POLICY & REGULATION
More support for adding UDI to claims, p. 5

COMMERCIAL
M&A sees lackluster start to 2017, p. 11

R&D
Bio2 comes under Start-Up Spotlight, p. 13

Medtech Insight

Issue 30

medtech.pharmamedtechbi.com

Pharma Intelligence Informa

February 13, 2017

Shutterstock: Orhan Cam

Q&A: MDMA Strikes Optimistic Tone For Coming Year

DAVID FILMORE david.filmore@informa.com

It has been frenetic beginning of the Trump administration, with controversial and wide-reaching executive orders issued on a daily basis. But US device-industry groups have so far projected a calm and optimistic tone about prospects for the sector.

That is the certainly case for the Medical Device Manufacturers Association and its President and CEO Mark Leahey, who recently spoke to *Medtech Insight* about MDMA's priorities for 2017. The priority list for the group is mostly unchanged from previous years, and Leahey says MDMA's members, which are mostly small- to mid-sized medtech firms, are overwhelmingly optimistic that the new administration will be fertile ground to make progress on key issues in taxes, regulation, reimbursement and legal matters. (See box, "2017 MDMA Priorities.")

Photo credit: MDMA

Mark Leahey

Permanent repeal of the device tax, which is currently under a two-year suspension, remains MDMA's top goal, and momentum is high toward achieving that as part of an Affordable Care Act repeal-and-replace package. And, at this point, Leahey doesn't foresee big problems in getting the MDUFA IV US FDA device user-fee agreement, which MDMA and its fellow trade associations see as a good deal to further improving the review process, through Congress before the current program expires later this year.

Leahey, who spoke on Jan. 25, acknowledges that his group will have new personnel in government to deal with, but he's not revealing any concerns. "We have a great story to tell," he said.

Medtech Insight: Many of the priorities MDMA is identifying for 2017 are pretty similar stated goals for 2016. But the political environment is very different now. What has changed with regard to how you address these matters, and how you plan to work with the administration and Congress?

Mark Leahey: I think the good news is, for the most part – being at MDMA just over 15 years now – all of these issues have strong bipartisan support. That is a benefit. Clearly, the new administration, probably the biggest change, will be some of the personnel within the administration, and the experience and the mindset they bring. And based

CONTINUED ON PAGE 15

Pharma intelligence

informa

Intelligence with a Global Perspective

The Premier Resource In The Life Sciences Industry

- Biomedtracker
- Datamonitor Healthcare
- In Vivo
- Meddevicetracker
- Medtrack
- Medtech Insight
- Pink Sheet
- Pharmaprojects
- RxScorecard
- Scrip
- Sitetrove
- Trialtrove

Pharmaintelligence.informa.com


7


13


19

explore more:

exclusive online content

LabCorp bets on January's biggest VC round
http://bit.ly/2k1DrsA

2017 has not gotten off to a bullish start, with January's total venture financing deal value barely making it halfway past the level in January 2016. The biggest funding round of the month caught the eye of the largest lab-services provider in the US, LabCorp.

Earnings winners and losers
http://bit.ly/29zivFF

The big medtechs have now closed the books on 2016 and are looking ahead to 2017. Which firms progressed and which slipped down in their financial performance?

Anti-tax campaign
http://bit.ly/2krp2JG

AdvaMed is targeting lawmakers on the Hill and in key states with a new ad campaign intended to ensure permanent repeal of the 2.3% device tax is part of a future congressional budget reconciliation bill.

Compliance 360°
http://bit.ly/2kHaq7T

An eight-part podcast series from *Medtech Insight* on US FDA compliance and enforcement issues. The first episode dropped Feb. 6. Look for new entries weekly.

Device Week
http://bit.ly/2k2H7dU

Our weekly podcast, where *Medtech Insight* journalists discuss topics they are covering that impact the device and diagnostics sector.

medtech.pharmamedtechbi.com

inside:

Medtech insight

DAVID FILMORE @MEDTECHDAVID
david.filmore@informa.com
TINA TAN @MEDTECHTINATAN
tina.tan@informa.com
SHAWN M. SCHMITT @MEDTECHSHAWN
shawn.schmitt@informa.com
REED MILLER @MEDTECHREED
reed.miller@informa.com
AMANDA MAXWELL @MEDTECHAMANDA
amanda.maxwell@informa.com
MARION WEBB @MEDTECHMARION
marion.webb@informa.com
SUE DARCEY @MEDTECH_INSIGHT
sue.darcey@informa.com
FERDOUS AL-FARUQUE @MEDTECH_DANNY
danny.al-faruque@informausa.com
ELIZABETH ORR @ELIZABETHJORR
elizabeth.orr@informa.com
CATHERINE LONGWORTH @MEDTECHCATE
catherine.longworth@informa.com
ASHLEY YEO @ASHLEYPYEO
ashley.yeo@informa.com
MAUREEN KENNY @SCRIPREGMAUREEN
maureen.kenny@informa.com
NEENA BRIZMOHUN @SCRIPREGNEENA
neena.brizmohun@informa.com
VIBHA SHARMA @SCRIPREGVIBHA
vibha.sharma@informa.com
JANET HANIAK SENIOR DESIGNER
GAYLE REMBOLD FURBERT DESIGN SUPERVISOR
RICHARD FAINT HEAD OF MEDTECH
richard.faint@informa.com
PHIL JARVIS MANAGING DIRECTOR

Editorial office:
52 Vanderbilt Avenue, 11th Floor, New York, NY 10017
phone 240-221-4500, fax 240-221-2561

CUSTOMER CARE:
1-888-670-8900 OR 1-908-547-2200
FAX 646-666-9878
clientservices@pharmamedtechbi.com

▶ join the conversation

We are tweeting, chatting, liking and sharing the latest industry news and insights from our global team of editors and analysts — join us!

@Medtech_Insight

barely making it halfway past the January 2016 level. The biggest round, valued at $40m, went to preterm birth-risk specialist Sera Prognostics, catching the eye of LabCorp, the largest lab services provider in the US.

11 **M&A Analysis –** 2017 kicked off with 12 medtech M&A acquisitions in January, a decline from the 18 M&A deals recorded in the same month last year, and two fewer than December.

12 **Abbott Finally Joins MRI-Compatibility Club In US CRM Market –** The firm's *Assurity MRI* pacemaker and *Tendril MRI* pacing lead, acquired in its recent St. Jude Medical deal, gained US FDA approval after some delay.

START-UP SPOTLIGHT

13 **Bio2 Technologies Inc., Space-Tech Biomaterial For Extremities Surgery –** Originating from aerospace technology, Bio2 Technologies' *Vitrium* biomaterial platform is designed for multiple applications across musculoskeletal surgery. The firm has already begun commercialization in the US and expects to get a CE mark later this year.

POLICY & REGULATION

17 **New French Notification Rule Means More Work For Medtech –** Manufacturers of implantable and class III medical devices will face additional work from a forthcoming requirement to submit a summary of product characteristics to the French regulatory agency.

18 **India Can Do More To Align New Medtech Regulations With Global Norms, Says Industry –** India will finally get a device-specific regulatory framework when new rules formed by the government come into force next year, but industry wants some tweaks before then.

19 **China Requires Medtech Cybersecurity Compliance Against Hackers –** China has issued its first-ever guidelines on cybersecurity in medical devices. These recommendations require companies to meet cybersecurity testing standards and ensure routine security updates before they can register web-connected products.

20 **Register Again Or Not? Malaysia Clarifies What Companies Must Do When They Modify A Device –** New guidance from Malaysia's Medical Device Authority defines three categories of device modifications and explains what they require of manufacturers in terms of notification to MDA.

21 **US DOJ Is Expanding Reach of Foreign Corrupt Practices Act, Attorneys Say –** The federal government has been creative in how it enforces the statute, which targets overseas corruption by US businesses.

22 **CMS Expands Competitive Bidding –** The US Medicare agency will expand its competitive bidding program to include insulin pumps, and will add new areas for continuous positive airway pressure devices.

UDIs Should Be Added To Insurance Claims, Panel Agrees

SUE DARCEY sue.darcey@informa.com

The Accredited Standards X12 committee, a panel made up of hospital and insurance plan administrators that helps set standards for claims documentation, has recommended, after years of deliberation, that Unique Device Identifiers should be noted on Medicare and private-payer claims forms for health-care services involving implantable devices.

Among the types of products that could be pinpointed on medical claims forms if the X12 recommendations are implemented are company-specific models of artificial hips and knees, cardiac stents, and defibrillators.

US FDA finalized its UDI regulation in 2013 and, since then, an increasing number of devices have fallen under a mandate to include the identifiers on labeling and packaging, and to submit device descriptors to the Global Unique Device Identification Database that that are linked to specific UDIs.

Multiple applications are envisioned for UDIs, but key ones are to track safety and outcomes for specific devices, and to more easily locate devices in a recall. To make those uses a reality, UDIs need to be incorporated into the system by hospitals and other providers. Two primary routes have been identified to make that happen: entering UDIs in patient electronic health records (EHRs) and linking UDIs to individual insurance claims.

Rules have been put into place to begin incorporating UDIs in EHRs. *(Also see "US Electronic Health Record Standards Add UDI For Implantable Devices" - Medtech Insight, 20 Oct, 2015.)* But there has been more resistance to adding a field for UDIs in claims forms. Until recently, the Centers for Medicare and Medicaid Services was pushing back against the idea out of resource concerns and other issues. But CMS formally came on board with the idea last summer. *(Also see "Medicare Agency Comes On Board With Adding UDIs To Claims Forms" - Medtech Insight, 18 Jul, 2016.)*

But device-makers remain opposed to the move, questioning the validity of the data that would be collected from claims. Hospitals also remain wary of UDI on claims primarily because of the costs it would involve.

PROCESS COULD TAKE A YEAR OR MORE

But the X12 recommendation adds new momentum to adding UDIs to claims. Pew Charitable Trusts has been a longtime champion of adding UDIs to the forms. The groups hailed the decision Feb. 1 as a victory, and a means to better understanding and boosting the long-term safety of implanted medical devices. But Pew cautioned that the committee's recommendation is only a "critical first step," and more work remains to be done.

The X12 panel must first finalize its recommendations, after which it will be reviewed by other advisory committees.

Eventually the recommendation will be presented to CMS to develop final rules for claims form inclusion. Pew said the process "could take a year or more." And, in a statement, it urged that the proposal be acted on this year or next. Claims forms are updated infrequently, Pew said, with the last changes made in 2012.

