Short-Term Cardiovascular Morbidity and Mortality Studies Excluded from the Draft Ozone ISA Based on Location

Attached are lists of studies for transmittal to the Clean Air Scientific Advisory Committee in response to a request made during the December 4-5, 2019 meeting on the draft Integrated Science Assessment for Ozone.

The attached lists include studies on (1) short-term ozone exposure and hospital admissions or ED visits for cardiovascular endpoints; (2) short-term ozone exposure and cardiovascular endpoints measured in panel studies; and (3) short-term ozone exposure and mortality that were excluded from the Draft Ozone ISA due the location where the study was conducted (consistent with the PECOS tools described in Table 10-2 of the Draft ISA).

Specifically, these studies were:

- Identified by our literature search (January 1, 2011 – March 30, 2018)
- Deemed to be relevant to the ISA based on screening of the title and abstract
- Excluded from further consideration because the study did not fall in the scope of the ISA as defined by the PECOS tool (Table 10-2). In these cases, the studies were excluded due to the location where the study was conducted.

Please let me know if you have any questions or would like any additional information.

Thank you,

John Vandenberg, PhD
Director, Health and Environmental Effects Assessment Division
Center for Public Health and Environmental Assessment/ORD
U.S. Environmental Protection Agency/B243-01
Research Triangle Park, NC 27711

Short-term Ozone Exposure and CVD Hospital Admission and ED Visit studies excluded from Draft Ozone ISA based on location (Outside of North America, Europe or Australia)

1. Javanmardi, P; Morovati, P; Farhadi, M; Geravandi, S; Khaniabadi, YO; Angali, KA; Taiwo, AM; Sicard, P; Goudarzi, G; Valipour, A; De Marco, A; Rastegarimehr, B; Mohammadi, MJ (2018) Monitoring the impact of ambient ozone on human health using time series analysis and air quality model approaches Fresenius Environmental Bulletin 27:533-544. HERO ID: 4261889

2. Akbarzadeh, MA; Khaheshi, I; Sharifi, A; Yousefi, N; Naderian, M; Namazi, MH; Safi, M; Vakili, H; Saadat, H; Alipour Parsa, S; Nickdoost, N (2018) The association between exposure to air pollutants including PM10, PM2.5, ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide concentration and the relative risk of developing STEMI: A case-crossover design Environmental Research 161:299-303. http://dx.doi.org/10.1016/j.envres.2017.11.020 HERO ID: 4165514

3. Liu, H; Tian, Y; Song, J; Cao, Y; Xiang, X; Huang, C; Li, M; Hu, Y (2018) Effect of ambient air pollution on hospitalization for heart failure in 26 of China's largest cities The American Journal of Cardiology 121:628-633. http://dx.doi.org/10.1016/j.amjcard.2017.11.039 HERO ID: 4245494

4. Guo, P; Feng, W; Zheng, M; Lv, J; Wang, L; Liu, J; Zhang, Y; Luo, G; Zhang, Y; Deng, C; Shi, T; Liu, P; Zhang, L (2018) Short-term associations of ambient air pollution and cause-specific emergency department visits in Guangzhou, China Science of the Total Environment 613-614:306-313. http://dx.doi.org/10.1016/j.scitotenv.2017.09.102 HERO ID: 4165709

5. Yu, Y; Dong, H; Yao, S; Ji, M; Yao, X; Zhang, Z (2017) Protective Effects of Ambient Ozone on Incidence and Outcomes of Ischemic Stroke in Changzhou, China: A Time-Series Study International Journal of Environmental Research and Public Health 14. http://dx.doi.org/10.3390/ijerph14121610 HERO ID: 4167016

6. Vahedian, M; Khanjani, N; Mirzaee, M; Koolivand, A (2017) Ambient air pollution and daily hospital admissions for cardiovascular diseases in Arak, Iran ARYA Atherosclerosis 13:117-134. https://www.ncbi.nlm.nih.gov/pubmed/29147121 HERO ID: 4245806

7. Chen, CC; Yang, CY (2017) Association between gaseous air pollution and hospital admissions for hypertension in Taipei, Taiwan Journal of Toxicology and Environmental Health, Part A: Current Issues 1-7. http://dx.doi.org/10.1080/15287394.2017.1395573 HERO ID: 4166935

8. Chung, JW; Bang, OY; Ahn, K; Park, SS; Park, TH; Kim, JG; Ko, Y; Lee, S; Lee, KB; Lee, J; Kang, K; Park, JM; Cho, YJ; Hong, KS; Nah, HW; Kim, DH; Cha, JK; Ryu, WS; Kim, DE; Kim, JT; Choi, JC; Oh, MS; Yu, KH; Lee, BC; Lee, JS; Lee, J; Park, HK; Kim, BJ; Han, MK; Bae, HJ (2017) Air Pollution Is Associated With Ischemic Stroke via Cardiogenic Embolism Stroke 48:17-23. http://dx.doi.org/10.1161/strokeaha.116.015428 HERO ID: 3455805

