

FINAL REPORT: Secondary Research EARLY STAGE COMPANY

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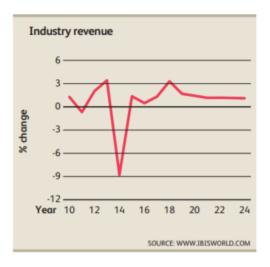
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Market

Market History

We have identified Pocket Innovations to be in the Medical Instrument and Supply Manufacturing market based on the product: PocketPro™. The Medical Instrument and Supply Manufacturing market has been hindered over the past five years heading into 2018. The market saw an uptick after the recession before leveling out. Because of this, it still isn't in the same place as it was in 2013, but 2018 saw the market start to recover with profits being only 0.9% less in 2018 than in 2013. The market is expected to grow at an annualized rate of 1.3% until 2023. The aging market has the largest effect on the success of this market¹.



Medical Instrument and Supply Manufacturing market revenue change from 2010 - 2024 (estimate)

¹ IBISWorld Industry Report 33911a, Medical Instrument & Supply Manufacturing in the US, Dec2018(p. 2-10)

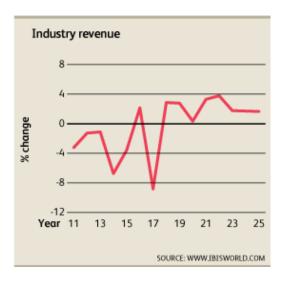
Wound care manufacturing industry on the other hand, the industry performance relies heavily on the healthcare sector, which has experienced strong growth over the five years to 2019; increasing public health expenditure and private health coverage have made medical services more accessible to US consumers². However, over the five years to 2019, industry revenue and profit has been volatile, as fluctuating commodity prices have caused industry product prices to shift. Consequently, industry revenue is expected to fall at an annualized rate of 1.0% to \$2.8 billion during the five-year period. However, this includes an anticipated 2.8% increase in 2019 alone.

Over the past five years, public and private healthcare coverage has already been extended to millions of previously uninsured Americans as a result of the Patient Protection and Affordable Care Act (PPACA), expanding the pool of potential industry customers. Although the PPACA has increased the overall size of the industry's market by giving more patients access to funding for wound care, some provisions of the act have threatened medical products manufacturers, including industry participants. The PPACA has emphasized cost-cutting efforts on the part of healthcare providers, resulting in lower demand for industry products.

Over the next five years, industry revenue is expected to grow as increased private health coverage and an aging US population will likely precipitate demand for industry products. Industry operators are expected to focus on the production of high value-added goods, such as advanced and active products. The healthcare sector will continue to source generic and traditional wound care goods from international markets due to their lower price; however, the United States will remain a key player in the development of new technologies. Consequently, international trade in the industry is forecast to rise over the next five years. Overall, industry revenue is projected to grow at an annualized rate of 2.2% to \$3.1 billion over the five years to 2024.

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² IBISWorld, Wound Care Product Manufacturing



Wound Care Manufacturing market revenue change from 2011 - 2025 (estimate)

Total Addressable Market

An article from the Journal of Geriatric Cardiology states that over one million cardiac pacemakers are implanted every year worldwide, of which approximately 200,000 are implanted in the United States alone³. Assuming the devices only see one use, some quick math (200,000 pacemakers* \$250/ device) says that Pocket Innovations has a \$50 million market annually in the US in pacemaker treatment alone. This Google Scholar source also has some really good information regarding the frequency of pacemaker implants as well as how frequently they have to be replaced⁴. The TAM was projected at \$93.6 billion in 2018, and it is expected to grow to \$100 billion by 2023. Pocket Innovations falls under the surgical appliances sector, which collectively make up 34.1% of total revenue (\$31.92 billion). Over the next five years, demand for this product segment is expected to rise⁵.

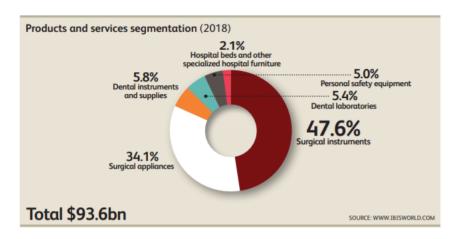
³ Journal of Geriatric Cardiology, <u>Leadless pacemakers</u>: a contemporary review, 15Apr2018

⁴ Pace, <u>The 11th World Survey of Cardiac Pacing and Implantable Cardioverter-Defibrillators: Calendar Year 2009–A World Society of Arrhythmia's Project</u>, 27Jun2011

⁵ IBISWorld Industry Report 33911a, Medical Instrument & Supply Manufacturing in the US, Dec2018(p. 14)

Market Segmentation

The market is broken up into surgical appliances, surgical instruments, dental laboratories, dental instruments and supplies, personal safety equipment, and hospital beds and other specialized hospital furniture. Pocket Innovations would fall under surgical appliances, which collectively make up 34.1% of total revenue (\$31.92 billion). This product segment can be broken down further to include orthopedic, prosthetic and therapeutic products⁶.



