



Worldwide Largest Inventory

#### FLIP ONE PAGE FOR MORE INFORMATION

Certified: ISO 13485:2016 ISO 9001:2015



www.infomedix.it

INFOMEDIX INTERNATIONAL 3/2020 - INFODENT Srl - Via dell'Industria 65 - 01100 Viterbo - Italy Poste Italiane Spa - PP - Economy - DCO/DCVT/n°5 fb del 24/05/02 - Sped. in A.P. - art. 1 comma 1 D.L. 353/2003 conv. In L n. 46/04 - CDSUVT G.C.

**New & Pre-Owned Endoscope Repair Parts** 

# AVEVITTA

### **PROTECT 2.0** ANTI-VIRUS **NANO TECHNOLOGY** Reusable mask

>99% ANTI-VIRAL

>99% ANTI-BACTERIAL

>99% FILTER EFFICIENCY

ADJUSTABLE NOSE CLIP

ADJUSTABLE EARLOOP

NANO FILTER STRUCTURE AS SMALL AS 0.1 MICRON (0.0001 MM)

#### DESIGNED AND DEVELOPED IN SWITZERLAND



WATER

REPELLENT



ULTRA THIN & BREATHABLE



VIRUS



AnnuA

PROTECT 2.0

ANTI-BACTERIAL



IDEAL FOR HOT WEATHER

CONTACT US WHATSAPP: +41 79 790 75 77 🔀 INFO@AVEVITTA.COM WWW.AVEVITTA.COM



Certified: ISO 13485:2016 ISO 9001:2015

AN:350

IEC is the leading International ISO 9001/13485 certified endoscope, endoscope parts, equipment, specialty service provider, and consulting firm since 1999.



**Rigid Endoscopes** 



**Endoscope Parts - Rigid** 



**Endoscope Parts - Flexible** 





CCD' & Electronics Repair



**Contract Manufacturing** 



**Processor Panel Repair** 



**Training & Consulting** 



**Tools & Devices** 



Laser Marking Services



Stolen Endoscope Registry

#### Please contact us today for more information.

320 International Parkway, Ft. Lauderdale, FL 33325 Tel (954) 217-8780 Fax (954) 217-8781 www.IECendoscopy.com



#### **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
- Accomodates 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 Allhangstrasse 18a 3001 Mauerbach - Austria



Arab Health

#### Tel.: +43 1 979 21 05 email: office@biegler.com

Arab Health 2021 - Dubai Dubai International Convention & Exhibition Centre June 21 - 24, 2021 www.biegler.com



INFOMEDIX INTERNATIONAL 3/2020 - INFODENT Srl - Via dell'Industria 65 - 01100 Viterbo - Italy. Poste Italiane Spa - PP - Economy - DCO/DCVT/n°5 fb del 24/05/02 - Sped. in A.P. - art. 1 comma 1 D.L. 353/2003 conv. In L. n. 46/04 - CDSUVT G.C.

We can offer a worldwide visibility to your company. Even only one contract signed with one distributor of our database can help you multiply your ROI.

Cover page **SANKOM** Rue de la Molière 2 CH-2800 Delèmont, SWITZERLAND Phone: +41-32-422-5000 Fax: +41-32-422-4000 info@sankom.com - www.sankom.com

#### Back Cover **MREPC** Malaysian Rubber Export Promotion Council Unit No 36-02, Level 36, Q Sentral, 2A Jalan Stesen Sentral 2, KL Sentral,

50470 Kuala Lumpur, Malaysia Phone: +603 2782 2100 info@mrepc.com - www.mrepc.com

Biegler
 BMI Biomedical International
 BMS Dental
 BTC
 Calze G.T.
 General Medical Merate
 HIWIN Technologies
 IAE
 IMS Giotto
 Cover Innovative Endoscopy Components
 J.D. Honigberg International
 New Life Radiology
 28-29. Silfradent
 Takatori Corporation
 Villa Sistemi Medicali

# Contents



"Third Dimension" of a Trade Fair



SMART 👶

FAIR

Edited by

MEDICAL by

INF©DENT

**INFOMEDIX** 

Infodent <sup>®</sup> Infomedix International Publishing & Consulting

House

**Check here** 

who is looking

for distributors

DISCOVER MORE ON P. 39 & 53

HIGHLIGHTS Companies looking for distributors





Osteoporosis - The Silent Disease



INFODENT INFOMEDIX inews

ImplantBook D CTOR 牙医 INF CMEDIX

• CEO - Publisher: Baldo Pipitone baldo.pipitone@infodent.com
 • General Manager: Paola Uvini paola@infodent.com

- General Manager: Paola Ovin paola@niodent.com
   Editorial Director: Silvia Borriello silvia.borriello@infodent.com
- Marketing Consulting Manager: Riccardo Bonati

riccardo.bonati@infodent.com
• Exhibition Manager: Cristina Garbuglia

cristina.aarbualia@infodent.com

Newsroom: Nadia Coletta nadia@infodent.com

Claudia Ragonesi pressoffice@infodent.com
• Social Media Strategist: Ilaria Ceccariglia

ilaria.ceccarialia@infodent.com

• Graphic Dept.: Silvia Cruciani silvia.cruciani@infodent.com

Antonio Maggini *artwork@infodent.com* • Account Dept.: Fausta Riscaldati

fausta.riscaldati@infodent.com

Infodent tm is the title of this magazine as well as an applied for trademark. Any use there of without the publisher's authorization is to be deemed illegal and shall be prosecuted. COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = 150 5001:2015 =



Publishing House: Infodent S.r.l. Via dell'Industria 65 - 01100 Viterbo - Italy Tel: +39 0761 352 198 VAT 01612570562

Printer: Graffietti Stampati Snc S.S. Umbro Casentinese Km. 4,500 - Montefiascone (VT)

n° 3/2020 - aut. trib. VT n°528 del 21/07/2004 Quadrimestrale di informazione tecnico scientifica Costo copia - Euro 0,77



company.infodent.com www.infomedix.it infomedix@infomedix.it

Infomedix International | 3 2020

2





All our advertisers are looking for distributors worldwide. Check here for more information.



Bulgaria's Key Challenge MARKET OUTLOOK

**OUTLOOK** 

WALL



INSIGHT

All About Digital Marketing

A Brief Summary On

Primary Osteoporosis



Malta - A Tiny Island Moving Forward





SHOW REPORTS



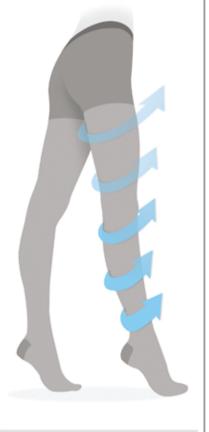
CALENDAR



Given the current situation worldwide, we warmly invite you to check trade shows dates, venues and booths location listed in this magazine













EDITORIAL

# "Third Dimension" of a Trade Fair



2020 has quickly gone from a promising year for the trade events industry into one of the most damaging, and the estimated recovery period has already shifted back several times. There is a different account every day of what the future looks like. One day a vaccine will be available this coming autumn, the next in 18 months. The most challenging aspect is that nobody really knows, unless we don't experience some breakthrough announcement like an effective vaccine, herd immunity or specific cure, in the next two or three weeks.

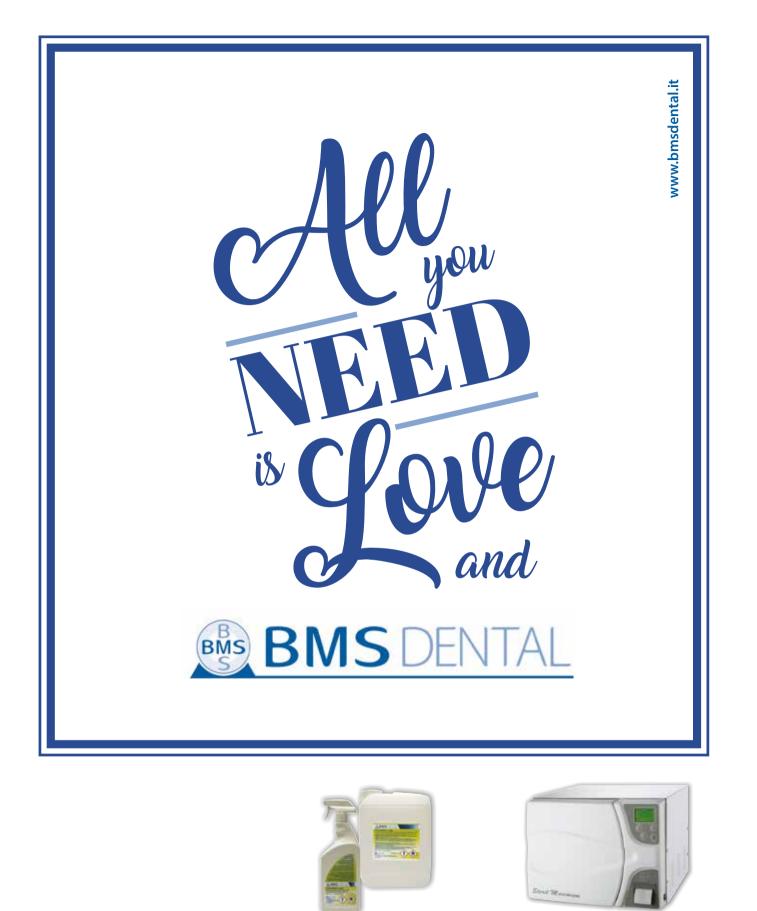
In this terribly confusing scenario, *Infomedix International* has been working hard to support its medical industry with digital visibility. Initially scheduled for end of year, we have promptly implemented our *Smart Medical Fair platform*, by giving our customers the support of a virtual trade fair, open all year round. Whenever we will go back to normal activities, or whatever the future might bring, our virtual trade fair will be there to support the industry. **Our digital experience is not meant to replace "face-to-face" events and interactions, essential for business, but rather enhance them, prolonging the marketing time to discover a brand, instead of rushing buyers at a trade show event.** 

At present, medical trade shows have either been canceled entirely or postponed, with only a few making the leap to virtual. Educational sessions, conferences and seminars are making a relatively smooth transition to virtual as there is quite a lot of precedent for content-driven formats online already, but trade shows are arguably one of the most challenging events to virtualize. They are very sensory in nature, you use all five senses to feel and experience them, whether that is examining a new product or shaking someone's hand to build a relationship. They are built entirely around the in-person experience, including people's ability to walk around from one booth to the next and engage in constant, often unplanned interactions with both exhibitors and each other. Attendees might happen to find a new supplier next to the booth they were originally planning to visit. Of course, certain product demos can also be scheduled and conducted virtually, and online events offer many opportunities to increase sponsorship and branding, extending their reach outside the show floor. Similarly, virtual events hinder exhibitors' ability to hand out tangible samples or branded products, and many attendees may find it necessary to physically see or try a product before they agree to a sale. Exhibitors will nevertheless face new advantages in a virtual format as they will save a lot of money while capturing focused customers with unlimited world visibility; they may also feel more comfortable managing the experience through their own online channels, where they will have more control over presentation and potentially less direct competition within an existing space or platform of people.

When looking at the pros and cons, it's not likely that virtual trade shows will take over live events anytime soon. But, if done as an augmented part of an in-person event, the blending of face-to-face and online interaction can certainly help to expand the audience reached. A hybrid third dimension is what we believe in. Taking the best that the technology has to offer while retaining all the benefits of face-to-face interaction. There is an opportunity for both sides to learn from each other.

Smart Medical Fair wants to focus on the time-period the selling of a product remains open online. A typical trade show lasts three to five days and is held in a specific location, our exhibitors can extend their visibility anytime during the year and all over the globe by constantly changing, adjusting and updating their virtual booth space, showcasing products and novelties to a selected remote audience, in line with our core business of connecting medical manufacturers with medical dealers worldwide.

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



Disinfection

Sterilization

and much more

BMS Dental Srl - Via M. Buonarroti, 21/23/25 - 56033 Capannoli (PI) ITALY - Tel. +39 0587 606089 - info@bmsdental.it



#### A new group is born

Since December 14th, 2018, we officially took control of Arcom Intl. which is now part of the BMI group: this new Company organization will allow us to diversify our products even more, to target different market segments and to continue the steady process of growth that we have started 25 years ago when BMI was established in a tiny office just out of Bergamo city, Italy.

Now, in 2020, we do employ 60+ people and we are active in more than 60 Countries worldwide with a total turnover of over 15M Euro. Thanks to our valued customers and partners, we will keep walking a long path together for many years to come and we will never stop raising our standards and chasing achievements.

#### www.bmibiomedical.it info@bmibiomedical.it



#### Visit us at: Smart Medical Fair www.smartmedicalfair.com/stand/h4p2b1z1491



 $\bigcirc$ 

#### **Care***fix*<sup>®</sup> Barrier Mask: Perfect solution for protection from COVID-19

The seamless **Carefix**<sup>®</sup> **Barrier Mask** is a one-piece garment, without awkward elastic bands around the ears, which is used as a passive support mask, creating a barrier against airborne viruses and hand-to-face contamination. Designed for everyday civilian use, for personal protection due to social distancing.

#### Features:

- Reduces hand-to-face contamination.
- Shields against airborne organisms from coughing, speaking, sneezing.
- Aerosol exposure test shows 93% protection.
- Protects user and surrounding people.
- Good fit ensures correct placement which minimizes touching of the mask.
- Easy to apply over homemade face covers.
- Soft, flexible, seamless and breathable material, extremely comfortable to wear.
- Foldable into small size to place in pockets or handbags.
- Washable and reusable up to 25 times.
- Latex-free.
- Tested for harmful substances (Oeko-Tex standard 100).

Made in Slovakia by Tytex A/S, an ISO certified company. Become a **Care** *fix*<sup>®</sup> Barrier Mask Distributor today!

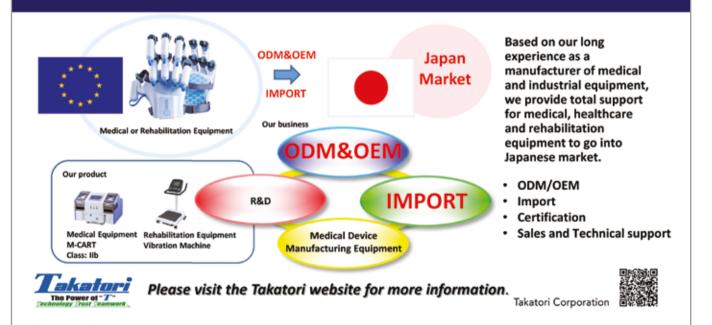


We also offer portable Ventilators, Suction equipment and Test Lungs (for Ventilator calibration)



www.jdhmedical.com medical@jdhintl.com Visit us at: Smart Medical Fair 2020 www.smartmedicalfair.com/stand/h6p1b7z2396

### Takatori can help your business in Japan.





#### Versatility highlights GMM state-of-the-art DR and RF systems



GMM has always been committed to improving the quality of diagnostic imaging through the development of cutting-edge solutions for both DR and RF applications.

Our products smoothly combine cutting-edge components and are engineered to provide the operator with user-friendly, intuitive and highly responsive user interface.



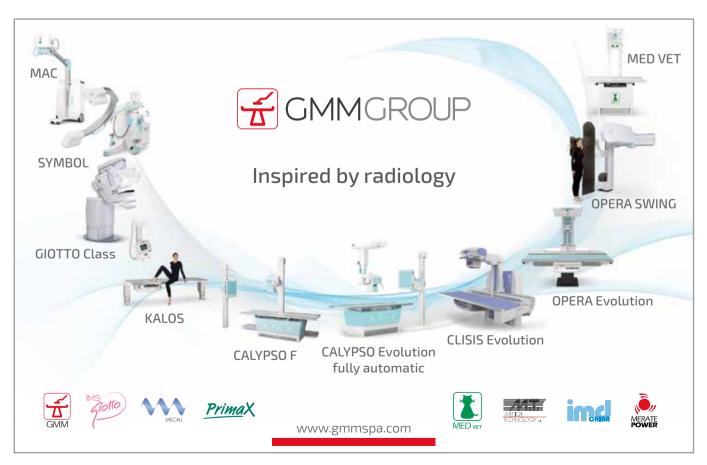
The DR range stretches from simple, extraordinarily compact and rational configurations to advanced systems with built-in programmable positioning that safely ensure optimised patient flow process and deliver high-guality examinations.

The RF line offers a wide range of configurations including basic systems with unmatchable quality-to-price ratio up to multifunctional systems with unique features such as "OPERA Swing".