Among those pushing for the addition of UDIs to claims have been members of Congress, including Sens. Chuck Grassley, R-Iowa, Elizabeth Warren, D-Mass., and Rep. Bill Pascrell, D-NJ.

"Collecting device identifiers on insurance claims forms would allow device performance and safety concerns to be tracked and evaluated at the model level, enable the collection and analysis of detailed device and patient data, facilitate outcome comparisons across device models, and protect the integrity of the Medicare program," Grassley and Warren wrote in an Aug. 29 letter.

But the industry group AdvaMed issued a statement on Feb. 2 opposing the X12 recommendation.

"We support efforts to incorporate UDI information in EHRs and believe that reducing existing obstacles to the adequate identification of medical devices is a laudable goal," said Don May, executive VP, payment & health-care delivery policy. "However, we are concerned that a complex dataset that combines UDIs, and hospital and physician claims information would be difficult to analyze appropriately, and could generate inaccurate and misleading conclusions about the performance and value of specific technologies.

"This could lead patients and physicians to make ill-informed decisions about the continued use of an important medical device. Further, implementing this requirement represents an unnecessary new regulatory burden on providers," May said.

AdvaMed plans to submit comments to X12 and to work with CMS among others, to share its concerns.

Published online 02/02/17

Four Charged In Device Fraud Scheme

ELIZABETH ORR elizabeth.orr@informa.com

Four people are facing fraud and conspiracy charges for their part in marketing a medical device that they falsely claimed could treat more than 200 different diseases, the US Department of Justice announced Feb. 2.

US Postal inspectors arrested Robert "Larry" Lytle, Fredretta Eason and Irina Kossovskaia after a Rapid City, SD, federal grand jury indicted the trio the weekend of Jan. 28. The fourth individual, Ronald Weir, agreed to plead guilty to related conspiracy charges on Jan. 30.

The government says Lyle, Kossovskaia and Weir marketed and distributed hand-held light-emitting devices known as *QLasers*, which they said could treat medical conditions ranging from cardiac arrest to cancer, and even Lou Gehrig's disease. However, US FDA had approved the device only to treat arthritis in the hand and its use to treat other conditions wasn't supported by any published research. The QLaser was marketed to elderly consumers for prices ranging from $4,000 to $13,000. The company's marketing referred to Lytle as "Dr. Larry Lytle, DDS, Ph.D."; however, his license to practice dentristry had been revoked for fraud, and his claimed Ph.D. was not legitimate, DOJ says.

This isn't the first brush with law enforcement for Lytle and his conspirators. In 2014, FDA issued an injunction against Lyle's company, 2035 Inc., for marketing the device for off-label uses. *(Also see "Injunction Granted Against Laser Manufacturer" - Medtech Insight, 8 Oct, 2015.)* The injunction was followed by a 2015 civil case, during which the court confirmed that the device's packaging was false and misleading, and also found that the QLaser could be dangerous when used as directed. As a result, the court told Lytle and his colleagues to stop distributing the devices. The defendants' failure to obey court orders led to the current criminal case, DOJ says.

Lytle and Kossovskaia face charges of mail fraud, wire fraud, conspiracy, criminal contempt and obstruction of government proceedings, while Eason was charged with criminal contempt. Weir, meanwhile, was charged with one count of conspiracy to introduce misbranded medical devices into interstate commerce with the intent to defraud and mislead.

The defendants face up to 20 years in prison for each count of mail or wire fraud, and five years for each charge of conspiracy or obstruction. There is no mandated maximum sentence for criminal contempt.

Published online 02/02/17

J&J Device Chief Gary Pruden Retiring; Sandra Peterson Will Take On Duties

SUE DARCEY sue.darcey@informa.com

Photo credit: Ferdous Al-Faruque

Gary Purden, worldwide chair, medical devices, Johnson & Johnson

Diversified medical products company Johnson & Johnson announced Feb. 2 that Gary Pruden, worldwide chair, medical devices, is retiring June 1, and his responsibilities will be assumed by Sandra Peterson, group worldwide chair.

In addition to taking over the hospital medical device business for J&J, Peterson will continue to oversee a broad portfolio of businesses for the company, covering supply chain, information technology, global services, health and wellness, global design and health technology.

Pruden served as executive VP and worldwide medical device chair at J&J since May 2015; prior to this, he led the firm's global surgery group for three years. He also served as company group chairman for J&J's Ethicon Inc. group, where he helped the global surgery business through a period of accelerated growth and innovative advancements, including the signing of a collaboration with **GoogleInc.** to bring a new robotic surgery platform to market in March 2015. *(Also see "Robotic-Assisted Surgery: Taking MIS By Storm" - Medtech Insight, 26 May, 2016.)*

The executive first joined J&J in 1985 with Janssen Pharmaceutical Cos., holding several senior sales posts until assuming the role of VP of sales and marketing in 2003.

Sandra Peterson has had an extensive career in health care, life sciences and consulting, most recently serving as chair and CEO of **Bayer CropScience AG** in Germany.

"Since joining the company more than four years ago, Sandi has been a valuable partner and has played a critical role in positing Johnson & Johnson to thrive in a rapidly changing environment," said J&J chair and CEO Alex Gorsky.

Published online 02/06/17

Mainstay Medical Wins First ReActiv8 Neurostimulation Implant Sale

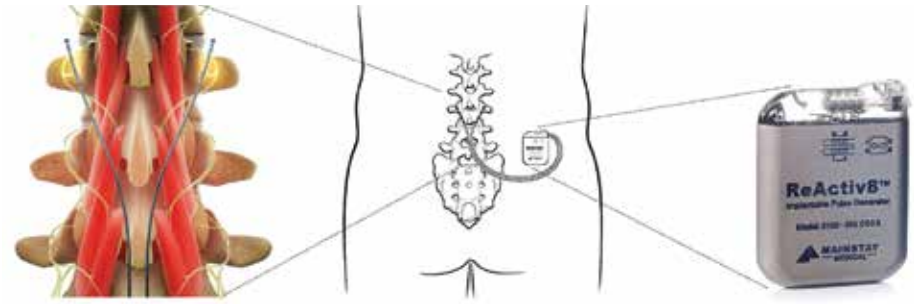
CATHERINE LONGWORTH catherine.longworth@informa.com

Mainstay Medical International PLC has won its first sale of *ReActiv8*, an implantable neurostimulation system to treat disabling chronic low-back pain (CLBP), some seven months after gaining CE mark approval. The ReActiv8 implant was performed at the Catholic Hospital Koblenz-Montabaur in Koblenz, Germany, by orthopedic surgeon Dr. Francis Kilian.

ReActiv8 is a small implanted device that electrically stimulates the nerves responsible for contracting the key muscles of the lumbar spine to restore functional spine stability. Mainstay Medical received CE-marking for ReActiv8 in May 2016 following results from the ReActiv8-A clinical trial in Australia and Europe. *(Also see "Mainstay Set To Launch ReActiv8 Neurostimulator In Germany" - Medtech Insight, 25 May, 2016.)*

Mainstay's European commercial activities for ReActiv8 are initially focused on Germany where it aims to drive adoption of ReActiv8 in a select number of high volume multi-disciplinary spine-care centers. Peter Crosby, Mainstay Medical CEO, told *Medtech Insight*: "What we've said and what we maintain is that our objective is to build a number of reference sites in Germany in centers who have a multidisciplinary approach to chronic lower-back pain and the hospital in Koblenz is one of those."

Crosby said there had been a lot of "backend" stuff going on to bring ReActiv8 to market since its CE-marking. "As part of our CE-marking, we agreed to conduct two post-market clinical follow up studies," said Crosby. "One was a registry and the other was a post-market clinical follow up clinical trial, so we had to finalize those protocols and get ethics committee approvals and sign contracts with all the centers for participation. Then there was the training of the physicians and the surgeons who will be using the device and the center for how to look for and manage patients. We also had to do negotiations with the center itself on the payment and pricing and the insurance."



Source: Mainstay Medical

In January, the company applied for ReActiv8 to be admitted to the Australian Register of Therapeutic Goods for commercialization in Australia. "The ReActiv8-A Trial was conducted at 10 centers worldwide, several of which were from Australia," said Crosby. "Australia is very much like other developed world markets in that it has well established health-care system and high standards of care. There was also a number of investigators who have used the device already in clinical trials and really want to use it in commercial situations, so we are responding to the requests of our investigators who say, 'Hey, I really like this and want to make it available to our patients, so get approval so I can do so.'"

He said Mainstay Medical expects Australian regulatory approval in one year, followed with placement of direct sales staff in that market. "The selling model for Mainstay is that we are targeting centers that see a large number of patients with chronic lower back pain, preferably with a multidisciplinary approach, and because it's a high-volume center it makes sense for us to have our own direct salesforce because it tends to be a small number of centers that will be high volume, rather than a large number of people who are buying a small number of products."

The company also plans to continue patient recruitment for its pivotal trial to gain US approval. "It is an international, multicenter, prospective, randomized, sham-controlled, triple-blinded trial in about 25 sites. There are about 15 sites in the US, some in Australia, Belgium, Netherlands and the UK. The first patient that was implanted from that trial was announced last year, and we are actively recruiting for the enrolment of the trial. We think that enrolment should be complete by the end of the year, so results will be available from next year."

The company is headquartered in Dublin, Ireland, and has subsidiaries operating in Ireland, the US, Australia and Germany. It has raised $101.1m in seven rounds, with the latest round in 2016. Investors include Sofinova Partners, Fountain Healthcare Partners and Seventure Partners.

Published online 02/01/17

Alvimedica Readies For Maiden Voyage Into US Drug-Eluting Stent Market

AHMET SEVINDIK

With annual turnover of around $50m, Istanbul-based Alvimedica is enjoying high double-digit growth rates from sales of its interventional cardiology products in Europe, Asia and the Middle East. But the firm is keen to enter the US market; the US therapeutic interventional market had an estimated value of $2.6bn in 2015, according to *Meddevicetracker*'s "US Markets for Interventional Cardiology Products" report.

Alvimedica was founded in 2007 by the late Ishak Alaton, who had a vision of developing the company into a specialist in high-level R&D and manufacturing within Turkey's medical technology industry. Over the years, it has developed a number of coronary stents, balloon catheters and guiding catheters that are currently sold worldwide – 60% of its $50m revenue in 2015 came from Europe, 14% from Turkey and the remainder from South-East Asia, Russia and the Middle East. The company has an average growth rate of around 25%, although these rates are far higher in Asia (87%), Russia (57%) and the Middle East (34%). However, to date, the company does not have a US presence.

