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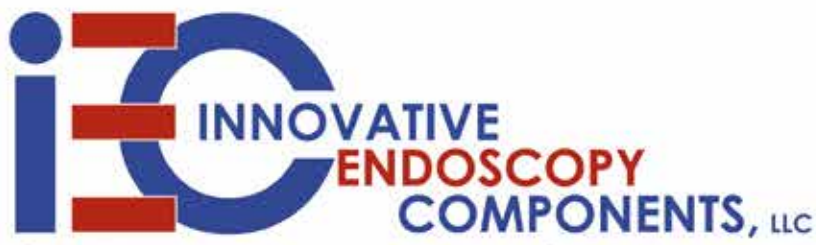
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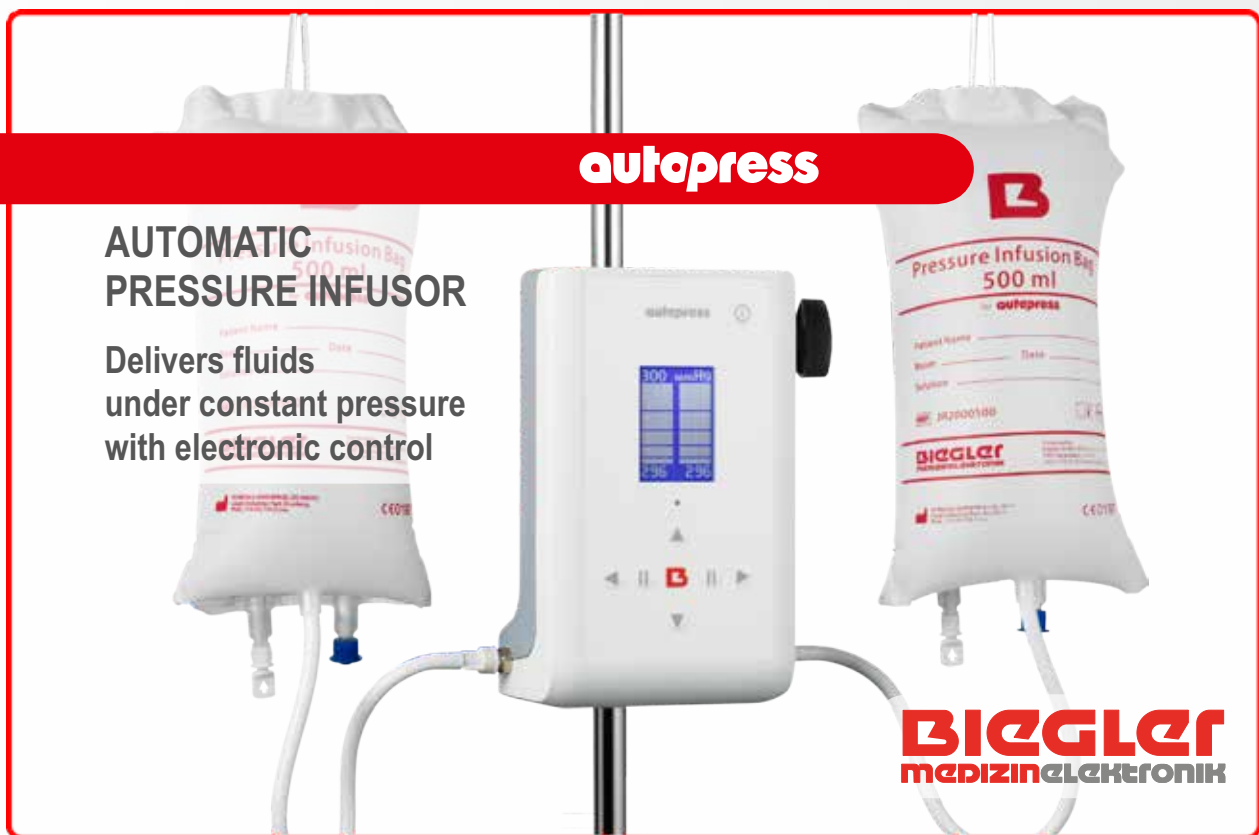
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## AUTOMATIC PRESSURE INFUSOR

Delivers fluids under constant pressure with electronic control

## Automatic Pressure Infusor

**BIEGLER GmbH** develops and manufactures medical devices and disposables for over 40 years. Biegler serves their customers by offering them not only high quality products and services but comprehensive and personal support as well.

The company based in Austria / Europe introduced the AUTOPRESS device as an important part of its fluid warming philosophy. Autopress works directly with Biegler blood and infusion warmers to deliver blood and fluids at high flow rates or as a stand-alone unit to deliver fluids at constant pressure up to 300 mmHg wherever needed.

Pressure infusing bags are mainly used for irrigation purposes during arthroscopy, laparoscopy and hysteroscopy. The adjusted pressure is constantly maintained and therefore does not require manual compensation.

When connected to an electrical outlet, Biegler Pressure Infusor automatically maintains pressure on blood and IV fluid bags. Pressure range is zero to 300 mmHg.

### Features at a glance:

- Pressure is adjustable and always maintained
- Precise pressure setting from zero to 300 mmHg with electronic control
- Accommodates pressure cuffs  
2 x 500, 2 x 1000 or 2 x 3000 cc
- Small and lightweight
- Mains operated
- Pressure cuffs can be emptied rapidly and easily
- Significant reduction of set up time

**Biegler GmbH**  
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## WHY INFOMEDIX INTERNATIONAL?



It might sound like I am doing some marketing, and I might well be, but my intent this time is to remind you what **Infomedix International** is all about. Our contents focus on news, regulations and novelties in the international medical market; we make deep research, using many different sources, to give you thorough outlooks on the different markets for the import and export of your products around the world; previews and post-show reports on international exhibitions as well as latest products highlights; company profiles of medical companies and much more...

We help manufacturers export around the world and we do our best to give our readers the most reliable information on the markets of export. We are, for this, a B2B magazine especially designed for the medical trade and industry, mailed to over 23,000 addresses of manufacturers, distributors, importers and suppliers, covering 165 countries around the world. We are specialized in a medical database of the industry and, on this regard, we might have the biggest one on the market as we have been operating in this sector for over 20 years.

**We help manufacturers export around the world and we do our best to give our readers the most reliable information on the markets of export.**

Thanks to its wide circulation, Infomedix International can give manufacturers and distributors worldwide visibility. Manufacturers looking for distributors and importers around the world choose Infomedix International to expand their distribution network and enter new markets; distributors and importers use our magazine to find new products to distribute and new partners.

To help our readers even further, we have been focusing our attention on what we have called the **"DISTRIBUTORS' WALL", a service of commercial announcements made by distributors, importers, manufacturers and suppliers where each one is looking for new contacts to start or increase business.**

You will find, in each issue of our magazines, a section full of announcements sent to us by manufacturers, distributors, importers and suppliers that are searching for one another... You can let the market know of a product you are searching for or selling, second-hand products, new initiatives, markets you are looking at, exhibitions you are attending and more.

**I invite you all to send us commercial announcements of any kind to publish in our magazine... believe it or not, this is one of the mostly read sections by our readers!**



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**But Infomedix International is not just a magazine. It is made up of a group of hard working people and consultants with a long standing expertise capable of giving you information and tips on world markets...**

of distributors and manufacturers looking for new business and contacts. You can use the wall at our booths to copy or give us contacts throughout the exhibition, creating an Infomedix meeting point!

But Infomedix International is not just a magazine. It is made up of a group of hard working people and consultants with a long standing expertise capable of giving you information and tips on world markets, including tailored made services such as newsletters, mailings, consulting services to help you find partners worldwide. We work in close collaboration with the most important international trade exhibitions and offer you services within the exhibitions... Let us know what you are looking for, we can surely be of help!

Infomedix International Magazine is published three times a year, the next issue is no. 3/2017- a special for the Medica show. With its targeted circulation and its wide range of B2B and online marketing services we can help you grow and create a network of business relationships!

Lastly, we have expanded the distributors' wall service at all the international exhibitions we are attending with our own booths around the world! How? Our booths have a dedicated wall to attach your announcements and read all the others; with announcements of any kind,

**Baldo Pipitone**  
CEO Infodent S.r.l.  
*baldo.pipitone@infodent.com*



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"Easy access to adequate sanitation and sufficient amounts of safe water for drinking and hygiene at home, schools and healthcare facilities is essential to human health and well-being and should be a prerequisite for a decent life in the 21st century..."



## KAZAKHSTAN, A DYNAMIC EMERGING MARKET

"The country has seen incredible, sustained growth over the past decade and a very young population to continue its level of dynamism in the future."



## NEW EU RULES ON MEDICAL DEVICES TO ENHANCE PATIENT SAFETY AND MODERNISE PUBLIC HEALTH

Brussels 5 April, 2017 - The European Commission welcomes the adoption of its proposal for two Regulations on medical devices which establish a modernised and more robust EU legislative framework to ensure better protection of public health and patient safety.

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### • Biegler Medizinelektronik - more than 40 years of experience in the medical field



Biegler Medizinelektronik, based in Austria/Europe, has to its credit more than 40 years of research, development and production in the service of medicine. Customers are served by offering them not only high quality products and services but

comprehensive and personal support as well. The quality management system was introduced in 1994 with EN ISO 9001 / EN 46001 and developed further in accordance with EN ISO 13485:20012. It covers all processes from development through to after-sales service and provides the guarantee for consistently high quality. Together with the customer from the start: Research and development is one of the core competencies at Biegler Medizinelektronik. The company offers not just the technical but all the regulatory prerequisites for successful partnership with OEMs. Biegler's expertise is in the development and manufacture of ready-for-sale medical products. The company operates distribution to end customers in over 70 different countries with distribution partners.



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### • BASIC line: New range of histo-pathology solutions MADE IN GERMANY!



We at KUGEL medical have designed a BASIC line that aims to improve medical diagnostics, standards and treatments. The BASIC line includes anatomy and autopsy tables for medical education at universities that can even be folded and stowed space-savingly, grossing tables for any kind of diagnostic work in the fields of pathology and histology as

well as morgue refrigeration units in modular design for tropical environments that can be customized to each customers' requirements and lift and transport trucks for deceased. The BASIC line is characterized by easy and reliable solutions at economic prices without impairing the typical KUGEL medical quality MADE IN GERMANY which we are known for around the world. No matter if you're looking for a partner for furnishing an entire building complex or a partial fit out. We are your point of contact for all questions concerning designing, developing and planning.



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## • From conventional mammography to digital breast tomosynthesis



Metaltronica has been designing and manufacturing mammography devices for almost 40 years, our long experience and the excellent skills of our staff grant the highest productivity levels and quality standards. We provide a full range of complete solutions for mammography that can satisfy all customer's need.

After having achieved great results with our analogue mammography unit Lilyum and our FFDM system Helianthus Metaltronica launched its Digital Breast Tomosynthesis: Helianthus DBT.

For its DBT System Metaltronica has chosen a technology that allows to gather sufficient information on larger volumes of tissue with low noise and high image quality.

After a scanning time of less than 20 seconds an advanced algorithm starts to reconstruct the breast tissue in 1 mm thick slices.

Helianthus DBT uses an anti-scatter grid specifically designed for tomosynthesis and this makes it a complete solution to obtain excellent images in 2D screening, 3D tomosynthesis and stereotactic biopsy.



[www.metaltronica.com](http://www.metaltronica.com) // [metaltronica@metaltronica.com](mailto:metaltronica@metaltronica.com)



### Digital Breast Tomosynthesis

*Take up the challenge to gain true insight*



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### • IAE

Nowadays IAE is a major role player in the International X-Ray market as the only independent manufacturer in Europe of rotating anode tubes. With its wide product line of more than 100 insert/housing combination, IAE is a strategic and reliable partner to the most important equipment manufacturer globally.

IAE has recently developed a compact light weight rotating anode mammography x-ray tube unit, with special double angle target, for optimal performances with all techniques. A non traditional, metal ceramic structure consented to divide by a factor two both the dimensions and the weight, compared to a standard mammographic unit, down to a lightweight 5.5 kg, and at the same time to increase the heat dissipation by a factor 4, obtained by an efficient air cooling. In this unconventional x-ray tube, of metal-ceramic construction, the tube housing and oil are absent, let alone a small lightweight box containing the radiation shielding and electrical accessories.



The energy associated with each exam is rapidly transferred directly to the ambient air by forced ventilation, without the need of being accumulated temporarily in an intermediate body. The energy transfer rate is more than three times higher than the equivalent parameter of a conventional tube unit, so the number of exams that can be performed in an hour, or in a day, is as much higher. This high dissipation, combined with the lightweight, makes it the ideal tube for high energy imaging techniques with moving X-ray source like tomosynthesis. Two separate focal tracks, small focus on 10° and large focus on 16°, complete the features of this device.

#### IAE - CONGRESS AND FAIRS

**FIME 2017** – Miami / USA - 8-10 august 2017, **Stand B.J23**

**JFR 2017** – Paris 13-16 october 2017

**CMEF AUTUMN 2017** – Kunming City / China - 29 october -1 november 2017

**MEDICA 2017** – Düsseldorf / Germany – 13-16 november 2017

**ZDRAVOOKHRANENIYE 2017** – Moscow – 4-8 december 2017

**ARAB HEALTH 2018** – Dubai – 29 january-1 february 2018

**ECR 2018** – Vienna – 1 / 4 march 2018

**KIMES 2018** – Seoul / South Korea – 15-19 march 2018

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## • Excelitas Technologies Introduces Qioptiq SlimLine Camera Lens System for Mobile X-Ray C-Arms



Qioptiq, an Excelitas Technologies® Company introduces SlimLine Camera Lens System for mobile X-ray C-arm medical imaging devices. As the first 1K x 1K complementary metal-oxide-

semiconductor (CMOS) camera available for this market, the new compact, ready-to-use SlimLine lens system offers high-resolution X-ray images in real time at an affordable price.

The design-to-cost OEM product consists of the SlimLine lens assembly and a QioCam X-ray camera to deliver a high-performance combination of optics (lens elements), mechanics (housing, flange), and electronics (motor control board for Iris communication).

The SlimLine lens assembly can be used with all 9" and 12" image intensifiers, and the camera is equipped with special functions including automatic gain control, gamma correction, frame on demand and more. The motion control board for Iris communication works with different interfaces such as GigE and SPI.



[www.qioptiq.com/x-ray.html](http://www.qioptiq.com/x-ray.html) // [info@qioptiq.de](mailto:info@qioptiq.de)

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Different configurations are available within the MAC range, including analog units (up to 32 kW) controlled by either a 8" touch screen or a membrane keyboard and digital units with 19" pc touch panel for image acquisition in DR mode.

The digital system can manage at the same time one or more Wi-Fi detector of different sizes (35x43 cm, 43x43 cm, 24x30 cm) or, as an alternative, MAC can be equipped with wired detector.

