



Global Shortage of Health Workers

Conference Report
11th International Joint Conference OHHW2019
on Occupational Health for Health Workers
Hamburg



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Editorial

Around a third of the world's population is affected by forced migration. Health workers are not only part of this migration population, they also play a role in meeting the special needs of migrants. This situation gives rise to a number of problems concerning the occupational health of health workers and inadequate access to health care. At the OHHW 2019 conference, experts from six continents and 41 countries around the globe discussed the different aspects of this topic under the title:

“Occupational Health for Health Workers in Times of Global Shortage of Health Workers.”

The OHHW 2019 was the 11th Conference organized by the ICOH Scientific Committee of Occupational Health for Health Workers (SCOHHW). The SC Women, Health and Work (SCWHW) and the SC Occupational and Environmental Dermatitis (SCOED), the Working Group of Occupational Infectious Agents of ICOH (WGOIA) and the International Social Security Association, Section Healthcare and Welfare (ISSA) collaborated.

Many colleagues were involved in putting together the program for OHHW 2019. I would like to thank them all for their valuable support. My particular thanks go to Gwen Brachman, USA, (Chair) and Anton De Schryver, Belgium, (Secretary of the SCOHHW), Acran Salmen-Navarro, USA, Igor Bello, Venezuela, Fouad M. Fouad, Lebanon, Ehi Iden, Nigeria, Swen Malte John, Germany, and Mary Ross, South Africa. Furthermore, we thank the BGW (Institution for Statutory Accident Insurance



and Prevention in the Health and Welfare Services) for its financial and technical support.

From a journalistic point of view our conference report takes you through a selection of keynote presentations which highlight the current debate not only for a specialist audience but also for other interested parties. We start with some general data on the situation of health workers, followed by insights and perspectives from different countries such as Syria, Lebanon, the USA, Croatia or Venezuela. Further topics include “Protecting health workers from TB”, “Occupational skin disease in health workers” as well as gender issues. As around 80% of the health workforce are women, topics such as maternity leave are very important. In addition, the occupational hazards that female health workers are exposed to are often gender-typical.

This report offers some impressions of the many different aspects of the topic discussed at the conference. If you want read on and dive deeper into the subject, see the scientific publications from the conference, available in the Special Issue of the International Journal of Environmental Research and Public Health (IJERPH) “Proceedings of ICOH Occupational Health for Health Workers (OHHW2019) Conference”.

We hope you enjoy the read!

Albert Nienhaus and the OHHW2019 preparation team in Hamburg



World Humanitarian Day 2017, photo: WHO

Declaration – Violence against Health Workers

Participants at OHHW 2019 issued the following declaration on violence against doctors, nurses and other employees in the health care sector:

It is a crime against humanity

- + to attack health facilities and to injure or kill health workers;
- + to prevent health workers from providing patient services, particularly in crisis situations;
- + to punish health workers for helping patients in need of care and treatment;
- + to restrict migrant health workers from delivering care or medical services to other displaced persons in need.

Therefore, the participants of the OHHW2019 Conference appeal to all national and international organizations to protect health workers from these crimes.

This declaration is endorsed by the directors of ICOH and it can be found on the ICOH SC webpage SCOHHCW.weebly.com.

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1

The 11th International Joint Conference OHHW 2019

More than 180 participants, scientists and doctors from 41 countries attended the 11th Joint Conference on Occupational Health in Hamburg at the invitation of the SCOHHW (Scientific Committee for Occupational Health for Health Workers). In light of a global shortage of health workers, the conference focused on the impact on health workers of armed conflicts, humanitarian and economic crises and the migration they cause.

Forced migration currently affects around a third of the world's population, with some 57 percent of countries impacted by corresponding crises. At the same time, the health care sector is one of the fastest growing industries worldwide with a workforce that is 80 percent female, according to the WHO.

"We are the largest workforce in the world with 58 million health workers. We are in every country, even in Antarctica, and 80 percent of our workforce are women," said Gwen Brachman, Chairperson of the SCOHHW, opening the conference. Currently, there is a shortage of over seven million health care workers, and this number is expected to rise to 13 million by 2035. "Cases of occupational injury and illness among health care workers are among the highest of any industry sector," explained Brachman. The daily work of care personnel generally puts a considerable strain on their mental health and their musculoskeletal system. A further risk is the danger of infection, for example with TB or hepatitis, as well as exposure to violence. At the same time, it is important to remember that there can be "no effective health care system without a healthy workforce. We really have to protect our health workers," said Brachman.

"No effective health care system without a healthy workforce"

Stefan Brandenburg, managing director of the Berufsgenossenschaft für Gesundheitsdienst und Wohlfahrtspflege (German Employers' Liability Insurance Association for Medical Services and Welfare Work - BGW) referred to the ethical aspects when it comes to recruiting health workers from abroad, which many countries have to do. To avoid a "care drain," the WHO has published a Global Code of Practice on the International Recruitment of Health Personnel, which is also mandatory for the German Federal Government.

"Globally, women make up most of the workforce in the health sector and we want to look closely at the problems that affect them and their particular needs," said Igor Bello, SC WHW (Scientific Committee on Women Health and Work). "Through our collaboration with the Woman Committee and the Committee of Occupational Health for Health Workers in ICOH, we have analyzed the situation to help caregivers in general, and women in particular." The work of health workers is affected not only by economic and technological phenomena, but also by demographic ones. "From an occupational health perspective, we must think about problems such as the aging workforce, the social changes migration brings, and also the large number of women in labor markets. They force us to look for new ways to deal with these challenges."

Volker Harth of the German ICOH group highlighted the situation from a local perspective. More than 160,000 people are employed in the health sector in Hamburg. The city's 56 hos-

pitals provide over 12,000 beds and 30,000 medical professionals care for more than half a million patients every year. Additionally, doctors, dentists and psychotherapists in private practice cover almost every conceivable medical problem. Patients in Hamburg can therefore rely on medical care. But according to Verdi, the German services union, hospitals in the city lack more than 4,000 nurses. This shortage of health professionals increases the stress and strain on those still working in the health sector. The daily confrontation with suffering and death is extremely demanding. Workers are exposed to complex hazards on a daily basis including heavy physical work, psychosocial and work-related stress, an increasing workload and infections. These risk factors can lead to mental problems or occupational diseases like musculoskeletal or infectious diseases, which are a predictor for future disability and early retirement. "We must sup-

port health workers to reduce unsafe working conditions that can lead to work-related illness, injuries with subsequent mobility problems and mortality, and to workers feeling unheard and not valued enough. We must empower our health staff through open leadership communication as well as supportive and empathic team relationships," said Harth.

The program of the OHHW 2019 was designed to provide an update on specific occupational health and safety topics, offer a chance to interact with colleagues from other countries and find new approaches to occupational health services for health workers. This conference report includes a selection of the presentations that contributed to the main topic of the conference. Further scientific publications from the conference are available in the Special Issue OHHW 2019.



OHHW 2019, photo: Sabrina Lagodka

2 General Data on the Situation of Health Workers and Health Workers in Areas of Conflict and Crisis

2.1 GLOBAL SHORTAGE OF HEALTH WORKERS AND THE CONSEQUENCES FOR OCCUPATIONAL SAFETY AND HEALTH (OSH), CHRISTIANE WISKOW, ILO, GENEVA, SWITZERLAND

“Global health workforce data are highly diverse, and depend on the data sources used, the respective organizations’ calculation methods, definitions, categories and the availability of data. You may hear very different results on the health workforce,” Christiane Wiskow told participants at the conference in Hamburg, where she introduced the facts about the global shortage of health workers and how it relates to occupational safety and health. “Whenever you see figures, look at where they come from. That may explain the huge differences.” Global data on the health workforce and on occupational safety and health are alarming, and there are gaps that need to be filled. Christiane Wiskow is specialized in international public health with a focus on health workforce issues. She has worked with a number of international organizations, mainly on labor aspects in the health sector.

“The health sector isn’t a burden, it contributes to economic growth”

As she explained, the health sector is a major employer in many countries around the world. Currently there are 130 million jobs in this sector, accounting for almost four percent of global employment in total. The health sector is also a major economic factor. For this reason, the Global Commission on Health Employment and Economic Growth has called for a paradigm shift in acknowledging that the health sector contributes to economic growth rather than being a burden for national economies.

Moreover, the health industry generates jobs. For every doctor, nurse, midwife, or physiotherapist, for everyone who works directly with patients in care, there are approximately two other jobs that support their work, both in the health sector and beyond. These include catering services, accountants and managers, who contribute to health services by helping health workers to provide care. Overall, it is estimated that the health workforce could double by 2030.

EMPLOYMENT IN THE HEALTH AND SOCIAL SECTOR



2018: 130 million jobs worldwide; 3,9 percent of total employment
Health and social workers as a percentage of the total workforce, and share of female workers per region.

	Health and social work workforce	Health and social work workforce MEN	Health and social work workforce WOMEN	WOMEN - % of total employed in health and social work
WORLD	3.9	2.0	7.0	69.6
AFRICA	1.5	1.0	2.0	59.0
AMERICAS	7.6	3.1	13.8	76.7
ARAB STATES	2.8	2.1	7.2	37.8
ASIA AND THE PACIFIC	2.5	1.6	4.0	58.8
EUROPE AND CENTRAL ASIA	9.6	3.7	16.8	78.9

Source: ILO calculations based on labour force and household survey microdata.

ILO, 2018

In addition, the health sector is a major source of employment for women. More than two thirds of the health workforce are female. On the other hand, women often remain at the low end of hierarchies or in lower skilled jobs. The gender pay gap in the health sector is between 26 and 29 percent, depending on the economic situation of the respective country, and is therefore even bigger than the global gender pay gap of 20 percent. Furthermore, there is a mismatch between worldwide de-

mand and supply for health jobs. The World Bank has projected that growing demand for health services and related work could create 40 million additional jobs by 2030. At a closer look, however, these jobs are mainly in upper-middle and high-income countries. There is an estimated global shortage of 18 million health workers, mainly in low-income and lower middle-income countries.



Photo: Klaus Nielsen / Pexels

Persisting inequities in access to health care

According to WHO data, there is an uneven distribution of the health workforce that affects above all the poorest countries. Health employment as a share of total employment is greatest in high-income countries, where people can afford to pay for health services. Economic demand is also higher in those countries compared to low-income countries, where the share of employment in healthcare is less than one percent. This is a huge difference and creates persisting inequities in access to health care. It has been estimated that due to health workforce shortages, as much as 84 percent

of the population in low-income countries do not have access to healthcare. In high-income countries, everybody has access to healthcare because there are enough health workers. There is also a rural-urban divide, according to Wiskow. The proportion of the population without access to healthcare owing to a lack of health workers is twice as high in rural areas than in urban ones. For example, 77 percent of the rural population in Africa do not have access to healthcare.

A work agenda based on strategic objectives

In general, health services face the challenge of ongoing, rapid changes that are influenced by factors outside the health sector, such as demographic change, globalization, science, technological advances, environmental and geopolitical developments or shifting patient needs. All of this has an impact on work in the health sector. It affects jobs and working conditions, as well as education, training, and migration. "The major aims of the ILO are to create productive, meaningful work for everybody under conditions of freedom, equality, security and human dignity," Wiskow said. "As a result, we pursue a work agenda that is based on strategic objectives and promotes employment, labor rights, social protection, social dialogue and gender equality, as well as eliminating discrimination." But often, reality is quite different. Long working hours result in exhaustion, a high risk of occupational musculoskeletal diseases, exposure to hazards like blood and airborne infections, and a particularly high risk of exposure to violence and harassment.

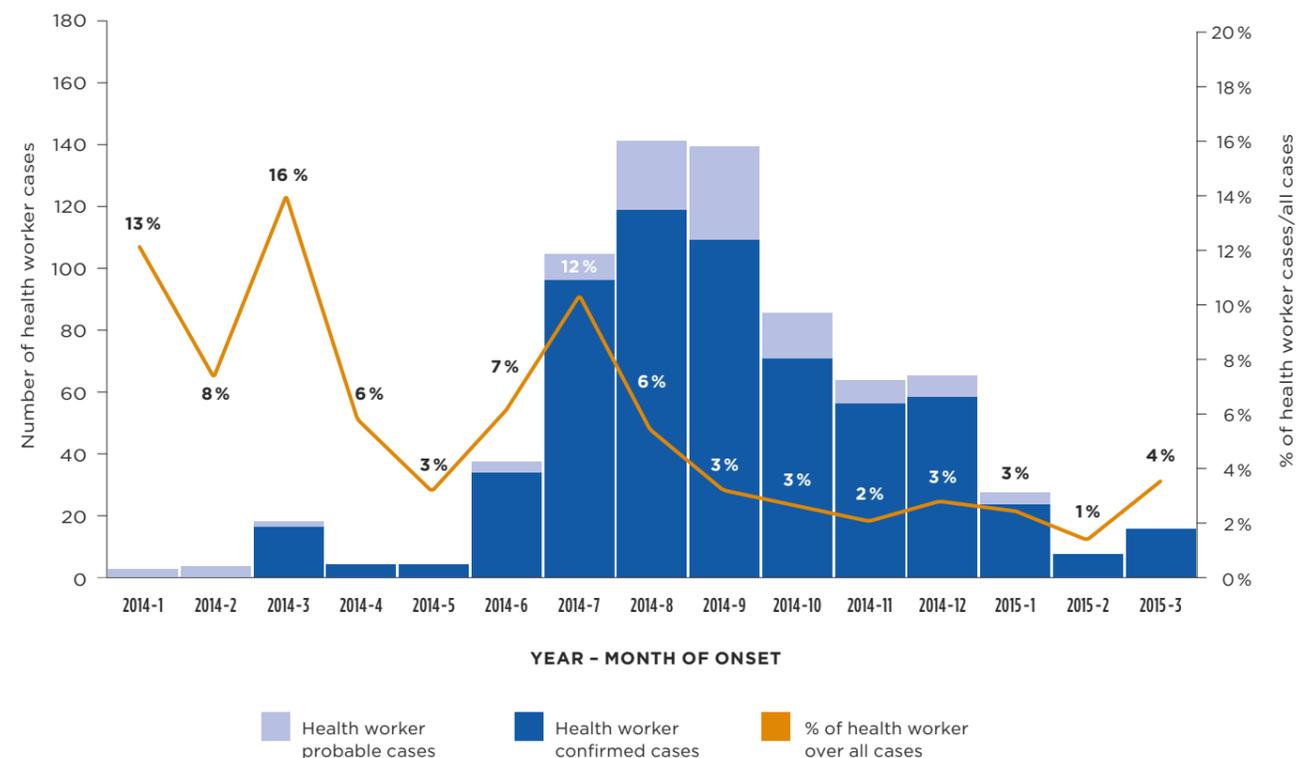
The Ebola outbreak in 2014/15 exemplifies how a lack of occupational safety affects health workers. More than 500 health workers died of the disease and many more were infected.

BIOLOGICAL HAZARDS FOR HEALTH WORKERS AND OSH EXAMPLE EBOLA VIRUS DISEASE OUTBREAK 2014 - 15

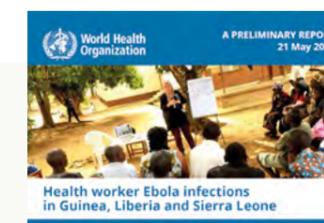


Number of confirmed and probable health worker EVD cases over time (and proportion of health worker cases among all cases* reported) in the three countries combined (Guinea, Liberia and Sierra Leone),

1 January 2014 - 31 March 2015



*All cases include health worker and non-health worker confirmed and probable cases.



At the beginning of the outbreak, there was a lack of PPE supplies, protocols or even knowledge about how to handle the risk of infection for health workers. Health workers were over 21 times more likely to be infected

than the normal population, particularly those working directly with patients. The risk diminished when supplies arrived, protocols were installed, and protection measures were taken.

EU: IMPACT OF RESTRUCTURING AND DOWNSIZING



Sectors where employees are most likely to report negative outcomes related to downsizing (at least 25 percent higher than in overall sample)

OUTCOME	SECTOR
Work intensity	Transport, HEALTH
Psychosocial risk exposure	HEALTH
Decreased satisfaction with working conditions	Public administration, education
Absent due to work-related health reasons	Retail / hospitality, education
Exposure to bullying	Public administration, HEALTH
Presenteeism	Education
Stress	Construction, retail / hospitality, education

Source: Eurofound (2018), ERM report 2018 (based on 2015 EWCS data)

The European Restructuring Monitor (ERM) shows that employees in sectors that are likely to report negative outcomes as a result of downsizing are overrepresented in the health sector. This means that health workers endure higher levels of work intensity, greater exposure to psychosocial risks and to challenging behaviors such as bullying, and an increased risk of distress, burnout and illness due to workplace pressure. In Europe, it was found that the health sector ranks highest among all economic sectors when it comes to stress. Surveys have shown that the most common reason for a high workload is a shortage of staff.

In 2002, when the ILO together with other organizations started to research workplace violence, they found that more than half of health workers had been exposed to psychological or physical violence in the preceding year. Again, the health sector was the economic sector with the highest figures. An industry that has to function 24/7 a week, naturally relies on irregular working time arrangements. But if they are inadequately implemented, for example using shifts and night work, this results in very long hours, extended shifts of 12 hours and more, insufficient breaks and an excessive use of overtime.

WORKING TIME ARRANGEMENTS



PREVALENT IN THE HEALTH SECTOR	NEGATIVE EFFECTS:
<ul style="list-style-type: none"> • Irregular working time (shifts & night work) • Long hours • Extended shifts (12+ hours) • Insufficient breaks • Overtime • On-call hours 	<ul style="list-style-type: none"> • Emotional fatigue, burnout • Disruption of sleep rhythm • Depression • Musculoskeletal disorders • Reduced capacity to manage workload • Job dissatisfaction • Absenteeism • Needle-stick injuries • Physical discomfort • Accidents

ILO, 2018

This has a devastating effect on the health workforce (see diagram). Having too few health workers increases the work intensity and load, which are associated with a higher risk of accidents and injuries, stress, fatigue, burnout, sick leave and absenteeism. It has been shown that safe staffing improves working conditions, worker well-being and patient health outcomes.

How can we ensure decent work in the health sector?

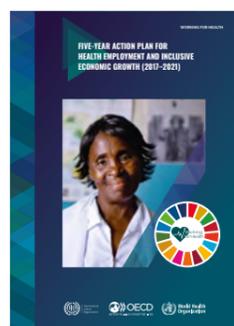
According to the literature, the best way to achieve decent work conditions in the health sector is through improved training opportunities, career prospects, fair remuneration, adequate social protection, occupational safety and health and social dialogue. This has a twofold effect: On the one hand, it guarantees the recruitment and retention of a sustainable

health workforce, and on the other, it enables health workers to provide high-quality care. In 2019, the International Labor Conference adopted a new, groundbreaking international standard on eliminating violence and harassment in the world of work. "This is historic and should be taken forward to incorporate it in our national legislation. We also hope that it will advance the work on addressing violence and harassment in the health sector," said Wiskow.

As Wiskow explained, the ILO calls for a human-centered agenda for the future of work that puts people at the heart of economic and social policies. This resonates with the need for people-centered health services in the health sector. It requires investing in people's capabilities, in the institutions of work and in decent work for all. As a recent development, the International Labor Conference in 2019 adopted the Centenary Declaration for the Future of Work that includes a reference to safe and

healthy working conditions. This was accompanied by a resolution asking the governing body to consider proposals for including safe and healthy working conditions in the ILO's Frame-

work of Fundamental Principles and Rights at Work, which will come into force in the next two years.



Read more:

“Working for Health”: A Five-Year Action Plan for Health Employment and Inclusive Economic Growth (2017-21)

The five-year action plan is a joint intersectoral program of work across ILO, OECD and WHO that is critical to support Member States in the effective implementation of the recommendations of the High Level Commission on Health Employment and Economic Growth in line with the Global Strategy on Human Resources for Health.

2.2

“A VULNERABLE POPULATION” – MASON HARRELL ON HEALTH WORKERS IN AREAS OF CONFLICT AND CRISIS

“Health workers laboring under crisis conditions are sometimes thought of as being immune to injury or illness, simply because it’s their job to heal,” said Mason Harrell, flight surgeon for the U.S. Navy and former medical expert for the WHO. “In reality, they should be described as a vulnerable population.” A high workload, shift work, and staff shortages are just some of the factors that contribute to poor working conditions and put a strain on medical workers’ health. A brain drain from countries with low resources, hazards and injuries at work during military or humanitarian crises, a lack of standardization in education

and training, and difficulties working with local organizations make the situation even more complicated. Insufficient medical supplies, not enough medications, and the failure of health-care infrastructure and institutions are often part of the problem. Complications arising from limited access to water, electricity or the internet also play a critical role. According to Harrell, “The challenges are already well defined.” A bio-psychosocial-economic approach could help to understand the situation of health workers more comprehensively.

HEALTH CARE DURING CRISES

DEMANDS	STANDARD COMPOUNDING FACTORS
<ul style="list-style-type: none"> • Increased needs • Infrastructure • Supplies • Transportation • Security • Policy • Culture • Language 	<ul style="list-style-type: none"> • Food • Water • Electricity • Internet • Mental Fatigue • Physical Exhaustion • Stress / Anxiety • Burnout / PTSD

Mason D. Harrell, III, MD, MPH, FACOEM

Hazards faced by health workers in crises

Exposure to chemical, biological, radiological, nuclear and explosive materials often increases the risk of physical harm to medical professionals during rescues. Another well-established and relatively common risk is violence to health workers. For example, by August 2019, 75 percent of hospitals in Syria had been damaged and 912 medical professionals had been targeted and killed. Through their exposure to seriously injured victims, dead bodies or emotionally distressed survivors, medical professionals have a high risk of developing acute stress disorder or even PTSD. According to the DSM (Diagnostic and Statistical Manual of Mental Disorders), a diagnosis of acute stress disorder requires exposure to the traumatic event and symptoms lasting 30 days.

Studies involving disaster workers from 9/11 have shown that those with high exposure and

previous experience of disasters, or workers with an acute stress disorder, were more likely to develop PTSD. In a study on nurses following the 2008 Wenchuan earthquake in China, it was found that within one year after the earthquake, exposed nurses reported significantly greater symptoms of PTSD and depression than non-exposed nurses. Health workers also run the risk of a severe burnout. This is defined by the simultaneous presence of exhaustion, cynicism and a lack of professional efficacy, as measured using the Maslach Burnout Inventory. In a longitudinal study on international humanitarian aid workers, it was found that they were at increased risk of depression and burnout (specifically, the emotional exhaustion component of burnout) after returning from deployment, and this did not improve after three to six months. They also suffered from a higher degree of anxiety and burnout (depersonalization component) immediately after being deployed, but this decreased after three to six months.



Photo: hush-naidoo / Unsplash

edge, it also means teaching complex skills for multi-level decision-making and resilience. Differences between health workers, such as their previous experience and cultural background, must also be taken into account.

As mentioned above, shift work is a well-known occupational health hazard. In the aftermath of the 2004 Japan earthquake, Azuma et al. studied the impact of an increase in working hours on cardiovascular disease by comparing relief workers with the lowest workload to those with the highest workload. They found that the latter had significantly higher BMI, blood pressure and serum cholesterol with likely causes being increased stress, a lack of sleep, and shift work.

Team training and improved criteria for recruiting health workers can help to mitigate the challenges associated with responding to a crisis. Furthermore, prior experience in a crisis was also found to help.

Difficult cooperation with local organizations

Cooperation between international and local organizations is important to achieve benefits for the patient population, according to the 2006 WHO report “Working together for health.” At the same time, healthcare in a crisis

setting is often challenging because collaboration with local authorities, international organizations or NGOs is so time-consuming. In a review of earthquakes in Turkey, Haiti and India, it was reported that cooperation between supply personnel and transports resulted in an increase in surgical capacity, as field hospitals had highly qualified personnel but lacked logistical support, and local liaison officers were essential for the evacuation of patients. A review of the impact of aid organizations in Haiti after the earthquake found that when local physicians were hired to work for aid organizations, this resulted in increased competition between healthcare facilities run by NGOs and local facilities, with some local facilities even having to close down. This illustrates the importance of collaboration between aid institutions and the local infrastructure. Large groups of volunteers are needed, but skilled crisis coordination teams are essential. Effective personnel selection is crucial due to the lack of skilled workers and overwhelming demand during a crisis. Sometimes, highly skilled workers have to perform less skilled work, which again leads to a shortage of resources.

Coping under stressful working conditions

“The ability to adapt to strenuous work conditions and resilience have been identified as necessary for a successful outcome, not only for patients and crisis relief, but also for health workers’ well-being,” said Harrell.

Successful health workers tend to have characteristics such as work drive – the disposition to work long, irregular hours and invest large amounts of time and mental acuity in their work – and conscientiousness, defined as being dependable, trustworthy and likely to adhere to standards when making clinical decisions. Medical professionals who are optimistic and emotionally stable are more likely to have strong coping mechanisms with multi-

ple stressors. Being extroverted, assertive and able to work in a team are important characteristics for healthcare professionals, who often have to take the initiative and make tough decisions quickly. Another study found that health workers who possess leadership traits were also under less stress. Role modeling for health workers has also been found to help in teaching humanistic aspects of crisis work. Organizational adaptation was determined to be an essential component for success, while hospital structure and personnel allocation flexibility were rated highly by all hospital managers.



Photo: humberto-chavez / Unsplash

Resilience, defined as the capacity to recover quickly from difficulties, makes it easier to adapt in the face of adversity, trauma, tragedy, threats and significant stress. This characteristic is generally a key to success. A four-year follow-up study after the 2011 earthquake in Japan demonstrated that for health workers, resilience was characterized by dedication. A study of humanitarian workers in South Sudan found that successful team cohesion was associated with lower levels of depersonalization – an established symptom of burnout described as a psychopathological syndrome characterized by a loss of identity and feelings

of unreality and strangeness about one’s own behavior. To sum up, health workers are at greater risk due to their heavy workload, a lack of policies and limited resources, not to mention hazards including violence, death, infection and anxiety. If they feel and are kept safe, they will be more able to carry out their professional activities.

Read more:

DANGER! Crisis Health Workers at Risk Mason Harrell¹, Saranya A. Selvaraj² and Mia Edgar³

International Journal of Environmental Research and Public Health, July 2020. This article belongs to the Special Issue Proceedings of ICOH Occupational Health for Health Worker (OHHW2019) Conference.

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3 Insights from Syria, Croatia, Lebanon, Zimbabwe, USA, Sierra Leone and Venezuela

3.1 HEALTH WORKERS AND INFORMAL HEALTH SERVICES IN THE MIDDLE EAST AND HEALTH SYSTEM FRAMEWORKS IN TIMES OF FORCED MIGRATION, FOUAD M. FOUAD, AMERICAN UNIVERSITY OF BEIRUT, LEBANON

“Health workers are always part of a health system. But what sort of system do they need? And how should people on the move be included?” In his presentation at the conference in Hamburg, Fouad M. Fouad from the Department of Epidemiology and Population Health at the American University of Beirut raised awareness of the situation of migrants and refugees who are not under the protection of a national healthcare system. He also described and demanded solutions for the challenges and barriers faced by health workers in practicing their profession if they are migrants or refugees themselves. He said that there should be open access to healthcare services

so that no one is left behind, and there should be opportunities for doctors, nurses, physical therapists and other medical professionals to work legally.

