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DISCOVER MORE ON P. 17

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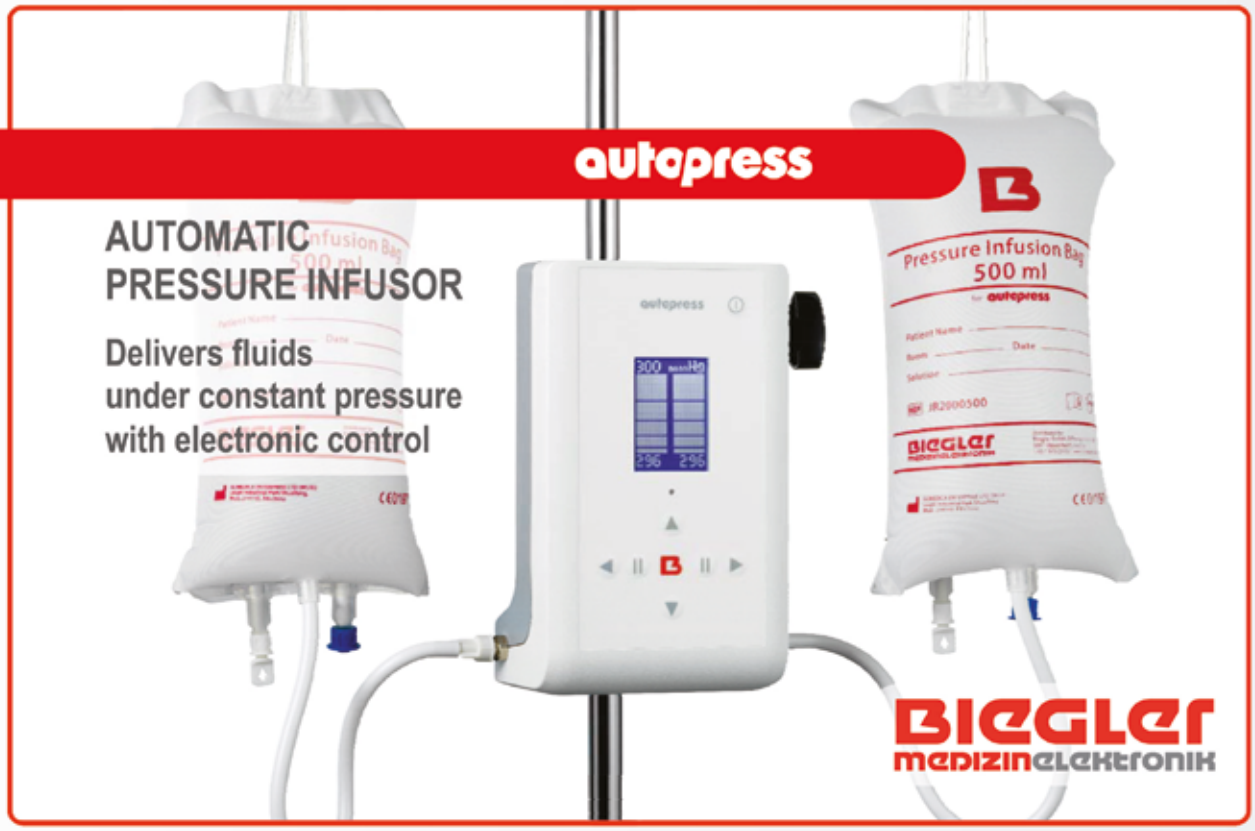

Automatic Pressure Infusor

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

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

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Medical Fair Asia 2020
December 9 - 11, 2020
Marina Bay Sands, Singapore
www.medicalfair-asia.com

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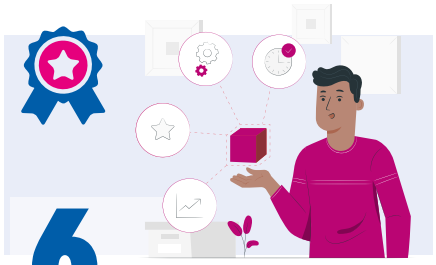

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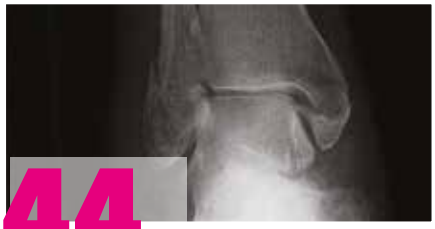

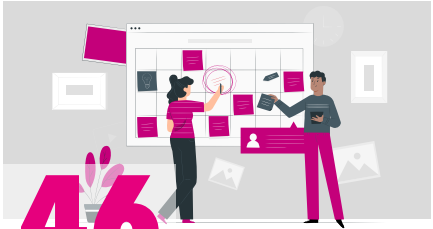

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HELPFUL TIPS

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

United at a Distance

And in this context, we feel even stronger in our role, our responsibility and the need to be alongside our customers, to help then keep their business running, with new ideas and proposals, during this challenging time.

As the COVID-19 pandemic unfolds and develops into a tragic and disruptive force in Italy and the rest of the world, I am writing to you from my home, where I am following official guidelines to help contain the spread of the virus. Monitoring the situation carefully, I sincerely hope that you and your family are healthy and safe, fully trusting everyone's commitment to be prudent, responsible and united, because only if we fight together we will be able to defeat this global pandemic, the most tragic of the last 100 years. We are experiencing a very delicate moment in which we are all called to change our daily habits and behaviors, adjusting to a new reality. And in this context, we feel even stronger in our role, our responsibility and the need to be alongside our customers, to help then keep their business running, with new ideas and proposals, during this challenging time. Actively working remotely, all together, is what we have in mind.

Months of preparation and tens of thousands of dollars were lost as the Coronavirus panic led to the last-minute cancellation or postponement of most medical trade fairs around world. But this is a transitory event, and not the financial crisis of 2008 in which most business-to-business companies decided to play it safe and cut their marketing budgets. Now instead, it is time to adopt to a new strategy of shifting the funds allocated to participation in exhibitions to double the investment in online marketing. If you think about it, such a move makes perfect sense. Although it's frustrating to back away from face-to-face interactions, you can offset some of that impact by accelerating your online presence. Research conducted in 2018 by the Center for Exhibition Industry Research (USA) indicated that B2B marketers who participate in industry events allocated nearly 40% of their budgets to exhibitions and industry shows, almost five times more than the 8% spent on online marketing. Even if only a small fraction of the events' budget is shifted to online marketing, it would translate into a massive growth in web marketing and leads.

While it might be tempting to hold back the budget amid concerns about an impending recession, halting spending now could have an even more crippling impact on your future opportunities. In a crisis like this one, silence is the worst possible response. The conversation will continue with or without you. Even if your customers aren't buying right now, you can stay at the top of their minds by considering their needs and providing value through challenging times. Scientific and technical content on your products, for example, will always be in demand. No matter who your customers are, they will expect to hear a proactive response from you, basic information, like how you are handling the crisis, what they can expect from you in the weeks to come or, if you're open for business, let them know! Continuing to market your business through the Coronavirus can be as simple as letting customers in need know that you're here, and you can provide your product or service like

usual. At some point, the Coronavirus will pass. When that time comes, do you want to be starting from scratch with your marketing again? Or building on the efforts you've already put in for the past few months? We know that most business owners are long-term-minded, so don't let the Coronavirus stop you from that forward-thinking mindset.

We, in Infomedix International, are fully operating, continuing our mission of connecting manufacturers with importers worldwide, for now digitally. Doing all we can to keep your projects on schedule, keeping you company with our on-line magazines and their content on healthcare markets insights, trade novelties, hot topics and product highlights. Check our medical calendar, in our website, to keep updated with the new dates or cancellations of trade shows around the world. If all trade shows have been cancelled, we have a "Virtual Trade Show" with international companies exhibiting their products and dealers called to visit. In the middle of this unprecedented situation we have found newer opportunities of using remote technology to its fullest for the benefit of all professionals. We are now all looking forward and preparing to return to "business as usual"!
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COVID-19 Equipment offered by JD Honigberg International, Inc.

Portable Suction clears airway of obstructions prior to hooking-up patients to ventilators.
IV Fluid stands for ambulatory infusion.
Infection Control PPE Storage Carts for critical COVID-19 PPE in isolation wards or temporary isolation units.
Reclining chairs help expand hospital capacity to treat COVID-19 patients.
Emergency Cart for emergency equipment.
Isolation Carts for handling isolated COVID-19 patients.
IV Fluid warming equipment to deliver at the right temperature medications and fluid replacement into patients.
Infectious Shipping containers for shipping COVID-19 contaminated items.
Dispensing Systems make easily accessible all needed PPE to protect Hospital staff from bacterial infection.
Hospital grade Disinfectants kill 99.9% of bacteria and viruses.
Soiled Linen Hampers with lid for better safety & control of airborne bacteria / odors.
Mayo Stands for holding surgical instruments during Tracheotomy procedures for inserting ventilator's air tube.
Test Lungs for calibrating ventilators.
Transport Ventilator for intermittent CMV ventilation of patients having Acute Respiratory Failure.

CHAMPION

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Villard Medical – PH² International support healthcare institutions with simple and effective Infection Prevention and Control solutions. Compact and modular, the Isolation Trolleys of Villard Medical - PH² International provide secured workstation to facilitate the rapid implementation of isolation and protective measures to ensure the safety of people (patients, caregivers, visitors) by limiting the risk of cross transmission of infectious agents during pandemic.

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MAC-D: mobile radiographic unit for digital imaging with monobloc high frequency generator

Extremely compact unit with lightweight overall dimensions, MAC-D is designed to respond effectively to X-ray examinations in all those locations where patients are bedridden or with mobility problems, such as intensive care wards, emergency rooms, orthopaedics, plaster rooms, and operating theatres. The reduced weight and the marked maneuverability allow to quickly reach the patient's bed and to prepare the X-ray source in the best way for the execution of the radiographic investigation.
Thanks to the full integration with a digital images acquisition system, directly installed on-board, the radiographic image, acquired by means of a wireless flat panel detector, is displayed in a few seconds and in high definition on the large monitor, which MAC-D is equipped with. The image is then ready to be post-processed with the most modern digital tools, among which the suppression of scattered-radiation related artifacts is worth mentioning, and exploited for the most accurate diagnosis.

