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# Print is Powerful

Over 60,000 hard copies per year, mailed to the medical industry, covering 189 countries around the world; *Infomedix International* has engaged medical distributors and manufacturers since 2002. Over twenty years of much appreciated insights on medical markets, trade exhibitions and congresses, medical products, novelties, innovation, and latest news. Meant to guide businesses in increasing their product distribution worldwide, we receive, for each printed edition, impressive feedback from our readers, and customers, of the medical industry.

Yes, because at first glance, some of you might think that in today's digital era print media may be "obsolete" and unnecessary and, focusing solely on social media, pay-per-click, website optimization and other online media may be more than enough.

Think again. Print media could be the most powerful branding tool that companies are missing! Over decades, print has inevitably declined, but it has refused to disappear, and with good reason. It works. The response rate of direct mail is 37% higher than email marketing and, somewhat surprisingly, young people are implicitly trusting print more than digital content.

Print media is physical and tangible. Handling a physical object has an element of sensory input. The act of physically interacting with the paper of a book, or magazine, stimulates the memory section of your brain more than a screen can. While digital material is swiftly scanned, paper-based reading is more deliberate and slower, resulting in higher rates of comprehension and memory. Websites are often skimmed in as little as 15 seconds per visit while, printed material leads to higher engagement. On average, a consumer spends 43 minutes reading a magazine, indicating that conventional print media ads are more likely to leave a lasting impression, as readers are already in reading mode, and hence result in increased sales. That may explain why neuroscientists discovered that consumers are 70% more likely to recall your brand after seeing it in a paper ad than after seeing it in a digital ad. Other research using brain scans discovered that watching physical ads activates different areas of the brain than viewing digital ads and that viewing them involves greater emotional processing, which is critical for memory and brand connections.

Even just having business cards to hand out to people increases the chances of them engaging with your brand or services. I follow a lot of people on social media, and I won't be looking through my following list after a networking event to find someone I just met, but I am much more likely to remember and engage with someone's brand if I have a physical business card.

In addition to the sensory aspects, there is something to be said about the feeling of legitimacy that comes from print. Print ads have a longer shelf life; they remain until the content they are linked

to has its value. You are able to put the printed piece down and comeback at any time to resume your reading. As marketers, we like this! A printed piece placed on the corner of a desk will be there day after day until it is picked back up to be viewed. Furthermore, print media is widely considered more credible than digital media. People who subscribe to magazines and newspapers do so for a reason — they believe the information contained in the publication is accurate, credible and provides them with some benefit. This is especially true for businesses that focus in niche markets, with a target audience, so you get a higher return on investment from magazine ads than digital ads. Even today, 61% of people still trust newspapers over online ads.

In today's digital age, it's easy for your target market to become saturated with online ads and email marketing. Online ads are avoided at all costs, most digital ads are never even looked at, and when given the option, users close or skip the ad as fast as possible. In 2020, an estimated 42.7% of all internet users had an ad block plugin installed. Differently, in magazines, ads are part of the culture, they are expected, and they are part of the magazine experience. I often find myself examining the ads in magazines and newspapers almost as much as I am reading the actual magazine contents. With the oversaturation of the digital branding and advertising space, there's less competition for printed material. Digital advertising is simply easier and less costly to do. Although it literally leads every single business to compete for the top spots, and usually the ones with the most money win those top spots.

If you are on the way to think that print is dead. Think again. It has the highest engagement, highest recall, and highest ROI. Creating a great library of printed materials and publications doesn't mean that you abandon your online marketing efforts. It's quite the contrary. Integrating your digital and print marketing makes your marketing campaigns stronger, more important, and more resilient.

Print is powerful. Ensure you include it in your marketing strategy! For this, we thank all our customers who place their trust in us.

**Baldo Pipitone**

CEO Infodent S.r.l.

[baldo.pipitone@infodent.com](mailto:baldo.pipitone@infodent.com)



# contents



**2** EDITOR'S NOTE

**4** PREMIUM HIGHLIGHTS

**8** HIGHLIGHTS

**16** FOCUS  
The Power of WATER

**24** MARKET OUTLOOK  
Austria's Reforming  
Healthcare

**34** AT A GLANCE  
AAOS Annual Meeting

**36** ORTHOPEDICS FROM  
THE WEB

**40** DISTRIBUTORS WALL

**44** CALENDAR

**46** NON PROFIT  
Sustainable Surgery for  
South Sudan's Kids



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## SW Safety

### EcoTek Biodegradable Nitrile Gloves

SW Sustainability Solutions Inc. is the trusted leader in manufacturing of biodegradable nitrile gloves. All of SW's branded nitrile gloves are produced with our EcoTek biodegradable formulation which has been tested under ASTM D5526 to biodegrade by 92.6% in 2.5 years in landfill environments.

This test has been tested to completion and not extrapolated for limited duration sample.

This allows SW to confidently stand behind its claim, and to be able to test the residue to ensure that it is non-toxic and will not contaminate the ground water. Verified and accredited by third party certification, it qualifies for zero waste initiatives for waste diversion from landfills. Help your customers do their part for the planet by partnering with SW Sustainability Solutions to help reduce the carbon footprint of nitrile gloves being used.



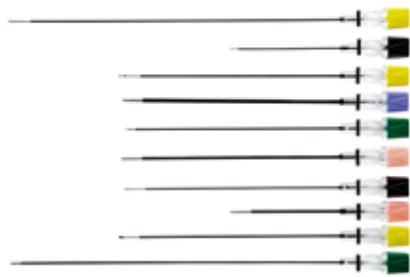
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## Spectra Medical Devices

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Spectra Medical Devices, LLC, a leading manufacturer of radiofrequency needles over the last 15 years, is supplying clinicians with millions of RF needles worldwide. We offer the largest variety of gauges, lengths, active tips, echogenic and lubricated RF needles in the industry in compliance with cGMP/QSR regulations. Our RF needle incorporates a tapered, double heat-sealed insulation aimed at minimizing patient trauma and increasing ease of advancement. Along with our extensive variety of RF needles, Spectra prides itself on the quality of our products, customer service and short lead times.

Since 1995, Spectra Medical Devices, LLC has been the world-leading manufacturer of pain management needles. Spectra's five state-of-the-art manufacturing facilities supply the world's largest procedural kit manufacturers, hospitals, care facilities, and individual clinicians around the world. Spectra needles are available with our industry-leading Spectra Guide® echogenic properties for clear imaging and accurate positioning.



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# Status Medical Equipments

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Established in 1994, Status Medical Equipments India Pvt Ltd, an ISO 13485:2016 certified company, manufactures and exports Urological Medical Equipment such as Uroflowmeter, Urodynamic Measurement System, Pneumatic Lithotripter, Holmium YAG Laser Lithotripter, Peristaltic Infusion Pump etc.

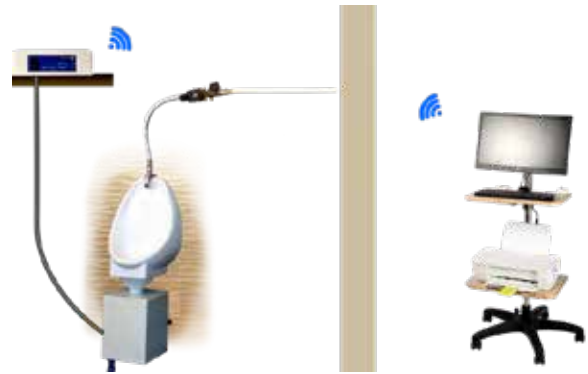
One of our flagship products is FlowComp-IoT, a self-cleaning wireless uroflowmeter with IoT technology.

- o US-patented self-cleaning technology
- o US-FDA registered device
- o The most hygienic and hassle-free operation
- o Wireless operation

- o Application based software allowing access from any smart device
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- o User access management
- o Easy sharing of test reports

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## moviplan iC

the tailor-made digital X-ray system



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premium highlights

COMPANIES LOOKING FOR DISTRIBUTORS

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## ITALRAY

Since 1974 for your X-Ray Solutions!



Italray is an Italian company that designs, manufactures and sells digital x-ray systems all over the world, combining innovation and tradition since 1974 to offer its customers a wide range of reliable and competitive 100% MADE IN ITALY products.

Our mission is to take care of our products and clients in every phase of a complete X-Ray Experience, from product design to the placing on market, responding to ISO 13485 Standards and with products compliant to EU Regulation (MDR 2017/745).

We provide solutions for the main areas of radiology, from

Mobile DR to Digital Radiographic and Radio-Fluoro Rooms, Digital Mammographs with Tomosynthesis and C-Arms with Flat-Panel detectors.

The company core business is strongly focused on Digital X-ray Imaging, also thanks to the proprietary image acquisition and processing software.

We are present in more than 70 countries worldwide with thousands of installations, and with a distribution network growing every day!

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# THE START OF A NEW ERA FOR SILFRADENT STEAM CLEANERS

AFTER 25 YEARS, THE EV1 SJ IS REPLACED BY THE NEW EV 5



The **EV 5** has a clean and modern design, with a completely stainless-steel structure which guarantees its durability over time and which requires only simple routine maintenance precautions. Among the outstanding features, this new model also boasts an external contact resistance: an innovative, high-performance, and long-lasting heating system, without electrostatic currents that can alter the ceramic structures.

Not only performance, but also convenience: modern technologies guarantee the highest quality at unbeatable prices, making it a reliable and accessible product for all professionals in the industry.



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Twenty-five years have passed since the launch of Silfradent's very first steam cleaner, the EV1 SJ, which over the years has become increasingly known and appreciated all over the world, becoming, thanks to its characteristics, a reliable companion and ally for an ever-growing number of professionals.

Today, after more than two decades of service, the EV1 SJ finally finds a worthy successor which becomes part of the "Evolution" family, a line designed to satisfy all professional needs surrounding cleaning and decontamination.