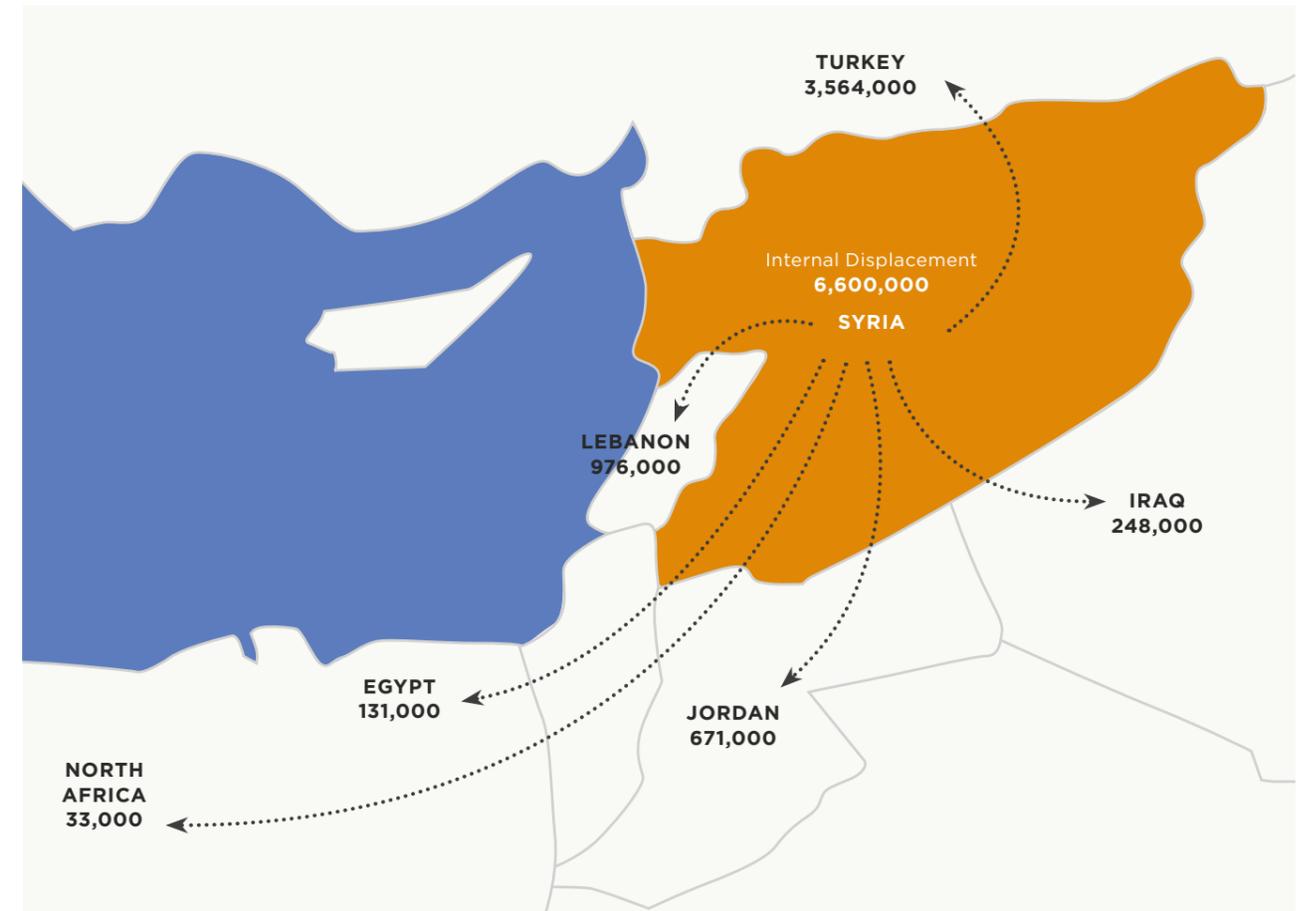
In 2018 the number of migrants, including labor migrants and refugees, was estimated at one billion people. According to the WHO/ UNHCR, there are about 71 million forced migrants worldwide, of whom 25 percent are refugees and 75 percent are internally displaced or stateless. The majority of these people have not fled to Europe or North America, but 85 percent of forced migrants are in low and middle-income countries. Forced migrants move

COUNTRY	2005	2017	
Syrian Arab Republic	16,401.00	6,308,619.00	
Afghanistan	2,166,149.00	2,624,225.00	
South Sudan		2,439,868.00	
Myanmar	164,864.00	1,156,732.00	
Somalia	395,553.00	986,356.00	
Sudan	693,632.00	694,506.00	
Congo, Dem. Rep.	430,929.00	620,775.00	
Central African Republic	42,890.00	545,498.00	

not only from Syria, but also from South Sudan, Myanmar, Somalia, Sudan and other countries (see graphic). The main destinations for migration are Turkey and Pakistan. These two countries host almost 1.5 million Syrian and

Palestinian refugees. As the trend over the last ten years shows, migrants are not only fleeing violence, catastrophes and natural disasters or low income-countries. They are increasingly fleeing from middle-income countries.

OVER 5.6 MILLION SYRIANS SEEK REFUGE IN NEIGHBOURING COUNTRIES



Source: UNHCR, Government of Turkey

Syrian health workers in Lebanon

Lebanon is a small country with a population of 4.5 million. Around one million Syrian refugees have settled in Lebanon and Lebanese territories, in addition to refugees who moved here historically from Palestine. Since 1948, the country has received about 1,000,000

refugees in total. Eighty percent of Syrian refugees are in Lebanon, mainly women and children. They are called “displaced people” or “displaced population” because Lebanon is not a signatory of the “Geneva Refugee Convention of 1951”. Health workers moved out of Syria mainly because health facilities were being targeted

directly. Between 2011 and 2017, some 850 Syrian physicians were killed in violent attacks, or were arrested and tortured to death because they offered healthcare to protesters. Another reason for health workers leaving Syria was the economic crisis. Between 50 percent and 70 percent of Syrian health workers left the country before the crisis, including around 15,000 to 21,000 Syrian physicians. According to current estimates, there are around 100 Syrian physicians and 300 health workers including nurses, physical therapists and paramedics in Lebanon.

Any foreign physician can register in Lebanon, get a license through the Ministry of Health and Public Health and become a member of the relevant professional association, the Medical Physician Association in Lebanon. But according to a new regulation from 2014, Syrians no longer have permission to practice at all. In December 2015, the Ministry of Labor issued a regulation list of careers or jobs for refugees. They were limited to just three categories: construction, agriculture and “environment jobs”, which means cleaning streets. Health work is not included in the list. Syrians have to sign a pledge not to work, and many physicians therefore work informally.

Current study on the contribution of informal health services

A current study by the American University of Beirut explores the contribution of informal health services provided by displaced Syrian health workers and their potential role as health partners. It also proposes a recommendation on integrating such a practice. Another topic of the study is the response of host communities to the health needs of refugees. The objectives are to investigate what type of health services displaced health workers offer, what type of funding they get, and what challenges they face. The research team chose a mixed method of a qualitative and a quantitative approach.

The focus at OHHW 2019 was on the results of the qualitative approach. As Fouad explained, this was a “seed approach” taking one seeded participant and then snowballing it to identify Syrian health workers. Because of the illegal work situation, it is essential that their privacy is protected. The study interviewed 22 participants, of whom 18 were male, 9 were doctors and 9 were from other professions. Fifteen had proved experience in their work for five to ten years before moving, while eight had a experience for between 30 and 40 years. The researchers asked them about their motivation for working in Lebanon, about the services they offered and about factors that facilitated their work. The responses were very clear. Above all, they said that they worked because it was their duty as a doctor and of course to earn money to survive.

According to the WHO, at least 1,000 additional doctors are needed to serve the population of one million refugees in Lebanon. There is a discrepancy between available health workers and the health needs, especially of people with chronic diseases and chronic conditions, which require a continuity of care. This was a further motivation for Syrian health workers to work in Lebanon. The Lebanese health system is highly privatized, with 80 percent of hospital beds in private hospitals. Care is very expensive and is mostly high-tech. Syrian refugees cannot afford this. Employing Syrian health workers might be a solution to this problem.

The researchers also asked about links between this informal health care system and the formal system. The Syrian health workers said that they are linked to the formal health system either because they work under the cover of Lebanese physicians, without a legal status, or in a hospital under the cover of NGOs. The Lebanese government turns a blind eye to the practice of Syrian health workers, they said, but this in fact hinges on political changes. Syrian health workers are close to their community. Some have created an informal network among themselves, for example through

Facebook or WhatsApp groups, and are often linked to formal services that sometimes facilitate their work.

The main issue is the legal status of Syrian health workers in Lebanon. As long as they work illegally, they feel under constant threat. They could lose their residence permit as a consequence, and this lack of security influences their daily life. As one of the participants of the study said, “At least they can always say, ‘You are Syrian, and you are not allowed to work,’ so we cannot ask for a salary increase.” Other consequences are a feeling of resentment, “Knowing that you’re Syrian, and therefore you’re not allowed to work or only under the cover of a Lebanese doctor.” Syrian health workers are not only exposed to exploitation, some have even been sent to jail. One of the participants of the study said, “I was deported from the country. They told me that I have to leave within a month.” The health workers suggested that a temporary work permit to work only with Syrian refugees would help them. Some said that they need further training and opportunities to advance their careers. Another issue is responsibility for medical errors, as well as other ethical issues, such as the practice itself being considered a crime. The policy towards Syrian health workers has to change. Best-practice examples of working strategies can be found in Germany, where 2,000 Syrian physicians were registered and started to work in their profession after submitting the required documents, and in Turkey, where they are allowed to work as “migrant health workers.”

Health needs are related to health profiles and preexisting conditions

In 2015, the Lebanese government asked the UNHCR to suspend registration of Syrian refugees. Now refugees get “recorded” instead. It is not quite clear what this means in legal terms. Most “recorded” Syrian refugees live in Beqaa Valley, close to the Syrian border. This is

home to the poorest Lebanese people, 70 percent of whom live below the poverty line, or from less than two dollars per day. Sixty percent suffer from extreme poverty, also in terms of their health. Almost two thirds of Syrian refugees have at least one family member with a health condition needing treatment. About 50 percent of these health conditions are chronic. This is to be expected because, as mentioned above, Syria had a high morbidity and mortality rate for chronic diseases, even before the crisis. As many as 77 percent of Syrians die of heart disease, cancer or diabetes.



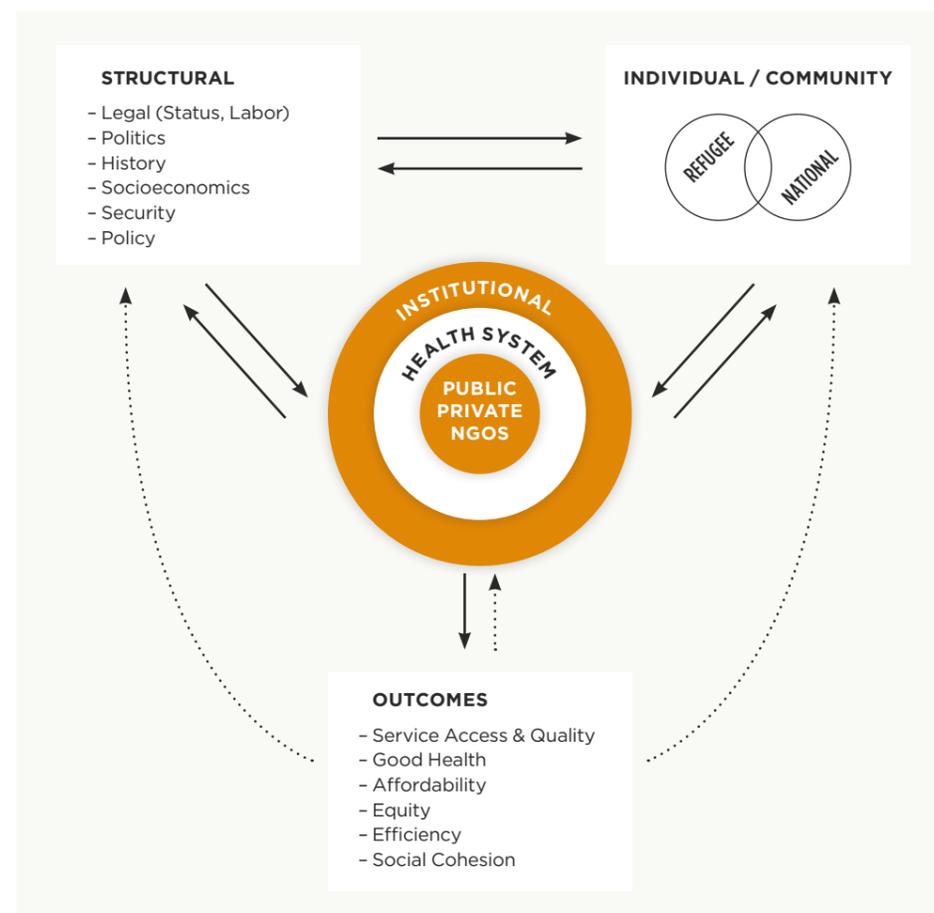
Photo: marcelo-leal / Unsplash

As Fouad explained, different health profiles often become an issue because people move and encounter a system that mainly responds only to basic needs like vaccination, family planning or clean water. The living conditions for refugees and their experience during the journey also have an impact on their health needs. On the other hand, health systems have different frameworks and depend on the political and geographic situation in individual countries.

To illustrate the potential hazards, Fouad related a case study of a 16-year-old boy, who decided to leave Pakistan to reach Germany by foot. At the Macedonian-Serbian border,

the boy had to see a doctor because of severe abdominal pain. Serbia had just decided not to accept any more refugees. The boy only had some hours to cross the border and leave the country, when a volunteer doctor diagnosed a spleen rupture. The boy needed to stay in Serbia for a further ten days to get surgery. He had to make the decision whether to leave or to get medical treatment, after which he

might be deported. How can health systems be changed to account for such cases? People who are citizens of a country can take advantage of the national health system and have the power to demand improvements from their government. Our global system does not protect those who are not considered citizens, Fouad criticized.



A conceptual framework to examine the different factors influencing the integration of refugees into national health systems and the interrelationships among various Levels.

A perspective of universal health coverage

As he said, one suggestion is to take the perspective of universal health coverage in order to protect the rights of migrants to better health conditions. The UHC Partnership (Universal Health Coverage Partnership), supported and funded by the WHO, is an initiative to

provide people worldwide with preventive, curative and palliative health services without being exposed to financial hardship.

Right now, access to a health system depends on the national regulations, legal and financial status. In Lebanon, for example, 85 percent of Syrian refugees are illegal because they are not able to pay the annual fees to register.

Primary healthcare is covered by humanitarian organizations, but access to hospital treatment is based on cost-sharing. Syrian refugees pay the first \$100 of the hospital bill. Up to a limit of \$15,000 UNHCR covers 75 percent of the cost. This cost-sharing model only applies to Syrian refugees registered with the UNHCR. Those unregistered have to cover the full cost. 80 percent of Syrian refugees in Lebanon surviving on less than \$2.9 per day, according to the UN World Food Program and they cannot even afford the first \$100¹.

A case study involving a 30-year-old man with renal failure, who has to undergo hemodialysis three times a week, shines a light on the consequences of this situation. The doctor decided that the patient needed a transplant, and the patient even had a donor. But renal transplant surgery in Lebanon cost 20,000 U.S. dollars, which the patient would have had to pay himself. In neighboring Jordan, the same surgery was offered for 10,000 dollars. In Turkey, the transplant could be done almost for free, because if the patient had a donor, he would be protected under the national system of the UNHCR. But Turkey stopped taking in refugees, as did Jordan. The patient is now dying because he couldn't afford the cost and was not protected by the UNHCR. "The main



Photo: Max Bender / Unsplash

task is to end the discussion on how the health system is influenced by mobility and how mobility influences the health system, and to find solutions for improving access to health care for migrants," Fouad concluded.

Read more:

Informal healthcare provision in Lebanon: an adaptive mechanism among displaced Syrian health professionals in a protracted crisis. *Confl Health* 13, 40 (2019). Honein-Abou Haidar, G., Noubani, A., El Arnaout, N. et al. *Voices of the vulnerable: Exploring the livelihood strategies, coping mechanisms and their*

impact on food insecurity, health and access to health care among Syrian refugees in the Beqaa region of Lebanon. Dana Nabulsi, Hussein Ismail, Fida Abou Hassan, Lea Sacca, Gladys Honein-Abou Haidar, Lamis Jomaa. Published: December 2, 2020 <https://doi.org/10.1371/journal.pone.0242421>

¹ Syria direct. Syriadirect.org, Alicia Medina "Syrian refugees' growing struggle to access healthcare in Lebanon", July 14, 2020

3.2
HEALTH CARE IN CRISIS –
IGOR BELLO ON THE SITUATION IN VENEZUELA

The future of decent work is influenced by factors like demographic change, an expectation of a prolonged productive life with more elderly people at work, an increasing number of women in the labor markets and a boom in migration. “The health sector does not escape this reality, and all of this defines health and safety for workers,” said Igor Bello, a founder of the Venezuelan Occupational Society and associate professor of the University of Simon Bolivar in Caracas. “Analyzing how migratory

phenomena affect national health systems is not only useful for the countries the migrants have left, but also to understand how the countries that receive them are affected and how migrants are affected themselves.” At the OHHW 2019, Bello explored these issues taking the example of the crisis in Venezuela, which has been described by the UNHCR (United Nations Agency for Refugees) as “one of the biggest displacement crises in the world.”

SOME FACTS ABOUT MIGRATION IN GENERAL:

- + Nearly 200 million individuals migrate annually across national borders – an increase of 144 percent in the past 40 years.
- + In 2017 there were over 250 million people living in a country other than their country of birth – an increase of 49 percent since 2000.
- + More than 60 percent of these migrants move from developing to developed countries seeking better employment and economic opportunities (Source: Global Conference of International Migration, 2005).

Work for a Brighter Future – Report by the Global Commission on the Future of Work

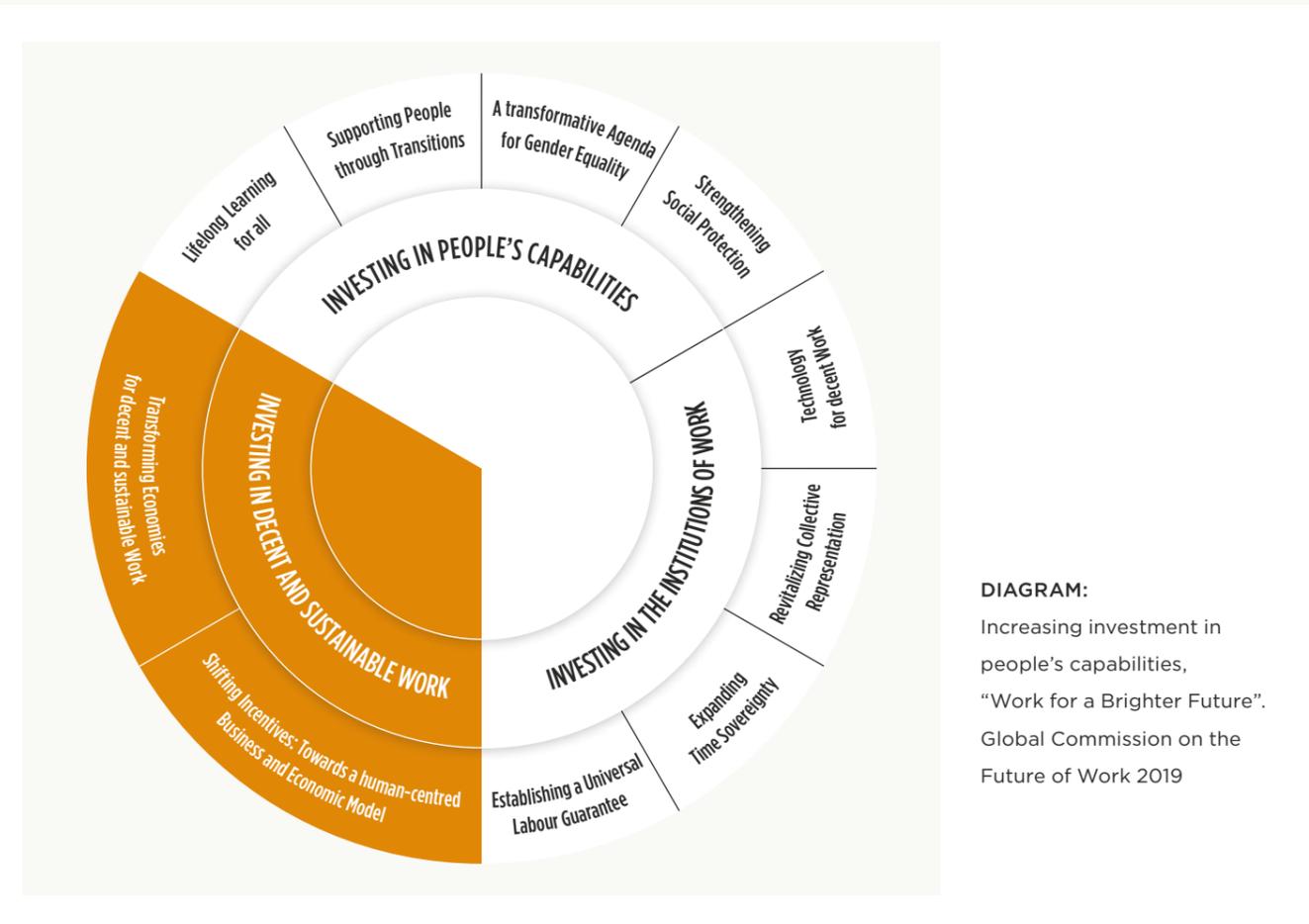
As Bello explained, some measures have already been drawn up across states to cope with the global topic of migration. According to the Global Commission on the Future of Work, “A human-centered agenda is needed for a decent future of work.” The Global Commission, chaired by Matamela Cyril Ramaphosa, President of the Republic of South Africa, and Stefan Löfven, Prime Minister of Sweden,

was founded by the International Labor Organization (ILO) in 2017 as part of the ILO’s Future of Work Centenary Initiative. Its members are independent experts from business, trade unions, think tanks, government and non-governmental organizations. The Commission’s report “Work for a Brighter Future”² published in 2019 focused on new forms of work, e.g., on lifelong learning, supporting people through transitions, inclusivity, gender equality and universal social protection.

² International Labor Organization “Work for a Brighter Future”. Global Commission on the Future of Work 2019
³ Global Compact for Safe, Orderly and Regular Migration and on Refugees (UN-Doc A/RES/73/195)
⁴ ECLAC: Latin American and Caribbean migration trends and patterns from around 2010 and the challenge for a regional agenda

In December 2018, the majority of the 193 UN member states formally adopted the Global Compact on Safe, Orderly and Regular Migration and on Refugees (GCM)³, an inter-governmentally negotiated agreement covering international migration, with a focus on improving its governance and strengthening the contribution of migration and migrants to sustainable development. “This will open new

opportunities to build stronger system-wide cooperation on migration and on access for refugees to labor markets,” said Bello. The Global Compact also corresponds to the 2030 Agenda for Sustainable Development with regard to migration. Development and research on sustainable jobs, changing the economy, creating good jobs in the respective countries, making migration unnecessary and investing in



people’s skills are part of the learning process around migration.

In 2010, about 28.5 million Latin American and Caribbean people resided outside their countries of birth. The Economic Commission for Latin America and the Caribbean (ECLAC) insists on including them in development strategies and appreciating the contribution that migrant people make to their countries of ori-

gin and destination. Furthermore, ECLAC proposes encouraging dialogue and international cooperation to ensure respect for the human rights of migrants, with a special focus on children, young people, women, workers with few skills and people in an irregular situation or seeking asylum.⁴ As Bello said, migration is not only a determinant of health conditions for migrants, it affects the health systems of both departure and receiver countries.

TABLES AND GRAPHS OF INTEREST TO THIS CORRIDOR

Table 18.
Venezuela: Number and Percentage of Colombian Residents, 1990, 2001 and 2011

1990 CENSUS		2001 CENSUS		2011 CENSUS
Number of Colombians in Venezuela	Percentage of Colombians compared to other migrants	Number of Colombians in Venezuela	Percentage of Colombians compared to other migrants	Number of Colombians in Venezuela
529.924	51.8 %	608.691	60.0 %	684.040

Source: IOM, 2013c.

According to ECLAC, the main receiver countries up to 2011 were Argentina (1.8 million), Venezuela (1.15 million), Mexico (1 million), and Brazil (600 thousand). The largest migrant flows were from Haiti to the Dominican Republic, from Nicaragua to Costa Rica, and from Colombia to Venezuela.

Until 2011, Venezuela was a popular destination for immigrants mainly from Colombia, because it was one of the strongest industrial nations in the region, not least because of the oil industry.