www.gmmspa.com
info@gmmspa.com

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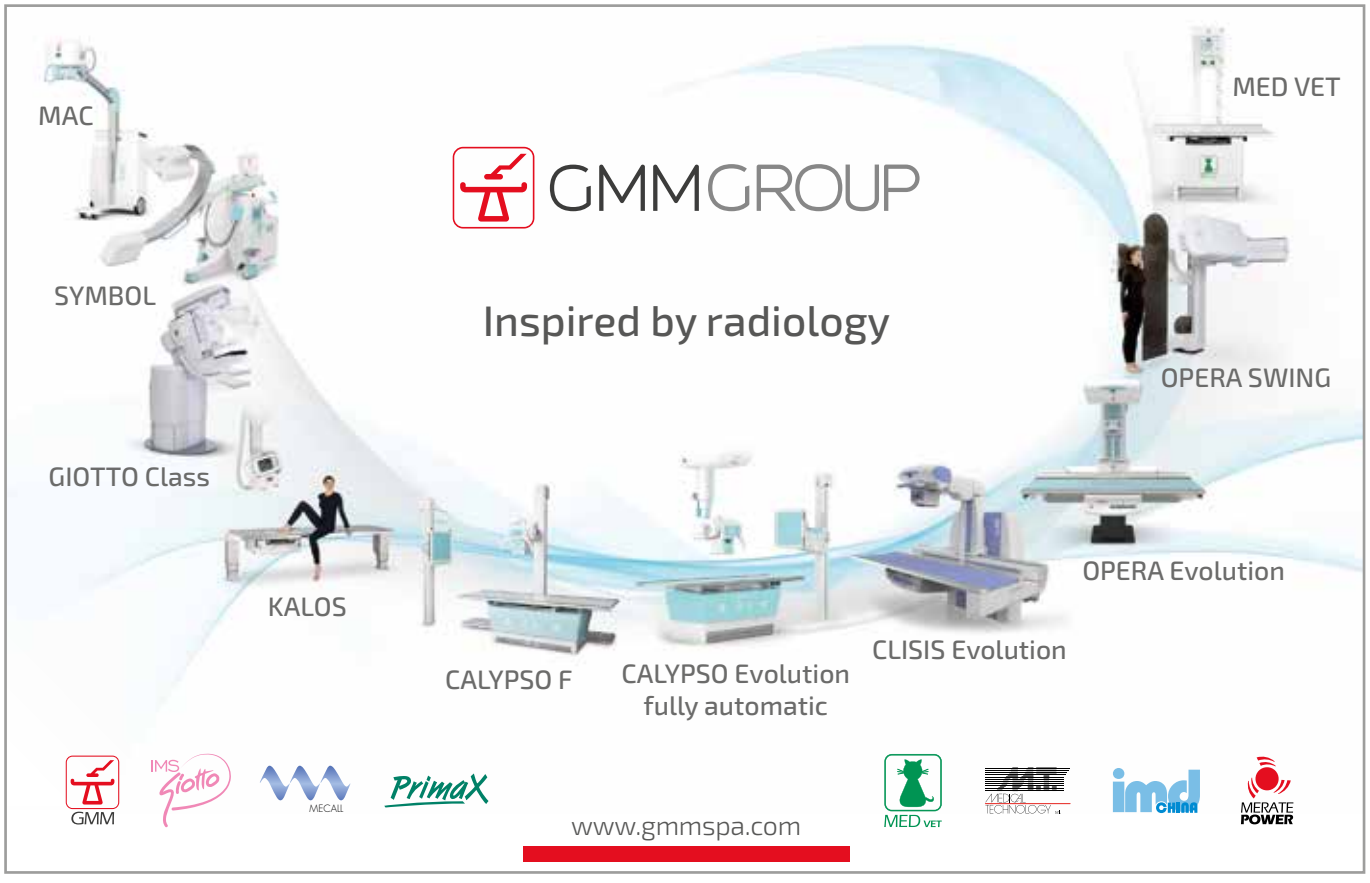
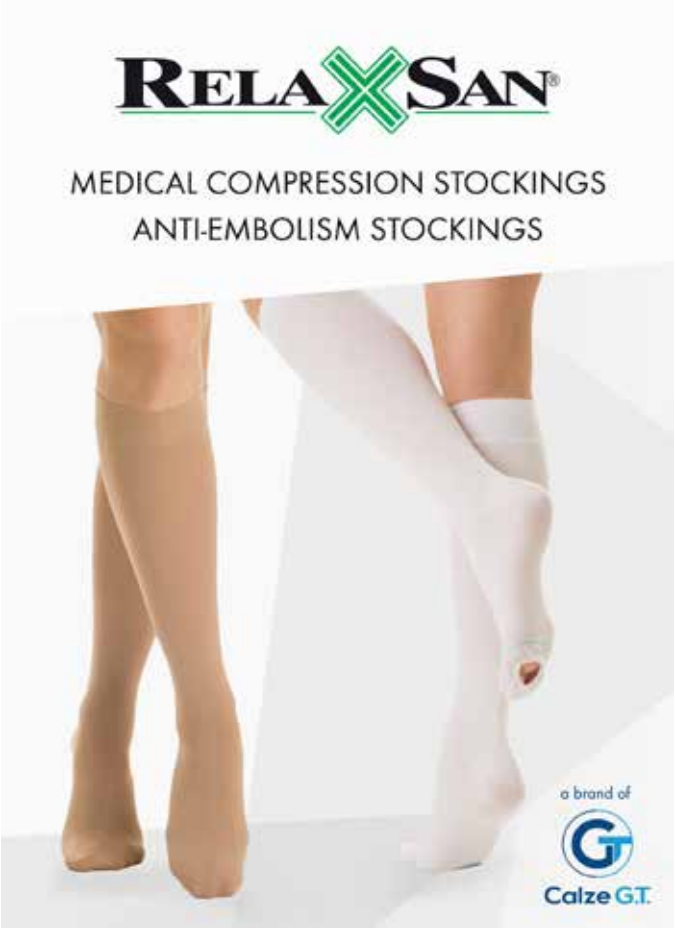


Giotto Class S - Productivity combining innovation and quality in the breast care

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 user-friendliness 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

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 well-being 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: FIME 2020, Italian Pavilion, Booth U22

Biegler

BIEGLER
MEDIZINELEKTRONIK

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

Can't get-together at exhibitions? Why not connect online instead

VirtualFair+

TRADEX GMBH SERVICES

In times when nearly everything has come to a total standstill – your daily company activity has been severely interrupted, sales pipelines are drying up, communication with manufacturers has broken down, product lines are in need of a refresh etc… and when those ever so important trade shows and congresses have been postponed or cancelled then solutions need to be found quickly.

To help sales representatives and their customers, exhibitors and their visitors, manufacturers and distributors to remain staying in touch… Tradex-Services GmbH refined Tradex+ (www.tradex-plus.com) and VirtualFair (www.virtualfair.org) thus creating VirtualFair+. VirtualFair+ is designed as an interactive gateway to run face-to-face business talks throughout all times of the year that combines Video-Chat functionalities, Text-Messaging and the innovative ability to share product images, information and detailed presentations all on one platform.

VirtualFair+ combines state of the art communication systems, with screen splitting features that allows easy access to a robust database of manufacturers from the DACH region ready to serve your business' needs. All functionalities are available on each company profile on Tradex+ (www.tradex-plus.com) as well as on our App for IOS and Android mobile devices to be available soon.

Get ready to start interacting via VirtualFair+ step-by-step:

1. Find your company and its products and services of interest on Tradex+ database (www.tradex-plus.com - „Company Database")
2. Request for an interactive VirtualFair+ meeting with your dialogue partner of choice via "Arrange a video call"
3. Submit all requested details enabling your dialogue partner to arrange your interactive VirtualFair+ meeting
4. Start your interactive communication at the defined date and fixed timing via VirtualFair+

For further information please contact one of the Tradex team members on +49 8177 998220 or email info@tradex-services.com

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Advanced diagnostics with 5G XL, the only CBCT device with lying down patient positioning that offers excellent stabilisation and a broad range of FOVs for very high-quality 3D and 2D images.
CBCT technology allows to reduce the dose radiated to the patient up to 10-fold less than CT devices, with superior spatial resolution for bone tissue investigations. Special focus on patient health, enhanced by ECO Dose mode and the exclusive SafeBeamTM technology.
5G XL is the first device with native FOV 21 x 19 cm for highly detailed investigations. The ideal device that produces clear, high definition images for orthopaedics, otorhinolaryngology, maxillofacial surgery and dentistry applications. It has an excellent connectivity and integration with the modern systems adopted by NewTom. Workflow and clinical and diagnostic activities become much easier and highly performing.

www.newtom.it
info@newtom.it

Multimedical - ITALY - Elastomeric pumps & Radiology set

Multimedical, well known as one of the leading manufacturers for medical disposables since 1984, it's located in Italy and it's manufacturer of standard and customized medical device for anaesthesia, oncology and infusion of contrast media too. Multimedical has long collaborations with Italian and foreign pharmaceutical industries and its products are used daily in the most important hospitals in the world. The Elaspump is an elastomeric pump produced according to the utmost modern standard of safety and reliability. The PVC components are DEHP Free and furthermore all the raw materials used are Latex Free, all this to assure the maximum biocompatibility of the device.

The Elaspump has been designed to satisfy all the requirements where the accurate infusion of the medication is needed, such as, the infusion of chemotherapeutic drugs or pain therapy drugs. Multimedical's main Radiology products are: TRANSFER SET, EXTENSION LINES, VALVES. Since 2015 MULTIMEDICAL introduced in its range COMPATIBLE SYRINGE KITS with different model of Injectors. Since March 2018 MULTIMEDICAL became the official distributor for Italy of NEMOTO Injectors, technical service, Original Disposables and spare parts.

www.multimedical.it
info@multimedical.it

EDGE O Ophthalmic Surgery Chair

BTC Ophthalmic Surgery

Innovative Medical Solutions

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
Visit us at: Medica 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.

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Innovative Endoscopy Components, LLC has been the ISO13485/ISO9001 Certified vendor of choice to hundreds of endoscope service facilities and dealers worldwide, for over 20 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.
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BY SANKOM® SWITZERLAND

X3
AVEVITTA PROTECT TRIPLE ACTION REUSABLE FACE MASK

DESIGNED AND DEVELOPED IN SWITZERLAND

FOR TRAVEL | POLLUTION | ANTI-BACTERIAL | POLLEN | WASHABLE | 0.0003MM FILTRATION | REPLACABLE 30 DAY FILTER

Developed by Dr. Mazourik in the heart of Switzerland, Avevitta by SANKOM strives to encompass what Switzerland stands for: quality, durability and eco-friendliness from our manufacturing process to our 100% recyclable packaging.

Most face masks available today only filter out particles that are 2.5 microns or larger.

But some of the most harmful particles are the smallest. Pollutants, bacteria, viruses, and toxic smoke pass through the filter seamlessly and end up directly in your lungs.

That's why SANKOM designed a triple action face mask that protects from viruses as small as 0.3 micron in size, as well as bacteria, dust, pollution, smoke and pollen.

SANKOM's main goal has always been to develop a functional, high quality, durable products that are not only comfortable to use but also improve your health.

There are currently worldwide shortages of masks, and especially those at risk need solutions to protect themselves as best as possible.

"Hundreds of millions of disposable masks are being used every day, so we wanted to develop a solution that is efficient, but also reusable, durable and eco-conscious."

The Avevitta mask by SANKOM is permanently anti-bacterial, and washable over 100 times without losing its shape or efficiency. It is made from a combination of natural patented high-quality, and eco-friendly fabric.

The replaceable filters in our masks have very high performance, and contain no toxic substances, and can be replaced every 2-4 weeks.

Protect yourself from viruses, bacteria, pollution, dust and pollen with Avevitta.

