Supplementary information

Perceptions, experiences and opportunities for occupational safety and health professionals arising out of the COVID-19 Pandemic

David Gold

Gold-Knecht Associates

Switzerland

Stuart Hughes

Mercedes AMG Petronas Formula One Team

United Kingdom

David Thomas

Middlesex University

United Kingdom

Table S1

Group demographics

The range of the reported age of the participants.

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| Age range | Number (n=37) (eight participants not reporting) |
| 25-34 | 2 |
| 35-44 | 7 |
| 45-64 | 21 |
| 65 + | 7 |

Table S2:

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| --- | --- |
| Canada | 1 |
| China (HK) | 1 |
| Switzerland | 3 |
| Ghana | 1 |
| Ireland | 3 |
| Nigeria | 1 |
| Singapore | 1 |
| UAE | 2 |
| UK | 31 |
| USA | 1 |

Table S2

Results of the Focus Groups

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| **Table S2 A-1 Impact on the workplace (Including Group 1)** | |
| **Background statement provided** | *New arrangements and challenges in the workplace Provided background statement:*The workplace has changed abruptly. There are physical changes, new arrangements and psychological challenges that need to be dealt with in all sizes of enterprises. At the same time, we need to be prepared for a possible second wave. How can we as safety and health professionals address these issues going forward? |
| **Participant statements reflecting the current situation** | A summary of the statements from the eight participants addressing the current situation included:   * How do we give advice in an area where we don’t have answers? * Once over the impact how do we bring the OSHPs on board? * How do we define a proactive system that continues to address all safety and health elements including those related to COVID-19. * We need to ensure that the psychosocial side of the pandemic is understood and being adequately addressed. * Is there a change in the occupational safety and health paradigm? * There is a gap between what is being said by government leaders and social media leading to uncertainty. * People cannot afford to stay off sick. They may come to work infected so they can maintain their jobs. |
| **Participants reflections on the way forward** | * Dynamic risk assessment is critical, we need to have the appropriate knowledge about the pandemic and associated risks to allow us to give correct and timely advice * We must build resilience into the workplace by having an up-to-date incident plan that can be adapted as the situation changes. * With many people working from home, we need to help identify issues. For example, are people covered by workers compensation if injured at home. * As we make changes to structures and arrangements, they need to be sustainable, at least until the pandemic is under control. * There has been a lack of credible, trustworthy information from different sources. We need to seek the truth and provide the correct advice to deal with the crisis, based on our credibility as safety and health professionals. Therefore, communicate using trusted information and study impact across a broader audience. * Seek to provide both psychological and physiological comfort. |

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| **Table S2 A-2 The social / psychological dynamic (from groups 2 and 3)** | |
| Group 2: Complacency and resistance to protective measures | |
| **Background statement provided** | Science has shown us that protective measures such as hand sanitation, distancing, testing and personal protective equipment are the most effective ways we can contain the virus and prevent its spread. Lockdown was extreme but necessary. However, there continues to be, as time progresses a certain level of complacency and a certain resistance to continue to apply these measures. How can we as safety and health professionals address these issues going forward? |
| **Participant statements reflecting the current situation** | * There are highly inconsistent messages coming from different agencies and institutions leading to uncertainty about what to do * OSHPs need to learn more about the virus from credible sources; its biology, how its transmitted and its associated risks. * There is complacency, partially due to confinement fatigue, about COVID-19 risk control measures. * There needs to be a level of trust in separating fact from fiction. * Many people have lost jobs which leads to a degradation of mental health. * Mental health risks are not being assessed well. * A number of young people are not close enough to the risk leading to complacent attitudes. |
| **Participants reflections on the way forward** | * It is imperative that OSHPs understand mechanisms of transmission and associated risks. * There needs to be on-going, holistic risk assessments that address COVID-19. * As a control measure, based on 2 above, OSHPs need to target specific messages to specific groups of people. * The control measures of social distancing, hand hygiene, respiratory hygiene, and mask wearing need to be continually reinforced. * An educational piece with case studies and discussion points could be used in a variety of settings and adapted to the targeted audience. * It is essential that there are solid and consistent policies regarding COVID-19 sickness from work and stay-at-home policies. * There needs to be an understanding and education to address the long-term physical and mental effects of COVID-19. |
| **Group 3** | **Dynamics related to different generations of workers and vulnerability** |
| **Background statement provided** | The young worker and the older worker have a different range of perceptions regarding their personal and their colleague’s vulnerability to the risks associated with COVID-19. There will be different dynamics at play across all generations and within specific generations. What support can we provide. What do we need to provide this support? What mechanisms do we have to positively influence supporting all workers.? |
| **Participant statements reflecting the current situation** | * Older workers are at a higher risk from COVID-19. * Younger workers are not immune from risk. * What is need are clear, succinct instructions from a credible source. * Asymptomatic transmission means that a person with the virus may not have signs and symptoms but can transmit the virus to others. * The general population is weary of public health messaging. * Existing infrastructures such as scouting or youth groups may be instrumental in spreading the message. |
| **Participants reflections on the way forward** | * There is an important need for a targeted messaging campaign. There should be messages for both the old and the young. * The messages need to be bite-sized, video messages of about 45 seconds maximum. * The messages must be evidence-based. * We have to be careful as not all of the young are carless and complacent. Also complacency is not confined to the young. * Some of the best communicators may be those who are of ill health as a result of COVID-19 but we should not focus on scare tactics. * Ideally, we will find different celebrities that different populations will listen to * This is a massive opportunity for the OSHP. * The messaging should be localised geographically taking into account languages and dialects. |