Dramatic change in the situation in Venezuela

“This situation became dramatically different during the last five years due to a change of government. Venezuela slipped increasingly into an economic crisis and, as a result, also a political and social crisis,” said Bello. “In October 2019, there were more than 5,000,000 Venezuelan migrants. The Washington Post talked about one of the biggest migration crises in Latin American history, comparable to the flow of Syrians into Western Europe in 2015.” Media around the world such as Al Jazeera and Forbes rated the crisis the same way. According to GIGA Focus Latin America, “While the government in Venezuela is

becoming more and more authoritarian, the population is becoming increasingly impoverished. One of the biggest waves of migration in the history of Latin America is the result. 2.3 million Venezuelans have fled the country since 2014.” (Victor M. Mijares, Natassja Roja Silva, October 6, 2018)

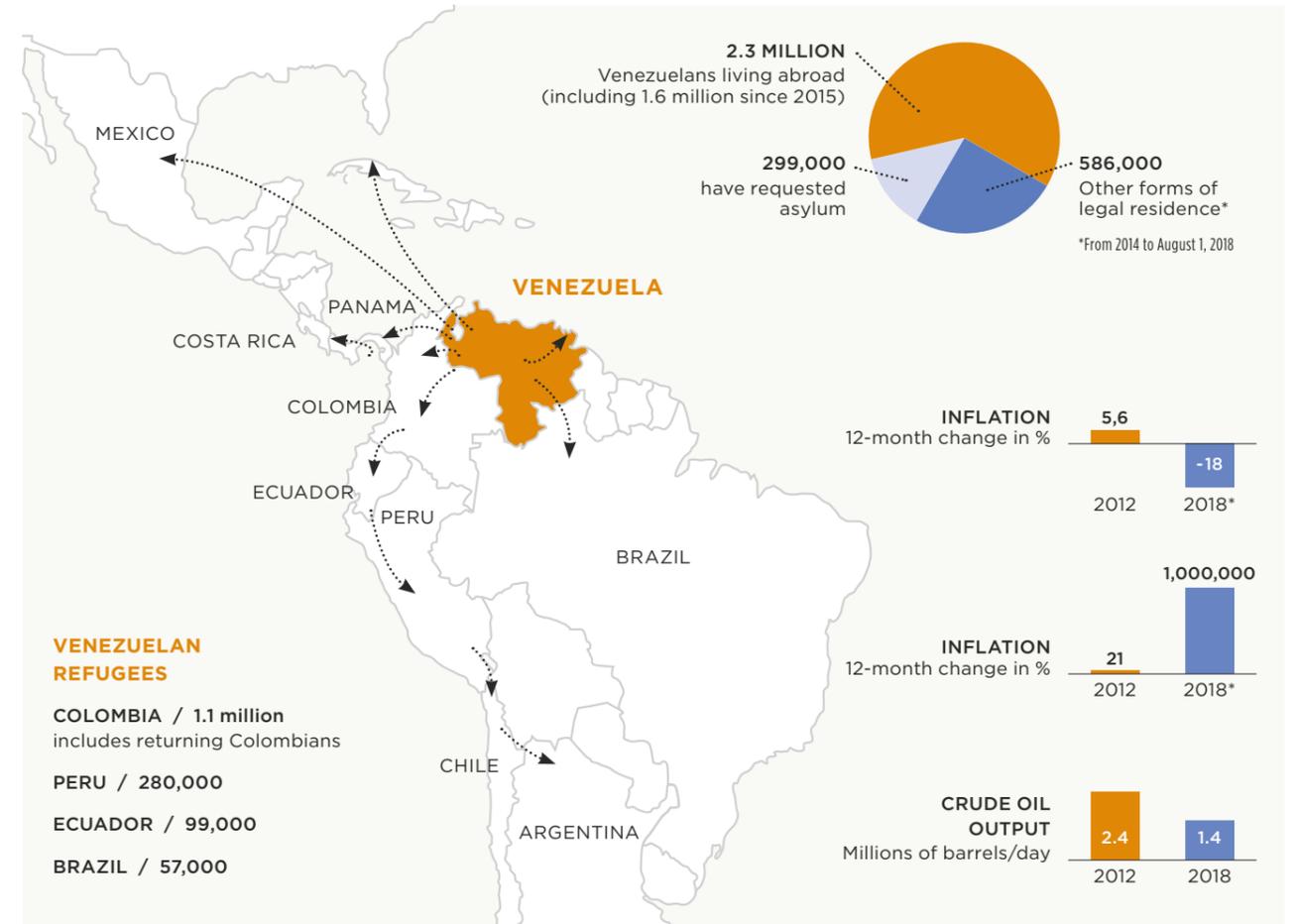
According to Bello, until 2019 the country was emptying out and most Venezuelan migrants fled to Colombia. The consequences for the economy were significant, which of course also affected the health sector. By 2015 Venezuela, which once held a pioneering role in the OSH movement in Latin America, had one of



Wage strike – Health workers in Venezuela 2018, Source: Aporrea.org

VENEZUELAN MIGRATION ROUTES

Hundreds of thousands flee economic crises



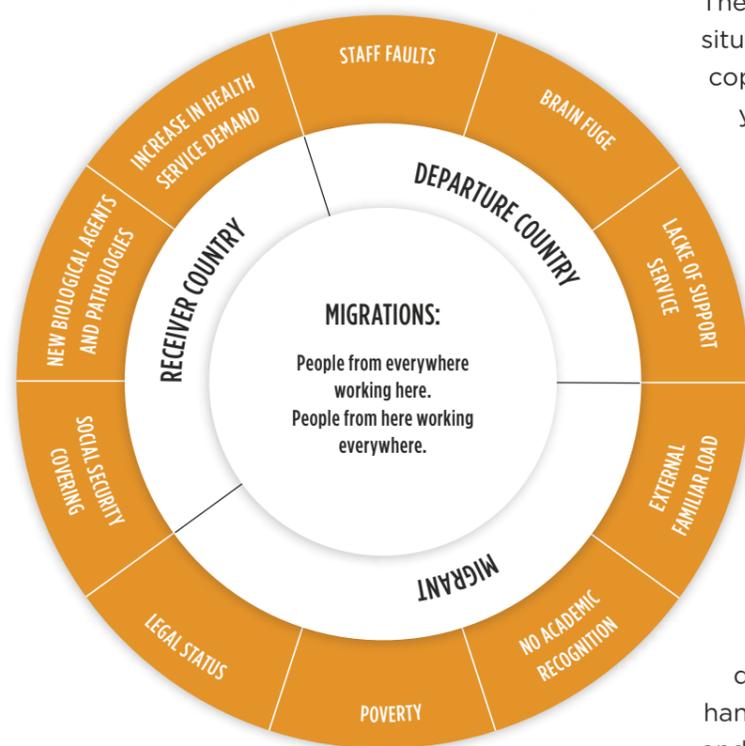
Source: UNHCR / IOM / USAID / UN DESA / IMF (*forecast) / OPEC

the highest inflations in the world, some of the lowest salaries, a significant scarcity of basic products and medication, a slow internet connection and the highest perceived corruption in Latin America⁵. “OSH became a luxury rather than a right in Venezuela,” said Bello. “And the gap between what is written on paper and reality became more and more significant.” National laws on occupational safety, ILO conventions and politically progressive rights for employees that Venezuelans had been accustomed to grew less important following the change in government. Most employees in the health sector, mainly nurses, earned a monthly

wage that was equivalent to just \$7.50. This led to health care strikes and protests for wage increases and improved working conditions. Nurses and doctors in hospitals treated only medical emergencies and certain urgent therapies.

The crisis in the health system was exacerbated not only by the lack of medicine and equipment, but also by a brain drain due to migration of health workers to Colombia and other countries. At the same time, the influx of well-educated medical professionals, e.g., from Colombia, failed to materialize.

⁵ Cf. Yohama Caraballo-Arias: Occupational Safety and Health in Venezuela. 2015



All countries are exposed to migration

The crisis in Venezuela is an example of the situation in a receiver country that has had to cope with high rates of migration over many years, and has been nearly emptied out by migration in the last five years. “All countries are exposed to migration. This is one of the lessons we have to learn,” said Igor Bello. “Health systems have to be managed under a ‘risk vision’ and be able to resize themselves without losing service capacity. This could be useful in other emergency situations like earthquakes or epidemics.”

Whereas departure countries have to cope with a lack of medical professionals in health care and training, receiver countries have to manage an increasing demand for health services. They have to handle new biological agents and pathologies and find solutions to questions on topics such as social security.

Migration also affects migrants

Migration is a complex social phenomenon, too. Migrants themselves are often not prepared for their new vulnerable situation when it comes to their legal status, the experience of poverty or difficulties in getting their academic degrees recognized. Family structures often change because men typically start the migration process ahead of the rest of the family, while women stay at home as family breadwinners, taking responsibility for the family. This period generally lasts between six and 18 months and sometimes takes a lifetime. “Receiver and departure countries need international support to cope with a migratory crisis,” Bello concluded. “Departure countries need human aid while receivers need financial and technical help to upsize their capacities.”

Read more

Occupational Safety and Health in Venezuela. Yohama Caraballo-Arias, 2015.
 ECLAC: Latin American and Caribbean migration trends and patterns from around 2010 and the challenge for a regional agenda.
 International Labor Organization “Work for a Brighter Future”. Global Commission on the Future of Work 2019.
 Global Compact for Safe, Orderly and Regular Migration (UN-Doc A/RES/73/195).

3.3

WORKING CONDITIONS IN A HEALTHCARE SYSTEM IN CRISIS – THE CASE OF ZIMBABWE, TAWANDA NHERERA

“When we talk about Zimbabwe, we are talking about working conditions in a health system in crisis,” said Tawanda Nherera, a scientist from the British Oxygen Company (BOC). The shortage of health workers affects the provision of health services throughout the

country. A study published in 2010 shows that for more than ten years, Zimbabwe has lagged behind not only the region, but also global standards. However, between 2013 and 2016 nurses, pharmacists and doctors enjoyed good working conditions, according Nherera.

Table 1:1 Health workforce distribution per 10 000 population as at 2013

CADRE	GLOBAL	REGIONAL	NATIONAL ZIMBABWE
PHYSICIANS	13.9	2.7	0.8
PHARMACY	4.5	0.8	0.4
NURSING AND MIDWIFERY	28.6	12.4	13.4

Source: Atlas of Africa Health Stats 2016

Hospitals run by the Ministry of Health and Child Care, mission hospitals established mainly by the Roman Catholic Church, and local district hospitals were last reviewed in 1983 and a risk assessment performed. Since that time, the population has grown and much has changed in the country. In the past, if any of these institutions wanted to hire additional employees, they had to submit a request. The

hospitals had to justify why they needed an extra nurse or doctor, and this could be approved or rejected. The decisions were based on estimates that in many cases did not correspond to an increased workload, population growth or the need for disease control. Finally, health emergencies forced authorities to start looking at the lack of staff and do something about it.

Diagram: Ministry of Health and Childcare (MoHCC) Human Resources for Health (HRH) vacancy levels for selected cadres

PERIOD	NURSES	PHARMACY	DOCTORS %
2013	14 %	27 %	37 %
2014	15 %	34 %	33 %
2015	17 %	30 %	35 %
2016	14 %	32 %	33 %

Source: HSB Annual Reports 2013 – 2016

Researchers began to criticize that the government did not follow scientific data in approving staff. In 2017, an investigation was carried out by the Ministry of Health, the WHO and the Health Development Fund – a consortium of funders – using the scientific Workload Indica-

tors of Staffing Need (WISN) method. This is what they established, for example in Harare Central Hospital, the second largest hospital in Zimbabwe (diagram below: WISN Results for Doctors – Harare Central Hospital, Zimbabwe 2017).

CADRE	AUTHORIZED ESTABLISHMENT (AE)	STAFF IN POST (SP)	WISN CALCULATED STAFF REQUIREMENT (WCR)	WISN CALCULATED STAFF DIFFERENCE (WCD) SP-WCR	WISN RATIO
Anaesthetist	4	5	23	-20	0.20
Cardiothoracic Surgeon	3	0	1	-1	0.00
ENT Surgeon	3	1	3	-2	0.38
General Surgeon	4	5	11	-6	0.45
Neuro Surgeon	1	0	1	-1	0.00
Obstetrician and Gynaecologist	3	3	19	-16	0.16
Ophthalmologist	3	1	6	-5	0.17
Orthopaedic Surgeon	5	1	6	-5	0.18
Paediatric Surgeon	0	1	6	-5	0.18
Paediatrician	3	2	34	-32	0.06
Physician	3	4	22	-18	0.19
Pathologist	2	1	3	-2	0.33
Psychiatrist	3	1	20	-19	0.05
Urologist	3	0	10	-10	0.00

Source: Zimbabwe WISN 2017

Harare Central Hospital

“The government has authorized three cardiothoracic surgeons in Harare, but there is just one in that position,” said Nherera. “The workload at the hospital is demanding. The hospital needs urologists. The government has approved three, but there is no one in that position and the requirement indicated by the workload is ten.” For example, 3,057 health workers are needed to manage the workload. But they found just 2,400. This has implications for occupational health and safety, starting with fatigue among health workers and all the problems associated with that.

According to the Zimbabwean government, the country’s economic crisis has caused an acute shortage of essential drugs and a resurgence of the black market. Products not available in pharmacies or hospitals can be found on the streets for an exorbitant price. People suffering from chronic illness need to fork out a lot of money to get access to the medicine they need. This has exposed the population to risks associated with unregulated and unauthorized drugs. The Medicines Control Authority of Zimbabwe is mandated to control and regulate the enforcement of laws. Zimbabwean hospitals lack even common supplies like gloves, needles and pain killers. “You might find that the whole hospital has closed down or they might announce that you have to evacuate your patients because there is no water or needles,” Nherera said. Then he cited a senior medical officer who described the situation like this: “I come to work, and I do my very best, but my output is stillbirths. My output is disabled babies. Elective surgery is not being done. So, we wait until it becomes an emergency. When it becomes an emergency, I’m given a baby with hypoxic brain injury. This child now has a permanent disability. Two weeks later needles run out in the middle of



Photo: WHO / Blink Media – Nana Kofi Acquah

treatment. This is not acceptable. This is really heartbreaking for me.” According to Nherera, this is a typical example of a country in crisis when it comes to health workers and health-care. In rural areas, where journalists cannot gain access, the situation is even worse. Communities have had to shut down large hospitals or scale back surgeries. Zimbabwe’s pharmaceutical supplies are dependent on private pharmaceutical companies which import most drugs. “We had our own manufacturing plant, but it’s working at about ten percent. There are efforts to resuscitate it. We depend on imports, but long supply chains make things complicated and middlemen push the prices of drugs very high,” Nherera explained.

DRUG & EQUIPMENT SHORTAGES

Comparison of drug prices: Zimbabwe vs. UK

DRUGS	AVERAGE ZIMBABWE PRICE (US\$)	UK PRICE FROM BNF MARCH – SEPTEMBER 2013 EDITION (GB£)	UK PRICES (US\$) RBZ \$:£ EXCHANGE OF 1:1.54 (ON 18/2/15)
Propofol 1 %, 20 ml vial	15.00	4.18	6.45
Atracurium 10 mg/ml 2.5 ml vial	7.00	1.80	2.78
Midazolam 1 mg/ml, 5 ml vial	6.00	0.60	0.93

BOC GASES
A Member of The Linde Group

Competence issues

The Ministry of Health provides basic and post-basic training programs, as well as in-service training courses for health workers. Attending workshops like this is critical for their continuing professional development. Other training opportunities include sponsored training programs to prepare managerial staff for new responsibilities. This is tracked by the Health Service Board, a statutory body created by the government under the Ministry of Health and Child Care. The Ministry of Health supports health workers who opt for personal development programs. But there is no guarantee that these programs will be sponsored. To be approved, they must be in line with the health workers' other duties. The ministry encourages employees to engage in self-development and supports them financially if they take courses that pertain to their roles. The Ministry of Health provides support by ensuring that workers do not lose their salary benefits during training. "But is their salary worth talking about?" Nherera asked. "A qualified senior doctor can earn as little as 50 U.S. dollars

per month, often not even enough to pay for electricity, food or school fees." Doctors had already put pressure on the government, including strikes, to demand better salaries and supplies. Training programs cater for a number of professional categories, but the chances have been reduced for many people and doctors seem to be favored. Applications from medical practitioners are approved almost immediately, whereas other applications take about two years after serving in less desirable rural areas, where there is little electricity or water, poor access to communication or infrastructure. "No one wants to be somewhere where you cannot be on social media, where you can't read the newspaper or have access to use and understand what's happening globally," said Nherera. Researchers point out that anyone who is well-connected does not have to endure long waiting times, which is a sign of corruption. Most health workers find that the selection process for further training, particularly overseas, lacks transparency. These are reasons for them to leave for the private sector or even leave the country.

Efforts to improve education for medical staff were severely hampered by the economic and political crisis from 1999 to 2009. It resulted in a 70 percent drop in medical student enrollment, a 61 percent faculty vacancy rate and caused specialist training to nearly collapse. The University of Zimbabwe's College of Health Sciences, the only medical school in Zimbabwe at the time, faced a decline in infrastructure and limited capacity to use technological innovations in education and research. Professionals invited from outside didn't want to come and to work under these conditions. The College of Health Sciences was trapped in a vicious circle. These challenges are mirrored by national shortages in the overall health workforce, which is far below the WHO guideline of 230 health workers per 100,000 people. The Division of Occupational Health and Safety of the National Social Security Authority is responsible for enforcing legislation. Its mandate in terms of accident prevention and workers' compensation is to create awareness, promote safety in the workplace, provide rehabilitation services, enforce health and safety legislation and provide financial benefits.

Effects on health workers' health

Because of the shortage of medical staff, health workers are under enormous stress to perform and suffer from fatigue as a result. There is also an inadequate or no provision of PPE for health workers. "There is no chance to say, let's implement ISO 45001 and do our risk assessment. That would be talking to people who do not have the equipment to do so," Nherera said. "One could say, let's sit down and discuss the occupational health and safety management system. Maybe the private sector would venture into that. Also, there should be an opportunity for pre-employment medical examinations if someone joins the organization, but there are no medical surveillance programs." According to Nherera a donor community is required to save lives in Zimbabwe. "To

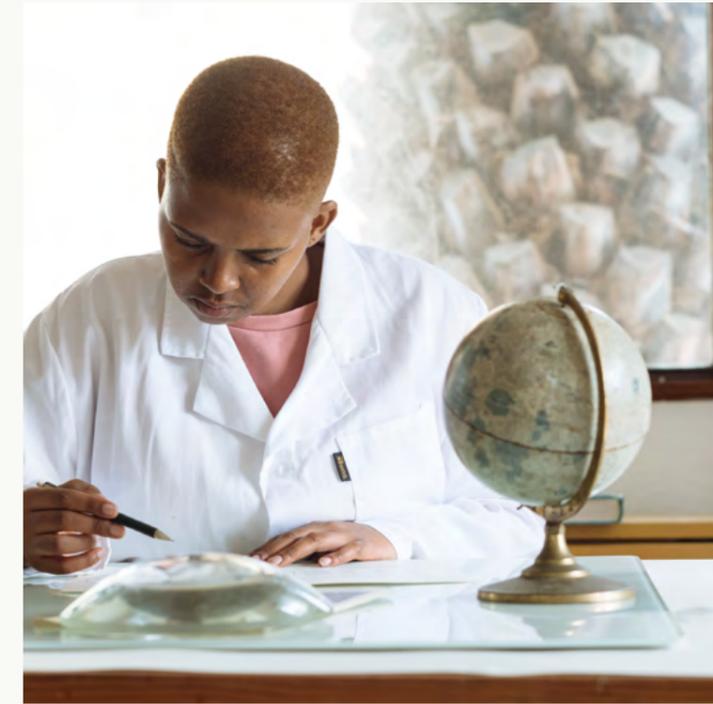


Photo: rfstudio / Pexels

do this, we need to sponsor health programs and come up with arrangements for paying an incentive to the few remaining health workers to continue working in Zimbabwe. We have to promote the establishment of occupational health and safety management systems in public hospitals and to help save health workers' lives."

3.4

ACRAN SALMEN-NAVARRO ON CHANGING THE MIGRATION NARRATIVE AND GENERAL CONCEPTS FOR IMMIGRANT HEALTH WORKERS IN NEW YORK CITY

“What I want to try is to shift the debate a little bit and talk about a success story that we’re doing in New York and specifically on migrant workers,” said Acran Salmen-Navarro. “But I will start with some data because it’s important to remember where we are standing when we speak about migration, migrant workers and how health workers are affected by this phenomenon”. Salmen-Navarro himself was a physician in Venezuela before coming to the United States, where it is also difficult for foreign health workers to practice. They have to completely retrain, which was why he decided to specialize in ergonomics and work-related musculoskeletal diseases. Now he works with the New York University School of Medicine in New York. According to the Global Commission on Inter-

national Migration (GCIM) every year, 200 million people migrate worldwide, and this figure has grown by 144 percent in the past 40 years. As many as 250 million people are currently living in a country that is not their own. More than 60 percent of these immigrants move from developing to developed countries because they are looking for opportunities to grow. According to the IOM (International Organization for Migration), there are 277 million migrants around the world. People also migrate within countries, for example, from rural areas to more populated ones. They usually move from south to north, but this differs from continent to continent. Lately, a south-to-south migration has become more prevalent. Which countries people move to depends on countries’ policies

and their strategies for welcoming people or accepting professionals, especially in health work. A few years ago, Chile opened its doors to Venezuelan physicians, making it easier for them to work. “That’s just one example of how things change under migration,” said Salmen-Navarro.

The economic impact of migration

Most people who migrate want to work, and either move for a job or for another reason, and have to work to earn a living. Migration also impacts economies. “When the migration flows change then everything changes, geopolitically and macroeconomically,” said Navarro. This is evidenced by remittances coming into migrants’ countries of origin. The GDP (gross domestic product) of many countries around the world depends solely on remittance. Migrants go to a country to work and send money back to their families. In 2015, worldwide remittance flows are estimated to have exceeded \$601 billion. Developing countries are estimated to receive \$ 441 billion, nearly three times the amount of official development assistance (ILO). Australia welcomes highly qualified and educated professionals and is particularly interested in physicians, health workers and similar. Data show that migration will contribute \$1.6 trillion to Australian GDP by 2050. Stopping migration would have a tremendous impact on their economy. According to Salmen-Navarro, everything depends on the policies of the respective country. But there is also a lot of controversy when it comes to the actual concepts of migration. It starts with the consequences of migration and the definition of being a migrant, a refugee, an asylum seeker or an unauthorized migrant.

Four million new health workers are needed to address global shortage

People migrate, whether permanently or temporarily and for different reasons. For

occupational health specialists, the focus is on labor migration. But is somebody who has just migrated to another country to work and find a better job a recent migrant, a seasonal migrant, an expatriate or even a student? All these things come into play when we talk about migration as a whole. There are around 60 million health workers worldwide, accounting for 11 percent of the global working population. In 2015 they included 9.8 million physicians and 20.7 million nurses and midwives.



Photo: irwan / Unsplash

More than a quarter of world’s countries do not have enough health workers. The world needs about four million new health workers to address the global shortage. The urgency of the health work crisis, and specifically migration, is a challenge for high, middle and low-income countries. Developing countries lose some of their health workers to richer countries. For example, 75 percent of doctors in Mozambique leave the country after graduating. “Lots of the physicians who graduated with me in Venezuela are living all over the world now. And about 50 percent fled Venezuela because of the crisis during the last five years,” said Salmen-Navarro. What does this mean to the host countries? What happens to countries that lose their professionals? And what is the impact on patients and society as a whole? Some facts might clarify this.

GLOBAL MIGRATION SNAPSHOT

277 million: international
> 740 million: internal

TRENDS

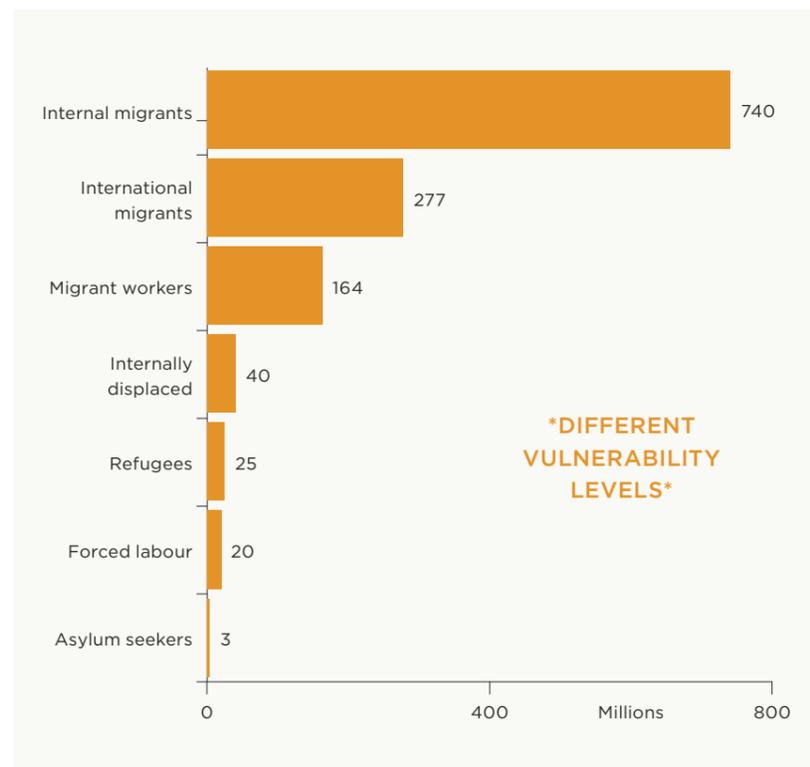
- Urbanisation: 50% +
- ‘Irregular’: 15-20%
- Feminisation: 50%
- < 20 years of age: 14%

DISPLACEMENT

- 40 million IDPs
- 25.4 million refugees

MIGRATION DRIVERS:

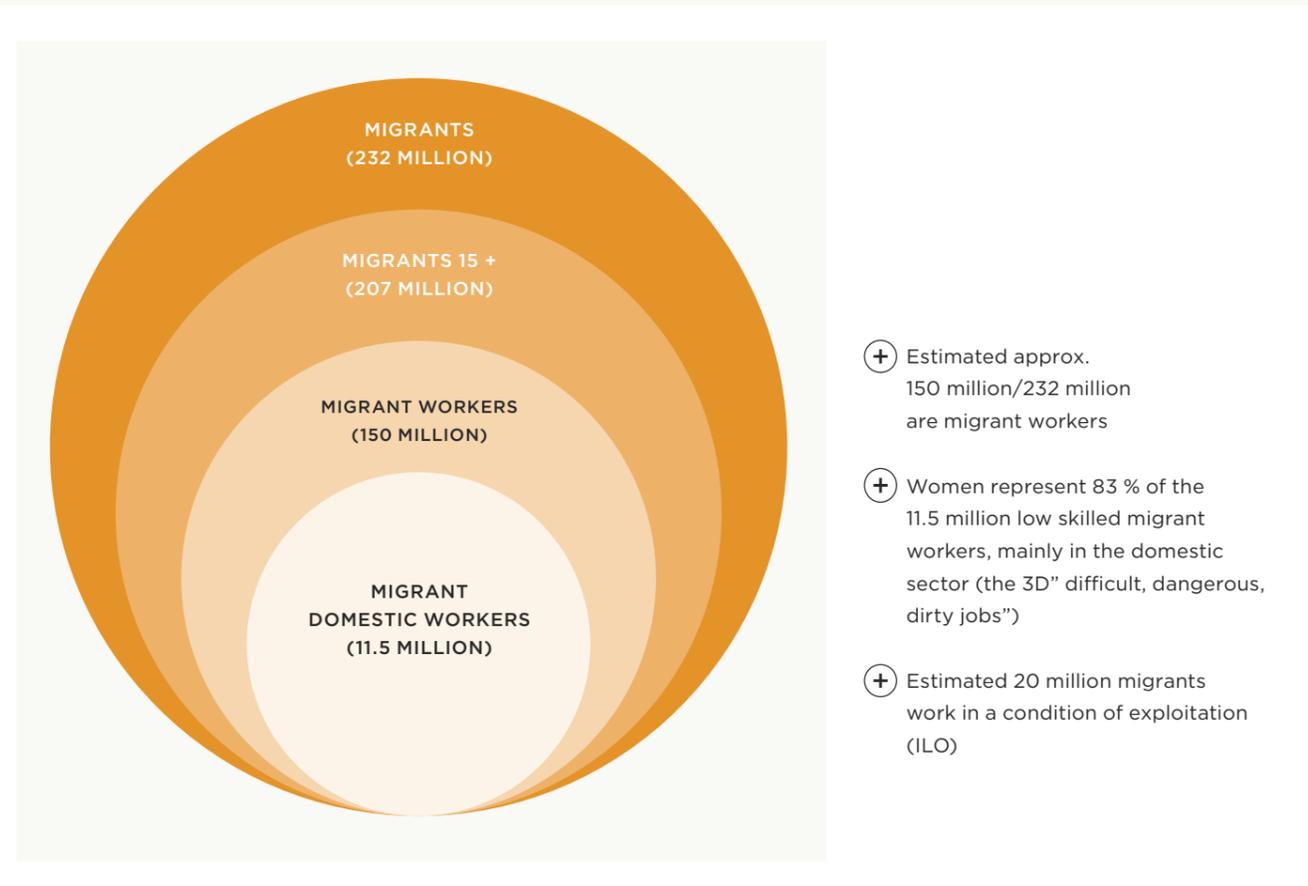
Violence, war, organised crime, persecution, natural disasters, economic opportunity, education, family reunification, etc.



Sources: UNDP; ILO; UNHCR; UNDESA; UNHCR; US State Dep

About 48 million women give birth each year without a skilled health worker at their side.⁶ This affects children and the world in general. As many as 6.8 million children under the age of five die from treatable diseases.⁷ In Sub-

Saharan Africa, 11 countries have no medical school, and 24 have only one⁸. Countries in the Caribbean have a shortage of 10,000 nurses, more than the total population of some of the countries in the Caribbean as a whole.



Literature review on migrant’s health

In a literature review from 2016 on studies dealing with migrants’ health, only 6 percent focused on the large group of “migrant workers”.⁹ They found that they were frequently exposed to hazards, occupational injuries, occupational fatalities, high rates of diabetes, hypertension and psychosocial risk factors.