[www.gmmspa.com](http://www.gmmspa.com) // [info@gmmspa.com](mailto:info@gmmspa.com)



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GMM range of products includes cutting-edge solutions for both conventional and digital radiography applications: extreme user-friendliness, reliability and safety in any procedure for utmost accuracy and precision in diagnostic results:

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## • Evario - the smart bed for all environments



The new Stieglmeyer hospital bed is not just a single bed. It is a modular system that enables the customers to combine features that perfectly meet their demands. Therefore, Evario is the ideal choice for all hospital units. The selection of features includes a choice of 2 different safety side systems and head and footboards, a variety of decors as well as different castors and mattress bases.

The Evario is easy to operate and facilitates everyday tasks for care staff and patients. Its clear design and construction components make for excellent hygiene properties, including an optional suitability for automated reprocessing.

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## Evario – the hospital bed for all requirements

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- intensive care
- premium units

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### • Villa Sistemi Medicali presents the new Apollo DRF 4.0



The new Apollo DRF 4.0, evolution of the reference remote controlled table from Villa, presents a series of improving features that enhance system's performance and usability, as well as its flexibility and diagnostic capabilities, providing a rapid and efficient workflow with increased productivity and better diagnostic results.

The new borderless tabletop with reduced height from the floor improves the patient accessibility to the table and simplifies its transfer from the stretcher. The new touch screen console with smart-touch joysticks and the direct controls on the touch screen collimator improve and simplify the operator interaction with the equipment, while the new 2 way intercom system with preset audio messages allows to communicate with the patient in different languages.

Apollo DRF 4.0 can cover the widest range of R/F applications, providing high resolution images at very low dose: in addition to DSA and full-leg/full-spine exams, the new tomosynthesis modality offers detailed information resulting in a rapid and effective diagnostic process.



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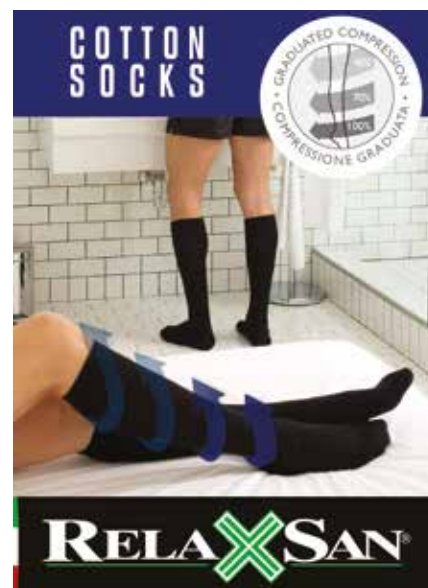


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4.0

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New smart-touch joysticks

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**63 million  
people**

- 1 in 10 - lack  
access to  
safe water

**More people  
have a mobile  
phone than  
a toilet**

**2.4 billion  
people**

- 1 in 3 - lack access  
to a toilet

**The water crisis  
is the #1 global risk  
based on impact to society  
(as a measure of devastation),  
as announced  
by the World  
Economic Forum  
in January 2015**





# Focus Access to Safe Drinking Water, Challenges and Opportunities for Improving Global Health

**How many people still drink dirty water  
or go to the toilet in the open?**

Easy access to adequate sanitation and sufficient amounts of safe water for drinking and hygiene at home, schools and healthcare facilities is essential to human health and well-being and should be a prerequisite for a decent life in the 21st century; yet, in many parts of the world water carries deadly toxins, parasites or bacteria that cause disease. The safety and accessibility of water are major concerns throughout the world and improving access to safe drinking-water and sanitation can result in tangible improvements to health.

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**A** safe, reliable, affordable and easily accessible water supply is essential for good health. Globally, people of many nations—or high income regions within nations—now enjoy the health benefits of vast, reliably maintained infrastructure and water management systems that pipe safe, clean water into people's homes for drinking, cooking, washing and flushing their waste into sewerage systems. In these regions, people no longer have the responsibility of maintaining their own supply of safe water or collecting water from a shared source outside of their own house or yard. Instead, people are billed, with variable levels of efficiency and cost recovery, for water services provided by government or private utility companies.

It has been estimated that a minimum of 7.5 liters of water per person per day is required in the home for drinking, preparing food and personal hygiene, the most basic requirements for water; at least 50 liters per person per day is needed to ensure all personal hygiene, food hygiene, domestic cleaning and laundry needs. This domestic water consumption is dwarfed by the demands of agriculture and ecosystems, even in wealthy countries where per capita domestic water consumption greatly exceeds these figures. To cover all these requirements and to avoid water stress, experts generally agree that about 1,000 cubic meters of freshwater per capita per year is needed. Nevertheless, only about 0.5% of water on Earth is usable freshwater; as most of the 1.4 billion cubic kilometers of water on the planet (70% of the planet) is seawater. **Water scarcity affects 40% of the world's population and water use is predicted to increase by 50% in developing countries and 18% in developed countries by 2025. It is thought that water scarcity will be exacerbated by population growth, expanding agriculture and climate change.** Despite the overwhelmingly clear evidence that providing safer, accessible and more reliable supplies of fresh water leads to healthier populations and economies, millions of people still struggle to access safe drinking water and some 842,000 people in low- and middle-income countries die each year from poor water, sanitation and hygiene, representing 58% of total diarrheal deaths.

The most commonly used definition of "access" is defined as having a source of safe water within 1 kilometer of the dwelling. **It is estimated that in 2015, 63 million people still lacked access to "improved" drinking water sources.** Improved sources are those deemed to be relatively protected from contamination and, therefore, likely to provide water safe for human consumption and household use, such as piped water supplies into the house, yard, boreholes or protected wells or springs.

Most unimproved sources—for example, surface

water or unprotected wells or springs—and many improved water sources are located away from the home and publicly shared. Transportation of water from the supply point to the house is, therefore, required and globally this is most often achieved through unpaid, informal work performed mostly by women. **Time spent collecting water restricts opportunities for other occupations, such as education and paid or other subsistence work. In developing countries women and girls, which spend an estimated 40 billion hours a year collecting water, are affected disproportionately.**

Water is not an easy substance to transport: it is heavy, unstable and energy-intensive to move. The infrastructure that supports piping water into houses is expensive to install and maintain and poorly constructed and maintained facilities lead to regular breakdown of supply systems with prolonged repair times. Many cities currently reap the benefits of past investments in infrastructure and face huge costs of repairing and replacing old materials. Piped water services are simply unaffordable in many communities of low-income regions or countries, particularly in remote rural areas.

**The health and social impact of the work of water carriage on people who must regularly collect water from out of home sources has received little attention to date.** It is likely that for healthy, fit, working-age adults, the physical health impact of collecting water may not be problematic. However, this assumes the absence of population tensions, violence, corruption and health problems, which can individually or in combination create a very challenging or unsafe environment for water collection, such that individuals or households struggle to obtain sufficient water to meet their needs. For instance, the long walks needed to collect water may increase the spread of certain infectious diseases through a community.

**Corruption in the water sector is also one of the key reasons that so many people lack access to safe water and sanitation.** It can mean that public contracting does not serve the public good, but leads to inflated prices and bribery for services, dumping of pollutants into water bodies and poorly constructed facilities.

Distance to water source, frequency of trips, terrain and climate in which water fetching is performed will also influence the level of difficulty that households face in accessing water. Injury, disability, age or long-term health conditions may further compromise an individual's capacity to physically collect enough water.

There is growing evidence that regularly carrying heavy loads on the head, typical of water carriage in Sub-Saharan Africa, is associated with musculoskeletal pain and disability. The aftermath of infectious

To cover all these requirements and to avoid water stress, experts generally agree that about 1,000 cubic meters of freshwater per capita per year is needed.



disease epidemics, conflict or natural disaster may mean that children or the elderly in poor families bear the burden of collecting water for household use and it is clear that the very young and the elderly have reduced capacity for such physical work.

### Water Quality and Health

An inadequate water supply—whether as a result of poor access or quality, low reliability, high cost or difficulty of management—is associated with significant health risks, experienced most strongly by the poorest nations and the poorest households within nations.

Inadequacies in water supply affect health adversely both directly and indirectly. Water is not so easy to keep clean, particularly if it must be transported from a shared source to the point of use. It has been shown that “improved sources” are not always safe and can be contaminated by chemical pollutants or human or animal excrement. Several studies have shown that even if the water quality is high at a public source point, contamination frequently occurs during transport, handling and storage in the home. **Contaminated water and poor sanitation are linked to transmission of diseases such as cholera, diarrhea, dysentery, hepatitis A, typhoid and polio.**

Absent, inadequate or inappropriately managed water and sanitation services expose individuals to

preventable health risks. This is particularly the case in healthcare facilities where both patients and staff are placed at additional risk of infection and disease when water, sanitation and hygiene services are lacking. **Globally, 15% of patients develop an infection during a hospital stay, with the proportion much greater in low-income countries.**

Some 842,000 people are estimated to die each year from diarrhea because of unsafe drinking-water, sanitation and hand hygiene. Infants and children under 5 years of age are particularly vulnerable to diarrhea as a leading cause of malnutrition and death. But diarrhea is largely preventable and the deaths of 1,000 children each day could be avoided if these risk factors were addressed. Where water is not readily available, people may decide hand-washing is not a priority, thereby adding to the likelihood of diarrhea and other diseases.

Investigations of the costs and health benefits associated with improvements to drinking water supply in low-income countries have concentrated almost exclusively on how these improvements affect the incidence of acute infectious diarrhea. **This focus is not surprising given that diarrheal disease is the second most common contributor to the disease burden in developing countries and poor-quality drinking water is an important risk factor for diarrhea.** Most of the excess disease burden in developing countries

**An inadequate water supply—whether as a result of poor access or quality, low reliability, high cost or difficulty of management—is associated with significant health risks, experienced most strongly by the poorest nations and the poorest households within nations.**



falls on young children—17% of all deaths in children under 5 years are attributed to diarrhea. Both the gross domestic product per capita (GDP) and the proportion of the population without access to improved water are highly correlated with infant mortality. **A broad statistical relationship exists between improved water services and lower infant mortality for countries of similar GDP.**

There is a strong link between repeat or chronic diarrheal disease, malnutrition, and the poor educational and physical growth that can seriously affect the ability of children to reach their full potential. It has been suggested that if the impacts of these chronic effects are taken into consideration, the real global disease burden due to diarrhea (and, consequently, the health benefits of water and sanitation interventions) would be about twice the current estimates, which are based only on acute illness and mortality. Diarrhea is the most widely known disease linked to contaminated food and water but there are other hazards. Almost 240 million people are affected by schistosomiasis – an acute and chronic disease caused by parasitic worms contracted through exposure to infested water. In many parts of the world, insects that live or breed in water carry and transmit diseases such as dengue fever. Some of these insects, known as vectors, breed in clean, rather than dirty water and household drinking-water containers can serve as breeding grounds. The simple intervention of covering water storage containers can reduce vector breeding and may also have a co-benefit of reducing faecal contamination of water at the household level.

**Inadequate management of urban, industrial and agricultural wastewater means the drinking-water of hundreds of millions of people is dangerously contaminated or chemically polluted.** Chronic or acute exposure to many organic and inorganic chemical agents has been implicated in adverse health effects that range from acute nausea and vomiting or skin rashes, to cancer and fetal abnormalities. Inorganic pollutants in drinking water that have been linked with disease include arsenic, copper, fluoride, lead and nitrate. Organic compounds that have caused concern include pesticides, chlordane, phenol and trihalomethanes. More recently, endocrine-disrupting compounds and pharmaceuticals in drinking water have been causing concern.

Globally, naturally occurring arsenic contamination is the chemical pollutant of most concern. In Bangladesh, drinking water wells constructed to provide people with clean drinking water often provided water with naturally high arsenic concentrations, affecting an estimated 20-50 million people. Long-term exposure has been associated with skin, bladder and lung cancers and kidney disease.

Fluoride in drinking water is also causing increasing

concern in the developing world. About 200 million people are at risk of exposure to elevated concentrations of fluoride in drinking water, which can lead to dental and sometimes skeletal fluorosis. Although the global disease burden estimates for non-diarrheal diseases associated with water supply problems such as these fall far below similar estimates for diarrheal disease, the communities affected by these diseases can suffer severely.

In addition to the direct health benefits of improved safe water supplies, there are many indirect benefits. For example, the strong relationship between water and livelihoods in all regions and economies of the world affects health indirectly. **In developing countries, deficiencies in water supply, whether for productive or domestic uses, have direct negative impacts on livelihoods; in wealthier countries, past investment in water infrastructure and the ability to invest more in the present increase water security and, arguably, prosperity.**

Lack of water can also lead indirectly to disease via malnutrition. Several authors argue strongly for investments in low-cost water harvesting techniques, irrigation, and clean water provision as a means of increasing food production and reducing infectious disease burden. Numerous examples exist across sub-Saharan Africa and south Asia in which access to a small amount of irrigated land has transformed food security for highly vulnerable households. A study of child nutrition in otherwise comparable communities with and without access to irrigation in central Kenya found clear evidence that irrigation contributed to higher energy intakes and reduced chronic malnutrition in children.

Finally, improvements in water supply are essential prerequisites for improved personal and home hygiene and to enable sanitation facilities to be kept clean. Consequently, the direct health effect of improved water supply is likely to be extended by its indirect effects on sanitation and hygiene.

### Socio-Economic Returns

- Investment to improve drinking water, sanitation, hygiene and water resource management systems makes strong economic sense.
- Every dollar invested leads to up to eight dollars in benefits.
- US\$ 84 billion a year could be regained from the yearly investment of US\$ 11.3 billion needed to meet the water and sanitation targets under the Millennium Development Goals (United Nations).
- In addition to the value of saved human lives, other benefits include higher economic productivity, more education and healthcare savings.

A recent study of the economic returns on investments in water supply and sanitation indicated that

**In developing countries, deficiencies in water supply, whether for productive or domestic uses, have direct negative impacts on livelihoods**

every US\$1 spent on water supply and sanitation services could lead to an economic return of between \$5 and \$46, with the highest returns in the least-developed areas. Much of this additional income was from the time saved by having reliable water close to the household. Other studies also suggest that investments in water alleviate poverty. **The balance of evidence favors the likelihood that water and sanitation interventions have economic benefits beyond those that simply relate to reduced healthcare costs. Indeed, it has been argued that adequate water and sanitation is an essential prerequisite to economic development.** Thus, poor countries with access to improved water experienced average annual growth of 3.7% whereas countries with the same per capita income but without such access have an annual growth of only 0.1%. The level of water sector financing in low-income countries is widely criticized as being inadequate, but at the same time water supply budgets are often underutilized or ineffectively used. Delays in the release of central government funds to local authorities combine with inadequate allocations for operational expenses to render local governments ineffective in disbursing the funds that do reach them. **Importantly, though, the additional US\$11.3 billion that is needed annually to meet the water and sanitation Millennium Development Goals targets—a relatively small investment (a few dollars per capita per year) that is “highly feasible and within the reach of most nations”—would yield an estimated seven-fold return.**

Improved water supplies usually attract a tariff or water charge. In low-income countries it is common for such tariffs to be set at levels that are below the real running costs. In such cases a vicious circle often becomes established, in which below-cost tariffs lead to inadequate investment in maintenance, which results in deteriorating service and further unwillingness to pay even low tariffs.

