ed. Margie Peden et al. World Health Organization 2008.

**WestRock Company** (NYSE: WRK) aspires to be the premier partner and unrivaled provider of paper and packaging solutions in consumer and corrugated markets. WestRock's 42,000 team members support customers around the world from about 275 operating and business locations spanning North America, South America, Europe and Asia-Pacific.