

Covidien: company fact file

In this article we examine Covidien, a global healthcare company with surgical, patient care, respiratory, imaging and pharmaceutical products. Covidien wound care products range from traditional products to innovative, advanced technologies designed to prevent wound complications and infection in order to help promote healing. Covidien also provides education and training for surgeons, nurses and other healthcare professionals to help improve patient outcomes.

KEY WORDS

Covidien
Wound care
Education
Innovation

Who is Covidien

Covidien is a leading global manufacturer of medical devices and supplies, diagnostic imaging agents and pharmaceuticals, with a 2010 revenue of \$10.4 billion, 42,000 employees worldwide in more than 60 countries, and a broad range of products sold in over 140 countries (www.covidien.com/covidien/pages.aspx?page=Home). Covidien has shown commitment to innovation in order to improve patient outcomes. The company's products are used by clinicians and patients at all stages of the patient journey, from surgery, to wound closure, to wound management and finally to patient monitoring and ongoing patient care (Figure 1). Covidien continues to demonstrate a leadership role in wound care.

Covidien wound care brands have a long history

The Kendall company (www.kendallhealthcare.com [kendallhealthcare.com/pagebuilder.aspx?webPageID=121555](http://www.kendallhealthcare.com/pagebuilder.aspx?webPageID=121555)), now a part of Covidien, began in 1903 under the stewardship of its founder;

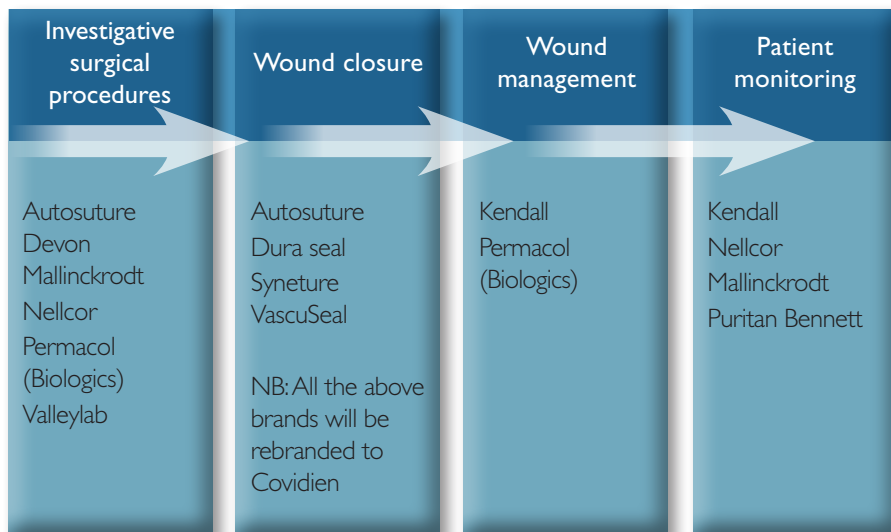


Figure 1: Covidien brands and products used throughout the patient journey

Henry P Kendall, who invested in a small textile mill in Walpole, Massachusetts, US, producing cotton batting, carpet linings and absorbent cotton. Production soon expanded to include cotton products used in healthcare, such as sterile wipes and surgical dressings, and with the advent of the First World War, the Kendall brand of surgical dressings and cotton gauze were in great demand.

Since those early beginnings the company's wound care portfolio has broadened, diversified and advanced to provide the comprehensive range in use today. The company grew rapidly during the 1920s and 30s with both acquisition and development of new products; expansion continued during the early

1940s fuelled by the demand for surgical and first aid products during the Second World War. By the 1970s, Kendall was a major supplier of US hospital and home healthcare as well as first aid products. Kendall became a wholly owned subsidiary of Colgate-Palmolive in 1972, but reverted to being an independent company in the late 1980s, marketing to over 80 countries predominantly in the US, Europe, the Far East and Latin America.