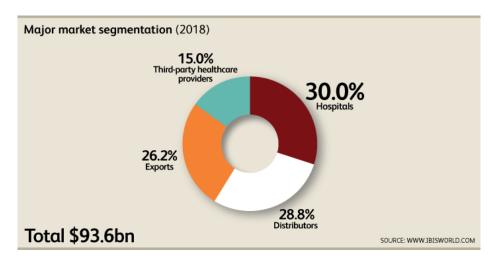
Medical Instrument and Supply Manufacturing market product segmentation

Major customer markets in the industry can be broken down into 4 main categories: hospitals, distributors, exports, and third-party healthcare providers. Of these four, Pocket Innovations is trying to establish hospitals as a steady source of customers, which would account for 28.08 billion of the revenue. However, from IBISWorld, it is stated that "hospital consolidation has limited demand for industry products, thus causing this market segment to decline during the five-year period, which has been further exacerbated by hospitals' growing use of group purchasing organizations.⁷" On

⁶ IBISWorld Industry Report 33911a, Medical Instrument & Supply Manufacturing in the US, Dec2018(p. 14)

⁷ IBISWorld Industry Report 33911a, Medical Instrument & Supply Manufacturing in the US, Dec2018(p. 14)

the other hand, hospitals' demand for disposable medical supplies has grown due to their rising focus on infection prevention, particularly to mitigate the prevalence of infection among patients who receive surgery or long-term chronic care. Which is perfect for PocketPro. Although third-party healthcare providers may only make up 15% of the revenue currently, over the past five years, the number of physician visits has declined in line with more patients visiting specialists, thus increasing specialists' demand for medical services and, in turn, industry products.



Medical Instrument and Supply Manufacturing market segmentation

The leading players in this industry are Johnson & Johnson, Stryker Corporation Becton, Dickinson and Co., Baxter International, Boston Scientific Corporation, with their market share being 7.8%, 6.8%, 3.6%, 2.5%, and 2.5% respectively⁸.

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⁸IBISWorld Industry Report 33911a, Medical Instrument & Supply Manufacturing in the US, Dec2018 (p. 26-29)

Market Forecasts

The value of Health Care Equipment and Supplies market in the United States is expected to grow from \$158bn in 2017 to \$183.7bn in 2022. The compound annual growth rate (CAGR) of the market during 2017 to 2022 is predicted to be 3.1% in average⁹.



Medical Instrument and Supply Manufacturing market value forecast

In addition, another report forecasts this market is growing as well. IBISWorld states the revenue of Medical Instrument and Supply Manufacturing market in the United States is expected to grow at an annualized rate of 1.3% to \$100bn in 2023¹⁰. For Health Care Equipment & Supplies industry growth, revenues generated through the sale of health care equipment and supplies are indicators¹¹.

⁹ MarketLine, Health Care Equipment & Supplies in the United States, Jul2018 (p. 12)

¹⁰ IBISWorld Industry Report 33911a, Medical Instrument & Supply Manufacturing in the US, Dec 2018 (p. 8)

¹¹ MarketLine, Health Care Equipment & Supplies in the United States, Jul2019 (p. 7)

Revenue Outlook									
Revenue \$ million	Growth %								
95,198.6	1.7								
96,562.8	1.4								
97,685.1	1.2								
98,831.7	1.2								
99,962.2	1.1								
101,064.1	1.1								
	Revenue \$ million 95,198.6 96,562.8 97,685.1 98,831.7 99,962.2								

Medical Instrument and Supply Manufacturing market revenue forecast

Another report from Deutsche Bank indicates that the Healthcare Technology and Services market is growing. The table below lists the growth outlook of the biggest companies in this industry. Their EBITDA growth rate in average is about 17% in 2019 and 2020¹².