The **new EV 5 steam cleaner** thus enters the market, the result of technological evolution, scientific research and the experience gained by the Silfradent technical team.



EV 5 | The new Silfradent EV 5 steam cleaner, the result of innovation and of over 25 years of experience - 5 bar with manual loading



## BMI

### JET DR: Our motorized digital radiographic unit

JET 32 PLUS DR is supplied with a wi-fi 35x43cm flat panel detector (brand: Canon) and a powerful and versatile Workstation, also battery-powered, through which the operator can set the generator for the acquisition of the images along with their visualization, post-processing and manage the DICOM connectivity as well.

Charging the battery pack is extremely easy and quick with a resulting motion autonomy of about 10km and an exposure autonomy of about 450 shots.

Come find out some more information on our website and feel free to contact us for more detailed commercial and pricing details!

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## General Medical Merate Calypso Series - Multifunctional DR Systems



DR range stretches from simple, particularly compact and rational configurations to more advanced systems with built-in programmable positioning, safely ensuring a large patient flow and delivering high-quality examinations.

Calypso series is a family of multifunctional DR systems that offers top quality results for general radiography imaging.

The integration of all systems with an acquisition workstation and digital flat panel detectors guarantees the instantaneous visualization of high-quality digital images, which can be optimised thanks to the sophisticated image processing features.

The high maneuverability is an asset for the intense rhythm of the emergency department.

The compact and solid structure provides flexibility and smooth movements, ensuring easy and fast patient positioning.

Calypso series accommodate any possible clinical request: in the context of overhead tube suspended and floor-based radiography systems, Calypso can be fully motorized with auto-positioning, motorized with auto-tracking, or manual.



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## IMS Giotto

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

Giotto Class S is a versatile system that can 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.

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- PHYTOGEL By HUCKERT'S®, dermatological solutions with plant-based formulas.

As part of an ECO-RESPONSIBLE approach, our laboratory is committed to marketing products that are risk-free for the operator, the patient, the equipment and the environment.

This is why we are present in various sectors of activity such as the medical sector (hospitals, doctors, gynaecologists, dentists,

veterinarians, etc.), community (daycare, retirement homes, medical and social centres, etc.), the food industry, the pharmaceutical industry, research laboratories, emergency services, etc.

Certified ISO 9001 and ISO 13485, we guarantee perfect traceability and reproducibility of our products.

Demands, reliability, safety, we protect the most precious thing of all: life.

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This new design significantly reduces the diameter of the wire harness creating more room for other parts. It gives the endoscope CCD' the ability to angulate and move with less stress on the camera than ever before.

We offer this service to endoscope repair companies and dealers worldwide.

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## Villa Sistemi Medicali

### Moviplan iC: the tailor-made digital X-ray system

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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## CEFLA

### NewTom GiANO HR

*NewTom's GiANO HR is one of the most innovative, high-performance 2D/3D devices available today. Available in 3 configurations, radiologists or dental surgeons can choose the most suitable version according to their needs, with the knowledge that technological upgrading is possible every step of the way.*

**3D Prime** configuration with a 10 x 8 FOV is ideal for applications in general dentistry, implantology, endodontics, gnathology and general orthodontics. **3D Advanced** configuration, thanks to a 13 x 16 FOV, extends the potential to the fields of dentistry and otorhinolaryngology (ENT), including examination of upper airways. 3D Professional configuration boasts an exceptional 16 x 18 FOV thereby giving access to a new dimension that includes applications for the entire dental-maxillofacial area and cervical spine.

#### **NNT software**

The powerful NNT software provides specific instruments and interfaces for different diagnostic applications: data acquired during scanning can be processed in just a few simple steps to produce 3D images with a resolution among the highest available on

the market. Low-dose protocols, SafeBeam™ technology and servo-assisted alignment always ensure low radiation doses for patient protection. A choice of three different emission levels lets users adjust patient exposure by taking into account the actual diagnostic needs, while the new 10" touch screen control panel makes workflow even more versatile and user-friendly.

**Exclusive features** include advanced ApT technology which improve every 2D image to ensure the best result for every projection. Patented algorithms for 3D reconstruction always lead to an optimal outcome. Low-dose protocols, using SafeBeam™ technology and servo-assisted alignment protect patient health, and the 10" on-board touch screen control panel featuring NewTom's powerful imaging software suite with specialist interfaces and tools, allows for user-friendly workflow and provides professionals with access to online assistance.

Unlike traditional sensors, the Cadmium Telluride (Cd-Te) Direct Conversion Detector, now available on NewTom GiANO HR, does not require the conversion of X-rays into visible light - as it is capable of sens-

Cone Beam 3D Imaging  
**NewTom**  
what's next

### GIANO HR DC III



ing it directly and converting it into precise, accurate digital signals. This enables extremely high resolution diagnostic images obtained at low X-rays doses.

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# Medical Taiwan 2023: Digital Healthcare, Innovation and Sustainability

## Sign Up Now and Explore Business Opportunities with Us in June!

Population aging is a global trend leading to increased demand for healthcare. Governments and companies worldwide are developing healthcare technologies for efficient and precise treatment and management of chronic and acute illnesses. Taiwan, a leader in medical technologies, has an exclusive advantage to develop a cross-field value chain with expertise in chip-making and ICT. Medical Taiwan, hosted by TAITRA annually in June, provides a platform for professionals in the healthcare industry to find supply chain partners and digital healthcare solutions from Taiwan's top-notch medical

device suppliers and smart healthcare companies.

Taiwan ranks first for the seventh year in a row, with a score of 86.43, according to Numbeo's "Health Care Index by Country 2022," a global crowd-sourced database of quality of life data.

The Taiwan government prioritizes the development of its medical industry, particularly in elderly care and technologies. It aims to make the home healthcare and well-being market worth more than US\$10 billion by 2025. In response to the latest industry trends and government policies, Medical Taiwan 2023

features a total of 250 exhibitors who will demonstrate their best on the following 5 themes: 'Digital Leap,' 'Supply Chain,' 'Innovation Force,' 'People-centric Future,' and 'All Age Healthcare.'

Visitors who see 'Digital Leap' may explore the latest solutions in the Digital Health and Smart Medical areas, where leading smart medical device makers such as Faspro, iXensor, dBio, QT Medical, Winnoz, Huijia Health, and ThinkCloud will showcase health detection analyzers, wearable stethoscopes, smart monitoring, cloud systems, and other cutting-edge technological products.







'Supply Chain' will feature an integrated procurement platform for clinic and hospital equipment, medical consumables, and medical components put together by the well-established MOTEX, CSD, Apex-care, D.C. MEDICAL, Nam Liong H&H, SIGMA-CARE, and Joson-Care. Industry associations including the Taiwan Medical and Biotech Industry Association and the Taipei Medical Instruments Commercial Association will also be participating with big delegations of member companies, showing what Taiwan has to offer to the world.

The 'All Age Healthcare' theme that centers around aged care/assistive devices and support technologies for elder people addresses the rising demand for the aging population, whereas the 'M-novator' is staged for the first time in this year's Medical Taiwan not only to underscore the importance of innovation but to facilitate exchanges between investors and healthcare service innovators via a variety of forums, pitches, and networking events.

The Future Pavilion is another highlight of the show that on one hand demonstrates how health promotion, personal health management, precision care, and medical care at home can be facilitated in the 'Home Healthcare Zone,' while the 'Sustainable Healthcare Zone' gives visitors a glimpse into how smart and digital applications and end-to-end medical services are practiced in a sustainable way, presenting a new healthcare business model as well as a vision of a 'People-centric Future.' Medical Taiwan will be held at the Taipei Nangang Exhibition Center, Hall 2 (TaiNEX 2) from June 8 to 10, 2023, and is the most important business matching trade show for Taiwan's medical device industry. TAITRA, with more than 60 overseas offices, will be inviting global industry players to visit the exhibition and will be enhancing connections with emerging markets that have huge demographic dividends and growth potential. The 'Health+ Conference' and a number of events, such as one-on-one procurement meetings,

will be held to share what's new in the industry and provide business opportunities for whoever visits the show. Register online right now and join us in exploring what's next in healthcare!

#### About TAITRA

TAITRA is a non-profit organization established by the Taiwanese government in 1970. Its objective is to promote Taiwan's foreign trade and facilitate business collaborations. TAITRA operates through a network of 5 local offices as well as over 60 offices worldwide, providing trade promotion, market research, education, and matchmaking services. TAITRA plays a crucial role in enhancing Taiwan's global trade presence and promoting economic development.

[www.taitra.org.tw](http://www.taitra.org.tw)

**MEDICAL  
TAIWAN**

# Focus

## CLIMATE CHANGE

As humans continue to pump more carbon dioxide and other greenhouse gases into the atmosphere, patterns of weather and water will change around the world. Droughts will become more common in some places, floods in others. Glaciers and snow will disappear in some areas, affecting the freshwater supplies to those downstream communities. These changes will combine to make less water available for agriculture, energy generation, cities, and ecosystems around the world.



# The Power of WATER

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There's nothing more essential to life on earth than water. If you're among the 9 out of 10 people on the planet, who have clean water around the clock, and a few steps away from you, in your bathroom or kitchen, consider yourself lucky. Hundreds of millions of people are not so fortunate, and their families pay the price daily.

There's nothing more essential to life on earth than water. Water covers 70% of our planet, and it is easy to think that there will always be plenty of it. Yet, fresh water—to drink, cook, bathe in, irrigate our farm fields with—is incredibly rare: only 3% of the world's water is fresh water, and two-thirds of that is found in frozen glaciers or otherwise unavailable for our use. As a result, over two billion people live in countries where water supply is inadequate and far too many people are dying of entirely preventable diseases because they lack access to safe water.