If you would like to receive more information on the **Avevitta Protect Triple Action Face Masks**, please contact us at **info@avevitta.com** or by whatsapp: **+41 79 790 75 77**

Qioptiq Introduces Slimline for X-ray Diagnostics Featuring Spine Mode

QIOPTIQ
Photonics for Innovation
An Excelitas Technologies Company

SlimLine for X-ray Diagnostics featuring Spine Mode automatically optimizes exposure, iris and gain for maximum contrast and visibility, resulting in improved imaging of spine details without the need for manual adjustment. X-ray images of spines and extremities normally suffer from low contrast because traditional automatic settings are not advanced enough for proper exposure of this specialized case. Designed and optimized especially for X-ray diagnostics, the complete lens and camera OEM solution consists of the SlimLine lens assembly and QioCam X-ray camera. SlimLine lens assembly offers a high-performance combination of optics (lens elements), mechanics (housing, flange) and electronics (motor control board for Iris communication). The QioCam X-ray camera is based on the high resolution and sensitivity of the latest CMOS technology. SlimLine is offered as a standard product that can also be customized by OEMs.

www.excelitas.com/product-category/x-ray-imaging-optics
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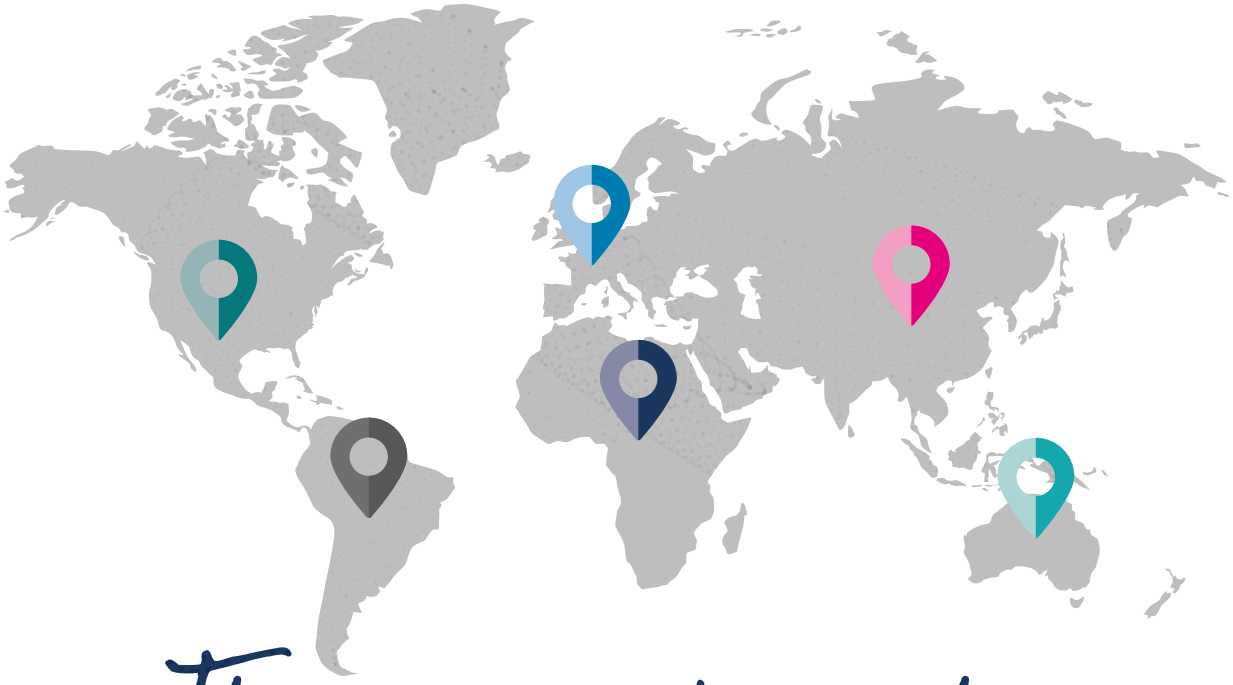
The Software Development Kit is now available in C++ and .NET

SMART *VIRTUAL* TRADE



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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.

CONGRESS AND FAIRS

• JFR 2020
Paris/France
October 2-5

• MEDICA 2020
Düsseldorf/Germany
November 16-19

• ZDRAVOOKHRANENIYE 2020
Moscow/Russia
December 7-11

I.A.E. SpA

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iaexray@iae.it
www.iae.it

FOCUS

Author: Silvia Borriello
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5G, latest wireless mobile phone technology, is expected to increase performance and a wide range of new applications, including strengthening e-Health (telemedicine, remote surveillance, telesurgery).

Almost half of global population (3.8bn people) are now users of the mobile internet (2G-5G), forecasted to grow to 61% (5bn people) by 2025.

What About 5G?

5G technology is deploying fast but, to date, the scientific community is not yet sure of the consequences of electromagnetic pollution on humans, especially on the more sensitive, children, adolescents and the sick. Given that for ionizing radiation these risks are already scientifically proven, possible health risks that could be associated with various forms of non-ionizing radiation are still under investigation and prudence is advised by suggesting avoiding installing antennas near hospitals, schools and kindergartens.

Electromagnetic fields produced by mobile phones are classified by the International Agency for Research on Cancer as possibly carcinogenic to humans.

WHO is conducting a health risk assessment from exposure to radiofrequencies, covering the entire radiofrequency range, including 5G, to be published by 2022.

According to statistics published by the National Cancer Institute, the rate of brain cancer in the US went down between 1992 and 2016 even as mobile phone use skyrocketed.

Source: IMF – World Economic Outlook Database

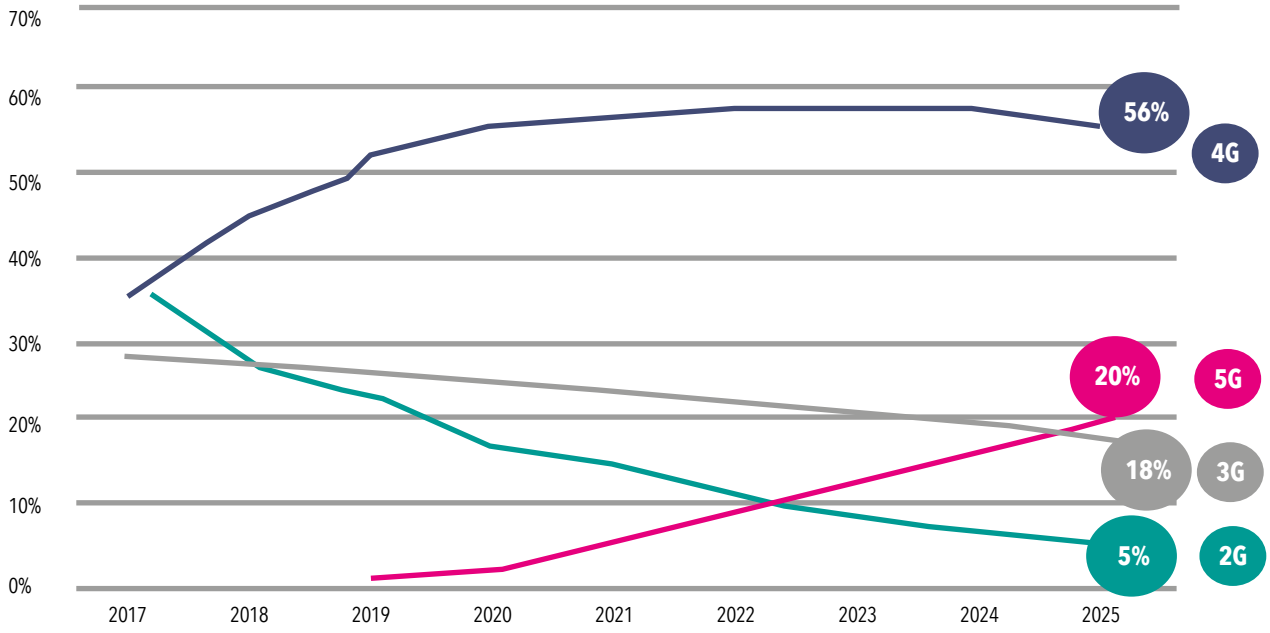
5G is the fifth generation of wireless communications technologies. Judging from the enthusiastic reception of 5G technology by governments and industry, we are on the verge of a technological revolution. Initially introduced to help wireless networks cope with ever-increasing data traffic on their networks, 5G will lead to game-changing innovations such as remote surgery, control of driverless vehicles and much more. Since the first commercial launch in the US and South Korea towards the end of 2018, large scale adoption began in 2019 and today virtually every telecommunication service provider in the developed world is upgrading its infrastructure to offer 5G functionality. Mobile 5G is now commercially available in 24 markets globally. Top countries include South Korea, the United Kingdom, Germany and the United States with multiple companies having deployed networks and selling compatible devices. According to the state-run news agency Xinhua, the world's largest 5G network was launched in China by the three largest Chinese network operators in October 2019. Countries including Switzerland and Finland, are up and comers in 5G development, with limited deployment so far.

The GSMA annual statement of the global mobile economy report predicts 5G will account for a fifth (20%) of global connections by 2025 –foreseeing a big technological break-up. A particularly strong increase is expected across developed Asia, North America, and Europe. According to the GSMA, the association representing the interests of mobile network operators worldwide, 4G became the dominant mobile technology globally in 2019 – with over 4bn connections, accounting for 52% of total connections (excluding licensed cellular IoT). **4G connections are expected to continue to grow for the next few years, peaking at just under 60% of global connections by 2023. As it stands actual 5G connections remain a fraction of the connectivity pie compared to current (4G) and previous cellular technologies.**

Since the first commercial launch in the US and South Korea towards the end of 2018, large scale adoption began in 2019 and today virtually every telecommunication service provider in the developed world is upgrading its infrastructure to offer 5G functionality.

As with previous cellular technologies, 5G networks rely on signals carried by radio waves - part of the electromagnetic spectrum - transmitted between an antenna or mast and your phone. We are surrounded by electromagnetic radiation all the time - from television and radio signals, as well as from a whole range of technologies, including mobile phones and from natural sources such as sunlight. The cutting-edge network technology (5G) is now capable of supporting speeds up to 100x faster than LTE/4G and delivering latency (time

4G now accounts for half of total connections; 5G will start moving the needle in 2020
% of connections (excluding licensed cellular IoT)



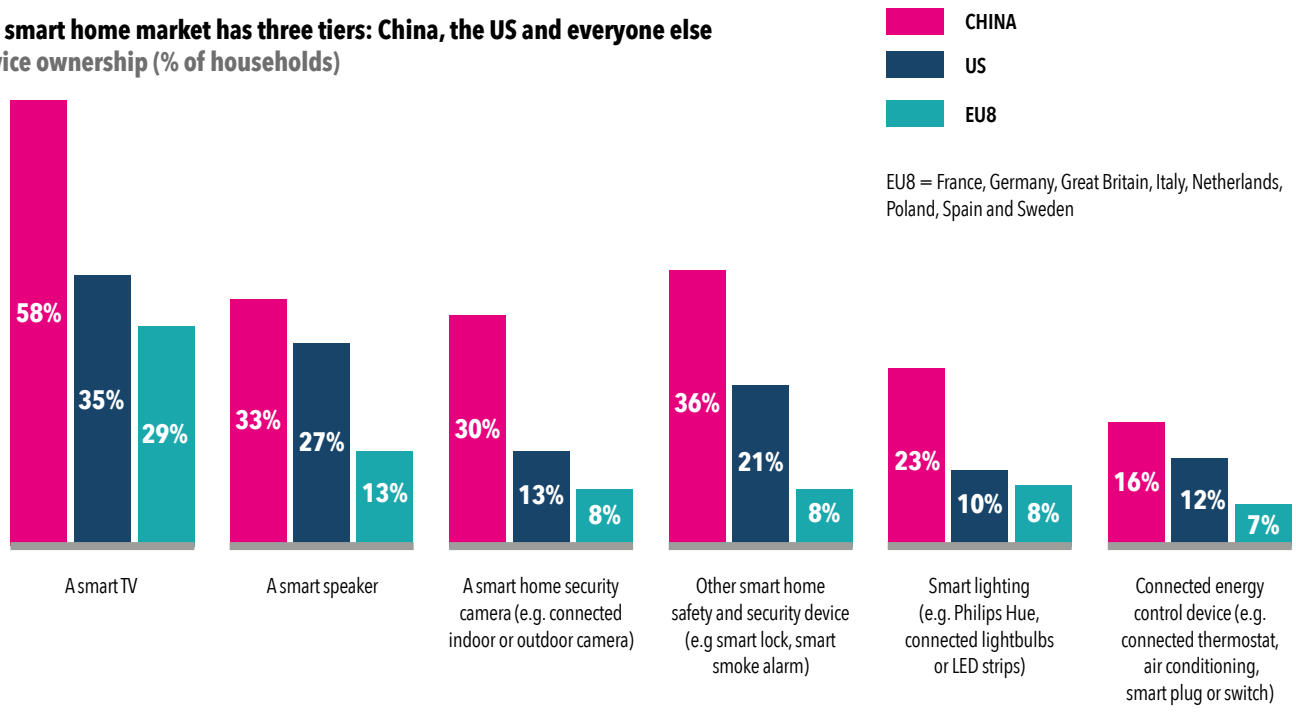
Source: Mobile Economy 2020 report, GSMA_MobileEconomy2020_Global.pdf

between receipt of a signal by a cellular base station and its response) of just a few milliseconds, meaning higher frequency waves than earlier mobile networks, being able to connect many more devices per cell site and at faster speeds. **The higher frequencies, known as millimeter waves, are new to mobile phone networks, but are commonly used in other applications, such as point-to-point radio links and body-scanners for security checks.** These waves travel shorter distances through urban spaces, so 5G networks require more transmitter masts (base stations that transmit and receive mobile phone signals) than previous technologies, positioned closer to ground level. As it rolls out, 5G is also expected to underpin a new wave of "smarter" digital services generating real-time AI assistance and help drive the digitization of legacy industries (industries not completely digitized).