GMM products are designed and geared up toward advanced applications, such as tomosynthesis and double energy, so as to ensure the best user experience also during complex diagnostic procedures.

www.gmmspa.com info@gmmspa.com

Visit us at: Smart Medical Fair www.smartmedicalfair.com/stand/h4p4b5z1516



#### Giotto Class S - Productivity combining innovation and quality in the breast care

IMS

Giotto Class S is a versatile system that can be be configured for 2D or/ and 3D breast tomosynthesis imaging choosing between different options, accessories and advanced interventional applications like high-precision tomo-guided biopsy or contrast enhanced spectral mammography, including an integrated biopsy specimen checker.

It features a unique, particularly ergonomic design which ensures patient comfort and userfriendliness for the operator. The C-arm stand enables a wide freedom of inclination: it can be tilted downwards and upwards to maximize patient comfort and breast positioning.

The system is easy to use and fits small places offering high throughput thanks to the increased speed of gantry's movement and positioning.

IMS Giotto is a company of GMM Group.

#### www.imsgiotto.com imscomm@imsgiotto.com

Visit us at: Smart Medical Fair www.smartmedicalfair.com/stand/h4p5b5z1517



#### Design Technology Ergonomy Never seen.

#### **ALL-IN-ONE-SYSTEM**

- **TOMOSYNTHESIS**
- SYNTHETIC VIEW
- 2D MAMMOGRAPHY
- TOMO-BIOPSY in PRONE or UPRIGHT POSITION
- DUAL-ENERGY

#### **Giotto Class**

The new dimension in Tomosynthesis and Breast Biopsy

#### IMS Giotto S.p.A. www.imsgiotto.com imscomm@imsgiotto.com

)

Infomedix International 3 2020



#### Villa Sistemi Medicali presents Moviplan iC

Moviplan iC is the latest-generation X-ray system, combining all of the features of modularity, ease of use and functionality needed for a radiology centre that wants to increase productivity and efficiency, in any working situation. The system based on floor column is the ideal choice for medium size operative room that can perform a huge range of exams and applications, satisfying the different diagnostic needs of every radiology centre. The configuration with the ceiling tubestand is the perfect solution for those who want the fastest workflow, complete flexibility and high throughput in a radiographic room. All movements can be motorized to offer advanced functions such as stitching and auto-positioning. Easy and intuitive controls are granted by the user-friendly touch screen interface. The system can be completed with the new Stitching Ready chest stand, simplifying and improving full-leg full-spine examinations, thanks to the integrated patient support that can be positioned quickly.

www.villasm.com vsminfo@villasm.com



Visit us at: Smart Medical Fair, www.smartmedicalfair.com/stand/h4p1b1z1241

What is MEDICAL

# NEW

The **Smart Medical Fair** is an international virtual exhibition open all year round that gives you the power to connect with a global audience and virtually showcase your products and services to meet your business objectives.

Do you want to join our Smart Medical Fair?

The **Smart Medical Fair** is made up of the following pavilions:

- Dental Technology;
- Laboratory Equipment, Diagnostics, Test;
- Physiotherapy, Orthopaedic Technology, Sport;
- Electromedical Equipment, X-Ray, Medical Technology;
- Communication Technology & Software;
- Commodities & Consumer Goods;
- Technology Components;
- Start-up & Innovation Products.

Write to advertise@infodent.com and ask our Marketing Consultants!



Infodent Infomedix International Publishing & Consulting House

#### Be online anytime and anywhere on www.smartmedicalfair.com

# **Radiology News**

# **A Shorth History on Bone Music**

Mainly made between the 1950s and 1960s in the Soviet Union the "rëbra", vinyl records made with X-ray plates, represented a method used in the black market to distribute the music, censored by the regime, by emigrated artists, such as Pëtr Leščenko, or by western artists like Elvis Presley, The Beatles, The Rolling Stones, The Beach Boys, Ella Fitzgerald and Chubby Checker.

In the Soviet Union in the years after the second world war, a lot of music was banned. Almost everything Western was forbidden because the USA and Britain, in particular, had become the enemy and their culture was held to be harmful. But a lot of Russian music was also forbidden. Anything made by emigres was off limits because, by definition, any Russian who had willfully left the country or who stayed away by choice was considered a traitor - whatever their repertoire and even if they had previously been approved of. Some of these people had been huge stars before the war. And what is perhaps more difficult to comprehend, is that a lot of domestic music made by Soviet citizens was also forbidden, or at the very least deemed 'unofficial'. Why?

From 1932 and especially during the Stalinist era, all Soviet art, literature, poetry, films, and music was controlled. The ideologues of the Soviet Union believed passionately in culture but also that all art had to be in the service of Socialist Realism and support communist ideals and therefore subject to an official censor. Self-expression was out. Many Russian popular tunes, especially those from the folk tradition called 'criminal' songs, whilst not really anti-Soviet in themselves, were deemed to be 'low culture' and would not pass these conditions. Many of them were songs that had become popular in the gulags (forced labor camps).



The practice of copying and recording music onto X-rays really got going in St Petersburg, a port where it was easier to obtain illicit records from abroad. But it spread, first to Moscow and then to most major conurbations throughout the states of the Soviet Union. Like a Jacques Brel track, they might be songs about violence or jealousy or about the rough and tumble of love and lust and life in the camps. A Russian friend said to me recently: "Remember, at that time, every family had at least one member in the gulag.". And even certain rhythms such as the foxtrot were banned on the basis that they might lead to wild, licentious behaviour, late night gatherings and general frivolity.

But young hearts were beating. People had a huge pent-up desire to hear their own music: songs which they had heard in the gulag or sung by those who had returned; songs which they had loved in previously, less controlled, times; songs by artists who were now persona non grata and even perhaps songs that they had heard played by some local singer at a clandestine concert. And of course, there was a demand for the impossibly exotic seeming Western music, the Rock and Roll or Jazz which might be caught on an overseas radio broadcast the state hadn't been able to jam or heard at a party on gramophone records smuggled into the country by merchant sailors or diplomats. Such records would be rare and fabulously expensive, costing the equivalent of a month's wages. This combination of huge demand with restricted supply is of course the perfect condition for a market to arise. And true to form, into this market, into this gap between supply and demand stepped the bootleggers.

We had our own bootleg culture in the West once - live recordings of concerts by the big Rock gods made on vinyl or tape in the days before the internet changed everything. But even if illegal, these were relatively easy to make. In Infomedix International | 3 2020

the Soviet Union during the period from the late forties to the early sixties, it was not so easy. The bootleggers' first technical problem, that of obtaining a machine to record with was relatively straightforward. Literature existed explaining audio recording techniques (say in case a righteous citizen wanted to copy the speeches of Comrade Stalin) and various recording machines had been brought back from Germany as trophies after the second world war. These could be adapted or copied, but a further problem existed. The State completely controlled the means of manufacturing records. You couldn't just go and buy the vinyl or shellac or lacquer needed in a store somewhere.

But at some point, some enterprising music lover hit on a genius idea. An alternative source of raw materials was available - used X-ray plates obtained from local hospitals. And that is where this story really begins. For many older people in Russia remember seeing and hearing strange vinyl type discs when they were young. The discs had partial images of skeletons on them and were called 'Bones' or 'Ribs' and they contained wonderful music, music that was forbidden. The practice of copying and re-



cording music onto X-rays really got going in St Petersburg, a port where it was easier to obtain illicit records from abroad. But it spread, first to Moscow and then to most major conurbations throughout the states of the Soviet Union.

Also known as "rentgenizdat", a term used for "x-rays", real medical x-rays were bought or recovered from hospital or clinic waste to make the recordings. The plates were cut into 7-inch discs and pierced in the center with a lit cigarette. According to the Russian musicologist Artemij Troitsky, "the grooves were engraved [at 78 revolutions per minute] with the help of special machines (made, they say, with old phonographs by skilled conspiratorial hands) [...] The quality was very bad, but the price was low, one ruble or one and a half ruble." The records could only be played five or at most ten times.

For more information and events: https://x-rayaudio.squarespace.com/contact/

Source: article taken from https://www.x-rayaudio.com/x-rayaudiohistory

# LSU Health New Orleans Team Creates Better Tool to Aid COVID Diagnosis

An LSU Health New Orleans radiologist and evolutionary anatomist have teamed up to show the same techniques used for research on reptile and bird lungs can be used to help confirm the diagnosis of COVID-19 in patients. Their paper published in BMJ Case Reports demonstrates that 3D models are a strikingly clearer method for visually evaluating the distribution of COVID-19-related infection in the respiratory system.

Emma R. Schachner, PhD, Associate Professor of Cell Biology & Anatomy, and Bradley Spieler, MD, Vice Chairman of Radiology Research and Associate Professor of Radiology, Internal Medicine, Urology, & Cell Biology and Anatomy at LSU Health New Orleans School of

Medicine, created 3D digital models from CT scans of patients hospitalized with symptoms associated with severe acute respiratory syndrome coronavirus (SARS-CoV-2).

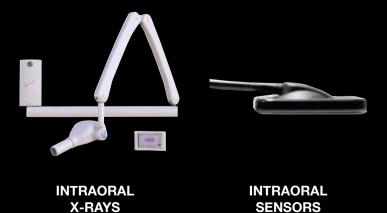
Three patients who were suspected of having COVID-19 underwent contrast enhanced tho-

racic CT when their symptoms worsened. Two had tested positive for SARS-CoV-2, but one was reverse transcription chain reaction (RT-PCR) negative. But because this patient had compelling clinical and imaging, the result was presumed to be a false negative.



# All the nuances of radiology.







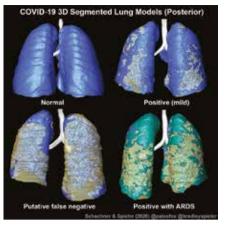
PHOSPHOR PLATE SCANNERS



AND CBCT

#### New Life Radiology Corso Giuseppe Canonico Allamano 13/15 Int. G 10095 | Grugliasco (TO) | Italy

info@newliferadiology.it www.newliferadiology.it



Given diagnostic challenges with respect to false negative results by RT-PCR, the gold standard for COVID-19 diagnostic screening, CT can be helpful in establishing this diagnosis.

"An array of RT-PCR sensitivities has been reported, ranging from 30-91%," notes Dr. Spieler. "This may be the result of relatively lower viral loads in individuals who are asymptomatic or experience only mild symptoms when tested. Tests performed when symptoms were resolving have also resulted in false negatives, which seemed to be the result in this case."

Given diagnostic challenges with respect to false negative results by RT-PCR, the gold standard for COVID-19 diagnostic screening, CT can be helpful in establishing this diagnosis. Importantly, these CT features can range in form and structure and appear to correlate with disease progression.

This allows for 3D segmentation of the data in which lung tissue can be volumetrically quantified or airflow patterns could be modeled.

The CT scans were all segmented into 3D digital surface models using the scientific visualization program Avizo (Thermofisher Scientific) and techniques that the Schachner Lab uses for evolutionary anatomy research. "The full effect of COVID-19 on the respiratory system remains unknown, but the 3D digital segmented models provide clinicians a new tool to evaluate the extent and distribution of the disease in one encapsulated view," adds Spieler. "This is especially useful in the case where RT-PCR for SARS-CoV-2 is negative but there is strong clinical suspicion for COVID-19."

To date, there haven't been good models of what COVID is doing to the lungs. So, this project focused on the visualization of the lung damage in the 3D models as compared to previous methods that have been published – volume-rendered models and straight 2D screen shots of CT scans and radiographs.

"Previously published 3D models of lungs with COVID-19 have been created using automated volume rendering techniques," says Dr. Schachner. "Our method is more challenging and time consuming, but results in a highly accurate and detailed anatomical model where the layers can be pulled apart, volumes quantified, and it can be 3D printed."

"The full effect of COVID-19 on the respiratory system remains unknown, but the 3D digital segmented models provide clinicians a new tool to evaluate the extent and distribution of the disease in one encapsulated view" The three models all show varying degrees of COVID-19 related infection in the respiratory tissues – particularly along the back of the lungs, and bottom sections. They more clearly show COVID-19-related infection in the respiratory system compared to radiographs (x-rays), CT scans, or RT-PCR testing alone.

Schachner and Spieler are now segmenting more models for a larger follow up project.

LSU Health Sciences Center New Orleans (LSU Health New Orleans) educates Louisiana's health care professionals. The state's health sciences university leader, LSU Health New Orleans includes a School of Medicine with branch campuses in Baton Rouge and Lafayette, the state's only School of Dentistry, Louisiana's only public School of Public Health, and Schools of Allied Health Professions, Nursing, and Graduate Studies. LSU Health New Orleans faculty take care of patients in public and private hospitals and clinics throughout the region. In the vanguard of biosciences research, the LSU Health New Orleans research enterprise generates jobs and enormous annual economic impact. LSU Health New Orleans faculty have made lifesaving discoveries and continue to work to prevent, advance treatment or cure disease.

To learn more, visit http://www.lsuhsc.edu, http://www.twitter.com/LSUHealthNO, or http://www.facebook.com/LSUHSC.

Infomedix International 3 2020

Source: Press release https://www.lsuhsc.edu/newsroom/ LSU%20Health%20New%20Orleans%20Team%20Creates%20Better%20Tool%20to%20Aid%20COVID%20 Diagnosis.html





the tailor-made digital X-ray system



# IAE - High Quality X-Ray Tubes

IAE history started in 1955 as manufacturer of electronic valves but very soon this production was abandoned and the Company focussed all production efforts on rotating anode tubes. 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.





#### C100 XT 1800 kJ/2400 kHU

The new technology applied to the C100XT housing allows full power operation with none of the traditional water cooling system's consumption costs and, therefore, none of the problems related to system engineering. Remote heat exchanger, hoses for oil circulation and water cooling circuits are no longer needed. Its innovative air cooling system reaches 1000 W dissipation thanks to the specially designed finning that allows the maximum loads of work with no pauses. The fans function only when the oil temperature reaches the predefined level. With normal working load the noise is minimum and the benefit both for the patients and the operators is remarkable. This housing is ideal for angiographic applications, cardiac diagnostic, cath-lab and can be installed on high level remote control tables, also in case of field retrofit.

#### XK1016 T - Max continuos heat dissipation 400 W

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.

This high dissipation, combined with the light weight, 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.

#### I.A.E. SpA

Via Fabio Filzi, 53 - 20032 CORMANO (MI) - ITALY - Tel: +39 0266303255

www.iae.it // iaexray@iae.it Visit us at: Smart Medical Fair, www.smartmedicalfair.com/stand/h4p1b5z1260



# High quality X-Ray tubes for a better future.









#### **Innovative Endoscopy Components, LLC Premium Endoscope Repair Parts**



Innovative Endoscopy Components, LLC has been the ISO13485/ISO9001 Certified vendor of choice to hundreds of endoscope service facilities and dealers worldwide, for over 21 years. Our product range and services are constantly

growing with international demand. Rapid prototyping, optical assemblies, injection molding, and CNC machined parts are offered just like OEM endoscope and equipment labeling as well as CCD' repair and multilingual repair training and consulting. Please contact us: Innovative Endoscopy Components, LLC: 320 International Parkway, Fort Lauderdale, FL 33325, USA Tel: 954-217-8780, Fax: 954-217-8781

www.IECendoscopy.com info@endoscopy.md



#### Let's participate and expand your ODM/OEM and import business into Japan together!

Takatori Corporation is a medical and industrial equipment manufacturer in Japan.

We develop and sell original medical equipment (M-CART: Ascites filtration and reinfusion, class IIb) in Japan. In addition, we are ISO13485 certified and qualified to manufacture and sell medical equipment in Japan, and we are ready to help your medical equipment into the Japanese market based on our experience and achievements. Based on our long of experience, we provide total support for your ODM/ OEM, import, certification, sales and technical support for medical, healthcare and rehabilitation equipment in Japan.

If you are interested in business in Japan, please contact us through our web site.

We will explain our vision for Japanese market for ODM/OEM and import business.

We look forward to doing business with you.

#### www.takatori-g.co.jp/english hiroki.takanaka@takatori-g.co.jp

Visit us at: Smart Medical Fair, www.smartmedicalfair.com/stand/h4p2b5z1273 www.smartmedicalfair.com/stand/h3p1b5z1421





Infomedix International | 3 2020

#### **EDGE O Ophthalmic Surgery Chair**



EDGE O is BTC ultimate concept of Mobile Ophthalmic Surgery Chair. It is the result of innovative technical and engineering solutions that enable the Professionals to perform Ophthalmic Surgery according to the time saving principle of rotation: prepare the Patient, perform surgery and keep patient for observation and recovery EDGE O is the perfect working tool that suits all Ophthalmology Clinics and Private Practices.