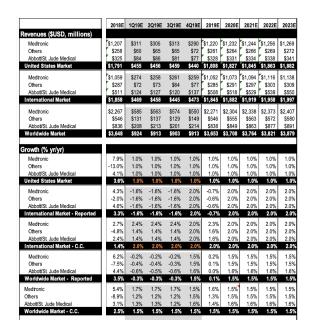
Valuation Comparisons																				
Deutsche Bank																				
Deutstile Balik																				
		Price	Market	Ent.	2018	2019 YTD	EV/	Sales	Sales	Growth	EV/E	BITDA	EBITDA	Growth	EBITD	A Margin	P	/E	EPS 0	Growth
Company Name	Ticker	Current	Сар	Value	Perf.	Perf.	CY19	_CY20	CY19	CY20	_CY19	_CY20	_CY19	_CY20_	CY19	CY20	2019E	2020E	_CY19	CY20
Health Insurers									1										1	
UnitedHealth Group Inc	UNH	230.68	221,956	253,729	13.0%	(7.4%)	1.0x	1.0x	7.2%	8.1%	11.5x	10.3x	11.3%	12.0%	9.1%	9.4%	15.6x	13.8x	15.0%	12.49
Anthem Inc	ANTM	250.45	63,906	58,495	16.7%	(4.6%)	0.6x	0.5x	11.4%	11.4%	8.4x	6.6x	6.3%	27.2%	6.8%	7.8%	12.9x	10.9x	21.7%	18.6%
CVS Health Corp	CVS	63.68	83,219	166,934	(9.6%)	(2.8%)	0.7x	0.7x	29.9%	1.0%	9.6x	9.1x	34.4%	4.7%	6.9%	7.1%	9.1x	8.8x	(1.6%)	3,4%
Cigna Corp	CI	162.16	61,131	95,760	(6.5%)	(14.6%)	0.7x	0.7x	187.2%	5.9%	8.0x	8.1x	127.9%	(1.5%)	8.7%	8.1%	9.7x	8.7x	18.0%	11.6%
Humana Inc	HUM	275.69	37,394	29,000	15.5%	(3.8%)	0.4x	0.4x	13.5%	9.7%	7.8x	7.0x	(13.5%)	11.8%	5.8%	5.9%	15.6x	14.7x	21.1%	6.3%
Centene Corp	CNC	46.23	19,348	19,705	14.3%	(19.8%)	0.3x	0.2x	22.8%	8.8%	6.4x	5.3x	15.5%	19.9%	4.2%	4.6%	10.5x	9.4x	24.8%	11.8%
Molina Healthcare Inc	MOH	118.59	7,447	4,754	51.6%	2.0%	0.3x	0.3x	(12.3%)	8.3%	4.1x	3.5x	(5.9%)	15.8%	7.0%	7.5%	10.4x	9.9x	4.6%	5.4%
Peer group average					13.6%	(7.3%)	0.6x	0.5x	37.1%	7.6%	8.0x	7.1x	25.1%	12.8%	6.9%	7.2%	12.0x	10.9x	14.8%	9.9%
									1										1	
Pharmacies								ll												
Walgreens Boots Alliance Inc	WBA	55.59	52,437	69,846	(5.9%)	(18.6%)	0.5x	0.5x	1.9%	2.4%	8.2x	8.0x	(8.2%)	2.9%	6.2%	6.2%	9.4x	9.1x	(4.0%)	3.3%
Diplomat Pharmacy Inc	DPLO	6.39	497	1,089	(32.9%)	(52.5%)	0.2x	0.2x	(11.0%)	2.5%	12.0x	10.9x	(45.7%)	9.8%	1.9%	2.0%	-6.9x	236.7x	(128.6%)	(102.99
Rite Aid Corp	RAD	8.22	521	7,189	(64.0%)	(42.0%)	0.3x	0.3x	(0.3%)	0.1%	13.9x	14.3x	(12.1%)	(2.5%)	2.4%	2.3%	-50.5x	-24.2x	(59.3%)	108.49
Peer group average					(34.3%)	(37.7%)	0.4x	0.3x	(3.1%)	1.7%	11.3x	11.0x	(22.0%)	3.4%	3.5%	3.5%	-16.0x	73.8x	(64.0%)	2.9%
Drug Wholesalers																				
McKesson Corp	MCK	143.79	27,464	36,987	(29.2%)	30.2%	0.2x	0.2x	3.5%	3.1%	9.2x	8.9x	(5.2%)	3.5%	1.8%	1.8%	10.3x	9.7x	3.9%	6.7%
AmerisourceBergen Corp	ABC	87.13	18.289	20.008	(19.0%)	17.1%	0.1x	0.1x	4.8%	5.1%	8.3x	8.0x	4.9%	3.0%	1.3%	1.3%	12.1x	11.2x	10.0%	8.4%
Cardinal Health Inc	CAH	46.82	14.573	20.075	(27,2%)	5.0%	0.1x	0.1x	4.7%	4,4%	7.6x	7.7x	(9.9%)	(1.8%)	1.8%	1.7%	9.2x	9.2x	2.2%	0.5%
Peer group average					(25.1%)	17.4%	0.1x	0.1x	4.3%	4.2%	8.3x	8.2x	(3.4%)	1.6%	1.6%	1.6%	10.6x	10.0x	5.4%	5.2%
Paver-Facing Healthcare IT								ll												
HealthEquity Inc	HQY	58.12	4.139	3.364	27.8%	(2.6%)	9.1x	7.0x	30.3%	30.0%	22.3x	14.4x	31.2%	54.6%	41.0%	48.8%	44.7x	40.3x	13.3%	11.1%
Teladoc Health Inc	TDOC	62.93	4,139	4,891	42.2%	27.0%	9.0x	7.0x	30.0%	24.7%	166.2x	76.6x	119.5%	117.1%	5.4%	9.4%	-40.5x	-57.2x	9.6%	(29.1%
eHealth Inc	EHTH	71.33	1.679	1.603	121.2%	85.7%	4.2x	3.4x	51.2%	22.2%	24.8x	17.8x	92.0%	39.2%	17.0%	19.3%	37.3x	30.7x	72.4%	21.3%
Peer group average	2/1111	71.00	2,075	2,000	63.8%	36.7%	7.5x	5.9x	37.2%	25.6%	71.1x	36.3x	80.9%	70.3%	21.1%	25.9%	13.8x	4.6x	31.8%	1.1%
Comp group average					2.4%	(0.1%)	1.8x	1.5x	18.2%	8.2%	18.6x	12.3x	17.2%	17.6%	10.4%	12.3%	8.7x	19.4x	1.3%	7.4%
S&P 500 Index	SPX	3.000.93			(6.2%)	19.7%	2.5x	2.4x	4.7%	5.4%	12.4x	11.3x	13.3%	9.6%			18.2x	16.5x	9.7%	10.6%

Medical Instrument and Supply Manufacturing market EBITDA forcast

¹² Deutsche Bank, Initiating Coverage of Healthcare Technology & Services, 11Sep2019 (p. 8)

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Moreover, since Pocket Innovation is related to the Pacemaker Market, we put this market into consideration as well. As shown in the table below, this market grow steadily at the rate of 1% to 2% in the following years¹³.