For a better understanding, the frequency spectrum of 5G is divided into millimeter waves, mid-band and low-band. 5G millimeter wave is the fastest, with actual speeds often being 1–2 Gbit/s down. Frequencies are above 24 GHz reaching up to 72 GHz which is above the extremely high frequency band's lower boundary. The reach is short, so more cells are required. Millimeter waves have difficulty traversing many walls and windows, so indoor coverage is limited. 5G mid-band is the most widely deployed, in over 30 networks. Speeds in a 100 MHz wide band are usually 100–400 Mbit/s down. Frequencies deployed are from 2.4 GHz to 4.2 GHz. Many areas can be covered simply by upgrading existing towers, which lowers the cost. Mid-band networks have better reach, bringing the cost close to the cost of 4G. 5G low-band offers similar capacity to advanced 4G. So,

The GSMA annual statement of the global mobile economy report predicts 5G will account for a fifth (20%) of global connections by 2025 –foreseeing a big technological break-up. A particularly strong increase is expected across developed Asia, North America, and Europe.

The smart home market has three tiers: China, the US and everyone else
Device ownership (% of households)



Source: Mobile Economy 2020 report, GSMA_MobileEconomy2020_Global.pdf

millimeter waves are not the only, or even the main, way that service providers will deliver 5G service. **The wireless industry is focused more on using mid- and low-band frequencies for 5G, because deploying a massive number of millimeter-wave access points will be time-consuming and expensive.** In other words, 5G will continue using the same radio frequencies that have been used for decades for broadcast radio and television, satellite communications, mobile services, Wi-Fi, and Bluetooth.

As it stands, there are still relatively few 5G smartphones in comparison to non-5Gs handsets, although many are being released. But, most importantly, according to the GSMA report, consumer demand for the next generation of connectivity has yet to be strengthen. The number of live 5G markets is increasing by the day and consumers' awareness of the technology is also growing however, there is wide variation across the globe in terms of intentions to upgrade to 5G and the willingness to pay more for it. **In general, consumers in South Korea and China, having experienced some of the earliest launches, appear to be the most excited by the prospect of upgrading to 5G, while those in the US, Europe and Japan seem more content with 4G for the time being.** The GSMA report adds that adults in markets such as the UK, Australia, Spain, and Italy have high awareness of the technology but low intent to pay for 5G, with less than 35% saying they want to upgrade. The US market also has a similarly high level of awareness and only a slightly higher intention to upgrade (40%+). The report also highlights variable and often low interest, certainly outside China, for a range of "smart" devices. Still, the GSMA predicts billions more IoT devices will be coming on stream over the next five years – saying that between 2019 and 2025 the number of global IoT connections will more than double to almost 25 billion, while it expects global IoT revenue to more than triple to $1.1 trillion. Among the near-term hopes on the GSMA's list is that health wearables become part of the solution to overburdened public health systems and a 2025 prediction for 5G is that the technology becomes "the first generation in the history of mobile to have a bigger impact on enterprise than consumers".

As service providers around the world race to build networks, 5G, however, has become intensely controversial in many locations, with citizens' groups, and some scientists, expressing concerns about the new technologies involved and the possible health effects on "involuntary" exposures to radio-frequency (RF) signals from environmental sources, including cellular base stations. Activist groups, supported by an even greater emphasis given by the internet and social media, have protested the installation of wi-fi in schools, wireless-enabled electric utility meters, cellular base stations and other infrastructure that transmits RF energy into the environment. **The imminent rollout of 5G technology will in fact require the installation of hundreds of thousands of 'small cell' sites in neighborhoods and communities throughout. There are real concerns about the way 5G is being deployed including security issues, the potential to interfere with weather forecasting systems and the steamrolling of regulations to accelerate the rollout, to mention a few.** Public opposition appears to focus on two characteristics, and fears, of 5G networks: First, that the effects of millimeter-wave signals might be more dangerous than traditional frequencies. While millimeter waves have not so far been used for cellular communications, they have been used for many other applications, including airport security scanners, anti-collision radar for automobiles and to link present-day cellular base stations. Public discussions seem to confuse 5G with millimeter-wave communication. In fact, many 5G networks will operate at

frequencies close to those used by present cellular networks, and some may use millimeter waves to handle high data traffic where needed. The second concern is the larger number of access points, some potentially much closer to people's homes, that might expose people to more radiation than 4G services. 5G systems will in fact rely on a multitude of "small cells" mounted close to subscribers, often on utility poles running along public streets. These small cells will incorporate "smart" antennas that transmit multiple beams which can be independently steered to individual subscribers. But crucially, because there are more transmitters, each one can operate at much lower power levels than "macro" cells used by present systems, which are typically located on tops of buildings in urban areas. In the long run, these will be supplemented by picocells (small base station meant to extend coverage to indoor areas) mounted inside buildings, operating at still lower power levels. Nonetheless, the prospects of a dramatic increase in the number of sources transmitting RF signals is undoubtedly disquieting to many citizens, regardless of the actual health risks as understood by health agencies.

Even before 5G rollout the electromagnetic radiation used by all mobile phone technologies has led some people to worry about increased health risks, including developing certain types of cancer. **However, researchers seem to have yet to find conclusive evidence linking mobile phone use to cancer or other health problems, consequently it seems that there's little reason even to think that 5G frequencies are any more harmful than other types of electromagnetic radiation, like visible light, for example.** In 2014 the World Health Organization (WHO) said that "no adverse health effects have been established as being caused by mobile phone use". Still, fears persist, in part because of inconclusive studies. Many critics of 5G and other wireless technologies point to the fact that the WHO's International Agency for Research on Cancer (IARC), in 2011, classified all radio frequency radiation (of which mobile signals are a part) as "possibly carcinogenic". It has been put in this category because "there is evidence that falls short of being conclusive that exposure may cause cancer in humans". Eating pickled vegetables, drinking coffee, or using talcum powder are classified in the same category. Alcoholic drinks and processed meat are in a higher category because the evidence is stronger. Radio waves, visible light and ultraviolet light are all part of the electromagnetic spectrum. The higher-frequency parts of the spectrum, including x-rays and gamma rays, are what is known as "ionizing radiation." This is the radiation we should worry about. It can break molecular bonds and cause cancer. Millimeter waves and other radio waves band used for mobile phone networks - along with visible light, are considered non-ionizing, meaning they lack enough energy to break apart DNA and cause cellular damage. **Millimeter waves are higher frequency than traditional broadcast frequencies, but they are still below the frequency of visible light and far below ionizing radiation such as shortwave ultraviolet light, x-rays, and gamma rays.** Higher up the electromagnetic spectrum, well beyond those frequencies used by mobile phones, there are clear health risks from extended exposure. The sun's ultra-violet rays can lead to skin cancers. There are strict advisory limits for exposure to even higher energy radiation levels such as medical x-rays and gamma rays, which can both lead to damaging effects within the human body.

There are, of course, individual studies that conflict with the scientific consensus that non-ionizing radiation poses health risks beyond heat. A study published in 2018 by the National Toxicology Program (NTP - U.S. Department of Health and Human Services) and pointed to by those expressing safety concerns, found that male rats exposed to high doses (900 MHz) of radio frequency radiation (RFR) developed a type of cancerous tumor in the heart (the study states: clear evidence of tumors in the hearts of male rats/ some evidence of tumors in the brains of male rats/some evidence of tumors in the adrenal glands of male rats). The exposure levels used in the studies were equal to and higher than the highest level permitted for local tissue exposure in cell phone emissions today. Cell phones typically emit lower levels of RFR than the maximum level allowed. For this study, rats' whole bodies were exposed to radiation from mobile phones for nine hours a day every day for two years, starting before they were born. No cancer link was found for the female rats or the mice studied. It was also found that rats exposed to the radiation lived longer than those in the control group. A senior scientist on the study said that "the levels and duration of exposure to RFR were much greater than what people experience with even the highest level of cell phone use and exposed the rodents' whole bodies. So, these findings should not be directly extrapolated to human cell phone usage", he added. "We note, however, that the tumors we saw in these studies are similar to tumors previously reported in some studies of frequent cell phone users". **In conclusion, although some of the research suggests a statistical possibility of increased cancer risks for heavy users, the evidence to date for a causal relation is not sufficiently convincing to suggest the need for precautionary action. "Cell phone technologies are constantly changing, and these findings provide valuable information to help guide future studies of cell phone safety." the senior scientist stated.** The NTP concludes that millimeter waves do not travel as far and do not penetrate the body as deeply as do the wavelengths from the lower frequencies. Millimeter waves are likely to penetrate no deeper than the skin, whereas the lower frequencies have been shown to penetrate at least three to four inches into the human body. NTP is also currently evaluating the existing literature on the higher frequencies intended for use in the 5G network and is working to better understand the biological basis for the cancer findings reported in earlier studies on RFR with 2G and 3G technologies. The exposure system is also being designed to have the capability to conduct studies with various RFR frequencies and modulations to keep up with the changing technologies in the telecommunications industry.

Nonetheless, in contrast to the cautious and generally reassuring assessments by health

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agencies, a few scientists have warned loudly about possible hazards of 5G. In the US, a visible scientist in the public arena on this issue claims that 5G will cause an "almost instantaneous" crash in human reproduction "almost to zero." At the same time, a group of scientists and doctors in Europe have written to the EU calling for the rollout of 5G to be halted. The appeal, signed by 245 scientists as of August 2019, recommended "a moratorium on the roll-out of the fifth generation for telecommunication until potential hazards for human health and the environment have been fully investigated." In a response to the appeal, the head of the Cabinet of Commissioners of the European Union reiterated reassuring advice of expert reports and indicated that the request to "stop the distribution of 5G products appears too drastic a measure. We first need to see how this new technology will be applied and how the scientific evidence will evolve", indicating that the commissioners would keep up with future developments.

That is not to say, of course, that overexposure to non-ionizing radiation cannot have negative side effects. Electromagnetic energy produces heat, which is apparently the only health concern posed by radio waves. This position is backed up by decades of research on the biological effects of non-ionizing radiation, including millimeter waves. A paper published by the engineering professional organization IEEE's International Committee on Electromagnetic Safety reviewing more than 1,300 peer-reviewed studies on the biological effects of radio frequencies found "no adverse health effects that were not thermally related." However, at the levels used for 5G (and earlier mobile technologies) the heating effects are not harmful, according to Prof Rodney Croft, an adviser to the International Commission on Non-Ionizing Radiation Protection (ICNIRP). "The maximum radio frequency level that someone in the community could be exposed to from 5G, or any other signals in general community areas, is so small that no temperature rise has been observed to date."

To protect against heat related effects, communications regulatory bodies set limits on how much energy wireless devices can emit. Two international bodies produce exposure guidelines on electromagnetic fields that many countries currently adhere to: The International Commission on Non-Ionizing Radiation Protection (ICNIRP) and the Institute of Electrical and Electronics Engineers (IEEE), through the International Committee on Electromagnetic Safety. These guidelines are not technology-specific, they cover radiofrequencies up to 300 GHz, including the frequencies under discussion for 5G. Most countries around the world have roughly adopted similar RF exposure limits. Such limits are designed to avoid established hazards of RF energy that result from excessive heating of tissue. A few countries, such as Italy, Belgium and India, and cities, like Paris, have adopted lower limits on "precautionary" grounds. These are, partially, a political accommodation to concerned citizens, also a hedge against the possibility that low level or "nonthermal" hazards might be demonstrated in the future. Russia and some of its former Warsaw Pact allies also have much lower exposure limits.