Water consumers without an improved water supply do not pay a financial tariff for water. Even though they may pay heavily in terms of health, time, and energy, it often proves extremely difficult to change the mindset of consumers who are used to water being “free.” Even small water charges are not welcomed by consumers and revenue collections that start as regular monthly charges often deteriorate to ad hoc collections or disappear altogether. Financial irregularities also often militate against continued payment of charges.

### Key Facts on Sanitation

- In 2015, 68% of the world's population had access to improved sanitation facilities including flush toilets and covered latrines, compared with 54% in 1990.

- The proportion of people practicing open defecation globally has fallen almost by half, from 24% to 13%.
- At least 10% of the world's population is thought to consume food irrigated by wastewater.
- Despite progress, the 2015 Millennium Development Goal target (United Nations) to halve the proportion of the population without access to improved sanitation facilities was missed by almost 700 million people.
- Of the 842,000 people that die because of inadequate water, sanitation and hygiene each year, poor sanitation is believed to be the main cause in some 280,000 of these deaths.
- Open defecation perpetuates a vicious cycle of disease and poverty. The countries where open defecation is most widespread have the highest number of deaths of under-5 as well as the highest levels of malnutrition and poverty and big disparities of wealth.

### Making Progress

In 2010, the United Nations General Assembly recognized access to safe and clean drinking-water and sanitation as a human right and called for international efforts to help countries to provide safe, clean, accessible and affordable drinking-water and sanitation. Achieving universal access to a basic drinking water source appears within reach but universal access to basic sanitation needs additional efforts. **The Joint Monitoring Programme (JMP) of UNICEF and the WHO reported that some 2.6 billion people gained access to improved drinking water sources**

Thus, poor countries with access to improved water experienced average annual growth of 3.7% whereas countries with the same per capita income but without such access have an annual growth of only 0.1%.



Limited data available on this topic suggests that a large proportion of wastewater in developing countries is discharged partially treated or untreated directly into rivers, lakes or the ocean.

since 1990, and 91% of the global population now have improved drinking water.

Whilst much of this progress was achieved in China, the JMP reported that in Sub-Saharan Africa, 427 million people have gained access, which equates to an average of 47,000 people per day every day for 25 years.

Overall, 84% of people still not enjoying an improved water supply live in rural areas, but it is the urban areas that are struggling most to keep ahead of population growth rates, which are commonly double the national averages.

Despite big improvements, inequalities between and within countries and regions persist in basic sanitation needs. In Southern Asia, 47% of the population was using improved sanitation facilities in 2015 compared with 22% in 1990. Sub-Saharan Africa has made slower progress, with sanitation coverage rising from 24% to 30% in 2015. In 47 countries, less than half the population has access to a toilet or an improved latrine.

Some 13% of the global population is forced to defecate in the open. Nine out of 10 people who do this live in rural areas but the number defecating in the open in towns and cities is gradually increasing as urban populations grow without a corresponding expansion of sanitation facilities. The nearly 700 million people who would have been served if the Millennium Development Goals target for sanitation had been met is equal to the number of unserved people in sub-Saharan Africa.

The situation of the urban poor poses a growing challenge as they live increasingly in mega cities where sewerage is precarious or non-existent and space for toilets and removal of waste is at a premium. Inequalities in access are compounded when sewage removed from wealthier households is discharged into storm drains, waterways or landfills, pol-

luting poor residential areas.

Limited data available on this topic suggests that a large proportion of wastewater in developing countries is discharged partially treated or untreated directly into rivers, lakes or the ocean.

In many regions, clean water is becoming increasingly scarce due to population growth, urbanization, pollution and climate change; yet, water also plays a vital role in the environment, socio-economic development and poverty reduction. For these reasons, the need to raise awareness of the issues surrounding water and encourage increased global collaboration to solve them.

In working to achieve the United Nations Sustainable Development Goals (SDG) target of universal access to safe drinking water and sanitation by 2030, the challenges discussed in this article must be addressed. The issues that complicate and perpetuate the realities of water collection faced by so many people in the world every day will not go away easily, but progress over the past 25 years and the building momentum, dialogue and political will toward transformation indicated by the SDG provide evidence that real change for the better is possible.

#### Among main sources:

<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000361>

[http://www.fairobserver.com/more/global\\_change/access-safe-drinking-water-challenges-opportunities-improving-global-health-32394/](http://www.fairobserver.com/more/global_change/access-safe-drinking-water-challenges-opportunities-improving-global-health-32394/)

[http://www.who.int/topics/drinking\\_water/en/](http://www.who.int/topics/drinking_water/en/)

<https://www.theguardian.com/global-development-professionals-network/2015/jul/01/global-access-clean-water-sanitation-mapped>

<https://www.fic.nih.gov/news/globalhealthmatters/january-february-2013/pages/water-global-health.aspx>

[http://www.who.int/water\\_sanitation\\_health/publications/jmp-2015-update/en/](http://www.who.int/water_sanitation_health/publications/jmp-2015-update/en/)

<http://www.who.int/mediacentre/factsheets/fs392/en/>

- A poor water supply impacts health by causing acute infectious diarrhea, repeat or chronic diarrhea episodes and non-diarrheal disease, which can arise from chemical species such as arsenic and fluoride. It can also affect health by limiting productivity and the maintenance of personal hygiene.

- Reasons for the limited progress towards universal access to an adequate water supply include high population growth rates in developing countries, insufficient rates of capital investment, difficulties in appropriately developing local water resources and the ineffectiveness of institutions mandated to manage water supplies (in urban areas) or to support community management (in rural areas).

- Strenuous efforts must be made to improve access to safe and sustainable water supplies in developing countries, and, given the health burden on the public and the costs to the health system, health professionals should join with others in demanding accelerated progress towards global access to safe water.





## MARKET OVERVIEW

Kazakhstan, a Dynamic Emerging Market





# Kazakhstan, a Dynamic Emerging Market

The country has seen incredible, sustained growth over the past decade and a very young population to continue its level of dynamism in the future. Its economic growth and reforms, combined with a growing middle class, are opening the region up to the rest of the world.

Its strategic aspiration is to become a modern, diversified economy with a high value-added and high-tech component, and Kazakhstan is cognizant of the need for foreign expertise to accomplish this. Nevertheless, areas such as health and environment still need an infusion of investment to reach global best practices.

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### The Healthcare Market

Healthcare provision varies greatly geographically and socially within the country. There has been a wide investment in the healthcare system but standards have often been raised from a very low base. Nevertheless, extensive reforms over the past 5 years have seen a period of heavy investment in the healthcare system, with approximately \$3.6 billion allocated to Kazakhstan's healthcare sector from the 2013 budget and further progress is projected. There is a very small domestic production base within the region and imports make up most of consumption.

### Medical Equipment

	2012	2013
Total Market Size	USD 470 millions	USD 480 millions
Total Local Production	USD 45 millions	USD 46 millions
Total Exports	USD 5 millions	USD 6 millions
Total Imports	USD 430 millions	USD 440 millions

The above statistics are unofficial estimates based on Kazakhstan customs data and industry sources.  
Source: <https://www.export.gov/article?id=Kazakhstan-Market-Overview>

The Kazakh medical equipment market imports 90% of products and provides an open business environment. There is almost no production of medical equipment in Kazakhstan and the government recognizes the need to replace obsolete equipment, which comprises approximately 80% of medical equipment currently being used in the country's public hospitals. 85% of medical equipment in Kazakhstan is purchased by the public sector.

From 2012 to 2013 the market for medical equipment increased by an estimated 2%, with almost all medical equipment imported (90%), totaling \$440 million in imports. Major importers into Kazakhstan are Russia, Germany and Japan. There are about 60 companies registered as medical equipment producers, most of which are small businesses with insignificant production volumes. Local production of medical equipment in 2013 accounted for only 9.6% of the total market so diagnostic equipment, medical lasers, endoscope and dental equipment are among the major products of import interest within the market.

An easy first step for entering the market is to establish a local presence or select a local partner for effective marketing and sales distribution, keeping in mind that Kazakhstan has a small population spread over a large landmass and distribution channels should be able to represent the needs countrywide.

In 2008, the government of Kazakhstan established the

National Medical Holding with the intent to introduce international standards of quality and safety of care and to ensure financial sustainability and growth. A joint stock company wholly-owned by the government, the company incorporates six separate innovative entities that include the National Research Center for Maternal and Child Health, the Republican Child Rehabilitation Center, the Republican Diagnostic Center, the Republican Research Center for Neurosurgery, the Republican Research Center for Emergency Care and the National Research Center for Cardiac Surgery.

### Healthcare Assessment

As a result of improved socio-economic situation and implementation of reforms in healthcare in recent years, Kazakhstan has experienced positive medical and demographic changes. **Since becoming independent it has taken major steps to reform its healthcare system developed within the Soviet model, which was focused on hospital services, while the primary healthcare sector, disease prevention and health promotion services received little attention.** Throughout the system, the tendency was to refer patients to higher levels of care. At present, the healthcare delivery system is in the process of reorganization as health services are fragmented and do not ensure continuity of care. There are no strong linkages between primary and secondary care and many services are organized in parallel vertical structures. The purpose of the reorganization is to transform primary care through the implementation of general and family physicians, followed by the closure of a number of small hospitals.

The two comprehensive reform programmes developed in the 2000s: the *National Programme for Health Care Reform and Development 2005-2010* and the *State Health Care Development Programme for 2011-2015* "Salamatty Kazakhstan" addressed the need for the improvement of the quality and availability of medical care by establishing a strong competitive health system with advanced management and stable financing. The reforms are addressing the urgent issue to switch accents from inpatient to outpatient care. **Despite some latest positive shifts in inpatient care, it still remains the main costly sector of the health system, accounting for more than 60% of all expenditures.** Inappropriate and ineffective use of the hospital infrastructure is also another big issue with poor performance indicators of inpatient care and many narrowly specialized health facilities.

Another key challenge in the country is regional inequities in health financing, healthcare utilization and health outcomes, although some improvements have been achieved in recent years. Between 2001 and 2008 the difference in health financing per capita between the richest and poorest oblast (regions) decreased from 4.2 to 2.1 times. Residents of the cities of Almaty and Astana have advantages in accessing health services, as these two cities host the most advanced national clinical centres, whereas the geographical accessibility of health services in remote areas is much more challenging, considering the country's vast and scarcely populated territory. In 2015 life expectancy at birth varied between 66.3 in North Kazakhstan oblast and 72.3 in Astana city, still among the lowest in the WHO Eu-



ropean Region. There were also strong regional variations in infant and maternal mortality.

Preliminary results of the National Programme for Health Care Reform and Development 2005-2010 indicated progress in quality improvement, especially in maternal and child health and TB, but also a strong need for further efforts. Despite investments and reforms, population health has not yet improved substantially compared to international standards. Health challenges still include low life expectancy, high infant and maternal mortality, high rates of TB and HIV/AIDS and a growing burden of non-communicable diseases such as cardiovascular disease, diabetes and cancer which are the leading causes of mortality.

The medical education system has also initiated comprehensive reforms to reflect the needs of the health system for practitioner of family medicine and general practices. Quality of care has been recognized as an area in need of major improvements and Kazakhstan has embarked on promotion evidence-based medicine and developing and introducing new clinical practice guidelines based on WHO Standards, as well as facility-level quality improvement.

#### Organization and financing

While the administrative set-up of Kazakhstan's health system is highly centralized compared to some federal or

highly decentralized systems in western Europe, it is less centralized than that of most other countries in central Asia or the CIS, and the oblasts (regions) have a great amount of autonomy. **While the ministry of Health is responsible for developing national health policies, healthcare provision and financing have been largely devolved to the oblast administrations and their health departments. The 14 oblast and Almaty and Astana city health departments are the key bodies administering health services in Kazakhstan and run most hospitals and polyclinics.** Parallel health systems, run by some ministries and government agencies, also have their own network of health facilities financed from the republican budget. These parallel systems have been inherited from the Soviet period and are still largely in place, even if some have been closed down. The role of professional associations and non-governmental organizations (NGOs) in the development of health policies, legislation and regulation is also increasing.

In 2014, total health expenditure amounted to 4.4% of GDP, which was one of the lowest shares in the WHO European Region. Health revenue comes from two main sources: the government budget (at national and oblast level) and out-of-pocket payments (official user fees and informal payments).

Financing according to state budgets was reintroduced in Kazakhstan in 1999, after a failed attempt to create a

**Furthermore, the provision and quality of services are uneven due in large part to the disparities between the regions in terms of size, population and wealth, among other factors.**



Nevertheless, in terms of human resources, the country still faces several challenges, including in specialty mix and distribution across the country

mandatory health insurance system. Nevertheless, a single-payer national health insurance fund is in the process of being reintroduced again and is expected to boost total spending on healthcare and become the central financing mechanism for paying for public health services by requiring contributions from both employers and employees, eliminating disparities between richest and poorest *oblasts*. National expenditure on health is mainly spent on services under the State Guaranteed Benefits Package (44%) and ear-marked transfers to local budgets (38%). **The bulk (60%) of oblast expenditure on health is devoted to services included in the State Guaranteed Benefits Package, while the remaining 40% cover services outside the package.**

The State Guaranteed Benefits Package includes emergency care and specified outpatient and inpatient services. A new outpatient drug benefit has also been introduced that entitles children, adolescents and women of reproductive age to free outpatient pharmaceuticals. For the rest of the population, medicines remain the main type of benefit that require co-payments.

Hospitals and other healthcare organizations can officially charge for services that are outside the State Guaranteed Benefits Package. User charges for goods and services by public providers were legalized in 1995. Set at oblast level they usually cover non-essential health services such as cosmetic surgery and some dental care.

Patients often pay for food and drugs in hospitals, although these should be provided free of charge; patients are also routinely given a list of medicines and medical supplies to bring with them to hospital. Also, they pay for pharmaceuticals, aids or dentures from outpatient services and polyclinics.

**The share of informal payments is assumed to be high, although the exact scale is difficult to estimate. Several are the reasons, including low official salaries of health workers, public underfunding of the State Guaranteed Benefits Package, poor monitoring of its implementation and the lack of a clear distinction between covered services and services that need to be paid by patients.**

The government aims to improve the financial protection of the population through the State Guaranteed Benefits Package and outpatient drug benefits to vulnerable groups of the population. It has also increased public expenditure on health. **However, private out-of-pocket expenditure still accounts for over 30% of total health expenditure, potentially exposing poorer groups of the population to catastrophic expenditures on health.** According to data of the National Statistical Agency, in 2008, 7.4% of the population did not use health services because of high costs.

Furthermore, the provision and quality of services are uneven due in large part to the disparities between the regions in terms of size, population and wealth, among other factors. Supplementary healthcare is a common and popular benefit for employees as a means of avoiding use of the state system.

### Physical and Human Resources

Similar to other countries of the former USSR, Kazakhstan inherited an oversized hospital infrastructure from the Soviet period. It has since reduced the number of hospitals (particularly in rural areas where many village hospitals

were closed down) and hospital beds significantly and has also started to renew its health infrastructure, but the ratio of hospital beds per population (7.2/1000 people, in 2012) is still higher than in western European countries and differs greatly across *oblasts*.