On Jan. 17, Alvimedica announced it had CE-marked Cre8 EVO and initiated Diab8, a 50-center, 3,000-patient randomized controlled trial that pits the performance of Cre8 EVO – which elutes Amphilimus, a proprietary sirolimus and fatty acid mix – against an everolimus-eluting stent in the treatment of coronary artery disease in diabetic patients. The 50 centers will be in 12 countries, although none of these are in the US, according to the firm. The data will hopefully provide further clinical support to the efficacy of Cre8 EVO.

Cre8 EVO stems from the Cre8 Amphilimus-eluting stent platform, which Alvimedica gained through its acquisition of Carbostent & Implantable Devices (CID), an Italian interventional cardiology company. The Cre8 stent technology features CID's proprietary coating, *Carbofilm*, a thin film of pure carbon with turbostratic crystal structure. When applied to the surface of an implantable device, like the stent, it gives the surface a very high degree of compatibility and hemo-compability, avoiding the risk of thrombosis. The absence of polymer in Cre8 stent further lowers the risk of stent thrombosis and reduces inflammatory response.

Cre8 EVO differs from the first-generation Cre8 stent by featuring a new stent architecture, which is designed for effective drug concentration within the vessel wall, including complex coronary anatomies and pathologies like those of diabetic patients. The very thin cobalt chromium body, sealed by the Bio Inducer Surface, provides high hemo- and bio-compatibility, increasing the rate of strut coverage and thus potentially reducing thrombogenicity.

ENTERING WITH EYES OPEN

Alvimedica decided to move into the US market after it was encouraged by positive clinical feedback about Cre8, particularly when used in diabetic patients, and the significant sales growth of this product in the current countries it sells to. While the Turkish firm recognizes that it will come face to face with large, well-established drug-eluting stent rivals in the US, and that competition will be fierce, it is determined to take its chances, it told *Medtech Insight*.

The company stressed that in spite of the limited resources spent in the development of Cre8, and then Cre8 EVO – in comparison with giant US companies on their products – the clinical performances of this polymer-free DES is "unanimously recognized as the best-in-class in the market," with a lot of backing from clinical evidence and appreciation by key opinion leaders in many countries. The firm said it is confident that this, together with its know-how in high quality manufacturing, will help it succeed in the US.

In the meantime, Alvimedica is also exploring possible paths for a commercial partnership in the US market after Cre8 EVO clears the regulatory hurdle.

Interventional Cardiology In Turkey

Turkey's stent market is worth about $120m annually and most of the products in this segment are being imported. The Turkish drug-eluting stent market grew 47.7 % last year, while the balloon angioplasty market grew 84% between 2014-2015.

Published online 02/02/17

VC DEALS ANALYSIS:

LabCorp Puts Money On January's Biggest Round

TINA TAN tina.tan@informa.com

January chocked-up 26 venture financing deals of $1m or more. That may only be five deals fewer than a year ago, but those few missing deals were the springboard that gave medtech investment in 2016 a flying start.

Coincidentally, January's deal volume breakdown by size of the financing round matched exactly that of January last year. (see Figure 1.)

The first month of 2017 did not see any deals go above $40m, while last January there were four deals in this higher-value range, the largest of which was a $100m series A round from Grail, the molecular diagnostic spin-out of Illumina. *(Also see " VC DEALS ANALYSIS: 2016 Bucks January Trend With Flying Start " - Medtech Insight, 2 Feb, 2016.)*. Of the 25 deals in January 2017 that disclosed financial details, the total raised was around $343.5m, easily eclipsed by the $624.5m raised a year ago.

However, looking at the bigger picture, January 2016 proved to be an unusually difficult target to beat and last month's performance is an improvement over other Januarys in previous year, which have shown to be typically slow, (See Table 1.)

PRETERM BIRTH RISK TEST CATCHES BIGGEST BUCKS

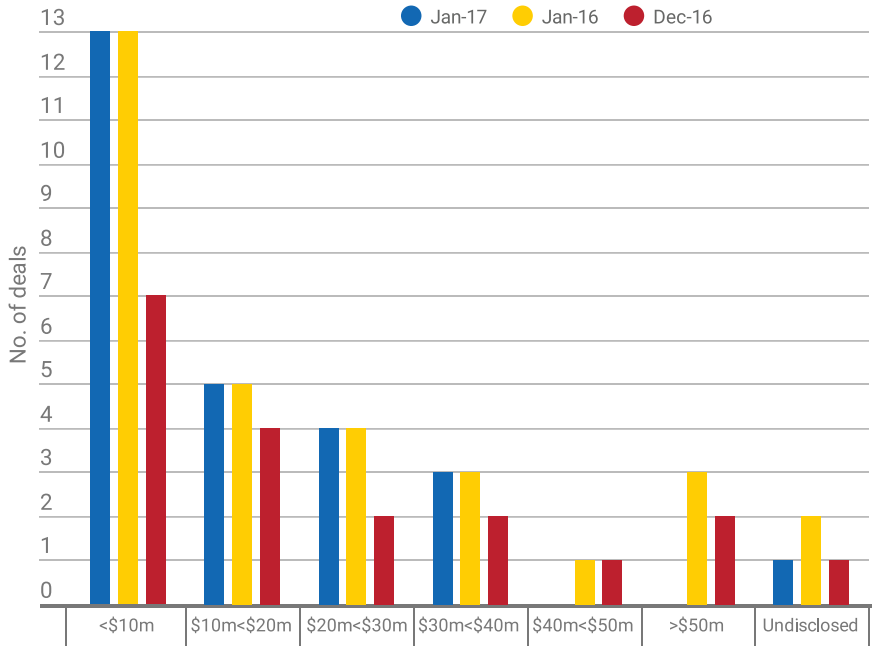
The deals in January were spread widely across multiple product/therapy sectors. IVDs had a modest win, accounting for five deals out of the total 26. Surgery was next with three, and diagnostic imaging, orthopedics and ENT each accounted for two deals. (See Figure 2.)

An IVD company also raised the biggest round in January, a $40m Series C financing from Utah-based Sera Prognostics. The round was led by LabCorp, which also agreed to be the exclusive US distributor of Sera's PreTRM test, designed to provide an early and individualized prediction of preterm birth risk.

Sera had initiated a targeted launch of PreTRM last year with limited commercial access in select geographies. Having an IVD heavyweight like LabCorp – which has a wide reach, covering 1,750 patient service centers in the US – as a partner should help it expand commercialization in its home market this year. LabCorp already offers noninvasive prenatal tests, as well as tests in women's health-care and reproductive genetics. Sera will also use the funds to build clinical evidence

FIGURE 1

Number of deals by amount raised, Jan 2017 vs Jan 2016 vs Dec 2016



Source: Medtech Insight VC data tracker

TABLE 1

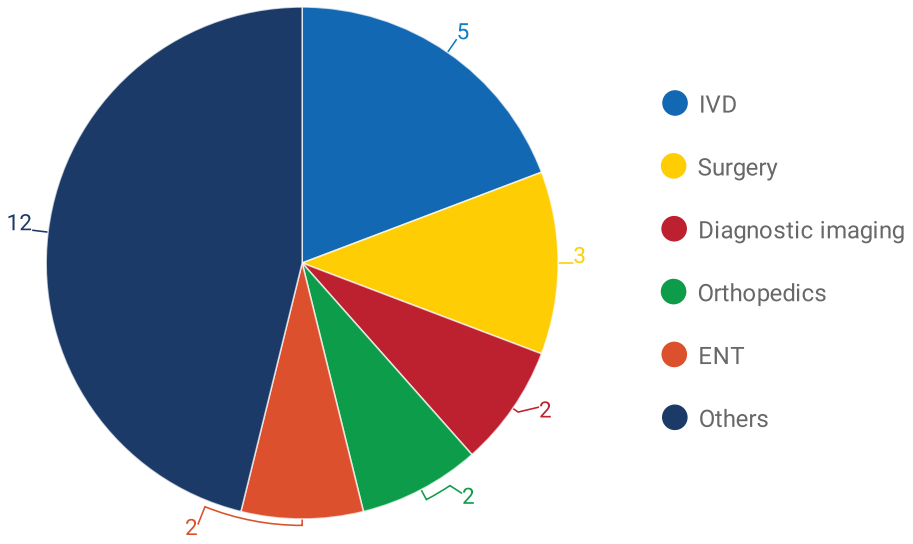
Comparison of January venture fundraising performance 2013-2017

	NUMBER OF DEALS	TOTAL DEAL VALUE*
Jan 2013	26	$294.2m
Jan 2014	24	$206.3m
Jan 2015	22	$247.9m
Jan 2016	31	$625.4m
Jan 2017	**26**	**$343.5m**

*Source: Medtech Insight VC deal tracker; * based on deals where financial details were available*

FIGURE 2

Number of deals by product/therapy sector



Source: Medtech Insight VC data tracker

to support reimbursement and insurance coverage decisions.

Preterm birth affects 15 million infants worldwide each year, with one million deaths occurring from prematurity. Of nearly four million babies born annually in the US, approximately one in ten is born prematurely.

The next biggest venture financing deal was a $38m Series B round raised by Pennsylvania-based Cerêve, which is seeking to position its *Cerêve Sleep System* as a drug-free alternative to treating insomnia. (See Table 2.) The firm intends to use the proceeds to launch its device, following *de novo* clearance by the US FDA in July last year. The technology is cleared for prescription use only and for reducing latency to Stage 1 and Stage 2 sleep in people with insomnia. The system comprises an intelligence bedside device that precisely cools and pumps fluid to a forehead pad worn throughout the night. The company has conducted several clinical studies on the technology, including a randomized controlled trial in primary insomnia patients in seven clinical sites across the US.

Cerêve has attracted well-known names in the health-care investment community, including Arboretum Ventures, Versant Ventures and – having just joined through this Series B round – KKR. The firm also has a management team with solid experience in sleep disorders; Eric Nofzinger, the founder and chief medical officer, was the director of the Sleep Neuroimaging Research Program at the University of Pittsburgh, while CEO Craig Reynolds served as the chief operating officer at sleep apnea therapy specialist Respironics for more than 10 years.