All these obviously have a direct and indirect effect on occupational health. The hazards are similar to those in conventional work for non-migrant workers. But, as well as the psychosocial risk factor of being an immigrant worker, they are also subject to the hazards that all health workers are exposed to. The jobs that immigrant workers and specifically health workers are exposed to when they get to their host country are known as “3D jobs” – difficult,

⁶ The state of the world’s children. UNICEF, 2011.

⁷ Levels and Trends in Child Mortality: Report 2012, UNICEF

⁸ Mullan F, Frehywot S, Omaswa F et al. Medical Schools in Sub-Saharan Africa – Lancet 2011

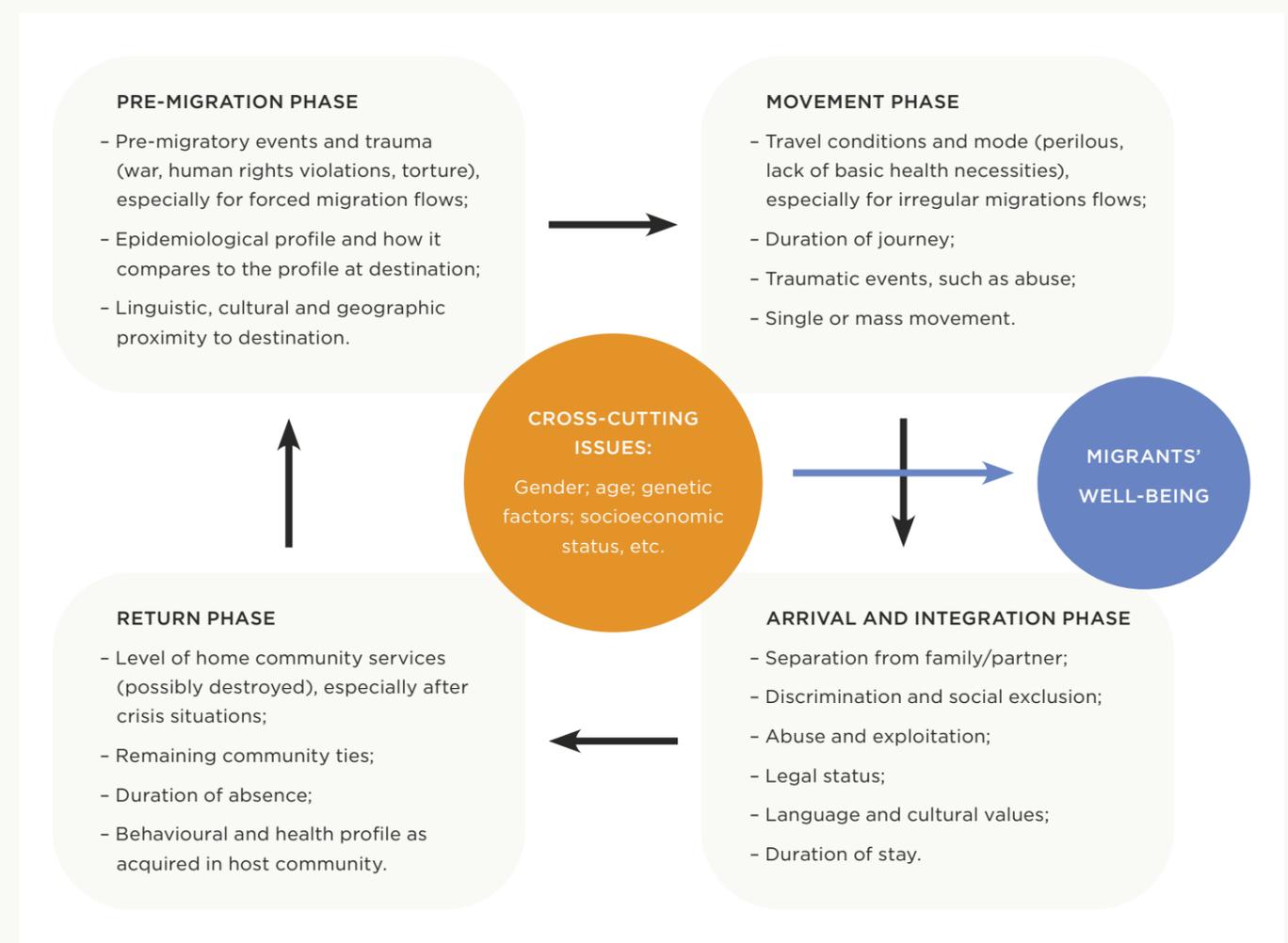
⁹ Sweileh et al. Bibliometric analysis of global migration health research in peer-reviewed literature, (2000– 2016), BMC Public Health (2018)

dirty and dangerous. Publications after the bombing of the World Trade Center show that “working-at-your-own-risk migrants” do the dirty and dangerous work. When the towers came down, the cloud everybody saw was mixed with all types of chemicals, including asbestos. The first responders were policemen, firemen and other helpers, including a lot of immigrant workers. After 10 or 15 years, the effects of the cloud became clearer, with the number of patients with cancer or PTSD soaring.

Additional burdens for migrants are language and literacy barriers, issues relating to prior health care, culture, isolation, and discrimination. “We have in our clinic quite a few patients who have never seen a doctor in their entire lives. Even if they suffer from an occupational injury, for example a broken shoulder,” said Salmen-Navarro.

Phases of migration

Migration includes a pre-migration phase, a movement phase when people are actually on their way, an arrival and an integration phase. The integration phase is highly influenced by the host country and depends on whether migrants are welcomed, and whether countries have the tools to integrate them. Finally, there is a return phase. Sentences frequently heard are, “I’m going back home,” “back home to my mother,” or “back home to my previous job.” “Working 15 years in Latin America, I saw the most precarious and underserved jobs. I was forced to move because of what was happening in Venezuela and I came to New York. I grew up there and I guess even I am going home finally,” said Salmen-Navarro.



Vulnerable workers and community project in New York City

Over three million migrant workers live in New York City. Around 400,000 of them are undocumented, but they are part of the economy. Many came voluntarily, and many are forced to work in occupations for which they are over-qualified. “Community organizations place nurses in construction jobs, and physicians work in home cleaning. But everybody has a job. It’s a melting pot of occupations,” Salmen-Navarro said. “New York City is divided. On the east side in Brooklyn and North Bronx, poverty is greatest and people have most need of health care”.



Health Building 125 Worth Street, Source Wikipedia

The New York City Health and Hospitals Corporation where Salmen-Navarro works is the largest municipal health care center in the United States, built for 1.4 million patients. “We see 475,000 uninsured patients a year. Our hospital system has over 190 simultaneous languages and we have 11 acute care hospitals, five nursing homes, and six for diagnostic treatment care. We do need more health care workers in this system,” he said. The New York City Health and Hospitals Corporation is the only one that offers occupational medicine. It has set up a vulnerable worker and community project to reach out to this vast population and to offer all the occupational health services they need. “We teamed up with the commu-

nity organizations that actually work with these vulnerable workers. And obviously we’re under the umbrella of a sanctuary city,” said Salmen-Navarro. “As a result, we are able to provide preventive occupational and environmental medicine services to those workers in New York City who are at high risk of work-related diseases and in need of help, regardless of their ability to pay.” Both the city and the hospitals are trying to serve community organizations. The project is also connected to proactive employers and to the project of “home health aides.” As Salmen-Navarro explained New York City has a huge population of migrant workers who work as home health aides and nobody knows the numbers. “With ICCOH we are studying how work is changing and we are studying job displacement”, he said. “At any rate, we need to understand that we have to change the toxic migration narrative. Migration is inevitable, necessary and desirable – migration is not a problem to be solved, but a reality to manage.”



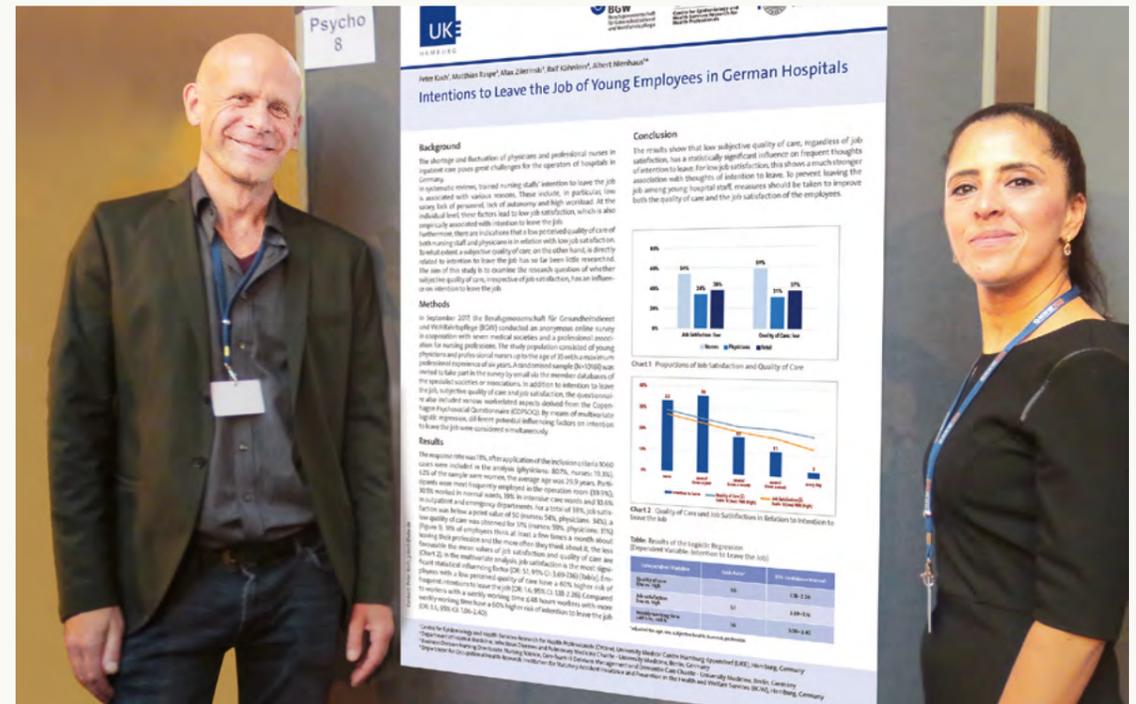
Hana Brborović, Culture of blame – an ongoing burden for doctors and patient safety, poster award 1st place



Napattamon Manorat, Latent tuberculosis infection in nurses: the pilot study, poster award 3rd place

Poster Award OHHW 2019

The posters were chosen for the award by the chairs of the SC OHHW (Gwen Brachman) and the SCWWH (Igor Bello) as well as the secretary of the SC OHHW (Antoon de Schryver) depending on actuality and novelty of the topic, soundness of methods and quality of graphic presentation. For each of the three posters a prize consisting of 200 Euro was given to the first author.



Peter Koch and Nazan Ulusoy, The role of quality of care and job satisfaction in relation to intention to leave, poster award 2nd place

3.5

INTERVIEW: STEFAN SCHMIEDEL ON THE LESSONS LEARNED ABOUT EBOLA IN SIERRA LEONE

STEFAN SCHMIEDEL, a specialist in tropical medicine gave insights into the lessons learned during the 2014 Ebola outbreak in West Africa and about sending health professionals into areas where the disease is endemic.



Mr. Schmiedel, at the height of the Ebola outbreak, you worked for Médecins Sans Frontières (MSF) for several weeks in Sierra Leone. What prompted your courageous decision to go into one of the epidemic's epicenters?

Here at UKE (the University Hospital in Eppendorf), we treated a patient in 2014 who had contracted Ebola, a 36-year-old World Health Organization (WHO) worker from Senegal, sent to us by WHO. We treated this patient and kept him under our care for several weeks in the treatment center for highly infectious diseases, an extremely secure, isolated reception center. He then fortunately recovered.

The crisis occurred in West Africa in 2014, with many thousands of people contracting the disease. We now know that there were 25,000 cases of Ebola in Sierra Leone, Liberia and the Conakry region of Guinea. In Sierra Leone especially, the spread of the disease among the population spiraled out of control. The health professionals on the ground were overwhelmed and healthcare provision collapsed. Appeals were made internationally, amongst others by MSF, for trained medical personnel, to provide assistance. I was interested in taking part from the medical point of view, as well as, obviously, for humanitarian reasons.

How did you find the situation on the ground, and what were you able to do in practical terms?

I was the medical director in charge of one of the treatment centers, of which there were four at the time, and I tried, as far as circumstances permitted, to provide medical care, continuing in fact what others had already begun. One of the epicenters of the epidemic lay in Kailahun, a remotely situated town in Sierra Leone. In September 2014, at the time when I was in West Africa, the outbreak was just reaching its peak. Our hospital had only 100 beds and all of them were occupied by Ebola sufferers. Every day, around 10 new patients were brought in and the same number died. We lost about 50 percent of our patients. In the region at the time, Ebola was the only thing that was still being medically treated. Aid organizations and WHO naturally also recruited local staff, and they were very successful in this. In addition, the Ebola treatment centres received staffing support from Europe, the USA and Japan.

What did the treatment look like?

A rather conservative programme of medication consisting of antibiotics, fluid therapy and nutritional therapy, anti-malaria medicine, analgesics and antipyretics. We cannot be entirely sure whether the treatment led to a decisive improvement in survival rates. There are no verified data on this, but of course we

hope that it did. I believe that it was crucial, having given the people something to eat and drink, to keep feeding and giving them plenty of water. Ebola patients are too weak to do this for themselves. Death from Ebola is agonizing, and it is also traumatizing for those affected to witness the suffering and death around them. At the same time, the rest of the health care provision in Sierra Leone was, under the circumstances, certainly not as one would have wished.

What measures were available to the medical staff to protect themselves from infection?

We wore protective suits that cover the whole body. As you can imagine, that isn't exactly pleasant in the heat. It's strenuous to work in those conditions, and it makes communicating with patients virtually impossible. In these situations, keeping safe is always down to teamwork. Even putting on the protective suit is carefully scrutinized, and minutely regulated every step of the way. However, most danger is attached to taking off the suit, because at that point, the wearer has already been in contact with the virus. Someone is always standing by to help and disinfect, with a further member of the security staff checking that everything proceeds as it should. Furthermore, we were kept in isolation in the camp. It is not so much at work, where strict precautions are taken, that danger lurks, but in private life, for instance when visiting someone at their home or shaking their hand. Of course, we were not allowed to do such things. We really were shut away from everything, like being confined to barracks.

What psychological protection is available for healthcare workers taking part in such a demanding humanitarian operation?

There was so much work, so much pressure, that we weren't conscious of the psychological

and physical stresses while we were actually in Kailahun. We stayed in the camp seven days a week, together day and night in a small group, in circumstances that were far from luxurious. That is exhausting. But you don't feel the full force of the stress until after you get home. While we were out in Sierra Leone, we were always very aware of being privileged and genuinely safe, also because not one of us suffered from the disease.

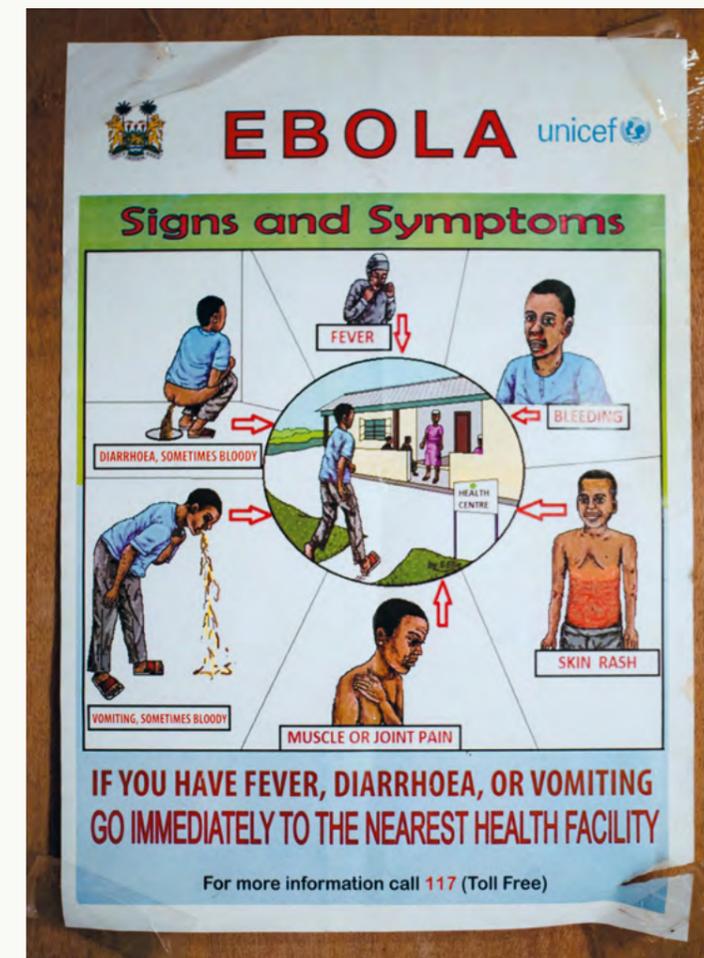


Photo: annie-spratt / Unsplash

Aid organizations like MSF can call on decades of medical experience in disaster relief. The organization has, for example, made sure that it only sends mentally stable professionals with several years' experience into the Ebola area, ones already used to work in the tropics and to humanitarian operations in developing coun-

tries. Preparatory training was given concerning safety aspects, but also in the management of psychological stress. Psychologists in the camp came for supervision and kept an eye on us, ensuring that the team functioned well as a unit, and also looking out for any



Photo: Dimitri Karastelev / Unsplash

healthcare workers giving cause for concern and who were in need of repatriation. During the catastrophic Ebola outbreak, periods in the field were limited to four weeks. This was a special precaution, since health workers normally stay out for six weeks. Before flying back to Germany, we were again offered psychological aftercare in Amsterdam.

None of this, however, should make us forget how motivating it is to do something as meaningful as this. What has stayed with me is how well the group cooperated, their team spirit and teamwork.

Can you describe what the situation was like for medical personnel from the area?

In the camp, protective measures were the same for everyone. Unfortunately, there were repeated cases of staff getting infected in the course of their private life, through contact with people outside the camp, through living with their families and so on. How the local health workers' situation de-

veloped after the crisis, bearing in mind the breakdown in the healthcare system, I cannot say.

Did you have to contend with people's reservations, either in Germany or in the actual crisis region?

In 2014, the idea of flying an Ebola victim to Germany met with a lot of opposition. Up to then, such a thing hadn't been an option — someone as ill as that was not to be transported across national boundaries. Fears ran high that the disease would be imported as a result. In reality, with the safety standards in operation and the medical knowledge about the disease and its progression, there was no danger.

In the end, both Hamburg politicians and the Federal Government behaved in an exemplary manner — and they had to give their consent before we could treat the infected WHO aid worker here.

While the care of the Ebola patient was taking place, the hospital carried on as usual. And in Eppendorf, the staff looking after him had volunteered for the job, taking on the burden by working extended hours.

On the ground in the crisis region, the stigmatization was often traumatic. Fear-stricken couples failed to look after each other, parents to look after their children, children after their parents. Survivors were frequently not allowed back into their village.

Have medical experiences been gained that are now of help in, for example, the Congo or Uganda?

It is still unclear what substances and medicine can be used to impact or halt the disease. However, vaccines have since been developed that were not available at the time of the 2014 crisis. They are already in use today in, for example, the Congo and Uganda.

BZHI – Treatment Center for Highly Contagious Infectious Diseases at the UKE

The Treatment Center for Highly Contagious Infectious Diseases (BZHI) at the University Clinics Hamburg Eppendorf (UKE) is a special isolation ward for highly contagious, life-threatening infectious diseases. It is one of the most modern isolation units in Germany.

The BZHI has biosafety level 4 and is maintained as a stand-by ward. Patients who have a suspected or confirmed infection with a highly contagious, life-threatening pathogen such as Lassa or Ebola viruses can be treated under isolation. The participation of health workers at the BZHI is voluntary.

The work at the BZHI focuses on averting the threat to people and the environment. Safety for people and the environment in the event of an emergency can only be guaranteed with sufficient numbers of staff. Working in a protective suit with respiratory protection is just one of the protective measures taken on this ward. If a patient is admitted, doctors and nurses always work in pairs in three-hour shifts over a period of 8.5 hours. Depending on the patient's condition, personnel from various areas of the UKE are called in. Staff members at the Clinic for Intensive Care Medicine are appointed to the BZHI from the very beginning as soon as a patient is admitted.

Before health workers participate at the BZHI they receive training on putting on and taking off the protective suit. They practice correct

behavior under the decontamination shower as part of so-called shower training sessions, and learn about correct behavior in emergency situations in the course of regular emergency drills.



This photograph depicted a Centers for Disease Control and Prevention (CDC) scientist demonstrating how one is to properly wear personal protective equipment (PPE) in appropriate laboratory settings. This PPE outfit included the suit, double gloves, and a powered air purifying respirator. Photo: CDC / Unsplash

3.6

VISON ZERO – HOW TO CREATE A CULTURE OF PREVENTION

“Vision Zero and creating a culture of prevention is all about health promotion at work or about managing safety,” said Marija Bubas from the Croatian Institute of Public Health and president of the Scientific Committee on Edu-

cation and Training in Occupational Health of ICOH. Vision Zero, or creating a world without work accidents and work-related illnesses, is a globally recognized concept based on seven rules, she explained.

THE 7 RULES AT A GLANCE

- + Take leadership – demonstrate commitment
- + Identify hazards – control risks
- + Define targets – develop programs
- + Ensure a safe and healthy system – be well-organized
- + Ensure a safe and healthy system – be well-organized
- + Ensure safety and health in machines, equipment and workplaces
- + Improve qualifications – develop competence
- + Invest in people – motivate by participation

These seven rules are generated by experience and deal with all aspects of prevention. They show that a sustainable culture of prevention involves various activities. “First you have to take the responsibility to be a leader and you have to commit yourself to that culture of prevention,” Bubas said. “Also, you have to ensure safety by fighting hazards and identifying your targets. What do you really want to achieve and how do you intend

to do that?” But without investing in people, the results will be unsatisfactory. Improving workers’ qualifications, knowledge, skills and experience and developing their competencies is the next milestone. “Vision Zero is all about managing events and their consequences, about costs and human resources,” Bubas said. One of the main questions is how to handle issues like accidents, sickness, costs of health care and sick leave.

Compensation and human resources

In the face of a worldwide shortage of health care workers, managing human resources is important. As data from ILO, ILOSTAT and World Bank show, 3.5 billion people worldwide are employed in health care. The figure may even be higher, because people in some countries start working at a very young age, but this is not included in the statistics. According to the Croatian Bureau of Statistics, there are 1.2 million employed and 1.1 million retired people in Croatia, who have to be supported. That means there is not only a shortage of

health workers but also high demand for workers in general.

As defined by the WHO, health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. A healthy workplace is a workplace where teams collaborate on a continuous improvement process to protect and promote the health, safety and well-being of all workers. It is not only about preventing injuries or providing personal protective equipment and making sure that workers use it. It’s about having decent work, getting paid for it and not having accidents at work, Bubas explained.

Injuries at work

OCCUPATIONAL INJURIES IN CROATIA:

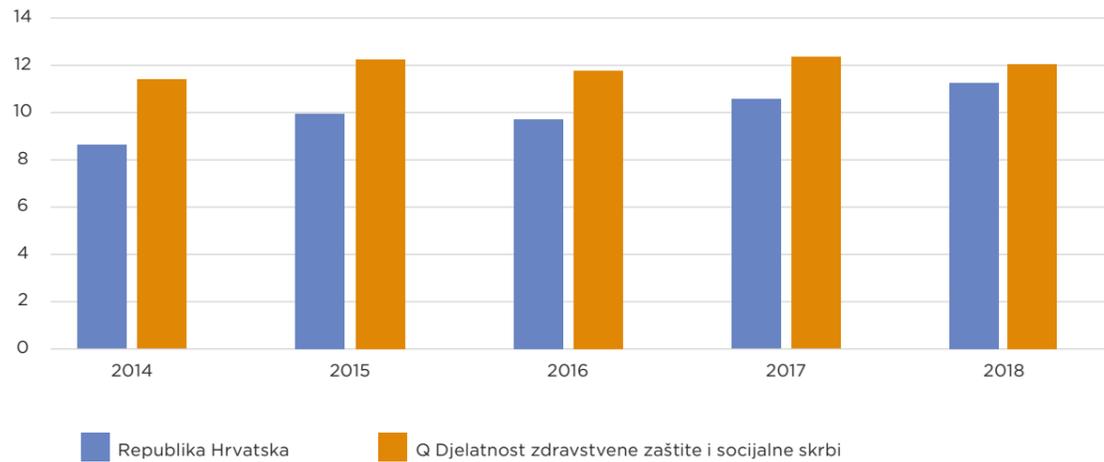
- + In 2014, 13,785 occupational injuries, 84 percent at the workplace
- + In 2017, 17,782 occupational injuries, still 84 percent at the workplace
- + What about health and safety?

The data from Croatia show that an increasing number of occupational injuries happen during work. This shows that there is a need for better protection for health and safety at the workplace. Governments all over the world show consideration to employers because they provide work to employees, workers or other companies and they have to deal with many problems. The fact that the workforce is getting older almost everywhere has been ignored for too long, criticized Bubas. On the other hand, there are young workers who do not have the necessary skills when

they start working. The process of hiring new professionals is time-consuming and complex. Absenteeism and presenteeism at work lead to staff shortages and a demanding workload for smaller teams, especially in health care. An increasing number of injuries at work results in more days of sick leave and absenteeism. Employees who are injured either stay out of work for a time, because they are still suffering from the consequences of the injury, or they cannot return to their previous workplace ever again because they are disabled.

THE RATE OF INJURIES PER 1000 EMPLOYEES AT THE WORKPLACE

The injury rate in the healthcare sector is higher than the national injury rate

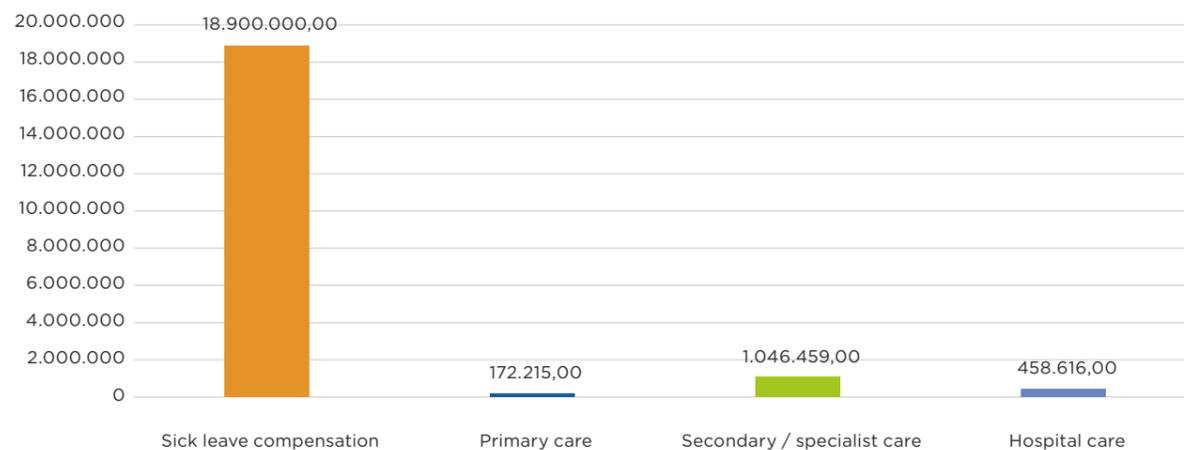


The chart shows the rate of injuries per 1,000 employees at the workplace. The blue columns are the national numbers in Croatia and the orange ones show the incidence rate of injuries in health care. The data was gathered by the Croatian Health Insurance Fund by Labor Inspectorate and the Ministry of Health. Thirty percent of all injuries are caused by tripping, slipping and falling. Nurses have the highest number of reported falls and injuries in health

care, while scientists, engineers and experts have the lowest percentage of injuries. This is because they do not have to move patients as much as nurses and they are less likely to fall or trip. The Croatian Health Insurance Fund crunched the numbers and found that approximately 2.5 million euros were paid for sick leave compensation. For a small country like Croatia with four million inhabitants, that is a lot.