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| **Table S2 A-3 Medical and health issues (from groups 4 and 7)** | |
| Group 4: **Should we be addressing the issue of Post-Traumatic Stress Disorder** | |
| **Background statement provided** | A serious and devastating co-morbidity to COVID-19 is Post-Traumatic Stress Disorder (PTSD). Although it has a serious impact on emergency and essential workers, many others have also become quite ill with this disorder through witnessing or even learning about the death or serious illness of a family member, a friend or a co-worker. |
| **Participant statements reflecting the current situation** | * PTSD does not necessarily happen immediately but when it starts, its onset is quick, possibly after the individual returns to work. * IOSH is global and we should consider implications as such? * We need to define the scope of the question and define what we mean by ‘addressing’ PTSD. * How far does the OSHP go? What is our role and how is it different than the mental health first aider? * What are the impacts of getting PTSD support wrong? * Education and acceptance: we are early in the journey. * PTSD is still seen by many as being related to war or similar. |
| **Participants reflections on the way forward** | * Are we getting the right support for people – how do we know? How do we measure ‘success’? * The OSHP needs to get involved in mental health, ensuring support mechanisms are in place and facilitating the role of mental health first aiders. “Facilitators who look after the doers.” * Ensure that OSH is a conduit between support and the person and ensure that the management systems are in place to enable facilitation. * Provide a toolkit on how to identify the need for support and readiness. * There is frequently a stigma associated with PTSD. Do we have the necessary tools to manage this associated stigma? * Some organisations already have EAP crisis team or specialist trauma team in place |
| **Group 7** | **Do we as safety and health professionals understand what burnout is, how it can be associated COVID-19.** |
| **Background statement provided** | According to the WHO, “Burnout is a syndrome conceptualised as resulting from chronic workplace stress that has not been successfully managed. It is characterised by three dimensions:1) feelings of energy depletion or exhaustion; 2) increased mental distance from one’s job, or feelings of negativism or cynicism related to one's job; and 3) a sense of ineffectiveness and lack of accomplishment. Burn-out refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life.”  According to Maslach and Leiter, Burnout is related to three dimensions: when energy turns into exhaustion; when involvement turns into cynicism; and when efficacy turns into ineffectiveness. Burnout can be a direct or an indirect manifestation of different stressors.  What can we, as safety and health professionals do to prevent burnout or mitigate its effects? |
| **Participant statements reflecting the current situation** | * COVID-19 is a new reality and we need to put in into context, balancing expectations with reality. * Redundancies and travel restrictions are having an impact on our mental health. * The stressors and stress related to COVID-19 can lead to burnout. * There is a common fear about future employment in any profession. * Chronic stress leads to burnout and burnout can be an antecedent to Post-Traumatic Stress Disorder. * Burnout is having a direct impact on family members. * Mechanisms must be identified and put into place to eliminate the harm related to mental health at the source. * In many countries there is a lack of well-being infrastructure and working from home during COVID-19 does not encourage the well-being message to be transmitted and reinforced. * Change is a huge contributor to stress. * Many global organisations are showing severe signs of stress within. * Although resilience training is important, it is more important to educate people about the signs and symptoms of stress and burnout and measures that can be taken mitigate stress at an early stage. |
| **Participants reflections on the way forward** | * Practical means need to be urgently found and implemented to identify positive behaviours to avoid stress early. * An adequate mental health risk assessment process including stress and burnout needs to be urgently developed and put into place. * There is a crucial role of IOSH[[1]](#footnote-1) Council to look ahead regarding stress and burnout, feeding information to the IOSH Board of Trustees to ensure that mental health issues remain high on IOSH’s agenda. * Training and educational packages need to be urgently developed and put into place, not only for mental health first aiders but also for managers and leaders to better understand mental health at work and what can be done to strengthen it. * Working with cross-organisational teams on stress and burnout can move issues forward more rapidly with more weight. * We need to encourage dialogue at a HR level, between a company’s leadership and line managers so everyone is dealing with stress and burnout related issues in a strategic and down-to-earth way. * Work with industry, international and national organisations to define the scope of evidence-based research with a view to develop a consensus on what is burnout and how to prevent it before it evolves into Post-Traumatic Stress Disorder. |