**771 million people lack access to safe, clean, water. That's 1 in 10 people on the planet. 4 billion experience water scarcity for at least one month each year. Inadequate sanitation is also a problem. 1.7 billion people – 1 in 4 – lack access to a toilet.** And things aren't getting better. On the contrary, water scarcity is getting worse due to the catastrophic effects of climate change, as well as the bad management of it. Since 1993, the United Nations recognizes the importance of addressing the global water crisis on World Water Day, which falls on March 22, each year. Since then, progress has been made in making clean water accessible — the number of people who lack access to clean water decreased from 1.1 billion in 2000 to 771 million in 2020. Yet, we are, right now, in the middle of a serious global water crisis, needing imminent action, as many of the water systems that keep ecosystems thriving and feed a growing human population have become stressed. Rivers, lakes, and aquifers are drying up or becoming too polluted to

use. More than half the world's wetlands have disappeared. Agriculture consumes more water than any other source and wastes much of that through inefficiencies. Climate change is altering patterns of weather and water around the world, causing shortages and droughts in some areas and floods in others. At the current consumption rate, this situation will only get worse. And ecosystems around the world will suffer even more. **By 2025, half of the world's population is projected to live in areas where obtaining safe water is difficult if not impossible, with people living in poverty feeling it first and worst.**

Water connects every aspect of life. Dysfunction throughout the water cycle is undermining progress on all major global issues, from health to hunger, gender equality to jobs, education to industry, disasters to peace. **Back in 2015, the U.N. member states committed to Sustainable Development Goal (SDG) 6, as part of the 2030 Agenda, with the promise that everyone would have safely managed water and sanitation by 2030. Right now, we are seriously off-track.** Billions of people and countless schools, businesses, healthcare centers, farms and factories are being held back because their human rights to water and sanitation have not yet been fulfilled. Nonetheless, correcting measures can still be taken to avoid the crisis to be worsening. There is increasing awareness that our freshwater resources are limited and need to be protected both in terms of quantity and quality. This water challenge affects not only the water community,

” There is a water crisis today. But the crisis is not about having too little water to satisfy our needs. It is a crisis of managing water so badly that billions of people – and the environment – suffer badly.”  
– World Water Vision Report

but also decision-makers and every human being.

**Whatever the use of freshwater (agriculture, industry, domestic use), huge saving of water and improving of water management is possible. Almost everywhere, water is wasted, and as long as people are not facing water scarcity, they believe access to water is an obvious and natural thing.** With urbanization and changes in lifestyle, water consumption is bound to increase. You and your family, businesses, schools, and communities can make a difference by changing the way you use, consume, and manage water in your lives. A lot of people believe problems like the water crisis are so big that they are permanent parts of life on this planet. They are not. The crisis is solvable, but right now! Many great global challenges are more solvable than we think—if we seek to empower the people who are facing those challenges and who have great capacity to solve them.

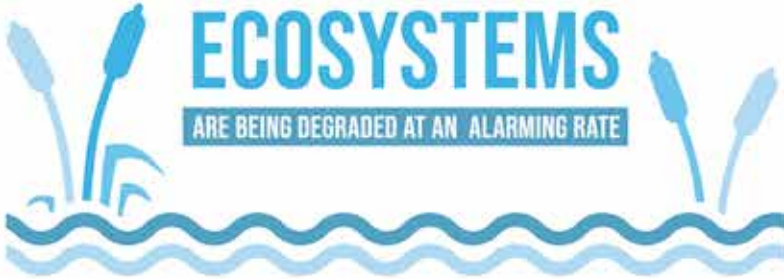




# ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

## THE WORLD'S WATER-RELATED ECOSYSTEMS

ARE BEING DEGRADED AT AN ALARMING RATE



OVER THE PAST 300 YEARS,

**OVER 85%**

OF THE PLANET'S WETLANDS  
HAVE BEEN **LOST**



FOR AT LEAST  
**3 BILLION PEOPLE,**

THE QUALITY OF THE WATER  
THEY DEPEND ON IS  
UNKNOWN DUE TO A LACK  
OF MONITORING

**733+** MILLION PEOPLE



LIVE IN COUNTRIES  
WITH HIGH AND  
CRITICAL LEVELS  
OF WATER STRESS

(2019)

MEETING **DRINKING WATER, SANITATION AND HYGIENE** TARGETS  
BY 2030 REQUIRES A **4X** INCREASE IN THE PACE OF PROGRESS

AT CURRENT RATES, IN 2030



**1.6 BILLION PEOPLE**

WILL LACK  
SAFELY MANAGED  
DRINKING WATER



**2.8 BILLION PEOPLE**

WILL LACK  
SAFELY MANAGED  
SANITATION



**1.9 BILLION PEOPLE**

WILL LACK BASIC  
HAND HYGIENE  
FACILITIES



**ONLY ONE QUARTER**

OF REPORTING COUNTRIES  
HAVE **>90%** OF THEIR  
**TRANSBOUNDARY WATERS**  
COVERED BY **OPERATIONAL**  
**ARRANGEMENTS** (2020)

“For millions of women, children, and communities, access to safe water can turn problems into potential – unlocking education, economic opportunity and improved health.”

- water.org

**200 M**

**A GENDER EQUALITY CRISIS**

Women and girls bear the greatest burden of the global water crisis because in the developing world they're most likely to be responsible for collecting water. In rural Africa, the average woman or girl walks 6 kilometers — 3.7 miles — to carry 40 pounds of water every day. This takes time away from work, school and caring for family affecting their ability to study, work, and live with dignity, locking women in a cycle of poverty.

Women and girls spend an estimated 200 million hours every day collecting water



**2 MIN**

Every 2 minutes a child dies from a water-related disease

**A HEALTH CRISIS**

Nearly 1 million people die each year from water, sanitation, and hygiene-related diseases, such as diarrheal, cholera, typhoid fever, and other water-borne illnesses. Access to safe water and sanitation contributes to improved health and helps prevent the spread of infectious disease. It means reduced child and maternal mortality rates. It means reduced physical injury from constant lifting and carrying heavy loads of water long distances. It means making women and girls less exposed to abuse, attack, and ill-health. In some underdeveloped areas half of the health clinics don't have clean water and 84% don't even have basic hand-washing facilities.

**494**  
million people practice open defecation



### AN ECONOMIC CRISIS

Time spent gathering water or seeking safe sanitation accounts for billions in lost economic opportunities. \$260 billion is lost globally each year due to lack of basic water and sanitation. Access to safe water and sanitation at home makes families spend less money on healthcare and turns time spent into time saved, giving families more time to pursue education and work opportunities that will help them break the cycle of poverty. Empowering women is critical to solving the water crisis. When women have access to safe water at home, they can pursue more beyond water collection and their traditional roles. They have time to work and add to their household income.

\$260 billion is lost globally each year due to lack of basic water and sanitation

**\$260**  
billion

**\$18.5 B**

Universal access to basic water and sanitation would result in \$18.5 billion in economic benefits each year from avoided deaths alone.



# 3rd

leading cause of child  
death is diarrhea

## A CHILDREN'S AND EDUCATION CRISIS

When children don't have to walk long distances to get water, they have more time to play, to attend school, and more energy to learn. It gives them an opportunity for a brighter future. This is especially important for girls, who most often spend their days collecting water for their families instead of focusing on school. Clean water, sanitation, and hygiene help kids grow taller, smarter, and stronger. They get more nutrition from their food because they're not sick. Families can use water to irrigate their gardens to grow more nutritious food year-round.



More than  
**800**  
children

More than 800 children under  
5 die every day from diarrhea  
caused by contaminated water,  
poor sanitation, and unsafe  
hygiene practices.





By **2023**,  
some  
**700 million**  
**people**  
could be displaced  
by intense water  
scarcity

### A CLIMATE CRISIS

Water is the primary way in which we will feel many of the effects of climate change, and climate change is exacerbating the global water crisis. Millions of families in poverty live in regions where water access is limited, temporary, or unstable. They are less prepared to face the effects of climate change like temperature extremes, floods, and droughts. Access to sustainable safe water and improved sanitation solutions can support climate resiliency for the people who need it the most. Farmers who depend on their crops or livestock to survive may be unable to purchase land in a new place, closer to where there is water. So, moving isn't an option for them.

By **2040**,  
roughly  
**1 in 4**  
**children**  
worldwide will be living  
in areas of extremely  
high water stress

## Play your part by doing what you can! BE THE CHANGE YOU WANT TO SEE IN THE WORLD

THERE IS AN ANCIENT STORY\* OF A HUMMINGBIRD AND IT IS ABOUT HOW WE REACT TO CRISIS. RIGHT NOW, WE FACE A WATER AND SANITATION CRISIS. DO WE STAND AND STARE? OR, DO WE ACT?

*\*One day in the forest, a fire broke out.  
All the animals ran for their lives.*

*They stood at the edge of the blaze, looking at the flames in terror and sadness.  
Up above their heads, a hummingbird was flying back and forth to the fire,  
over and over again.*

*The bigger animals asked the hummingbird what she was doing.*

*"I am flying to the lake to get water to help put out the fire!"*

*The animals laughed at her and said, "You can't put out this fire!"*

*The hummingbird replied, "I'm doing what I can!"*

THE HUMMINGBIRD IS HELPING SOLVE THE PROBLEM, ONE DROP AT A TIME. SHE IS BEING THE CHANGE SHE WANTS TO SEE IN THE WORLD. YOU CAN BE A HUMMINGBIRD, TOO. THE ACTIONS YOU TAKE, NO MATTER HOW SMALL, WILL HELP SOLVE THE WATER CRISIS.

SEE WHAT PEOPLE ARE DOING  
IN YOUR REGION  
AND CHOOSE YOUR ACTIONS!