Cerêve is targeting a very lucrative market valued at the double-digit billion-dollar range. The US represents its biggest opportunity, with 55 million Americans suffering from insomnia. According to the National Center for Health Statistics, nearly nine million Americans have taken prescription sleeping pills in the last 30 days.

After Cerêve, the second largest financing deal in January was a $35m Series D round by UK IVD firm Atlas Genetics. In this round, Atlas welcomed new Chinese investor Wondfo Biotech, potentially signaling continued interest by China's investors in foreign medtech assets. Atlas said it is using the proceeds to fund US clinical trials and commercialization of its second diagnostic product, a combined chlamydia and gonorrhea test which runs on its *io* molecular diagnostic platform. Other investors in Atlas include Consort Medical (with whom Atlas also has a strategic partnership for the manufacture of its test cartridges) and from pharma investors Novartis and Johnson & Johnson. *(Also see "Atlas Genetics Fundraising Pulls In New Chinese Investment" - Medtech Insight, 23 Jan, 2017.)*

Published online 02/07/17

TABLE 2

Top 5 medtech VC deals by amount raised, January 2017

RANKING	COMPANY	BASED IN	PRODUCT/ THERAPY SECTOR	AMOUNT RAISED	FINANCING ROUND	TOTAL INVESTMENT
1	Sera Prognostics	UT, US	IVD - preterm birth risk	$40m	Series C	Undisclosed
2	Cerêve	PA, US	Sleep disorders - insomnia therapy	$38m	Series B	Undisclosed
3	Atlas Genetics	Bath, UK	IVD - infectious disease	$35m	Series D	$100m
4	Ivantis	CA, US	Ophthalmology - microstent for glaucoma	$25m	Series C	$113m
5	Elucent Medical	MN, US	Cancer management - breast tumor localization technology	$24m	Series C	Undisclosed

Source: Medtech Insight VC data tracker

M&A Analysis: Feeble Start To 2017

CATHERINE LONGWORTH catherine.longworth@informa.com

While December 2016 rounded off with a final flurry of M&A activity, deal-making shifted down a gear in the first month of the new year. A total of 12 medtech M&A transactions were announced and recorded on *Medtech Insight*'s M&A Data Tracker in January 2017, a decline from the 18 acquisitions in January 2016 and two fewer than December 2016. *(Also see "MNA Analysis: 2016 Begins With Small List Highlighted By IVD Blockbuster" - Medtech Insight, 2 Feb, 2016.)*

It continues the year-on-year downward trend in M&A deal volume, with 26 acquisitions tracked in January 2015 and 32 acquisitions in January 2014.

Out of the twelve deals recorded in January, only four disclosed the financial terms. The biggest transaction of the month was **IBA Molecular Inc's** agreement to pick up Mallinckrodt PLC's nuclear imaging business**.** The deal, valued at $690m, included $574m paid up-front, the assumption of $39m of long-term debt, and $77m of contingent consideration. The merged businesses will comprise 21 manufacturing centers and commercial operations across 60 countries.

In another multimillion dollar deal,Hill-Rom Holdings Inc. signed an agreement to acquire Mortara Instrument Inc. for $330m in cash. Hill-Rom said the acquisition of the diagnostic cardiology and patient monitoring specialist company would allow it to qualify for a significant tax benefit.

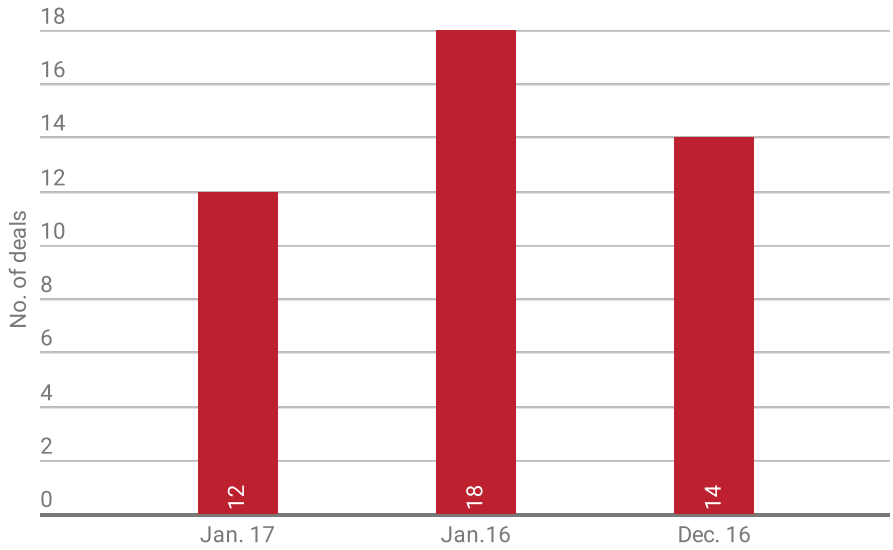
Integra LifeSciences Holdings Corp acquired tissue regeneration company Derma Sciences Inc. for $7 per share of common stock in cash, or a total of approximately $204m. Under the terms of the agreement, Integra will commence a cash tender offer to purchase all of the outstanding shares of the capital stock of Derma Sciences. The company said the addition of Derma's amniotic tissue-based products would broaden its regenerative technology offerings and accelerate is advanced wound-care strategy.

Wound-care firm ConvaTec also made its first acquisition since listing on the London Stock Exchange. The FTSE-100 company raised nearly £1.5bn in London's biggest IPO of 2016. The UK based company inked a €25m ($27m) deal to grab Dutch ostomy-care business EuroTec, which will include its production facilities in Roosendaal, Netherlands.

January was noticeably absent of any billion-dollar deals compared to the same period last year. In January 2016, Thermo Fisher Scientific Inc. made a $1.3bn blockbuster deal to acquire **Affymetrix**.

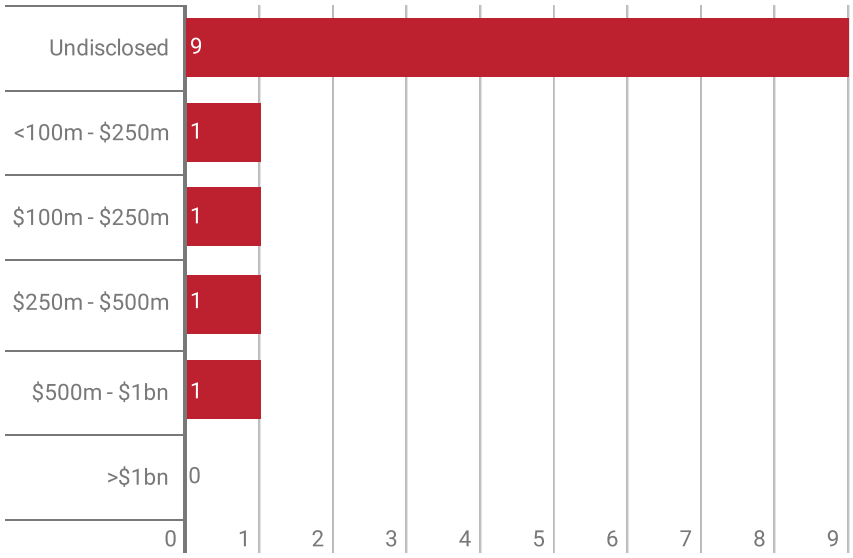
In terms of deal spread by product/therapy sector, IVDs led the way again with three acquisitions and orthopedics, picking up two deals. US companyPerki-

FIGURE 1



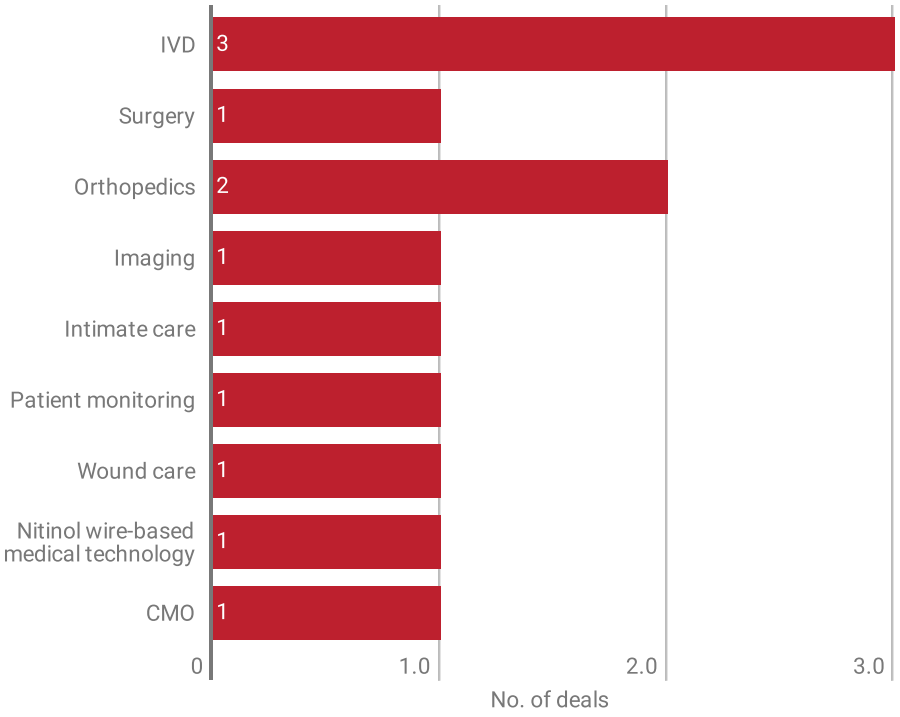
Source: Medtech Insight M&A Data Tracker

FIGURE 2



Source: Medtech Insight M&A Data Tracker

FIGURE 3



Source: Medtech Insight M&A Data Tracker

nElmer Inc. acquired Indian IVD firm **Tulip Diagnostics Ltd.** for an undisclosed amount. Tulip is one of India's largest domestic providers of *in vitro* diagnostic reagents, kits and instruments. PerkinElmer said the acquisition of Tulip would help accelerate growth in emerging market diagnostics and expanding the company's infectious disease screening menu.