There has also been a decline in the average length of stay in hospitals in recent years which, according to WHO data, was one of the lengthiest in the world in the 1990s. Such a long period of bed-days remained over more than 10 years stabilizing at 9.9 bed-days in 2011. It is evident that the hospital stock is still used irrationally. In fact, over 2.6 million patients (15.5% of the total population) are treated annually in the over 900 hospitals in Kazakhstan. Of these patients, one third does not need inpatient care at all.

Kazakhstan has approximately 913 hospitals and 2,752 outpatient settings (Ministry of Health data for 2012) with new facilities in the pipeline. Though some private hospitals were opened over the past 10 years, the state owns 777 public hospitals and 1,825 outpatient organizations, while more than 700 inpatient and outpatient healthcare organizations have private ownership.

In the health system, privatization has been more limited than in the industrial or agricultural sectors and it mostly involved pharmacies (95.8%) and dental care, while hospitals, sanatoriums and large polyclinics continue to be mainly state owned. However, between 1999 and 2004, the number of private hospitals almost doubled, and the number of private facilities almost tripled. The share of the private sector is increasing and in 2010, 16.4% of all physicians were working in the private sector.

According to the Ministry of Healthcare, over the years of independence Kazakhstan, at the expense of the state budget, has built and put into operation 1,312 healthcare facilities with the intention of new hospitals replacing old ones and no increase in the overall number of beds.

Between 1990 and 2000, Kazakhstan experienced a dramatic decline in the number of health workers, due to several factors including a shift to the private sector; health workers leaving the health sector; the emigration of ethnic Russian and other ethnic groups and the dismissal of health personnel. However, because of the measures taken and the increase of the issue in medical schools, the shortage of medical personnel at national and regional levels has been reduced in all specialties by 34%, or more than 2 thousand people, between 2005 and 2015, **reaching 190 thousand medical workers, including 53,000 doctors.**

Nevertheless, in terms of human resources, the country still faces several challenges, including in specialty mix and distribution across the country. Rural and remote areas continue to experience a shortage in health personnel, while larger cities are much better staffed. There is also an imbalance towards specialist services, to the detriment of primary healthcare facilities. The healthcare system is still dominated by a system of specialization. Building trust in a system whereby a primary care physician oversees a patient's health is proving a challenge; heads of department and professors are more respected than a primary care physician.

The need for certain categories of health professionals, such as specialists in health management or health economics, is particularly acute, especially as health care providers have received greater autonomy to manage their resources.





One of the challenges is that salary levels, in particular for nurses, which remain low. Many doctors have more than one job or see patients privately because of low salaries.

The ratio of health workers per 100,000 population in the public sector decreased for all professions between 1991 and 2009, with some of the most pronounced declines for nurses, midwives and dentists. The ratio of physicians (PP) to population declined between 1991 and 2000, but has since increased again, slightly surpassing the CIS average in 2009.

#### Main Sources:

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- The Ministry of Labor and Social Protection of Population of the Republic of Kazakhstan, <https://www.enbek.gov.kz/en/taxonomy/term/780> <http://www.mz.gov.kz/en/node/342216> The Ministry of Healthcare of the Republic of Kazakhstan  
- <https://www.cia.gov/library/publications/the-world-factbook/geos/kz.html>  
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For further  
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#### Health Workers (PP) in the Public Sector per 100 000 population (2000-2010)

Year	2000	2008	2009	2010
Physicians	330	374	378	388
Dentists	21	8	8	10

Source: Ministry of Health, 2011 / Note: PP = Physical Persons

# New EU Rules on Medical Devices to Enhance Patient Safety and Modernise Public Health

Brussels 5 April, 2017 - The European Commission welcomes the adoption of its proposal for two Regulations on medical devices which establish a modernised and more robust EU legislative framework to ensure better protection of public health and patient safety.

These replace the existing Directives.

- **Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC**
- **Regulation (EU) 2017/746 of the European Parliament and of the Council of 5 April 2017 on in vitro diagnostic medical devices and repealing Directive 98/79/EC and Commission Decision 2010/227/EU**

The new Regulations on medical and in-vitro diagnostic medical devices proposed by the Commission in 2012 will help to ensure that all medical devices – from heart valves to sticking plasters to artificial hips – are safe and perform well. To address this, the new rules will improve market surveillance and traceability as well as make sure that all medical and in vitro diagnostic devices are designed to reflect the latest scientific and technological state-of-the art. The rules will also provide more transparency and legal certainty for producers, manufacturers and importers and help to strengthen international competitiveness

and innovation in this strategic sector.

Elżbieta Bieńkowska, Commissioner for Internal Market, Industry, Entrepreneurship and SMEs, said: “I’m extremely happy that our push for stricter controls of medical devices on the EU market will now become a reality. Whether for medical devices, cars or other products, we must ensure stronger supervision in the interest of our citizens. We should not wait for another scandal instead we should start a discussion how to strengthen European oversight over Member States’ market surveillance activities.”

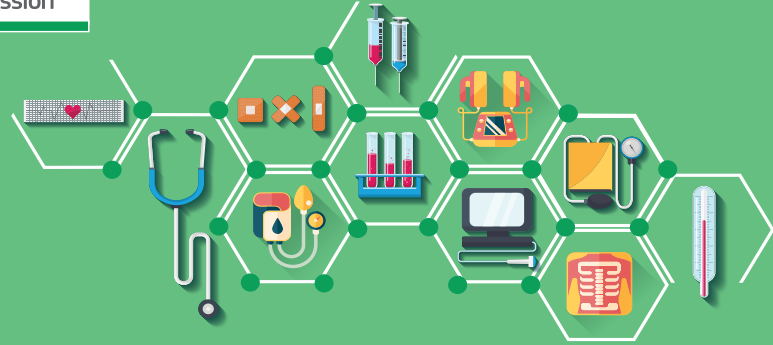
The two new Regulations bring a number of improvements for medical and in-vitro devices:

- **Improve the quality, safety and reliability of medical devices:** The new rules will impose tighter controls on high-risk devices such as implants, requiring a pool of experts at the EU level to be consulted before placing the device on the market. Controls will also be tightened on clinical trials as well as on the bodies that can approve the marketing of medical devices. The new rules will also cover certain, previously unregulated aesthetic products (e.g. coloured contact lenses that do not correct vision). In addition, a new system for risk classification in line with in-





# New EU rules to ensure safety of medical devices



## EXISTING RULES

**Outdated rules** – rules on medical devices date back to the 1990s and don't reflect the technological progress made since then

Control of high-risk devices such as implants relies **on national Notified Bodies** – separate bodies risk inconsistency

Clinical trials taking place in more than one Member State are subject to **multiple national assessments**

Most aesthetic products, such as coloured contact lenses, are **regulated as general products**

**Only one in five** *in vitro* diagnostic medical devices is checked by a Notified Body before they are placed on the market

European database contains **limited** information on medical devices that is not publicly accessible

**Varying and often limited** information on implanted devices available to patients

In case of harm resulting from medical devices, compensation is **not guaranteed** if, for example, manufacturer goes bankrupt

**Multiple registration procedures** might be required for medical devices in different EU countries

## NEW RULES

**Up-to-date rules** – new rules take into account technological progress and drive innovation

Control of high-risk devices such as implants involve also **panels of independent experts** at EU level

Clinical trials taking place in more than one Member State will be subject to **a single coordinated assessment**

Many aesthetic products are **regulated as medical devices and subject to stricter controls**

**Four out of five** *in vitro* diagnostic medical devices are checked by a Notified Body before they are placed on the market

European database contains **extensive** information on medical devices, most of which is publicly available

An **"implant card"** for implanted devices gives patients more information

A financial mechanism **ensures patients are compensated** in case defective medical devices harm them

**Simplified procedure** allows manufacturers to register their device only once at the EU level



ternational guidelines will apply to in vitro diagnostic medical devices.

- **Strengthen transparency of information for consumers:** The new regulations will make sure that vital information is easy to find. For instance, patients will receive an implant card with all the essential information, and a unique device identifier will be mandatory for every product so that it can be found in the new European database of medical devices (EUDAMED).
- **Enhance vigilance and market surveillance:** Once devices are available for use on the market, manufacturers will be obliged to collect data about their performance and EU countries will coordinate more closely in the field of market surveillance.

### Background

There are over 500,000 types of medical devices and in-vitro diagnostic medical devices on the EU market. Examples of medical devices are contact lenses, x-ray machines, pacemakers, breast implants and hip replacements and sticking plasters. In vitro diagnostic medical devices, which are used to perform tests on samples, include HIV blood tests, pregnancy tests and blood sugar monitoring systems for diabetics.

The existing regulatory framework dates back to the 1990s and consists of three Directives. However, problems with divergences in the interpretation and application of the rules, technological progress

as well as incidents involving malfunctions of medical devices—i.e. the PIP breast implant scandal—highlighted the need for revision of current legislation. The Commission is also currently working on more structural and horizontal solutions for better market surveillance within the broader frame of a goods package reform.

To address this, the European Commission presented two legislative proposals on medical and in-vitro diagnostic on 26 September 2012. This was followed by extensive expert consultations that resulted in an agreement on the general approach to the medical devices package among Member States' health ministers on 5 October 2015. The adoption of the package by Parliament, following today's vote in plenary, fully reflects the position of the Council reached in its first reading and in turn the agreement of the co-legislators from June 2016, therefore allowing to conclude the legislative process.

**To allow manufacturers and authorities to adapt, the new rules will only apply after a transitional period. Namely, 3 years after entry into force for the Regulation on medical devices (spring 2020) and 5 years after entry into force (spring 2022) for the Regulation on in vitro diagnostic medical devices.**

Source: European Commission Press Release, for more details: [http://europa.eu/rapid/press-release\\_IP-17-847\\_en.htm](http://europa.eu/rapid/press-release_IP-17-847_en.htm)

# Medical aesthetics

## Facial wrinkle treatment in dental practices with plasma gel

Aesthetics - a business, gaining more and more importance in peoples' daily life and society. It is therefore not surprising that even dentistry practices have to take account of this demand. In order to remain competitive, it is not only of great importance to be able to offer individual treatment concepts and a modern practice equipped with the latest technology. Decisive factors for success are additional services in the field of holistic aesthetics. Nowadays, dermal fillers are frequently demanded by clients.



## Plasma gel: a serious alternative to hyaluronic acid

Plasma gel, with all its benefits, is the latest innovation of facial augmentation and satisfies all requirements to modern injections. The only filler, which is a 100% endogenous and hence tolerated by the body. In comparison to hyaluronic acid, plasma gel does not cause fibrotic tissue. Applications with plasma gel improve the skin naturally and support a visual regeneration of the skin - with a long-term effect. The results are unique which makes plasma gel a superior autologous product.

## The production of plasma gel is carried out by medical staff, who after taking the blood, processes it into gel.

Significant for the efficiency and quality of the plasma gel is the selection of the right and high quality materials and equipment, as well as a certified user protocol for the production of the filler. These elements are well-matched to ensure achieving the best possible results.

## The effect

As a training institute we have tested various systems at home and abroad. Meanwhile, we use a worldwide recognized user protocol for the manufacturing of plasma gel. Therefore we have shifted our focus from the PRP (platelet-rich plasma) to the concentrated growth factors (CGF) (Massimo et al/2006). Unlike with other protocols, here specifically thrombocytes and CD34+ stem cells are taken, which later are added to the plasma gel. The effect is caused by the thrombocytes: As soon as the biphasic platelets get activated by thrombin, they release growth factors which are significant for cellular proliferation and collagen synthesis (Rodella et al/2011).

The injection of plasma gel affects the skin in two ways: an instant effect due to the addition of the filler - as well as rejuvenating the skin (Dong et al/1995).

## The production

Specific centrifuge tubes, made of borosilicate glass manufactured by the company Silfradent, deliver high-quality results and do without citrate as an anti-

coagulant. Studies have clearly proven the increased yield of growth factors with the use of sodium heparin ((G Valacchi and V Bocci/1999).

The first step is to centrifuge the tubes filled with the blood. The latest technology in this field is the MEDIFUGE MF 200, offered by the company Silfradent. By centrifuging at different times and speeds, particles of various sizes can be separated. This technique is called differential centrifugation and differs from conventional methods. In the next step, parts of the plasma are transformed into a filler



gel. For this process we use a device for denaturation (A.P.A.G.) by the brand Silfradent. The preset programs simplify the usage. Furthermore it is built with anti-static and anti-magnetic materials.

## The injections

A vital factor for a visual skin aging is the facial volume loss, reduction of fat tissue and muscles. With a deflated support system, skin starts to sag. Modern wrinkle treatments no longer only inject single wrinkles - a three-dimensional recontouring of the face ensures an optical balance. Anatomists have defined so-called "sweet spots": facial areas, when being injected, have the greatest impact. Injections in deep compartments prevent a migration of the plasma gel in surrounding tissues and a lifting effect occurs, while blunt cannulas are used superficial to volumize.



age 78 yrs. full-face-approach

Before and two weeks after the first treatment; significant reduction of nasolabial-/marionette lines as well as overall tightening. In the next edition, we will see the woman after the second treatments within 8 weeks.

Enough time to recognize the enhancing effect due to CGF.

Additionally, we will demonstrate the production of plasma gel as well as injection techniques.

Katrin Rotter-Böttger – Training-Institut

[www.plasma-gel.de](http://www.plasma-gel.de)

In cooperation with Silfradent/Italy.



**Silfradent Medical Line**  
for Advanced Italian Technology

**MEDIFUGE**  
MF 200



**THE THOUGHT OF THE DENTIST  
BRINGS A BROAD SMILE**

*Phase Separation*  
The medical device MEDIFUGE MF 200 is used for the production of  
5 test tubes of the required plasma gel.  
A microprocessor control system allows for  
the maintaining of a constant speed.

Power Source: 230V +/- 10% 50/60Hz or  
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Dimensions (WxDxH) 280x320x240 mm  
Nominal Power Consumption: 120 VA

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# The Perfect Newsletter

## Do you think the e-mail is dead?

The e-mail is the oldest web protocol, but it doesn't mean it has retired. Do you really think you can do without a fruitful strategy just because it's not the most recent one on the market? You fool!

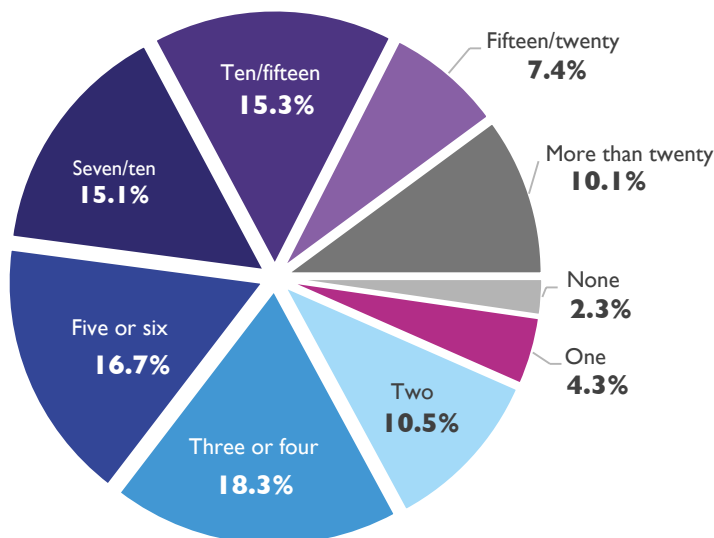
The e-mail is a tool with no rivals in customer care but it is also a media that can help you get in touch with your target and, most of all, it can be used to "nourish" potential customers and eventually turn them into customers.