[www.worldwaterday.org](http://www.worldwaterday.org)



#### Among Main Sources:

Most of the sources cited are humanitarian organizations that you can refer to if you'd like to contribute to the crisis:

- water.org - <https://water.org/our-impact/water-crisis/>
- World Vision - <https://www.worldvision.org/clean-water-news-stories/global-water-crisis-facts>
- UNICEF - <https://www.unicef.org/wash/water-scarcity>
- WWF - <https://www.worldwildlife.org/threats/water-scarcity>
- The United Nations - <https://sdgs.un.org/goals/goal6>
- <https://www.worldwaterday.org/>
- <https://fortune.com/2023/03/22/climate-change-exacerbating-global-water-crisis-corporations-solution-hurst-white-damon/>
- <https://www.worldwatercouncil.org/en/water-crisis>
- <https://www.euronews.com/green/2023/03/08/clean-water-shortages-steal-womens-time-heres-what-happens-when-they-get-it-back>

# market outlook

Democratic republic situated in central Europe. It covers a territory of about 84,000 sq. kms.

As a federation, Austria has nine provinces (Länder) including Vienna as its capital.

Since 1955 Austria has been a member of the United Nations, joined the European Union in 1995 and adopted the Euro as its currency in 2002.

Austria, largely mountainous landlocked country of south-central Europe. Together with Switzerland, it forms what has been characterized as the neutral core of Europe, notwithstanding Austria's full membership in the supranational EU.

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# Austria's Reforming Healthcare



Austria's healthcare is renowned across Europe for being sufficiently affordable, accessible, and of a very high standard, nonetheless, the latest few years have brought high volume investments in healthcare and major reforms aiming to improve population health and costs reduction.

Austria has a two-tier healthcare system. Virtually all individuals receive publicly funded care through a social health insurance, covering the basic needs of most persons living legally in the country, as well as an optional, and competitive, supplementary private health insurance offering additional benefits. Care involving private insurance plans (sometimes referred to as "comfort class" care) can include, among other things, no waiting times, more flexible visiting hours, private rooms and clinics, as well as doctors' choice. Although the quality of care does not vary hugely, the comfort of care might.

Austria has a complex health system with responsibilities for health system governance being divided between the federal and the regional (Länder) level.

**Health insurance is mandatory, and universal coverage is very high, with 99% of the population covered through Social Health Insurance (SHI) funds.** The federal government is responsible for regulating SHI and most areas of healthcare provision. The nine states (Länder) regulate and plan hospital care in their jurisdictions, and are responsible for implementation, organization, and financing of inpatient and outpatient care in hospitals, as well as hospital investment. The organization of ambula-

tory care is largely delegated to the self-governing bodies of social insurance funds and providers which engage in collective negotiations on contracts and reimbursement. Such a complex structure results in fragmentation and some inefficiencies, in particular, between federal and Länder governments for inpatient care and SHI for ambulatory care.

**Since 2012, important reforms have focused on reducing the fragmentation, as well as administrative costs, in the health system by promoting joint planning, decision-making and financing, mainly achieved via Target-Based Governance Agreements. Other major reforms that have been implemented include a large nursing and long-term care reform targeting various improvements in working conditions, training and remuneration for health professionals, carers, and care recipients; the development of a new primary care approach, promoting, among other things, the establishment of multidisciplinary primary healthcare units. In addition, on 1 January 2020, as a part of the ongoing healthcare reform, the Austrian Social Health Insurance Fund (Die Österreichische Gesundheitskasse, ÖGK) was created by merging the nine former regional health insurance funds.**

### EFFORTS TO REDUCE THE FRAGMENTATION OF RESPONSIBILITIES

To overcome the traditional fragmentation of the health system, the importance of joint decision-making bodies at federal and Lander level, including representatives of the three main players (federal government, Lander and SHI), has increased since 2013. The Target-Based Governance Commission, established in 2013, brought together the federal government, SHI funds and the Lander to define financial and reform targets jointly. These are then further specified by State Target-Based Governance Commissions that bring together the main players at the Lander level. The Federal Target-Based Governance Commission has also taken the lead for joint planning of healthcare provision structures through the Austrian Structural Plan for Healthcare.

The ÖGK is based in Vienna. With a volume of benefits of almost €15.3 billion and about 20,000 contractual partners, the Austrian Health Insurance Fund covers the healthcare services of over 7.2 million insured people. A key motive for this reform was cost reduction (which was mainly achieved by cutting personnel) to be accompanied by making more resources

	Austria	EU
Population size (mid-year est. 2021)	8,955,797	447,319,916
Share of population over age 65 (%)	19.0	20.6
Fertility rate <sup>1</sup> (2019)	1.5	1.5
GDP per capita (EUR PPP <sup>2</sup> )	36,972	29,801
Relative poverty rate <sup>3</sup> (% , 2019)	13.3	16.5
Unemployment rate (%)	5.4	7.1

Notes: 1. Number of children born per woman aged 15-49.

2. Purchasing power parity (PPP) is defined as the rate of currency conversion that equalises the purchasing power of different currencies by eliminating the differences in price levels between countries.

3. Percentage of persons living with less than 60 % of median equivalised disposable income.

Source: Eurostat database / World Bank

“ Austrian health system generally provides good access to high-quality care, but some structural issues, including the need to pursue reforms to overcome fragmentation and strengthen primary care, remain key challenges.

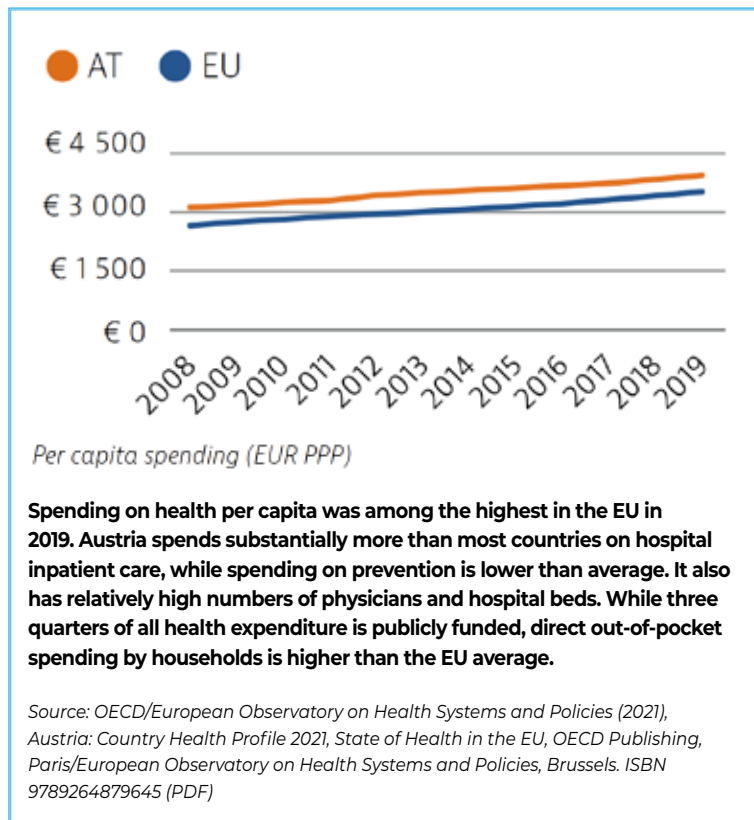
Two major health reforms have aimed to improve population health and to overcome the fragmentation of responsibilities and financing by promoting joint planning, decision-making and financing.

available to patients. However, in early assessments of the ÖGK in 2021, it became clear that personnel costs had increased by more than 3%. Moreover, the negotiations between the Austrian health insurance fund and the Medical Chamber regarding the implementation of a new nationwide catalog of services for all health insurance physicians are planned to take place. The main goal is to develop a degree with the Medical Chamber regarding the care mandate and range of services, which is expected to be ready by 2024.

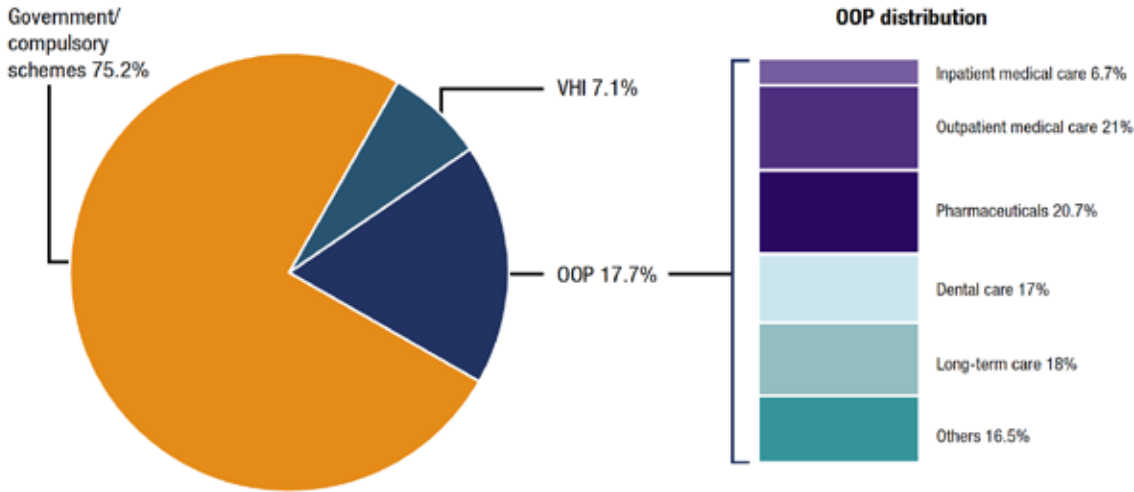
*Health funding and expenditure* - Overseen by the Federal Ministry of Labor, Social Affairs, Health, and Consumer Protection, healthcare is primarily public. Specifically, wage-earners making over a certain amount, have a portion of their salary automatically deducted for healthcare, a pension, and accident insurance. Healthcare is free of charge for people with low or no income, or for those who are disabled, studying, or retired. The health system is thus financed by a mix of general tax revenues and compulsory social health insurance (SHI) contributions (through both employee and employer contributions). Thus, financing is very fragmented with the federal level, regional level (Länder and municipalities) and SHI funds all contributing to the budget. SHI contributions represent the largest share of revenue (45% in 2019). Direct government spending constitutes the second largest share (33%). Private spending accounts for the remainder, with voluntary health insurance playing a relatively minor role, accounting for just over 7% of this spending.