Thus, according to the WHO, to date, and after much research performed, no adverse health effect has been causally linked with exposure to wireless technologies. Health-related conclusions are drawn from studies performed across the entire radio spectrum but, so far, only a few studies have been carried out at the frequencies to be used by 5G. Tissue heating is the main mechanism of interaction between radiofrequency fields and the human body. Radiofrequency exposure levels from current technologies result in negligible tempera-

ture rise in the human body. As the frequency increases, there is less penetration into the body tissues and absorption of the energy becomes more confined to the surface of the body (skin and eye). Provided that the overall exposure remains below international guidelines, no consequences for public health are anticipated.

Fully investigating potential hazards of 5G, or any other technology, seems endless as the technology is evolving rapidly. More studies on possible health and safety implications of millimeter waves are surely needed. At the same time, cellular networks are undergoing "densification" (adding many small cells) to manage their ever-increasing data traffic. By allowing faster transmission of data and steering beams toward individual users, 5G may, in fact, reduce the overall levels of RF signals in the environment–but this will eventually be offset by the rapidly growing data traffic on cellular networks and by the eventual flood of wireless-connected devices that 5G will make possible.

In addition, as protests and comments on health risks by some scientific experts and several organizations seem to be ignored by health agencies, some have highlighted the possibility that the scientific community might be political and industry supportive more than scientific and health promoting. For a definitive conclusion however, high-quality research is needed, as well as continued monitoring of the scientific literature by health agencies.

Meanwhile, in such a controversial scenario precautionary measures should be taken, globally. Maybe, simple measures on the devices, such as earphone incorporated in the phone, or warnings of possible health risks in cell phone instructions and packages so that the device is kept away from the body, and other technological measures that manufacturing companies can certainly come up with. Public health needs timely action to reduce exposure, companies must conceive better technologies, invest in training and research, focus on a safety approach rather than power, quality, and efficiency of the radio signal. We are all responsible for the new generations to come and we must ensure that cell phones and wireless technology do not become the next tobacco, for which we knew the risks but ignored them for decades. Of course, wireless technologies bring enormous benefits, but we can all certainly try to modify our habits and contain its use.

Among Main Sources:

- Extracts from "Does 5G pose health risks?" By Reality Check teamBBC News. For full article: https://www.bbc.com/news/world-europe-48616174

-Extracts from "5G Is Coming: How Worried Should We Be about the Health Risks? So far, at least, there's little evidence of danger" By Kenneth R. Foster. For full article: https://blogs.scientificamerican.com/observations/5g-is-coming-how-worried-should-we-be-about-the-health-risks/

Kenneth R. Foster, PhD, PE, is an emeritus professor of bioengineering at the University of Pennsylvania, and has been involved in studies of health and safety aspects of RF energy for many years. He is a member of the International Committee on Electromagnetic Safety (ICES), which sets exposure limits for RF energy. He is also a registered professional engineer and provides engineering consulting services to industry and government, chiefly on exposure assessment for RF fields.

-World Health Organization-WHO - https://www.who.int/news-room/fact-sheets/detail/electromagnetic-fields-and-public-health-mobile-phones

https://www.who.int/news-room/q-a-detail/5g-mobile-networks-and-health

-Extracts from "Worried About 5G's Health Effects? Don't Be", for full article: https://www.wired.com/story/worried-5g-health-effects-dont-be/

-National Toxicology Program- U.S. Department of Health and Human Services, "Cell Phone Radio Frequency Radiation" https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones/index.html?utm_source=direct&utm_medium=prod&utm_campaign=ntpgolinks&utm_term=cellphone

-For full article on "High Exposure to Radiofrequency Radiation Linked to Tumor Activity in Male Rats" - NIEHA- National Institute for of Environmental Health Sciences https://www.niehs.nih.gov/news/newsroom/releases/2018/february2/index.cfm

-National Toxicology Program https://ntp.niehs.nih.gov/events/panels/index2.cfm

-"The Top Countries with 5G Deployments and Trials"

-https://www.sdxcentral.com/5g/definitions/the-top-countries-with-5g-deployments-and-trials/

-https://en.wikipedia.org/wiki/5G

-For full Mobile Economy 2020 report: GSMA_MobileEconomy2020_Global.pdf

The GSM Association (GSMA) is an industry organization representing the interests of mobile network operators worldwide. More than 750 mobile operators are full GSMA members and a further 400 companies in the broader mobile ecosystem are associate members. The GSMA also produces the industry leading MWC events held annually in Barcelona, Los Angeles, and Shanghai, as well as the Mobile 360 Series of regional conferences. www.gsma.com

-Article by Natasha Lomas -https://techcrunch.com/2020/03/05/5g-is-now-live-in-24-markets-gsma-predicts-itll-be-20-of-global-connections-by-2025-and-eyes-a-big-tech-break-up/

MARKET OUTLOOK

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In the 1950s, The New York Times called Uruguay as 'Switzerland of South America.' A lot has happened since then, including a military rule but, over the last decade, stable democracy, effective social policies and reforms, as well as a healthcare on par with international standards has given the country solid bases, turning it into one of the most attractive nations to investors in Latin America.

Healthcare in Uruguay, No One Without It

Population
3.4
million

GDP
(USD bn)
59.65

GDP
per capita
(USD)
17,014

Economic
Growth
(GDP, annual variation)
1.6%

Unemployment rate
8.4

Source: IMF – World Economic Outlook Database

Uruguay, a beacon of political stability in Latin American, is classified as a high-income country by the World Bank. It stands out for being an egalitarian society and for its high income per capita, low level of inequality and poverty and the almost complete absence of extreme poverty. In relative terms, its middle class is the largest in America, representing over 60% of its population. Institutional stability and low levels of corruption are reflected in the high level of public trust in government. According to the Human Opportunity Index constructed by the World Bank, Uruguay has managed to attain a high level of equal opportunities in terms of access to basic services such as education, running water, electricity and sanitation.
In the past 15 years, the country has only recorded positive GDP growth (averaging 4.1% from 2003 to 2018), even despite recessions experienced by its main trading partners, Argentina and Brazil, in 2017 and 2018. Economic openness, prudent macroeconomic policies and a commitment to diversify its markets and products have increased the country's ability to withstand regional shocks.

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For the first half of the twentieth century Uruguay and Argentina had the most advanced levels of medical care in Latin America. Military rule from 1973 to 1985 adversely affected standards with more resources going towards military hospitals, open only to relatives of the members of the armed forces. Nonetheless, Uruguay's strong economic growth through the last decade has allowed its healthcare sector to flourish again and the system is today run through two types of sub-sectors, public and private. The authority responsible for implementing and enforcing health regulations is the Ministry of Public Health (MoPH). **In 2007, the government created an Integrated National System of Healthcare (SNIS) which oversees both the public and private sectors. The SNIS regulates the right to health protection for all inhabitants of the country through a National Health Insurance system, which is financed by the National Health Fund (FONASA).**
Public expenditure on healthcare has increased in the years to approximately 8.6-9% of GDP, with the public sector representing over 70% of these expenditures. **It comprises two main programs: direct public healthcare for people living in poverty – a program that has existed since the end of the 19th century – and the National Health**

Insurance System launched in 2007. The National Health Insurance System subsidizes the private healthcare of all workers, their spouses and dependent children under 18 years as well as pensioners and retirees. It currently covers some inactive workers and is moving towards universal coverage. Coverage of the National Health Insurance System increased from 23% of the population in 2007 to over 70%; nevertheless a percentage of the population may still fall outside of the system either because they belong to one of the special schemes, or because they work in the informal sector of the economy and lack the resources to pay for a healthcare provider. Health sector funding is complex, mixed between public and private sources. Multiple funding comes from central government funds, user contributions and state transfers.

Public Health - The Ministry of Public Health (MoPH) provides services through the State Health Services Administration (ASSE - *Administración de Los Servicios de Salud del Estado*). The ASSE is the principal actor in the public sector, it is mostly funded by the national budget (taxes and nonbudgetary resources from sale of services), but also from healthcare premiums paid by FONASA (which funding comes primarily from employee and employer social security contributions), as well as general revenues covering imbalances. **Currently, the ASSE covers a little more than one-third of the country's population, or about 1.2 million people.** Of its beneficiaries, 61.5% are entitled to benefits without making a direct economic contribution; 32.4% are insured by FONASA, that is, they contribute a portion of their salary to fund the sector; and the remaining 6% corresponds to services provided to individuals covered by other public providers, Police Health Care and Military Health Care.

The MoPH-ASSE has public health facilities, classified by level of complexity as multi-purpose clinics, health centers and hospitals (general and specialized) spread across the country. Most big hospitals under the ASSE are in major cities. **Public health coverage is given free of charge to all citizens only for specific medical care such as emergency ambulance service, initial treatment and medication. If any other types of medical treatment or ongoing treatment is needed it requires citizens to pay a fee, which is determined by the level of treatment. ASSE also serves as a social safety net providing comprehensive free care to low-income residents (as per Article 44 of the Constitution for which the State provides services for disease prevention and healthcare free of charge only to the indigent or those who lack sufficient resources).**

Transfers to healthcare providers, public or private, are manage by a state-owned fund, FONASA (*"Fondo Nacional de Salud"* -National Health Fund). **FONOSA is an autonomous State entity created by the Frente Amplio government in 2007 to entitle all employees (public, private, self-employed) and pensioners to healthcare outside of the public health system. The public system would still be free but was to be reserved for those outside of these broad categories**. FONASA's task is to coordinate state social welfare services and organize social security. It acts both as an intermediary, receiving worker and employer contributions and contracting collective healthcare institutions. The Fund, as a direct provider of health services, covers care for workers during pregnancy and childbirth, as well as ordinary pediatric care up to age 6; dental and orthodontic care and social welfare up to age 9; and healthcare up to age 13 (or no age limit for persons with birth defects). It owns one hospital and several maternal and child centers in the capital, Montevideo. In other parts of the country, the Fund contracts services to the MoPH or Medical Assistance Institutions (IAMCs). All legally registered employees, sole traders ("Unipersonal"), including the sub-category of "*Monotributistas*" for very small businesses, public employees, unions, pensioners (state and private) and retirees are entitled to private health coverage under FONASA. Coverage extends to all family members, i.e. spouses and under 18 year of age and over, if they are registered as disabled. While initially private workers were not able to opt for the public health sub-system, all insured citizens can now select from either a private insurance company or the public sector system.

Public expenditure on healthcare has increased in the years to approximately 8.6-9% of GDP, with the public sector representing over 70% of these expenditures.

While initially private workers were not able to opt for the public health sub-system, all insured citizens can now select from either a private insurance company or the public sector system.

FONASA is a central part of the funding model. As a mandatory pooled public fund, it involves a tripartite mechanism whereby those insured contribute based on income, employers contribute in proportion to wages paid and the State's general fund supplements these, in order to bring to reality the benefits package for the entire population provided for in the Comprehensive Health Care Plan. Its principal source of financing remains contributions (approx. 90% of total financing) based on the employee's salary and payment varies from 3 to 8%, depending on the family structure and the amount of their salary. The employer pays a 5% contribution.

In 2005, monthly spending per user in the private sector was US$50, versus US$14 in ASSE (a 3 to 1 ratio). In 2016, expenditure per user

Healthcare coverage in Uruguay, 2014

No coverage	Mutualista through FONASA (1)	Mutualista private payment	MPS (2) through FONASA (1)	MSP (2) low income	Private Insurance through FONASA (1)	Private Insurance out-of-pocket	Other
1.5%	56.1%	5.1%	11.4%	18.6%	1.5%	0.6%	5.1%

Source: National Statistics Institute (INE) - Continuous Household Survey (ECH). Note: The sum of the partials may not coincide with the total due to rounding of the figures. (1): National Health Fund (FONASA). (2): Ministry of Public Health (MSP).