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| **Table S2 A-4 Occupational safety and health implications (from groups 5 and 6)** | |
| Group 5: Potential reduced work forces and safety and health implications | |
| **Background statement provided** | The economic impact of COVID-19 has put tremendous strain on economies in both developed and emerging economies. It will most probably take years to recover. Increased unemployment has been partially addressed by compensation and furlough schemes, but may workplaces will most probably be understaffed, increasing the demands on the existing workforce. What do we as safety and health professional need to keep in mind to guide employers and managers to address the risks associated with this situation? |
| **Participant statements reflecting the current situation** | * There is currently a move within companies to save money which translates in some situations to a reduction in OSH services. * A lack of an adjusted OSH policy taking into account COVID-19 is translating into a lack of adequate control measures and a lack of enforcement. * Some corporate leaders are returning to a situation where OSH decisions are being made with no underlying risk assessment. * Many workers are working from home with limited or no professional OSH support and little if any protection. * Globally, there is a lack of understanding of cultural diversity. For example, in some countries, workers have never worked from home and it’s difficult for OSHPs to provide guidance. |
| **Participants reflections on the way forward** | * OSHPs need background and training to strengthen their ability to effectively develop and disseminate health messages. * There is a need to strongly encourage mental health first aid, even to point of encouraging legislation. * Guidance is needed on risk assessment on mental health. * There is a strong need for quality guidance in working from home. * New policies need to be enabled to strengthen organisational abilities to address diversity on a global scale. * IOSH should use the current situational a springboard to not only strengthen the profession but also to strengthen the recognition of the profession as an essential service. |
| Group 6 Are we losing sight of basic safety and health issues? | |
| **Background statement provided** | Due to the Pandemic, there has been an emergence of the importance of occupational health. Some occupational safety and health professionals express that with this new and important focus, managers and workers may lose sight of some basic and important aspects of safety. We need to not only protect people from the risks of COVID-19 but also continue to identify and control risks associated with everyday work. How can we as safety and health professionals continue to reinforce the importance of prevention so that managers and workers do not lose site of the basics of preventing accidents and exposures. |
| **Participant statements reflecting the current situation** | * Professionals don’t know how to manage COVID-19, diverting the risk profiles and diverting the control measures. * Many sites have shut down except for a skeleton crew ignoring security and maintenance checks. * In process safety issues relating to lock down and start-up. * Although people now have a better understanding of the hierarchy of controls and the role of PPE, many feel that PPE is the only line of defence. * Standard operating procedures now need to be replaced with dynamic operating procedures due to the rapidly changing risks. * Some employers are using COVID-19 as an excuse not to comply with high-risk assessment control measures. * In some industries the first people to be furloughed are the safety and health staff. * There is often poor guidance disseminated by the safety and health authority leading to confusion at all levels. * Many organisations are lacking business continuity plans and have collapsed leading to unemployment. * Many countries are now bracing for a second wave. * The future will now translate into a new way of doing business which is yet to be defined. |
| **Participants reflections on the way forward** | * Reinforce the correct hierarchy of controls, correcting any misalignment caused by COVID-19. * Determine how the Vision Zero seven golden rules can be aligned with restoring basic safety and health concepts. * Work to be more inclusive with the health aspect of wellbeing. * Strengthen the role and importance of the occupational safety and health profession locally and globally. * Continue to work with business leaders to capture what’s left behind after COVID and explore how OSH adds value to the business. * Expand on opportunities to promote new OSH legislation. * Encourage the movement from compliance management to risk management. * Consider that OSHPs need to move from what we are doing to why we are doing it. * Using tools such as good practice benchmark good practice. * Take the opportunity to “reset” where we place our efforts in providing technical services, especially with leaders of business. |