When compared to other national health systems across the EU, Austria's health system is relatively expensive. Health expenditure amounts, on average, to 10.4% of GDP, above the EU average of 9.9%. The pandemic caused health spending as a share of GDP to rise sharply to 11.5% in 2020. In 2019, spending on health per capita was the fifth highest in the EU after Luxembourg, Germany, the Netherlands, and Sweden. **Spending on health from public sources accounted for 75% of the total, which is below the EU average of 80%. In contrast, out-of-pocket (OOP) spending accounted for nearly 18%, which is above the EU average (15%).** Most treatments deemed necessary and effective by the insurance carriers are covered, with modest to significant co-payment for dental and vision care as well as health aids. Coverage extends to (medically necessary) hospitalizations and surgeries, and includes basic dental, vision, and orthopedic care. Co-payments are charged for reimbursed pharmaceuticals,

higher-end dental, vision, and orthopedic care, elective surgery, mental health therapies, etc. In 2019, OOP spending was related mainly to outpatient medical care (21% of the total), pharmaceuticals (20.7%), long-term care (18%), and dental care (17%). **Despite higher OOP payments, Austria has low levels of unmet medical care needs for financial or other reasons, due to the generous benefits package that is available within public health.** Direct payments for benefits not covered by SHI funds represent the largest share. Exemptions for co-payments apply for certain population groups, including socially deprived groups, patients with notifiable infectious diseases, people in compulsory community service or asylum seekers under federal care, pensioners entitled to compensatory allowances, children, or co-insured dependents up to the age of 18. In spite of this, inequalities in healthcare have arisen, particularly between those able to afford additional private insurance and those who cannot. Still, inequalities between ordi-



COMPOSITION OF OUT-OF-POCKET PAYMENTS, 2019



Note: OOP: out-of-pocket; VHI: voluntary health insurance.  
 Source: Austria: Health system summary, 2022. ISBN 9789289059367

nary and private patients are much less pronounced than, for example, in Germany. In contrast to Germany, civil servants pay into the same public health insurance system as everyone else. **One element of the government's tax reform passed in late 2021 included a reduction in health insurance contributions for lower income earners (worth about €300 per year).**

*Infrastructure and human resources* - Most of the public and private non-profit hospitals are owned by the Länder, the municipalities or by non-profit institutions, whereby the Länder are the largest group of owners with 55.9% of all hospital beds. The majority of primary healthcare and specialized ambulatory care is provided by independent private practices of which 62% have a contract with one or more SHI funds. Ambulatory care is regulated by collective contracts negotiated on a regular basis between SHI funds and federal and regional medical chambers. All hospitals are contracted collectively by the SHI funds, regardless of whether they are publicly or privately owned as long as they offer services covered by SHI-funds.

**Austria has a very large hospital inpatient sector, with 531 acute care hospital beds per 100,000 popula-**

**tion in 2019, a ratio that is the third highest in the EU after Bulgaria and Germany, and well above the EU average of 387 beds per 100,000 population.**

Both hospitals and medical equipment are equally distributed across the country, and generally well equipped with major medical equipment relative to population. **In 2020, the ratio of MRI scanners increased from 1.91 in 2012 to 2.53 in 2020 and is mostly related to the growth of**

” Among the investments in the healthcare sector is the renovation of Vienna’s General Hospital: the city plans to spend \$1.6 billion between now and 2030 to modernize Vienna’s most important teaching hospital.

	Physicians/100 000 pop.	EU Average
Physicians (practicing)	535/100 000	393/100 000
Nurses (practicing)	1,048 /100 000	835/100 000
<b>Total No. of Physicians, 2020</b>	<b>47,674</b>	
No. of General Medical Practitioners (GPs)	13,280	
No. of General Pediatricians	1,502	
No. of Gynecologists and obstetricians	2,033	
No. of Psychiatrists	1,848	
No. of Medical group of specialists	11,092	
No. of Surgical group of specialists	9,874	
Other specialists not elsewhere classified	61	

Sources: Eurostat 2020 / Austria: Health system summary, 2022 -ISSN 2958-9193

“ Although Austria remains a top scorer in terms of the number of physicians and nurses per inhabitants, a recurrent issue in recent political debates on healthcare has been the shortage of physicians in some (non-urban) regions.

**private investments in the ambulatory (extramural) sector, while the number of CT scanners decreased slightly from 2.98 to 2.85 in the same period.** Among the investments in the healthcare sector is the renovation of Vienna's General Hospital: the city plans to spend \$1.6 billion between now and 2030 to modernize Vienna's most important teaching hospital.

Although Austria remains a top scorer in terms of the number of physicians and nurses per inhabitants, a recurrent issue in recent political debates on healthcare has been the shortage of physicians in some (non-urban) regions. **Compared with most EU countries, Austria has low levels of unmet needs for medical care due to cost, waiting time or travel distance: 0.4% in 2020 with almost no difference between income groups.** However, waiting times for treatments in hospitals differ significantly between patients. Moreover, waiting times for, and opening times of, ambulatory (extramural) specialists affect many patients in Austria, especially for radiological examination. **In addition, the sharply increasing share of non-contracted physicians and decreasing number of contracted physicians, particularly among general practitioners (GPs), but also certain specialists such as pediatricians, is a major cause for concern.** The situation jeopardizes the principles of equity of access to ambulatory care because fees of GPs and specialists without a SHI contract are largely unregulated and only partly covered by SHI. While the number of contracted physicians decreased by about 4% between 2012 and 2021,

Number of hospitals	264
Number of beds	62,873
MRI scanners per 100 000 pop.	2,53
CT scanners per 100 000 pop.	2,85

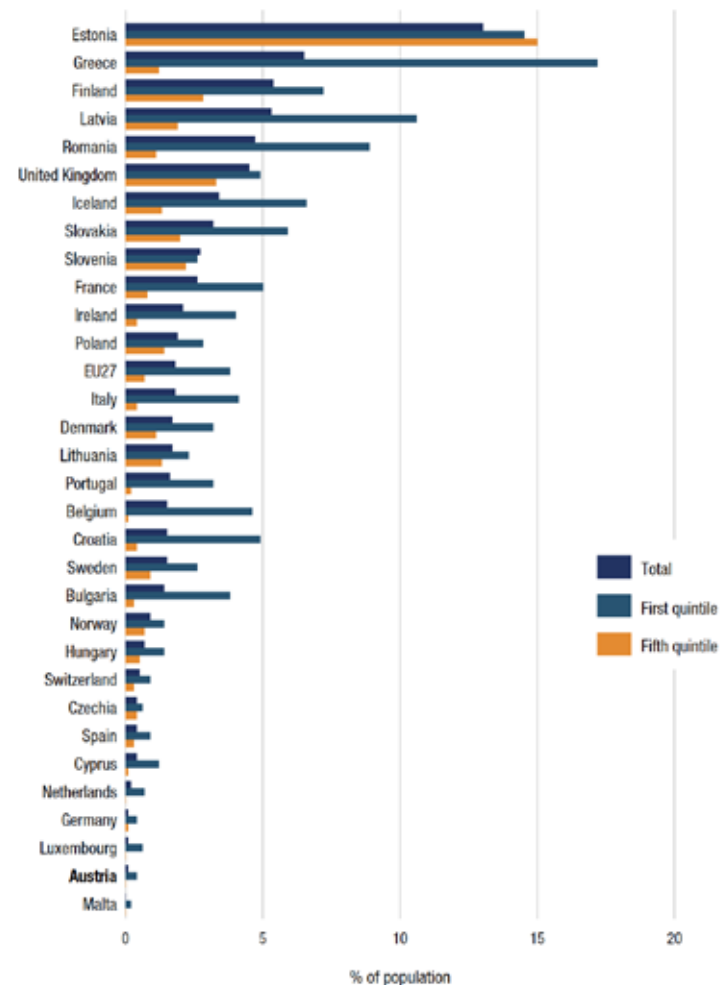
Note: Data for MRI and CT scanner units include those in ambulatory facilities and acute hospitals.