As for orthopedics, Japanese tech group Teijin Ltd. added **Takiron**'s bone-fixation business to its portfolio. Teijin acquired an 86% share of the Osaka-based business for an undisclosed amount. *(Also see "Teijin To Solidify Ortho Biz With Bone-Fixation Investment" - Medtech Insight, 25 Jan, 2017.)* In a statement, Teijin said it would work to expand the sales, profitability and brand recognition of Takiron's bioresorbable implants, which include the *OSTEOTRANS-MX* bone-bonding material. Once the transaction is finalized, the business will be renamed **Teijin Medical Technologies Co. Ltd.**, with Takiron continuing to own the remaining 14% of the company.

Johnson & Johnsonorthopedics subsidiaryDePuy Synthes made an asset purchase and development agreement with Interventional Spine Inc. DePuy Synthes will add Interventional Spine's expandable cages, and minimally invasive surgery (MIS) technologies for spinal fusion to its core spine platform. Financial terms of the agreement were not disclosed.

Also in January, Abbott Laboratories Inc. finally completed its $25bn acquisition of St. Jude Medical Inc. The addition of St. Jude positions Abbott as a key cardiac rhythm management competitor to medtech giants Medtronic PLC and Boston Scientific Corp.*(Also see "Abbott Becomes CRM Player Overnight By Completing St. Jude Deal" - Medtech Insight, 5 Jan, 2017.)* The EU commission also approved Abbott's pending acquisition of Alereon condition that Alere's Epoc,Triage and BNP businesses are divested to alleviate anti-trust concerns. The two companies are in the midst of a protracted legal battle. *(Also see "EU Approves Troubled Abbott-Alere Deal – But Abbott Still Wants Out" - Medtech Insight, 26 Jan, 2017.)*

Published online 02/03/17

Abbott Finally Joins MRI-Compatibility Club In US CRM Market

DAVID FILMORE david.filmore@informa.com

Abbott
A Promise for Life

Abbott Laboratories Inc. shed a significant drag on its efforts to pick up market-share in the US cardiac rhythm management market with the Feb.1 FDA approval of MRI-conditional labeling for its pacemakers.

Abbott's CRM business, which it acquired on Jan. 4 as part of its acquisition of St. Jude Medical Inc., fell behind competitors in achieving labeling to support use of its devices with MRI scans, a factor that has proven to be a critical market differentiator. *(Also see "Emerging Markets Are Fertile Frontier For CRM Device-Makers" - Medtech Insight, 30 Jan, 2017.)* Medtronic PLC, along with smaller competitor, Biotronik SE & Co. KG, were way out ahead in gaining MRI labeling in the US for CRM devices. Boston Scientific Corp. joined the club last year. *(Also see "MRI Labeling For Boston Scientific's Emblem MRI S-ICD Approved By US FDA" - Medtech Insight, 10 Aug, 2016.)*

The approvals announced by Abbott Feb. 1 are for the *Assurity MRI* pacemaker and the *Tendril MRI* pacing lead. The firm had originally expected to get these approvals before the end of 2016. The delay contributed to underperformance by St. Jude's CRM business in the fourth quarter, according to Larry Biegelsen, an analyst with Wells Fargo Securities.

Photo credit: Abbott Laboratories

Assurity MRI pacemaker

"With FDA approval in hand, we expect [Abbott's] pacemaker business to improve and recapture share in the US low-voltage market," Biegelsen said in a Feb. 1 research note. He estimated that since Boston Scientific gained MRI-conditional approval last spring, its US pacemaker business has grown more than 20% each quarter.

Abbott still is not fully caught up in terms of MRI-compatibility in the US CRM market. Medtronic has also gained FDA MRI labeling for one of its ICD systems. *(Also see "Medtronic's MRI-Compatible ICD System Receives FDA Approval" - Medtech Insight, 16 Oct, 2015.)* And Boston Scientific has passed that threshold for its *Emblem S-ICD* system.

Abbott's CRM business has also been impacted by the October battery-depletion warning for implantable defibrillator and cardiac resynchronization therapy devices. *(Also see "St. Jude Warns Of Battery-Depletion Issues With Some ICDs" - Medtech Insight, 12 Oct, 2016.)* The business was also singled-out with a cybersecurity safety alert from FDA for its CRM devices, although the market impact from that notice is not yet clear. *(Also see "FDA Recommends Security Patch For St. Jude Wireless Cardiac Devices" - Medtech Insight, 9 Jan, 2017.)*

Published online 02/01/17

START-UP SPOTLIGHT:

Bio2 Technologies Inc., Space-Tech Biomaterial For Extremities Surgery

BOB KRONEMYER bkronemyer@frontier.com

A resorbable, inorganic material that has the ability to elicit bone remodeling comparable to biologic materials looks promising for orthopedic extremity surgery. Because it is synthetic, *Vitrium* from **Bio2 Technologies Inc.** does not carry the risk of biologic materials, and is much less expensive, according to president and CEO Paul Nichols.

Vitrium is a three-dimensional porous scaffold that can also withstand physiologic loads. "The product has broad application across musculoskeletal medicine," Nichols said.

Bio2 is initially targeting the one million foot and ankle surgeries performed annually in the US, driving a $500m yearly opportunity. In December 2015, Vitrium received an FDA 510(k) clearance as a bone graft substitute for non-load-bearing applications, and in June 2016, a fusion device for hammertoe deformity correction. The company expects to receive a CE mark for its extremities products in October this year.

SPACE SHUTTLE ORIGINS

Bio2 was founded in 2009 as the result of a spin-out from ceramics firm **GEO2 Technologies Inc.**, which possessed an intellectual property portfolio originally developed for aerospace and used to manufacture the tiles for the US Space Shuttle program. GEO2 applied the process technology to ceramic filtration for emissions reduction in diesel trucks. The intellectual property was then licensed in 2009 to Corning Inc. for use in the automotive field.

GEO2 subsequently identified orthopedic biomaterials as a field where the high ratio of compressive strength to porosity might have value. Bio2 was started to research the application of this process to biocompatible ceramics and metals to produce orthopedic implant materials with advantageous characteristics. The new company began working with both bioactive glass and titanium in 2010.

A primary hurdle for working with bioactive glass was "achieving our compressive strength objectives while generating a three-dimensional, interconnected

BIO2 TECHNOLOGIES INC.
12R Cabot Road
Woburn, MA 01801

Phone: +1 781 569 0559

Website: www.bio2tech.com

Contact: Paul Nichols, president & CEO

Industry Segment: Orthopedics

Business: High-strength resorbable scaffold for new bone remodeling

Founded: December 2009

Founder: Spin-out from ceramics firm GEO2 Technologies Inc.

Employees: Seven

Financing To-Date: $14m

Investors: Private investors; multi-family offices

Board of Directors: Cheryl Blanchard, PhD; Doug Kohrs; Gary Jacobs; Rick Intrater; Debora LaBudde; Paul Nichols

Scientific Advisory Board: Gunnar Andersson, MD (Rush University Medical Center, Chicago); Tom Bauer MD, PhD (Cleveland Clinic); Charles Saltzman, MD (University of Utah, Salt Lake City); David Greenspan, PhD (University of Florida, Gainesville)

scaffold allowing for the propagation of newly formed bone," said Nichols, who was an early investor in Bio2 and joined the board of directors at inception of the company, becoming president and CEO in December 2012.

Bioactive glass has a long history of fully resorbing in a safe and predictable fashion, and was approved by US FDA in 1985 for bone graft substitutes. It is currently used in several products in particle form. "However, due to its brittleness, bioactive glass is used only as an additive in materials such as beta-tricalcium phosphate (beta-TCP) and moldable bone void fillers," Nichols said.

Nichols' background includes 30 years as an executive and entrepreneur in the musculoskeletal space. In 2004, he cofounded Nexa Orthopedics LLC (implants for extremities), where he remained as CEO until 2007, when it was acquired by Tornier Inc. He also cofounded Avanta Orthopedics Inc. (implants for hand surgery) in 1994 and acted as CEO until 1998, when it was sold to Minneapolis-based RMS Medical Products. Moreover, in 1996, Nichols cofounded Futura Biomedical Corp. (implantable devices for foot and ankle surgery).

Bio2 has 15 issued and some 30 pending patents, but is not sharing royalties/revenues with another entity.

For foot surgery, Vitrium is preshaped into a solid osteotomy wedge, in various anatomic sizes, geometries and thicknesses, to alter the biomechanics of the foot for correction of flatfoot deformity. The shelf-stable product arrives to the surgical facility in sterile packaging, avoiding the handling and documentation requirements associated with biologic products.

In the example of correcting the cuneiform bone (a small mid-foot bone), the orthopedic surgeon first cuts open the bone and creates a void. A template is then used to determine the appropriate implant size and the Vitrium implant is inserted into the void, allowing the surgeon to extend the length of the bone. "In doing so, the surgeon alters the biomechanics in a way that restores the anatomy of the foot," Nichols said.

Bio2 Technologies' Vitrium bone graft susbstitute implant

Source: Bio2 Technologies

The material can be shaped according to application; this wedge is used for mid-foot osteotomies

The procedure lasts about 30 minutes and can be performed out-patient in a hospital under general anesthesia. "Patients typically are up and walking in a walking boot immediately postoperative," Nichols said. Most patients are able to ambulate without support in six to 12 weeks.

Bio2 is also developing a Vitrium interbody fusion device for the $3bn spinal fusion segment and recently completed a pivotal time point in an ovine study at Colorado State University in Fort Collins. "Twenty-six week interim data indicates the device produced a high-quality fusion mass with compressive strength equivalent or superior to the adjacent vertebrae," Nichols reported. Further, histological evaluation showed that Vitrium approached full resorption and an absence of significant adverse cellular reaction.

Spine surgeons treat pain associated with degenerative disc disease by accessing the intervertebral space and removing the existing disc. In order to restore anatomical alignment, a spacer is inserted between the vertebrae. "Currently, the spacers are constructed of either cadaver bone, or a biocompatible plastic or metal," Nichols said. "Our ovine data indicates that interbody spacers constructed from Vitrium will, for the first time, offer the option of a total biologic fusion, whereby the spacer resorbs and is replaced by the patient's own bone."

Such a procedure typically takes at least one hour in an in-patient setting under general anesthesia, but the time is highly variable. Recovery is three to six months.

Vitrium for either foot/ankle or spine has a nominal learning curve. "It is simply replacing implants that are in current use and constructed of other materials," Nichols said. "There is little or no change to the surgical technique."

