

**Abstracts of the 9th European Congress on Tropical Medicine and International Health**

**MATERIALS AND METHODS** Although sewage sludge use positively affects soil and plants, its long-term application may result in toxic accumulation of heavy metals with unfavorable effects on plant growth. In this respect, to ensure safe sludge reuse and effective application, the monitoring of soil pollution is required. In order to estimate the soil pollution, indices such as Pollution Load Index (PLI), Elemental Pollution Index (EPI), and Total Concentration Factor (TCF) were determined.

**RESULTS** A considerable number of heavy metal interactions are taking place in soil and plants, under the influence of both TMWW and sewage sludge. The quantification of the contribution of the above interactions, showed a significant acceleration of nutrients and minerals levels in soil and plants.

**CONCLUSION** As TMWW are marginal waters, their utilization in agriculture, necessitates the acceptance of farmers and consumers. Additionally, the development of management plans, transport and implementation systems, is necessary, with regard to TMWW and sewage sludge reuse practices. Finally, further research is required to secure the highest safety and effectiveness of the reuse of TMWW and sewage sludge in agriculture and other sectors.

**DISCLOSURE** Nothing to disclose.

**PSI.251****Climate change and health: does it matter in Switzerland?**

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Amplified by global warming, there is a need to reduce the public health impacts of exposure to hot weather. The health risks of heatwaves may vary across the globe depending on climatic, demographic and socioeconomic profiles. In Switzerland, a heat-wave occurring during summer 2003 caused an estimated 7% increase in all-cause mortality. As a consequence, the Swiss Federal Office of Public Health provided recommendations on how to behave during hot weather periods.

Our project aims to

- 1 evaluate implemented preventive measures to reduce heat-related mortality,
- 2 to assess the effect of heatwaves on mortality in Switzerland, and
- 3 to identify meteorological parameters best describing the heat effect on mortality.

First, adopted and recommended measures aiming to reduce heat-related mortality in different counties in Switzerland will be collected and evaluated. Second, Swiss mortality data (1990–2012) and meteorological data from MeteoSwiss will be used to investigate heat-related excess mortality. The hypothesis will be tested whether the effect of heat episodes on mortality has been reduced since 2003. Finally, both the results of our project and of other identified relevant epidemiological studies on the topic will be made available to agencies and stakeholders in Switzerland by means of workshops and newsletters.

The project will generate evidence on the meteorological parameters of heatwaves most strongly related to increased mortality. It will indicate whether an increased sensitivity to health risks of heatwaves and adopted policies have reduced the extent of heat-related mortality in Switzerland. This information may contribute to limiting the public health impacts of heatwaves and climate change worldwide, and will generate evidence for new potential adaptation measures within health policy programs.

**DISCLOSURE** Nothing to disclose

**PSI.252****Long/short-term effects of air pollution in Tehran, Iran**

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A broad range of adverse health outcomes due to short- and long-term exposure to air pollutants, at levels usually experienced by urban populations throughout the world, are established. In the present work, we estimated the chronic and acute effects of air pollution on the health of inhabitants in Tehran city, the capital of Iran.

We applied the approach proposed by WHO using the AirQ 2.2.3 software. Concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub> and O<sub>3</sub> in 2014 were used to assess exposure and long and short-term effects. The annual average of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub> and O<sub>3</sub> were 78.8, 32.0, 49.9, 85.7 and 35.8 µg/m<sup>3</sup>, respectively. Considering long and short-term effects, PM had the highest health impact on the 9 000 000 inhabitants of Tehran city.

Our results showed that the magnitude of the health impact estimated for the city of Tehran highlights the need for urgent action to reduce the health burden of air pollution and the AirQ software seems an effective and easy tool, helpful in decision-making.

**DISCLOSURE** Nothing to disclose.

**PSI.253****Facility-based control of healthcare-associated infection in maternities of Kyrgyzstan**

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**INTRODUCTION** Monitoring systems of Health Care-Associated Infections (HCAI), in most countries of the Commonwealth of Independent States often fail to achieve their objectives due to underreporting of HCAI. This is due to punitive actions from sanitary-epidemiological stations (SES) and healthcare authorities. In 2005, as part of the national strategy to update and reinforce management of HCAI, infection control specialists were introduced in all health facilities across the country. These professionals faced significant challenges to fulfill their duties due to insufficient technical knowledge and weak analytical skills. Six training modules were offered to the infection control specialists of referral-level facilities over a 1-year period. On-site supportive supervision by national experts followed after each training.

**METHODS** Two independent cross-sectional studies were conducted in 2013–2014 with a 1-year interval (study I – before, study II – after training on HCAI) in the same settings of 13 maternity wards with annual facility birth numbers from 404 to 7003 and overall coverage of 46 994 births annually (31.7% of all births in the country) to assess prevalence of HCAI in the context of changing practices. Study I covered 316 women after delivery, including 61 (19.3 ± 4.4%) with caesarean section