Table S 3

Word Frquency Count

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| **Top Words** | | **Bigrams** | | **Trigrams** | |
| Word | Frequency | Word | Frequency | Word | Frequency |
| Health | 187 | Covid-19 | 86 | Safety & Health | 68 |
| Safety | 97 | Mental Health | 52 | Occupational Safety and | 17 |
| Covid | 94 | Focus Groups | 31 | The focus groups | 11 |
| 19 | 92 | The Pandemic | 30 | In the workplace | 11 |
| Risk | 78 |  |  |  |  |
| Work | 65 |  |  |  |  |
| Pandemic | 62 |  |  |  |  |
| Management | 60 |  |  |  |  |
| Mental | 58 |  |  |  |  |
| Stress | 45 |  |  |  |  |
| Workers | 45 |  |  |  |  |
| Business | 43 |  |  |  |  |
| Professional | 40 |  |  |  |  |

Table S4

Case study 1 Givaudan International SA

Givaudan International SA is a Swiss-based multinational company that manufactures fragrance and flavour compounds, operating in all regions of the world. It has over 181 locations worldwide, with over 77 production sites. There are 15,852 employees working, locally, regionally and globally (Givaudan SA, 2021).

The company has two divisions, Flavours and Fragrances.

A crisis management team (CMT) was set up in February 2020. The Chair of the CMT sits on the company’s Executive Committee (ExCo) and directs Environment, Health and Safety (EHS) and Human Resources (HR). The CMT included the CEO, CFO, Corporate Communications, EHS and Corporate Compliance. This individual coordinated the response of EHS professionals as well as actions dictated by the situation. This resulted in EHS and HR being totally aligned.

The EHS team, in addition to their day job, was engaged in adapting and implementing infection-related risk assessment to the current situation. Providing considerable support in transitioning from site work to working from home and helping local EHS (site) professionals manage the response to the pandemic. Their work was well above and beyond their day job requiring considerable additional work (to the limit of their capacities).

Comprehensive guidance was designed and distributed to all sites, providing a global framework that could then be implemented locally. This guidance included a risk management approach to working on-site and guidance on home working. The priority was to protect those workers who had to be on site, eg production and laboratory workers. As a result, business continuity teams were developed in both divisions; Tracking of cases was established with results reported by site, numbers in quarantine and employee fatalities; Global procurement planning was made for pandemic-related PPE; and site support networks were established and led by the heads of corporate compliance and EHS, including best practice calls.

An employee engagement team was established that included EHS and HR. The team set up the "Healthy Home Working" training (training 25 internal trainers and nearly 2'000 people. This training included but was not limited to ergonomics, mental and emotional health, time management, and work-life balance. Most of the trainers were Givaudan EHS professionals; the Humantech software, already used by the company, was promoted (for training in office ergonomics and assessing/ modifying the home office environment). The team ensured people got suitable IT equipment for home office - keyboard and mouse minimum, plus borrowing a chair and large monitor from work if needed; A global Employee Assistance Programme (EAP) was implemented (previously a local decision) and a programme, "Happier, Healthier Habits" was delivered daily for 21 days in October, followed by continuous weekly sessions. The programme focuses on mental and emotional health but also includes sleep and physical health. Typically, more than 600 employees attended per day. 2'000 different employees attended at least one session. These were facilitated sessions and often included a leader from the business. The head of EHS was involved in all of these elements - although some roles were delegated (e.g. PPE procurement)

New ways were found for working remotely. For example, the use of augmented reality glasses to conduct audits and, in one case, to commission a new plant in China enabling support by Engineers in Europe.