STRYKER AND DEPUY AMONG RIVALS

Two competitor bone graft substitute products are from **Stryker Corporation** (*Vitoss*), a TCP with the addition of bioactive glass; and **Johnson & Johnson DePuy** (*ChronOS*), a beta-TCP. "These devices are constructed from particle-based materials and do not have the beneficial three-dimensional structure of Vitrium," Nichols claimed. "They also have unpredictable resorption rates."

The Musculoskeletal Transplant Foundation (MSTF), in contrast, uses allograft (cadaver bone) as a biologic. "This is a product that we expect to supplant widely because cadaver bone is not fully resorbable," Nichols said. "Vitrium also does not have the regulatory overhead associated with cadaver bone for storage and handling."

Bio2 began selling foot and ankle implants in the US in December 2015 through a single national distribution partner, i2b Global Inc., and Vitrium is covered under existing reimbursement codes.

Bio2 has completed two rounds of financing: a $7.4m Series A that concluded August 2013 and a $6.6m Series B in December 2016, for a total of $14m, both funded by high-net-worth individuals and multifamily offices. No additional fundraising is planned at this time.

Beyond the company's distribution relationship, there are no pending strategic partnerships. The most likely exit is an eventual trade sale to a major market leader in orthopedic surgery.

Meanwhile, Bio2 is contemplating Vitrium applications for shoulder surgery and craniomaxillofacial surgery.

Published online 02/01/17

CONTINUED FROM PAGE 1

upon public statements, and President Trump's [transition documents] talked about reforming the FDA to accelerate the review process, and we certainly are supportive of those efforts. Certainly, when it comes to taxes, full repeal of the medical device tax is something that has strong bipartisan support. We are confident we can get it across the finish line early in the year. And then, broadly, when it comes to broad-based corporate tax reform, discussions of bringing the corporate rate down to 15%-20%. A more efficient regulatory environment, lower taxes – I think these are all things that will stimulate investment, innovation and better patient care at lower cost.

Any concerns, or all optimism?

Leahey: Overwhelmingly, our members are optimistic. We have a great story to tell. This is about improving patient care, reducing the cost of care. Obviously, our industry has predominantly small businesses, and predominantly US manufacturing, so, again, we think, as it relates to medical technology, this is an opportunity to accelerate and enhance the innovation ecosystem so patients have more timely access to products, and the process can be performed more efficiently at a lower overall cost.

Obviously, device-tax repeal is a top priority. But what about the rest of the so-called ACA repeal-and-replace? What are you watching there, in terms of impact on industry?

Leahey: Obviously, they are still working through what the repeal-and-replace will look like. Everyone is talking about the need for affordable health insurance for all. Our belief is that, both from a policy and political standpoint, we won't be in a scenario where people will be left out without having access to the care they need. And ... the individuals who are enrolled through the [ACA] exchanges demographically tend not to be high medical device volume users. We looked at Massachusetts, as a microcosm, when "RomneyCare" went into place, and universal coverage there did not translate into higher volume for medical devices. For us, there has never been a correlation as it relates to covered lives in the ACA.

Certainly, one area we are keeping an eye on is we want to make sure that hospitals are not adversely impacted, because if there are additional pressures on the hospital side that often trickles down with additional pressures on their ability to purchase medical devices.

It's not typical for a user-fee reauthorization to be negotiated under one administration and then need to go through Congress under another administration. Particularly with the greater-than-average uncertainty associated with policy developments in this administration and the fact that we don't know who will be running FDA yet, do you have any concerns that the Trump administration may want to negotiate the MDUFA IV package rather than accept the deal made by the Obama administration FDA?

Leahey: The process always works ... where industry and FDA negotiate an agreement. And then it is up to Congress to review and authorize, and so, at this stage, I am sure there will be congressional hearings and we will talk about the package. I think a lot of this, quite frankly, will be driven with the perspective of the administration. At this stage, it is hard to speculate whether they would say, "This is a

2017 MDMA Priorities

- **Permanent device tax repeal**: "We want to make sure the first ACA bill out of the door incorporates a full repeal of the medical device tax."
- **FDA user-fee reauthorization (MDUFA IV)**: "We have to work this process through, by, usually that Memorial Day to July 4 window."
- **Reducing the regulatory-reimbursement gap**: "It can be three, five, seven years after a product is approved or cleared by FDA before it is adequately covered by CMS [the Centers for Medicare and Medicaid Services] and private payers."
- **Patents**: Pushing against patent reforms that "make it cheaper to infringe"; supporting reforms that promote innovation.
- **Highlighting the value of medical technology**: "The increase on medical device [spending] is increasing at a much lower rate than CPI, or medical CPI or services."
- **Balance in federal investigations**: "There has been disproportional focus and attention on trying to prosecute executives ... when there is no intent and no knowledge."

On MDUFA IV, "I think a lot of this, quite frankly, will be driven with the perspective of the administration. At this stage, it is hard to speculate whether they would say, 'This is a good deal' or 'This is a bad deal.'"

good deal" or "This is a bad deal." That would be speculation.

One thing we do know is obviously we have to work this process through, by, usually that Memorial Day to July 4 window. MDUFA III officially expires Sept. 30, but, it has to be done 60 days before so the RIF [reduction in force] notices don't go out. So, our focus is on working with everybody to ensure that this gets reauthorized in a timely manner.

Another point is that sometimes, the user fee reauthorizations become the Christmas tree for a huge universe of FDA changes. I think with the [21st Century] Cures legislation just passing last year – I am sure there will be members, new members on these committees, who obviously want to have their voice heard – but my expectation is maybe this will be a smaller package, given that Cures was just passed the previous year.

What about the leadership team that has been nominated to run HHS and CMS, and your thoughts about potential FDA leaders?

Leahey: Starting with Dr. Price: We worked well with Dr. Price in Congress. Having someone who is a physician, who understands the importance of the physician-patient relationship. He has used medical technology, knows the value of it. I think there is an opportunity to ensure that as some of these reforms move forward that nothing is done to compromise that physician-patient relationship. Obviously, with Seema Verma, we look forward to working with her at CMS.

When it comes to the FDA, I think, obviously it is important to have someone there who understands the regulatory landscape, who understands the innovation ecosystem, and who will be able to work with industry, Congress, FDA personnel, and all stakeholders to recognize that the FDA mission is twofold; it is to protect patients, but also to protect innovation and patient access and accelerate that access. We look forward to working with whomever the administration names to ensure that efficiency, consistency and predictability continue to move forward at FDA.

It seems like Jeff Shuren, FDA's device center director, has been an important glue holding things together, helping to drive many of the improvements supported by industry in recent years. Any concern about his future role at the agency under the new administration?

Leahey: I don't know what FDA is thinking. CDRH director is not a political appointee. It is a professional role. So, nothing requires him to step down. We have had a constructive working relationship with Dr. Shuren, and, as to his future, you should talk to him or the administration.

What about global trade? Trump is going back on trade deals, such as the Trans-Pacific Partnership and NAFTA. The medtech industry has generally supported these types of trade deals as mechanisms for opening up markets and reducing regulations. Do you have concerns?

Leahey: Trade is very important to our member companies. I would say, particularly around TPP, both presidential candidates said they were against it. Some of that may have been baked into expectations already. As it relates to NAFTA, or other deals, it is going to be a bilateral approach to trade rather than multilateral. I think a lot of this will be on a case-by-case basis on the different agreements that are reached. This is something that I am sure as more details arise, we will be able to better assess what the impact is.

So these are some of the key issues. What about lobbying tactics in the new administration? Any adjustments planned?

Leahey: Our story has been consistent throughout. We are a great US success story. High-tech manufacturing in the US. Exporting to a number of different countries. Jobs created domestically. The lives we save. The costs we save. Allowing people to go back to work in two days versus three weeks. I think all of these are messages that we have communicated to the transition team post-election and we will continue to communicate now with the administration.

Q: How is MDMA's working relationship with AdvaMed and the Medical Imaging and Technology Alliance? Is there a unified medtech voice in Washington, DC?

Leahey: We are in constant contact with our colleagues in the industry, both with members and other organization and associations to make sure we are aligned on key priorities, and coordinating and collaborating when key opportunities arise.

Published online 01/31/17

New French Notification Rule Means More Work For Medtech

NEENA BRIZMOHUN neena.brizmohun@informa.com

Implantable and class III medical device-makers operating in France need to prepare for a new law that will require them to submit a summary of product characteristics to the health-care products regulator, ANSM.

The new requirement, which will become applicable as of July 1, 2017, will introduce additional administrative work for device firms that put their products into service in France, according to the law firm Hogan Lovells.

It will require manufacturers to disclose to ANSM several elements that are contained in their products' technical file and that they would not normally communicate to the agency unless they receive a specific request to do so, Hogan Lovells explained.

The requirement could be especially burdensome for manufacturers who have substantially modified an already-submitted summary of product characteristics, as they would be required to inform ANSM of the change immediately, the law firm warned.

The new obligation is described in Decree 2016-1716, which was adopted in December 2016. Decree 2016-1716 relates to a new article (Article L. 5211-4-1) that France's 2016 law for modernizing the country's health-care system (Loi 2016-14) introduced into the French Public Health Code.

"The decree provides that the summary of product characteristics must be submitted by electronic means to the director-general of the ANSM at the time the medical device is put into service on French territory," the law firm says. In addition to being applicable to manufacturers, the obligation also applies to their European authorized representative or distributors.

According to Hogan Lovells, examples of the elements that will need to be included in the summary of product characteristics are:

- The name and address of the legal manufacturer and authorized representative;
- The date of the summary of product characteristics and version number;
- Descriptions of the device and accessories, or other products that are meant to be used with it;
- The intended purposes of the device, contraindications and targeted patient population;
- The device's place in the diagnostic and therapeutic strategy;
- Targeted users of the product and the related training which might be required;
- A summary of the clinical evaluation for the device; and
- A post-market surveillance plan for the device.

Published online 02/03/17

India Can Do More To Align New Medtech Regulations With Global Norms, Says Industry

VIBHA SHARMA vibha.sharma@informa.com

The Indian government has published new rules for the medical technology sector that will put an end to the current practice of regulating medical devices and *in vitro* diagnostics as drug products when they come into effect on Jan. 1, 2018.

The new rules are based on the international risk-based approach. Both multinational and domestic medtech manufacturers operating in India have welcomed the development, but they say there are several issues that still need to be ironed out for the country's medtech regulatory framework to align with global norms. *(Also see "India Takes Another Stab At Regulating Devices As Devices" - Medtech Insight, 12 Jul, 2016.)*

The Indian arm of US-based medtech industry association AdvaMed said its member companies had "long-awaited creation of a separate set of rules for medical devices" and, therefore, appreciated that the government had finally recognized "the vast differences between medical devices and pharmaceuticals".