Number of Health Professionals, by Department (affiliated with the University Professionals Retirement Fund, 2014)

Doctors	Dentists	Chemicals Pharmacists	Midwives	Nurses	Psychologists	Other
16,317	4,974	2,550	656	6,198	5,652	4,365

Source: Caja de Jubilaciones y Pensiones de Profesionales Universitarios (CJPPU). Note: doesn't include members with no address information.
Includes active professionals and those that declare non-exercise of the profession.

was nearly the same in the two sectors. Further, FONASA's National Resource Fund (FNR) has become an important mechanism for centralized, supplementary, and (financially and institutionally) independent insurance, providing coverage for an extensive package of highly specialized medical services.

Private Health – As mentioned, the National Integrated Health System is a mix of public-private healthcare. The private system is comprised of private service providers, including: (i) Collective Medical Assistance Institutions (IAMC - *Instituciones de Aistencia Medica Colectiva*), private and non-profit medical facilities (with the most known as "*Mutualista*" and "*Cooperativas*"); (ii) private healthcare institutions (the so-called partial-health insurance institutions), which are for-profit companies that provide a specific type of care (for example: emergency, dental, multipurpose clinics, etc.); (iii) highly specialized medical institutes (public or private companies that perform some of the 15 procedures funded through the FONOSA (Public Resources Fund); and (iv) private sanatoriums, clinics and physician's offices, together with residences and nursing homes for the elderly.

Number of hospitals (2017)	102
Physicians (2016)	3.74 /10,000 population
Dentists (2017)	14.8/10,000 population

Source: https://2016.export.gov/industry/health/healthcareresourceguide/eg_main_116248.asp

The principal actor in the private sector is the group of Collective Medical Assistance Institutions (IAMCs). These are private institutions, but their principal source of financing comes from public funds from FONOSA. The population entitled to care under the IAMC subsystem breaks down as follows: 90% are FONASA members, 5% are individual members, which means that they pay directly out-of-pocket and 5% are collective members, who are entitled to benefits as a result of agreements between the IAMCs and other institutions.

Mutualista is an affordable private-hospital membership plan that comprises a monthly membership fee (around $100 per month) and a small co-payment when the insured patient uses hospital's services.

Following the introduction of the private-hospital membership plans by the IAMCs, the most popular being *Mutualista* (there are also other types of hospital plans), a large number of people moved from the public healthcare system to the private medical care system with currently approximately two-thirds of the population receiving healthcare services from the IAMC sector. *Mutualista* is an affordable private-hospital membership plan that comprises a monthly membership fee (around $100 per month) and a small co-payment when the insured patient uses hospital's services. The hospital provides members everything from routine doctor visits to emergency room care and major surgery. A *mutualista* differs from regular health insurance; there is no middleman between the insured patient and the private hospital that provides medical care, there is no big deductible, no lifetime cap and no complicated terms to decipher. **All hospital plans–including *mutualistas*–have various drug prescription discount programs, too. Non-emergency optometry and dentistry, as well as visits to a psychologist, are not included services with most plans.** Hospitals that offer *mutualistas*

are private companies, each setting its own standard regarding age limits and pre-existing conditions for non-employed members. In addition to private health-care options however, a healthcare plan is also available through the ASSE, the public healthcare system, by making monthly payments like a *mutualista*. The public system in this case is available to anyone, regardless of age and pre-existing conditions.

Citizens in Uruguay can thus opt from a variety of healthcare options as those who do not have the conditions or cannot afford treatment in the private sector choose the public healthcare system instead.

The presence of the *mutualista* model puts less pressure on the public healthcare system in Uruguay, resulting less overcrowded and with improved quality over the years, becoming to acceptable quality. Also, the government has been able to allocate more funds towards the improvement of its infrastructures. Service standards of the public hospitals in Montevideo seem to be generally lower than those in a mutualista but some citizens still use public services to have access to medications that are not available with a *mutualista*. The university hospital (part of ASSE), which provides care in almost every medical specialty, has top medical specialists for specific diseases or conditions. Outside Montevideo, ASSE hospitals often have a better service reputation, with often more citizens using the public option. The IAMCs are independent organizations that compete with one another. The State exercises some legal and technical control over them; however, they do have a high degree of autonomy. The greatest constraint to that autonomy is that the State sets a price ceiling on monthly premiums. This might force some of them to recover the difference by charging higher prices for other ser-

The USA is the main supplier of medical devices in Uruguay, with 31% of the market share, followed by China (11%) and Germany (9%). Other important suppliers, but with less than 5% of the market share, are Switzerland, Costa Rica, Ireland, Argentina, Mexico, Japan and Brazil.

vices outside the "basic package". In addition, in the years, waiting times have become longer, although manageable. The IAMCs are scattered throughout the country.

IAMCs membership premiums are the principal component of health financing in Uruguay either: (i) paid by individuals; (ii) paid through a collective agreement; or (iii) paid by social security. Other sources are member's copayments for the use of services (11%) and revenues from the sale of services and other sources (14%).

There is no direct public financing for the private sector, social security administers employer and worker contributions and pays for insurance in the private sector. The IAMCs' involvement with the public sector takes place, especially, through the purchase and sale of services. There is also coordination in areas related to health promotion and disease prevention through ad hoc commissions. The IAMCs continue to be the dominant model in Uruguay however there is a growing trend towards "private medical care" institutions, which are commercial health insurance companies.

To a large extent, with the implementation of the Integrated National Health System, social segmentation has been overcome with regard to exercising the right to health, and there have been advances, though still insufficient, in reducing fragmentation. Nevertheless, this process is at a crucial juncture in terms of sustainability. The outcome will depend on how issues of funding, provision, care model, quality, leadership and overall regulation of the system are resolved. The incorporation of groups that were not part of FONASA in 2016 (the military, police officers, municipal personnel and people without formal employment covered by the ASSE) constitutes a fundamental challenge, both for the financial sustainability of the insurance and for realizing the guiding principles of the Integrated National Health System.

Medical Market - Uruguay imports almost all its medical equipment, as there is little local industry. Major market opportunities are for new, technologically advanced supplies and equipment. Medical device imports amounted to $80 million in 2018, 3% directly by the government and 97% by more than 400 companies from the private sector (including hospitals, laboratories and clinics). **Future demand should remain stable as, compared to other Latin American countries, Uruguay has an aging society with 15% of the population being 60 years of age and over.** Uruguay has a national policy on health technology that is part of the National Health Program. The National Health Technology Management Unit is the department which plans medical equipment allocation. This department must approve any incorporation of new technology, either for the public or private sector, considering the scientific information available, the need for its use and the rationality of its location and functioning.

The USA is the main supplier of medical devices in Uruguay, with 31% of the market share, followed by China (11%) and Germany (9%). Other important suppliers, but with less than 5% of the market share, are Switzerland, Costa Rica, Ireland, Argentina, Mexico, Japan and Brazil. Most international medical device and technology providers do not have subsidiaries in Uruguay and work with local representatives or distributors which serve both hospitals/clinics pharmacies/wholesalers shops etc. Uruguayan customers are increasingly purchasing through internet, mainly from the eCommerce platform Mercado Libre. In order to export a medical device to Uruguay, the device, needs to be registered with the Uruguay Ministry of Public Health (MoPH) by a local representative (i.e. manufacturers, representatives, distributors and/or importers of the products). The import company must be registered at the MoPH. Importation of medical equipment of high or medium size needs prior authorization granted by the same entity and needs approval to be sold in the local market. The registration can be done either by the manufacturer or the distributor, it takes around 12 months, expires every five years and is renewable with payment of a fee.

Uruguay is a smaller market, compared to other Latin American countries, but with high purchasing power and very little local competition. It has a favorable import climate and could be an interesting hub location for the export to other countries within South America. Although Uruguay is member of Mercosur and there is a common external tariff (CET) applicable to imports from countries outside Mercosur, the country has its own tariffs on certain products, called exceptions to CET. These exceptions are applicable to medical devices and represent a reduction to the common external tariff and therefore to the importing costs on these products.

Useful contacts:

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- Ministry of Public Health (MoPH) www.msp.gub.uy
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MARKET OUTLOOK

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Israel's Health Efficiency With Limited Resources

Israel is a small country, with just over 8.7 million citizens and a modern market-based economy with a comparable level of gross domestic product per capita to the average in the European Union and a substantial high technology sector.

It has a compulsory national health insurance (NHI) system that provides for universal coverage. Every citizen or permanent resident of Israel is free to choose from among four competing, non-profit-making sickness funds, called health plans *"Kupot Holim"*, which are charged with providing a broad package of benefits stipulated by the government. The system is financed primarily via a combination of a health-specific payroll tax and general taxation. The four Health plans (HPs), Clalit, Maccabi, Meuhedet and Leumit are both insurers and providers of services.

Overall, the Israeli healthcare system is quite efficient. Health status levels are comparable to those of other developed countries, even though Israel spends on average a relatively low proportion of its gross domestic product on healthcare (less than 8%) and nearly 40% of that is privately financed. Factors contributing to system efficiency include regulated competition among the health plans, tight regulatory controls on the supply of hospital beds, accessible and professional primary care and a well-developed system of electronic health records (95% of doctors). **Israeli healthcare has also demonstrated a remarkable capacity to innovate, improve, establish goals, be tenacious and prioritize – all of which has enabled it to achieve good health outcomes with limited resources.** Israel's capacity to improve has been highlighted by its documented and rapid improvements in quality of care in the community. Crucial has been the commitment of the HPs to improve the health of their members, the HPs' capacity to translate strategy into action and their close working relationships with their professionals.

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Medical innovation and biotechnology are highly developed. In 2008, Israel opened its first Bio Park – a medical research orientated Technology Park at Hadassah Medical Organization's Ein Kerem campus comprising Hadassah Hospital and the Hebrew University's schools of medicine, dentistry, pharmacy, nursing and public health.

Israel is undergoing numerous health reform efforts. The health insurance benefits package has been extended to include mental healthcare and dental care for children and a multipronged effort is underway to reduce health inequalities.

One of the major challenges currently facing Israeli healthcare is the growing reliance on private financing. The increasing growth of private expenditure has raised serious concerns about a shortage of resources in the public system and rising inequalities. Efforts are currently underway to expand public financing, improve the efficiency of the public system and constrain the growth of the private sector.

Supplementary Insurance - Even though the Israeli NHI benefits package is broad compared to most OECD countries, the voluntary health insurance (VHI) market is one of the biggest, with about 87% of Israel's adult population covered with health plan VHI (supplementary insurance offered by the HPs to all of their own beneficiaries) and 53% covered with commercial insurance (offered by commercial insurance companies to individuals or groups). **Household spending on VHI has increased markedly over the past decade. Out-of-pocket (OOP) expenditures are also high relative to many other countries (26% of total health expenditure, compared to an EU average of 21%) and have increased somewhat over time.** There are large differences in households' expenditures on health by income quintile, which indicate the existence of inequalities.

Crucial has been the commitment of the HPs to improve the health of their members, the HPs' capacity to translate strategy into action and their close working relationships with their professionals.

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Hot Topic

Coronavirus: Context, Numbers and Possible Therapies

Author: Luca Maria Pipitone
Biotechnology

It is November 2002 in the coastal province of Guangdong (China), when a man comes to the first aid with flu symptoms and dry cough. An ordinary situation in the hospital which normally resolves in a short time, without serious consequences. In this case, however, the patient does not seem to react well to the drugs, he appears immediately stunned and confused, with a cough that worsens violently compromising his respiratory capacity up to lowering the oxygen saturation to a critical level. Intubation remains the only decision that doctors can take, and a chest X-ray is immediately arranged to understand the cause of this atypical pneumopathy. From the examination, infiltrates in both lung lobes are highlighted; therefore, the transport in intensive care follows the diagnosis of an unknown origin pneumonia. Two days later, the doctor and the nurse who assisted the patient, begin to feel feverish and the next day their symptoms worsen. Laboratory tests conducted on the first patient show that the cause of this pathology is a Coronavirus, more specifically an unknown strain that shortly after will be called *SARS-CoV (Severe Acute Respiratory Syndrom by CoronaVirus*). This virus, responsible for an often-severe respiratory syndrome (*SARS*), spread in 33 countries between November 2002 and July 2003, infecting 8,000 people and recording about 800 deaths, with a mortality average rate of 10%. According to the *WHO* data, for the over 65s the mortality of the virus exceeded 50%, for the under 24 it was less than 1% while in the age groups 24-40 years and 45-

64 years it was established respectively at 6 % and 15%. This great variability in percentages, all in all expected, can be explained both by the greater efficiency possessed by the immune system of young individuals, and by the presence of previous pathologies that often represent the main risk of clinical complications in the elderly. In any case, the numbers recorded by the *SARS-CoV* epidemic are certainly not comparable to

To date, SARS-CoV-2 has infected nearly two million people worldwide, killing over 110 thousand of them, figures that have now reached those recorded during the 2009 H1N1 flu pandemic

those we are observing in these days with the current *SARS-CoV-2* pandemic. Although both viruses belong to the *Coronavirus* family and possess a high genetic similarity degree, epidemic waves follow different courses.