EDGE O is conceived in a solid metal structure, the mobile base is equipped with 4 medical grade castors and rear lock and It is operated with 3 silent linear actuators and one telescopic column by a modern and multi-function wire-less foot control.

The upholstery comprises 5 separate padded sections fully removable for easy disinfection.

www.btc-med.it btcmed@btc-med.it





Infomedix International | 3 2020



#### **Biegler**



Biegler GmbH based in Austria/Europe extends its product line of blood and infusion warmers with the device BW 410.

At a glance:

- Adjustable temperature
- Consumable inserted through the side
- Easy to open and cleanable design
- Mounting on infusion stand or normed rail
- Consumable available with integrated bubble trap
- Continuously operating safety and alarm systems

You are invited to learn more about Biegler at www.biegler.com

#### www.biegler.com office@biegler.com

#### **RELAXSAN Medical and Antiembolism** Stockings

Calze G.T. Srl is an Italian company specialized in the production of Medical graduated compression stockings since 1984. Since the beginning of its business, Calze G.T. Srl has aimed to engage in the research and the development of products for the health and the wellbeing of the body. Thanks to the opening to the global market and its expertise in export, Calze G.T. Srl. sells its products worldwide in more than 65 countries under its own brand names RelaxSan.

The RelaxSan brand includes a wide range of products – i.e. Medical Stockings, Graduated Compression Socks, Compression Sport Socks, Diabetic and Sensitive Feet Socks and several Orthopedic body care products. All the products are certified CE, FDA and thempany have the ISO 9001 and ISO 13485 certifications, as well as the Oekotex certificate. All the products are 100% Made in Italy in its own facilities.

#### www.gtcalze.com cristiano@relaxsan.it Visit us at: Smart Medical Fair, www.smartmedicalfair.com/stand/h3p1b2z2375



#### MEDICAL COMPRESSION STOCKINGS ANTI-EMBOLISM STOCKINGS





### **PROTECT 2.0** ANTI-VIRUS Reusable mask

#### DESIGNED AND DEVELOPED IN SWITZERLAND





BREATHABLE





Avera O PROTECT 2.0



AvevittA is a sub-division of SANKOM Switzerland that specializes in supplying the highest quality protective masks for personal, professional and medical use, as well as developing innovative eco-friendly reusable masks.

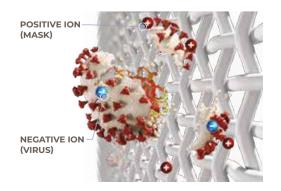
SANKOM Switzerland was founded in 2003 by Dr. Mazourik (MD, PhD) and develops innovative high-quality functional consumer goods distributed to over 95 countries worldwide. SANKOM Switzerland holds a unique portfolio of patents successfully marketed worldwide and has won a series of prestigious international awards.

#### **INTRODUCING AVEVITTA 2.0 WITH A UNIQUE ANTI-VIRAL EFFECT**

Featuring unique anti-viral properties that kills viruses and bacteria with >99% efficiency on a molecular level. With adjustable ear loops and nose clips, the mask comfortably fits adults and children.

- ✓ 99.9% Anti-viral destroys viruses on a molecular level
- Ultra thin & breathable ideal for hot weather
- ✓ Nano Technology Filtration membrane (99.8% filtration)

If you would like to receive more information on the Avevitta Protect 2.0 Anti-Virus Nano Technology **Reusable Masks**, please contact us at **info@avevitta.com** or by whatsapp: +41 79 790 75 77



### FOCUS

Author: Silvia Borriello silvia.borriello@infodent.com

# **Osteoporosis** The Silent Disease

As the population of the world continues to age, left unchecked, the burden imposed by osteoporosis will be enormous. Fractures due to osteoporosis have a devastating impact on millions of people worldwide, both in terms of human suffering and financial costs to our societies. Yet, despite effective medical advances to reduce fractures, a minority of men and women receive treatment. By 2050, the worldwide incidence of hip fracture in men is projected to increase by 310% and by 240% in women.

Urbanization and ageing populations are driving rapid increases in the osteoporosis disease burden.

Osteoporosis accounts for more days in the hospital than breast cancer, heart attack, diabetes & other diseases.

Loss of independence after a hip fracture, approximately 60% require assistance a year later and 20% will require long-term nursing care.

A prior fracture is associated with an 86% increased risk of any fracture.

Only 1/3 of vertebral fractures come to clinical attention.

Fracture risk up to 27% higher than prostate cancer risk.

#### 1 fracture occurs every 3 sec

80% of people who have had at least one osteoporotic fracture are neither identified nor treated for osteoporosis.

In men, the risk of fracture is up to 27% higher than the risk of prostate cancer.

Key recommendations made in a consensus statement published in 2014 by the European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis (ESCEO):

- Optimal dietary protein intake of 1.0–1.2 g/kg body weight/day with at least 20-25g of high-quality protein at each main meal.
- Vitamin D intake of 800 IU per day to maintain serum 25(OH)D levels greater than 50 nmol/L (20 ng/mL).
- Calcium intake of 1,000 mg per day.
- Regular physical activity/exercise 3-5 times per week combined with protein intake in close proximity to exercise.

Source: 2019-IOF-Compendium-of-Osteoporosis-WEB.pdf

October 20 of each year marks World Osteoporosis Day; a unique occasion when people around the globe unite to put the spotlight on the immense burden caused by osteoporosis and musculoskeletal diseases. Osteoporosis is the most common bone disease in humans, representing a major public health problem, affecting an enormous number of people, of both sexes and all races, and its prevalence will increase as the population ages. It causes bones to become weak and fragile, so that they break easily (i.e. fragility fractures) even as a result of a minor fall, a bump, a sneeze, or a sudden movement. Osteoporosis is a risk factor for fracture just as hypertension is for stroke. Fractures caused by osteoporosis can be life-threatening and a major cause of pain and long-term disability. Considering the influence the demographic shift will have upon the prevalence of osteoporosis and the fact that most individuals who suffer fragility fractures are neither assessed nor treated for osteoporosis it is imperative that all nations develop and implement a strategy to improve the bone health of their populations.

The world's population is ageing fast and humankind is entering a new demographic era. Between 2015 and 2030, the number of people in the world aged 60 years or over is projected to grow by 56%, from 901 million to 1.4 billion, and by 2050, the global population of older persons is projected to more than double its size, reaching nearly 2.1 billion. At the start of the next decade, globally, for every 100 people aged 15-64 years there will be 14.4 people aged 65 years or over. The United Nations projects that this so-called "old-age" dependency ratio will increase dramatically throughout the 21st Century. By 2030, the global ratio is projected to be 18 seniors per 100 "workers", which is set to increase to 25.2 and 37.6 per 100 by 2050 and 2100, respectively. The current global population of 7.8 billion is projected to grow to 8.5 billion, 9.7 billion and 10.9 billion by 2030, 2050 and 2100, respectively. The impact of such a rapid shift in the age structure of our global society has enormous implications for how we manage national economies and healthcare systems. In 2019, for the first time, the G20 group of nations identified ageing as a global risk. With an aging population and longer life span the prevalence of chronic conditions afflicting older people is poised to rise considerably, and this will include osteoporosis and the fragility fractures it causes.

Currently, it has been estimated that more than

By 2030, the global ratio is projected to be 18 seniors per 100 "workers", which is set to increase to 25.2 and 37.6 per 100 by 2050 and 2100, respectively.

200 million people are suffering from osteoporosis, becoming a global epidemic. According to statistics from the International Osteoporosis Foundation (IOF), worldwide, 1 in 3 women over the age of 50 years and 1 in 5 men will suffer an osteoporotic fracture in their lifetime. Every fracture is a sign of another impending one. It was reported that in both Europe and the United States, 30% women are osteoporotic, and it was estimated that 40% post-menopausal women and 30% men will experience an osteoporotic fracture in the rest of their lives. The incidence rate for hip fracture increases exponentially with age in all countries. It was estimated that around the age of 50 years, the probability of having a hip fracture in the remaining lifetime was 3.5% in men and 14.6% in women.

Nonetheless, worldwide variation in the incidence and prevalence of osteoporosis is difficult to determine because of problems with definition and diagnosis. Most fragility fracture patients are neither assessed, nor treated by their healthcare system hence there is failure to 'Capture the Fracture' and reduce risk of subsequent fractures. The most useful way of comparing osteoporosis prevalence between populations is to use fracture rates in older people. However, because osteoporosis is usually not life-threatening, quantitative data from developing countries are scarce. Despite this, the current consensus is that in the year 2000, approximately 9 million fragility fractures occurred annually worldwide. By 2010, the global incidence of hip fracture was estimated to have increased to 2.7 million cases per year and set to increase four-fold by 2050 due to the increasing numbers of older people.

In addition, the cost that osteoporosis imposes on healthcare budgets is impressive. Here too, global health expenditure attributable to osteoporosis is not well known, on account of a lack of data on fracture rates for many developing countries. The most obvious example is India, which is set to become the world's most populous country within the next few decades. However, information is available for many countries, including the 4 largest economies in the world, USA, European Union (EU) China and Japan, which provide an indication of the immense financial burden osteoporosis imposes on our global society.

In 2010, European Union countries spent an estimated Euro 37 billion (US\$40 billion), including pharmaceutical intervention. Twothirds of this cost was attributed to treating new fractures, long-term care accounted for 29% and pharmacological prevention just 5%. Excluding the cost of pharmacological prevention, hip fractures represented 54% of the costs. The 2018 IOF EU6 (France, Germany, Italy, Spain, Sweden, UK) report projected that fracture-related costs will increase in the EU6 countries by almost Euro 10 billion per year between 2017 and 2030, to Euro 47.4 billion by 2030.

The United States spent US\$20 billion in 2015 with a projected cost of US\$25 billion by 2025. According to a study, on an annual basis, nationwide, the cost burden of second fracture to the US health system was estimated to amount to \$834 million for patients with commercial insurance and \$1.1 billion for Medicare patients. The study clearly highlighted the need for widespread implementation of Fracture Liaison Services (FLS). Although still widely underutilized in most countries, a FLS is a coordinated model of care for secondary fracture prevention, ensuring that all patients aged 50 years or over, who present to urgent care services with a fragility fracture, undergo fracture risk assessment and receive treatment in accordance with prevailing national clinical quidelines for osteoporosis. When used, FLS have shown to dramatically improve osteoporosis treatment rates for fragility fracture patients and reduce secondary fracture incidence and mortality.

Although widely associated with older age, nonetheless, the absolute number of individuals of working age who sustain fractures is substantial. In 2017, the total number of sick days incurred by people of working age in the EU6 countries after a fragility fracture exceeded 7.6 million days, furthermore national retirement ages, now in the range 60-67 years, are set to increase in the coming decades, imposing an even greater burden on employees, employers and national health insurance schemes.

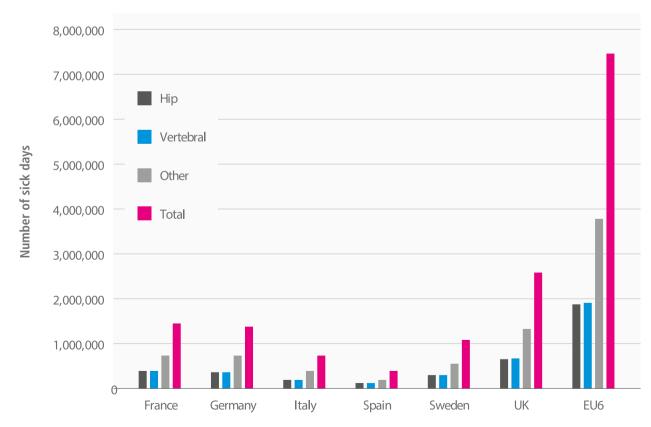
Osteoporosis is a disease characterized by low bone mass, deterioration of bone tissue, and disruption of bone microarchitecture: it can lead to compromised bone strength and an increase in the risk of fractures. Our skeleton is a highly active living tissue comprised of a myriad of cells, blood vessels, proteins and minerals. At birth, we have 300 soft bones which are transformed during childhood and adolescence into hard bones. As some bones fuse during the developmental process, the adult skeleton has 206 bones. The size of our skeleton, and the amount of bone contained in it, changes significantly throughout life. **Peak bone mass is achieved for both males and females by the mid-twenties. Thereafter, a** 

#### gradual decline into old age occurs in men, while a plateau followed by an accelerated period of bone loss for several years after the menopause occurs in women.

Although osteoporosis is seen in all age groups, gender, and races, it is more common in Caucasians (white race), older people, and women. Hip-fracture rates are highest in Caucasian women living in temperate climates, are somewhat lower in women from Mediterranean and Asian countries and are lowest in women in Africa. Environmental factors may play a greater role than genetic factors. Epidemiological studies of immigrant populations lend support to this hypothesis. While African Americans living in the United States have lower fracture probabilities than their Caucasian countrymen and women, their hip fracture risk is higher than native Africans. Similar patterns are observed for the Japanese population of Hawaii and Chinese living in Hong Kong SAR or Singapore.

The relative distribution of the world's older population is set to change dramatically. **Con**sequently, during the first half of this century, absolute hip fracture incidence will remain high and costly in the West and will increase enormously in the East. During the next 3 decades, the demographic shift in Asia and Latin America will result in these regions bearing the brunt of the increase in hip fracture incidence worldwide. In absolute terms, Asia faces the most marked increases, with projections suggesting 1 million cases annually in 2030 and 2 million annually in 2050. The Republic of Korea provides one of the most stark illustrations of the demographic shift that is projected to occur this century, from 10 seniors per 100 people of working age in 2000 to 66.3 seniors per 100 workers in 2050, and a plateau of the ratio at about 70:100 for the second half of the century. It has been projected that half of all hip fractures will occur in Asia by 2050. In Pakistan, Philippines, Sri Lanka and Vietnam only half of hip fracture patients receive surgery. While published studies are currently not available, post-fracture mortality is likely to be remarkably high for these individuals.

Number of Sick Days Taken After a Fragility Fracture in 2017 in the EU6 Countries



Source: IOF Compendium of Osteoporosis

**nfomedix International** 3 2020

By 2050, Europe will remain the world's oldest region, with a ratio of 48.7:100. In 2010, it was estimated that 22 million women and 5.5 million men in the EU had osteoporosis in accordance with the diagnostic criterion of the WHO. Every year, 3% of women aged 50 years or over sustain a new fragility fracture. The annual incidence of fragility fractures will increase by almost a guarter, to 3.3 million cases per year by the end of the next decade. While Europe will continue to age throughout the century, Latin America and the Caribbean will shift from the second youngest world region in 2000 to becoming the world's oldest region by 2100. A significant shift is projected for highly populous Brazil, from a low ratio of 7.8:100 in 2000 to 36.7:100 and 63.3:100 by 2050 and 2100, respectively. The rapid ageing of the Latin American population in the coming decades is projected to result in 12.5% of all hip fractures occurring in this region by 2050. Rapid increases in old-age dependency ratios are also evident for both Canada and the United States of America. In 2015, the United Nations report estimated that 75 million individuals in this region were aged 60 years or older in 2015, a figure which is set to rise to 123 million by 2050. The 2010 US Census population suggested that there were 99 million adults aged 50 years and over living in the US in 2010. Based on this data and osteoporosis prevalence rates taken from the National Health and Nutrition Examination Survey (NHANES) 2005-2010, 10.2 million older adults were estimated to have osteoporosis. A further 43.4 million older adults had low bone mass (i.e. osteopenia). By 2025, the total number of fractures is projected to exceed 3 million cases per year.

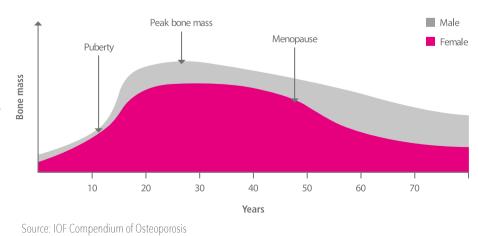
Osteoporosis has no symptoms, until a bone fracture occurs. Worldwide, millions of people at high risk of fractures remain unaware of the underlying disease as vastly under-diagnosed and under-treated. As well, the importance of good bone health is all too often underestimated (and therefore neglected) by patients and doctors alike. At a public health level, many governments and health authorities remain unaware of the enormous socio-economic burden caused by osteoporosis

A recent fracture at any major skeletal

Despite effective treatments having been available since the mid-1990s and publication of many national clinical guidelines which advocate assessment and treatment of fracture patients, there is still a global care gap.