MagNews has interviewed 1,000 Italian users by asking them what they wished to find in the e-mails, newsletters or DEMs they receive from other companies each day. The outcome will give you hints and advice on when you will need to plan your own content strategy.

Is it difficult to meet public expectations? Maybe. But not doing so means giving up a unique opportunity for your business: *human to human* communication.



## How many Newsletters/DEMs do you receive each day?



## Why subscribing to a newsletter?

Why do you subscribe to a newsletter? We've asked a thousand users. No one said they wished to receive daily newsletters full of fake discounts and institutional news of little interest.

When you are writing to your mailing list you are writing to people that are trusting you (and given you their e-mail address), because you have promised them something. You should not disturb them with non-inherent information.

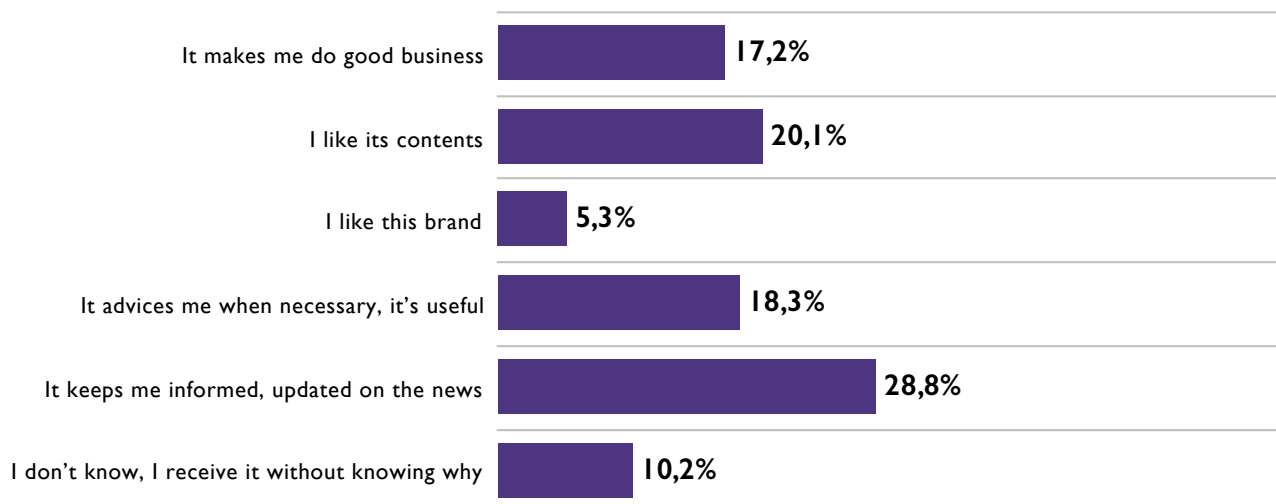
**The main reasons of subscription to a newsletter** are "It keeps me informed and updated" (28.8%); "I like its contents" (20.1%); "it advises me when necessary" (18.3%); "It makes me do good business" (17.2%).

Only 5% subscribe to a newsletter no matter of the contents, only because they are "fond" of a trade mark. Most likely, many are the brands believing to be favorite brands and believing that their news is important. But for the user this is not necessarily so.

Lastly, about 10% of users receive newsletters without knowing the reason. It's not nice. Those senders will give some work to the anti-spam filters.



### Which are the reasons you have subscribed to this newsletter?



### What do your favorite newsletters talk about?

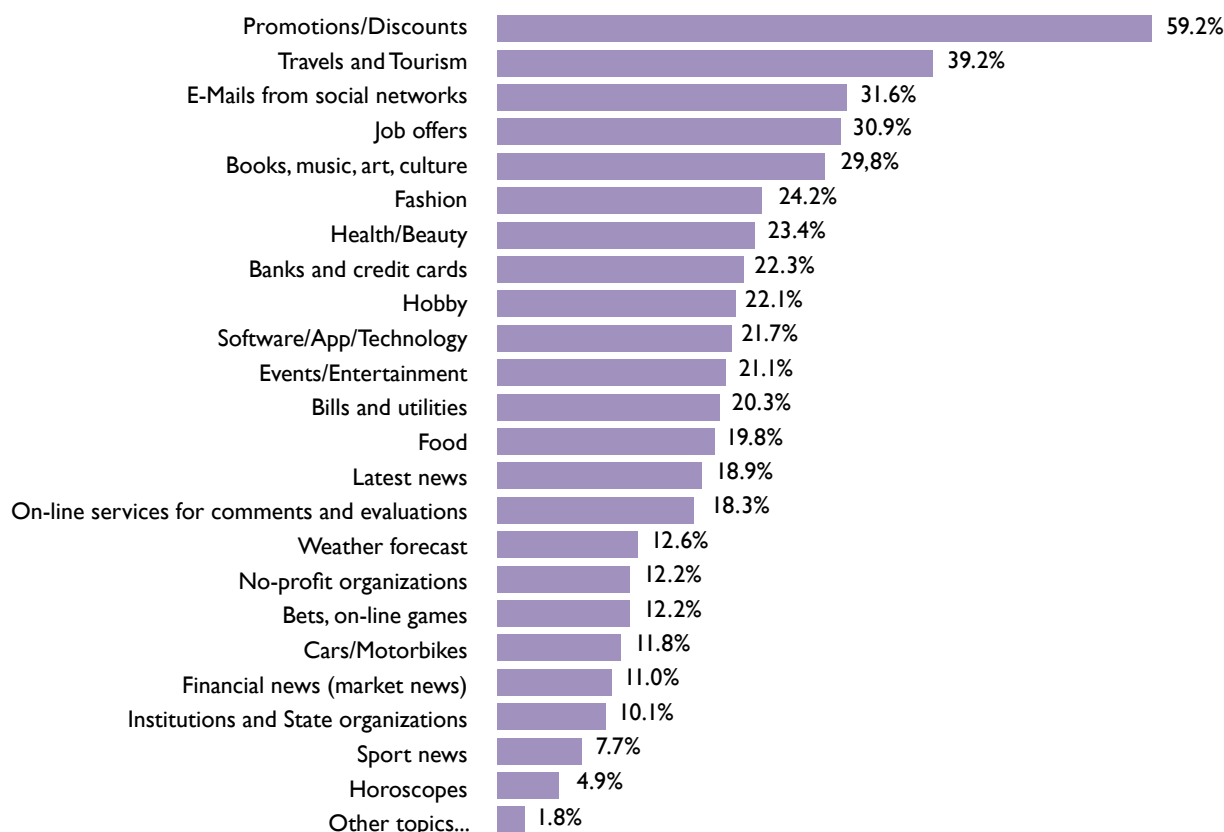
One subscribes to a newsletter because interested in specific topics. Creating a newsletter also means "to remain focused": you are not TV commentators.

Almost 60% of people subscribe to newsletters on "discounts/promotions". The second topic is "Travels/tourism": almost 40% of people interviewed subscribe to these newsletters. This data is not surprising, considering the exponential growth of on-line shopping for tourism services.

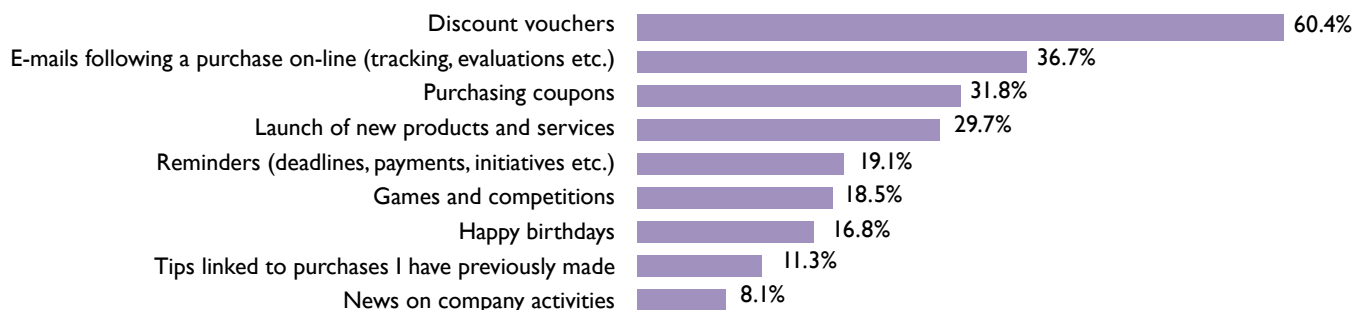
"Job offers" are also a strong topic; "Books, music, art and culture", "Fashion"; "Health/Beauty". Next are "Banks and credit cards"; "Technology"; "Events"; "Bills"; "Food".

Favorite topics are discounts and coupons (60.4% and 31.8% respectively). But also, service e-mails, those that follow an on-line purchase (order confirmation, parcel tracking...), "reminders" (deadlines, events...) are significant and receive their "like" from users.

### Which are the topics of the newsletters you have subscribed to?



## And which are the contents you most like?

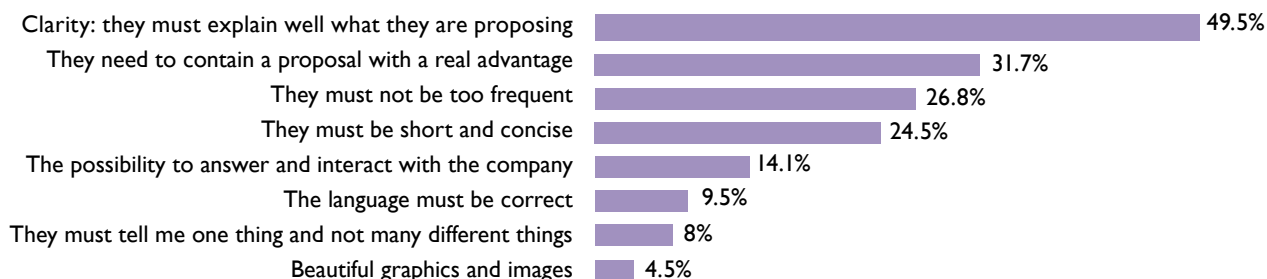


## Newsletter: How would you like it?

Clarity (and not simply conciseness) is considered the most important characteristic in a newsletter from 49.5% of people interviewed. 31.7% wishes to receive discounts and proposals with a real profitability and 26.5% doesn't want to receive too many updates.

Only 4.5% of interviewers gives much importance to the graphics of the communications they receive from companies. Linguistic correctness gains a good 9.5% of preferences.

## Which are the most important characteristics in the newsletters you receive?



**Diennea-MagNews** is a company specialized in digital marketing solutions since 1996. A complete partner to aid businesses in designing their digital strategy, from technology to consultancy.

Since 2000 we have been developing **MagNews**, a multi-channel marketing platform for creating and managing communication campaigns, to which we combine a team of experts and consultants for developing strategic projects. MagNews is also a **Marketing Automation** platform which integrates with leading eCommerce systems (Magento, Prestashop), CRM solutions (Salesforce, Dynamics) and social networks (Facebook), as well as all corporate systems in order to automate communication projects, save time and, most importantly, increase sales.

Our technology and field experience in valuing the greatest information assets of a company, their contacts, enables us to develop brand awareness, lead generation and engagement projects for our customers.

**Clients:** Ducati, BMW, Stroili, Imetec, Generali, Bellissima, Eataly Net, Arcaplanet, Illumia, Autostrade, Lago

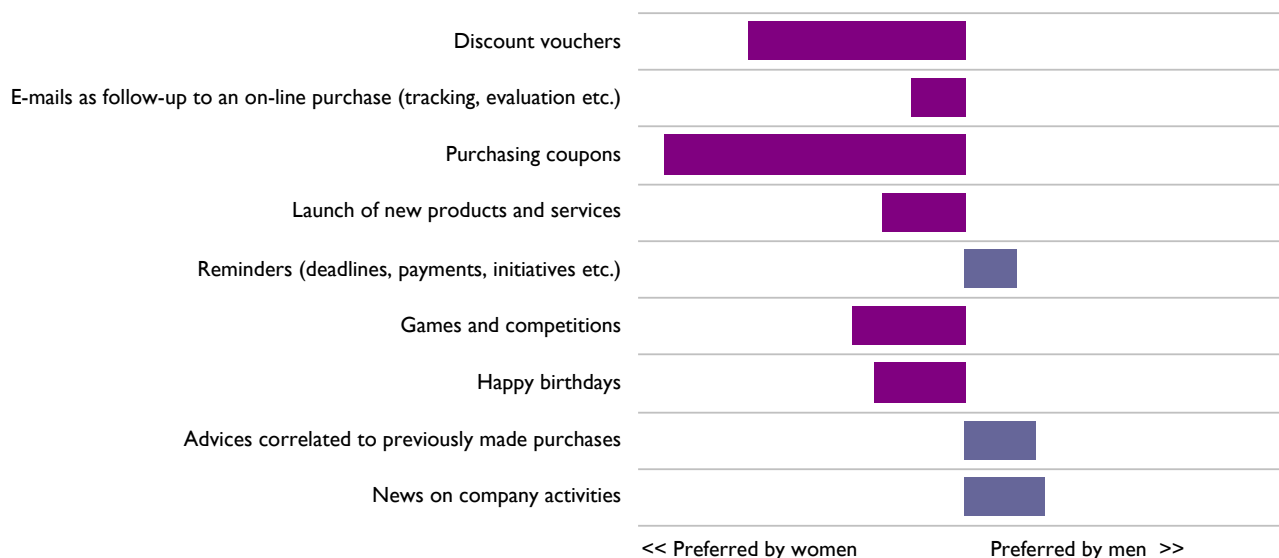
[www.diennea.com](http://www.diennea.com)

[www.magnews.it](http://www.magnews.it)

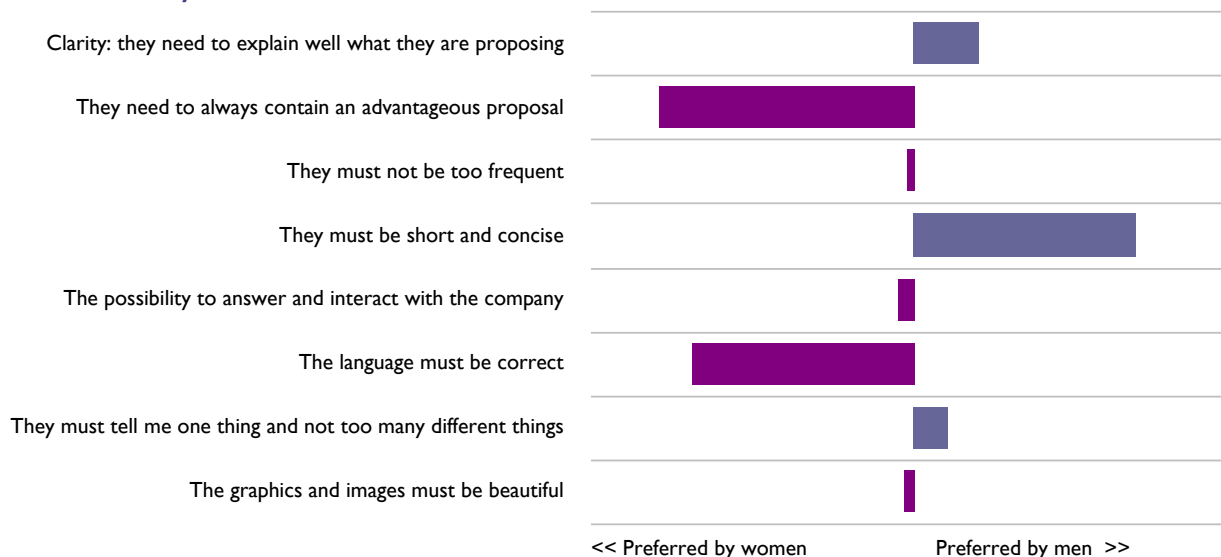


The MagNews and Diennea brands are a Diennea property.