To date, *SARS-CoV-2* has infected nearly two million people worldwide, killing over 110 thousand of them, figures that have now reached those recorded during the 2009 H1N1 flu pandemic, with its more than 100 thousand deaths (according to *WHO* between 100 to 400 thousand only in the first year).

In short, history repeats itself, as it has been repeating for centuries now. Suffice it to say that in the twentieth century there were 3 flu pandemics, including the Spanish flu of the '20s which, with about 30 million deaths, was one of the most devastating pandemics in history. Even though particularly aggressive viruses have sometimes appeared, the human species has always been able to defend itself by developing powerful defense mechanisms over the evolution course. When an external agent (such as the virus) manages to come into contact with human cells, the immune system responds immediately and powerfully with a nonspecific series of actions that have the purpose of suppressing the pathogen and alerting the whole immune system of the threat encountered. This innate immunity represents the first line of defense that the body possess, but not the only one. In fact, as soon as this generic response is expressed, some specialized cells leave the infection site to reach the lymph nodes where they activate the second line of defense, adaptive immunity. The latter constitutes the greater efficacy and selectivity defense possessed by the human body against pathogenic species, such as *SARS-CoV-2*. This immune response can count on a powerful and extremely specific molecular weapon: antibodies. These small proteins, made to measure to challenge the infectious virus, ripen within a few days and, once ready, cover the entire surface of the viral particle, neutralizing and eradicating the threat itself. Unfortunately, the antibodies, to be ready to perform their function, can take up to a couple of weeks and, before then, the body can only count on the innate response. This is where the problems begin.
If on the one hand this type of defense is immediate, on the other hand it is non-specific and therefore does not distinguish between the parasite and the host organism cells.

Vaccines are perhaps the most awaited solution since they are able to stimulate the adaptive response and therefore provide definitive immunity, but they have a weak point: they take a long time to be developed and produced on a global scale.

In the specific case, moreover, *SARS-CoV-2* further aggravates the situation by excessively stimulating, especially in the elderly, the inflammatory cytokines production pattern.

This leads to intense inflammation of the involved tissues which, in the case of *Covid-19,* are the pulmonary alveoli. When the tissue is inflamed edema is formed which, pouring into the alveoli themselves, compromises the patient's respiratory capacity up to the point that mechanical respiration is necessary. When edema is excessive, despite the help of respirators, the alveolar gas exchange surface is compromised to levels that are no longer compatible with life. In these cases, unfortunately, nothing can be done.
During an epidemic, human losses are inevitable and always dramatic, however we are part of the terrestrial ecosystem and towards us, as well as towards all other life forms, nature is brutal. However, unlike other living species, we have medicine. A great tool that in this case can provide help on at least two fronts: vaccines and antiviral therapies. However, the medicine is not perfect and takes time to provide effective treatments.
Vaccines are perhaps the most awaited solution since they are able to stimulate the adaptive response and therefore provide definitive immunity, but they have a weak point: they take a long time to be developed and produced on a global scale. For this reason, biotech industries need to simultaneously launch several test versions of the vaccine in order to increase the chances of obtaining an effective version, within a reasonable time. As reported by a Science article, from March 16 the *Moderna* biotech industry is already testing an experimental version (based on mRNA) on 45 volunteers; at the same time, *China's CanSino Biologics*, with the participation of the Chinese military's Institute of Biotechnology, has launched a small clinical trial to evaluate the safety and ability of its vaccine to trigger an adequate immune response. Pietro Di Lorenzo (CEO of the Italian biotech *Advent-Irbm*), in collaboration with the *Jenner Institute* of the *Oxford University,* has instead announced that by the end of April he will launch a trial on 550 healthy volunteers and that, if phase I is successfully passed, he plans to make the vaccine usable for healthcare professionals and security forces as early as September. Meanwhile, other companies are testing their versions, each with its own technology (from mRNA to the protein subunit, via non-replicating vectors), thus offering an extremely broad spectrum of options. Both *Moderna* and *Johnson & Johnson* have said that if everything goes according to plans, they will be able to launch trials with around 5,000 individuals by the end of autumn and, in the following two months, to determine if the vaccine works. For drugs, however, the situation is simpler. If the development of a new specific antiviral for *SARS-CoV-2* presents the same problems as vaccines, at the same time in the hope to find one, among the drugs already spread on the market, which shows a good efficacy against this *Coronavirus*. In fact, hearing the news, it would seem so.

A couple of weeks ago, the Italian virologist *Roberto Burioni* has announced that a study, conducted at San Raffaele Hospital in Milan, showed promising results.
The in vitro efficacy, against viral replication of *SARS-CoV-2*, of a drug used in the 1950s for the treatment of malaria, *Plaquenil*, was assessed and demonstrated. A work from 2005 had already shown its in vitro ability to inhibit the replication of the SARS virus, cousin of the current Coronavirus, and it is thanks to this study that the molecule was taken into consideration and tested in the laboratory. This does not mean that

the drug is really effective in infected patients, but it is certainly a significant step that leaves room for some optimism.

It is hoped that subsequent clinical tests will give concrete results but, if this does not happen, there are still other promising molecules being tested: the monoclonal antibody *Tocilizumab* (used in the treatment of rheumatoid arthritis); the anti-viral *Remdesivir* which has shown the ability, similar to *Plaquenil*, to inhibit the replication of *SARS-CoV-2 in vitro*; the antiparasitic *Ivermectin*, already in use to combat scabies but which has also proven effective against some viruses such as *HIV, Dengue, West Nile* etc. Finally, even if it does not fall into the "drugs" category, the plasma treatment, deriving from donors previously cured of the infection (and therefore rich in neutralizing antibodies), has shown the ability to mitigate clinical symptoms in just three days. In short, an interesting range of therapeutic options that give hope and, quoting the words of the Italian virologist: "I would not be surprised if good news arrived in the coming weeks".

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Special Orthopedics from the web

Study Shows Disparities in Outpatient Orthopedic Care

Racial/ethnic minorities, people with lower incomes, and other groups are less likely to receive office-based care for common musculoskeletal conditions, reports a nationwide study in Clinical Orthopaedics and Related Research® (CORR®), a publication of The Association of Bone and Joint Surgeons®. The journal is published in the Lippincott portfolio by Wolters Kluwer.

Some of the same characteristics are linked to higher use of more-expensive emergency department (ED) care for orthopedic conditions, according to the new research by Nicholas M. Rabah and colleagues of Case Western Reserve University School of Medicine, Cleveland. "It is imperative for orthopedic surgeons to continue to collaborate with policy makers to create targeted interventions that improve access to and use of outpatient orthopedic care to reduce healthcare expenditures," the researchers write.

Patient factors linked to lower use of outpatient orthopedic care, higher use of ED care

The study included data on more than 63,500 patients receiving office-based or ED care for common orthopedic conditions between 2007 and 2015, drawn from the nationally representative Medical Expenditure Panel Survey. The study focused on eight categories of non-emergent musculoskeletal conditions--for example, osteoarthritis, fractures, and strains and sprains. (The study did not include spinal disorders, which can be treated by either neurosurgeons or orthopedic surgeons).

Several sociodemographic factors were linked to lower use of office-based care for musculoskeletal conditions. After adjustment for other characteristics, black and Hispanic patients were about 20 percent less likely to receive outpatient care, compared to white patients.

Use of outpatient orthopedic care was also lower for Americans with household incomes below the federal poverty line, without at least a high school education, and without private insurance (either on public insurance or uninsured).

In contrast, patients with lower income, lower education, and public insurance status were more likely to receive ED care for these non-emergent musculoskeletal conditions. Hispanic patients also were more likely to receive ED care, although black patients were not. For most of the eight conditions studied, expenditures were significantly higher for ED care than for office-based care.

There are well-documented disparities in healthcare use in the United States. Musculoskeletal disorders are a major health burden, affecting more Americans than either cardiovascular or respiratory disease and accounting for more than $162 billion in healthcare spending per year (based on 2012-14 data).

Office-based care is thought to be the most appropriate site of care for common musculoskeletal conditions. The new study is one of the first to link specific sociodemographic factors to disparities in the use outpatient orthopedic care.

Multiple factors may contribute to the observed disparities, including differences in health literacy, beliefs about health and disease, and lack of social support and resources to recognize diseases and make informed decisions.

Mr. Rabah and coauthors conclude: "Orthopedic surgeons should focus on improving communication with patients of all backgrounds to help them identify musculoskeletal symptoms that warrant office-based orthopedic care versus ED care."

Musculoskeletal disorders are a major health burden, affecting more Americans than either cardiovascular or respiratory disease and accounting for more than $162 billion inhealthcare spending per year (based on 2012-14 data).

Source:
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Earlier Falls Predict Subsequent Fractures in Postmenopausal Women

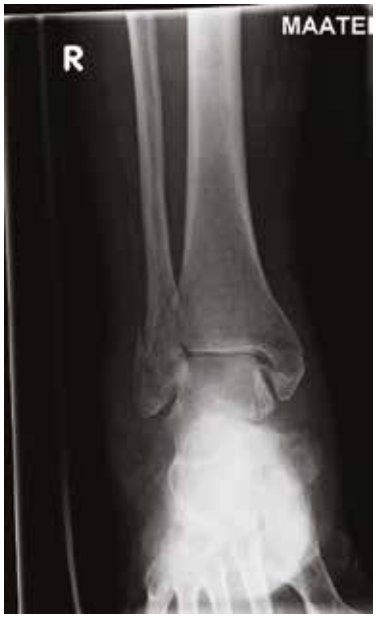
UNIVERSITY OF EASTERN FINLAND

Press Release, 9 Jan. 2020 - The risk of fracture in postmenopausal women can be predicted by history of falls, according to new findings from the Kuopio Osteoporosis Risk Factor and Prevention Study (OSTPRE) at the University of Eastern Finland. Published in Osteoporosis International, the study is the first to follow up on the association between history of falls and subsequent fractures.

Falls in the elderly are common, resulting in fractures and other serious health consequences. In people aged 65 years or over, falls are the leading cause of injury-related death and hospitalisation. Fall-induced injuries cause a substantial economic burden worldwide. Conducted at the University of Eastern Finland and Kuopio University Hospital, the study comprised 8,744 women whose mean age at the beginning of the study was approximately 62 years.

The study started in 1999 with an enquiry asking the study participants about their history of falls in the preceding 12 months. The researchers wanted to know how many times the study participants had fallen, what had caused the falls and how severe the falls had been; i.e., did they lead to injuries that required treatment. A follow-up enquiry was conducted in 2004, asking the study participants about any fractures they had suffered during the five-year follow-up. The self-reported fractures were confirmed from medical records.

Nearly one in five women reported a fall during the preceding 12 months. The risk of fracture was 41% greater in women who had reported a fall in comparison to those who hadn't. Slip falls were associated with a greater risk of subsequent fracture than falls caused by other reasons. Furthermore, injurious falls predicted future fractures: the risk of fracture was 64% higher in women who had experienced an injurious fall. In particular, earlier injurious falls predicted other fractures than those typically associated with osteoporosis.