Pacemaker market growth

¹³ Deutsche Bank, Initiating Coverage of MDT, SYK, ZGH, EW, 2Jan2019 (p. 16)

Customer

Demographics

According to the interview with Pocket Innovations, the main type of customer are elderly people who suffer from pocket hematoma. Elderly people are more vulnerable to suffer from pocket hematoma.

In the United States, approximately 150,000 ICDs (Implantable Cardioverter Defibrillator) are implanted annually¹⁴. Among them, according to our interview with the Pocket Innovation's representative, 2%-5% of patients suffer from pocket hematoma. Another research paper reports that the incidence of pocket hematoma was 4.9%¹⁵. If we take the percentage as 5%, there are approximately 7500 patients who may need the product every year in the United States.

Psychographics

Patients may suffer pocket hematoma after pacemaker/implantable cardioverter defibrillator (ICD) implant, which leads to the danger of a serious infection and discomfort. Infection occurred in 11% of patients with previous clinically significant pocket hematoma¹⁶. PocketPro solves this problem by adding pressure to the wound, which can stop the bleeding and provide comfort to the wound.

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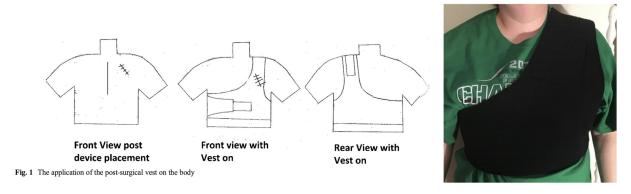
¹⁴ AMA Cardiol, Trends and In-Hospital Outcomes Associated With Adoption of the Subcutaneous Implantable Cardioverter Defibrillator in the United States, 01Nov2016

Chest, Pocket hematoma after pacemaker or implantable cardioverter defibrillator surgery: influence of patient morbidity, operation strategy, and perioperative antiplatelet/anticoagulation therapy, Oct2004
 Journal of the American College of Cardiology, Clinically Significant Pocket Hematoma Increases
 Long-Term Risk of Device Infection, Mar2016 (Volume 67, Issue 11)

Pocket Innovations is working on passing FDA to determine if they can sell PocketPro to hospitals directly, which would be used to treat patients, instead of selling in pharmacies. The goal is to be used by doctors on patients after a pacemaker/ICD implant. The ability to sell to hospitals can provide a solid base customers.

Previous Research

Turagam, et. al. (2017) have conducted an experiment to see if post-surgical vests can help reduce the risk of pocket hematoma. 40 patients were tested over a span of 7 days and the result was the use of post-surgical vests is associated with a significantly lower rate of device-pocket hematoma¹⁷. The vest from this research study was manufactured by L&M Innovations, located in Kansas, however, this company cannot be found on market research databases such as ReferenceUSA, Crunchbase, and Capital IQ.



Post-surgical vest for treating pocket hematoma

Conventional methods for treating pocket hematomas include therapeutic oral warfarin and uninterrupted antiplatelet agents¹⁸.

¹⁷ CrossMark, <u>Use of a pocket compression device for the prevention and treatment of pocket hematoma</u> <u>after pacemaker and defibrillator implantation</u>, 17Apr2017

¹⁸ Thal, S., Moukabary, T., Boyella, R., Shanmugasundaram, M., Pierce, M., Thai, H., and Goldman, S., The Relationship between Warfarin, Aspirin, and Clopidogrel Continuation in the Peri-procedural Period and the Incidence of Hematoma Formation after Device Implantation, Apr2010.

Competitors

Direct Competitor

Pressure Products

3 Assigned Properties/Patents

Pressure Products operates as a medical device company. It offers hemostatic peel-away and sliceable introducers and accessories, as well as medical devices for femoral and pacemaker pocket hemostasis¹⁹. Their main product that competes with PocketPro is the PocketPal II. In addition to PockPal II, Pressure Products also manufactures safesheath introducers, sealing adapters, dialysis introducers, BiV CS introducers, BiV CS venography balloons, sensing and pacing products, hemostasis management, pacemaker protection and comfort, BiV lateral vein introducers, and pacemaker lead tunnelers, as well as accessories, such as braided sheath cutter, transvalvular insertion tool, and contrast administration kit²⁰. Their location sales volume at the moment is \$619,000²¹.

¹⁹ Capital IQ, Pressure Products, Inc. (Private Company Profile)

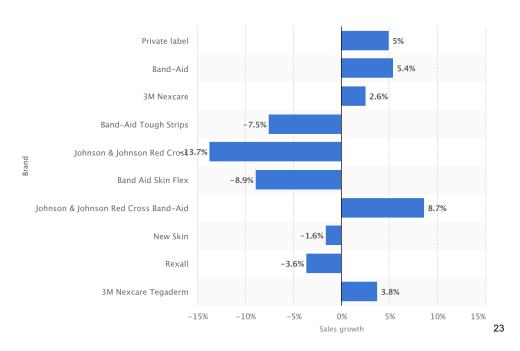
²⁰ CapitallQ, Pressure Products

²¹ ReferenceUSA, Pressure Products

Indirect Competitors

Pocket Innvation's current product is use of a pocket compression device for the prevention and treatment of pocket hematoma after pacemaker and defibrillator implantation. It is mentioned the current solution is through the use of bandages, gauze, and medical sandbags. Thus we also examined the competitors for these items.