### Which is your favorite characteristic in the newsletter you receive?



### Which are the contents you most like?



### Men and Women

Lastly, we finish with some curiosities on the different preferences between men and women. Who prefers to receive happy birthdays from companies? Women! And advice on products correlated to previously made purchases? Men.

And if men seem to appreciate clarity and conciseness more than women, the latter seem to place more attention on grammar and spelling.

### The research sample

1001 internet users of at least 15 years of age were interviewed. The sample represents a collectivity of 30.5 million individuals and weighed per gender, age, geographic area of residence, device usually utilized to access internet (desktop, smartphone, tablet). The research took place in January 2015 in collaboration with the Human Highway Research Institute.

### Let's give some numbers!

**940**  
million  
e-mails received  
every day in Italy

**+30**  
per user

**59%**  
subscribers to  
newsletters offering  
discounts

**220**  
million  
e-mails from companies

**+7**  
per user

**39%**  
subscribers to  
travels/tourism  
newsletters

Source: <http://www.magnews.it/newsletter-perfetta/>  
MagNews is a very powerful software for the **creation and sending of newsletters** and for the **management of your mailing list**! But it is also made up of a team of consultants ready to plan with you incredible e-mail campaigns!

## Prosthetic Arm Technology that Detects Spinal Nerve Signals Developed by Team at Imperial College, London

**Scientists have developed sensor technology for a robotic prosthetic arm that detects signals from nerves in the spinal cord.**

February, 2017 - To control the prosthetic, the patient has to think like they are controlling a phantom arm and imagine some simple manoeuvres, such as pinching two fingers together. The sensor technology interprets the electrical signals sent from spinal motor neurons and uses them as commands.

A motor neuron is a nerve cell located in the spinal cord. Its fibres, called axons, project outside the spinal cord to directly control muscles in the body.

Robotic arm prosthetics currently on the market are controlled by the user twitching the remnant muscles in their shoulder or arm, which are often damaged. This technology is fairly basic in its functionality, only performing one or two grasping commands. This drawback means that globally around 40-50% of users discard this type of robotic prosthetic.

Detecting signals from spinal motor neurons in parts of the body undamaged by amputation, instead of remnant muscle fibre, means that more signals can be detected by the sensors connected to the prosthetic. This means that ultimately more commands could be programmed into the robotic prosthetic, making it more functional.



The new robot prosthetic is controlled by sensor, which sits firmly on the patients pectoral muscle.

*"We've tried a new approach, moving the focus from muscles to the nervous system. This means that our technology can detect and decode signals more clearly, opening up the possibility of robotic prosthetics that could be far more intuitive and useful for patients."*

Professor Dario Farina - Department of Bioengineering and Institute of Biomedical Engineering, Imperial College London

For full article: [http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/newssummary/news\\_6-2-2017-13-48-49](http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/newssummary/news_6-2-2017-13-48-49)

## Sydney Orthopaedic Surgeon Performs Australia's First Computer-Navigated Shoulder Replacement



**While computer-assisted orthopaedic surgery (CAOS) techniques have previously been used on other joints, the world's first computer-assisted shoulder replacement was carried out only very recently.**

May 1, 2017 - Clinical Associate Professor Mark Haber, lead surgeon and shoulder specialist at Southern Orthopaedics, said he was honoured to be the first surgeon in Australia to perform CAOS techniques on the shoulder. The total shoulder replace-



ment operation took place at Hurstville Private Hospital in Australia and saw Dr Haber and his team replace the ball and socket of the shoulder by inserting an implant into the shoulder joint.

"It is exciting that CAOS technology has finally arrived for shoulders following the success of similar technological advancements for hip and knee replacements," said Dr Haber.

Fewer than 30 similar procedures have been carried out globally. "I think there have been 30 worldwide in the last few months. We have ten planned in Australia in the next few weeks." Two men aged 60 and 76 were the first patients to receive the new procedure. CAOS is a new and evolving surgical technology which provides the surgeon and his team the ability to plan the procedure on a computer immediately preoperatively. The navigation system then provides enhanced information and guidance during the operation.

"Previously, the procedure relied on the surgeon's

experience, eyesight and steady hand." While these remain paramount, "computer assistance is able to aid accuracy and precision." Dr Haber said.

"The technology is too new for its benefits to be determined accurately, but we are aiming for [big] improvements on the 10-year-plus outcomes of the current techniques."

Shoulder replacement surgery has been on the rise in recent years. "As a result of great improvements in implant design, less invasive surgical techniques, better anaesthesia and improved postoperative care, we have seen the number of surgeries increase exponentially, nearly 10 per cent year on year".

"The procedure allows patients with severe shoulder pain and movement limitations to return to activities they had never again thought possible."

Source - <http://www.opnews.com/2017/05/sydney-orthopaedic-surgeon-performs-australias-first-computer-navigated-shoulder-replacement/13529>

## Lactose Intolerance Linked to Lower Vitamin D Levels

**A new study suggests that people with a genetic intolerance to lactose should increase their intake of non-dairy foods rich in vitamin D, after finding that they are more likely to have low levels of the essential nutrient.**

May, 2017 - Lactose intolerance is defined as the body's inability to effectively digest lactose, a sugar found in dairy products, including milk, butter and cheese.

The condition occurs when the small intestine fails to produce sufficient amounts of lactase, which is the enzyme that breaks down lactose. If a person with lactose intolerance consumes dairy products, they may experience bloating, flatulence, diarrhea, nausea and abdominal pain. These symptoms usually arise around 30 minutes to 2 hours after lactose consumption.

It is unclear precisely how many people are living with lactose intolerance, but estimates suggest that around 65% of the population experience a reduced ability to digest lactose following infancy. One cause of lactose intolerance is mutations in the LCT gene, which is the gene responsible for lactase production.

From an analysis of 1,495 men and women who



were a part of the Toronto Nutrigenomics and Health Study, El-Soheemy and colleagues found that people who possessed LCT gene mutations had a

lower intake of dairy products, compared with the general population.

Individuals with LCT gene mutations also had lower blood levels of vitamin D, which the team says is likely down to reduced intake of dairy products, since these are often fortified with vitamin D.

"We were not surprised that lactose intolerant people ate less dairy," says El-Sohemy, "but we were surprised that they did not compensate by supplementing or eating other foods fortified with this crucial nutrient."

Vitamin D is considered essential for the absorption of calcium in the gut, which is important for good bone health. The vitamin also aids nerve functioning and helps the body to stave off bacteria and viruses. Interestingly, the researchers found that people with LCT gene mutations were shorter than individuals in the general population, which indicates that reduced intake of vitamin D through lack of dairy consumption may be inhibiting bone growth.

El-Sohemy and colleagues say that their findings suggest that people with lactose intolerance should consider increasing their intake of vitamin D through non-dairy food sources.

*"These findings speak to the need for greater awareness for those who limit dairy because of lactose intolerance. They need to be mindful of getting enough vitamin D from other fortified foods like certain brands of orange juice, or to consider trying lactose-free dairy products."* Ahmed El-Sohemy

Another finding of the study was that individuals with just one mutated copy of LCT demonstrated an intolerance to lactose, but to lesser degree than those with two mutated copies; it was previously thought that two mutated copies of the gene were required for lactose intolerance to arise. According to the researchers, this finding indicates that clinical definitions and genetic classifications for lactose intolerance may need to be reviewed.

*Study co-author Ahmed El-Sohemy, a professor of nutrition at the University of Toronto's Faculty of Medicine in Canada, and colleagues recently reported their findings in the Journal of Nutrition.*

*Taken from: <http://www.medicalnewstoday.com/articles/317496.php>*

## COOLIEF Cooled Radiofrequency Cleared to Relieve Pain in Osteoarthritic Knees



May, 2017 - Halyard Health, a company out of Alpharetta, Georgia, landed FDA clearance for its

COOLIEF Cooled Radiofrequency technology to be used for treatment of moderate to severe chronic knee pain arising from osteoarthritis. It may be particularly beneficial for patients who are poor candidates for knee replacements or that may choose to wait for whatever reason.

This is the first radiofrequency (RF) therapy that has been cleared by the FDA for pain relief in osteoarthritic knees. Halyard believes that its system may help many patients avoid drugs and steroid injections, that come with their unique side effects and potential for addiction.

COOLIEF delivers RF energy onto targeted nerves while using cold water to cool the surrounding area. This provides the ability to deactivate nerves while avoiding unwanted damage to nearby tissues.

*For full article: <https://www.medgadget.com/2017/05/coolief-cooled-radiofrequency-cleared-relieve-pain-osteoarthritic-knees.html>*

## Carestream Health Developing New 3D Orthopaedic Imaging System for Enhanced Imaging of Extremities

May, 2017 - Carestream Health is partnering with leading orthopaedic and sports medicine specialists to develop a new three-dimensional medical imaging system (investigational - not available for commercial sale) for capturing images of patient extremities (knees, legs, feet, arms and hands). Initial clinical studies will focus on the advantages of using cone beam CT (CBCT) technology in the diagnosis and treatment of knee injuries. Imaging systems based on CBCT technology can be used in treating orthopaedic conditions. Carestream's new CBCT system is designed to provide weight-bearing images of knees, legs and feet, which are difficult to obtain. "We are focused on applying CBCT technology for extremity imaging because it offers excellent visualization of soft tissue and bone with systems that are smaller and more affordable than CT systems," said Diana L. Nole, President, Digital Medical Solutions, Carestream. Carestream's new extremity system may be adopted for use in urgent care facilities and clin-

ics, athletic training facilities, and orthopaedists' and other specialty practice offices.

"This system could make it easier to obtain diagnostic exams immediately following an injury and help improve evaluation and treatment," Nole explains.

Nole adds that Carestream is working with top orthopaedic care providers and leading sports medicine experts to help guide current and future product development initiatives. The company's development efforts include an agreement forged two years ago between Carestream and the Buffalo Bills with the goal of aiding Carestream's understanding of the use of advanced medical imaging technology in early detection and monitoring of player injuries. This partnership continues to focus on the need for new technology to help address key concerns in sports medicine.

Source - <https://www.carestream.com/publicNewsEventsArticle.aspx?id=464052>

## 3D Printed Cartilage Made of Hydrogels Mimic Strength, Flexibility of Knee's Meniscus

April, 2017 - Worn out cartilage in the knees is a major cause of disability and once it's worn out there's nothing ideally suited to replace it. Osteoarthritis develops, and eventually much of the entire knee is often replaced, with variable success. Researchers at Duke University have been working on creating a material that can serve as a cartilage replacement and they have already developed something at least as strong and pliable as the cartilage making up the knee's meniscus. Moreover, the material can be used inside a cheap 3D printer to create the exact shape desired, opening the possibility that we'll be seeing 3D printers in orthopedic operating rooms in the not too distant future.

The team's material is a novel hydrogel that is stronger than previously developed hydrogels and even stronger than natural meniscus cartilage, yet having the elasticity of cartilage. This was thanks to a care-

ful combination of two different hydrogels that have somewhat opposite characteristics. One is strong and the other soft and pliable, and the two hydrogels are essentially "woven" into each other, according to the researchers. The hydrogel mix can be adjusted to create just the right amount of strength and flexibility desired for different applications. Mixing in a special "nanoparticle clay" gives the material the quality of turning to liquid under pressure and back to a solid when the pressure is removed. This is a perfect feature for 3D printing, as the pressure inside the needle of the printer is high enough for the material to remain a liquid. As soon as it is deposited by the printer, it turns to a solid and becomes part of the object being built.

For full article: <https://www.medgadget.com/2017/04/3d-printed-cartilage-made-hydrogels-mimic-strength-flexibility-knees-meniscus.html>

# Additive Manufacturing in the Orthopedics Industry

Additive Manufacturing (AM) is an appropriate name to describe the technologies that build 3D objects by adding layer-upon-layer of material, whether the material is plastic, metal, concrete or one day... human tissue.

Common to AM technologies is the use of a computer, 3D modeling software (Computer Aided Design or CAD), machine equipment and layering material. Once a CAD sketch is produced, the AM equipment reads in data from the CAD file and lays down or adds successive layers of liquid, powder, sheet material or other, in a layer-upon-layer fashion to fabricate a 3D object.

The term AM encompasses many technologies including subsets like 3D Printing, Rapid Prototyping (RP), Direct Digital Manufacturing (DDM), layered manufacturing and additive fabrication. AM application is limitless. Early use of AM in the form of Rapid Prototyping focused on preproduction visualization models. More recently, AM is being used to fabricate end-use products in aircraft, dental restorations, medical implants, automobiles and even fashion products.

While the adding of layer-upon-layer approach is simple, there are many applications of AM technology with degrees of sophistication to meet diverse needs including:

- a visualization tool in design
- a means to create highly customized products for consumers and professionals alike
- as industrial tooling
- to produce small lots of production parts
- one day... production of human organs

The main benefit of additive manufacturing for orthopedics is the bone ingrowth capabilities. It also enables the manufacture of complex metal parts simultaneously for different sizes, shapes, and design. In the industrial field (mainly aeronautics), the ad-



ditive manufacturing users are looking for weight reduction or advanced cooling. Additive manufacturing is now a mature technology in orthopedics as it has been used for more than 15 years in the industry. With additive manufacturing, Italy offers the most

advanced market; following Zimmer, the historical player and one of the major orthopedic companies, challengers like the Italian Lima Corporate and Adler Ortho have invested heavily in this technology. The main trabecular products are hip cups (several thousand are sold in Italy each year) followed by other products such as shoulder implants, knee tibial plates and mini-hip stems. Spinal cages manufactured via additive manufacturing represents one of the most dynamic orthopedic segments. For example, in Europe, PEEK cages are expected to lose market share (-4.5 percent CAGR by 2018) and titanium cages are anticipated to see a decrease of 2 percent in the five main countries. Meanwhile, additive manufacturing and trabecular cages are expected to increase by 19 percent and reach 61,000 units in 2018. In 2014, almost 25 orthopedic products that were manufactured via additive manufacturing received 510(k) clearance in the U.S.