Credit: Heikki Kröger

Research article: N. Afrin, R. Sund, R. Honkanen, H. Koivumaa-Honkanen, T. Rikkonen, L. Williams, H. Kröger. A fall in the previous 12 months predicts fracture in the subsequent 5 years in postmenopausal women. Osteoporosis International, published 19 December 2019. https://doi.org/10.1007/s00198-019-05255-5

Source:
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The risk of fracture was 41% greater in women who had reported a fall in comparison to those who hadn't. Slip falls were associated with a greater risk of subsequent fracture than falls caused by other reasons.

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

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Calendar

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Discover all worldwide exhibitions at
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SEPTEMBER

10-13 09 2020

IDEX 2020

17th International Dental Equipment and Materials Exhibition

Istanbul - Turkey

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OCTOBER

01-04 10 2020

SIRM 2020

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Rimini - Italy

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NOVEMBER

01-03 11 2020

ARM 2020 - Annual Radiology Meeting in UAE

Dubai - United Arab Emirates

Organized by: Index Conferences
& Exhibitions

General information:
Andrea Barretto
Email: info@radiologyuae.com
(Operations Manager)
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Venue: Dubai International Convention &
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08-11 11 2020

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Fax: +1 312 222 1310
Venue: McCormick Place
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www.hcpechicago.com

29/11-04/12 2020

RSNA 2020 - The 106th Scientific Assembly and Annual Meeting

Chicago - USA

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Website: www.rsna.org
Venue: McCormick Place
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DECEMBER

07-10 12 2020

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Moscow - Russia

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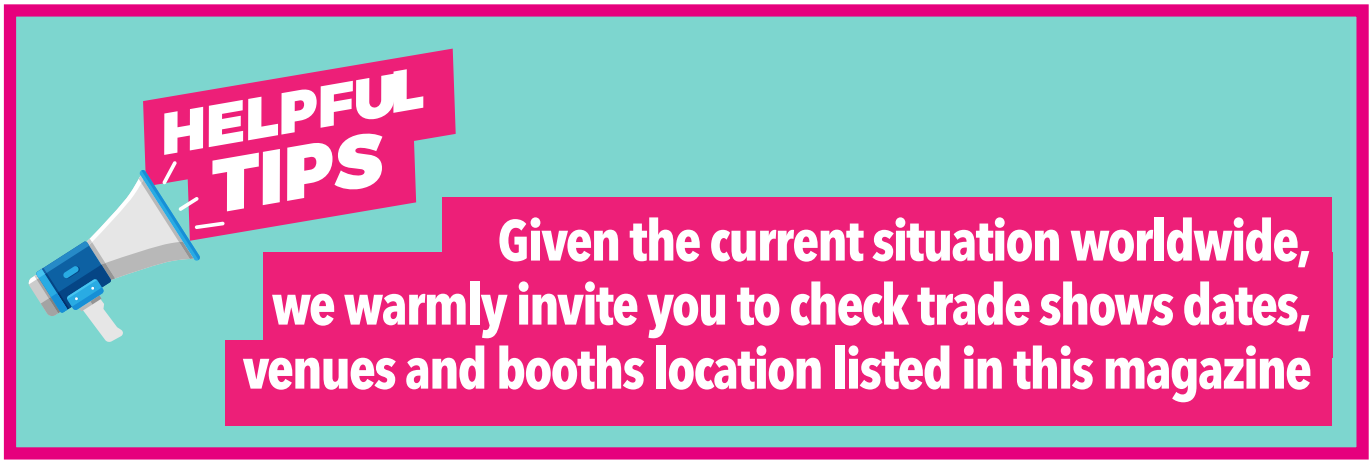

DECEMBER

16-19 12 2020

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Medical Equipment Fair and Integrated Health Services, International Health Congress and Symposium

Istanbul - Turkey

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www.expointurkey.org/istanbul-health-expo-2020

FEBRUARY 2021

01-04 02 2021

Arab Health 2021

Dubai - United Arab Emirates

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Venue:
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New Delhi - India

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Venue:
Pragati Maidan
New Delhi
India

www.medicalfair-india.com

27/02-01/03 2021

MIDO 2021 - Eyewear Exhibition (Optics - Ophthalmology - Optometry)

Milan - Italy

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Millions of Refugee and Displaced Children in Overcrowded Camps as New Coronavirus Spreads Globally

Save the Children aims to prepare communities with weak health systems

Save the Children®

Washington, DC (March 17, 2020) – Vulnerable children and their families living in informal settlements such as refugee and displacement camps, and areas with already weak health systems, cannot be forgotten as the world fights to contain the coronavirus outbreak, Save the Children warns.

Around the world, there are more than 12 million child refugees and some 70 million people have been forced to flee from their homes, many of whom are currently living in overcrowded conditions with limited or no access to healthcare. Refugees and forcibly displaced children are already vulnerable to infectious diseases in a number of ways, including reduced access to healthcare, water and sanitation systems and potentially weakened immune systems.

Save the Children teams across the world are preparing for potential outbreaks in countries with weakened health systems, fragile contexts or a limited capacity to respond due to other ongoing crises, such as conflict or natural disasters. In Cox's Bazar in Bangladesh, home to the largest refugee settlement in the world, there is currently no system in place to screen or test for COVID-19 and there are no intensive care units for the nearly 1 million refugees, half of whom are children. With freedom of movement severely restricted and cramped conditions also compromising people's ability to self-isolate, the virus could prove catastrophic.

> "COVID-19 is a global health crisis which requires a coordinated global response," said Dr. Zaeem Haq, Save the Children's Global Medical Director.

"Even though at present there are no confirmed cases of COVID-19 in Cox's Bazar, we've kept an isolation unit with 15 beds in our primary healthcare center in one of the camps specifically for isolation as needed," said Dr. Shamim Jahan, Deputy Country Director for Save the Children in Bangladesh. "If COVID-19 should spread widely, we'd still be able to keep running our primary healthcare center alongside the isolation unit which is crucial to saving lives but there is a risk we could become overwhelmed. The center normally treats children for pneumonia and offers pregnant women with vital maternal healthcare services."

In Idlib, Syria, where conflict has forced nearly a million people to flee into inhumane living conditions in camps stretched far beyond capacity, self-isolation would be practically impossible during an outbreak of coronavirus with potentially devastating consequences for families living through the tenth year of the Syrian conflict.

In Sub-Saharan Africa, which hosts more than a quarter of the world's refugee population, cases are rapidly being confirmed across the majority of countries. With just 0.2 doctors per

1,000 people, it's the region with the fewest number of medical professionals per capita in the world–putting both refugees and host communities at risk as the virus spreads. By contrast, East Asia and the Pacific, where the vast majority of confirmed cases of COVID-19 have occurred, has 1.6 doctors per 1,000 people.

Save the Children runs major sanitation and hygiene programs across the globe and is working with health teams on the ground to share COVID-19 prevention messages like handwashing and self-isolation. These actions will ultimately support children's ability to prevent infection and resilience to overcome it if they become ill, but more support is needed to bring these actions to scale.

"COVID-19 is a global health crisis which requires a coordinated global response," said Dr. Zaeem Haq, Save the Children's Global Medical Director. "It is in all of our interests to ensure we are doing everything to prevent further spread of the virus and this is especially significant in refugee and displacement camps where isolation and testing pose significant challenges. Children already bear the burden of many of the world's infectious diseases including pneumonia, malaria and cholera and families already struggle to get adequate health care."

Save the Children is calling on international donors and national governments to scale up investment in health systems to allow countries to respond to the outbreak without compromising other health services, and to roll out communications campaigns within refugee populations to stop new infections from occurring.

Save the Children believes every child deserves a future. Since our founding 100 years ago, we've changed the lives of more than 1 billion children. In the United States and around the world, we give children a healthy start in life, the opportunity to learn and protection from harm. We do whatever it takes for children – every day and in times of crisis – transforming their lives and the future we share. Follow us on Facebook, Instagram, Twitter and YouTube.

Source: https://www.savethechildren.org/us/about-us/media-and-news/2020-press-releases/coronavirus-threatens-millions-in-overcrowded-refugee-camps

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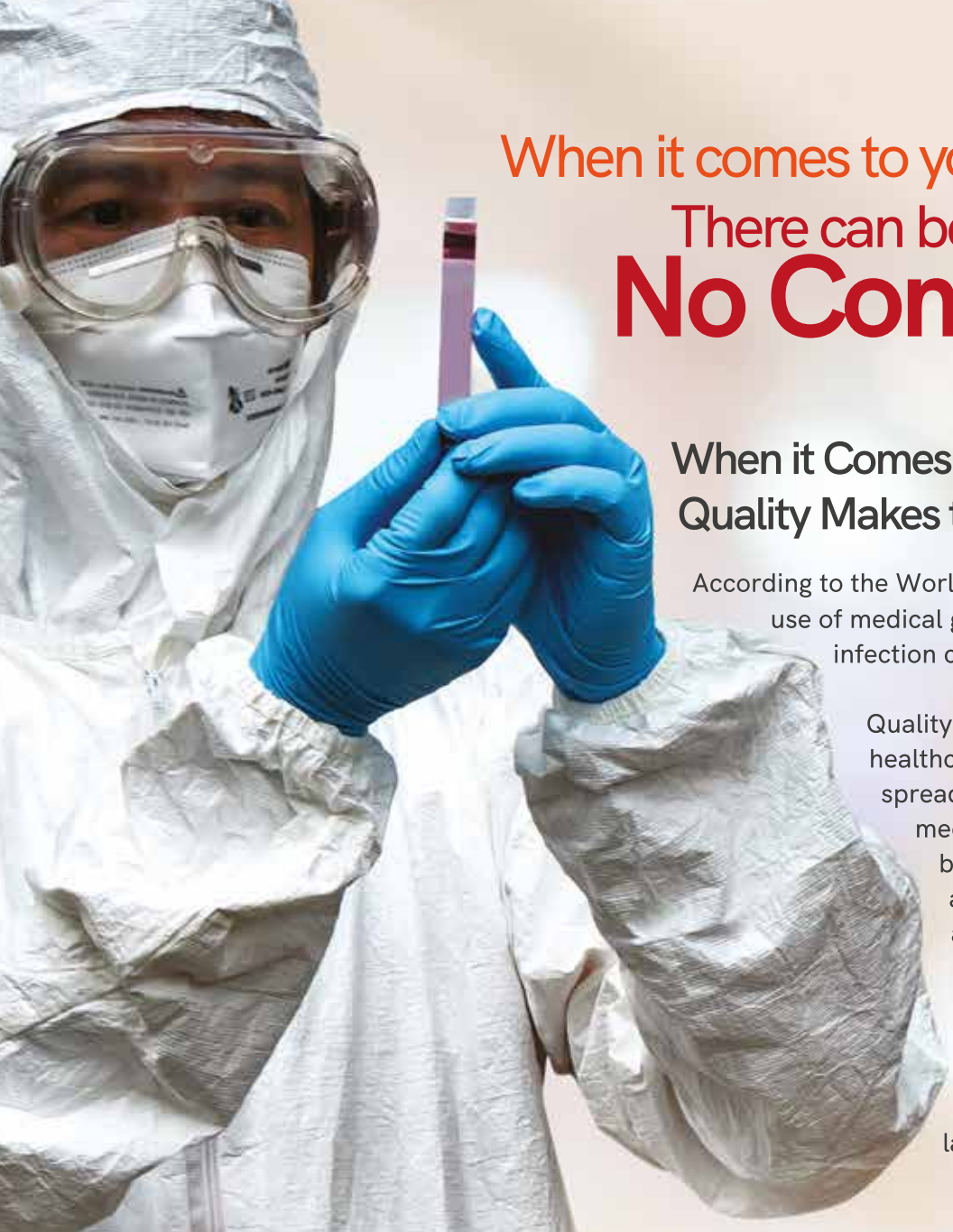

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