Bone Mass Throughout The Life Cycle





site, such as vertebrae (spine), proximal femur (hip), distal forearm (wrist), or shoulder in an adult older than 50 years with or without trauma, should suggest that the diagnosis of osteoporosis needs further urgent assessment involving diagnosis and treatment. Fractures may cause chronic pain, disability, and death. Hip or vertebral fractures are associated with 15-20% increased mortality rate within 1 year, with a higher mortality rate in men, followed by a 2.5fold increased risk of future fractures (secondary fractures). Thus, although widely regarded as a disease that affects women, 20% of symptomatic spine fractures and 30% of hip fractures occur in men. Approximately 20-50% hip fracture patients require long-term nursing homecare and suffer from decreased quality of life, social isolation, depression, and loss of self-esteem.

However, with an early diagnosis of this disease before fractures occur and by assessing the bone mineral density and with early treatment, osteoporosis can be prevented. Therefore, increasing awareness among doctors, which, in turn, facilitates increase awareness of the normal populace, will be effective in preventing this epidemic.

In addition to age, gender and a history of fragility fracture, several are the risk factors identifying individuals that are likely to be at increased fracture risk, such as being underweight, individuals with parental history of fracture, frequent falls or early menopause. Smoking and alcohol are also among the risks. Above the threshold of 2 units or less daily (e.g. 2 glasses of 120 ml of wine), alcohol intake is associated with an increased risk of 23%, 38% and 68% for any fracture, any osteoporotic fracture, and hip fracture, respectively. Adverse effects on BMD (bone mineral density) and/or fracture risk have also been reported for many classes of medicines. Furthermore, individuals who are living with a broad array of diseases, such as chronic disease in childhood, diabetes, chronic kidney disease, dementia, chronic obstructive pulmonary disease, inflammatory bowel disease, coeliac disease, rheumatoid arthritis as well as hypogonadism in men are pre-disposed to develop osteoporosis or sustain fragility fractures. During the last three decades, science has provided us with the tools needed to avert an epidemiological catastrophe. A broad range of effective treatments are available throughout the world. Among the techniques used to make a diagnosis of osteoporosis are:

#### Number of DXA Scanners per Million of Population in the European Union, 2017

-- BMD testing by dual-energy X-ray absorptionetry (DXA).

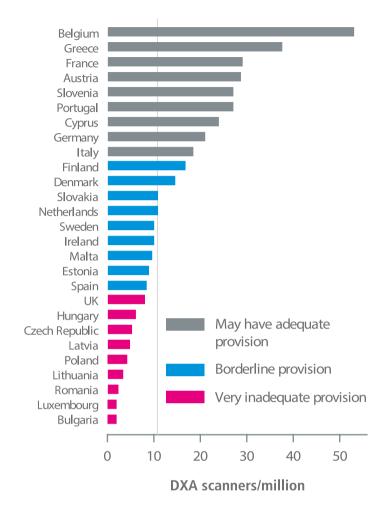
-- X-Rays or Vertebral Fracture Assessment (VFA) to identify vertebral fractures.

-- Measurement of Bone Turnover Markers (BTM) in the serum or urine.

-- fracture risk calculators. The advent of absolute fracture risk calculators such as FRAXR provide individuals and their clinicians with a readily accessible, online tool to estimate fracture risk. Individuals can visit **https://** www.sheffield.ac.uk/FRAX/ to access their own risk. FRAXR, in combination with access to axial DXA scanning, provides primary care providers with an opportunity to stratify fracture risk within their practice population.

Nonetheless, only 10% of older women with fractures in fact receive osteoporosis therapy. In 2010, in Europe alone some 12.3 million people considered to be at a high risk for osteoporotic fractures were left untreated. While genetics plays a significant role, the combination of a well-balanced diet, physical activity, particularly activity that maintains or increases muscle strength, as well as lifestyle play an important part in ensuring good bone health, affecting musculoskeletal health throughout life, from maternal nutrition through childhood and adolescence to maintaining bone mass in adulthood, also considering the special nutritional needs of seniors. It has been estimated that a 10% increase of peak bone mass in children reduces the risk of an osteoporotic fracture during adult life by 50%. In this regard, osteoporosis has been characterized as a pediatric disease with geriatric consequences.

Adequate calcium intake, vitamin D and protein are the most important for bone health. There still is considerable debate about whether current calcium recommended intakes are adequate to maximize peak bone mass and to minimize bone loss and fracture risk in later life. Vitamin D is obtained either from the diet or by synthesis in the skin under the action of sunlight. Protein provides a source of amino acids which are needed to maintain bone structure and stimulates release of IGF-I which may increase osteoblast activity resulting in increased production of bone matrix. Although further studies are needed, many other nutrients and dietary factors may be important for long-term bone health; among the essential nutrients, are zinc, copper, manganese, boron,



(Reproduced from Arch Osteoporos . 2013;8:144 with kind permission of Springer)

Source: IOF Compendium of Osteoporosis

vitamin A, vitamin C, vitamin K, the B vitamins, potassium and sodium.

In 2017, an ESCEO expert consensus (the European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases) meeting highlighted that only approximately one-fifth of eligible fracture patients receive osteoporosis treatment after a fracture. Despite effective treatments having been available since the mid-1990s and publication of many national clinical guidelines which advocate assessment and treatment of fracture patients, there is still a global care gap. The task ahead is enormous but must be tackled if our healthcare systems are to avoid an unbearable increase in demand for hospital admissions throughout the world. Among Main Sources:

-Extracts from IOF Compendium of Osteoporosis, for detailed report - 2019-IOF-Compendium-of-Osteoporosis-WEB.pdf

The International Osteoporosis Foundation (IOF) is the world's largest nongovernmental organization dedicated to the prevention, diagnosis and treatment of osteoporosis and related musculoskeletal diseases. www. iofbonehealth.org www.facebook.com/iofbonehealth @ iofbonehealth

 Sözen, T., Özışık, L., & Başaran, N. Ç. (2017). An overview and management of osteoporosis. European journal of rheumatology, 4(1), 46–56. https://doi.org/10.5152/ eurjrheum.2016.048

https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC5335887/

-http://worldosteoporosisday.org/about-osteoporosis by International Osteoporosis Foundation -World Health Organization - https://www.who.int/nutrition/topics/5\_population\_nutrient/en/index25.html





Author: Dott.sa Paola Pederzoli pederzoli.paola@gmail.com

A trend for rejuvenating skin that has emerged in the past few years requires the use of one's own blood to be re-injected into skin. By using Concentrated Growth Factors (CGF) from platelets, your blood is used to heal regenerate tissues and build collagen. This treatment modality harnesses the healing power of platelets - components in the blood that initiate and regulate tissue repair and release biphasic growth factors from blood to stimulate a stem cell response. Then stem cells help you to grow new collagen and blood vessels, repair and regenerate damaged skin, and help slow the signs of aging. CGF started its in ortthopedic medicine, dentistry, sport medicine, gynecology, dermatology and reconstructive surgery. Now, Doctors have discovered its healing and regeneration properties can also be used in cosmetic to stimulate skin rejuvenation.

#### **The Ageing Face**

As we age, we experience a loss of volume and skin laxity that results in common complaints, which include: A) Volume loss in the cheeks B) Dehydrated skin C) Crow's feet D) Lip and frown lines E) Acne scarring F) Deep depressions around the nose and mouth G) Filling of missing tissue H) Voluminizing effect Gel I) Scarring around the jaw line J) Overall loss of healthy, youthful skin texture and tone K) Rosacea

The face becomes triangle – shaped as the skin and fat begins to flatten with gravity. A poor diet, smoking and exposure all cause oxidative stress, a key component of the ageing process, that appears as fine lines, hyperpigmentation, unevenness of skin tone, sagging skin and advanced wrinkling.

# Blood Therapy, a New Trend in Skin Ageing Regeneration

CGF, your blood is re-injected into affected areas. CGF vs. aging skin is a popular among many People CGF Fraction, Platelet Rich Plasma (PRP) is a concentrated growth factors therapy without exogenous chemical material.

CGF/ PRP addresses these problems – it is a skin regeneration therapy that uses the patient's own blood to boost the natural healing power and repair the cells. The Concentrated growth factors, when released, induce the production of collagen and generation of new capillaries to rejuvenate the skin. It has the advantage of a longer duration of efficacy compared with injections of Hyaluronic acid, Botox and collagen that are absorbed into the body. An unique technologies developed by Silfrandet<sup>®</sup>, can generate low release matrix from human albumin (APAG device, from Silfradent<sup>®</sup>). Combination of CFG plus APAG, is considered the thirds generation of PRP. Filler effect and collagen stimulation can be reached with this method.

Autologous CGF/PRP/ APAG procedure is a quick 30 minute treatment. It involves removing a vial of the patient's own blood and spinning it in a special device (Medifuge, Silfradent®), to separate out the red blood cells, plasma, platelets and stem cells CD34+ without exogenous chemicals components. This plasma ( the clear, liquid part of blood ) now contains from 3-5 fold the basal levels of platelets. This PRP fraction is injected into the affected areas around the skin in tiny needles or cannula. Now, Doctors are applying the technique to other problem, including helping with hair loss by using PRP to stimulate hair follicles.

#### **CGF in Skin regeneration**

CGF is a completely natural treatment, there's no risk of allergy, infection or rejection, it can be done at all ages, on all skin types. The treatment is ideal for individuals looking for gradual, but noticeable improvement in skin texture, tone and color with minimal downtime. It gives you a fresher and healthier appearance without looking frozen or over – plumped, without aggressive surgery, chemicals or toxins. The treatment also rejuvenates saggy skin, reduces fine lines, eye bags and neck wrinkles, and helps with any acne-scarring. CGF is effective particularly for crinkling skin under the eyes that are difficult to treat by conventional rejuvenation therapy. Like all cosmetic treatments, it requires a few treatments for best results - with most Doctors recommending three treatments, once a month. Top- up treatment can be done once or twice every year. Noticeable results will seen around the three - months mark and will continue as new collagen production. Results are variable from person to person, but in general, could last from 12 - 18 months. CGF uses the patient's natural biology to address skin defects and volume loss, triggering production of new cells and collagen formation. Thus, CGF (PRP) therapy is very promising in facial restoration. Results are optimal when patients receive a combination of PRP with microdermabrasion, chemical peels, laser therapy and Gel A.P.A.G to accelerate and sustain the benefits of CGF (PRP).

#### **Disclaims**:

Silfradent (Santa Sofía, Italy) is a devote centre in regenerative medicine. The information provided in the present manuscript is for educational and communication purposes only and it should be conducted only by medical doctor.

Information published in this article is not intended to replace, supplant or augment a consultation with a health professional regarding the reader's own medical care. The star doses not give any warranty on accuracy, completeness, functionality, usefulness or their assurances as to the content appearing in this column. The star disclaims all responsibility for any losses, damage to property or personal injury suffered directly or indirectly from reliance on such information.

#### SILFRADENT srl www.silfradent.com e-mail: info@silfradent.com



**EQUIPMENT FOR DENTAL LABORATORIES** 

# Sanitation of Environments and Surfaces

# SILFRADENT innovation!

The constant high-pressure steam generator produces a nebulization of dry steam capable of penetrating the surfaces without wetting them. An appropriate disinfectant essential for sanitization can be inserted directly into the boiler.

According to the provisions of the safety regulations for industrial and commercial production activities, **Silfradent srl** has adapted its commercial offer.

Silfradent's new model **EV1 GA** is able to perform a complete sanitization of environments and surfaces with dry steam and an appropriate and tested disinfectant product.

When we talk about "sanitization" we refer to a much deeper cleansing, to complete the ordinary cleaning of the rooms and objects.

The biocidal liquid has a composition without side effects. It is not harmful; it is not toxic. Nevertheless, it is recommended to perform the sanitization with the use of gloves, eye protectors and to provide adequate air exchange for the rooms.

The portable steamer **EV1 GA** is compact and functional. It can be filled manually; it does not require connection to the water network and fulfills all cleaning and decontamination operations every day.

#### SILFRADENT srl

via G. Di Vittorio 35/37 47018 S. Sofia (FC) - ITALIA tel. +39 0543.970684 fax +39 0543.970770 www.silfradent.com e-mail: info@silfradent.com



#### **MAIN FEATURES**

- Dry steam (micro drops of water only 5%);
- Powerful: it generates dry steam to 4.5 bar;
- Fast: it takes less than 15 minutes to obtain the desired pressure;
- Boiler: high capacity (4.5 liters);
- Water consumption;
- Heating: external resistance without maintenance.
- The surface is sanitized after about 3 minutes from the treatment. Without rinsing.



Visit us at: Smart Medical Fair, www.smartmedicalfair.com/stand/h1p3b5z1376 www.smartmedicalfair.com/stand/h4p3b5z1401

# Insight

# A Brief Summary On Primary Osteoporosis

Today osteoporosis belongs to about 18.5% of the female population between 40 and 79 years and 10% of the male population between 60 and 79 years.

#### Author: Luca Maria Pipitone

Degree in biotechnology

In medical practice, patient's symptoms are essential for making a diagnosis, and they are equally necessary for an individual to recognize the problem and consult a doctor. Unfortunately, not all pathologies are evident to attract the patient's attention and push the patient into the doctor's office, some remain hidden, without any obvious consequence, continuing to spread silently. Osteoporosis, differently from other diseases, does not give symptoms in the early phase until the bone structure is so much compromised that any solicitation or a slight bump causes a bone fracture, revealing the pathology. It is well known that, due to hormonal changes in menopause, it is the female sex who is most affected, but men can be affected too due to genetic predispositions, lifestyle, eating habits and pharmacological treatments.

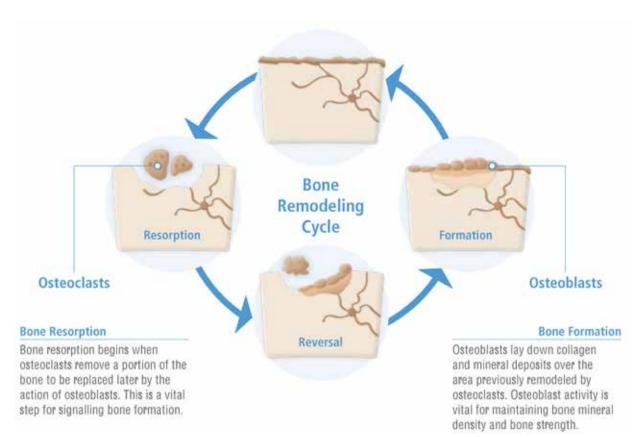
Bone is a peculiar connective tissue, approximately 2/3 is composed of inorganic crystals,



similar to hydroxyapatite, immersed in a protein matrix (consisting mainly of collagen, glycoproteins, and proteoglycans) which occupies the remaining portion. It is a living and dynamic tissue that is totally renewed approximately every 8 years thanks to the concomitant action of two opposite processes, one of resorption (operated by osteoclasts) and the other of bone deposition (carried out by the osteoblasts). Bone metabolism is regulated by various factors that govern growth, aging and maintenance of this tissue, and which, at the same time, regulate phospho-calcium homeostasis (serum levels of  $Ca^{2+}$  and  $PO_4^{-3-}$ ), drawing the mineral salts present in it, or vice versa, depositing and excreting them if their serum level is too high. This adjustment is mainly operated by the parathyroid glands which, possessing a calcium sensor (CaSR *"calcium sensing receptor"*), perceive the changes in serum calcium and in response produce parathyroid hormone (PTH).

This hormone acts both at the level of osteoblasts/osteoclasts, thus increasing bone me-

It is well known that, due to hormonal changes in menopause, it is the female sex who is most affected



Source: 2019 IOF Compendium of Osteoporosis

tabolism, and at the renal level, favoring the reabsorption of calcium and the synthesis of the main metabolite of vitamin D, calcitriol, which in turn stimulates the intestinal absorption of calcium and phosphates.

Other factors also act on bone metabolism such as estrogens that hinder the differentiation of osteoclasts, or such as calcitonin which, always inhibiting the same cell type, blocks bone resorption, or the growth hormone (GH) which contributes to the development of the skeletal system, glucocorticoids that reduce the absorption of calcium and phosphates in the intestine, and, at the same time, promote their renal excretion or, lastly, vitamins A and C, and insulin which seems to be involved in bone remodeling (correlation between diabetes mellitus and osteoporosis).