Key products during the 1990s included the well-established wound care brands as well as elastic supports and hosiery, disposable medical, surgical, and vascular therapy products, including wound care supplies, stockings and

BOX 1

Covidien brands and products

Covidien is a leading manufacturer of healthcare-related products. These are:

- ▶▶ Medical devices – includes endomechanical wound closure, soft tissue repair; energy devices, oximetry and monitoring, airway and ventilation, vascular and other products
- ▶▶ Pharmaceuticals – includes specialty pharmaceuticals, active pharmaceutical ingredients, contrast products and radiopharmaceuticals
- ▶▶ Medical supplies – includes nursing care, medical, surgical, sharp safety and original equipment manufacturer (OEM) products.

Covidien's core brands include Kendall, Autosuture, Permacol (Biologics), Synture, Devon. Other companies that were acquired by Covidien were Valleylab, USSurgical, Mallinckrodt, Nellcor, Puritan Bennett

compression devices designed to reduce the risk of thromboembolism. By 1993, Kendall had an 80% share of the US vascular compression market.

In late 1994, Kendall was purchased by Tyco International Ltd, and became part of the Tyco Healthcare division. In mid-2007 Tyco spun off the healthcare segment as an independent company under the Covidien name, where it continues to grow as a broad line, global healthcare company.

Where are Covidien products used today?

Covidien products are used in the surgical suite and for routine patient care in the acute and long-term care settings for the prevention, diagnosis and treatment of healthcare complications. Covidien products are found in hospitals, medical and nursing care facilities, and patients' homes. Sold through a combination of direct and distributor sales forces, Covidien products are available worldwide.



Figure 2. Kendall™ AMD foam dressing (0.5% PHMB) used to treat excessive bioburden in a trauma wound.

Education and training

Covidien maintains a significant commitment to improving patient outcomes via provision of training, education and support for surgeons, nurses and other healthcare professionals. To help it achieve this objective, the company operates a number of dedicated regional training centres in France, China, Japan and the US (www.covidien.com/covidien/featherbeddings=Education/Centres), as well as running in-house and on-site courses.

These centres run a variety of postgraduate training courses, advanced courses and resident training programmes, and nursing programmes. In addition, the company works in partnership with external medical institutions around the world to provide educational initiatives and online learning (see useful links).

Postgraduate training includes master

classes for practising surgeons and medical staff with varying levels of surgical skill. The company's Advanced Training Program is designed to provide clinical and technical training for surgeons in techniques required for minimally invasive surgical procedures such as laparoscopic gastric bypass surgery and colon surgery. Nursing programmes include product training and accredited continuing education courses covering technological advances in surgical stapling and suturing.

Covidien also provides educational grants and sponsorship (via its Foundation for Surgical Fellowships) at a number of leading US institutions.

Innovation

A key area of recent wound care innovation has been the development of foam dressings which incorporate polyhexamethylene biguanide (PHMB). The antiseptic properties of PHMB have



Figure 3. Covidien European Training Centre, Elancourt, France.

Table 1

Key products within each brand. The company has a long heritage as a supplier of quality wound care products in the US and now has established a significant global reach. Its early, traditional products have now been supplemented by advanced wound care products and technologies suitable for a range of clinical scenarios.