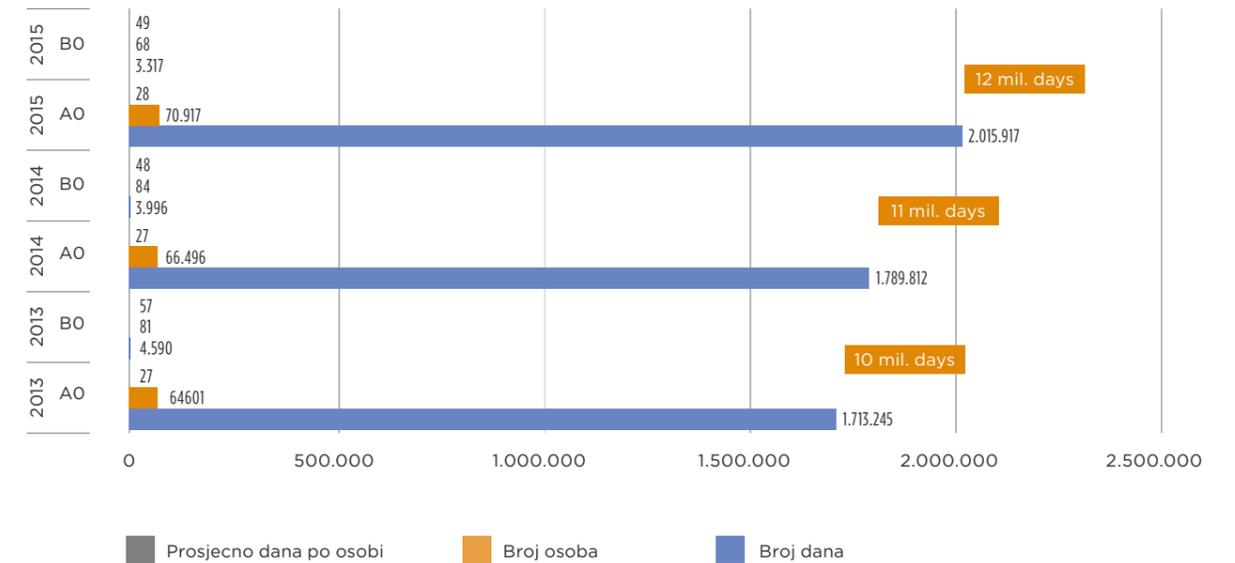
CHIF: ALL SICK LEAVE COSTS AND TREATMENT COSTS DUE TO OCCUPATIONAL INJURIES

2014 - 2017 = 20,577,290.00 HRK; approx 2.5 mil EUR



Sick leave due to injuries creates high rates of absenteeism. Back pain and back injuries are further reasons for employees to take sick leave (ICD-10, Group M50-M54).

DAYS OF SICK LEAVE 2013-2015, ICD-10 GROUP M50 - M54



Causes of workplace injuries

Long work shifts are one of the causes of workplace injuries. Ten-hour shifts increase the risk of injury by 13 percent, and 12-hour shifts increase it by as much as 28 percent. The risk is 17 percent higher for the third consecutive night shift and as much as 36 percent higher for the fourth (Caruso C.C. Negative Impacts of Shiftwork and Long Work Hours. Rehabil Nurs. 2014 ; 39(1): 16-25). "Employers must be persuaded to invest not only the obligatory minimum, but to do more do reduce the risks of injury in health care," Bubas demanded.

Promoting health and safety in the health care sector

To promote the Vision Zero concept, an occupational safety and health communication group was set up in 2013 by the Croatian Health Insurance Fund, the Ministry

of Health, the Labor Inspectorate and the Institute of Public Health as part of a training project named "Health and Safety at Work." The group's objective is to contribute to an occupational health and safety protection system through better communication and joint projects. Croatia already has some programs in place that support occupational health, for example the "Safety program for persons employed in health care until 2020." Also, the government has action plans on helping employers enhance safety and support the economy after the economic crisis of 2008. All of these projects are part of an international campaign to achieve Vision Zero. One focus is to improve health and safety at work in hospitals by introducing an improved OSH system, to provide information to employers and further education to workers. "We hope that by 2020, we will see some reduction in costs due to sick leave and injuries at work because of the project that we have started with five clinical hospital centers," according to Bubas.

Slipping, tripping and falling

The finding that 30 percent of injuries at work are caused by slipping, tripping and falling spurred Bubas and her team to conduct research on medical and safety footwear in 60 hospitals and five clinical hospital centers. Health workers often use their own footwear and not the proper medical safety gear. One of the results of the project was a catalogue of medical work and safety footwear for health workers.

The team interviewed health workers about how they feel about safety at work. Among their criticisms was the fact that when an accident happens at work, the question usually asked is, “Who did it?” rather than, “How did it happen and what could be improved?” Furthermore, they said that the administration only enforces safety after adverse events and ignores near misses that should be evaluated as accidents as well. The workers also criticized that the effectiveness of measures taken to improve safety is not evaluated. The shortage of health workers creates exhaustion and consequently increased sick leave rates. In general, the health workers complained about a lack of support from their employer regarding safety at work. Worker protection should include personal protective equipment like work clothes, shoes, masks and gloves supplied by employers, as well as education. “It seems to me that these comments by workers show that they are becoming more and more aware of occupational safety and health and health promotion at work,” Bubas said. “This process should be supported by ongoing education.”



Education on behavior and perception of safety at work

The largest hospital center in Zagreb offers seminars for groups of 60 workers. This educational work is aimed at changing behavior and the perception of safety at work. Employers and managers in hospitals are also invited to the table. OSH issues and topics need to be included in vocational education and university education for medical staff. Students need more knowledge of safety and safety behavior, which is also important when it comes to exposure to blood or to needle injuries, which are too often ignored or trivialized. It is also difficult to register such injuries because according to the Eurostat definition, an occupational injury is one that results in three or more days away from work.

Challenges for the next 20 years

AGING POPULATION AND WORKFORCE

- + U.S. by 2020 – 25 percent of the workforce will be aged 55 years or older
- + Europe by 2060 – the proportion of people aged 65 and over will increase from 12.9 percent to 30 percent of the working population¹
- + Japan by 2040 – population with the highest median age
- + China, Hong Kong and Singapore – fastest aging populations in Asia
- + China and India – largest older populations (in absolute numbers)

¹ Bevölkerungsbomb für EU-27 in Sicht: Eurostat-Bericht. Cordis, Forschungsergebnisse der EU

The situation of health workers in Croatia is part of a global problem. As Bubas said, we will all have to face some challenges over the next 20 years. In addition to the aging population, one is a lack of training and knowledge. In some countries, there is also too little information about communicable and non-communicable diseases among workers, about lifestyle risks and long latency periods, especially for occupational diseases. We have to keep asking, what is the health consequence of work exposure and what are the differences in health insurance and company compensation systems? Universal health coverage is still a major issue. And too many health workers have still never seen an occupational health specialist. “Education is raising awareness and a growing awareness is connected to education. We need to educate everyone involved in the world of work,” Marija Bubas concluded.

Read more

734 Differences in musculoskeletal complaints and daily functioning in croatian nurses employed in child and adult care – a crown study. April 2018, Occupational and Environmental Medicine 75 (Suppl 2): A331.1-A331, DOI: 10.1136/oemed-2018-ICOHabstracts.950

Stavovi obiteljskih liječnika o profesionalnim bolestima. January 2019, Sigurnost 60(4):343-356. DOI: 10.31306/s.60.4.3, Marija Bubas, Croatian Institute for health Protection and Safety at Work, Denis Lisica Mandek, Zoran Šimurina Hrvoje Radić

“We Need a Comprehensive Approach” Gwen Brachman and Rodney Ehrlich on Protecting Health Workers from TB

Rodney Ehrlich from the University of Cape Town, South Africa, presented a “comprehensive occupational health perspective” on the problem of tuberculosis (TB) in health workers, and explained how it strengthens prevention and practice. The concept draws on research by a group of scientists around Ehrlich, in cooperation with the University of British Columbia. Ehrlich himself looks back on many years of experience as a hospital-based clinician and advisor to a provincial public sector health department. As he explained, a definition is first needed: A “health worker” is not just someone



Photo: WHO / Asad Zaidi

who gets paid for his work, but could be also someone who provides medical services and care via an NGO as a volunteer or trainee. TB continues to be a major cause of morbidity and mortality throughout the world. “High rates of TB and even higher rates of latent TB

infections among the population of low or medium-income countries put health workers at risk, and of course affect their health,” said Ehrlich. Gwen Brachman, Chair of the ICOH Scientific Committee on Occupational Health for Health Workers, presented some concrete data on TB. “There is a global epidemic of tuberculosis,” she said. “It is the number nine cause of death globally and the number one cause of death from infectious agents.” There were 10.4 million new cases in 2016 and 1.3 million deaths annually. The data have not changed much since. “People who have HIV are even more likely to die from tuberculosis than they are of HIV or AIDS.” HIV implicates a high risk of catching tuberculosis.

Ongoing efforts to stop TB

There is an ongoing effort to stop TB. The WHO aims to reduce deaths from tuberculosis by 95 percent in 2035, and the UN has set itself “sustainable development goals,” including ending the TB epidemic by 2030. In its statement to the UN, ICOH stressed that TB among health workers and workers exposed to silica dust (both high risk populations for occupational acquired TB) should be prevented by providing occupational safety, better health systems and services. “Health workers face an increased risk of contracting TB due to occupational exposure to TB bacilli in their work environment and in the communities where they live and work,” the commission wrote in a statement released in April 2018. “This is particularly true for health workers in high TB burden countries, where they are reported to

have a two to three-fold higher incidence of active TB disease compared to the general population.” Also, the risk of hospitalization for multi-drug resistant TB among health workers in such settings has been found to be five times higher compared to that of non-health workers. Therefore, ICOH demands that governments, health ministries, labor ministries, worker representative organizations and other institutions invest in developing OSH measures to prevent new TB cases and to treat affected health workers. Furthermore, the UN General Assembly published a political declaration on TB in December 2018: Health care workers as a group have to be recognized as a vulnerable population and appropriate measures must be taken for infection prevention and control (IPC), “screening” and “surveillance” of health workers.

“Health workers have to be considered as a vulnerable population,” said Gwen Brachman. “But it should not be overlooked that it is even more dangerous to work in mines.” The risk here is up to four times higher due to silica exposure. “If miners have HIV, which a lot of them have for various reasons, particularly in Africa, the risk of them catching TB is 15 times higher.” In addition, silica is a carcinogen. “If you control silica, you can control the risk of getting both cancer and tuberculosis as well as silicosis, of course,” explained Brachman. In 1994 the U.S. American Centres for Disease Control and Prevention published “Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Settings” in response to outbreaks of TB in U.S. hospitals related to HIV and drug resistance. The guidelines were updated in 2005. However, they did not apply to poorer countries. Therefore, the WHO demanded that the guidelines be adapted to low resource contexts and published several documents on the management of TB (and HIV) in health workers (in 1998, 2009, 2019), as well as a joint document with ILO in 2010. Further results are expected from the FAST strategy: “Find cases Actively, Separate temporarily and Treat effectively,” which means refocusing administrative prevention,

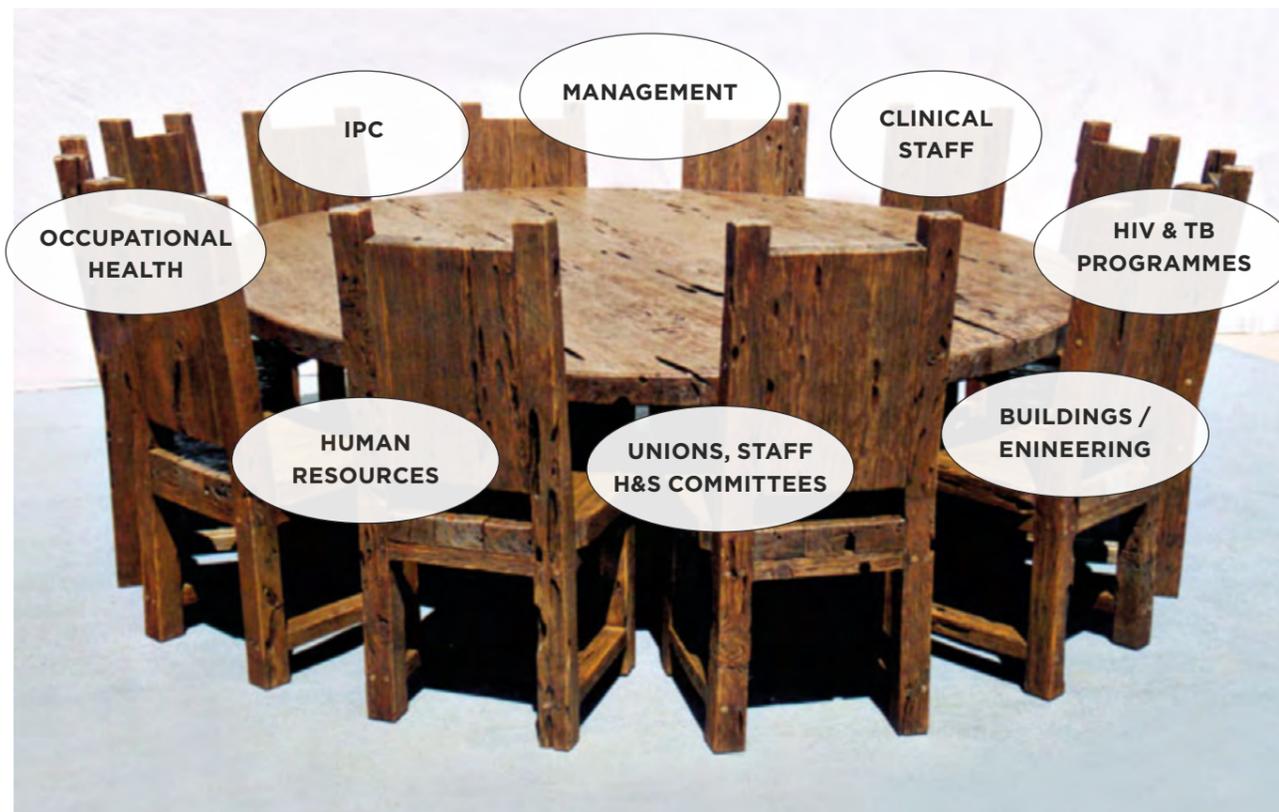
given the availability of rapid diagnostic/sensitivity testing (Xpert/RIF MIB) and effective second-line drugs. “ICOH started pushing the idea of primary prevention, which is completely different from the rest of the UN TB declaration, which is about diagnosis and treatment,” said Brachman. “Nobody was focusing on the



Photo: WHO / Asad Zaidi

fact that there is a way to reduce primary infection at least in some groups.” According to Ehrlich, there are numerous guidelines for protecting health workers from occupational tuberculosis, but they are not sufficient. There is an evidentiary deficit, and the implementation of protective practices is poor, particularly in high TB burden countries. “To solve this problem and improve the prevention of TB, a reconceptualization of the problem is needed,” said Ehrlich. Experience in field research on occupational health, safety, infection control and prevention (IPC) in low and middle-income countries, engaging with government decision makers in implementing practices, and experience in drafting a comprehensive policy on TB/HIV in health workers in South Africa was necessary to develop a comprehensive approach on reducing TB and dealing with its consequences. Scientists, management experts, clinical staff, experts from HIV & TB programs, from buildings and engineering, unions, human resources and occupational health gathered around a table and worked out a new agenda with five cross-cutting tasks.

WHAT DO WE BRING TO THE TABLE?



AGENDA

1. Broaden thinking and action in South Africa from primary prevention (such as IPC) to *comprehensive primary, secondary and tertiary prevention*.
2. Persuade decision makers that IPC and occupational health are part of *strengthening health systems* rather than just “add-on” programmes.
3. Move beyond documenting failure to implement proximal protective practices (administrative, environmental and respiratory protection) to grappling with *upstream or system barriers*.
4. Adapt policy to include *legal and ethical issues*, taking into account how health care differs from other sectors.
5. Encourage *health worker advocacy* on this issue modelled on “TB Proof,” an organisation of health workers in South Africa.

Comprehensive approach: primary, secondary and tertiary prevention

“A comprehensive occupational approach to TB prevention suggests that it is a task and a journey, and not something we can easily take for granted”, said Ehrlich. Different approaches have to be considered, like primary, secondary and tertiary prevention. Primary prevention includes administrative measures, environmental prevention and PPE (Personal Protective Equipment) to protect health workers who are exposed to occupational risks, but not infected. Secondary prevention is for infected or reinfected health workers (LTBI- latent tuberculosis infection) and for undiagnosed health workers with TB. It includes testing and treating LTBI as well as screening and treating TB. “What we are particularly worried about is the undiagnosed health care workers, who have progressed to active tuberculosis, which is clearly a problem for patients and their families as well as for health workers and their families”, said Ehrlich.

Finally, tertiary prevention includes medical care for health workers who have been treated ineffectively, rehabilitation for those who have returned to work and for impaired or disabled workers. Occupational health covers the whole spectrum.

Implementing a positive safety culture

A positive safety culture including a safety concept for patients helps to motivate health workers and their teams. It determines the quality of care in a clinic or a hospital. Therefore, a collaborative approach across different elements and professions within a hospital or health care system is needed to better deal with an outbreak of TB.

“But there are still barriers to implementing comprehensive prevention programs and concepts, such as political will, governance, budgeting, a lack of skills, a lack of occupational health services, of management, technology or even proper information,” said

Ehrlich. He explained that in South Africa, for example, it is very difficult to get information on how many health workers have had TB. The disease is still stigmatized, and one reason for this is the frequent correlation between TB and HIV infections. Convincing leaders to take responsibility for occupational health and safety within a clinic or hospital, or even in the health system is important for success. But without data, it is hard to persuade skeptical managers to take comprehensive measures.

Legal and ethical issues

Guidelines often differ, depending on the context even if they are adapted, for example, for low resource countries. Every country has its own legal and ethical context. “When I started to work with colleagues from infection prevention control, two things struck me at the meeting,” said Ehrlich. “First, I had never met any of them, even though we were working in the same hospital. Secondly, when I asked about an Occupational Health and Safety Act, enabling legislation to protect health workers, there was nothing like that.” As Ehrlich explained, there is a kind of “public sector exceptionalism” for health workers regarding legally regulated occupational safety and also a resistance to the industrial model of regulation, inspection and enforcement. A labor inspectorate that is not specialized in the sector simply cannot tell clinicians what to do.



Privacy is another issue. Mandatory screening and disclosure of TB could help to reduce TB rates, but raises privacy issues, especially

because TB is still stigmatized due to the close association between HIV and tuberculosis.

Advocacy for TB with “TB Proof”

In some countries, labor unions play an important role in recognizing the risk of TB for health workers and demanding solutions. This brings a labor perspective to preventive guidelines. In South Africa, health workers themselves have stood up for their rights and founded “TB Proof,” a voluntary group of members who have suffered from TB, supported by an international network of health workers. Activities undertaken by “TB Proof” include engaging with national policy-makers on TB, destigmatizing TB, targeting students and junior health-care staff to teach them to protect themselves as well as to assert their right to be protected, and using personal narratives and media in a

savvy way.

TB Proof also supports the comprehensive occupational health approach as an essential complement to IPC (Infection Prevention and Control) guidelines.

As Ehrlich explained, a health system framework focusing on components such as a statutory regulation, leadership, and information system, and staff trained in protective disciplines should be part of this approach as well. Primary prevention should be complemented by more secondary and tertiary prevention and recognize the ethical implications of screening health workers, and the stigma of being diagnosed with tuberculosis. “Health workers should be more involved in decision-making,” said Ehrlich, “And a comprehensive approach will contribute to the prevention of occupational tuberculosis as well as to the ability of a health system to deal with crises of infectious hazards to its workforce.”



www.facebook.com/TBproof/ www.tbproof.org

Read more:

Occupational health and TB: A feasibility study of participatory theatre with South African healthcare workers. Parent S, Ehrlich R, Baxter V, Kannemeyer N, Yassi A., *Int J Tuberc Lung Dis* 2017; 21(2), 140-8. Tuberculosis as an occupational disease.

Ehrlich R, Van de Water N, Yassi A. *Anthropology Southern Africa* 2018. Protecting health care workers against occupational tuberculosis. Cross-disciplinary or cross-purposes? Ehrlich R, Spiegel J, Yassi A., *Public Health Action* 2019 9(1): 11-14. doi.org/10.5588/pha.18.0086 (1/3)

5 Swen Malte John on Occupational Skin Disease in Health Workers, Prevention and Rehabilitation Strategies

Occupational skin diseases are a highly relevant problem in health care. Swen Malte John from the Institute for Interdisciplinary Dermatological Prevention and Rehabilitation (iDerm) at the University of Osnabrück presented recent developments regarding prevention and rehabilitation of occupational skin disease at the OHHW 2019. As he said, this is not only important for patients, but also to save costs for social insurance systems to prevent them from collapsing.



As John explained, irritant contact dermatitis in health care workers is one of the most frequent occupational diseases, not only in Germany. “Furthermore, we have allergic contact dermatitis, atopic dermatitis and contact urticaria,”

he said. The picture of a 23-year-old nurse with a classical atopic flexural eczema and palmar itchy vesiculae – typical symptoms of atopic manifestation under irritant exposure in health care workers – provided an impression of the symptoms in people suffering from so-called “hay fever of the hands.” According to a recent study, the 1-year prevalence of self-reported hand dermatitis among health care workers in a Dutch university medical hospital was 24 percent, compared with less than 10 percent in the general population. Among health workers, nurses are the group at highest risk of hand dermatitis, with an estimated point prevalence of up to 30 percent¹¹.

In Great Britain, the cost of treating hand dermatitis in the National Health Service (NHS) workforce amounts to £125 million per year. A behavioral change package (BCP) including, e.g., online training and advice on when to use gloves, antibacterial hand rubs or moisturizing cream was developed against the background of a study with more than 2,000 nurses and tested for efficiency. The project was funded by the National Institute for Health Research (NIHR). As John said, the results have not been published yet, but the BCP program has shown a positive effect in changing behaviors in dermatitis prevention.

A recent study from Sweden with about 10,000 health care workers who self-reported their problems showed a one-year prevalence of hand eczema (HE) of 21 percent. Obvious-

¹¹ Cf. Madan, I., Parsons, V., Cookson, B. et al. A behavioural change package to prevent hand dermatitis in nurses working in the national health service (the SCIN trial): study protocol for a cluster randomised controlled trial. *Trials* 17, 145 (2016). <https://doi.org/10.1186/s13063-016-1255-y>

ly, there was a link between HE and frequent handwashing with soap as well as the time spent wearing disposable gloves. Hand washing and other activities with direct contact between the skin and fluids are defined as wet work, which is one of the main risk factors for nurses of developing hand eczema. At the same time, no association was made with the use of alcoholic disinfectants.

A cross-intervention study in geriatric nurses among more than 1,300 health care workers in Germany (KRISTA) found that the point

prevalence was 18 percent in 2009. Data from other countries also show a high prevalence of HE in health workers: Korea: 23 percent (Smith 2006), USA: 26 percent (Larson 1997), Netherlands: 32 percent (Smith 1993), Italy: 39 percent (Stingeni 1995). According to recent data from Germany, contact dermatitis of the hands accounts for around 30 percent of all occupational diseases. In health care workers, some 6,000 cases were reported in 2018, of which 4,779 were confirmed as being work-related.

EPIDEMIOLOGY

BJD
British Journal of Dermatology

WET WORK EXPOSURE AND HAND ECZEMA AMONG HEALTHCARE WORKERS: A CROSS-SECTIONAL STUDY*

N. Hamnerius,¹ C. Svedman,¹ O. Bergendorff,¹ J. Björk,^{2,3} M. Bruze¹ and A. Pontén¹

+ Cross-sectional study in **hospital employees** in southern Sweden

+ Questionnaires of **9051 HCWs**

+ **1-year prevalence** of self-reported **HE: 21%**

+ Association with atopic dermatitis

+ **Dose-dependent association** for:
- **Daily number of hand washes** with soap at work
- **Time working with disposable gloves**

+ No association for use of **alcoholic disinfectants**

Hamnerius N et al. (2018) Br J Dermatol 178:452-461

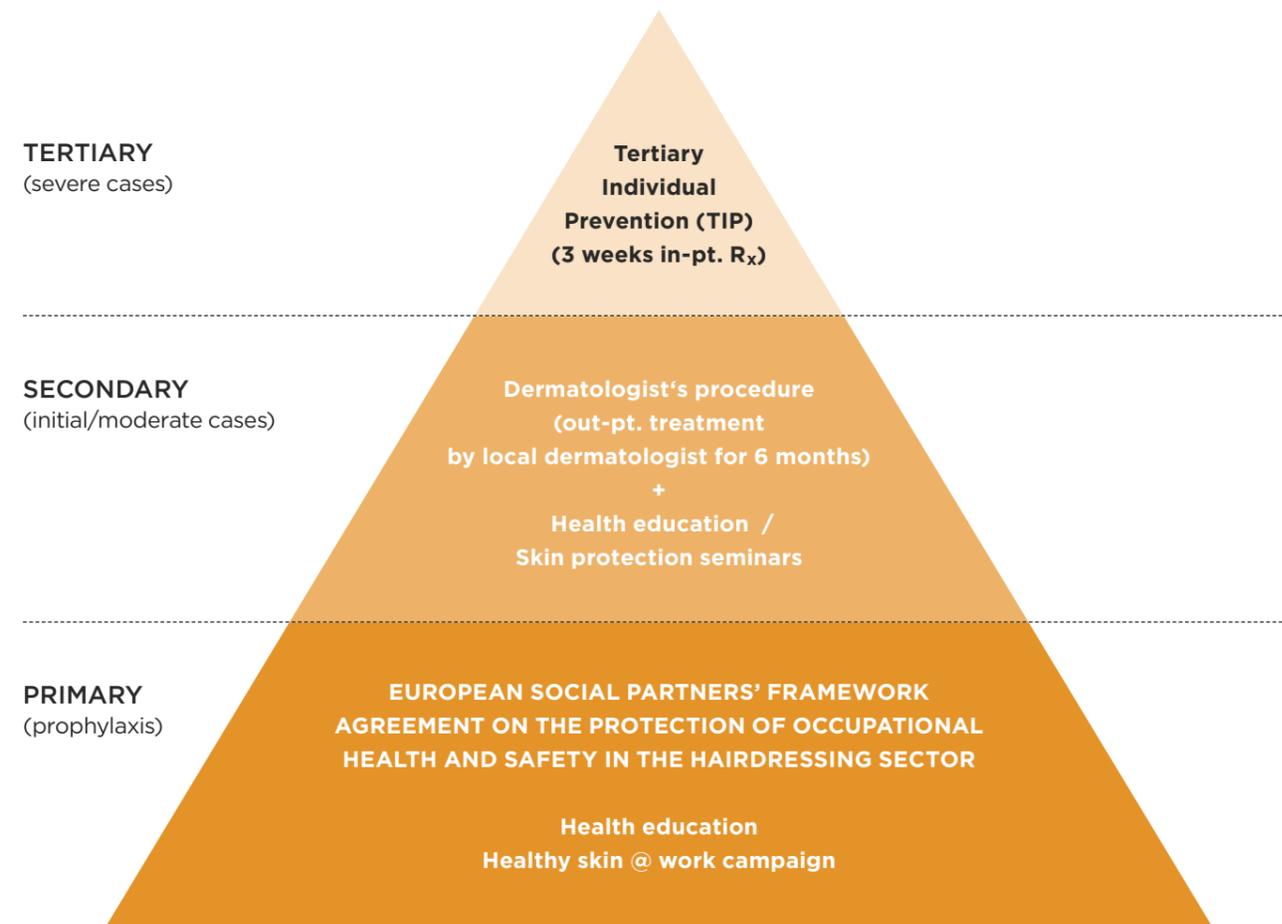
Occupational skin diseases in Europe require standards for prevention and patient care

In view of the extent of these diseases, a team of experts convened by the EU defined minimum standards for dealing with patients with

occupational hand eczema, not only from the health sector but from all other professions with health hazards.¹²

¹² Minimum standards on prevention, diagnosis and treatment of occupational and work-related skin diseases in Europe - position paper of the COST Action StanDerm (TD 1206)

SYSTEMATIC APPROACH TO OSD PREVENTION:



EADV - Europrevention Campaign: Healthy skin@work

Primary, secondary and tertiary prevention

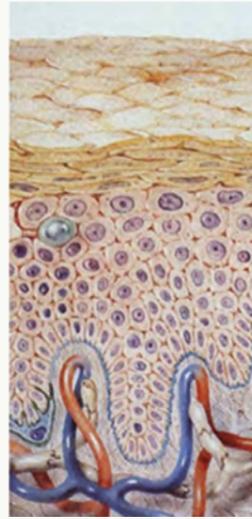
The standards stipulate an interlocking system of primary, secondary and tertiary prevention and an improved diagnosis of cases. As John explained, an increase in latex allergies among medical staff in the early 1990s was due to the use of powdered latex gloves. Latex allergens adhered to the powdered surface and were transferred to the skin and the airways. The allergy problem was easily solved by banning the gloves in the mid-1990s - an example of how effective primary prevention and pro-

active workplace design can work. Providing information about occupational risks is part of primary prevention and one of the main topics of the standard. For example, the "healthy skin @ work" campaign was launched with the slogan "Your skin. The most important two square meters of your life." "If you give nurses information about what to do to avoid contact dermatitis from the start, you can drastically reduce the amount of contact dermatitis," said John. According

to a study on primary prevention in health care employees¹³, those who received training (intervention group) reported fewer cases of contact dermatitis than the group without training (89 percent). But still there was a high incidence of contact dermatitis (67 percent).