Source: Eurostat, 2021, taken from: Austria: Health system summary, 2022 -ISSN 2958-9193

the number of non-contracted physicians increased by nearly 31% in the same period. As private patient physicians in

general are not available to people without private healthcare insurance and, given population aging and therefore increased demand

**UNMET NEEDS FOR A MEDICAL EXAMINATION (DUE TO COST, WAITING TIME, OR TRAVEL DISTANCE), BY INCOME QUINTILE, EU/EEA COUNTRIES, 2020**



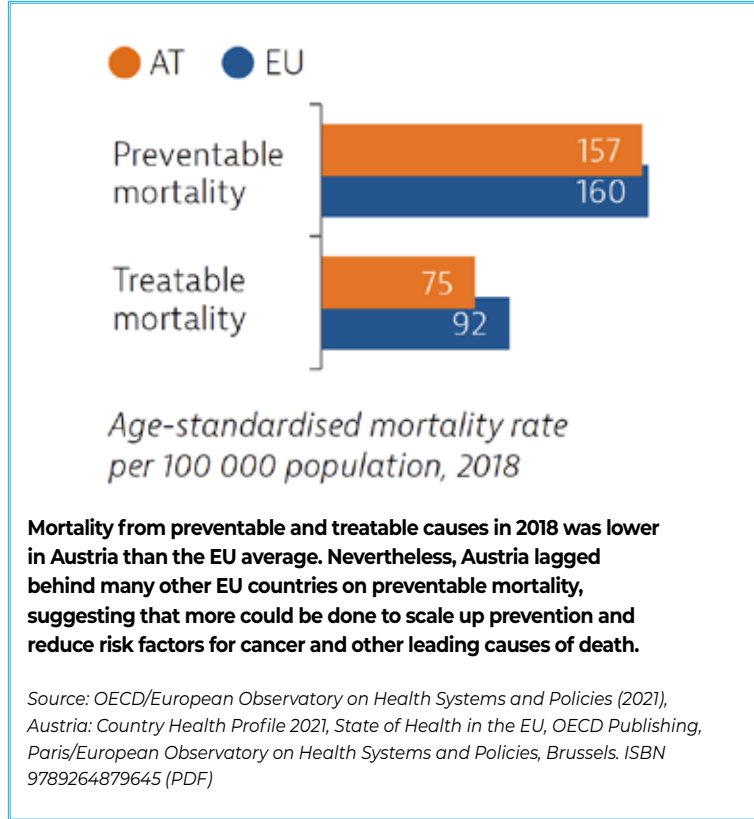
Note: EEA: European Economic Area; EU: European Union. Data refer to 2020 except for Italy (2019), Iceland (2018) and United Kingdom (2018).

Source: Eurostat (2021), based on EU-SILC. Taken from: Austria: Health system summary, 2022 -ISSN 2958-9193

on healthcare services, this development provides a clear picture as to the overall quality of services provided (exclusively) by the public healthcare system.

Austria's health system remains hospital-centric, based on solo practitioners, and potentially avoidable hospital admissions for chronic conditions have traditionally been higher than in most other European countries. To address this, past and ongoing efforts are aimed at reducing the fragmentation between inpatient and ambulatory care and strengthening primary healthcare.

Primary care is provided by independently practicing physicians and specialized ambulatory care by independent private practices, outpatient clinics and hospital outpatient departments. The provision of health services is characterized by free choice of provider and unrestricted access to all levels of care (GPs, specialists, and hospitals). Access to GPs is generally good. Patients are able to obtain same-day GP appointments. However, its primary care system is generally considered relatively weak due to its strong reliance on specialist and inpatient care, with the second



highest hospital discharge rate among OECD countries. Although the country has among the highest physician density, only 8% of physicians work as GPs within pri-

mary care, and mainly in solo practices (Austrian Physician Chamber, 2022). The current primary healthcare reform aims to establish new multi-professional primary care

**Status is high and population ageing is above OECD\* average, although it fell to 81.3 in 2020 due to the Covid pandemic. However, even before the pandemic, gains in life expectancy had slowed considerably between 2010 and 2019.**



	Austria	OECD* Average
<b>Life expectancy</b> (2019 or nearest year) Years of life at birth	82.0	81.0
<b>Self-rated health</b> (2019 or nearest year) Population in poor health (% population 15+)	7.8	8.5





Smoking and alcohol consumption is much higher than OECD average. About 40 % of all deaths in Austria in 2019 can be attributed to behavioral risk factors. Within the EU, tobacco consumption among adults has fallen but remains slightly higher than average. Alcohol consumption among adults is the second highest in the EU. Heavy alcohol consumption among adolescents is also higher than the EU average.

2

	Austria	OECD Average
<b>Smoking</b> (2019 or nearest year) Daily smokers (% population 15+)	21	17
<b>Alcohol</b> (2019 or nearest year) Liters consumed per capita (population 15+)	12	9
<b>Overweight/obese</b> (2019 or nearest year) Population with BMI >= 25 (% population 15+)	51	56
<b>Air pollution</b> (2019 or nearest year) Deaths due to ambient particulate matter pollution (per 100 000 population)	27	29



Good access to healthcare, high coverage, and satisfaction

	Austria	OECD Average
<b>Population coverage, eligibility</b> (2019 or nearest year) Population eligible for core services (% population)	100	98
<b>Population coverage, satisfaction</b> (2019 or nearest year) Population satisfied with availability of quality health care (% population)	86	71
<b>Financial protection</b> (2019 or nearest year) Expenditure covered by compulsory prepayment (% total expenditure)	75	74

3

Care quality key indicators above OECD average, though primary care could be strengthened to reduce avoidable admissions.



	Austria	OECD Average
<b>Safe primary care</b> (2019 or nearest year) Antibiotics prescribed (defined daily dose per 1 000 people)	12.1	17
<b>Effective primary care</b> (2019 or nearest year) Avoidable COPD admissions (per 100 000 people, age-sex standardized)	193	171
<b>Effective preventive care</b> (2019 or nearest year) Mammography screening within the past two years (% of women 50+)	75	62
<b>Effective secondary care</b> (2019 or nearest year) 30 day mortality following AMI (per 100,000 people, age-sex standardized)	5	7



Resources for health above average, with high health spending, workforce, and hospital beds

	Austria	OECD Average
<b>Health spending</b> (2019 or nearest year) % of GDP	10.4	8.8
<b>Long-term care</b> spending (2019 or nearest year) % of GDP	1.5	/
<b>Doctors</b> (2019 or nearest year) Practicing physicians (per 1 000 population)	5.3	3.6
<b>Nurses</b> (2019 or nearest year) Practicing nurses (per 1 000 population)	10.4	8.8
<b>Hospital beds</b> (2019 or nearest year) Per 1 000 population	7.2	4.4

Note: COPD = chronic obstructive pulmonary disease

\*Note: There are 38 member countries in the OECD from around the world: North and South America, Europe, and Asia-Pacific.  
To see full list: <https://www.oecd.org/about/members-and-partners/>  
Source: Health at a Glance 2021: OECD Indicators.  
<https://www.oecd.org/health/health-at-a-glance.htm>.

units, which offer more comprehensive services, longer opening hours and team-based care. As of early 2022, 30 out of a planned 75 primary care centers had been established. These primary care centers have a minimum of a core team of GPs and qualified nurses and may also include pediatricians and other health and social professionals. They can be set up either as centers with one location or as networks with several practice locations and practice assistants.

**Health status** - The development of the healthcare environment in Austria is largely in line with European trends. At the height of the coronavirus pandemic, the Austrian healthcare system was tested to its limits. A survey study found that public trust in the Austrian healthcare system decreased significantly over the first year of the pandemic (early 2020 through to early 2021), although less so than trust in the government. In the wake of the coronavirus pandemic, life

expectancy for people living in Austria decreased slightly, but less dramatically than in several other countries. **However, in spite of the mentioned exceptional event, overall, Austrians are quite satisfied with the quality of care they receive. Life expectancy at birth is above the EU average and low amenable mortality rates indicate that healthcare is more effective than in many other EU countries.** However, behavioral risk factors, including smoking and alcohol use, as well

as diet and low physical activity, remain important drivers of mortality in Austria.

**Medical Market** - In recent years, the Austrian biotechnology industry has experienced rapid growth, becoming amongst Europe's leading centers of biotechnology, with currently more than 150 biotechnology businesses. With over 900 wellness establishments, cosmetic treatments and alternative medicine are also popular, despite being paid out of pocket. **Together with technologies for treating age-related ailments, technologies that can help reduce waste and improve efficiency are growing increasingly important as administrators work to reduce the high cost of healthcare.** Examples include health IT solutions, preventive medicine, minimally invasive surgical methods and products, and cheaper and more efficient

screening and diagnostic technologies. Cutting-edge IT, including artificial intelligence, clinical decision support, big data applications, telemedicine, and telemonitoring, are attracting interest.

Austria imports most of its medical devices. Major suppliers are Germany (around 31% of the market), the U.S. (15%), as well as Switzerland, South Korea, the Netherlands, China, and Japan. There are around 550 companies in Austria that produce or sell medical technologies, of which 171 are manufacturers and 383 are distribution or service companies.

*Among Main Sources:*

*Extracts from: European Observatory on Health Systems and Policies.*

*Bachner F, Bobek J, Habimana K, Ladurner J, Lepuschutz L, Ostermann H, Rainer L, Schmidt A E, Zuba M, Quentin W, Winkelmann J (2022). Austria: Health system summary, 2022.*

*ISSN 2958-9193 (online) ISBN 9789289059367*

*- Health at a Glance 2021: OECD Indicators. <https://www.oecd.org/health/health-at-a-glance.htm>.*

*- OECD/European Observatory on Health Systems and Policies (2021), Austria: Country Health Profile 2021, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels. ISBN 9789264879645 (PDF) Series: State of Health in the EU SSN 25227041 (online)*

*- Healthcare reform in Austria: Austria health insurance fund established: <https://mtrconsult.com/news/healthcare-reform-austria-austrian-health-insurance-fund-established>*

*- International Trade Administration, U.S. Department of Commerce. For full report on Austria: <https://www.trade.gov/healthcare-resource-guide-austria>*

*- [https://www.sgi-network.org/2022/Austria/Social\\_Policies](https://www.sgi-network.org/2022/Austria/Social_Policies)*

## KEY HEALTH REFORMS OVER THE LAST 10 YEARS

- **Austrian health targets (2012):** to increase healthy life expectancy until 2032, following the WHO recommendation to develop frameworks to maximize the health status of the entire population
- **First Federal Target-Based Governance Agreement (2013):** to establish a joint, target-based health governance system bringing together the major actors (federal government, state governments, and SHI funds) in the health system
- **Minimum quality management requirements for health care providers, revision of quality strategy (2016/2017):** to define minimum standards for quality management that have to be fulfilled by all health care providers
- **Health Promotion Strategy adopted by the B-ZK (2014, updated in 2016), National Strategy on Improving the Quality of Communication in Healthcare (2016):** to coordinate health promotion actions in Austria including regulations for the allocation of resources
- **Revision of the Austrian Structural Plan for Healthcare and Regional Structural Plans for Healthcare (2017):** to strengthen joint health care planning and extending traditional hospital planning to ambulatory (extramural) care and rehabilitation care planning as well as major equipment planning in the Austrian Structural Plan for Healthcare
- **Second Federal Target-Based Governance Agreement (2017):** to further strengthen and institutionalize cooperation between federal government, state governments and SHI funds
- **Primary Health Care Act (2017):** to strengthening primary and ambulatory care, in particular to regulate the scope of services, contractual and organizational requirements of primary health care units, and to establish first pilot projects of multi-professional and interdisciplinary primary health care units
- **Reform of social health insurance funds (2020):** consolidating the previous 18 SHI funds into five funds (3 of which are exclusively health insurance funds). The nine regional SHI funds form a single fund which covers about 82% of the insured population
- **Nursing and long-term care reform (2022):** comprehensive measure aimed at strengthening health and care professionals' work practices, investing in training of nurses and LTC professionals and improving working conditions and caring situations of LTC recipients and caring relatives.