Product category	Therapy areas	Key product brands	Other
Nursing care	Wound care, nursing care, enteral nutrition, incontinence care, urological care	Kerlix™ AMD antimicrobial bandage and sponges Telfa™ AMD antimicrobial dressing Curity™ AMD packing strips Excilon™ AMD antimicrobial drain and IV sponges Kendall™ dressings (calcium and zinc calcium alginate dressings; hydrocolloid dressings; transparent film dressings) Thermazene™ cream The new Kendall™ AMD foam, bordered foam dressing and the foam disc for exit site management (i.e. PEG site, tracheostomy sites) Kangaroo™ enteral feeding pumps and sets Wings™ and Sure Care™ incontinence products Dover™ urologicals	Covidien AMD products contain 0.2–0.5% PHMB as their antimicrobial
Sharp safety	Needles and syringes, sharps disposal	Monoject™ needles and syringes Magellan™ safety needles and blood collection SharpSafety™ disposal containers	
Surgical devices	Surgical stapling and instrumentation for laparoscopic, endoscopic and traditional open surgeries	Endo GIA™ Universal Endo GIA™ Ultra with Tri-Staple technology Duet TRS™ Reloads DST Series™ EEA Stapler	Continuing professional education to enhance knowledge of advanced minimally invasive procedures among surgeons and other healthcare professionals
Soft tissue repair	Collagen implants available in sheet and injection format for soft connective tissue reinforcement, replacement and bulking. Innovative hydrogel-based biomaterials to assist wound sealing and healing following thoracic, spinal, gynaecological, vascular and general surgery. Advanced wound closure products and sutures used in general, cardiovascular, gynaecological, orthopaedic and neurosurgery. Hernia repair	Permacol™ biological implant DuraSeal™ and VascuSeal™ sealant systems SprayShield™ adhesion barrier system V-Loc™ wound closure device, Caprosyn™, Polysorb™, Biosyn™ and Maxon™ absorbable sutures Dermalon™, Ticon™, Surgipro™, Novafil™, and Sof silk™ non-absorbable sutures Indermil® tissue adhesive (US only) Parietex™, Parietex™ Composite PCO Mesh Parietene™ and SurgiPro™ synthetic hernia repair mesh AbsorbaTack™ and ProTack™ fixation devices used with mesh for hernia repair	
Medical surgical products	Single-use operating room products, surgical instrument handling and positioning products, patient positioning supports, surgical suction, laceration and suture removal kits, cardiac monitoring and chest drainage	Devon™ cautery tip cleaners Devon™ surgical vessel loops Devon™ instrument pouches Devon™ disposable foam positioning products and positioning straps Kendall™ DL cable and lead wires Medi-Trace™ electrodes Argyle™ chest drainage units	Kendall™ DL cable and lead wires are a new range of disposable electrocardiogram (ECG) leads to reduce the risk of infection from cross-contamination
Energy devices	Surgical products used in vessel sealing, electrosurgery, ablation and radio frequency pain management	LigaSure™ vessel and tissue fusion products Evident™ MW ablation system Cool-tip™ RF ablation system Force Argon™ II argon-assisted electrosurgery system	Valleylab Institute of Clinical Education provides training and education on advances in surgical and radio frequency-related technique, technology and practice
Pharmaceuticals and imaging	Pharmaceutical products and ingredients used in a wide range of branded and generic pharmaceuticals; imaging products including contract media, delivery systems, MRI infusion pumps, nuclear medicine products and urological imaging systems	Conray™, Hexabrix™, Optimark™ and Optiray™ contrast media Angiomat™, Illumena™, Optistar™, Optivantage™ and MRidium™ delivery systems	
Vascular therapies	Compression therapy, dialysis treatment and ablation therapies	SCD™ and SCD EXPRESS™ compression systems T.E.D™ compression stockings Trellis™ and ev3 neurovascular and peripheral vascular products	
Respiratory therapy	Pulse oximetry, airway and temperature management devices. Mechanical ventilation and respiratory care devices	Nellcor™, OxiMax™ pulse oximeters OxiNet III™ remote monitoring system Puritan Bennett™, Achieva™, Legendair™, Smartair™ and Supportair™ ventilators and portable ventilators	Accredited continuing education for nurses and respiratory therapists via the Covidien Center for Clinical Excellence website

been shown to be effective against a wide range of wound-related bacteria and fungi with little reported toxicity or allergy (Leaper, 2010).

PHMB antimicrobial dressings have great potential in the management of wound infection (Leaper, 2010). Covidien is committed to providing antimicrobial dressings for use in acute and chronic wounds and those that are traditionally difficult to dress such as exit site and tracheostomy wounds (for this specific dressing, request a sample at www.kendallamdf foam.com).

Another interesting area of innovation is the use of porcine dermal collagen. Permacol™ biological implant is a sterile fibrous sheet of acellular porcine dermal collagen and its constituent elastin fibres. It is indicated for permanent implantation to provide support in surgical procedures for the reconstruction, remodelling or reformation of soft connective tissue and can be used in complex abdominal wall repairs.

This biological implant (Permacol™ biological implant) is crosslinked using HMDI (hexamethylene diisocyanate), the benefit of this specific crosslinking process is that it increases the stability of the scaffold and increases resistance to degradation without compromising normal tissue repair (Gaertner et al, 2007).

Where does Covidien operate?