The up and coming companies for bandages, gauze, and medical sandbags are Johnson & Johnson and 3M²². From the graph we can see that there are many brands on the market, however, most of these brands are actually sub-brands of Johnson & Johnson and 3M, with the exception of New Skin and Rexall.



Sales growth of the leading first aid tape/bandage/gauze/cotton brands in the United States 2019

²² DSN Magazine, DSN Daily, 25Aug2019 (p. 32)

²³ Statista, Sales growth of the leading first aid tape/bandage/gauze/cotton brands in the United States in 2019, Aug2019

Johnson & Johnson²⁴

Over 5000 Assigned Properties/Patents

Johnson & Johnson, together with its subsidiaries, researches and develops, manufactures, and sells various products in the healthcare field worldwide. It operates in three segments: Consumer, Pharmaceutical, and Medical Devices. The products indirectly competing with Pocket Innovations are under BAND-AID. They also have electrophysiology products to treat cardiovascular diseases. The company markets its products to the general public, and retail outlets and distributors, as well as distributes directly to wholesalers, hospitals, and health care professionals for prescription use. It has a research and collaboration alliance with Morphic Therapeutic. Johnson & Johnson has over 113 customers, these customer types are distributor, licencee, and customers. In addition, the primary industry for these customers are from pharmaceuticals and health care equipment. They have over 135,100 employees and a revenue of 81,706 million.

Johnson & Johnson has acquired 29 organizations. Their most recent acquisition was Auris Health on Feb 13, 2019. They acquired Auris Health for \$3.4 billion²⁵. Auris Health is a medical company that develops robotics technology for medical applications.

$3M^{26}$

14995 Assigned Properties/Patents

3M Company develops, manufactures, and markets various products worldwide. It operates through four business segments: Safety & Industrial, Transportation & Electronics, Health Care, and Consumer. The Health Care segment offers medical solutions, oral care, separation and purification sciences, health information systems, drug delivery systems, and food safety products. 3M has over 147 customers, the primary industry for these customers are from industrial conglomerates. Customers

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²⁴ Capital IQ, Johnson & Johnson

²⁵ Crunchbase, Johnson & Johnson

²⁶ Capital IQ, 3M Company

include Acelity L.P. Inc., Ampli S.A., Suzuki Motor Corporation just to name a few. They have 93,516 employees and a revenue of 31,970 million.

3M has acquired 76 organizations. Their most recent acquisition was Acelity on May 2, 2019. They acquired Acelity for \$6.7 billion²⁷. Acelity is an advanced wound care company committed to developing innovative healing solutions for customers and patients across the care continuum. Its subsidiary, KCI, is the most trusted brand in advanced wound care²⁸.

Cardiva Medical, Inc.²⁹

48 Assigned Properties/Patents

Cardiva Medical, Inc., a medical device company, manufactures and markets vascular access management products that help the body heal itself following percutaneous catheterization procedures. The company offers VASCADE VCS, an extravascular and bio absorbable femoral access closure system that leaves no permanent components behind, and enables rapid hemostasis and minimizes complications in patients; Cardiva CATALYST, a manual compression assist device that provides temporary hemostasis and enhances coagulation for patients requiring manual compression; and VASCADE MVP, a vascular closure system for multi-site venous closure for 6-12 French inner diameter sheaths used in electrophysiology procedures, such as cardiac ablation and left atrial appendage closure. It serves physicians and cardiac centers in the United States. Cardiva Medical, Inc.

Cardiva Medical is currently under debt financing. On December 27th, 2018, FDA approved Cardiva Medical's new bioabsorbable vessel closure system. A week before that, Cardiva Medical wins FDA PMA for Vascade MVP vascular closure device.

²⁸ Crunchbase, Acelity

²⁷ Crunchbase, 3M

²⁹ Capital IQ, Cardiva Medical

Although they don't have a wide variety of products like Johnson & Johnson and 3M (only 3 products)³⁰, they still have around 30.8 million in revenue. Which may indicate that a solid customer base is more important than the variety of products offered. Cardiva Medical mainly sells to hospitals, cardiac centers, and physicians.

Tetra Medical Supply Corporation³¹

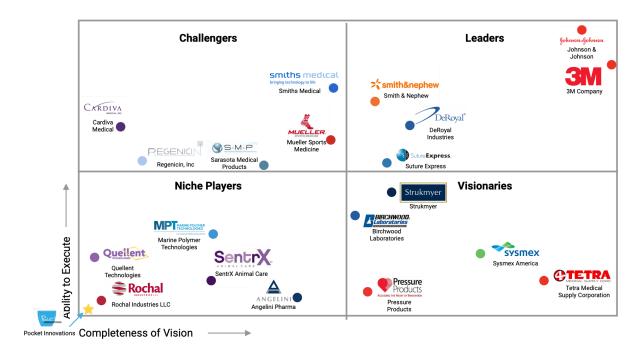
Tetra Medical Supply Corporation manufactures and distributes medical supplies. The company offers bandages, dressings, orthopedic soft goods, etc. It also provides decubicare, drapes, elbow supports, electrotherapy, finger/thumb splints, and first aid/wound care products. Its customers include hospitals, surgeons, podiatrists, chiropractors, departments of correction, sports rehabilitation, professional sports teams, occupational and physical therapists, massage therapists, fire departments, industrial offices, federal, state, city and county offices, and universities and schools. The company offers its products through authorized dealers and distributors in the United States and Canada, as well as through online catalogs. Tetra Medical Supply Corporation have well over 100 pharmaceutical products, with the target audience being regular everyday consumers. They have around 3 million in revenue.