# AAOS Hosts Its Most Successful Annual Meeting since 2019



*Board of Directors looks to the future and starts work on new five-year strategic plan*



*Kevin J. Bozic, MD, MBA, FAAOS, 2023–2024 AAOS president. He also is the inaugural chair of the Department of Surgery and Perioperative Care at Dell Medical School at the University of Texas at Austin.*

It is with great humility and enthusiasm that I begin my tenure as the 2023–2024 AAOS president, having just completed an exciting AAOS 2023 Annual Meeting, held March 7 to 11 at the Venetian Convention & Expo Center in Las Vegas. By all accounts, the meeting was a resounding success, with more than 22,000 people convening to experience world-class education, innovation, networking, and collaboration.

More than 2,000 faculty members contributed to an exceptional education program, which featured a diverse array of learning formats that touched nearly every facet of orthopaedic practice. Or-

thoDome™, a state-of-the-art surgical video education experience, spanned 2.5 days and drew standing-room-only crowds on a variety of clinical topics. The new Spanish-language track debuted and offered attendees the chance to experience five educational sessions presented in Spanish. The medical student program was expanded to include 200 students. Nearly 1,600 paper and poster abstracts highlighted the latest research in orthopaedics.

The Exhibit Hall housed more than 200,000 square feet of exhibits and showcased the latest techniques and technologies in orthopaedics from more than 600 companies. Other Exhibit Hall highlights included education programming offering in-depth and hands-on opportunities for attendees to discover new ways to transform their practices and advance patient care. We also hosted a well-attended Happy Hour in the Hall for meeting attendees.

The Annual Meeting provided opportunities to collaborate and connect with colleagues from more than 130 countries and varying subspecialties—two of the most valued aspects of the meeting. AAOS welcomed Germany as the Guest Nation, and the Combined Meeting of Orthopaedic Associations was held in conjunction with AAOS 2023. AAOS-hosted events, such as the New Member Luncheon, Resident Bowl, Speed Mentoring

for Residents, and the PrideOrtho Luncheon, helped forge many meaningful connections.

AAOS 2023 continued a long tradition of honoring the leaders whose contributions advance the field of orthopaedics. “The Your Academy 2023” event highlighted members of our AAOS leadership team; AAOS award winners; and golf legend Tom Watson, who was the Presidential Guest Speaker.

The success of the AAOS 2023 Annual Meeting was due in no small part to the contributions of the many volunteer leaders, faculty, exhibitors, sponsors, and attendees who participated. Thank you to everyone who helped make this meeting such a success. A special thanks goes to our Annual Meeting Committee, ably chaired by Matthew T. Provencher, MD, MBA, CAPT MC USNR (Ret.), FAAOS, and the outstanding Annual Meeting staff.

**I hope to see an even greater turnout at the AAOS 2024 Annual Meeting, to be held Feb. 12 to 16, 2024, at the Moscone Center in San Francisco.** When making your plans, be sure to note that based on feedback from our members and other Annual Meeting attendees, the meeting days are shifting to Monday through Friday, rather than the traditional Tuesday through Saturday.

The 2024 Annual Meeting promises to be another can't-miss event, with a broad range of innovative



educational formats and a packed social agenda that will take advantage of all that San Francisco has to offer. Specialty society programs will again bookend the meeting on Monday, Feb. 12, and Friday, Feb. 16. Do not forget to adjust your Super Bowl Sunday (Feb. 11) and Valentine's Day (Feb. 14) plans accordingly, maybe even bringing your significant other with you to San Francisco.

### **Beyond 2023**

Although it is exciting to reflect on our recent successes, your AAOS leadership remains focused on preparing our members for continued success in a rapidly evolving healthcare environment. AAOS' current five-year Strategic Plan runs through the end of 2023, and we recently launched a new effort to develop a refreshed 2024–2028 Strategic Plan.

The development process will take place throughout 2023 and be informed by diverse stakeholder voices across the AAOS ecosystem

in the form of marketplace data and feedback from our members and other key constituents, which we will solicit through surveys, interviews, and more.

The Strategic Plan is vitally important to codify AAOS' direction and act as a lens for decision making and resource allocation. The plan will establish priorities for where AAOS will focus and invest to achieve our mission of serving our profession to provide the highest-quality musculoskeletal care. Since 2019, the current Strategic Plan has shaped priorities to improve the member experience; equip our members to thrive in value-based environments; and evolve AAOS' culture to be more strategic, innovative, and diverse.

Among other efforts, AAOS launched a new membership app and the Resident Orthopaedic Core Knowledge (ROCK) program; expanded our family of registries; advocated for legislative and regulatory changes to reduce the administrative burden placed on

orthopaedic surgeons and their practices; and took steps to create a more diverse, equitable, and inclusive culture within our specialty. To that end, we launched the IDEA Grant Program™ to promote diversity in orthopaedics, as well as specialty society grants to promote greater partnership and innovation in collaborative research. Finally, the AAOS Leadership Institute (ALI) has helped to expand members' access to volunteer opportunities and develop future leaders.

I am honored to have the opportunity to lead AAOS during this pivotal time in our history, which will inform how we support our members and profession to better serve our patients over the next five years and beyond. Thank you for your willingness to share your perspectives as we embark on this next phase of our journey to strengthen our position as the trusted leaders in advancing musculoskeletal health.

For more info - [www.aaos.org](http://www.aaos.org)

# Speaker: Biologic use, promotional material need to be in alignment with on label use



**Scott P. Bruder, MD, PhD**

LAS VEGAS, April 2023 - As the business of biologic products has continued to grow, scrutiny from the FDA and other federal authorities on the use and promotion of biologics has also increased, according to a speaker.

Although the FDA provides physicians with guidance on the use of biologics, Scott P. Bruder, MD, PhD, noted the agency does not regulate the practice of medicine.

“Too many physicians believe that the FDA regulates how you prac-

tice medicine. They do not,” Bruder said in his presentation during the combined Arthroscopy Association of North America and Biologic Association Specialty Day at the American Academy of Orthopaedic Surgeons Annual Meeting. “They regulate how sponsor companies make products available.”

Part of the FDA guidance includes products that are “eligible for FDA exemption if they are minimally manipulated and used in a homologous fashion,” according to Bruder. “You cannot use a bone to recreate a cartilage and call that homologous use, for example,” he said.

Bruder noted orthopedic surgeons can convert an exam room into a laboratory and prepare platelet-rich plasma and bone marrow aspirate concentrate properly without any repercussions. However, the FDA and federal authorities consider culture-expanded cells or isolating and delivering fragments of complex cell populations as activities of a biologic manufacturing facility, which requires a biologic license. Surgeons can only use certain biologic products through an FDA registration study and only on patients enrolled in the study, Bruder said.

## ” Key takeaways:

- Biologic products need to be minimally manipulated and used in a homologous fashion.
- Promotional and marketing materials of biologic products must be “on label.”

In addition, he said promotional and marketing materials of biologic products have been under scrutiny of the FDA and Federal Trade Commission and must be “on label.”

“It does not matter if Mrs. Jones could barely get off the couch before you treated her and now she climbs Mount Everest. If you put her on your website saying that you are subject to some serious scrutiny and possible prosecution. That is not consistent with the labeling,” Bruder said.

*Taken from: <https://www.healio.com/news/orthopedics/20230420/speaker-biologic-use-promotional-material-need-to-be-in-alignment-with-on-label-use>*



# John McFall Selected as World's First person With a Disability to Undergo Astronaut Training

The British Orthodontic Association are delighted to congratulate John McFall on his selection as the world's first person with a disability to undergo astronaut training with the European Space Agency.

John had his right leg amputated following a motorcycle accident in 2000 and following that obtained a BSc and MSc in Sports and Exercise Science in South Wales, with a particular interest in biomechanics and gait analysis. John learnt to run again using a prosthetic knee and competed at the Paralympic Games in Beijing 2008, winning a bronze medal in the 100 metres.

He then studied medicine, graduating from Cardiff University School of Medicine in 2014. He is currently a Trauma and Orthopaedic registrar in the Wessex Deanery and lives with his wife and three children in the north-east of Hampshire.

John has said he hopes to inspire

others and show that "science is for everyone... and potentially space is for everyone" We really hope he makes it through and takes orthopaedics into space!

To learn more on John's story

[www.boa.ac.uk](http://www.boa.ac.uk)

*Taken from: <https://www.boa.ac.uk/resource/john-mcfall-selected-as-worlds-first-person-with-a-disability-to-undergo-astronaut-training.html>*

“The functionality of an advanced waterproof microprocessor knee has allowed me to live a 'normal' life. I can run for a Frisbee, go rock-pooling with my children, and help them learn to swim in the sea. I can walk up and down stairs foot over foot, and go about being a surgical trainee without people ever knowing I'm a through knee amputee.”