Furthermore, in addition to endocrine stimuli, bone tissue also responds positively to mechanical efforts generated by weight-bearing physical activities such as running, dancing and football and consequently responds negatively to rather long periods of immobilization. Nutritional deficiencies or a dysfunction within the bone metabolism can lead to a prevalence of the bone resorption process over the deposition process, reducing the "bone mass density" (BMD) and leading over the years to a condition of bone fragility. Today osteoporosis belongs to about 18.5% of the female population between 40 and 79 years and 10% of the male population (between 60 and 79 years), making this pathology, and the fractures associated with it, one of the major socio-health problems of the Western world. In fact, looking at the statistics relating to the fracture of the femur in osteoporotic patients, 25% of them die within one year of the injury, 50% remain disabled and 80% permanently lose their independence.

From this we can understand the psychological repercussions that a diagnosis of osteoporosis can arise in the individual who suffers from it. In addition to having to deal with the substantial mortality rate due to trauma, patients face the high probability of losing their independence, entrusting relatives with the heavy task of providing for their needs.

To date, osteoporosis is treated with various drugs that aim either at blocking the bone resorption process (anti-resorptive drugs) or at stimulating the thickening process (anabolic drugs), mainly working on increasing the "bone mass density" (BMD) and therefore increase the mechanical properties of the skeletal system. However, to make these therapies effective, the patient must have adequate calcium intake within the diet and sufficient vitamin D to ensure its absorption in the intestine. In fact, vitamin D, more specifically its active form (calcitriol), is necessary to effectively absorb this metal, and its supply through diet and sun exposure is essential for proper bone health.

Clearly, as already mentioned, many are the factors that can contribute to the onset of osteoporosis and diet alone may not be sufficient to prevent this disease. So, in addition to removing potentially modifiable risk factors such as a diet lacking in calcium and vitamin D, poor physical activity, cigarette smoking and alcohol abuse, it is advisable, in adulthood, to undergo specific tests such as DEXA (dual-energy X-ray absorptiometry), so as to evaluate the state of one's own bone mass and to be able to immediately start with therapy in case of reduced bone density. This is especially true for all those individuals at risk such as postmenopausal women, those who have a genetic component or those who take drug therapies that make them susceptible to osteoporosis (cortisone treatments for example).

#### Bibliografia:

 Valerio Monesi, S. Adamo, P. Comoglio, A. Dolfi, M. Molinaro, G. Papaccio, G. Siracusa, M. Stefanini & E. Ziparo.
 Istologia di Monesi (6° edizione). Padova, PD: Piccin.
 Robbins & Contran. (2010). Le basi patologiche delle malattie. Patologia generale, Vol. 1 (8° edizione). Milano, MI: Elsevier.

## MARKET OUTLOOK

Author: Silvia Borriello

# sivia.borriello@infodent.com Bulgaria/s Key Challenge

Since its entry into the EU, notable progress in living standards and health indicators have been made. However, numerous issues are yet to be solved. The economic instability and underfunding of the healthcare system contribute to unsatisfactory population health; Bulgaria requires substantial changes and solutions which can happen only with political will and public support.

32



Bulgaria is a comparatively small European country of the Balkan peninsula in the south-eastern part of the continent, along the Black Sea. Situated in the western part of the country, the capital, Sofia, is the country's largest city and lies almost at the geographical center of the Balkan peninsula. Its population of around 1.3 million is almost four times as large as the population in each of the next biggest cities, Plovdiv and Varna. Demographic development continues to be a major challenge as Bulgaria is projected to have the fastest-shrinking population in the world with negative population growth and negative net international migration, leading to a steady and continuous population decline and steep drop of the working-age population. In 1989, almost nine million people lived in Bulgaria. Now, it is little over seven million (7.1). By 2050, that number is projected to be less than 5.5 million. The government is introducing several measures to try to tackle depopulation by increasing the birth rate: offering help with the costs of fertility treatment, giving childcare and mortgage support. A large share of native Bulgarian emigrants is young (68% younger than 40), seeking better working and social living conditions abroad or migrating for study purposes. Even if at the beginning economic contraction and high unemployment were partly responsible for the emigration, the trend has continued even after the economic environment stabilized.

Even if at the beginning economic contraction and high unemployment were partly responsible for the emigration, the trend has continued even after the economic environment stabilized.

In parallel, the country has undergone a significant transformation over the past decades, changing from a highly centralized, planned economy to an open, market-based, upper-middle-income economy securely anchored in the European Union (EU) since 2007. The advancement of structural reforms starting in the late 1990s, the introduction of the currency board and expectations of EU accession unleashed a decade of exceptionally high economic growth and improved living standards. Yet, many legacies from the past, the global economic crisis of 2008 and a period of political instability in 2013-14 undid some of those gains. Now, in its pursuit of boosting growth and shared prosperity, Bulgaria is moving to address these issues. However, regardless of the comparatively stronger

economic performance, Bulgaria is still facing serious economic and social challenges, with worryingly high levels of poverty and significant regional variances in all related indicators. The labor force and employment sector exhibit serious structural weaknesses, due to the noticeable shortage of skilled labor in key sectors such as industry, education, health, and tourism, which are holding back economic growth. The lack of political stability has greatly undermined reform efforts in many fields, including healthcare. There has been progress in certain demographic indicators such as life expectancy, as well as in some mortality and morbidity indicators such as infant mortality. Nevertheless, Bulgaria is behind almost all other EU Member States and shows unsteady improvement patterns.

Health Indicators	1990	2005	2015	EU 28 average (2015)
Life expectancy at birth, total (years)	71.2	72.5	74.7	80.6
Mortality rate SDR per 100 000 population	n/a	1861	1660	1036
Infant mortality rate (0-1 year per 1000 live births) a	14.8	10.4	9.3	3.6
Under-5-year mortality rate (per 1000 live births) b	22.1	15.9	8.2 7.1 (2018)	4.2
Estimated maternal mortality ratio (per 100 000 live births) a	25.0	15.0	11.0	8.0

Source: Eurostat, 2018; WHO HFA 2017, World Bank 2020.

Notes: n/a = not available; SDR = standardized death rate. NCPHA, 2016; a = WHO Regional Office for Europe, 2018; b = World Bank, 2017. Taken from: HiT-Bulgaria-2018-web.pdf



Healthcare in Bulgaria is based on mandatory health insurance, governed by the 1998 Health Insurance Act, also encompassing voluntary health insurance. It is therefore compulsory for all Bulgarian citizens to be insured under the health system. Compulsory Social health insurance (SHI) is administered by a single payer, the National Health Insurance Fund (NHIF). The NHIF finances medical and dental services included in the benefit package and medications listed in the Positive Drug List (PDL). The benefit package and prices of services are negotiated between the NHIF and professional associations of physicians and dentists annually. Voluntary health insurance (VHI) is provided by for-profit jointstock insurance companies for general and life insurance, which directly contract both insured individuals and healthcare providers. While the insurance system (both SHI and VHI) covers diagnostic, treatment and rehabilitation services

In accordance with the 1999 Health Care Establishments Act, healthcare providers are autonomous self-governing market players and private healthcare providers can sign contracts with the NHIF on the same terms as public providers. as well as medications for the insured individuals, the Ministry of Health (MoH) is responsible for providing and funding public health services, emergency care, transplantations, transfusion hematology, tuberculosis treatment and inpatient mental healthcare.

Although new principles, such as autonomy, contractual relations and market regulation were introduced in the late 1990s, in practice, the decision-making process in the Bulgarian health systems remains highly centralized with the main national actors being the National Assembly, the Council of Ministers and the Ministry of Health. The mandatory health insurance system is designed as a state monopoly. It has the exclusive right to grant mandatory health insurance and to guarantee the observance of the insurance rights in respect of all nationals, following a public contract model. A National Framework Contract (NFC) is in fact signed every year between the NHIF on one side, and the Bulgarian Medical and Dental Associations - on the other. The Contract, intended to regulate the formal and operational

procedures of the compulsory health insurance system, comes into force upon sanction by the Minister of Health.

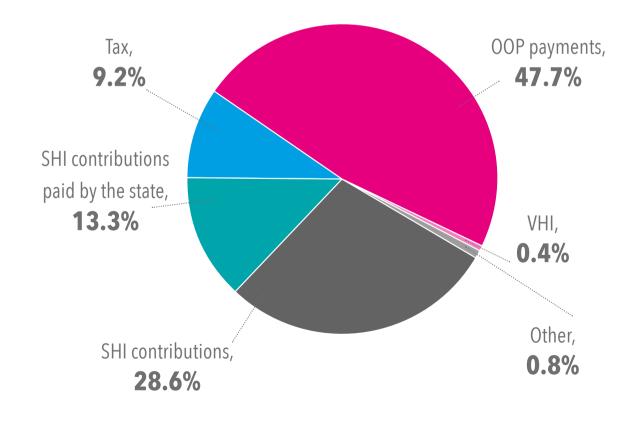
The benefit package, financed by the NHIF, includes primary and specialized outpatient medical care, outpatient diagnostic services, dental care and inpatient services that are regulated by clinical pathways and procedures. Public health services, emergency care and state psychiatric hospitals are funded by global budgets of the Ministry of Health. The Regional Health Insurance Funds contract all public or private healthcare providers operating in their territory that meet criteria stipulated in the NFC. In accordance with the 1999 Health Care Establishments Act, healthcare providers are autonomous self-governing market players and private healthcare providers can sign contracts with the NHIF on the same terms as public providers. As of 2018, the private sector encompasses primary care, much of the specialized outpatient (or ambulatory) medical and dental care, pharmacies and some hospitals. The state owns university hospitals and national centers, specialized hospitals at national level, centers for emergency medical care, psychiatric hospitals, centers for transfusion hematology and dialysis, as well as 51% of the capital of district hospitals.

The number of General Practitioners in Bulgaria has been declining and access to primary care in rural and remote areas is still a challenge. Ambulatory care is provided by specialized outpatient facilities, mostly privately owned. The distribution of specialists across the country is also characterized by large regional imbalances. Inpatient care is delivered mainly through a network of public and private hospitals, divided into multi-profile and specialized. Bulgaria has a relatively high hospitalization rate, reflecting the underutilization of ambulatory care services and the lack of integration and coordination of different levels of care. Although strengthening of primary care has been on the policy agenda of almost all governments since 1990, these remain underused. Acute hospitals prevail and are the third highest within the EU, whereas capacity for long-term care is insufficient.

Pharmaceutical care is part of the state health policy and under the responsibility of the Minister of Health. The Bulgarian pharmaceutical market is one of the smallest in the EU, but it is nevertheless among the fastest growing sectors of the Bulgarian economy. In 2018 it grew by 5.9 % compared to 2017 reaching USD 2 billion and outpacing other fast-growing markets in the Central and Eastern Europe region. Nevertheless, this was the first registered decrease in growth, which has been in double digits for the last ten years.

Healthcare Funding - Bulgaria's healthcare sector is funded principally through the compulsory social health insurance system operated by the Bulgarian National Health Insurance Fund (NHIF). Nearly 99% of the NHIF's total revenue is formed by SHI contributions. Contributions paid by employers and

## Percentage of Total Expenditure on Health According to Source of Revenue, 2015



Infomedix International | 3 2020

employees traditionally account for the largest share of the total contribution revenue, which have increased to 61.2% in 2016. SHI contributions paid by the state represent approximately one third of the total contribution revenue even if they cover the largest share (around 60%) of insured individuals, those exempt, most of which are pensioners, children, the unemployed and dependents (even if these funds are defined as SHI contributions by type of revenue, they in fact originate from general non-earmarked taxation). By law, all Bulgarian citizens must be insured with the NHIF; however, a significant share of the population (up to 12%) is de facto uninsured.

The role of public financing decreased steadily since the transition period to a SHI system. In 2018, Bulgaria's total healthcare expenditure amounted to USD 5.3 billion, equaling a per capita healthcare expenditure of USD 743. Government healthcare spending in 2018 rose by 4.8% to USD 2.60 billion, whereas private healthcare spending was upped by 7.2% to USD 2.62 billion.

Total health expenditure as a percentage of

gross domestic product (GDP) increased steadily in the years and stands at around 8.2%. Even if below the EU15 average, Bulgaria spends more on health as a percentage of GDP than all new EU Member States, except for Slovenia. Although both public and private health expenditure contributed to the increase of total health expenditures, the growth rate of private expenditure outpaced that of public spending. Private expenditure on health, mainly out-of-pocket (OOP) - has grown from 39.1% in 2000 to 48.9% of total expenditure in 2015, second highest value in the EU after Cyprus and constitutes the largest source of financing in Bulgaria, posing a financial burden on the population, especially for pharmaceutical care, which accounts for approximately two thirds of overall OOP expenditures. Corporate payments are ranked second in private health expenditures, whereas VHI only plays a marginal role contributing less than 1% to Bulgarian health financing. The trend of private (mainly OOP) expenditure increasing might be the result of a shortage or inefficient use of public resources for healthcare, also considering that public expenditure per capita tripled from 2000 (223 \$) to 2015 (743\$). OOP payments include cost-sharing and direct payments for services not covered by the NHIF. In addition, the incapability of the SHI system to assure access to, and quality of, health services means that many make direct payments for services that are in fact covered by the NHIF.

Overall OOP spending on health increased more than threefold between 2003 and 2015, representing the highest health expenditure share of the final household consumption among all EU Member States. The high and growing percentage of OOP payments also shows the inadequate financial protection that the SHI system provides to citizens. Inevitably, this has adverse implications for the accessibility of healthcare and puts many disadvantaged groups at a high risk of impoverishment and forgone care. Citizens as well as medical professionals are dissatisfied with the performance of the health system and the quality of care, for which a national monitoring system or standardized data are lacking.

TYPES OF SERVICES	2003	2015		
Pharmaceuticals and other goods	€381.9 million	€1299.0 million		
% of OOP	74.4%	75.7%		
Growth Index	1	3.4		
Outpatient care	€92.9 million	€257.4 million		
% of OOP	18.1%	15.0%		
Growth Index	1	2.8		
Inpatient care	€38.5 million	€160.1 million		
% of OOP	7.5%	9.3%		
Growth Index	1	4.2		
TOTAL Growth Index	€513.2 1	€1716.4 3.3		

Source: NSI, 2018g. Taken from: HiT-Bulgaria-2018-web.pdf

**nfomedix International** | 3 2020

Cost-sharing was established by the 1998 Health Insurance Act in the form of co-payments (referred to as user fees) for visits to physicians, dentists, laboratories and hospitals for the use of services covered by the NHIF. User fees apply to all patients with some exceptions: children, pregnant women and women up to 45 days after delivery, patients suffering from chronic diseases listed in the NFC, patients with malignant neoplasms, medical professionals, those with income below a certain threshold and some other groups.

#### **User Charges for Health Services, 2018**

HEALTH SERVICE	TYPE OF USER CHARGE IN PLACE	PROTECTION
GP visit	Fixed user fee of BGN 2.90 (€1.50)	13 patient groups including children, chronic patients, pregnant women and others are exempt from paying user fees.
Outpatient specialist visit	Fixed user fee of BGN 2.90 (€1.50)	Same as above.
Outpatient laboratory services	Fixed user fee of BGN 2.90 (€1.50)	Same as above if user fees apply.
Inpatient stay	Fixed user fee of BGN 5.80 (€2.96) for each day of stay (up to 10 days per year). Extra billing for luxury hospital services (for example, choice of Physician or team)	Same as for GPs and specialist visits. No exceptions.
Dental care	Co-payment for services included in the NHIF's benefit package	Children pay no or smaller co-payments.
Outpatient pharmaceuticals	Co-payment	No exceptions.

Source: HiT-Bulgaria-2018-web.pdf

Human and Physical Resources - Even though there is no overall shortage of physicians, the current composition of human resources in the health system is unbalanced. Rapid ageing and an outflow of young physicians result in large regional discrepancies and insufficient coverage in some fields. The hospital sector has traditionally been marked by overcapacity and yet it is subject to further growth. According to OECD data, the number of hospital beds per population has decreased in all EU Member States since 2000, except for Bulgaria. In 2016, there were 321 hospitals with a total of just below 50,000 beds. The increase in both the number of hospitals and the number of beds is mainly driven by the private sector, whereas the number of public hospitals (under state and municipal ownership) has been decreasing, following the government strategy for restructuring the hospital sector. There are considerable regional variations for inpatient facilities in favor of more urban settlements. Unlike most of the private hospitals, public hospitals in Bulgaria are characterized by a chronic poor state of facilities due to underfunding and inefficient use of available resources, there is pressing need for upgrading and renewal of medical equipment. The number of health facilities for outpatient care (medical, dental, diagnostic and consulting centers, and laboratories) has also risen to 2,029 in 2016.