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³⁰ Cardiva Medical Website

³¹ Capital IQ, Tetra Medical Supply Corporation

Magic Quadrant



Magic Quadrant for Pocket Innovations' competitors

We have taken what we consider to be the Top 20 competitors in the Healthcare and Pharmaceutical industry manufacturing wound care products and distributed them on this chart to visualize how Pocket Innovations compares to the competition.

The x-axis on the chart correlates to the products a company has. We took into consideration both the number of products a company has that perform different functions, as well as how well developed those products are.

The y-axis on the chart correlates to the amount of revenue a company made in the last twelve months (LTM). These numbers were found on the Capital IQ database.

Leaders tend to have a wide variety of product lines and high revenues. Challengers are companies with a large revenue but only a handful of products. Visionaries have a broad product line but a smaller revenue. Niche players are companies focusing on a very specific industry, which lead to their narrow product lines and small revenue.

Leaders

Leaders have the largest range of products, some might even manufacture products across multiple industries. In addition, they also have the largest revenue. Their customers range from everyday people to government institutions or large corporations. Mostly, these companies have been around for a long time and have made a lot of acquisitions, further establishing their leader status.

- **3M:** Very large corporation manufacturing products in multiple industries. They have a revenue of over 32 billion USD³². In the healthcare industry alone, they have over 2 thousand consumer products³³.
- Johnson & Johnson: Johnson & Johnson mainly focus on healthcare and pharmaceutical industry, with over 81 billion revenue³⁴.

³² Fortune, Fortune 500 Companies 2018: Who Made the List, 29Aug2019

^{33 3}M Website

³⁴ Capital IQ, Johnson & Johnson

Challengers

Challengers have a strong base of customers, they might not have a lot of different products, but each product is a necessity in the healthcare industry, thus they have high revenues. Their main customers might be hospitals or laboratories.

- Cardiva Medical: From their website, it seems like they only have 3 products, but all of those are focused on vascular access management. They sell to hospitals and physicians (base customers), and have a revenue of 30 million USD³⁵.
- **Smiths Medical:** Smiths Medical is a leading global manufacturer of specialty medical devices that provides innovative and lifesaving solutions for the hospital, emergency, home and specialist environments. They only have 15 products³⁶, but have over 1 billion in revenue³⁷. They offer emergency healthcare solutions for military and homeland defense, and medical grade tubing products, which includes spigots, aspirators, connectors, and adaptors for industrial use. The company also offers veterinary devices used in the field of anesthetic, airway, critical care, chest, wound drainage, and monitoring for large and small animals; OEM services to medical device manufacturers, pharmaceutical companies, and suppliers worldwide; and medical device solutions for preclinical and clinical research. Its products are used in adult critical care, alternate care, anesthesia, assisted reproduction, cardiac care, diabetes, medical surgical, neo and pediatric critical care, oncology, pain management, respiratory care, and sleep medicine. The company offers its products through its sales and distribution network in the United States and internationally. Smiths Medical, Inc. was formerly known as Portland Plastics and changed its name to Smiths Medical, Inc.

³⁵ Capital IQ, Cardiva Medical

³⁶ Smiths Medical Website

³⁷ Capital IQ, Smiths Medical

Visionaries

Visionaries have a wide variety of products but not making as much money.

- Tetra Medical Supply Corporation: Tetra Medical Supply Corporation have well over 100 pharmaceutical products from bandage to braces³⁸with the target audience being regular consumers. However, they only have around 3 million in revenue³⁹.
- Pressure Products, Inc.: This is the direct competitor that Pocket Innovations identified from the kickoff. They are the one and only direct competitor on the market right now focusing on a non-invasive device that helps combat pocket hemostasis. They have a number of other products focusing on surgical appliances as well. Pressure Products fits into this category since they have over 19 products but less than 1 million revenue⁴⁰.

³⁸ Tetra Medical Supply Corporation Website

³⁹ Capital IQ, Tetra Medical Supply Corporation

⁴⁰ Capital IQ, Pressure Products, Inc

Niche Players

Niche Players have a narrow customer base, they are either new to the market or their products are targeted to specific audience, which would explain their lack of products and revenue.

- Angelini Pharma, Inc.: Angelini Pharma is a small company founded in 1983 and is based in Maryland, with only 20 employees, They currently have 9 products and a revenue of 2 million USD⁴¹. They manufacture sanitizing and disinfecting solutions, pharmaceuticals, wound care systems, and renal healthcare solutions. Angelini Pharma, Inc. operates as a subsidiary of Angelini Group.
- Rochal Industries LLC: Rochal Industries is an even newer company founded in 2014 and headquartered in San Antonio, Texas⁴². They are still in the research phase collaborating with other companies to focus on wound care and eye care products. Thus, they don't have any products on the market yet. Rochal Industries' current status is similar to Pocket Innovations as they're both still early in the process of developing a solution. From the Magic Quadrant, they are around the same place as Pocket Innovations. Rochal Industries develops and manufactures biomaterials for wound care and eye care industries. It offers antimicrobial materials for the reduction of opportunistic pathogens and biofilms; and cell compatible substrates.

⁴¹ Capital IQ, Angelini Pharma, Inc.