In 2015, if the orthopedic industry used 1,500 to 2,000 tons of titanium, additive manufacturing required less than 50 tons (<3 percent of the total). This year, Lima Corporate will need almost 2 tons of titanium for additive manufacturing and Adler Ortho will require 0.7 tons. From 2014-2021, the market growth for additive manufacturing in metal will be between 18 and 30 percent, according to several industry forecasts. Orthopedic applications will be one of most dynamic segments.

#### Sources:

- Extracts taken from "Additive Manufacturing Status in the Orthopedics Industry", for full article: [http://www.odtmag.com/contents/view\\_online-exclusives/2016-05-04/additive-manufacturing-status-in-the-orthopedics-industry](http://www.odtmag.com/contents/view_online-exclusives/2016-05-04/additive-manufacturing-status-in-the-orthopedics-industry)  
 - Extracts taken from "What is Additive Manufacturing?", for full article: <http://additivemanufacturing.com/basics/>

For further  
informations please  
contact  
Riccardo Bonati  
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Since nine years, Expomed Mexico has made the decision to create a business network which operates in favor of health sector needs. This business network has been thriving and nowadays it is recognized like the main link platform, suitable for B2B contact among the industry, potential buyers and health professionals, offering the most comprehensive offer in innovation technology, products and services for the health institutions.

**Expomed Mexico has had a 30% continuous growth during the last 3 years.**

## 2017 STATISTICS



## 2018 OBJECTIVES



20 participating countries



40,000 represented brands



13,000 potential buyers



300 expositors



10,400 m<sup>2</sup> exhibition

## EXPOMED IMPORTANCE IN MEXICO

### MARKET TRENDS FOR THE FOLLOWING YEARS

- Mexico is the greatest market in Latin America, the eighth medical devices exporter across the world and the main exporter in Latin America as well as the main United States provider.
- By 2020 is forecast the use of the medical devices in Mexico will be more than 19,700 million dollars.
- It is estimated that from 2013 to 2020 the annual growth average rate is 7.2% which is greater than NAFTA region (5.1%) and countries like Germany (4.3%), Japan (4.4) and Switzerland (2.5).

Mexico has a net with 12 Free Trade Agreement with 46 countries (FTA) which make easier marketing with other countries, highlighting:



**We are waiting for you the next year in our 10th edition, in June 6th to 8th 2018**

# Catch a Glimpse of MEDinISRAEL 2017

MEDinISRAEL Conference has grown at an exponential rate since its establishment in 2012 at the initiative of the Israel Export Institute.

**The medical devices industry has become more sophisticated, complex and advanced than ever.**

**I**ts recent, 4th International Conference, on March 6-9, 2017 in Tel Aviv, Israel, was a tremendous success with over 100 exhibitors, 40 fascinating speakers, and 800 international business partners.

This exclusive event creates a platform for hundreds of pre-arranged business meetings between Israeli Medical Device and HealthCare IT companies as well as HealthCare service providers, including HMOs, Hospitals, MDA, "Sarel" and "Natali" and 2000 professional visitors from Israel and abroad.

The medical devices industry has become more sophisticated, complex and advanced than ever. The number of companies engaged in the field of medical devices & HIT in Israel is exceptionally higher than anywhere in the world. The technologies of Israeli companies are widely used in academic and research institutions, as well as in the best and most known medical centers in the world.

The companies operate in bold entrepreneurial environments and provide a variety of innovative solutions and technologies to healthcare challenges that the system deals with today such as: Reducing the Costs of medical treatment and addressing the evolving needs in the world, while taking in account the overall condition of the patient, treatments, implementation of the concepts of Continuity of Care, collaborative medi-

cine and Patient Empowerment, Big Data technologies and creation of significant value for the investors. All these make the Israeli companies relevant, interesting and sought after by leading health agencies and organizations, the representatives of which arrive to the Conference seeking for business collaborations.

Dr. Daniel Kraft from Singularity University of San Francisco, one of the Keynote speakers at the Conference, painted the future of healthcare and medicine in light of evolving technological changes that significantly impact the existing systems.

MEDinISRAEL 2017, initiated and organized by the Israel Export Institute in cooperation with the Ministry of Economy and Industry, the Ministry of Health and the Ministry of Foreign Affairs, has succeeded not only in showcasing some of the best technologies and solutions available for today and tomorrow's needs but also in provoking discussions to improve, challenge and benefit this industry.

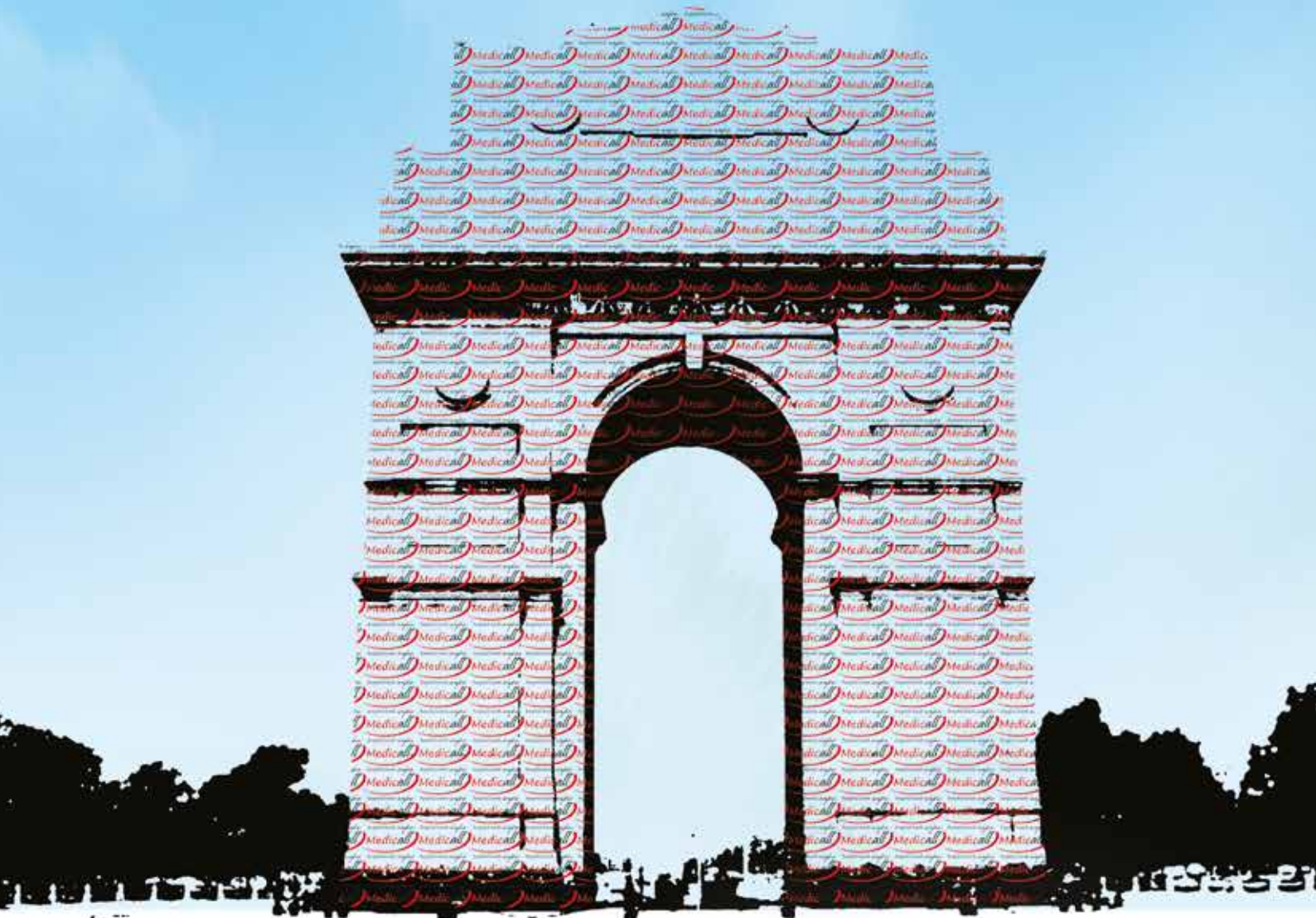
We encourage you to meet Israeli Medical Device and HealthCare IT companies as well as world class HealthCare leaders from Israel in our upcoming events in France (#EMS), Mexico (#ChronicDiseases), US (#Telemedicine, #mHealth, #mApps, #PHA), Japan (#SuperAged Society), China (#CMEF), Brazil (#Hospitalar), Germany (#MEDICA2017, #Compa-med2017).







# MEDICALL INDIA'S LARGEST HOSPITAL EQUIPMENT EXPO, YOUR GATEWAY TO INDIAN HEALTHCARE



## India Key Facts

• Healthcare Industry US\$ 100 billion • Economy US\$ 1.7 Trillion • Growth Rate 15.5% CAGR • Top 20 healthcare consumers of the World • More than 70% of Medical devices are imported • Plan : 400,000 beds in the next 5 year's time

## Why Exhibit at Medicall

- Medicall is India's Largest Medical Equipment Exhibition
- Chennai is India's healthcare Capital and Mumbai is the Financial capital
- Medicall attracts more than 750 exhibitors and 15000 professional visitors
- Participate in Medicall to appoint dealers, distributors in India

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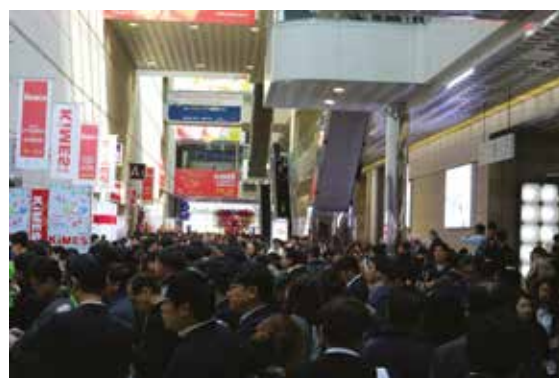
18<sup>TH</sup> EDITION | OCT 6, 7, 8 - 2017 | MUMBAI



# KIMES, a Showcase of Innovation, Technology in Medical Sector

**KIMES** 2018

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Secretariat)  
Tel: +82-2-551-0102



KIMES provides attendants with the opportunity to identify and confirm the great potential and prospect of the future medical industry as well as the latest medical industry trend as a venue where 1,300 domestic and overseas manufacturers show the new technology and new products. It will become the venue for the communication to present that latest medical information and technology to keep up with the fast developing medical market.

The 34th Korea International Medical & Hospital Show will take place at COEX in Seoul from 15th to 18th March in 2018. The Asian's premier medical event has been growing as the hub of attraction for all those involved in the medical and health care industries. With excessive demands from the Korean consumers, the development of the medical industry in Korea is remarkably fast-growing. In the circumstances, KIMES's filling of the role of the platform where manufacturers and consumers can find their satisfactions.

## Points the future of healthcare sector

Medical supplies and equipment based on artificial intelligence (AI) and robotic technology are being highly issued in the global health care sector. Major research centers and leading tech firms will introduce their latest robotic hardware to potential customers. Reflecting the growing interest in this field, companies

taking part in the exhibition showcased more than 30,000 examples of advanced medical supplies and equipment, hoping to grab the attention of international buyers.

## The Exhibition that Various Medical Experts Participate in

KIMES offers a great opportunity for you to meet numerous domestic and overseas buyers who have a strong purchasing power at one place including officials in medical institutions, academic industry, research institutions as well as hospitals such as oriental doctors, veterinarians, dentists, nurses, radiologists, physical therapists, medical laboratory technologists, pharmacists and emergency medical technicians.

## KIMES 2018 is...

KIMES 2018 attracts about 73,000 visitors from home and abroad as 1,300 domestic and overseas companies participate in the exhibition with the space of 40,000m<sup>2</sup>. KIMES attracts the key buyers for your company through various media network such as TV, radio, newspaper and economic magazines. We are confident that we will become the best partner for your business by assisting participating companies to find out the new buyers and maximize the marketing effect.



# K<sup>+</sup>iMES

34th Korea International Medical & Hospital Equipment Show

[www.kimes.kr](http://www.kimes.kr)

**15-18**  
**March 2018**  
**COEX, Seoul**

ORGANIZERS Korea E & Ex Inc. / KMDICA / KMDIA

CONTACT Korea E & Ex Inc.

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# South America Health Exhibition

Sahe is a landmark in the healthcare market bringing content, business and qualified public together



**T**he first edition of the South America Health Exhibition (SAHE) was the launching of new technologies, services, softwares and innovative practices in healthcare market, allied with an intimate business environment and decision-makers of the area. The event was held from March 13 to 16, 2016, at Pro Magno Events Center in São Paulo and had more than 5,200 visitors. "Our goal was fully achieved by the realization of the SAHE. Even with the challenges that are usually imposed in a first edition of an event, we have been able to highlight the potential of the companies in the industry and to disseminate technologies that promise to improve and even revolutionize the healthcare area. The event was a success", commented Katherine Shibata, Executive Director of SAHE. She also reinforces the qualified audience, success factor and networking.

For Cláudia Castagna, from Sismatec- exhibiting company of the event, SAHE is a fair within the Brazilian reality of hospitals and clinics. "The event was excellent. I closed three great deals and leaped three other more, only in those four days. Our customers praised

the event, because the fair is totally tied to the reality of the country", she commented. Jack Burgess of the Health Suppliers Association - AFS, launched the entity at the event and was successful in business. "As the first edition of the event, the result was excellent. The fair is more selective than others in the industry, and constant conferences have brought a high level of visitors. For AFS, whose goal was to expand the membership, the result was fantastic".

For the Commercial Director of Sisnaced SAHE was a great opportunity for networking and business formalization with influential visitors. "We have identified an extremely positive and important business profile at SAHE. We receive qualified visitation from people who are directly related to our environment, such as directors and hospitals administrators. This is important for spreading our solutions and technologies in the market".

According to André Pacheco, Marketing and New Business Director of Cremer, a leader in the market for first aid, surgery, treatment, hygiene and wellness that reaches a share of 35% of products purchased



in hospitals, participating in SAHE was important to reach the decision-makers of the industry. "The event is born with a more qualitative and targeted audience concept. We do not release our products, we release the Experimental Cremer program, which is a relationship model that provides hospitals and clinics the simplification of purchasing processes, cost reduction and excellence in services rendered. In the four days of the event, we attend more business-oriented visitors", he says.

### **SAHEVENTOS: Information in the right measure for the healthcare future**

The event also featured intense content programming at SAHEventos. In particular, the First International Congress of the Connected Hospital, a seminar focused on Information Technology in healthcare.

According to David Oliveira, congressional coordinator and CEO of Decida, the main goal was to generate movement and break the barriers when talking about connection within the hospital and "Internet of Things".

The main target audiences of the event were the chiefs of IT (CIOs) in healthcare area. "We wanted to break taboos on the topic, showing practice, what has been done to connect the patient, promoting high security in their stay at the hospitals. Topics such as big data, patient information and cloud data sharing were addressed", he says.