Covidien maintains a presence in more than 60 countries and employs approximately 42,000 employees worldwide. Its products are sold in more than 140 countries and 45% of Covidien sales are derived from outside the US. Nearly two-thirds of Covidien staff work in 53 manufacturing facilities located in 16 countries and the company employs more than 5,000 sales representatives. The parent company is based in Ireland.

The company vision

The overall company vision for Covidien is to create and deliver innovative healthcare solutions, developed in ethical collaboration with medical professionals, which enhance quality of life for patients and improve outcomes for customers.

Covidien is focused on becoming a leading global healthcare product company through innovation. By creating innovative medical solutions, the company will help improve patient outcomes and deliver value through clinical leadership and excellence. They plan to achieve this via:

- ▶▶ Focus on growth
- ▶▶ Commitment to innovation
- ▶▶ Leveraging global structure
- ▶▶ Driving operational excellence
- ▶▶ Increased portfolio management.

Covidien has a major focus on research and development, with nearly \$450 million spent on research and development in 2010, with that amount expected to increase in 2011. It also seeks to expand its portfolio via acquisition. Covidien stock is quoted on the New York Stock Exchange (NYSE) (<http://investor.covidien.com/phoenix.zhtml?c=207592&p=irol-alerts>).

Recent technical innovations developed by the company include:

- ▶▶ Kendall™ AMD foam dressings: antimicrobial dressings utilising AMD technology containing 0.2–0.5% PHMB to prevent wound infection
- ▶▶ Kendall™ DL disposable cable and lead wire system: designed to address patient safety and comfort, electrical performance and ease of use
- ▶▶ AbsorbaTack™ absorbable mesh fixation device for hernia repair
- ▶▶ V-Loc™ absorbable wound closure device: a self-anchoring loop and barb combination, which enables wound closure without the need to tie knots; it permits simultaneous closure of multiple dermal layers
- ▶▶ DuraSeal™ spine sealant: a hydrogel-based product used to repair dural tears; the first product approved by the US Food and Drug Administration for intra-operative sealing of the dural membrane during spinal procedures
- ▶▶ SILS™ Port: a multiple instrument/single-incision access port used in laparoscopic surgery
- ▶▶ Mallinckrodt™ TaperGuard™ and TaperGuard™ Evac endotracheal tubes designed to minimise risk of microaspiration in intubated patients.

In line with the company's vision for long-term growth, Covidien plans to maintain and expand its wide range of traditional and advanced wound care products and equipment, with research into, and acquisition of, new products and technologies. Key areas in which the company expects to focus in future include antimicrobial dressing technology to reduce the risk of wound infection, utilising polyhexamethylene biguanide (polihexanide, PHMB), and ongoing sport for education in wound care. **WUK**

References

- Leaper D (2010) Technology update: the role of PHMB in delayed wound healing. *Wounds Int* 1(5): 2. Available online at: www.woundsinternational.com/article.php?contentid=129&articleid=8922&page=2
- Gaertner W, Bonsak M, Delaney J (2007) Experimental evaluation of four biologic prostheses for ventral hernia repair. *J Gastrointestinal Surg* 11: 1275–85

Useful links

- <http://www.covidien.com/covidien/pages.aspx?page=Home>
- www.kendallhealthcare.com/kendallhealthcarepagebuilder.aspx?webPageID=121555
- <http://www.autosuture.com/autosuture/pagebuilder.aspx?webPageID=63662&websiteID=63656>
- <http://www.covidien.com/covidien/pages.aspx?page=Brands/BioSurgery>
- <http://www.covidien.com/campaigns/pagebuilder.aspx?topicID=121347&page=InDermil:Main>
- <http://www.covidien.com/cavitating/pages.aspx?page=Brands/Devon>
- <http://www.valleylab.com>
- <http://www.covidien.com/covidien/pages.aspx?page=Brands/Mallinckrodt>
- <http://respiratorysolutions.covidien.com>
- <http://www.covidien.com/covidien/featherbeddings=Education/Centers>
- <http://covidien.mhssoftware.com>
- <http://www.covidien.com/covidien/pages.aspx?page=Education/AdvancedTraining>
- <http://www.surgicalfellowships.org>
- <http://www.flsprogram.org>
- <http://investor.covidien.com/phoenix.zhtml?c=207592&p=irol-alerts>