⁴² Capital IQ, Rochal Industries LLC

Transactions

The following are transaction histories of the competitors from 2016 to 2019. There are 31 records found. Among them, 3M company has 12 records as target or seller, and 5 records as buyer or investor. Johnson & Johnson has 8 records as target or seller, and 5 records as buyer or investor. And Cardiva Medical, Inc. has one record as target or seller. Pressure Products and Tetra Medical Supply Corporation have no transition record during this era.⁴³

The results are showing as the following:

Johnson & Johnson:

Closed Date	Transaction Type	Role	Target	Buyer/Investors	Sellers	Size (\$mm)
Aug-27-2019	Merger/Acquisition	Seller	BabyCenter, L.L.C.	Everyday Health Media LLC	Johnson & Johnson (NYSE:JNJ)	
Feb-15-2019	Merger/Acquisition	Buyer	Innovalens B.V.	Johnson & Johnson (NYSE:JNJ)		
Jan-16-2019	Merger/Acquisition	Buyer	Assets of Strickland General Agency of LA, Inc.	Johnson & Johnson (NYSE:JNJ)	Strickland General Agency of LA, Inc.	
Sep-30-2019	Buyback	Target	Johnson & Johnson (NYSE:JNJ)			5,000.0
Jan-10-2019	Merger/Acquisition	Buyer	Ci:z Holdings Co., Ltd.	Johnson & Johnson (NYSE:JNJ)		1,089.17
Jan-17-2019	Merger/Acquisition	Buyer	Ci:z Holdings Co., Ltd.	Johnson & Johnson (NYSE:JNJ)	CIC Corporation	715.18
-	Merger/Acquisition	Seller	14 Sites in North America, Switzerland and Germany of Johnson & Johnson	Jabil Inc. (NYSE:JBL)	Johnson & Johnson (NYSE:JNJ)	-
Jun-07-2018	Merger/Acquisition	Seller	66-Acre Corporate Campus At 185 And 201 Tabor Road In Morris Plains, New Jersey	Vision Real Estate Partners, LLC; PCCP, LLC	Johnson & Johnson (NYSE:JNJ)	-
Oct-01-2018	Merger/Acquisition	Seller	LifeScan, Inc.	Platinum Equity, LLC	Johnson & Johnson (NYSE:JNJ)	2,100.0
Aug-28-2017	Merger/Acquisition	Seller	Protein Sciences Corporation	Sanofi Pasteur Inc.	Ropart Asset Management Funds; Johnson & Johnson (NYSE:JNJ); Mertiva AB (publ) (NGM:MERT A); Pfizer Inc. (NYSE:PFE)	750.0
Dec-22-2016	Merger/Acquisition	Seller	Johnson & Johnson, Anusol and Rectinol Brands	Church & Dwight Co., Inc. (NYSE:CHD)	Johnson & Johnson (NYSE:JNJ)	130.0
Jun-16-2017	Merger/Acquisition	Buyer	Actelion Ltd	Johnson & Johnson (NYSE:JNJ)	Bellevue Asset Management AG; BlackRock, Inc. (NYSE:BLK); HBM Partners Ltd.	29,853.46
Jun-30-2016	Merger/Acquisition	Seller	Noramco, Inc.	SK Capital Partners	Johnson & Johnson (NYSE:JNJ)	392.5

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⁴³ Capital IQ, Screening

3M:

Closed Date	Transaction Type	Role	Target	Buyer/Investors	Sellers	Size (\$mm
Sep-30-2019	Merger/Acquisition	Seller	Assets of Drive Thru Communications Systems Business of 3M Company	ParTech, Inc.	3M Company (NYSE:MMM)	7.0
-	Merger/Acquisition	Seller	Advanced Ballistic Protection Business of 3M	Avon Rubber p.l.c. (LSE:AVON)	3M Company (NYSE:MMM)	116.0
Aug-01-2019	Merger/Acquisition	Seller	Gas and Flame Detection Business of 3M	Teledyne Technologies Incorporated (NYSE:TDY)	3M Company (NYSE:MMM)	230.0
Oct-11-2019	Merger/Acquisition	Buyer	Acelity, Inc.	3M Company (NYSE:MMM)	Acelity L.P. Inc.	6,725.0
Feb-01-2019	Merger/Acquisition	Buyer	Technology Business of MModal IP LLC	3M Company (NYSE:MMM)	MModal IP LLC	1,000.0
-	Buyback	Target	3M Company (NYSE:MMM)			10,000.0
Apr-30-2018	Merger/Acquisition	Seller	Wendt Boart Sprl	Altifort	3M Company (NYSE:MMM)	
Jul-02-2018	Merger/Acquisition	Seller	Polycom, Inc.	Plantronics, Inc. (NYSE:PLT)	3M Company (NYSE:MMM); Brentwood Venture Capital; Siris Capital Group, LLC; Whitman Capital, LLC Seller Funds: Brentwood Associates VII, L.P.; Whitman Partners,	1,986.55
Feb-06-2018	Merger/Acquisition	Seller	Noise, Environmental and Heat Stress Monitoring Products of 3M Company	TSI Incorporated	3M Company (NYSE:MMM)	
Jun-04-2018	Merger/Acquisition	Seller	3M Company, Communication Markets Division	Corning Optical Communications LLC	3M Company (NYSE:MMM)	900.0
Mar-31-2018	Merger/Acquisition	Seller	3M Company, High-Concentrates Additive Compounding Business	Evonik Industries AG (XTRA:EVK)	3M Company (NYSE:MMM)	
Sep-06-2017	Merger/Acquisition	Buyer	Elution Technologies, LLC	3M Company (NYSE:MMM)	Bia Diagnostics, LLC; Immunology Consultants Laboratory, Inc.	
Oct-03-2017	Merger/Acquisition	Seller	3M Attenti Ltd. (nka:Attenti)	Apax Partners LLP	3M Company (NYSE:MMM)	200.0
Jun-30-2017	Merger/Acquisition	Seller	3M Company, Tolling and Automated License/Number Plate Recognition Business	Neology, Inc.	3M Company (NYSE:MMM)	
Apr-17-2017	Private Placement	Buyer	VitaHEAT Medical Holdings, LLC	3M Company (NYSE:MMM)		1.8
Oct-04-2017	Merger/Acquisition	Buyer	Scott Technologies, Inc.	3M Company (NYSE:MMM)	Johnson Controls International plc (NYSE:JCI)	2,000.0
May-01-2017	Merger/Acquisition	Seller	3M Cogent, Inc. and 3M's Document Reader and Secure Materials Businesses	Gemalto N.V.	3M Company (NYSE:MMM)	850.0
Jan-03-2017	Merger/Acquisition	Seller	3M Company, Safety Prescription Eyewear Business	HOYA Vision Care, North America, Inc.	3M Company (NYSE:MMM)	53.0