The Hospital Summit, hosted by ANAHP- The National Association of Private Hospitals, also had an excellent hearing. Among the speakers were important and influential personalities of the sector; among them José Carlos de Souza Abrahão, the National Supplementary Health Agency and Fernando Honorato, Bradesco's chief economist.

They discussed important issues such as the challenges in integrating public and private sectors in healthcare, the economy in Brazil for 2017 and 2018 and how the segment has prepared for the future that the healthcare area is moving to. For Abrahão, the event is a milestone for public and supplemental health.

"Society has changed. Today, life expectancy is much higher. People are taking better care of our health and our focus has been even more the patient, who has become more demanding. Our challenge is to provide care, safety and quality in the treatment of healthcare users".



The event also had the 4th Brazilian Seminar on Clinical Engineering, promoted by the Brazilian Association of Clinical Engineering - Abeclin; Courses of the Brazilian Association for the Development of the Hospital Building -ABDEH; The first ONA Seminar on Quality and Patient Safety, promoted by the National Accreditation Organization; The HL7 Forum on IT and Health, mediated by Dr. Marivan Abrahão; SAHEClínicas, event focused on management and marketing in hospitals and clinics; Meeting Passarini on certification and export; Workshop Fluke Biomedical of Medicalway and Frost & Sullivan, focused on quality control.

### **About SAHE**

Formed by professionals with more than 20 years of experience in healthcare market and management, SAHE-South America Health Exhibition, delivered an impeccable organization, high content standards in the simultaneous events, qualified visitation with decision-making profile, innovated communication and closer relationship with the exhibitors, set a new positive agenda for the industry by heating the business early in the year.



# Medical Japan 2017 Ended in Great Success!



Reed Exhibitions Japan Ltd. held MEDICAL JAPAN 2017 - 3rd International Medical Expo & Conference, Japan's only comprehensive medical event, from February 15 to 17, 2017 at INTEX Osaka, Japan. Consisted of 6 specialised shows covering the entire medical industry, MEDICAL JAPAN attracted 1,067 exhibitors from 25 countries/regions and 29,311 professionals worldwide, making this year's event the largest-ever gathering since its launch in 2015. MEDICAL JAPAN has successfully become the best gateway to Japan, the world's leading medical market. Attracting great attention inside and outside Japan, MEDICAL JAPAN 2017 gathered exhibitors from 25 countries. With a special support system for foreign exhibitors, it has successfully become their dependable entrance to the Japanese market. This year's exhibits represented cutting-edge technologies together with the particular situation in Japan – a country with the most rapidly-aging population that is prone to frequent natural disasters. Many exhibitors became increasingly aware of the market demand to deal with the situation. This will no doubt stay in the mainstream for some years to come.

Contact:  
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Japan Ltd.  
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E-mail:  
medical-japan@  
reedexpo.co.jp

## Ideal Gateway for International Exhibitors' Debut in Japan

Medical device and product manufacturers of various nationalities held booths to introduce cutting-edge ideas/technologies to the world's leading market, Japan. In fact, most of the international exhibitors were newcomers to Japan and even did not apply for legally-obligated medical device registration. Show Management offered them a special support, "Matching Support with Importers," which enabled them to find right Japanese importers/distributors to start business by arranging over 400 meetings on site. The strong support makes MEDICAL JAPAN unrivalled gateway for foreign exhibitors who aim to achieve success in Japan.

## MEDICAL JAPAN 2018

- Dates: February 21 [Wed] – 23 [Fri], 2018
- Venue: INTEX Osaka, JAPAN
- Organised by: Reed Exhibitions Japan Ltd.
- Supported by: Union of Kansai Governments
- [www.medical-jpn.jp/en/](http://www.medical-jpn.jp/en/)

**MEDICAL JAPAN 2018**  
4th International Medical Expo & Conference



EXHIBITION TITLE	MEDICAL JAPAN 2017 – 3RD INTERNATIONAL MEDICAL EXPO & CONFERENCE
DATES	FEBRUARY 15 [WED] – 17 [FRI], 2017
VENUE	INTEX OSAKA, JAPAN
ORGANISED BY	REED EXHIBITIONS JAPAN LTD.
SUPPORTED BY	UNION OF KANSAI GOVERNMENTS
CONSISTING SHOWS	<ul style="list-style-type: none"> <li>-3rd [Hospital + Innovation] Expo Japan</li> <li>-2nd Medical IT Solutions Expo</li> <li>-3rd [Elderly Care + Nursing] Expo Japan (Nursing Care Japan 2017)</li> <li>-7th Medical Device Development Expo Osaka - MEDIX OSAKA 2017</li> <li>-3rd Regenerative Medicine Expo &amp; Conference Japan</li> <li>- 3rd Int'l Pharmaceutical R&amp;D and Manufacturing Expo Osaka - INTERPHEX OSAKA 2017</li> </ul>
CO-HELD EVENT	CONFERENCE



# Hospitalar Fair and Forum

Business, new developments, launches and solutions for the healthcare sector in Brazil in May



**For further information on how to attend or exhibit at Hospitalar Fair + Forum:**  
[www.hospitalar.com](http://www.hospitalar.com)  
[internacional@hospitalar.com.br](mailto:internacional@hospitalar.com.br)

The 24th edition of Hospitalar, the principal event for the healthcare sector in the Americas, which takes place in São Paulo from May 16th to 19th 2017, is the stage for generating new business opportunities for the sector and is the entry point for the industry in South America. Furthermore, the event is consolidating its place as an important forum, bringing together hospital directors, healthcare professionals and renowned thinkers from the sector. With more than 90,000 professional attendees, the event brings together Brazilian and international delegates and decision makers from the industry, distributors, international buyers, specialized consultancies, training and research institutions and people from development, finance and government organizations. Be among the international exhibitors, meet the attendees from 74 countries – the fair is impressive for the sheer scale of the section of the market it reaches. On individual stands or collective pavilions, companies from the widest variety of sectors have at their disposal a wealth of opportunities in a market made up of more than 6,000 Brazilian hospitals and 288,000 healthcare establishments.

## Event's Attractions to 2017

CISS – The International Congress of Health Services, will take place on May 17th and 18th, 2017, it is staged across two main sections that bring together worldwide experiences and case studies on health-

care management policy and also the industry, which will present solutions and trends that support the efficiency of the sector.

## HIMSS@Hospitalar

The principal global forum for technology is now part of Hospitalar and will bring to the 2017 edition the theme "eHealth.17 – The End of the Beginning", which will analyze the current maturity of the eHealth market after the first decade of its expansion. The forum will bring in more than 20 international speakers, in addition to a high-level range of relevant content concentrating on the best in practices, products and services in Digital Healthcare across the world.

## Facilities

A new area, located between the white and green pavilions with workshops and demonstrations, in addition to bringing together suppliers, equipment, products and services from the facilities area of the healthcare sector:







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Importers/dealers for medical equipments & devices in eastern part of India. We are offering sales & service channel partners for leading manufacturers across the globe. We are looking for new technology driven products with enhancements in surgery, aesthetics, gynecology, operation theatres, endoscopy, lasers.

[gaurav@jindalenterprises.co.in](mailto:gaurav@jindalenterprises.co.in)

**Laboratoire CCD**

We are offering food supplements fertility, pregnancy breastfeeding, utis. We are looking for distributors in Ethiopia, Kenya, Tanzania and South Africa.

48 Rue des Petites Écuries, 75010 Paris

+971 563 48 94 88

[enaudin@ccdlab.com](mailto:enaudin@ccdlab.com)

[www.ccd-lab.com](http://www.ccd-lab.com)

**New Life Medicals**

We are offering exporter of branded generics, drugs and pharmaceutical, speciality products. We are looking for GCC Partners, customers Africa and customers China. 23, Shantiniketan Complex, Opp. HBK School, Gurukul Road, Ahmedabad  
**+9898255874 // [newlifemedicals@gmail.com](mailto:newlifemedicals@gmail.com)**  
**com // [www.newlifemedicals.com](http://www.newlifemedicals.com)**

**Gardner Denver Fze**

We are offering vacuum pumps & channel blowers to be integrated with medical systems. We are looking for partners to stock & sell in the medical segment, hospitals through their equipments.

**Contact person: Neil Fernandes, Mobile:**

**+971 56 4410978, Email: [neil.fernandes@gardnerdenver.com](mailto:neil.fernandes@gardnerdenver.com)**

[gardnerdenver.com](http://gardnerdenver.com)

# Calendar

**July**

**05-07 07 2017**

**Myanmar Phar-Med  
Expo 2017 -  
Myanmar Dental  
Expo 2017**

Website: [www.veas.com.vn](http://www.veas.com.vn)

Contacts

• Ms Rosie

Email: [rosie.tran@veas.com.vn](mailto:rosie.tran@veas.com.vn)

• Ms Ann

Email: [ann.ltb@veas.com.vn](mailto:ann.ltb@veas.com.vn)

Venue: Rose Garden Hotel

171 Upper Pansodan Rd

Yangon, Myanmar - Vietnam



The 5th  
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Exhibition and  
Conference on  
Pharmaceutical and  
Medical  
Industry for Myanmar

(Yangon - Myanmar)

Organised by:  
Minh Vi Exhibition and  
Advertisement Services  
Co., Ltd (VEAS CO., LTD)

12th Floor, Room 12A03, Cong  
Hoa Plaza, 19 Cong Hoa Street,  
Ward 12,  
Tan Binh District, Ho Chi Minh  
City - Vietnam

Phone: +84 8 3842 7755

Fax: +84 8 3948 1188



**28-30 07 2017**

**Medicall 2017 -  
Chennai  
17th Edition**

(Mumbai - India)

Organised by: Medexpert  
Business Consultants Pvt Ltd  
7th Floor, 199, Luz Church Road,  
Mylapore, Chennai - 600 004.

Tamilnadu, India

Email: [info@medicall.in](mailto:info@medicall.in)

For Stall Booking contact:

Mr.Sundararajan

Phone: +91 7305 789 789

Email: [info@medicall.in](mailto:info@medicall.in)

[www.medicall.in](http://www.medicall.in)

Venue: Chennai Trade Centre

Nandambakkam,

Chennai -600 089

India

**05-07 07 2017**

**Myanmar  
Phar-Med Expo  
2017**

**28-30 07 2017**

**Medicall 2017  
Chennai 17th Edition**

**August**

**17-19 08 2017**

**MediPharm Vietnam  
2017**

The 17th International Medical,  
Hospital & Pharmaceutical  
Exhibition in Hochiminh City

(Ho Chi Minh City - Vietnam)

Organizer:

Vietnam National Trade Fair &  
Advertising Company - VINE-  
XAD



9 Dinh Le, Hoan Kiem, Ha Noi  
Phone: +84 4 3855 5546 / 3934 0474  
Fax: +84 4 3825 5556  
Email: medipharmexpo@vinexad.com.vn  
Website: www.vinexad.com.vn

Venue: Saigon Exhibition &  
Convention Center  
799 Nguyen Van Linh Str,  
Tan Phu Ward, 7 Dist., HCMC,  
Vietnam

**08-10 08 2017**

**FIME 2017**

**Infomedix Booth:  
ABIMO pavillion BN57**

**(Orlando, Florida)**

Organised by:  
FIME International Medical Exposition,  
Inc.  
3348 Seventeenth Street  
Sarasota, FL 34235 USA  
Phone: +1 941 366 2554  
Fax: +1 941 366 9861  
Email: info@fimeshow.com

Contact person:  
- Exhibiting and sponsorship  
opportunities  
Gil Alejo (Sales Manager)  
Phone: +1 941 554 3485  
Email: gil.alejo@informa.com



**17-19 08 2017**

**MediPharm**

**Vietnam 2017**

**08-10 08 2017**

**FIME 2017**

Marketing and media  
partnerships  
Yasmin Coutain-Springer  
(Senior Marketing Manager)  
Phone: +971 4 407 2641  
yasmin.coutain@informa.com  
- General enquiries  
Email: fime@informa.com

Venue: Orange County  
Convention Center  
Orlando, Florida

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**September 06-08 09 2017**

**Medical Fair**

**Thailand 2017**

8th International Exhibition  
on Hospital, Diagnostic,  
Pharmaceutical, Medical and  
Rehabilitation Equipment and  
Supplies

**Infomedix Booth:  
1C32**

(Bangkok - Thailand)

Messe Duesseldorf Asia Pte Ltd  
3 HarbourFront Place,  
#09-02  
HarbourFront Tower Two  
Singapore 099254  
Phone: +65 6332 9620  
Fax: +65 6337 4633 / 6332 9655  
medicalfair-thailand@mda.com.sg  
Project Manager: Daphne Yeo  
Phone: +65 63329620  
Email: daphne@mda.com.sg

For more info  
please contact  
tradeshows  
@infodent.com

Venue: Queen Sirikit  
National Convention Center  
(QSNCC)  
Bangkok  
Thailand



**15-17 09 2017**

**PharMed**

**Cambodia 2017**

Cambodia Lab Expo 2017  
Cambodia Dental Expo 2017 -  
The 3rd International Exhibition  
and Conference on  
Pharmaceutical and Medical  
Industry for Cambodia

(Phnom Penh - Cambodia)

Organised by: Minh Vi Exhibition  
and Advertisement Services Co.,  
Ltd (VEAS CO., LTD)  
12th Floor, Room 12A03, Cong  
Hoa Plaza, 19 Cong Hoa Street,  
Ward 12,  
Tan Binh District, Ho Chi Minh  
City, Vietnam

Phone: +84 8 3842 7755  
Fax: +84 8 3948 1188  
Email: info@veas.com.vn  
Website: www.veas.com.vn

Contacts  
Ms Rosie  
Email: rosie.tran@veas.com.vn

Ms Ann  
Email: ann.ltb@veas.com.vn

Venue: Diamond Island  
Convention & Exhibition Center  
Phnom Penh - Cambodia  
www.pharmed-cambodia.com

**06-08 09 2017**

**Medical Fair  
Thailand 2017**

**15-17 09 2017**

**PharMed Cambodia  
2017**





8th International Exhibition on  
Hospital, Diagnostic,  
Pharmaceutical,  
Medical & Rehabilitation  
Equipment & Supplies

**6-8 Sep 2017**

**QSNCC • Bangkok**  
Queen Sirikit National Convention Center

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**Within Thailand:** Exposit Co., Ltd · Tel (66) 2559 0856 – 8 · [info@exposit.co.th](mailto:info@exposit.co.th)

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A close-up photograph showing several pairs of hands in white surgical gloves working on a surgical glove. The hands are using various tools like forceps and a scalpel to shape and finish the glove. The background is a blurred surgical environment with blue drapes.

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Medicall  
Chennai, India  
28 - 30 Jul 2017

FIME  
Florida, USA  
08 - 10 Aug 2017

World Congress of Surgery  
Basel, Switzerland  
13 - 17 Aug 2017

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Unit No 36-02, Level 36, Q Sentral,  
2A, Jalan Stesen Sentral 2, KL Sentral,  
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