More than 120,000 people, or roughly 5.5% of all full-time employees, are working in the healthcare sector in Bulgaria. The number of physicians per 1000 population has been steadily growing to 4.16 in 2016, which puts Bulgaria above the EU28 average (3.5 per 1000 population). There are far more medical specialists than general practitioners (GPs), with the latter making up only 16.6% of the total physician workforce, the second lowest ratio in the EU after Greece. Bulgaria also records the lowest nurse per physician ratio of all EU Member States, with 1.1 nurses per physician, less than half the EU Member States ratio of 2.5 nurses per physician. This is contrasted by the highest density of practicing dentists per 1000 population in the EU in 2016. Overall, Bulgaria is behind in the process of introducing new professional roles or diversifying and expanding competences of existing professions. Furthermore, the exodus of medical specialists and nurses in OECD countries is developing into a serious problem. The most common reasons for leaving the country include low levels of satisfaction and lack of professional development, low salaries, imbalances in payment by specialties, lack of modern medical equipment and failed health reforms.

#### Among main sources:

-Extracts from "Bulgaria Heath Systems Review 2018". The European Observatory on Health Systems and Policies, a partnership hosted by WHO. The Health Systems in Transition (HiT) profile on Bulgaria was produced by the European Observatory on Health Systems and Policies and Medical University - Varna "Prof. Dr P. Stoyanov", which is a member of the Health Systems and Policy Monitor (HSPM) network. For a comprehensive and detailed report on Bulgaria: HiT-Bulgaria-2018-web.pdf -Bulgaria's Outlook for Healthcare & Life Sciences, https:// www.export.gov/article?id=Bulgaria-Healthcare-and-Medical – Export.gov helps U.S. companies, plan, develop and execute international sales strategies necessary to succeed in today's global marketplace.

-The World Bank in Bulgaria, https://www.worldbank.org/ en/country/bulgaria/overview SMART

## The international virtual MEDICAL TRADE FAIR open all year round

Reach your customers wherever they are with our new service.

More info: advertise@infomedix.it



# Marketing All About Digital Marketing

It's fair to say that digital marketing has entirely transformed the way companies connect and engage with their customers. With more consumers searching and buying online than ever before, digital marketing has become crucial, especially in such an unprecedented crisis, as the Covid-19 pandemic.

It's a fact of life that we live in a technology dependent world where we resort to the internet with whatever questions or needs we might have. If you turn on your smartphone, tablet or laptop, you won't have to look too far to find an event that is live and in progress. As data becomes more affordable, it becomes clear that the future will become all about remote participation, gaining momentum in such an unprecedent time-period, where social distancing is the rule. While the new coronavirus pandemic has already had a significant impact on the business community and the economy, your company still has plenty of opportunities to be there for your customers and prospects through the crisis: the internet has in fact enabled businesses to never stop interacting with targeted audiences in real time. According to surveys, virtual commercial transactions have surged by a 40% during the coronavirus crisis only within Italy, with 81% of all advertisement being digital. So, now is the time for companies to update their digital presence as well as marketing and communication strategies. For example, the role of webinars in marketing and sales strategies will likely be transformed forever. As we are forced to let go of our preference for face-to-face commercial communication, webinars offer professionals the opportunity to feel more connected with customers and prospects. Not to mention the cancellation or postponement of all significant B2B events that have led to a surge of virtual trade show platforms, all available from the comfort of our homes and offices.

As a matter of facts, the major advantages of digital marketing, besides the fact that

it does not require face-to-face interaction, is that it is measurable and affordable. An email blast or social media campaign can send your message to a wider audience, at the right time and in the right place, for a fraction of the cost of a TV or print ad, for example. So, why not take advantage of everything that digital marketing has to offer?

#### You Can Have Trackable, Measurable Results

Measuring your online marketing in real time by accessing timely data through web analytics tools and other online metric tools makes it easier to establish how effective and successful your campaign has been, and you can respond adjusting your strategy accordingly. If you organize a virtual event, a live streaming, a webinar or take part at a virtual trade fair, reporting and analytics track every move attendees make. You know how they came, what they did, with whom they chatted, what they tweeted, which videos or pdf they watched, etc.

#### It Drives New Inquiries with Global Reach

A website, webinar or virtual trade show allows you to find new markets and trade globally for only a small investment. There are several ways of reaching new customers, from websites to video marketing, virtual events, and social media. Digital marketing also helps you to attract mobile customers, a huge and rapidly growing market. At the end of last year, mobiles devices (apart from tablets) generated 52.6% of global website traffic and during the Covid-19 pandemic within Italy, the mobile-laptop fork has widen to 77% of sales through mobile devices against 23% on laptop.

#### Your Website is Active Day and Night

A well-designed website will 'work' for you every hour of the day, every day of the year, allowing potential customers on the other side of the world to easily browse your services and products, watch videos, demos or tutorials outside of office hours. This means that, while your sales team is off the clock, your website is acting as a 24/7 salesperson and helping to bring business in.

#### **Big Results with Little Money**

The trick is to be 'strategic' about your digital marketing campaigns. By clearly understanding the results of your data, you can carefully plan a well targeted omnichannel digital marketing campaign that can reach the right customer, increase your revenues, saving both money and time. It is no longer "one-size-fits-all" but you can tailor campaigns to specific demographics, such as age, location, interests, and gender, making them a lot more effective. This further puts small to medium businesses back into the game by giving them resources that were previously only accessible to larger corporations.

#### You Can Maximize Your Profits

Besides being cost-effective, digital marketing has also proven to achieve a high return on investment (ROI). Marketers can quite easily obtain a good picture of which activities generate the highest number of quality leads and at what expense, effectively using the available marketing budget. Simply put, we can stop spending money in areas that are not working and focus on what is most likely to drive enhanced ROI.

## **Build Brand Awareness**

By carefully managing digital marketing, your

If you need help planning your next move or revisiting your digital marketing strategy, *Infomedix International* can guide you every step of the way.

brand can become accessible to new customers as well as familiar and recognizable to existing ones. You can build customer loyalty and create a reputation for being easy to engage with both current and potential customers. By posting regularly, updating interesting content, answering questions and queries quickly, and responding to reviews and comments, positive or negative, you are actually improving brand loyalty and increasing brand awareness, showing customers that you care about what they say and think.

#### It Can Work As "Social Currency"

You can create engaging campaigns using content marketing tactics. This content (images, videos, tutorials, articles) can gain social currency, being passed from user to user and becoming viral. High-value content created with your target audience in mind can ensure that your brand is seen as being both reliable and approachable. Writing articles, press releases and blog posts, making videos, tutorials or organizing webinars that reflect and address their interests and pain points will encourage more engagement and highlight you as an expert within your industry.

#### Content Marketing and Hyper Personalization

Hyper personalization is becoming the norm and personalized messages make customers feel a lot more valued. Your digital tracking can equip you with the ability to create content that addresses customers' interests and preferences. The more you understand about your customers outside of their demographics, the more strategic you can be in creating content, language and imagery that converts them into long-term customers. You can position your product or service as a solution to your audience's specific needs. On-demand content consumption is on the rise and strategic marketers continue to hone on providing a customized experience to their customers. Where tracking behavior is one possibility conducting surveys can also capture detailed information to gather enough insights about your audience for an even more effective customized follow-up strategy.

### **It Improves Conversation Rates**

The best thing about implementing digital marketing? It can be immediate. if you have a website, if you organize a webinar or participate to a virtual



trade fair, your customers are only a few clicks away from making a purchase. People no longer need to phone, or physically travel to come to your store to make a conversion. Your website is your store. Your website should offer potential customers everything they need to know about your product and services. You can embed unique codes that allow you to track who, when and how people saw your ad or product, as well as what they did after this. Did they visit your website? And if so, which page did they view? Did they visit your virtual booth or followed your webinar? Did they download content? Place an order? With digital marketing you can monitor your conversion rate to see which leads turned into revenue.

Online shopping statistics show that companies with strong omnichannel engagement retain 89% of their customers. So, at a time like this, with limited face-to-face interaction, digital marketing channels are more important than ever and if we are long-term-minded marketers, we should wisely adapt our communication strategy to the current situation. Establishing that brand-customer trust is invaluable to the longevity of your business now and long beyond Covid-19, so why not take the time now to set yourself up for long-term success? Digital marketing is a great way to do just that!

If you need help planning your next move or revisiting your digital marketing strategy, *Infomedix International* can guide you every step of the way.

You can use our platform "Smart Virtual Trade" to hold your webinar/lecture/conference to distributors worldwide or in specific countries. You can exhibit your products worldwide, through our "Smart Medical Fair", a virtual trade exhibition open all year round, where you can set up your own booth and take a tour around the exhibit hall and conference hall. Through our virtual platforms you will have the opportunity to showcase your products, or share your event with registered attendees, to have a live chat with distributors and a Q&A interaction with them or schedule private meetings. We take care of all technical issues, marketing and promotion.

Send an email to **advertise@infomedix.it** to get more information from our team.

We have it all: expertise and a world database of distributors and manufacturers... we can connect your business worldwide!

## MARKET OUTLOOK

Author: Silvia Borriello silvia.borriello@infodent.com

> GDP per capita (EUR) 26,398

Malta's budget surplus reached 3.8% in 2017, higher than any other EU country and fourth highest in the world

Malta's main drawcard is the ease of doing business and the cost of operations on the island, generally 20 to 30% cheaper than the more established <u>Europ</u>ean centers, while a company's seed capital may last 3 to 5 times longer

It only gained independence from Britain in 1964

# A Tiny Island Moving Forward

Analysts and international institutions all agree that the country's investment appeal has been crucial in attracting capital from Europe, Asia and the US, positioning Malta as one of the world's most forward-looking nations. The country's internalization across all sectors, including health, is high on the agenda and will remain a key driver of future growth.

Strong economic growth and career prospects have attracted a large expat population, with foreign nationals accounting for 12% of the population

The archipelago is so small that could fit into London five times. The main island, Malta, is 27 km long and measures 14.5 km at its widest point, crossing Malta rarely takes longer than one hour.

WHO's global healthcare ranking marked Malta 5th in the world at the turn of the 21st century. The U.S. and the U.K. ranked 37th and 18th respectively, which illustrates the quality of the Maltese system. At 1,348 persons per km<sup>2</sup>, Malta has the highest population density in Europe, with population growth over 7% in the last decade, though it remains the smallest EU Member State by population

Malta is a tiny island located at the southern tip of Europe and on the doorstep of North Africa. With virtually no natural resources and a population little over 483,000 inhabitants, Malta has always had to be versatile in adapting to the changing realities of the global economy. Since its membership to the EU (2004) and Eurozone (2008), the island has significantly diversified its economy and the export of services across the EU member states is today a prime driver of economic growth. Despite its small size, Malta has turned into a hotbed for high-value manufacturing multinationals, global finance firms, pharma producers, IT and software developers, games studios and blockchain start-ups. Their growth and success helped Malta emerge as one of Europe's best performing economies, according to the International Monetary Fund. The country's decision to focus on sector-specific regulations, infrastructure, talent, and technologies is paying off and driving investment into Malta. Entrepreneurs and startups are attracted

to Malta due to the island's drive to nurture new industries by providing dedicated regulations. Among them is the production of medical cannabis, a new industry expected to add to GDP growth and create jobs, due to lack of regulations in other European countries. **The island has thus bolstered its status of a key business hub in the Euro-Mediterranean region by marrying a still relatively inexpensive and business-friendly environment close to major European and North African markets and a skilled workforce.** A steady GDP growth within the last six years,

hitting historic high of 7.4% in 2015 and 5% in 2016, and record-low unemployment (3.5%) have helped the island emerge as the most dynamic in the Eurozone and even if growth is projected to 4% in 2020, Maltese economy remains robust, still comfortably outperforming the Eurozone average.

The government has committed itself to making Malta the hub of choice for a wide range of sectors turning it from the best in Europe into the best in the world, emulating the success of global business locations such as Singapore and Dubai. Malta has a long history of providing publicly funded healthcare which dates back to 1372, when Malta had its first functioning hospital. **Nonetheless, today Malta has both a public healthcare system, where healthcare is free at the point of delivery, and a private sector complementing the provision of health services, especially in primary care.** The public healthcare system remains the key provider The government has committed itself to making Malta the hub of choice for a wide range of sectors turning it from the best in Europe into the best in the world, emulating the success of global business locations such as Singapore and Dubai.

and offers universal coverage to a comprehensive basket of services, ranging from pregnancy and childbirth through to surgery and rehabilitation (including hospitalization), that are free for every citizen who lives in Malta. A few services, such as elective dental care, optical services and some medicines are means-tested. There are no user charges or co-payments for public health services.

-Primary and ambulatory care is readily available through both the public and private sectors. However, the private sector accounts for about two-thirds of the workload in primary care and will be taking on an increasing role in hospital provision as well, through the new public-private partnership, expected to also attract international patients.

The nation has a strong tradition of general practitioner (GP) led primary care. In the public sector, patients are seen by the GP on duty

within the health centers and citizens are not required to register with a doctor in the Maltese system. There are 8 health centers, seven in the mainland and one on the island of Gozo, that provide comprehensive primary healthcare to non-paying patients, without distinction on income and wealth. GPs in the public sector function as gatekeepers, referring patients to specialists (both public and private), hospital outpatient facilities and accident and emergency departments. On the contrary, with privatized care, patients need to initially register with a GP in their area to be referred to specialist doctors within public healthcare. Private GPs, specialists and dentists can all refer patients either to the public or private outpatient hospital services and the emergency departments.

-Secondary and tertiary care is mainly provided by specialized public hospitals of varying sizes, with private hospitals playing a complementary

Medical Personnel (2015)	Per 100 000 Population
Physicians (inclusive of specialist trainees) 65% working in hospitals	391
General Practitioners (GPs)	83
Nurses	867
Midwives	47
Dentists	49

Source: Azzopardi-Muscat N, Buttigieg S, Calleja N, Merkur S (2017). Malta: Health system review. Health Systems in Transition, 2017; 19(1):1–137.

role. In the public health sector, specialized ambulatory care services are provided both in hospitals and in health centers. In the private sector, services are provided in a range of settings – from clinics operating adjacent to or embedded within local community pharmacies, through to fully fledged licensed private clinics and private hospitals. Nearly all pharmacies offer private GP services between specific times, with some even providing specialized private doctors.

Outpatient services at public general hospitals are available for practically all specialties. Patients are referred by their private GP, by a health center GP within the public primary care sector, or by another specialist from the private or public health sectors. Access to specialists in the private sector does not require GP referral; this generally allows for the quick setting of appointments and access to care.

The Mater Dei (972 beds), commissioned in 2007, is the primary hospital site, located in Msida. It is a general and teaching hospital, offering standard and specialist services, one

of the biggest medical sites in Europe. On the island of Gozo, public secondary care is provided at the Gozo General Hospital (143 beds). Other hospitals include, a new cancer hospital, Sir Anthony Mamo Oncology Centre (86 beds), built and opened in 2015 (using EU funding). Patients needing rehabilitative services refer to the Karin Grech Rehabilitation Hospital. There is one public psychiatric hospital, Mount Carmel Hospital (501 beds) and a dermatology hospital, at Sir Paul Boffa Hospital (48 beds), which has also been converted into a long-term care nursing facility. When it comes to the provision of highly specialized care for the treatment of rare diseases or specialized interventions, patients are sent overseas, through reciprocal agreements with European countries, as neither cost-effective nor feasible to conduct locally.

Population growth and heightened economic activity are putting ever-increasing pressure on Malta's healthcare system. **The country is entering into strategic partnerships and** 

Nearly all pharmacies offer private GP services between specific times, with some even providing specialized private doctors.

## alliances to expand both public and private health infrastructure, as well as attract researchers to conduct R&D projects and increase the level of sophistication of work being carried out from Malta.