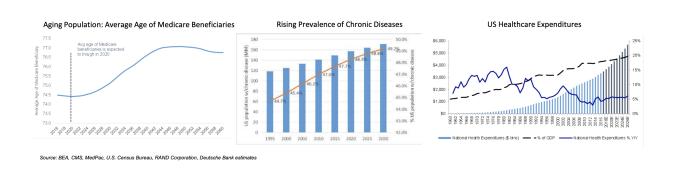
Cardiva Medical, Inc.:

Closed Date	Transaction Type	Role	Target	Buyer/Investors	Size (\$mm)
Feb-20-2018	Private Placement	Target	Cardiva Medical, Inc.	Canepa Healthcare, LLC; Luther King Capital Management Corporation; PTV Healthcare Capital <i>Buyer Funds:</i> Canepa Advanced Healthcare Fund, L.P	41.0

News/Trends

Market Trends

Deutsche Bank Research points out the demographics and macro trends in the Medical Technology industry, including the aging population, the incidence of chronic diseases, and healthcare expenditures. These trends are expected to lead steady industry growth over the next several years⁴⁴.



Other trends such as technology advances and geographic expansion also influence the market. Technology innovation provides multibillion-dollar opportunities, and international markets represent critical growth driver for large caps⁴⁵.

In addition, report from IBISWorld states that both consumer and technology trends are boosting the market growth⁴⁶. For the consumer section, the increasing number of elderly people represents the growing needs in this market. The report predicts the number of US residents aged 65 and older will reach \$61.6MM people in 2023. Internationally, the consumer trend of emerging markets such as China, India, Russia, and Brazil helps the market to grow as well. The report expects the value of industry to

⁴⁵ Deutsche Bank, Initiating Coverage of MDT, SYK, ZGH, EW, 2Jan2019 (p. 5)

⁴⁴ Deutsche Bank, Initiating Coverage of MDT, SYK, ZGH, EW, 2Jan2019 (p. 3)

⁴⁶ IBISWorld Industry Report 33911a, Medical Instrument & Supply Manufacturing in the US, Dec2018 (p.10)

grow at an annualized rate of 1.5% to \$26.6bn in 2023. Lastly, the most important sources in the industry growth are innovation and product development, so the R&D expenditure trend influences this market. The report forecasts the industry spending on wages, including hiring skilled laborers, will increase to \$19.5bn at an annualized rate of 1%. As for industry growth indicators⁴⁷, revenues generated through the sale of health care equipment and supplies as indicators, competitive products, and commercial execution are seen as the primary indicators⁴⁸.

Crystal Ball

For the healthcare industry, it will continue to grow steadily, since where there's people, there will be a need for healthcare. Also, there will be an increasing number of elderly people in the US (65 and older will reach \$61.6MM people in 2023), which is a major increase for pacemakers, and in turn, market for Pocket Pro.

On the other hand, although on paper there will be a steady need for devices to combat against pocket hematoma, from our TVL group interviews, we learned from their primary research with doctors and physicians, that pocket hematoma rarely happens in their experience. One mentioned that in the last 3 years of operating cardiovascular surgeries, only one person had pocket hemostasis.

As for competitors, Leaders will be hard to beat, since they are miles ahead in revenue and product pipelines. Because of their large funds, they can acquire emerging companies that help them expand into more fields and industries. Johnson & Johnson recently acquired Auris Health for their lung cancer diagnosis and surgical robots technology, in-line with the trends that technology advances are indeed something to look out for. From our research, there are currently two ways to advance into the market. The first is to expand the number of different product lines, since the market for

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⁴⁷ MarketLine, Health Care Equipment & Supplies in the United States, Jul2019 (p. 7)

⁴⁸ Berenberg, Smith & Nephew plc (SN/LN), 22Jul2019 (p. 4)

devices combating against pocket hematoma from TVL primary interviews seems small currently. The second approach would be to secure contracts with hospitals to provide a steady stream of revenue.