Secondary prevention for initial and moderate cases

German doctors, regardless of their specialization, are obliged to report suspected occupational skin disease to the German Social Accident Insurance (DGUV), if they suspect a link between the dermatitis and the patient's work. Of these notifications, 86 percent come from dermatologists. As soon as the insurance is informed, the patient is offered secondary and sometimes even tertiary prevention, paid for by the insurance. Secondary prevention includes medical and dermatological treatment and skin protection seminars (SIP) from local dermatologists. Tertiary prevention includes inpatient treatment in specialized centers. "There is no such thing as innocent skin damage in health care. You have to intervene because it will always get worse if you don't. Therefore, notifying is the most important thing," said John. The WHO found that the problem of contact dermatitis is so relevant that notification has to be improved. This was confirmed by the WHA (World Health Assembly) in May 2019. As John explained, "If you enter the code for allergic contact dermatitis in the ICD11 (International Classification of Diseases 11th) you will now be asked whether it is an occupational disease and if you would like to make use of this understanding."



Water paradoxically dries the skin

The next step is to diagnose the disease by patch testing and advise the patient, including providing knowledge about healthy skin. The epidermis is a thin construction separating the body from its environment like a highly complex, natural, protective wall. Basically,

it is only the 0.02 mm top layer, the horny layer, which is the point of contact. Too much contact with water results in washing out the skin's own fat. This causes cohesion between the cells to decrease and the skin to dry out. Foreign substances can penetrate it and the immune system reacts with inflammation. In the general population in Germany, women suffer from hand eczema more frequently (10.6 percent) than men (5.2 percent). "Do they have more sensitive skin? The answer is no," said John. "Actually, they still do most of the wet work in the household, and something has to change there. If you do wet work above a certain threshold and if it's only one person in the family who does it, she will get the disease. If these jobs were shared, nobody would get it."

In Denmark, nurses who already suffered from skin disease participated in an investigation on secondary prevention in health care. An intervention group was given specific teachings, while a control group wasn't. After five months, the HECSI score indicating the severity of the disease was only half as high among nurses of the intervention group as those in

the control group. The former also had a much better quality of life. But even if the teachings seemed helpful, there was no long-term effect on outcomes. Five years later, the difference between the groups had disappeared completely. The training has to be repeated to have a sustainable effect.¹⁴

Tertiary prevention for severe cases

Contact eczema often marks the start of occupational dermatitis. It may proceed with an increased permeability of the epidermal barrier and a pro-inflammatory allergic contact dermatitis. If the disease has already progressed, tertiary individual prevention offered by the German Social Insurance (DGUV) could help to get patients back to work. As John explained, DGUV multi-step intervention "TIP" (tertiary individual prevention) comprises up to three weeks of inpatient dermatological diagnostics, treatment and health-related psychological and behavioral advice. The patients stay out of work for about three weeks to allow the epidermal barrier to fully recover, closely accompanied by local dermatologists. TIP also includes testing prevention methods in a simulation model of the workplace environments. The program not only spares the workers a lot of suffering, it also saves the insurance a lot of money, which it would otherwise have paid for the worker to retrain in another profession or for compensation.

DANGEROUS MYTHS

- ⊕ Skin protection: only for the ill
- ⊕ Skin disease: is down to fate and inevitable
- ⊕ Red skin: sign of diligence and zeal for work
- ⊕ Red skin: sign of diligence and zeal for work
- ⊕ ... part of the job

Diagnosis as part of the minimum standards of prevention in the EU

Diagnosis is another important topic in the minimum standards on prevention in Europe. "Irritant dermatitis," for example, is an exclusion diagnosis. In particular, an allergic etiology should be considered. John cited the example of a geriatric nurse who claimed to have atopic dermatitis. A commercial patch test was used, but no allergen could be detected, and allergens that aren't tested of course cannot be identified. "We found that this nurse was pulverizing the benzodiazepines pills for her geriatric patients to be able to swallow them," said John. "When we patch-tested it, it was pretty obvious that she had a very intense reaction, an airborne contact dermatitis against this occupational hazard." Using a kind of pill crusher, the nurse continued to work without any further health problems.



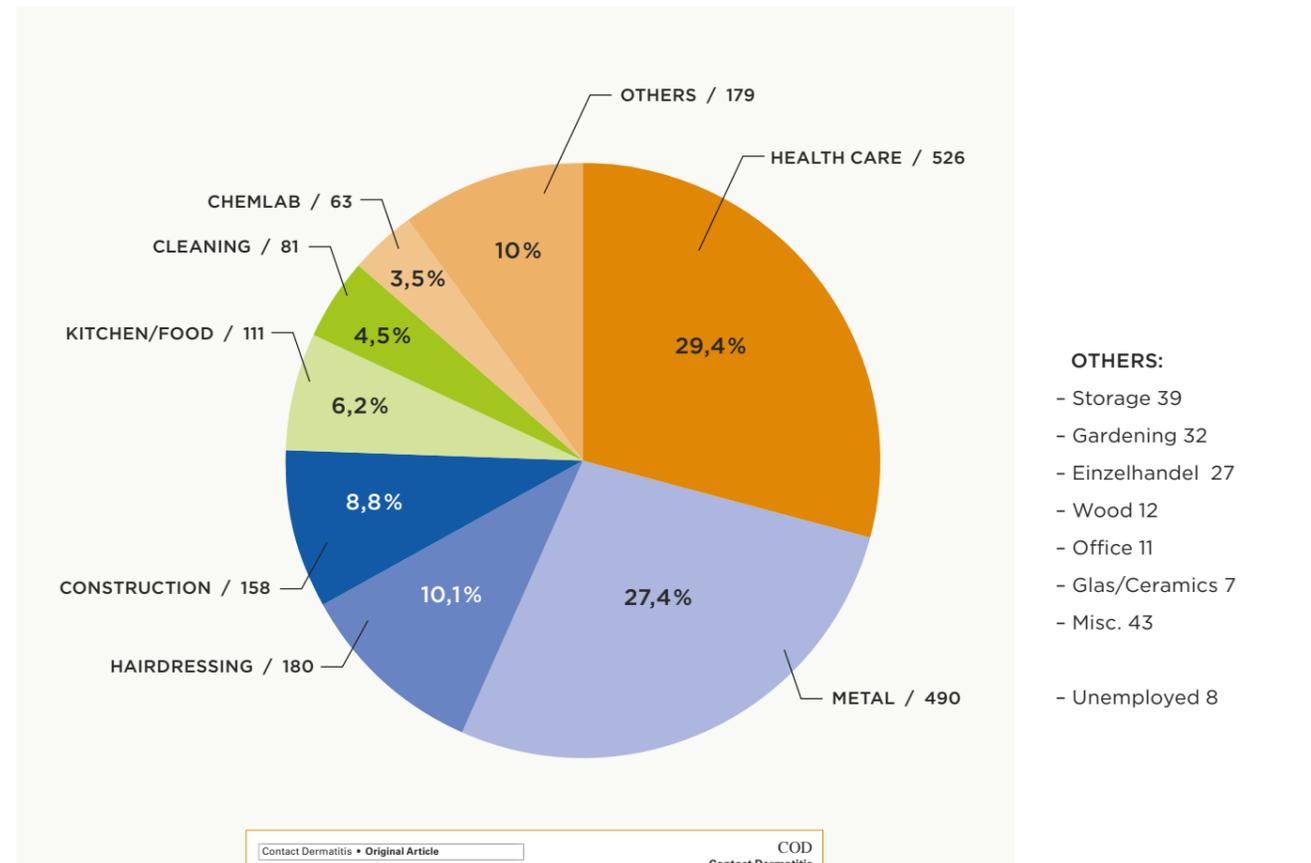
Photo: Melissa Jeanty / unsplash.com

Another example showed a 43-year-old male nurse who initially suffered from irritant dermatitis and atopic dermatitis, but then also acquired resistant staph (MRSA), which complicated his health condition. "We actually have about 10,000 deaths in German hospitals due to nosocomial infection," said John. A health worker infected with MRSA not only suffers, but also presents a problem for his patients.

¹³ Löffler H, Bruckner T, Diepgen T, Effendy I. Primary prevention in health care employees: a prospective intervention study with a 3-year training period. *Contact Dermatitis*. 2006 Apr;54(4):202-9. doi: 10.1111/j.0105-1873.2006.00825.x. PMID: 16650095.

¹⁴ Graversgaard C, Agner T, Jemec G, Thomsen S, Ibler K. A long-term follow-up study of the Hand Eczema Trial (HET): a randomized clinical trial of a secondary preventive programme introduced to Danish healthcare workers. *Contact Dermatitis* 2018; 78: 329-334.

**WORK PLACES OF AFFECTED PTS
(AT ADMISSION)N=1788**



- OTHERS:**
- Storage 39
 - Gardening 32
 - Einzelhandel 27
 - Wood 12
 - Office 11
 - Glas/Ceramics 7
 - Misc. 43
 - Unemployed 8

Contact Dermatitis • Original Article

COD
Contact Dermatitis

First results from the multicentre study Rehabilitation of Occupational Skin Diseases – Optimization and Quality Assurance of Inpatient Management (ROQ)

Christoph Skudlik^{1,2}, Elke Weisshaar³, Reginald Scheidt⁴, Peter Elsner^{4,5}, Britta Wulfhorst^{1,2}, Michael Schönfeld⁶, Swen Malte John^{1,2*} and Thomas Ludwig Diepgen^{2*} for the ROQ Study Group*

To solve this problem, the infection and the eczema have to be treated at the same time. A retrospective cohort study from July 2009 to December 2014 on 319 health care workers admitted to the tertiary prevention program TIP found that 13.5 percent of them were colonized with resistant staph. For example, the study revealed that nurses with pre-existing

occupational skin diseases have a threefold higher prevalence of MRSA. According to John, the infection risk increases in patients with atopic dermatitis and particularly those with lesions. Therefore, looking for and recording cases of dermatitis is basically part of infection control.

DATA OF FOLLOWED-UP HW THREE YEARS AFTER TIP
(tertiary individual prevention)
Of 1,409 patients, 1,166 working (82.7 percent)

Of these 1,166:
80 percent in same profession
73 percent in same job, but with better knowledge and medical care
Approx. 20 percent non-responders

Days of sick leave:
34.5 days year before TIP
26.5 days in first year after TIP
9.1 days in 2nd and 3rd year after TIP

Brans R, Skudlik C, Weisshaar E, Scheidt R, Ofenloch R, Elsner P, Wulfhorst B, Schönfeld M, John SM*, Diepgen TL* (2016) Multicentre cohort study 'Rehabilitation of Occupational Skin Diseases – Optimisation and Quality Assurance of Inpatient Management (ROQ)': results from three-year follow-up. Contact Derm (in press)

Still, dermatitis is one of the more frequent reasons why health care workers leave their job, and it is often recognized as “uncurable”. The figures above show that an interdisciplinary program of tertiary prevention could keep health workers in their job. As data from the German Accident Insurance for the Health and Welfare Services (BGW) show, up to 81 percent less was spent on retraining due to the success of these prevention and rehabilitation measures for occupational dermatitis. “Of course, they above all prevent suffering for people who can now stay in their job,” said John. “In conclusion, primary, secondary and tertiary prevention works and we need a disinfection and skin care culture in health care”.

Read more:

Minimum standards on prevention, diagnosis and treatment of occupational and work-related skin diseases in Europe – position paper of the COST Action StanDerm (TD 1206) <https://onlinelibrary.wiley.com/doi/10.1111/jdv.14319>

6 Gender Issues

6.1 HEALTH WORKERS IN CONFLICT SETTINGS – A GENDER/SEX PERSPECTIVE? A SCOPING REVIEW BY RIMA HABIB

The situation for medical staff in conflict zones is not a new topic in research. But does it make a difference whether the health workers are male or female? Do women carry out different tasks from men, or are they under particular stress? Are there gender-specific (long-term) health or social outcomes? Rima Habib conducted a scoping review to show that the gender/sex perspective is not yet sufficiently considered in research and why it is so important.

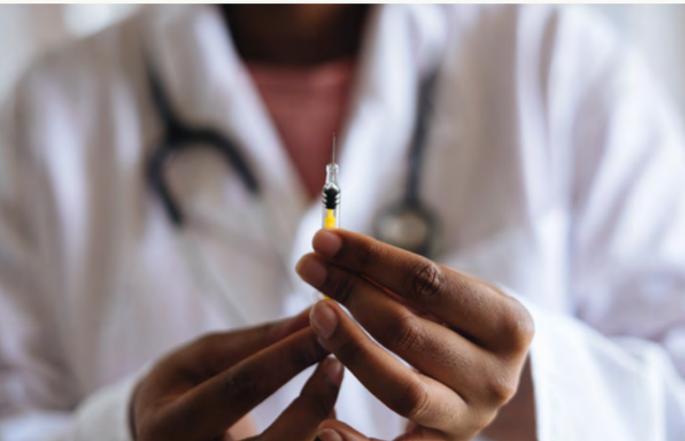


Photo: rfstudio / Pexels

General impact of conflicts and war on the health sector

In 2017 alone, there were more than 50 documented armed conflicts around the world, mostly in North Africa and the Middle East, including Syria, Lebanon, Iraq and Afghanistan. The conflicts in these countries shape their

history, often for many years, and frequently become chronic. At the same time, war has a devastating impact, affecting all aspects of life – social, economic and ecological. Wars lead to the destruction of the environment; they result in the loss of property and in the displacement of people. One of the worst consequences of war is the loss of human life. The number of deaths resulting from armed conflict has grown significantly in the last decade. Between 2007 and 2017, it rose by 118 per cent with a total of 130,000 deaths in all age groups, as Rima Habib explained at the OHHW 2019. Habib is a professor at the University of Beirut and has conducted research on the situation for refugees in Lebanon’s health economy, among others. She is a founding member of the Committee for Women Health and Work of the International Commission on Occupational Health (ICOH), and has been awarded the “International Health and Safety Award” by the American Public Health Association for her work. Together with students, Habib has now published the “Scoping Review on Healthcare Workers in Conflict Settings: A Gender/Sex Perspective”¹⁵, and presented the preliminary results at the OHHW.

According to Habib, healthcare facilities and their employees are almost always particularly affected by war and armed conflicts. A loss of medical staff through death, injury or early retirement from the profession as a result of high pressure present these facilities with enormous challenges that are hard to resolve. Hospitals and other healthcare institutions face a short-

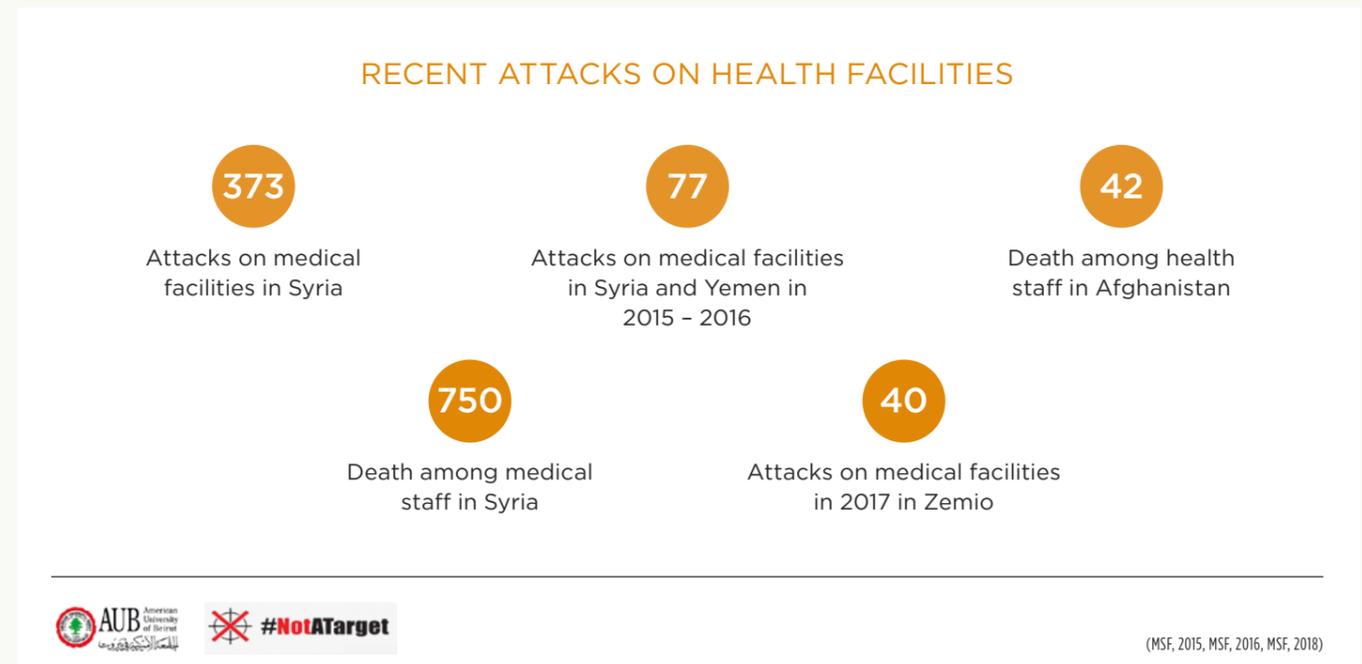
age of qualified personnel, and have to rely on young employees with little experience or on volunteers, according to Habib. A further problem is the lack of medical supplies. Facilities in Yemen, Afghanistan, Syria and Gaza report a lack of medications, for example, forcing surgeons to carry out operations without anesthetics.

Targeted attacks on healthcare facilities

Healthcare facilities and their employees have increasingly become the target of attacks and executions with the aim of denying medical care to opponents of war. These targeted attacks can be considered “weapons of war”, according to Rima Habib. In 2018 alone, the humanitarian information portal ReliefWeb documented 973 attacks on health workers, healthcare facilities, health transports and patients in 23 conflict zones. In 2018, 167 healthcare professionals died in attacks, 710 were injured and 173 healthcare facilities were

destroyed. The number of attacks on health workers in Syria and Yemen is particularly high. The organization Medecins Sans Frontieres (MSF) assesses the number of attacks on healthcare facilities in countries in conflict as follows: Since the start of the conflict in Syria there have been an estimated 373 attacks on 265 medical facilities in which 750 health workers have died. Between October 2015 and October 2017, medical facilities in Syria and in Yemen were the target of such attacks 77 times.

Do these attacks on health facilities in conflict zones reveal gender aspects? Maybe not at first glance, said Rima Habib. But the term “gender” also encompasses typical roles and behaviors ascribed by certain societies as being appropriate for men or women, and therefore goes beyond the purely biological and physiological differences between the sexes. The definition of gender can therefore change depending on the geographical location or the culture in which we conduct our research.



¹⁵ Habib RR, Halawani D, Mikati D, Hneiny L: A Scoping Review on Healthcare Workers in Conflict Settings: A Gender/Sex Perspective. International Journal of Environmental Research and Public Health, 2019

Women and men in conflict settings have different experiences

A report by the United States Institute of Peace (USIP) confirms that men and women have different experiences of war. The way they are brought up prepares boys and girls differently for war. Boys in many cultures are encouraged to adopt male ideals of strength, courage and sometimes also aggression. Preparing for battle in war is part of growing up to be a man.¹⁶

Women, on the other hand, are traditionally expected to look after their families as the caregiver. Whereas men have to fight in war, women left at their homes also have to take on the additional burden of being the sole economic provider.



Photo: jakayla-toney / Unsplash

Due to the different roles ascribed to the sexes in war, men are at greater risk of dying or being tortured. Women, on the other hand, tend to be victims of sexual violence and are disproportionately likely to be displaced or forced to flee their home.

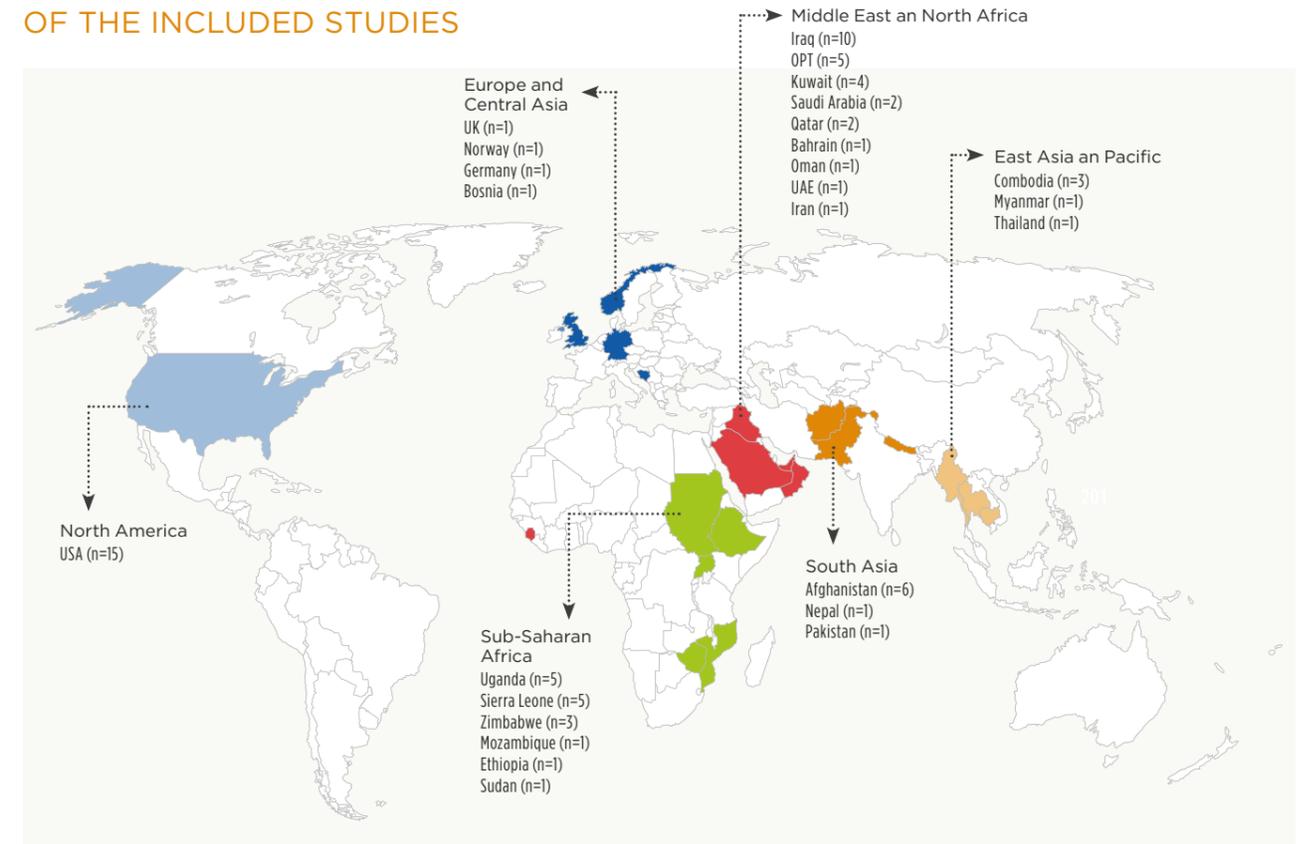
Gender roles and work

Women and men are assigned to work environments that fit the gender roles created for them by society. For this reason alone, female and male health workers are exposed to different pressures, which affect their health in different ways. For example, men tend to carry out more physical or strenuous tasks and accept longer working hours, while women are more often employed part-time or in temporary positions. This division of labor by gender in the workplace almost always leads to an imbalance in working conditions, also in terms of exposure to physical, chemical, biological and physiological risk factors and harmful substances. When it comes to research on the situation of health workers in conflict settings, it is clear that the situation and the experience of male and female health workers differs. At the same time, however, an analysis from the gender perspective that consciously focuses on the different circumstances for the sexes is lacking.

Rima Habib therefore focused her scoping review on the question of how the categories “sex” and “gender” are approached and dealt with in occupational medical literature on the subject. The review had the aim of identifying gaps in research literature and uncovering the desiderata for future projects.

A total of 47 relevant sources were identified. As expected, a number of studies explored the situation of health workers in North Africa and the Middle East, including Iraq, Libya, Palestine and Syria.

FIGURE 2. GEOGRAPHICAL DISTRIBUTION OF THE INCLUDED STUDIES



Number of publication are represented by "n"; OPT: Occupied Palestinian Territories; USA: United States of America; UK: United Kingdom

Results of the review

According to Habib and her team, most studies examined female and male subjects (n=39). Where this was not the case, it often had to do with gender distribution in the respective workforces and settings. However, the terms “gender” and “sex” were not further explained or defined in the vast majority of studies (n=41). The main topics identified by the researchers were: Working conditions and challenges for health workers in conflict and “post-conflict” settings as well as their coping strategies and motivations for joining the profession, their movement between the public and private health sector, and data on job allocations and roles; social and mental health; physical health; and workplace violence.