The private system is market-driven and comprised of autonomous, independent health providers. In 1995, following an amendment to the laws regulating provision of private healthcare, private hospitals were opened, and private clinics were able to register as hospitals, provided they satisfied the regulations. A higher number of residents are in fact purchasing private healthcare insurance, which has led to an increase in the volume of private clinics and hospitals and many doctors working in the public system also have their own private practices. The island's focus on the internationalization of sectors such as education and health, has managed to attract foreign investment from private companies, such as the recent opening of a new private hospital in Gozo and a medical school seeking to attract students from across the world. There are 6 licensed private hospitals, 4 licensed private day care clinics and 9 licensed mental health facilities. All hospitals are located in Malta with the exception of one hospital on the island of Gozo; among them are St James Capua Hospital (79 beds), St James Hospital, Żabbar (6 beds) and St Thomas Hospital (33



beds), which opened its doors in September 2016. There are also several private clinics where patients pay for care out-of-pocket or through private insurance.

Both public and private sectors have the same highly regarded level of medical technology available at their disposal. There is no capping on investment in complex technology. Medical equipment is mostly hospital-based, but there is an increasing availability of medical imaging devices such as X-ray machines at specific primary healthcare centers on a 24-hour basis and in private clinics. When compared to the OECD average, Malta has a low number of both MRI and CT exams per 1000 population, but the island emerges as having a high ratio of PET scanners per capita (one in the public and the other in the private sector).

In the private sector providers are paid a feefor-service, either directly by the patient or indirectly via voluntary health insurance (VHI). The only time that private providers receive public funds is when certain procedures – typically surgical procedures with a waiting list in the public sector – are outsourced to the private sector; this has only become a notable payment mechanism since 2014.

The private sector already carries out a significant amount of activity in the ambulatory and primary care sectors and its role in the hospital sector is also set to increase following a public-private partnership contract for 3 existing pubic hospitals agreed in 2016 between an international profit-making healthcare, and the Government of Malta. This agreement effectively transfers responsibility for the management of Gozo public General Hospital, St Luke's Hospital and Karin Grech Hospital to

The relatively high proportion of out-of-pocket payments, amounting to 29% of total health expenditure (compared to EU average of 15%), remain the main source of funds for purchasing medicines and paying private GPs and are also still widely used for private ambulatory specialist consultations

the private sector organization for a period of 30 years; although the government will continue to remain responsible for the funding of the care provided and those publicly funded healthcare services will remain free of charge at the point of use to all those entitled. Thus, the historical role of the Ministry for Health being responsible for both regulation and provision of health services in what has hitherto been mostly an integrated public system of health services organization, financing and delivery, is substantially moving towards greater private sector involvement where the Ministry's role is shifting from being a direct provider of services to ensuring standards of care through its regulatory function.

The public portion of Maltese healthcare is funded through general taxation. All those economically active that earn more than the

minimum threshold pay income tax. Rates of contribution for income taxation are set by Parliament and are progressive, rising according to income (starting from 15% up to 35%) and depending on whether the worker is single, married or a parent. National Insurance (Social Security Contribution) is shared between the employer and the employee in a 1:1 ratio, each contributing 10%, with selfemployed persons paying a higher rate. It is only paid by those who are active in the labor market while retirees and the unemployed do not pay National Insurance. The Department of Inland Revenue is asked with collecting these two contributions, as well as all other sources of government revenue, all pouring directly into the general government revenue.

Total health expenditure as a percentage of GDP is slightly higher than the EU average, amounting to around 9.75%, although both per capita spending and public expenditure

	Malta	Italy	Spain	UK	Germany
Total Health expenditure per capita Int. USD	2,304	2,700	2,354	4,356	4,592
Total health expenditure as % of GDP	9.6	9.0	9.2	9.9	11.2
General government expenditure on health as % of general government expenditure	14.2	13.4	14.9	18.5	21.4

Source: World Health Statistics 2018, WHO

MARKET OUTLOO

as a percentage of total health expenditure remain among the lowest in Western Europe. In recent years, the increase in private spending has outpaced public health expenditure growth. Public expenditure comprises almost 69% of total health expenditure while out-of-pocket payments and VHI make up most of the remaining **spending.** The relatively high proportion of out-of-pocket payments, amounting to 29% of total health expenditure (compared to EU average of 15%), remain the main source of funds for purchasing medicines and paying private GPs and are also still widely used for private ambulatory specialist consultations; thus, accounting for a significant part of the total payment for private healthcare (over 80%). Two reasons may explain this trend. Persons with a certain level of education and income have traditionally been accustomed to seeking primary and ambulatory services in the private sector to receive more personal attention, to have better continuity of care by seeing the same provider, to set appointments at convenient times. These services remain relatively affordable for a considerable segment of the population. The second reason is to bypass rather long waiting lists for specialist ambulatory care and elective diagnostic and therapeutic interventions in the public sector.

The high rate of out-of-pocket expenditure presents a stark contrast to the low level of unmet need for care, indicating that those in need can easily access healthcare services in Malta. This is thought to be the result of a high volume of relatively low-cost transactions taking place in the primary care and ambulatory care sectors, as well as expenditure on medicines not covered by the public healthcare system. Only 1.1% of the population reports feeling unable to access needed medical or dental care because either too expensive, too far to travel or due to waiting lists; even despite elective dental services are not being covered for all persons under the public healthcare system. Whilst there have not been any health sector specific measures to strengthen financial protection, general government measures to protect low-income persons include the recent decision not to tax pensioners earning up to €13,000 annually.

Maltese people spend on average close to 90% of their lifespan in good health, longer than in any other EU country and life expectancy

	Malta	Italy	Spain	Germany	UK
Life expectancy at birth, total (2016)	81.5	82.8	83.1	81.0	81.4
Mortality due to noncommunicable diseases, Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70 (%), 2016	10.8	9.5	9.9	12.1	10.9
Maternal mortality ratio (per 100 000 live births, 2015)	9	4	5	6	9
Under-five mortality rate (per 1000 live births), 2016	6.8	3.3	3.3	3.8	4.3

Source: World Health Statistics 2018, WHO

Maltese people spend on average close to 90% of their lifespan in good health, longer than in any other EU country and life expectancy is higher than the EU average.

is higher than the EU average. Increases in longevity are largely due to declining death rates from all causes: Malta has the lowest rates of preventable mortality in the EU. Obesity is the principal public health problem, with 25% of the adult population and 27% of children (aged 11-15 years) being obese: the highest rate in the EU. Diabetes and HIV also have a relatively high prevalence compared to other European countries. Frailty associated with ageing remains a major challenge facing the whole population, as does the old age dependency ratio, which rose from 19.3% (2005) to 27.6% (2015). Projections depict a rapidly ageing population, with the ratio estimated to reach 32.7% in 2020, exceeding the EU average of 31.8. This ratio is expected to climb steadily and reach 40.5% by 2030, when the EU average is projected to be 39.0%. The health sector in Malta is one of the largest

employers. In 2015, 30.3% of total Ministry for Health recurrent expenditure was allocated for salaries. Education and training are being further strengthened to retain more specialist skills in Malta. **Most healthcare workers are trained at the University of Malta**  **Faculty of Health Sciences and Faculty** of Medicine and Surgery; the school is publicly funded. There are several regulatory councils responsible for the registration of qualified practitioners. These include the Medical Council (doctors, dentists), the Pharmacy Council, the Council for Nurses and Midwives and the Council for Professions Complementary to Medicine. These are all regulated under the Health Care Professions Act. In addition, with regards to doctors, there is also a Specialist Accreditation Committee which certifies doctors who have completed their specialist training within the different respective fields. As an EU Member State, Malta is now obliged to implement Continuous Professional Development as per Directive 2013/55/EU but there are no revalidation mechanisms in place yet.

Among main Sources:

- Extracts from: Azzopardi-Muscat N, Buttigieg S, Calleja N, Merkur S (2017). Malta: Health system review. Health Systems in Transition, 2017; 19(1):1–137. -World Health Statistics 2018, WHO-World Health Organization -Extracts from: MaltaProfile, powered by CountryProfiler, https://maltaprofile.info/article/economy



# MEDICAL FAIR ASIA 2020 goes Digital with Online Convenience for Medical Sourcing Needs

Ten-day digital experience for a vibrant marketspace to conduct business 24/7

Singapore, 21 September 2020 – Messe Düsseldorf Asia announced today that the 13th edition of **MEDICAL FAIR ASIA** will take place as a digital edition from 9-18 December. **MEDICAL FAIR ASIA Digital Edition** will offer a purpose-built online B2B experience for manufacturers, suppliers, distributors and trade buyers from the medical and health-care sector to conduct business on a secure sourcing platform.

The well-established medical and healthcare exhibition first started in 1997 has since grown to be one of the most recognised regional events for sourcing hospital, diagnostic, pharmaceutical, medical and rehabilitation equipment and supplies. This shift to a digital event is in response to the dynamic situation of the COVID-19 pandemic, where travel and physical restrictions are still in effect globally.

Moving from in-person interactions at a physical trade event to making virtual connections anywhere in the world, MEDICAL FAIR ASIA Digital Edition aims to deliver the onsite benefits of a trade fair but with all the convenience of an online experience.

Mr Gernot Ringling, Managing Director, Messe Düsseldorf Asia, said: "It is a new reality in these trying economic times and we continue to adjust how we do business in the face of new customer habits and digital trends. Taking care of our customers is a top priority, and in the absence of a physical exhibition this year, staying true to the MEDICAL FAIR ASIA brand, both exhibitors and visitors can be assured that the digital edition will be an effective platform connecting global sellers and quality buyers."

"On the back of the COVID-19 pandemic, there are clear signals that indicate an acceleration of omni-channel selling, tech-enabled selling and More than 300 international companies are expected to participate at the digital edition. In addition, over 30 presentation and conference sessions will run concurrently – live and on-demand, with speakers from the Start-Up Podium and Wearable Technologies ASIA Conference.

e-commerce. We believe the digital edition is well timed in serving the current needs of the medical industry, as well as medium term needs as potential demand for elective and delayed essential procedures see resurgence," added Mr Ringling.

More than 300 international companies are expected to participate at the digital edition. In addition, over 30 presentation and conference sessions will run concurrently – live and on-demand, with speakers from the



Start-Up Podium and Wearable Technologies ASIA Conference.

Ms Daphne Yeo, Senior Project Manager, MEDICAL FAIR ASIA, Messe Düsseldorf Asia said: "We are excited to announce this digital edition and believe it will be a fresh experience for exhibitors and visitors to do business and remain connected via this new format. The live-streaming and video call features where exhibitors and visitors can interact face-to-face is as personal an encounter as is possible and coupled with the multi-language capabilities, we are confident it will be an effective business platform."

#### Strategic sourcing online

MEDICAL FAIR ASIA Digital Edition will offer trade visitors focused and targeted sourcing opportunities – from medical products and devices, rehabilitative equipment and new technology, telemedicine, to pandemic management solutions. The digital exhibition will allow companies to present their product offerings and services online, with live-streaming of product demonstrations, real-time interaction with buyers via one-to-one video meets and instant chats. On a user-friendly dashboard, both exhibitors and visitors can view suitable matches and personalised meeting suggestions based on their interests and profile through AI driven smart business matching. Trade visitors will also have access to a comprehensive technical presentation showcase throughout the exhibition. Attendees to the concurrent line-up of activities will experience the full benefits of a live conference including presentations and Q&A sessions. Content will also be available on-demand for delegates based in different time zones.

Mr Darren Liao, Product Manager of Milli-Q Lab water Division, Merck Pte Ltd, said, "Joining the digital edition this year was a natural decision particularly with the challenging travel restrictions. We look forward to join the exhibition, so we can share our solutions to clinical, pharmaceutical and medical device companies and at the same time, contribute to the COVID diagnostic and related research." Commenting on the positive feedback from exhibitors on the move to a digital edition, Mr Ringling said that after an extended period of isolation, businesses are likely to have an appetite to get back on track as economic recovery begins and remains hopeful in playing a part to stimulate activity and investment in the B2B event space with the digital edition.

"The visceral enthusiasm and our human need to interact and for personal encounters at exhibitions are irreplaceable and will result in recovery in time. We are optimistic and look forward to staging the physical exhibition at the next edition of the MEDICAL FAIR series which will take place next year in Bangkok," he said.

For more information on MEDICAL FAIR ASIA Digital Edition, please visit **www.medicalfair-asia.com** 

#### About Messe Düsseldorf Asia

Messe Düsseldorf Asia is a subsidiary of Messe Düsseldorf in Germany, one of the world's leading trade fair organisers responsible for organising more than 20 global No. 1 exhibitions held in Düsseldorf, Germany; across various sectors such medical and healthcare, workplace safety, security and health, packaging, printing, plastics, rubber, wire and tube, and wine and spirits, With extensive expertise in organising trade fairs in Southeast Asia, Messe Düsseldorf Asia has developed a portfolio of well-established trade fairs in the region since 1995. For more information, visit http://mda.messe-dusseldorf.com/

Media contacts: Gena See | Zarina Ann Muhammad Tel: (+65) 9227 8201 | 9873 3674 Email: gena@mda.com.sg | zarina@mda.com.sg

## The Distributors Wall

Looking for distributors? Interested to deal new products and improve your business? These are the pages for you: announcements of companies and distributors searching for each other. Your next partner is already waiting for you.

Write to **classified@infomedix.it** to be in the next issue. Always free for distributors!





Looking for products

Infomedix International Advertisers

All classifieds we receive will be verified. Any fraud or incorrect behavior will be reported to the competent international authorities.

As a consulting agency we can only guarantee the reliability of classifieds carrying our world logo, since they are our customers and we are aware of their proven seriousness.

Looking for distributors for Graduated Compression medical stockings and Anti-Embolism stockings. Looking for distributors for Shapewear and modeling underwear. All products Made in Italy, certified CE, ISO 13485 and Oekotex. Calze G.T. S.r.I. Via Walter Tobagi 14/21 46040 Casaloldo MN, Italy Contact details: Mr. Gorgaini Cristiano T. +39-0376-780686 cristiano@relaxsan.it

www.gtcalze.com



HIWIN HEALTHCARE is looking for distributors worldwide. Robotic endoscope holder H100 is used in minimal invasive surgery to provide

steady endoscopic views to enhance the surgical efficiency. Robotic gait training system P100 provides intensive weight-bearing walking training for rehabilitation at the early intervention. www.hiwin.tw

## info@hiwinhealthcare.com

T. +886 4 23581399 ext.5904



BTC is looking for distributors to expand its network. Contact us. BTC Srl Via Altobelli Bonetti 8/A 40026 Imola (BO) Italy www.btc-med.it btcmed@btc-med.it

Corporation Takatori is а manufacturer of medical and industrial equipment in Japan. Based on our long experience as a manufacturer of medical and industrial equipment, we provide total support for ODM/OEM and import of medical, healthcare and rehabilitation equipment, as well as certification, sales and technical support in Japan. T. +81744408302 hiroki.takanaka@takatori-g.co.jp www.takatori-g.co.jp/english/

Looking for distributors

NILTORG LLC is a Russia based company engaged into import and distribution of Medical Devices, Implants, Speciality Pharma Products. We have our sales offices in Switzerland, Italy, Russia, Belarus, Kazakhstan, Ukraine. Niltorg LLC - Russia info@niltorg.com

Spektra Medical Company's core business is ultrasound sales and service. We have been working on ultrasound sales for more than 17 years. Spektra Medikal Sistemler Turkey Ertugrul@spektramedikal.com

We are Karaz Medical Est. located in Middle East in Jordan. We are looking for the new ideas and new items for hospitals. Karaz Medical Est. - Jordan - mosab@karazmed.com



With over 25 years of Experience in the Surgical service industry, IEC is offering training and consulting for technical companies that want

Miscellaneous

to start their own in-house Endoscope repair program or an existing facility expansion. We customize single day training events as well as full staff training over several weeks. Please contact us for further information.

www.IECendoscopy.com info@endoscopy.md



Biegler Medizinelektronik, based in Austria/Europe, has to its credit more than 40 years of research, development and production in the

service of medicine. Biegler's expertise is in the development and manufacture of ready-forsale medical products. The company operates distribution in over 70 different countries with distribution partners. www.biegler.com office@biegler.com

• Caribbean Medical is the largest supplier of medical products in Guyana and among the largest in the Caribbean. We are looking for strategic partners in the Caribbean Region to expand our scope in the region.

**Caribbean Medical Supplies Inc.** The Caribbean caribdiag@yahoo.com

• AKACIA AG is a Central Europe distribution, sales and marketing agency representing WW producers in CEE. Our HQ is located in Switzerland. Our distribution regulatory, salesforce and marketing affiliates are in Czech Republic, Slovakia and Hungary. Please, see more in brief description at

www.akacia.eu AKACIA - Czech Republic demuth@akacia.eu bizdev@akacia.eu



Distribution Opportunity: Carefix<sup>®</sup> Barrier Mask, perfect protection for COVID-19

**Care***fix*<sup>®</sup> Barrier is a passive support mask, preventing hand-to-face contamination, designed for civilian use for personal protection due to social distancing.