There was also a community element: as Givaudan has many plants that are set up for handling ethanol, it was relatively easy to manufacture hand sanitizer (when this was in short supply) and more than 1.5 million bottles were donated to hospitals, NGOs and other organizations; a communities’ fund was set up where sites could claim money to support projects to assist local communities with pandemic-related problems. Givaudan donated more than CHF 1 million, which supported 137 communities in 69 locations, benefiting about 94,000 people.

As part of ongoing resiliency, the company is now promoting a strong element of care. This not only includes more classic safety topics but also diversity and inclusion and the whole wellbeing programme. The pandemic also triggered the project "Silver Linings" to extract learning from 2020 and see how the company can apply it to the future of work. For example, smarter travel policies, review of office spaces and how to use both effectively.

Outcome: There was no significant disruption to output. Production and sales were at record levels in 2020. The human impact was difficult to measure but there was no increase in employee turnover. People are clearly still affected by "COVID fatigue" but the company is confident that it made some positive differences.

Case Study 2 Cambridge City Council

With UK Local Authorities (LAs) having additional responsibilities as a Category 1 Responder (Restauri and Sheridan, 2020) many health and safety professionals roles have expanded to be lead officers for emergency response and business continuity (BC). These roles involve both understanding business risk, being able to advise business and network across boundaries and professions. As active participants on the Local Resilience Forum (LRF) (Bertoni, 2017) there are strategic and tactical activities that the lead office would undertake. Within a LA the Chief Executive is the strategic lead; in the case of Cambridge City Council (850 employees) with a Chief Executive knowing his LAs duties has established a structure allowing for maximum empowerment. As well as being Corporate Health and Safety Manager (CHSM) with appropriate professional training and professional membership (an ex-member of IOSH Council) he (and his assistant) also has significant training in business continuity and emergency management at both strategic and tactical level. Normal line manager reporting was to the Head of Estates, Housing Maintenance and Assets with reporting for pandemic related issues directly to Strategic Management Team.

With the LRF led normally by the Fire Service, pandemic related activity was led by the Director of Public Health and the NHS / County LA lead. The CHSM represents the local authority on the County Resilience Strategic and Tactical group and is vice chair of the Tactical Business Group. Key skill sets demonstrated includes risk profiling, emergency management, communication and liaison in a fast-moving government led structure. The post holder is also personally responsible for the management of the Local Authority test centre. At the start of the pandemic, parallel to government setting societal rules, the post holder led on the LA risk assessment processes so that there was a continuity of service. As part of his broader BC remit, he had instigated improved IT Resilience that was sufficiently advanced in February 2020 to enable a massive move to remote/home working. This was followed by obtaining a DSE online self-assessment tool to give staff the tools to work remotely.

As well as ‘maintaining business as usual’ the post holder is responsible for ensuring offices are ‘COVID-Safe’, sits on the LA Accommodation Group, has had to reprioritise work and engage with staff across a unionised environment. The authority has been fortunate that in the first twelve months there was no covid-19 related death to a member of staff. COVID-19 risk management in the Wastes Management service was led by the Head of Wastes Management in the Waste Collection Service [\*] This guidance was produced following cross- professional industry engagement led by risk (OSH) leads including input from Government Public Health Leaders, professional unstitutions, and the HSE. It was a dynamic document updated constantly and was the first sector to introduce the concept of ‘Bubbles’ in the workplace (Morera et al., 2020).

The expanded broader risk based professional role covering Business Continuity and Emergency Management has raised the post holders profile and gravitas.

[\*] WISH, 2021. Covid-19 and Waste Management Activities. <https://www.wishforum.org.uk/wp-content/uploads/2021/01/INFO-13-COVID19-and-waste-management-activities-issue-9-6-Jan-2021.pdf> Accessed 20 Mar 2021

1. Institution of Occupational Safety and Health (IOSH) [↑](#footnote-ref-1)