Varying working conditions

Working conditions for health workers were the subject of 44 percent of the studies. The results showed that women tend to work in professions with a lower income, including nursing, childcare, midwifery and community work. Men, on the other hand, were more likely to hold management positions. This was mainly due to difficulties and restrictions in accessing training and further education for women. Working in conflict zones presents both sexes with challenges, according to the studies. Economic uncertainty and low wages are coupled with high demands at work. A number of studies focused on the coping strategies adopted by health workers to deal with working conditions that are often beset by shortages and are frequently dangerous or

¹⁶ United States Institute of Peace. Gender, War and Peacebuilding. Academy for International Conflict Management and Peacebuilding, Washington DC. Available online: <https://www.usip.org/publications/2012/09/gender-war-and-peacebuilding>

even life-threatening. One way is to withdraw to areas considered comparatively safe within an armed conflict zone. Both men and women said that they took comfort from their faith and their commitment to the community, that they benefited emotionally from the support of friends, or that they occasionally borrowed money to compensate for material uncertainty or hardship. One study interestingly found that men wrote e-mails as a way of reducing stress, while women preferred to read books.

Mental and social stress

Male and female health workers talked about their fears in the face of danger such as fire or terrorist attacks. They were afraid of being shot or abducted, being exposed to chemical or biological weapons, or of losing colleagues to attacks. Three studies pointed out that female health workers suffered more than their



Photo: engin akuyurt / Pexels

male colleagues from being separated from their family as a result of their employment in a war zone. Working in conflict settings also had an impact on health workers' social relationships. Women returning from deployment were more likely than men to divorce or separate from their partner.

Three studies with exclusively male subjects revealed a high risk of suffering from depression and post-traumatic stress disorders. The researchers ascribed this to the fact that men on emergency medical assignments or in rescue services as well as soldiers are more often directly confronted with the consequences of disasters, armed conflicts or terrorist attacks. Both sexes reported having mental problems as a result of experiencing violence during their work in conflict regions.

Physical health

Around a third of the studies dealt with health workers' physical health. Only one study made a direct comparison between the health of men and women, but was not able to find any gender-specific differences. According to the other reports, men perceived their own health as being slightly worse on average compared to women in comparable positions. Emergency medical staff also assessed their health more negatively in general. Women tended to suffer more from chronic obstructive lung disease. Health issues such as respiratory diseases, rhinosinusitis, reflux diseases, allergies, musculoskeletal disorders and other diseases were found in both sexes.

Experiences of violence at the workplace

Three studies focused on workplace violence. One of them explicitly explored the gender differences among medical staff with regard to physical and other violence and came to the conclusion that there are no differences between men and female workers in this respect. The other two studies reported that men are generally more exposed to physical violence than women. Rima Habib pointed out that it is important to consider the cultural norms behind some of these studies that tend to discourage discussions and reports about violence to women.

Gender perspectives in research

The topic of gender/sex is not explicitly reflected in the majority of the studies examined, even if they make it clear that men and women in the health sector experience different working conditions in conflict regions and are exposed to gender-specific stress. However, a gender-sensitive analysis is essential to understand the discrepancies in occupational medical findings among male and female health workers and to shape occupational health and safety policies in order to better protect health workers in conflict areas, explained Rima Habib. She demanded that "gender/sex" should be an integral part of research design and methodology in occupational health studies. Moreover, the gender perspective should become more prevalent, for example by adopting binding guidelines for including gender as an aspect in occupational medical research.

Read more:

A Scoping Review on Healthcare Workers in Conflict Settings: A Gender/Sex Perspective. Habib RR, Halawani D, Mikati D, Hneiny L, International Journal of Environmental Research and Public Health, 2019.

Gender, War and Peacebuilding. Academy for International Conflict Management and Peacebuilding, Washington DC. United States Institute of Peace.



World Humanitarian Day 2017, Photo: WHO

6.2

DANILEING LOZADA AND VIVIANA GÓMEZ ON OCCUPATIONAL HEALTH AND SAFETY FOR MOTHERS IN MEDICAL PROFESSIONS

The share of women employed in the health sector worldwide is 80 percent. At the same time, there is a shortage of health professionals. Guaranteeing occupational health and safety is essential to retain women in the profession, with a focus on maternity leave and a good work-life balance. Danileing Lozada and Viviana Gómez presented comprehensive measures on this subject at OHHW 2019, the 11th International Joint Conference on Occupational Health for Health Workers in Hamburg.

Pregnant women and new mothers must be ensured safe working conditions that present a danger neither to themselves nor to their children. In addition, they should be able to reconcile their work with their role as mothers in the best possible way. Danileing Lozada from the Venezuelan Society on Occupational Health presented adaptations to the workplace that minimize the risks for women and relieve the pressure on them in their everyday work. Viviana Gómez-Sánchez, President of the Association for Occupational Medicine of Costa Rica, showed measures that offer protection against influenza, pertussis or hepatitis A and B, and are also suitable for expectant mothers. Not only the workplace, but the entire working environment must be geared to the needs of pregnant women and mothers, especially in the first phase following birth, according to Danileing Lozada. Nevertheless, we must not forget that pregnancy is not an illness. “It is possible to combine healthy, safe work with pregnancy as long as the occupational risks for the pregnant mother and the fetus are known, and we address them with adequate measures.”

Greater risk of complications for members of medical professions

Research has shown that the probability of complications during pregnancy is somewhat higher for physicians than for the female population in general.⁸ This is because they are often exposed to chemical substances, gases, radiation or the risk of infection, as well as working long hours with high levels of psychosocial and physical stress. In a study by Erika Rangel et al. in 2018, female assistant physicians were interviewed during a surgical training program about how they perceived their working environment during pregnancy¹⁷. The results showed that women had health concerns, especially in the later stages of pregnancy, and would like to see changes in their working environment. For example, they found that maternity leave was too short and complained about being stigmatized in connection with their pregnancy.¹⁸ They desired more flexibility in their working hours to be able to nurse their baby after birth, more childcare support and overall a better work-life balance. Above all, they expected support from colleagues and teaching staff, but could also imagine mentoring programs in the faculty.

Occupational risks for pregnant women

Preventive measures should be based on an analysis of occupational factors that put the health of the mother or the fetus at risk. This analysis should differentiate between ergo-

nomical and physical stress factors, psychosocial risks and dangers that pregnant women are exposed to due to their specific working environment.



Photo: aditya-romansa / Unsplash

Ergonomic risks

To understand the ergonomic risks, it is important to first take into account physical changes during pregnancy, said Lozada. For example, the cardiovascular system changes, resulting in much higher oxygen consumption, an accelerated metabolism and an increase in the blood volume by up to 45 percent. The stronger blood circulation causes the blood vessels to expand and the pulse to speed up. This is one reason why women are less able to carry out physically strenuous tasks during pregnancy. In everyday work, this means that standing for more than an hour in a single position or standing for more than four hours a day should be avoided if possible, as it can cause dizziness or syncope. In addition, it can lead to a higher risk of developing oedemas, varicose veins or thrombosis, which is anyway higher in pregnant women due to changes in the blood veins. If standing for a long time is part of the job, pregnant women should be allowed regular short breaks. In the last trimester of pregnancy, however, women should not stand for longer than 30 minutes at a time.

Sitting properly

Sitting correctly depends on the ergonomics of the chair. If it is too high, it can cause compression in the pelvic area or the upper thighs, which again promotes varicose veins. If it is too low, the angle of the knees can lead to complaints in the lumbar region and the knees, as well as causing the torso to bend awkwardly. Sitting wrongly can also put a strain on the shoulders and neck. To relieve it, frequently changing position helps, as well as a chair that can be ideally adjusted to the person's anthropometric measurements. The perfect chair should support the lumbar region and also allow freedom of movement. If the work surface cannot be adjusted, footrests are important to relieve the joints. The woman should make sure that she is sitting leaning slightly backwards so that the fetus is not constricted.

Because the body's center of gravity shifts as the child grows in the course of pregnancy, it can lead to a curvature of the lumbar spine, resulting in a “hollow back.” This increases the risk of lower back pain and also limits the extent to which the woman can reach forwards. Ergonomic desks with cutouts or ones that can be tilted slightly and adjusted in height can improve the situation at work.

Manual handling of loads

Especially in nursing, spinal injuries are a common reason for staff taking sick leave. Handling loads, for example when caring for people with restricted mobility, through lifting, carrying or moving beds or equipment are main causes of back pain. For pregnant employees, this strain comes with additional risks. Lifting heavy objects can cause premature contractions and lead to the baby being born prematurely.

For this reason, equipment should also be inspected. Even lead aprons can be too heavy for pregnant women. The literature suggests that mothers-to-be should only handle a recommended maximum weight in the first six

¹⁷ Takeuchi et al.: Long working hours and pregnancy complications: women physicians survey in Japan. BMC Pregnancy and Childbirth 2014

¹⁸ Erika L Rangel, Manuel Castillo-Angeles, Marguerite Changala, Adil H Haider, Gerard M Doherty, Douglas S Smink. Perspectives of pregnancy and motherhood among general surgery residents: A qualitative analysis. 2018

months of pregnancy. If the woman has to handle loads four times or more within the space of eight hours, the maximum weight is five kilograms. Up to the seventh month, a pregnant woman can lift up to ten kilograms. She should bend her knees while lifting to take the strain off the back. Ideally, the weight should be carried under the stomach and as near to the body as possible. However, mechanical gear or support to transfer patients can also help to minimize risks. For example, robots can be used to move patients. But training courses in ergonomics can also help to prevent injury. If lifting is unavoidable due to the work requirements, a load calculator can be used to check whether adjustment factors such as turning the body, traction or the frequency of lifting have an influence on the load, and whether the recommended weight should be corrected accordingly.



Photo: Laura James / Pexels

Excluding health risks when working on the computer

During pregnancy, the body produces larger amounts of relaxin and progesterone, hormones that relax the joints and ligaments. In the pelvic region, this facilitates birth later on. At the same time, however, the wrists become more instable, which can cause pain when writing on a computer keyboard, especially if the hand is constantly at an angle. Ergonomic keyboards can provide relief. In addition, reducing time spent on the computer prevents not only wrist problems, but also dry eyes and temporarily impaired vision due to changes in the composition of the lacrimal fluid caused by pregnancy hormones.

Psychosocial factors

Psychosocial factors and the organization of work also have an influence on the baby's development and the mother's health. Night shifts or double shifts and a workload of more than 40 hours per week, more than eight hours a day or more than five consecutive working days should be avoided during pregnancy, and duty rosters adapted accordingly. Conflict at work or discrimination due to the pregnancy can also have an adverse impact. Pregnant health professionals who work in a crisis setting, often far away from their supportive family environment, are often under excessive stress. "Female health workers are not only subject to high emotional stress, but also frequently to violence," Lozada explained. To alleviate this situation, support networks could be set up for pregnant women in their working environment, for example.

Risk factors in the working environment

Risk factors in many medical professions include contact with chemicals such as methyl methacrylate (MMA), solvents, drugs,

anesthetic gas or ionizing radiation. Pregnant staff should work in areas where they are not exposed to these risks. Depending on the risk, ventilation systems, suction devices or personal protective equipment can be used. Biological risks include contact with pathogens that cause diseases such as hepatitis A and B, cytomegaly (CMV), HIV, Zika or chicken pox.

Prevention in the case of biological infection risk

The risk of becoming infected by contagious pathogens while nursing or treating patients is comparatively high, and protecting medical staff always means minimizing risks for patients. Pregnant employees must be protected against infections, for example influenza, hepatitis A and B or whooping cough, Viviana Gómez explained. In this regard, it is important to consider the immune status of the pregnant woman. Has she already developed antibodies against an infection? Is it possible to use vaccinations, which are among the most effective measures to prevent infectious diseases being spread, and if yes, which ones?

"From a global perspective, there are currently huge gaps in terms of immunization," according to Gómez. Immunization is not dealt with comprehensively in many training programs, she said, and the recommended vaccines vary from country to country. The influenza pandemic (Influenza A/H1N1) of 2009, for example, showed just how dangerous certain infections can be during pregnancy. Pregnant women were admitted to hospital four times more often than other people. The disease is associated with high risks for the fetus and can result in retarded growth, miscarriages or premature births.

Vaccination against influenza is recommended

Vaccinating women against influenza during pregnancy, on the other hand, can dramatically reduce the infection rate. In addition, washing



Photo: cdc-UC9 / Unsplash

hands thoroughly and standards to protect against airborne infections have proven their worth for health workers in contact with infectious patients. For example,

pregnant nurses can use a face mask when serving food to patients with suspected influenza, or avoid contact if possible. "Of course, pregnant women who are exposed to influenza viruses through their work should also consider an antiviral post-exposure prophylaxis once the first symptoms appear," said Gómez. These have so far not been associated with complications when applied during pregnancy. Moreover, infected employees must stay at home for at least 24 hours after the symptoms have disappeared.

Vaccinations against pertussis

Whooping cough (pertussis) is a risk for pregnant women in health care. This extremely contagious respiratory disease is transferred by aerosols and associated with a high infant mortality rate. Various combination vaccines against pertussis are approved during pregnancy. They contain components that protect the woman against tetanus, diphtheria and whooping cough, and in some cases against polio. The vaccine for whooping cough cannot be obtained individually.



Photo: sharon-mccutcheon / Unsplash

By vaccinating pregnant women, it is possible to achieve maternal passive immunity for the child, as the mother's antibodies are transferred to the unborn child. This means that the baby is also protected against whooping cough in the first months of life. However, vaccinating against whooping cough or having whooping cough before becoming pregnant does not lead to passive immunoprotection. Studies have shown that the best time to have

the vaccination is a few weeks before the end of the pregnancy. However, because the antibodies are only short-lived, the vaccination should be repeated for each pregnancy.¹⁹

Hepatitis B

Vaccinations against hepatitis B and hepatitis A are recommended during pregnancy as a preventive measure, again in combination with hygienic precautions and safe work practices. Hepatitis is one of the main causes of morbidity and mortality worldwide. According to the WHO, some two billion people have been or are currently infected with the hepatitis B virus (HBV). Approximately 3 percent of the world's population have a chronic HBV infection²⁰. In Pakistan, as many as 7.4 percent of the population suffer from chronic hepatitis B and hepatitis C, which is most common in Southeast Asia, Gómez explained. The use of syringes, contaminated razors, intravenous drugs or acupuncture needles are among the most common causes of infection.

Acute hepatitis B virus infection during pregnancy is usually not severe. However, it can lead to premature births and a low birth weight. The risk of passing on the hepatitis B virus to the fetus increases in the course of the pregnancy.

Nonimmune pregnant workers who had no previous vaccination series or previous hepatitis B infection need HBIG prophylaxis and should also receive hepatitis B vaccine series. This is also true for any non-immune worker. The recommendation depends on the person's immune status.

International legislation to protect pregnant employees

Occupational health and safety for (expectant) mothers is also backed by legislation, for example by Convention 183 of the International Labor Organization (ILO). This stipulates that women must not be forced to do work that could damage their health, that of the unborn or newly born child. They have a right to maternity leave and paid leave if complications arise during pregnancy, as well as nursing breaks. Furthermore, women cannot be given notice during their maternity leave or while on sick leave.

Read more

World Health Organization (WHO): Guidelines for the prevention, care and treatment of persons with chronic hepatitis B infection. 2015a

Vygen-Bonnet S, Hellenbrand W, Garbe E, von Kries R, Bogdan C, Heining U, et al. Safety and effectiveness of acellular pertussis vaccination during pregnancy: a systematic review. *BMC Infect Dis.* 2020;20(1):136

Erika L Rangel, Manuel Castillo-Angeles, Marguerite Changala, Adil H Haider, Gerard M Doherty, Douglas S Smink. Perspectives of pregnancy and motherhood among general surgery residents: A qualitative analysis. 2018

¹⁹ Vgl. Vygen-Bonnet S, Hellenbrand W, Garbe E, von Kries R, Bogdan C, Heining U, et al. Safety and effectiveness of acellular pertussis vaccination during pregnancy: a systematic review. *BMC Infect Dis.* 2020;20(1):136.

²⁰ World Health Organization (WHO): Guidelines for the prevention, care and treatment of persons with chronic hepatitis B infection. 2015a

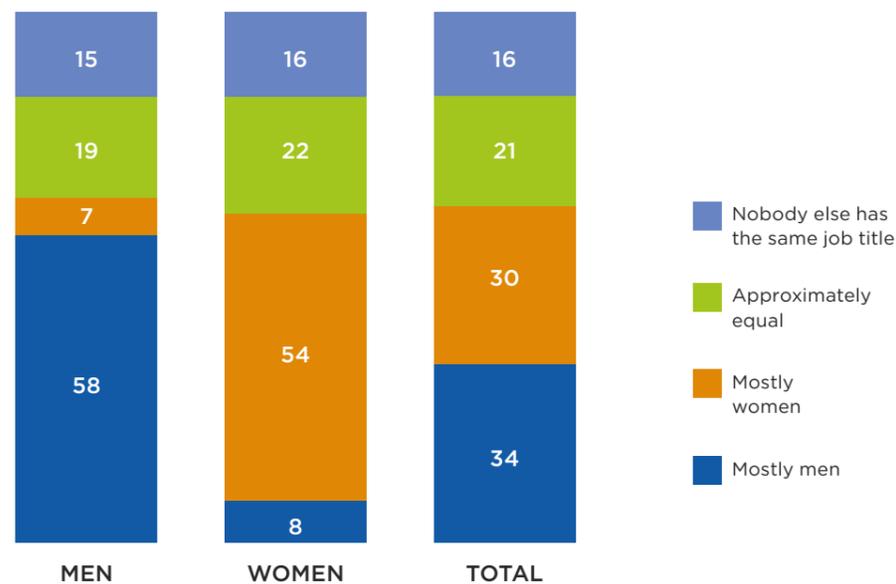
7

Elke Schneider and Lorenzo Munar on Results from the EU-OSHA Research

“Gender issues that are related to occupational safety and health in general are often also relevant for the health sector,” said Elke Schneider from the European Agency for Safety and Health at Work (EU-OSHA) based in Bilbao, Spain. These issues are a cross-cutting topic, and included in several projects and in all research by the agency. Gender is taken into accounts in projects for young workers and topical research on specific issues such as digitization. Because the conditions and circumstances of health care work are very different for men and women, a gender-sensitive approach to occupational safety and health is required.

EU-OSHA was set up in 1994 by the European Union to make jobs safer, healthier and more productive. As Schneider explained, the agency does not inspect workplaces or enforce the law, but develops, gathers and provides relevant information, analysis and tools to occupational safety and health throughout Europe and works closely with social partners. Lorenzo Munar, who also works at EU OSHA, supplemented Schneider’s lecture on gender issues with a presentation of the latest results from the European Survey of Enterprises on New and Emerging Risks (ESENER) on health and safety in European workplaces.

FIGURE 16: SEX OF CO-WORKERS WITH THE SAME JOB TITLE, BY SEX, EU28 (PERCENT)

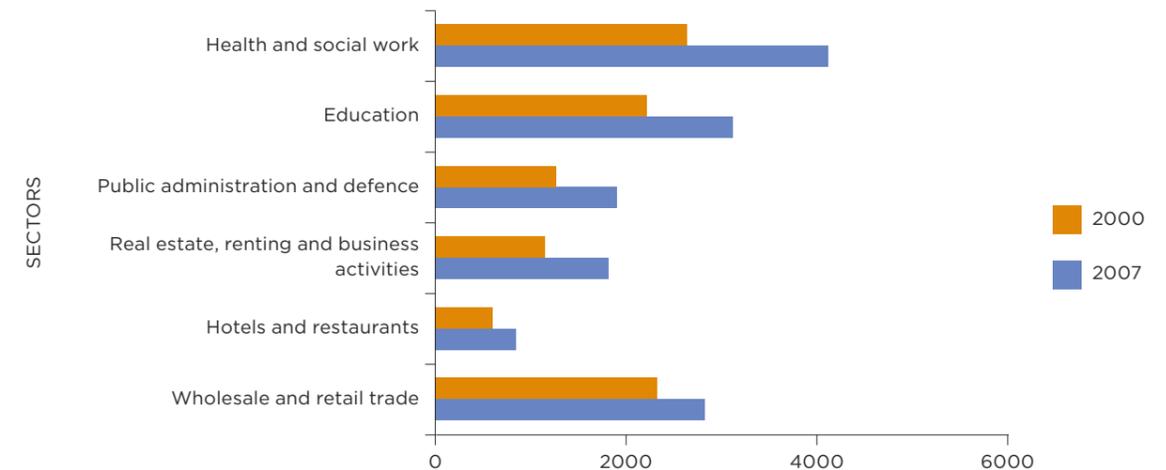


Gender-related health problems and risk factors

In Europe, women are more likely to work part-time, in informal or casual jobs. For example, home care for the elderly is on the rise and is mainly provided by women. “In terms of career, income or prestige it is the same situation as 20 years ago,” said Schneider. “Women are still behind men. Furthermore, they are concentrated in specific sectors. We have what we call a ‘horizontal segregation’.” Women often work in female dominated jobs whereas men tend to be in male dominated jobs. Gender segregation still characterizes EU workplaces: 58 percent of men and 54 percent of women say that their “co-workers with the same job title” are mostly of the same sex. Only 19 percent of men and 22 percent of women stated that there were an equal number of men and women working in a similar position at their place of work (see Figure 16, source: 6th European Working Con-

ditions Survey – Overview Report Nov 2016²¹). In Europe, a large part of health problems can be traced back to stress and related health and mental health issues, such as cardiovascular diseases or burnout. Further health problems are due to a static posture, monotonous and repetitive work and strain injuries. In addition, it is a challenge to enforce occupational safety and health in home care, where labor inspectors are not able to monitor conditions. “Women and part-time workers often have less access to training, and many part-time workers are in fact women,” said Schneider. “Furthermore, they are less represented in decision-making positions, for example in health and safety committees.” Women work predominantly in the service sector while men mainly choose jobs in construction, utilities transport and manufacturing. Even if some women are moving into male dominated jobs, the numbers are still only very small and do not eliminate segregation. Women aged

FIGURE 4: FEMALE EMPLOYMENT IN EU-27 BY ECONOMIC SECTOR, AGES 50 - 64, IN 2000 AND 2007



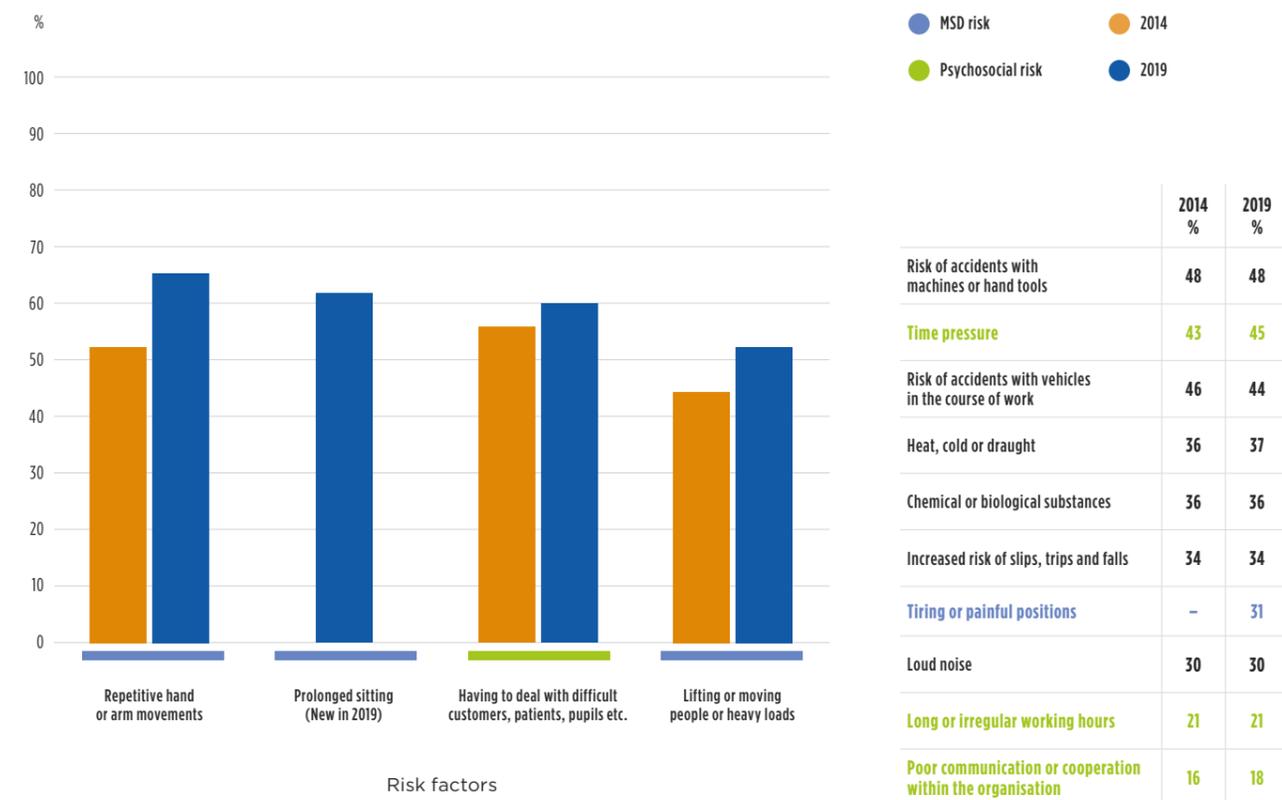
Source: Eurostat, EU-LFS

²¹ 6th European Working Conditions Survey – Overview Report, DOI: 10.2806/518312 Edition: 2016, publisher: Publications office of the European Union, Editor: eurofound 6th European Working Conditions Survey – Overview Report (update 2017)

between 50 and 64 work mainly in the health sector or in education. Generally, the employment rate in manufacturing is decreasing in Europe and this also affects women's jobs. According to Munar, up to 60 percent of participants in the European Survey of Enterprises on New and Emerging Risks (ESENER)²² on health and safety in European workplaces identified "dealing with difficult clients" as a psychological risk factor. Women working in the health care or service sector are particularly exposed to this risk. They are also subject to long or irregular working hours and time pressure, which constitutes "the top risk factor

in Finland, Sweden (74 percent in both) and Denmark (73 percent) and comes second in the Netherlands (64 percent) At the same time, there is a lack of communication about psychological risks in most companies, even though about 70 percent already experienced "bullying" and "stress" and are aware of this, according to Munar. More than 50 percent of companies stated they had already hired specialists to resolve conflicts or train teams of workers. Nevertheless, it is often difficult for affected employees to talk about psychological problems.