# New injectable cell therapy shows promise for treating osteoarthritis

Wake Forest Institute for Regenerative Medicine (WFIRM) scientists have created a promising injectable cell therapy to treat osteoarthritis that both reduces inflammation and also regenerates articular cartilage.

Recently identified by the Food and Drug Administration as a public health crisis, osteoarthritis affects more than 520 million people worldwide who deal with pain and inflammation. Osteoarthritis is typically induced by mechanical or traumatic stress in the joint, leading to damaged cartilage that cannot be repaired naturally.

Osteoarthritis is a disease of the joint system. The joint includes a synovial membrane – a connective tissue that lines the inner surface of the joint. The membrane functions to protect the joint and secretes a lubricating fluid filled with cell elements needed to maintain a healthy environment and to provide friction free movement.

In healthy joints when an injury occurs, the body recruits an army of inflammatory cells and sends them to the injury site to contribute to cleaning of the damaged tissues. In the osteoarthritic joint, however, a traumatic injury leads to inflammation of the synovial membrane and cartilage damage.

“With time, the inflammation worsens, leading to degradation of the cartilage lining the joint bones and chronic inflammation in the surrounding tissues. For patients, this causes severe pain, swelling and often limits daily activities,” said co-author Gary Poehling, MD, an orthopedic surgeon at Atrium Health Wake Forest Baptist.

For this study, published in *Science Advances*, the journal of the American Association for the Advancement of Science, the research team set out to investigate what is taking place in the osteoarthritic joint environment that keeps the healing process from happening.

“We evaluated whether the cell population present in the joint fluid environment lacked the capability to contribute to functional tissue repair, or if there is something in the environment that impairs their ability to do so,” said Gustavo Moviglia, PhD, a WFIRM researcher.

The team isolated cells from the joint fluid of osteoarthritic patients, separated the cells from the fluid and investigated them alone, but also in the presence of the autologous fluid. Separated from the fluid, they saw that the cells had the ability to undergo processes required for functional tissue repair. When they added a small percentage of the fluid back into the cell culture assay, the cells’ abilities were impaired – they couldn’t do their job – suggesting that the specific osteoarthritic environment stops them.

Based on these findings and what is known about functional tissue repair, a cell therapy was designed that can overcome the inflammatory environment and also regenerate cartilage.

“Cartilage activated immune cells that target inflammation, combined with progenitor cells aid tissue regeneration,” said Anthony Atala, MD, senior author and director of WFIRM. “It’s really a dynamic communication between these two cell populations that are crucial for the efficacy of the treatment.”

The combination of cells leads to simultaneous treatment of several of the aspects involved in osteoarthritis: synovial inflammation, cartilage degradation, subchondral bone sclerosis and innervation of pain sensory neurons.

The therapy was tested in a pre-clinical model and was found to have the ability to reverse cartilage damage in the synovial membrane and diminish the inflammation as well. To evaluate clinical efficacy, a compassionate use study was conducted in nine patients with confirmed osteoarthritis who each

“Without better understanding of what drives the initiation and progression of osteoarthritis, effective treatment has been limited. Initially, we studied what goes wrong in osteoarthritic joints, compared these processes to functional environments, and used this information to develop an immunotherapy cell treatment.

Johanna Bolander, Lead Author, WFIRM

received one or two injections. Efficacy was evaluated through scoring of pain and functional living, MRI scans pre- and post-treatment and a biopsy from one patient was obtained.

Once treated, the patients experienced improved quality of life, ability to participate in recreational activities, and reduced pain. Additionally, MRI studies confirmed cartilage regeneration. Additional clinical studies are required to evaluate the outcome in a larger patient population as well as to evaluate potential differences in patients in specific subgroups.

Taken from: <https://www.news-medical.net/news/20230421/New-injectable-cell-therapy-shows-promise-for-treating-osteoarthritis.aspx>

Article Reviewed by Emily Henderson, B.Sc.

Source:  
Atrium Health Wake Forest Baptist

Journal reference:  
Bolander, J., et al. (2023). The synovial environment steers cartilage deterioration and regeneration. *Science Advances*. doi.org/10.1126/sciadv.ade4645.



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23-25/08/2023

### **Medical Fair China 2023**

**Suzhou – China**

Organised by: Messe Düsseldorf  
(Shanghai) Co., Ltd.

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Venue: Suzhou International Expo  
Centre  
Suzhou  
China

[www.medicalfair.cn/en](http://www.medicalfair.cn/en)



## SEPTEMBER

25-26/09/2023

### **Healthcare Automation and Digitalization Congress 2023**

**Zurich – Switzerland**

Organiser: BGS Group  
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Venue: Zurich, Switzerland

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## Sustainable Surgery for South Sudan's Kids: Changing Lives



**Consider this fact.**

**1,750,000,000 children lack access to safe surgery globally. One billion, seven hundred and fifty million children.**

That means 10 out of 11 children live in a country lacking the dedicated surgical infrastructure to get the care they need. Without those facilities, common, easily treatable illnesses become deadly diseases or cause life-long disability. We're at a point where, despite significant progress elsewhere in global health, mortality and morbidity from common conditions needing surgery have grown in the world's poorest regions, both in real terms and relative to other health gains. The Lancet Commission on Global Health recently estimated that 143 million additional surgical procedures are needed annually in low-and-middle-income countries (LMICs), 54 million for children alone.

Put in the simplest terms, there are hundreds of thousands of children needlessly dying every year, with more children, dying from surgically curable conditions than HIV, Malaria and TB combined.

How do we even begin to solve a problem on that scale? How can the College be part of a sustainable solution? Through our HOPE Foundation, our College has chosen to support Scottish charity Kids Operating Room (KidsOR) and in so doing are beginning to play our part in ensuring that every child has access to safe surgery. At the end of 2021, the HOPE's Trustees decided to support the training of South Sudan's first-ever paediatric surgeon.

For context, despite being a country of 11 million, over half of whom are children, South Sudan lacks a single paediatric surgeon. To further emphasise that point, a country where 10% of children die before their 5th birthday, lacks both the infrastructure (with no dedicated paediatric

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operating theatre) and the expertise (without a single paediatric surgeon) needed to care for its children. That's why HOPE's Trustees supported KidsOR's project to catalyse change. We're not acting alone: HOPE and our College have teamed up with our friends at the Royal College of Surgeons of Edinburgh – and their Global Surgery Foundation – to jointly support KidsOR's Paediatric Surgical Scholarship Programme. KidsOR is a global health charity focused on the provision of high quality, safe surgical services for children in low- and middle-income countries. From their bases in Edinburgh, Dundee and Nairobi, they provide surgeons and their teams with the infrastructure and training needed to transform the care available for their nation's children.

### SUSTAINABLE LOCAL EXPERTISE

Importantly, KidsOR put sustainability at the heart of their model and, unlike some other participants in international development, only invest in local people, building real capacity and promoting self-reliance in the long-term. Over the past four years, the KidsOR team have moved quickly to put this model into practice, installing 50 operating rooms (ORs) across 22 countries; creating additional capacity for at least 30,000 operations each year.

Many of these ORs sit as part of

KidsOR's Africa 30 strategy, an ambitious but achievable, plan to deliver 120 ORs, train 100 paediatric surgeons and 100 paediatric anaesthesia providers across the continent by the end of the decade. The immediate outcome will be 10 million years of disability prevented, as some 635,000 children access emergency and essential care. The economic benefit to partner nations will go on to be an estimated \$5.6billion. The Colleges' joint investment into South Sudan will form an important part of KidsOR's plans, providing the funding for the first year of a five-year scholarship. That scholar, Dr Betty Arkangalo Yuggu Phillimona, will begin training at Baylor College of Medicine in Lilongwe, Malawi under Dr Bip Nandi, before returning to work at South Sudan's first dedicated OR for children, within Al Saba Children's Hospital, Juba.

Once qualified, it is estimated Dr Phillimona will go on to perform approximately 6,000 procedures over the course of 10-years (the average life-span of an OR). That's 6,000 children just like Jibril, who had waited his whole ten-year life for a simple surgical procedure before KidsOR installed an OR in his town.

This then is how we solve the problem of 1,750,000,000 children lacking access to safe surgery. This is how the Royal College of Physicians and



Surgeons of Glasgow play a part in the solution: Through cooperation: Together, both of Scotland's ancient Surgical Colleges have come together to promote training and local capacity building in one of Africa's most in need nations.

Through partnership: KidsOR work with local surgeons and local hospitals and partner with Ministries of Health and regional bodies to deliver truly exceptional surgical care that meets the needs of local people.

One operation at a time: Dr Phillimona is just one incredible surgeon. After graduation, she will perform thousands of life-saving and life-changing procedures. KidsOR will go on to train three more surgeons to join her in South Sudan. Together, they will perform thousands more procedures. By the end of the decade, KidsOR will have trained the surgeons and provided the capacity for over 630,000 procedures. One Operating Room, one surgeon and one operation at time, collectively amounting to transformational, systematic change.

It costs KidsOR just £50 to provide a life-saving operation. You can support or find out more about their



work by visiting [www.kidsor.org](http://www.kidsor.org)  
To make a donation to the HOPE Foundation visit [rcp.sg/hopedonate](http://rcp.sg/hopedonate)

#### About US

The Royal College of Physicians and Surgeons of Glasgow was founded in 1599. We are an inclusive, global community that enables our members to develop the skills, knowledge and leadership to improve patient care.

We have over 15,000 members - physicians, surgeons, dental professionals and those working in podiatry and travel medicine. We are a truly diverse community across 97 countries and empower our members to provide the highest standards of care to their patients through education, training and assessment.

<https://rcpsg.ac.uk/>

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