However, certain provisions in the new rules - such as those pertaining to shelf life, acceptance of international standards, batch testing, investigational medical devices, recalls, and transition timelines – have drawn concern as AdvaMed believes that these still need to be aligned with global norms and best practices. The trade group is hopeful that these concerns will be addressed before implementation of the new rules gets underway.

While having separate rules for medical devices could potentially improve the market's attractiveness, AdvaMed said that as a long-term measure, India should have a separate legislation altogether in the form of a Medical Devices Act harmonized with international best practices. It said a predictable regulatory environment would provide a necessary boost to the sector and would also contribute to the overall growth of the economy through the creation of high paying jobs, economic value and better patient outcomes.

The Association of Indian Medical Device Industry (AiMeD), which represents domestic medtech companies, also welcomed the creation of a "separate rule book" for the medtech sector, but said it was disappointed that under the new rules only the regulation of low-risk devices (Classes A and B) is being brought within the purview of designated third-party conformity assessment bodies (also called, notified bodies). All high-risk devices (Classes C and D) will be overseen by the central licensing authority and may be subjected to extra scrutiny.

AiMeD is concerned that the government's decision to specifically exclude high-risk devices from the notified body assessment process and subject them to additional scrutiny may force domestic manufacturers of such products to shut shop as it may become cheaper to import high-risk devices. AiMeD said the rules were a missed opportunity for the government to promote the prime minister's "Make in India" campaign to boost local production across all industry sectors. *(Also see "India consults on national policy to promote, protect local medical device industry " - Medtech Insight, 9 Jun, 2015.)*

While the new rules permit the central licensing authority to use the services of a designated notified body for inspecting the manufacturing site of a Class C or D device, AiMeD is concerned that this may end up as a "double whammy" for the manufacturer facing the joint inspection, who would have to satisfy both the licensing inspector and the notified body expert. The past experience of AiMeD member companies with joint inspections by state-level and central teams from the drugs department have resulted in some concerns on this front, said AiMeD forum coordinator Rajiv Nath.

AiMeD is also disappointed that the new rules do not recognize a voluntary certification scheme launched by the industry last year, which allows notified bodies to be approved by the country's national accreditation body so that they may assess and certify the quality management systems and other essential requirements of medical device companies against international standards. *(Also see "New Indian Medical Device Certification Scheme To Fill Regulatory Vacuum " - Medtech Insight, 24 Feb, 2016.)* Nath said though the voluntary certification scheme had received support from several government departments and ministries, the health ministry was not backing the scheme in spite of several rounds of discussions with the industry.

In addition, Nath noted that the new rules do not address AiMeD's concerns regarding the definition of a "manufacturer", as it allows traders/marketing companies to be called and labeled as manufacturers. Also, the new rules are silent on the issue of importing non-calibrated second-hand medical devices. *(Also see "Indian Government Appoints Panel To Restrict Import Of Refurbished Radiology Devices" - Medtech Insight, 28 Apr, 2016.)* As these rules have been drawn up under the current legislation, AiMeD is hopeful that the forthcoming medical devices bill would address its remaining concerns.

STRICT TIMELINES AND SELF COMPLIANCE

The new rules are based on the principles of the Global Harmonization Task Force as was (it is now the International Medical Device Regulators Forum), under which all medtech products are categorized in four groups based on their risk level, with Class A representing the lowest risk.

This represents a sea change from the way medtech products are currently being regulated in India, whereby only certain types of devices – formally notified by the government on a case-by-cases basis – are regulated as drugs, while all other types of devices are not formally regulated.

When the rules come into effect, the quality management system (QMS) of all device manufacturing sites will have to be aligned with the international QMS standard, ISO 13485. The rules include strict timelines for most tasks undertaken by regulators and this is expected to bring certainty to the overall process, the health ministry said in a statement.

The new rules will result in India embracing an EU-like system of appointing notified bodies to verify and assess the QMS of medical device manufacturers, but this will be limited to Class A and B devices. Only notified bodies accredited by the National Accreditation Board for Certification Bodies (NABCB) will be able to undertake this work.

Under the new rules, manufacturers of Class A devices would be able to obtain a manufacturing licence by self-certifying compliance with the requirements and would not have to face a prior audit of the manufacturing site. A post-approval audit of the manufacturing site would be carried out by the notified body to check compliance with QMS requirements.

The Central Drugs Standard Control Organization will oversee the import of all medical devices. Under the new rules, there will be no requirement for manufacturers or importers to periodically renew their licences as these will remain valid till until these are suspended or cancelled or surrendered. The ministry explained that the whole licensing process would be operated through an online platform.

The CDSCO will also be responsible for dealing with applications for clinical investigation with medtech products. The rules include provisions for offering compensation to subjects participating in clinical investigation in case of an injury or death.

Published online 02/06/17

China Requires Medtech Cybersecurity Compliance Against Hackers

BRIAN YANG brian.yang@informa.com

Issued just before the Lunar New Year holiday, China's first guidelines relating to cybersecurity in the medtech sector are expected to have a far-reaching impact on the industry.

The guiding document divides software changes into two categories: regulatory security updates and "other major changes." For the latter category, manufacturers will need to provide security testing reports showing that requirements for confidentiality, integrity and availability are being met.

Producers will also need to submit traceability reports showing that their design, testing and risk management procedures follow the official requirements.

The guidelines take effect in January 2018, and companies will be given the remainder of 2017 to decide the best way to proceed.

The new document is significant not only because China has a large and increasing demand for the latest medical products, ranging from surgical robots to machine-learning precision medicines, but also because the country is prone to data theft and privacy breaches.

DIGITAL ECOSYSTEM RISKS

Unlike other industrialized countries that have both digital and legacy non-digital tools in place, China has seen an explosive, leapfrogging growth in e-commerce, resulting in a heavy reliance on mobile and digital devices. Digital payment systems aside, people rely on their mobile phones to book medical appointments, buy over-the-counter medicines, and discuss ailments with their doctors.

The personal data collection required for such digital transactions is constant and ubiquitous, and some unscrupulous collectors are selling user information for quick-and-easy capital gains.

Shutterstock: BeeBright

"Although there are third-party providers for software used in device products, this doesn't exclude medical device applicants from responsibilities to ensure cybersecurity," China FDA stresses.

Adding complexity to these concerns is a lack of standards and information sharing among health-care institutions. Patients provide personal information to each individual hospital and clinic they visit, resulting in vulnerability and loopholes for the theft of identification, insurance numbers and other data.

In August 2014, Chinese hackers broke into Community Health Systems' IT system and stole patient data. *(Also see "Hack Attack On Hospital System Highlights Need For Device Cybersecurity" - Medtech Insight, 20 Aug, 2014.)* And in a more recent incident, thousands of new mothers in Shenzhen found their names and personal information disclosed to an infant formula company and household helper agencies without their prior knowledge.

Searching around Chinese e-commerce sites, it's not hard to locate many vendors advertising to provide potential customers' information for a fee, prompting regulators to strengthen measures.

REGULATORY APPROACH

"Although there are third-party providers for software used in device products, this doesn't exclude medical device applicants from responsibilities to ensure cybersecurity," stressed China FDA in the new guidelines.

The document uses a large portion of the IEC/TR 8001-2-2 guidelines on device security, and the agency said manufacturers should consider a product's particular characteristics to decide the corresponding appropriate security measures.

Device applicants should submit cybersecurity files and routinely update files; the former applies to product registration and major security updates, and the latter to regular updates.

"The guidelines are reasonable and the requirements not very high," Chen Bei, director of Beijing-based **BMC Medical Co. Ltd.**, told *Medtech Insight* in a written response. "If a product with internet connectivity has met US FDA requirements, it should be able to meet the requirement [of the CFDA]," Chen said.

Speaking about the impact of the new move, Chen said her company's main product, *ResMat* artificial ventilators, had already completed the registration and thus would feel very little impact.

Published online 02/03/17

Register Again Or Not? Malaysia Clarifies What Companies Must Do When They Modify A Device

NEENA BRIZMOHUN neena.brizmohun@informa.com

Device firms operating in Malaysia who alter the intended purpose and/or indication of an already-registered product must apply for a new registration if they want to continue selling their product, a recent guidance states.

Manufacturers often modify a device as part of the product's life-cycle. The new guidance, issued by the Medical Device Authority, describes three categories of modification, based on the extent to which the modification might affect the safety and performance of the device. The document explains what each category requires of manufacturers to notify the MDA of a change.

"Before making any decision whether a changed medical device can continue to be placed in the market, the authority will determine whether evidence of safety and performance have been appropriately collected and reviewed based on the notification made by the registration holder," MDA comments.

The three categories of changes described by the guidance document are:

- **Category 1:** Changes to a device that affect its safety and performance and will require a new registration;
- **Category 2:** Changes to a device that require evaluation and endorsement from MDA prior to implementation of the change; and
- **Category 3:** Changes to a device that may be implemented immediately upon receipt of an acknowledgement from MDA.

The guidance document does not describe every permutation and type of change that can occur, but it provides several examples of the types of modifications that might fall into each category.

Included among Category 1 changes are modifications that are made to the intended purpose and/or indication of a device; changes to the risk classification of a product; and changes to the type, concentration or drug specifications of a medicinal substance incorporated as an ancillary component of a medical device.

One example of a Category 2 change is a modification that results in an increase or reduction in the number of devices included in a set of a registered product. In such a case, the manufacturer would need to provide MDA with a declaration of conformity; a declaration to state that there is no change to other aspects of the device, including intended use and technical specifications; a list of configurations of medical devices; device labeling stating changes for each amended section; and a description of the addition or reduction.

An example of a Category 3 modification is a change in the regulatory status regarding the rejection or withdrawal of a device in other countries recognized by MDA.

For all of the change categories, MDA says that registration holders can submit a request to the regulator for confirmation on the change category using a template (in Annex A of the guidance document) prior to submitting a change notification to the authority.

"In cases where the category of change cannot be determined or has been deemed inaccurate by the authority, the authority shall determine the correct category of change and advise the registration holder to amend the category of change as deemed appropriate," the document says.

This guidance document is also applicable to situations when a registered medical device undergoes any changes or proposed changes as a result of a mandatory reportable incident or field corrective action under Malaysian law.