- Easy to apply over homemade face covers.
- Soft, flexible and comfortable breathable material.
- Washable and reusable up to 25 times.
- 93% blockage of airborne viruses.

## www.jdhmedical.com medical@jdhintl.com

• Meditec SAS in an Argentinian medical distributor of ultrasounds, surgical lights and infusion pump. We are looking for manufacturers from all over the world interested in meeting a reliable distributor for Argentina.

Contact Mr Ezequiel Serio for more information: ezequiel.meditec@gmail.com Argentina Meditec SAS

.....

• We are looking for a long-term cooperation. Currently, we are distributors for BK Medical, COOK Urology, AngioDynamics, Insightec.

Medfocus Co., Ltd. Thailand jason@medfocus.co.th www.medfocus.co.th



## **UNIQUE IN THE WORLD!**

Protective Face Masks that KILL viruses:

- Swiss Medical Device, CE & FDA
- >99% anti-viral, >99% anti-bacterial, >99% filtration
- ultra-thin, water-resistant and breathable

The Swiss company SANKOM is looking for partners and distributors worldwide for its unique range of functional products. **info@avevitta.com www.avevitta.com** whatsapp: +41 79 790 75 77

• I'm Warintorn, Great Eastern Drug Co., Ltd (GED) Business Development Manager in Thailand. GED is an affiliate of UNILAB (United Laboratories) in Philippines.

#### Great Eastern Drug Co. Ltd. Thailand warintorn@unilab.co.th

• Mandiri Jaya Medika is a medical equipment distributor looking for the following products: defibrillator, blood and infusion warmer and anaesthesia machine.

## Mandiri Jaya Medika

Indonesia P. +62 21 72800203 **ridwan saleh@mandirijayamedika.com** 

• Viamed Pharmaceutical Pvt. Ltd. Co. from Ethiopia is a pharmaceutical products distribution company and one of the subsidiary companies of Viamed Group. Our distribution channel is of the best standard practice which we have deployed structures and plans in all our distribution processes in order to ensure that we remain abreast of all technological developments in the industry; this will ensure that we are able to give our customers our very best when it comes to serving them.

## Viamed Oharmaceuticals Pvt. Ltd. Co. Ethiopia

mentesnotzewdie@viamedplc.com

• We are interested in representing overseas companies in India mainly for the surgical supplements/nutraceuticals, cosmetic, physiotherapy and rehab and fitness products, BP monitor/sugar test/rapid test kits, medical products.

**Reed Business Solutions Private Ltd** India

## ragu@reedbusinesssolutions.co.in

• We are a company established in 1992, engaged in marketing of various medical diagnostic & therapeutic devices and their consumables.

## B&C Technologies - India binoy@bnctechnologies.com www.bnctechnologies.com

• X-way is a company founded in 2003 by medical imaging professionals and located at The Hague, The Netherlands.

We are looking to distribute medical imaging related products, x-ray, ultrasound, MRI & CT, nuclear medicine and other medical devices. **Xway B.V.** - The Netherlands

g.vanderloo@xway.nl

• We are the authorised importers and distributors of Elle TENS Machine for labour pain control in India.

Kindly contact us for any requirements concerning Elle TENS (new machine), spares and consumables and electrode pads.

Alpha Biomedix India

## alphabiomedix@gmail.com

• Fore Care Medical is a medical distributor of laboratory equipment from Mexico.

We distribute all kinds of point-of-care rapid tests and we are looking for diabetes, malnutrition, hypertension and drug abuse rapid tests. If you are interested in our services, please contact Mr Mario Tello: dcomercial@forecaremedical.com Fore Care Medical - Mexico • We are a dedicated, passionate and ethical healthcare device distributor with after-sales service. We are looking for partners with quality conscious manufacturers to represent them in Middle East region and to help improving healthcare at a sustainable supply chain delivery.

Core Channel Distribution - UAE SäubernExports@gmail.com

• We are looking to distribute pharmaceuticals, medical device & equipment, consumer goods, food and beverages, food/ dietary supplements. We are always looking forward to new opportunities and new partners. We are currently importing mainly from Korea, Thailand, Malavsia, India, Australia.

NI TUN OO TRADING CO., LTD. Myanmar nto.trading@gmail.com

• We are one of the upcoming medical distributors based at Kochi, Kerala. We have sales network in South India too and we are one of the suppliers for Govt. Hospitals. We are looking for medical disposables like respiratory care products, suction catheters, urine bags, nitrile gloves, IV Set etc... under OEM basis on our brand name.

Jakesmed Healthcare - India jakesmedhealthcare@yahoo.co.in

• We are one of the main importers and distributors of medical equipment in Iran and we already have a significant share of market and about 28 distributors around Iran. We are going to expand our business and we are looking forward to cooperating with estimated companies around the world. Jahan Tajhiz Hakim - Iran commercial1@jahan-tajhiz.com

 We stock new Olympus Endoscopy parts, supplies all OEM and new ones.
 Global Medical Parts On Line, LLC
 USA - info@gmpol.com • We have been distributors of the Finnish Planmeca company, as well as of digital radiology and dental tomography products for more than 12 years. We are looking to distribute x-ray equipment to each manufacturer of medical radiology.

Pro Imagen Bolivia jcorrea@pro-imagen.com.bo

 We are a company under exclusive Angolan law that operates in the area of distribution, marketing and representation of pharmaceutical products.

It is our priority to contribute to the provision of better healthcare in Angola, extreme rigor in the quality of our products, in partnerships with manufacturers and personalized assistance customers. Contact person: Susana Carmelino

#### Biocure

Angola

susana.carmelino@biocureangola.com

• Avazzia BEST advanced microcurrent technology is incorporated into the easy-to-use, four-mode device for the temporary relief of pain associated with sore and aching muscles in the shoulder, waist, back, back of the neck, upper extremities (arm), and lower extremities (leg) due to strain from exercise or normal household work activities.

Advanced Microcurrent Solutions Sdn Bhd Malaysia

#### reaswaran@avazzia.com

Industry/field of activity: Life Science & Diagnostics
 Multi-Pronged Strategy for Building Values:
 Clinical diagnostics, Biotech & pharma, Laboratory & research
 Headquarters: Tehran, Iran
 Founded: 1998
 Type: Company - Private/trading
 FAZA Pajooh Co.
 Iran

Com@fazabiotech.com

Since 1998, OKKAR THIRI is the exclusive distributor in Myanmar for leading international medical and laboratory equipment manufacturers. A team of 150 internationally trained specialists provide continuous market intelligence to hospitals, clinics, laboratories and research institutes who require equipment according to their individual needs.

OKKAR THIRI Co., Ltd Myanmar sales@okkarthiri.com

 ELEVET Technologies is a veterinary marketing and distribution company of high-quality medical equipment from around the world.

We are looking for leading manufacturers of new, innovative medical devices to bring to the veterinary industry.

Please contact us at info@ele-vet.com. We look forward to working with you!

#### Elevet Technologies USA chris.scott@ele-vet.com

 We are looking to distribute Q Prompt Whole Blood QC for POCT glucose testing, haematocrit, haemoglobin A1c with ISO 13485 certification.
 Visit www.wemedlab.com or send email to us at wemedlab@gmail.com
 WE Med Lab Center Co., Ltd. Thailand

#### **U.S. PATENT**

Haemorrhoid Pain Relieving Apparatus Non-invasive, Ultra-fast solution without touching "that area". Innovation and effectiveness. FDA: 510(K) EXEMPT Med Device Class 1. Great Opportunity for the very best in the world: 2 BILLION potential consumers! Contact: Mr. Sergio A. Pleszowski **renabis8@gmail.com** 





## Welcome to the Smart Medical Fair.

Visit www.smartmedicalfair.com to enjoy our virtual trade fair open all year round.

## Are you a distributor?

Visit the virtual exhibition organized by categories.

- go for an e-walk
- read about the products
- check which is the product most attractive for you
- register your email
- contact the manufacturers directly

## Are you a manufacturer?

Would you like to exhibit your product or your company? Drop an email to **advertise@infodent.com**.

All the companies you see are waiting for you to start new partnerships.



Infodent Infomedix International Publishing & Consulting House

# Calendar

## NOVEMBER

16-19 11 2020

2020

virtual.MEDICA and

virtual.COMPAMED



Here our trade shows selection. Discover all worldwide exhibitions at www.infomedix.it/calendars/tradeshow

## 01-03 11 2020 ARM 2020 - VIRTUAL EDITION - Annual Radiology Meeting in UAE

Dubai - United Arab Emirates \*\*\* ARM 2020 ONLINE

## Düsseldorf - Germany

Organised by Messe Duesseldorf GmbH Messeplatz, Stockumer Kirchstrasse 61 D-40474 Duesseldorf - Germany Postal Address: PO Box: 10 10 06 D-40001 Duesseldorf - Germany It has been decided to change the platform from an in-person (physical) event at DWTC to a fully virtual event. The event dates will remain 1 – 3 November 2020. Organized by: Index Conferences & Exhibitions General information: Andrea Barretto info@radiologyuae.com (Operations Manager) Phone: +971 4 520 8907 Mobile: +971 50 476 2417

## www.radiologyuae.com

Phone: +49 211 45 60 01 Infophone: +49 211 45 60 900 Email: info@messe-duesseldorf.de Website: www.messe-duesseldorf.de Venue: Duesseldorf Trade Fair Centre Messeplatz - 40474 Duesseldorf - Germany

## www.medica-tradefair.com

## **NOVEMBER/DECEMBER**



29/11-05/12 2020 RSNA 2020 - VIRTUAL EDITION - The 106th Scientific Assembly and Annual Meeting Radiological Society of North America (RSNA) 820 Jorie Blvd Oak Brook, IL 60523-2251 - USA Phone: +1 630 571 2670 Toll Free (U.S. and Canada only): 1 800 381 6660 - Fax: +1 630 571 7837 Website: www.rsna.org

www.rsna.org/Annual-Meeting

USA

Given the current situation worldwide, we warmly invite you to check trade shows dates, venues and booths location listed in this magazine

## 09-18 12 2020

## Medical Fair Asia 2020 Digital Edition

## Singapore

## JUNE



## The 13th International Exhibition on Hospital, Diagnostic, Pharmaceutical, Medical and Rehabilitation Equipment and Supplies

Organized by: Messe Dueseldorf Asia Pte. Ltd. 3 HabourFront Place #09-02 HabourFront Tower Two Singapore 099254 Phone: +65 6332 9620 Fax: +65 6332 9655 E-Mail: medicalfair-asia@mda.com.sg Website: www.medicalfair-asia.com

## www.medicalfair-asia.com

## 21-24 06 2021

## Arab Health 2021

## Dubai - United Arab Emirates

Informa Life Sciences Gubelstrasse 11, CH-6300, Zug, Switzerland Phone: +971 4 3365161 Email: info@lifesciences-exhibitions.com Website: www.informalifesciences.com

## Venue: Dubai International Convention & Exhibition Centre Dubai United Arab Emirates

www.arabhealthonline.com

**HIWIN**®

Health Care

## Robotic Endoscope Holder MTG-H100

# Stable image is under your control.

## Steady Image

- Intuitive Control
- Minimized Wound Size
- Safe & Sterile work

## HIWIN TECHNOLOGIES CORP.

No. 13, 8th Jinke Rd., Precision Machinery Park, Taichung 40852, Taiwan TEL: +886 4 2358 1399 | info@hiwinhealthcare.com | www.hiwin.tw Infomedix International | 3 2020

# Non profit



## Sub-Saharan Africa: 426 Children Per Day at Risk of Death From Hunger Following Impact of COVID-19

1st September, 2020 - An estimated 67,000 children are at risk of dying from extreme hunger across Sub-Saharan Africa before the end of the year, Save the Children warned today, as already dire circumstances are exacerbated by the impact of the coronavirus pandemic. New analysis from Save the Children on data taken from the Lancet indicates that an average of 426 children per day are at risk of death unless urgent action is taken.

Food insecurity has been compounded by a series of shocks this year in parts of the continent – from floods, swarms of locusts and soaring food prices to displacements. The impact of COVID-19 has added to these factors, crippling economies and destroying livelihoods, rendering food and health services unaffordable or unavailable – earlier this year it was estimated COVID-19 would drive up poverty in sub-Sahara Africa by 23 percent.

By 2030, it is predicted that an estimated 433 million people will be undernourished across Africa.

Ubah, a mother of six in Puntland, Somalia told Save the Children staff: "Life was tough for me and my family, but I worked hard and we survived. The coronavirus has made my situation even worse. Now, jobs are few and far between... Before receiving support, we were only eating once a day and that was just in the morning. I have seen my children go to sleep hungry. The worst feeling for a mother is when you fail to feed your children".

With food increasingly scarce, young children are growing risk of severe malnutrition. Prior to the pandemic, more than 26 million children across East and Southern Africa were stunted, and 2.6 million children suffered from severe acute malnutrition - the deadliest form of undernutrition. In West and Central Africa, 15.4 million children under five are expected to suffer from severe acute malnutrition this year; a twenty percent increase from earlier estimates. "We're already seeing the devastating impacts of this virus on some of the world's hungriest people. Coronavirus measures have decimated livelihoods and crop production, jobs have dried up, and food is becoming increasingly expensive - if it's available at all. Simply put, many parents

*can no longer put food on the table for their children"*, said Ian Vale, Regional Director for Save the Children in East and Southern Africa.

"We're already seeing more children arriving at our clinics everyday suffering from malnutrition, and we know that we're only at the beginning. If we wait until clinics are full, it will be too late. The food crisis could kill tens of thousands of children unless they are reached with humanitarian assistance immediately. We cannot afford to wait.", continued Vale.

Even before the pandemic, Sub-Saharan Africa was one of the most food insecure regions globally; it is expected to be home to more than half of the world's chronically hungry if current trends continue.

Save the Children is responding to the food crisis by providing food or cash to vulnerable families, ensuring access to safe and clean water and by continuing its health and nutrition services in a Coronavirus-safe way. With resources running dangerously low, Save the Children is urgently calling for funding to support some of the most deprived children in the world. www.savethechildren.net To support Save the Children's global CO-VID-19 emergency appeal and for enquiries, kindly reach out to: Saddam Hussien Carab, saddam.carab@savethechildren.org /+252 63 4480883

Claire Nicholl, C.Nicoll@savethechildren.org.uk During out of office hours: media@savethechildren.org.uk +44 7831 650 409

Source: taken from Save The Children website, /www.savethechildren.net/news/sub-saharan-africa-426children-day-risk-death-hunger-following-impact-covid-19



# Dubai Derma

## Skin Health is our Concern

Y E A R S L

Dubai World Dermatology and Laser Conference & Exhibition



2 - 4 March 2021 DWTC, Dubai - UAE

To Avail the Pre-Registration Discount - **Register Now!** For conference updates visit

www.dubaiderma.com

DubaiDerma (100000 #dubaiderma



Strategic Partner





Supported by





## WHEN IT COMES TO **PROTECTION**, **QUALITY** MAKES THE DIFFERENCE

The Covid-19 pandemic has been a prolonged and far reaching one, affecting millions across the globe. It continues to be a serious health crisis with healthcare workers worldwide facing a challenging and difficult environment in the battle against the disease.

# STAY PROTECTED with OUALITY MEDICA GLOVES

For healthcare workers and front liners who work tirelessly to prevent and contain the spread of the disease, strict infection control protocol and the use of Quality medical gloves are critical in the fight against Covid-19. As part of personal protective equipment, Quality medical gloves are your first line of defense against infection.

THANK YOU FRONT LINERS for your dedication and bravery in supporting our communities. We are all in this together.

## Malaysia: World's No 1 For Quality Medical Gloves



Excellent Barrier Protection



Advancements in Material and Design



Exported to 195 Countries



Conform to International Standards such as ASTM, ISO and EN



WWW.**mrepc.**COM Malaysia • USA • Europe • China • India

#### MALAYSIAN RUBBER COUNCIL

(Formerly known as Malaysian Rubber Export Promotion Council) Unit No 36-02, Level 36, Q Sentral, 2A Jalan Stesen Sentral 2 KL Sentral, 50470 Kuala Lumpur, Malaysia

tel: (603) 2782 2100 fax: (603) 2782 2199 e-mail: mpd@mrepc.com