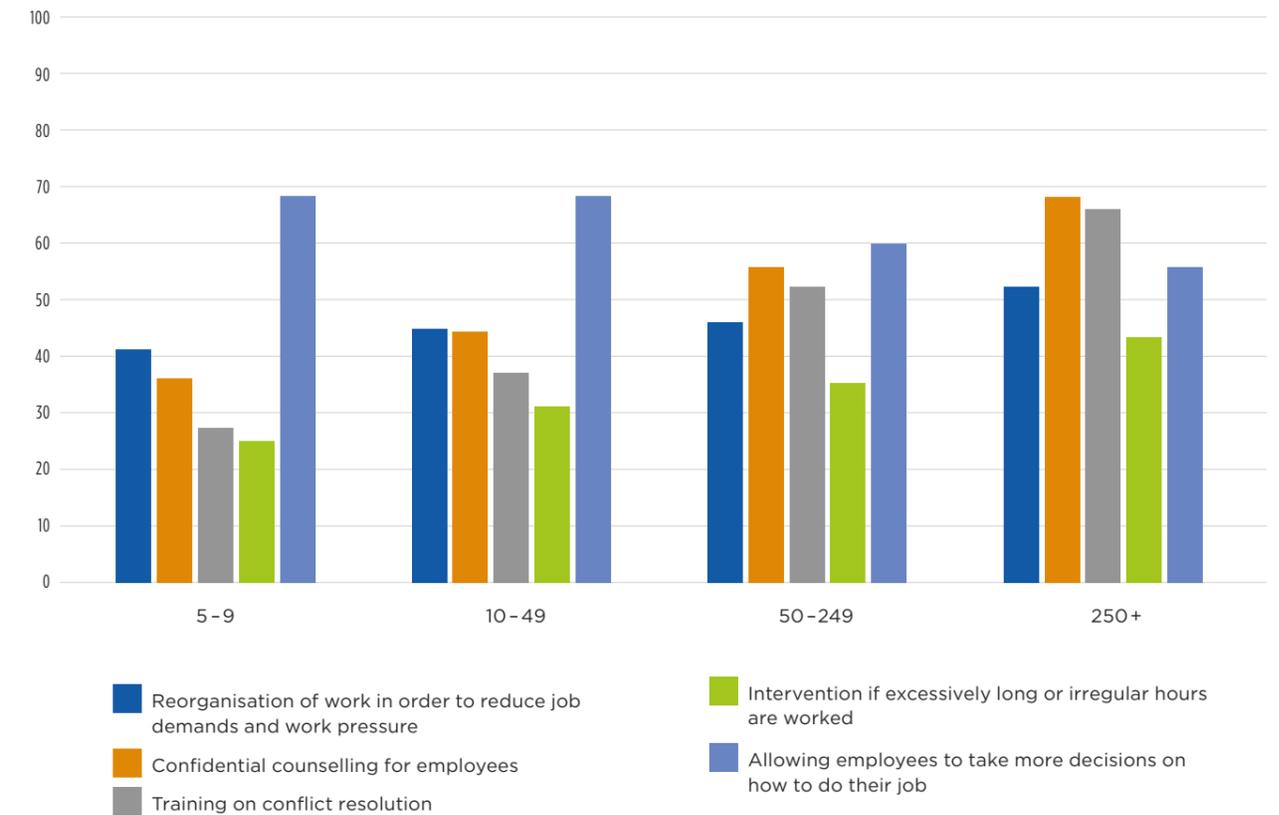
MOST FREQUENTLY IDENTIFIED RISK FACTORS (PERCENTAGE WORKPLACES), 2014 AND 2019



NB: The data are for all workplaces in the EU27_2020, from ESENER 2014 and ESENER 2019.

²² EU-OSHA's third European Survey of Enterprises on New and Emerging Risks (ESENER 2019), Second European Survey of Enterprises on New and Emerging Risks 2014 (ESENER-2)

FIGURE 6. PERCENTAGES OF WORKPLACES REPORTING MEASURES TO PREVENT PSYCHOSOCIAL RISKS, BY SIZE (NUMBER OF EMPLOYEES), 2019



NB: The data are for all workplaces in EU27_2020, from ESENER 2019.

Aging in health care

The female workforce is aging in many sectors. Moreover, different age groups in the female working population have to face different occupational risks. According to the European Working Conditions Survey, the proportion of people in employment aged 50 years or over has increased from 24 percent to 31 percent in the past 10 years. At the same time, there has been a steady decline in the proportion of younger workers aged under 35 years.²³

Generally, there is an increasing number of older women in the main employment sectors and this must be taken into account in prevention. "The general topic is adapting work to workers," said Schneider. "We have to look at the real work situation and above all consult women at work and older people to see how they perceive the risks at their workplaces. They know best about their working situation." Many health care workers have to care for others themselves, such as for elderly relatives, children, grandchildren or other relatives in

²³ 6th European Working Conditions Survey - Overview Report (update 2017)

need of care. Furthermore, there is a higher incidence of chronic diseases in older health care workers. Issues related to menopause are linked to the cumulative impact of many years of shift work or physical and emotional burdens.



Photo: WHO / Blink Media - Martyn Aim

Female workers and especially health care workers are often not covered by occupational health services with an age-appropriate risk management or programs and measures for wellbeing at work. According to Schneider, the following is necessary with regard to aging in the profession:

- + more flexible working schemes,
- + more information about retirement and pensions,
- + job redesign and redeployment,
- + really looking at the tasks people do,
- + ensuring occupational health support.

EU OSHA published a fact sheet with recommendations on how to include diversity, carry out an effective workplace risk assessment and deal with gender issues, ages and disability.²⁴

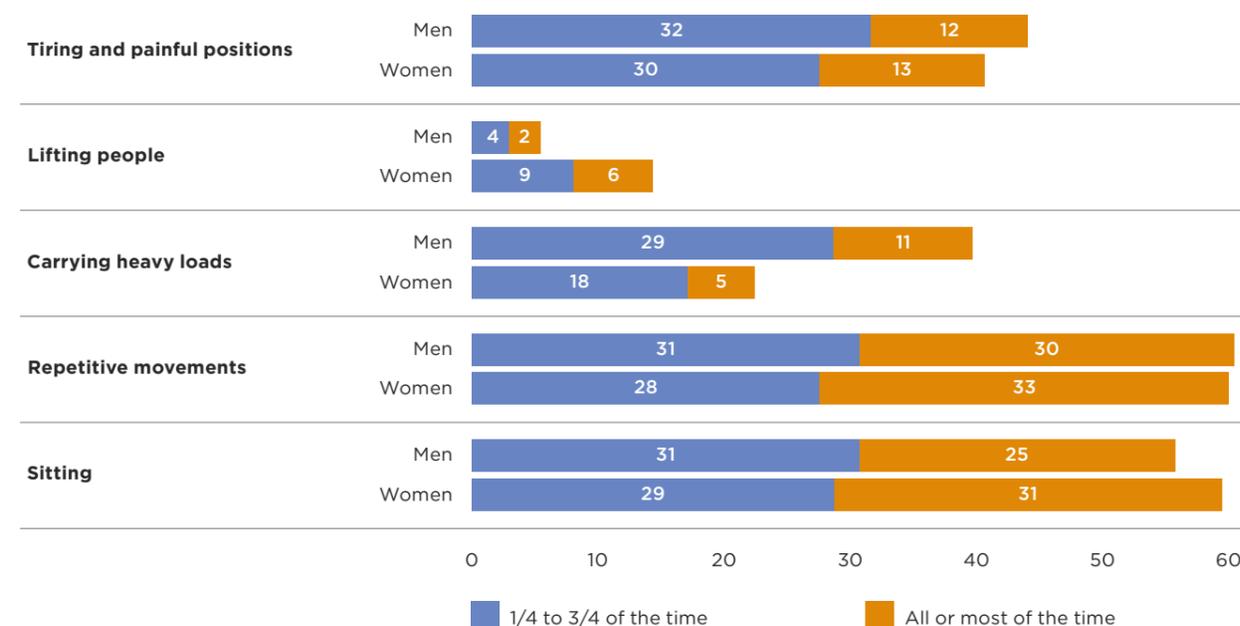
Further occupational hazards

The number of workplace accidents has declined in Europe overall, but not in the service sector where the rates have stagnated. Therefore, more targeted prevention is required to stop accidents in the service sector, according to Schneider. Additional occupational hazards for women include prolonged sitting and standing, and this also applies to the health care sector. In addition, women in Europe are exposed to biological and chemical agents. Many of them, such as cleaners or health care workers, work with clients and at client's premises. According to Schneider, women also have to fulfill multiple social roles, because men still do not contribute as much to housework or childcare as women do, which is evidenced by figures on working time.²⁵ Including unpaid work, women spend more time at work than men do. This higher workload can also affect their physical and mental health. In summary, the results of the European Survey on Working Conditions (Eurofound 2017, update) show overall structural inequalities and differences related to gender, employment, status and occupational health.

Posture-related risks

Furthermore, work itself is changing. "More and more it is about carrying and moving people, and the use of technical aids such as lifters, for example, is not common in all workplaces," said Schneider. "This applies in particular to home care where the conditions may be precarious in that respect."

FIGURE 36: EXPOSURE TO DIFFERENT POSTURE-RELATED RISKS, BY SEX, EU28 (PERCENT)



Source: 6th European Working Conditions Survey – Overview Report (Update 2017)

Occupational disorders

The Federal Institute for Occupational Safety and Health (BAuA) and the Federal Institute for Vocational Education and Training (BIBB) carry out regular surveys on the working conditions of some 20,000 employees.²⁶ According to the results, infectious diseases have increased in the health care sector, as have skin diseases, specific respiratory disorders, mental health problems and accidents such as slips, trips and falls, but also accidents related to violence and needlestick injuries. Further complaints include fatigue, cognitive disorders and musculoskeletal disorders. Based on the DGUV register of occupational disorders (ODs), another study analyzed rates of confirmed cases of ODs related to

job sectors and professions. Increased rates of confirmed cases were found, for example, in miners, construction workers, and unskilled workers. Nurses, midwives, other health professionals as well as related professions were strongly affected, also. Health care workers, for example, did more lifting than construction workers, who are generally perceived as doing hard physical work. In addition, health workers work shifts, which also puts a strain on their health.²⁷ Shift work may also be considered a risk factor for accidents. In some female dominated sectors, accidents are stagnating or even rising, for example in the hotel, restaurant and catering sector. "Generally, these issues are not sufficiently addressed," said Schneider. According to the European Commission's guide for prevention and good practice in the

²⁴ Factsheet 87 – Workforce diversity and risk assessment: ensuring everyone is covered Summary of an Agency report

²⁵ 6th European Working Conditions Survey – Overview Report (Update 2017)

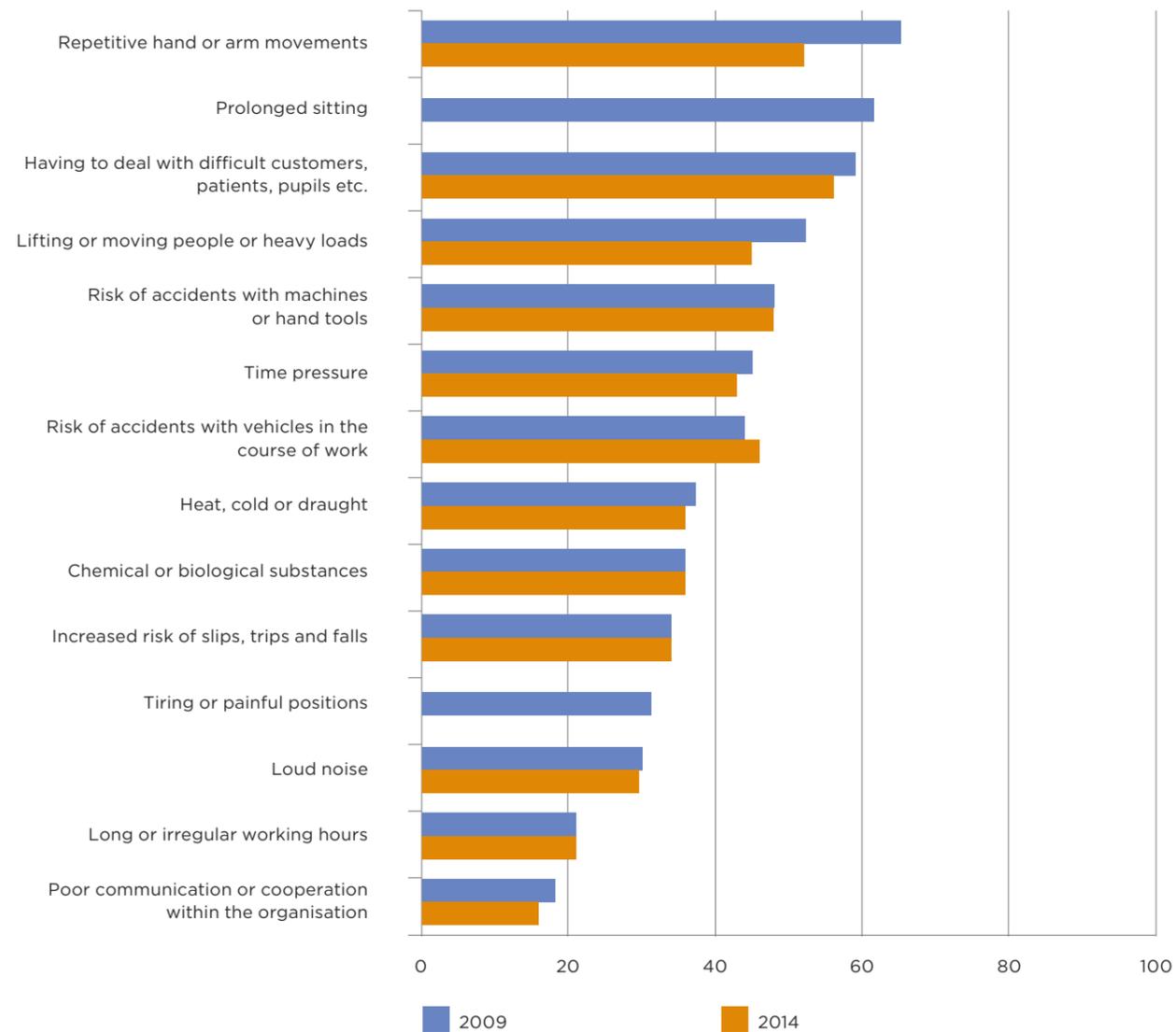
²⁶ BIBB/BAuA Employment Survey 2018, Working conditions and health from the employees' perspective

²⁷ F. Liebers, U. Latza: Berufskrankheiten durch mechanische Einwirkungen – Raten bestätigter BK-Fälle in Einzelberufen. 1. Edition. Dortmund: Bundesanstalt für Arbeitsschutz und Arbeitsmedizin 2016. pages 75, Project number: F 2277, paper, PDF file, DOI: 10.21934/baua: bericht 2016 1125

health care sector²⁸, not only an adequate risk assessment at the workplace is important, but also thorough planning and taking a stepwise approach. In addition, prevention and health

promotion should be established as a management task and biological, musculoskeletal, psychosocial and chemical risks taken into consideration.

FIGURE 2. PERCENTAGE OF WORKPLACES REPORTING RISK FACTORS, 2019 AND 2014



NB: The data are for all workplaces in the EU27_2020, from ESENER 2014 and ESENER 2019, 'Prolonged sitting' is a new item in the ESENER 2019 questionnaire.

EU-OSHA provided a risk assessment and risk assessment fact sheet available in many languages that addresses gender issues and gives recommendations on how to carry out gender-sensitive risk assessment at workplaces.²⁹ In addition, EU-OSHA organizes the campaign "Healthy Workplaces for All Ages" to promote "sustainable work and healthy ageing right from the start of working lives" and presents best-practice examples from European member countries³⁰.

A further issue is women and rehabilitation: "If you have a gender pay gap and lower salaries, you are bound to have lower compensation if you have to leave the health care profession, for example because of skin disease or the consequences of an accident," said Schneider. Gender topics also affect rehabilitation. Very often, for example, childcare is not taken into account in rehabilitation schemes which are mainly set up for male workers in typical male sectors.



Photo: WHO / S. Volkov

Lorenzo Munar finally stressed the need to collect more data and make it available for research. In addition, he called for the information to be shared even more at EU level.

Read more

Third European Survey of Enterprises on New and Emerging Risks, 2019. European Agency for Safety and Health at Work, Kantar Public. (2020). [data collection]. UK Data Service. SN: 8690, <http://doi.org/10.5255/UK-DA-SN-8690-1>.

Gender issues in safety and health at work: A review. EU-OSHA (European Agency for Safety and Health at Work) (2003), Available at: <http://osha.europa.eu/en/publications/wr-reports/209>.

Eurofound (2017), Sixth European Working Conditions Survey – Overview report (2017 update), Publications Office of the European Union, Luxembourg.

Healthy Workplaces Good Practice Awards 2016–2017.

Occupational health and safety risks in the healthcare sector – Guide to prevention and good practice. Directorate-General for Employment, Social Affairs and Inclusion (European Commission), 2014.

²⁸ Occupational health and safety risks in the healthcare sector – Guide to prevention and good practice. Directorate-General for Employment, Social Affairs and Inclusion (European Commission), 2014

²⁹ Factsheet 43 – Including gender issues in risk assessment, 12.09.2003

³⁰ Healthy Workplaces Good Practice Awards 2016–2017

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Biographical information on the speakers



IGOR BELLO

MA in Ergonomics and Psychosociology, Venezuelan Society on Occupational Health, Secretary of the Scientific Committee on Women, Health & Work of ICOH, Associate Professor at Simon Bolivar University, where he chairs the Center of Human Engineering and Ergonomics, Venezuela.



GWEN BRACHMAN

MD, MS, MPH, FACOEM. Specialist in Internal Medicine and Occupational Medicine. She is currently retired but remains active in ACOEM (American College of Occupational and Environmental Medicine) and ICOH (International Commission on Occupational Health), where she is Chair of the Scientific Committee on Occupational Health for Health Workers.



MARIJA BUBAS

MD, PhD, Croatian Institute of Public Health. Occupational and sports medicine specialist, lecturer at the Faculty of Medicine, postgraduate study in occupational medicine (University of Zagreb, School of Public Health, Croatia). Former Head of Department for Education, Head of Division for Occupational Health, former Director of the Croatian Institute for Health Protection and Safety at Work, Assistant Director-General of the Croatian Institute of Public Health. Co-author and author of, e.g., peer-reviewed scientific articles and a handbook on occupational skin diseases. Consultant for the European Commission on occupational medical issues and legislature updates. Bubas has also been active in ICOH since 2014 as Secretary of the Scientific Committee Education and Training in Occupational Health (SCETOH), and currently as SCETOH Chair.



RODNEY EHRLICH

Em. Prof., Senior Research Scholar School of Public Health and Family Medicine, University of Cape Town, South Africa. Ehrlich trained in economics at UCT and Oxford before switching to medicine. His research interests are in social epidemiology, workers' health, tuberculosis and other chronic lung diseases.



FOUAD M. FOUAD

MD, American University of Beirut, Lebanon, Assistant Research Professor at the Department of Epidemiology & Population Health, Co-Director of the Refugee Health Program at the Global Health Institute at the American University of Beirut (AUB). Fouad is currently working on a number of research projects related to the Syria crisis and/or Syrian refugees. Fouad serves as a commissioner in two Lancet Commissions: AUB Lancet Commission: Syria and the crises in global governance, health and aid; and UCL Lancet Commission on Migration and Health.



VIVIANA GÓMEZ-SÁNCHEZ

MD, President of the Association for Occupational Medicine of Costa Rica and of the Latin American Association of Occupational Health (Asociación Latinoamericana de Salud Ocupacional - ALSO) in Costa Rica



RIMA R. HABIB

PhD, MPH, MOHS, of the American University of Beirut, received the 2017 International Health and Safety Award from the Occupational Health and Safety (OHS) Section of the American Public Health Association (APHA). This award recognizes individuals with outstanding contributions to public health. She has carried out extensive research on refugee workers in Lebanon.



MASON D. HARRELL

Medical Director, III M.D., M.P.H., FACOEM, Harvard-trained, double board-certified physician in occupational medicine, public health and general preventive medicine. Harrel worked as a medical expert with the Massachusetts Institute of Technology (MIT), the World Health Organization (WHO), and others. Currently active-duty Navy Lieutenant Commander, Medical Division Officer, and Flight Surgeon supervising 75 medical professionals.



SWEN MALTE JOHN

Dept. Dermatology, Environmental Medicine, Health Theory at the University of Osnabrück, Institute for Interdisciplinary Dermatological Prevention and Rehabilitation (iDerm) at the University of Osnabrück, Lower-Saxonian Institute of Occupational Dermatology (NIB).



DANILEING LOZADA

MD, from the Venezuelan Society on Occupational Health presented different ways to adapt health work to the needs of pregnant women, for example by using robots to move patients, introducing ergonomic desks and chairs, and organizing work to avoid night shifts for pregnant women.



LORENZO MUNAR

MSS, Project Manager, European Agency for Safety and Health. Before joining the Agency, Munar worked as a researcher at the Université Libre de Bruxelles, where he carried out studies on subjects like stress, OSH and gender issues or OSH prevention in different activity sectors.



ACRAN SALMEN-NAVARRO

MD, MSC, New York University (NYU) School of Medicine, USA. Expertise and research interests: Ergonomics, work-related musculoskeletal diseases (WMSD), occupational health (OH) on immigrants/underserved/vulnerable workers and health workers. Active member of ICOH WMSD and Health Workers Scientific Committees. Founding member of the Venezuelan Ergonomic Society and delegate to the International Ergonomic Association (IEA). Active member of the IEA WMSD Technical Committee. Active member of ACOEM and Board member of the New York chapter NYOEMA.



TAWANDA NHERERA

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STEFAN SCHMIEDEL

Dr. med., senior physician in the Department of Infectious Diseases and Tropical Medicine at the University Medical Center Hamburg-Eppendorf (UKE). His work covers, among other things, internal medicine, infectious diseases and tropical medicine. Stefan Schmiedel went to Sierra Leone with Médecins Sans Frontières MSF, where he worked as a medical director in charge of one of the treatment centers, of which there were four at the time.



ELKE SCHNEIDER

ILO, Senior Project Manager at the European Agency for Safety and Health at Work, Spain. Schneider has been involved in several major projects, including the European Risk Observatory. She led a project from 2015 to 2019 to collect data on work-related diseases, including diseases caused by biological agents, with a particular focus on unintentional contact with such agents and systematic prevention.

Schneider has a degree in Technical Chemistry / Biochemistry and a PhD in Technical Sciences from the Vienna University of Technology.



CHRISTIANE WISKOW

Christiane Wiskow is a specialist for the health services sector at the International Labour Organization (ILO) in Geneva, Switzerland. Wiskow has a professional background in social and health sciences, and practical work experience in community-based psychiatry. She is specialized in international public health with a focus on health workforce issues and has worked with a number of international organizations, mainly on labor aspects in the health sector.

BGW - BERUFGENOSSENSCHAFT FÜR GESUNDHEITSDIENST UND WOHLFAHRTSPFLEGE

The statutory accident insurance for non-governmental institutions in the health and welfare sector. The primary task of the BGW is to prevent occupational accidents, occupational diseases and workrelated health hazards. In the event of an injury, the BGW ensures optimum medical treatment as well as appropriate compensation to enable its insured members to participate in professional and social life once again.

CVCARE - CENTRE FOR EPIDEMIOLOGY AND HEALTH SERVICES RESEARCH FOR HEALTH PROFESSIONALS

The Competence Centre for Epidemiology and Health Services Research for Healthcare Professionals (CVcare) was established in 2010 with the appointment of Prof. Dr. Nienhaus to an endowed professorship funded by the Statutory Accident Insurance in the Health and Welfare Services (BGW). By funding the endowed chair, the BGW aims to promote separate and independent research in the field of work-related health promotion, prevention and rehabilitation for employees in the health and welfare services in accordance with its statutory mandate. The CVcare is part of the Institute for Health Service Research in Dermatology and Nursing at the University Clinics Hamburg Eppendorf (UKE).

EU-OSHA - EUROPEAN AGENCY OF SAFETY AND HEALTH AT WORK

EU-OSHA is the European Union's information agency for occupational safety and health. Its work contributes to the European Commission's Strategic Framework for Safety and Health at Work 2014-2020 and other relevant EU strategies and programs, such as Europe 2020.

ICOH - INTERNATIONAL COMMISSION ON OCCUPATIONAL HEALTH

The ICOH is an international non-governmental professional society whose aims are to foster the scientific progress, knowledge and development of occupational health and safety in all aspects. Founded in 1906 in Milan as the Permanent Commission on Occupational Health, ICOH is now the world's leading international scientific society in the field of occupational health with a membership of 2,000 professionals from 105 countries. The ICOH is recognized by the United Nations as a non-governmental organization (NGO) and has close working relationships with ILO and WHO.

ILO - INTERNATIONAL LABOR ORGANIZATION

Founded in 1919, the ILO brings together governments, employers and workers in 187 member states with the goal of setting labor standards, developing policies and devising programs to promote decent work for all women and men. The aims of the ILO are to promote rights at work, enhance social protection and strengthen social dialogue as an integral part of the 2030 Sustainable Development Agenda.

INRS - INSTITUT NATIONAL DE RECHERCHE ET DE SÉCURITÉ, FRANCE

The National Research and Safety Institute for the Prevention of Occupational Accidents and Diseases created in 1947 is a non-profit organization. Its activities are in accordance with social security directives (French National Health Insurance Fund for Salaried Workers - CNAM) and policies defined by the Ministry of Labor. INRS contributes to the prevention of occupational accidents and diseases. It conducts studies and research, offers training activities, develops and disseminates information on occupational safety and health, and provides technical, legal, medical and documentary expertise.

ISSA - INTERNATIONAL SOCIAL SECURITY ASSOCIATION

The International Social Security Association (ISSA) is the world's leading international organization for social security institutions, government departments and agencies. It promotes excellence in social security administration through professional guidelines, expert knowledge, services and support to enable its members to develop dynamic social security systems and policy throughout the world. The ISSA was founded in 1927 under the auspices of the International Labor Organization, and today has over 320 member institutions from over 150 countries.

SC OHHW - SCIENTIFIC COMMITTEE ON OCCUPATIONAL HEALTH FOR HEALTH WORKERS

The OHHW 2019 was organized by the Scientific Committee of Occupational Health for Health Workers (SC OHHW), with the support of further Scientific Committees of ICOH (Women Health and Work (SCWHW), Occupational and Environmental Dermatitis (SCOED)), the WGOIA (Working Group of Occupational Infectious Agents of ICOH) and ISSA (International Social Security Association, Section Healthcare and Welfare).

UKE - UNIVERSITÄTSKLINIKUM HAMBURG-EPPENDORF

Since its foundation in 1889, the University Medical Center Hamburg-Eppendorf (UKE) has been one of Europe's leading hospitals. With around 13,600 employees, the UKE is one of the largest employers in the Free and Hanseatic City of Hamburg.

The UKE's main research areas include neuroscience, cardiovascular research, health care research, oncology, and infections and inflammations. Furthermore, it trains around 3,400 medical and dental students.

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“Global Shortage of Health Workers”, Conference Report,
11th Joint Conference on Occupational Health for Health Workers,
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The Congress was organized by the Scientific Committee of Occupational
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12th International Joint Conference **NYC ICOH – OHHW 2022/23** on Occupational Health for Vulnerable Health Workers New York, Dates to be announced

The theme of the conference will be –

Occupational Health for Vulnerable Health Workers

We are planning on a three days conference. One day will focus on worker's representation e.g. community based organizations, unions, good practice from employers, research oriented worker's experience.

Main Topics of the Conference:

Occupational Health (OH) for Migrant Health Workers

OH for Informal Workers

Precarious Work

OH for pregnant Health Workers

OH for ageing Health Workers

Psychosocial Risk Factors

OH for Dental Workers

Ergonomics

SARS – CoV -2 Lessons learned and beyond

Immigration

International Law for Vulnerable Health Workers

Workers Compensation

A call for abstracts will be send around as soon as the dates of the conference and the venue are fixed. The year 2022 is still tentative. The conference might be switched to 2023 if the **33rd International Congress on Occupational Health – ICOH** will be held 6 - 11 February 2022 in Melbourne.

More information on the OHHW 2022/23 will be given on the ICOH website as soon as possible www.icohweb.org