Published online 02/06/17

US DOJ Is Expanding Reach of Foreign Corrupt Practices Act, Attorneys Say

ELIZABETH ORR elizabeth.orr@informa.com

Manufacturers who do little business outside the US shouldn't assume they don't need to think about the Foreign Corrupt Practices Act, two attorneys for Arnall Golden Gregory said in a Jan. 25 webinar.

"DOJ has been very creative in expanding the reach of FCPA," attorney Michael Burke warned. For example, the government's evidence in Teva Pharmaceutical Industries Ltd.'s December agreement to pay $520m to settle FCPA claims included payments that passed through a US server, although the Teva affiliates involved were all based overseas. "If money or goods pass through the US, the scheme is subject to the FCPA," he said.

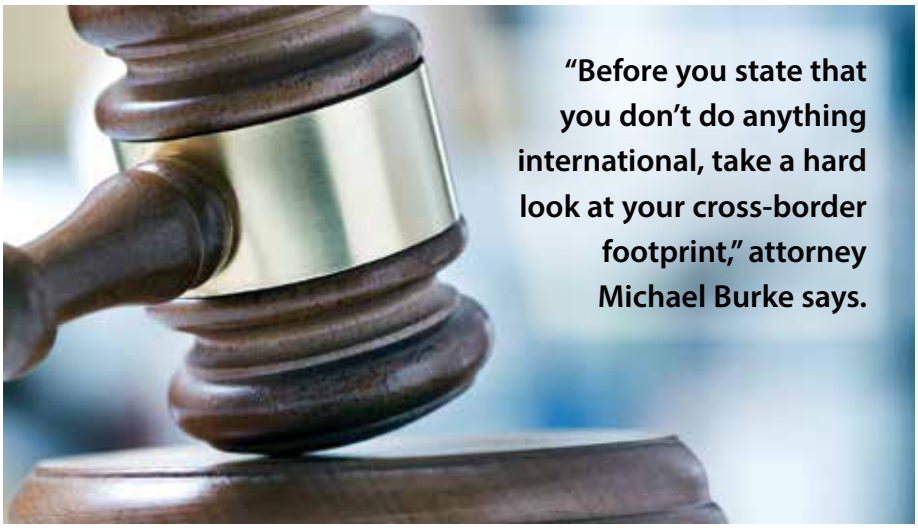
Burke added that companies often underestimate the size of their international liability. For example, a company might not consider components that are imported from India and pass through Indian customs officials. "Before you state that you don't do anything international, take a hard look at your cross-border footprint," he advises.

And small companies can't assume the DOJ will neglect to enforce FCPA against them in favor of targeting larger companies, Burke said. FCPA applications don't distinguish based on company size, and so compliance efforts should be the same.

TRY TO REPENT

In terms of mitigating FCPA enforcement actions against a company, attorney Sara Lord noted that the DOJ responds well to firms that try to repent for their misdeeds. "A company that disgorges its profits and takes steps to remedy damages might get a limited penalty," she said, adding that failure to cooperate can be expensive.

A strong compliance culture can help to prevent misconduct, and also identify and react to it more quickly, Lord said. In addition, a company that can show regular compliance training may have an easier time separating itself from an individual employee's misdeeds. But it's important for companies to show that employees attended the training, not just that it was offered; otherwise, a firm is risking that an employee who skipped the training may claim they didn't know their activity as in violation of the FCPA.



Shutterstock: Alex Staroseltsev

She further recommended a strong policy addressing social media and email use by employees. For example, email is often written in a flippant tone that integrates shorthand. "In modern cases, email is often the rope you hang yourself by," Lord said. "It's prime evidence the government seeks to use to describe the attitude of employees and the motivations for particular actions."

In general, all overseas contractors and other contacts should be subject to ongoing diligence, such as annual training and reviews on FCPA compliance, he said. This includes a policy of wariness toward overseas charitable groups, which may be used as a front for illegal activities. In one case, an enforcement action was brought because a company donated to a charity as a way to influence a Chinese Communist Party official.

Excessive travel and entertainment spending is considered a bribe under FCPA. But, Burke said, there's no specific bright line that makes it clear when reasonable travel or entertainment costs become a bribe. "There are some obvious cases, like bringing officials to the US for negotiations, but adding on a trip to Vegas with no clear link to official business," he said. "As a practice point, make sure your general policy on travel and entertainment takes FCPA into account."

It's not always obvious that the professionals that life-sciences companies encounter are considered foreign officials, attorney Lord noted. While some may wear uniforms and badges, others will not. But anyone paid by the state is considered a foreign official, which means many officials who work in permitting, clinical monitoring, or clinical trials may be covered by FCPA.

"Every time you do something that involves engaging with a foreign official, it raises the possibility of an improper transaction," Lord said.

The Foreign Corrupt Practices Act allows companies to make facilitation payments, which are when an official asks to be paid to take a routine action that shouldn't require discretion – for example, if police ask for a bribe in exchange for protection. But those payments are against the law in some countries, such as the UK. Therefore, companies may want to ban facilitation payments as a matter of policy, Burke says.

CHANGE IN TRUMP ERA?

The attorneys declined to speculate on what changes new President Donald Trump's administration might bring to FCPA enforcement. Burke noted that, on average, FCPA cases are in the pipeline for five to six years, so it may be some time before changes become obvious to the public. The attorneys say they expect about 25 to 30 cases per year, based on recent-year trends. And as in past years, the health-care industries should remain particular areas of concern.

Average settlements have fallen in the range of $10m to $30m. "That may appear relatively modest," Lord said, "but those numbers only go up, never down." In addition, DOJ often requires companies appoint an independent monitor to ensure further compliance.

Lord also noted that DOJ will probably continue its focus on enforcement against individual corporate officers, encouraged by a 2016 memo by former assistant attorney general Sally Yates.

"It can be argued whether Yates was a departure, but the bottom line is that it tells DOJ officials to look at individuals when investigating companies," she said.

Burke noted that there has been some speculation that Trump opposes FCPA enforcement, but he thinks that may be overblown. "If you take the context, his comment related to the way FCPA impacts facilitation payments, not the larger structure of the act itself," he said. In addition, Trump's views will be less important than that of the Department of Justice appointees enforcing laws.

The administration will need to decide relatively soon whether to extend an ongoing pilot program that granted specific rewards in return for self-disclosure. Burke noted that the program has the support of career DOJ staff.

Major regions of ongoing interest for FCPA enforcement are activities taking place in China, Latin America (including Brazil), and Africa, Lord said.

Published online 01/31/17

CMS Expands Competitive Bidding To Include Insulin Pumps, More CPAP Areas

SUE DARCEY sue.darcey@informa.com

CMS is expanding its durable medical equipment, prosthetics, orthotics and supplies (DMEPOS) competitive bidding program in 2019 to add insulin pumps and supplies to the list of DMEPOS covered, and to add 10 new competitive bidding areas for the program for continuous positive airway pressure (CPAP) devices, the agency announced Jan. 31.

Mandated by the Medicare Prescription Drug, Improvement and Modernization Act of 2013, the competitive bidding program sets the amount Medicare pays for certain devices and medical equipment like walkers and wheelchairs, using market-bid prices in established "competitive bidding areas," or CBAs. But it has been criticized by DMEPOS companies for leaving some Medicare beneficiaries without adequate access to equipment and for rewarding suppliers that undercut on price versus those that offer higher-value or higher quality products. *(Also see "Insulin Pumps, Including Sensor-Augmented, Enter Competitive Bidding" - Medtech Insight, 13 Jan, 2014.)*

In its most recent announcement, CMS said that for the 2019 bidding round, for contracts effective from Jan. 1, 2019-Dec. 31, 2021, it is adding insulin pumps and related supplies as a product category to be bid in the national CBAs, and CPAP devices and related accessories for 10 competitive bidding areas.

SOME CBAS WILL USE CAPPED MONTHLY RENTALS FOR CPAP

In five of the new areas, payment for the CPAP device, related accessories and services will be made on a bundled, non-capped monthly rental basis, while payment in the other five CBAs will be made on a capped monthly rental basis.

Other product categories for the 2019 round, besides insulin pumps and CPAP equipment, include:

- enteral nutrients, equipment and supplies;
- general home equipment and related accessories (including hospital beds);
- mail-order diabetes testing supplies;
- nebulizers and related accessories;
- negative pressure wound therapy pumps and accessories;
- respiratory equipment, such as oxygen;
- mobility equipment such as walkers and both power and manual wheelchairs; and
- transcutaneous electrical nerve stimulators (TENS) devices and supplies.

The DMEPOS program has been a true cost-saver, and "when combined with other fraud, waste and abuse initiatives, is currently saving over $2 billion per year," for the Medicare program, according to acting CMS administrator Dr. Patrick Conway.

HHS SECRETARY NOMINEE OPPOSES BIDDING PROGRAM

But not every official sees the program as providing benefits. HHS Secretary nominee Rep. Tom Price, R-Ga., for example, in May 2016 introduced the "Patient Access to Durable Medical Equipment Act," H.R.5210, that would delay the Medicare competitive bidding reimbursement program that was running in 2016.

At the time, he complained that the competitive bidding program has failed patients because "it does not hold bidders accountable, does not ensure that bidders are qualified to provide the products in the bid markets, and produces bid rates that are financially unsustainable."

Published online 02/03/17

Medtech Insight
Pharma intelligence | informa

advertise with us and take your business to the next level.

you won't believe the transformation

Contact our sales executive to learn about our various advertising opportunities available to you!

Christopher Keeling
+44 203 377 3183
christopher.keeling@informa.com
Customer Care: +1 888-670-8900 (USA)

medtech.pharmamedtechbi.com

Over 100 event types

Over 100 catalyst types

Over 5,000 products

Meddevicetracker
Pharma intelligence | informa

Double **the Power**

Meddevicetracker with Medtech Insight reports is a new interactive real-time source of in-depth medical technology market intelligence

Meddevicetracker brings you closer to the medtech market, helping you to:

- Identify upcoming device regulatory events/filings
- Search for medtech clinical trial starts and data
- Find historical and forecasted procedure volumes data
- Monitor drug delivery technologies and identify partnership opportunities
- Quantify the market size for devices or diseases
- Discover forecasted market share of devices by type
- Understand the device competitive land-scape and identify unmet clinical needs

Request your free demo today:
please visit - **www.meddevicetracker.com**