9. Huang, F; Luo, Y; Tan, P; Xu, Q; Tao, L; Guo, J; Zhang, F; Xie, X; Guo, X (2017) Gaseous Air Pollution and the Risk for Stroke Admissions: A Case-Crossover Study in Beijing, China International Journal of Environmental Research and Public Health 14. http://dx.doi.org/10.3390/ijerph14020189 HERO ID: 3603207

10. Chiu, HF; Weng, YH; Chiu, YW; Yang, CY (2017) Short-term effects of ozone air pollution on hospital admissions for myocardial infarction: A time-stratified case-crossover study in Taipei Journal of Toxicology and Environmental Health, Part A: Current Issues 80:251-257. http://dx.doi.org/10.1080/15287394.2017.1321092 HERO ID: 3862115

11. Xia, R; Zhou, G; Zhu, T; Li, X; Wang, G (2017) Ambient Air Pollution and Out-of-Hospital Cardiac Arrest in Beijing, China International Journal of Environmental Research and Public Health 14. http://dx.doi.org/10.3390/ijerph14040423 HERO ID: 3863885

12. Guo, P; Wang, Y; Feng, W; Wu, J; Fu, C; Deng, H; Huang, J; Wang, L; Zheng, M; Liu, H (2017) Ambient Air Pollution and Risk for Ischemic Stroke: A Short-Term Exposure Assessment in South China International Journal of Environmental Research and Public Health 14. http://dx.doi.org/10.3390/ijerph14091091 HERO ID: 4165147

13. Ghaffari, S; Hajizadeh, R; Pourafkari, L; Shokouhi, B; Tajlil, A; Mazani, S; Kavandi, H; Ansari, H; Nader, ND (2017) Air pollution and admissions due to ST elevation myocardial infarction-a time-series study from northwest of Iran Environmental Science and Pollution Research 24:27469-27475. http://dx.doi.org/10.1007/s11356-017-0343-1 HERO ID: 4168792

14. Liu, H; Tian, Y; Xiang, X; Sun, K; Juan, J; Song, J; Cao, Y; Xu, B; Hu, Y (2017) Air Pollution and Hospitalization for Acute Myocardial Infarction in China The American Journal of Cardiology 120:753-758. http://dx.doi.org/10.1016/j.amjcard.2017.06.004 HERO ID: 3861158

15. Liu, H; Tian, Y; Xu, Y; Huang, Z; Huang, C; Hu, Y; Zhang, J (2017) Association between ambient air pollution and hospitalization for ischemic and hemorrhagic stroke in China: A multicity case-crossover study Environmental Pollution 230:234-241. http://dx.doi.org/10.1016/j.envpol.2017.06.057 HERO ID: 3861621

16. Kang, SH; Heo, J; Oh, IY; Kim, J; Lim, WH; Cho, Y; Choi, EK; Yi, SM; Do Shin, S; Kim, H; Oh, S (2016) Ambient air pollution and out-of-hospital cardiac arrest International Journal of Cardiology 203:1086-1092. http://dx.doi.org/10.1016/j.ijcard.2015.11.100 HERO ID: 3070651

17. Alimohammadi, H; Fakhri, S; Derakhshanfar, H; Hosseini-Zijoud, SM; Safari, S; Hatamabadi, HR (2016) The effects of air pollution on ischemic stroke admission rate Chonnam Medical Journal 52:53-58. http://dx.doi.org/10.4068/cmj.2016.52.1.53 HERO ID: 3224158

18. Han, MH; Yi, HJ; Ko, Y; Kim, Y; Lee, Y (2016) Association between hemorrhagic stroke occurrence and meteorological factors and pollutants BMC Neurology 16. http://dx.doi.org/10.1186/s12883-016-0579-2 HERO ID: 3259720

19. Michikawa, T; Okamura, T; Nitta, H; Nishiwaki, Y; Takebayashi, T; Ueda, K; Kadota, A; Fujiyoshi, A; Ohkubo, T; Ueshima, H; Okayama, A; Miura, K; NIPPON DATA2010 Research Group (2016) Cross-sectional association between exposure to particulate matter and inflammatory markers in the Japanese general population: NIPPON DATA2010 Environmental Pollution 213:460-467. http://dx.doi.org/10.1016/j.envpol.2016.02.051 HERO ID: 3360885

20. Jung, CR; Chen, WT; Lin, YT; Hwang, BF (2016) Ambient Air Pollutant Exposures and Hospitalization for Kawasaki Disease in Taiwan: A Case-Crossover Study (2000-2010) Environmental Health Perspectives 125:670-676. http://dx.doi.org/10.1289/ehp137 HERO ID: 3418897

21. Han, MH; Yi, HJ; Kim, Y; Ko, Y; Kim, Y (2016) Association between Diurnal Variation of Ozone Concentration and Stroke Occurrence: 24-Hour Time Series Study PLoS ONE 11:e0152433. http://dx.doi.org/10.1371/journal.pone.0152433 HERO ID: 3270534

22. Phung, D; Hien, TT; Linh, HN; Luong, LM; Morawska, L; Chu, C; Binh, ND; Thai, PK (2016) Air pollution and risk of respiratory and cardiovascular hospitalizations in the most populous city in

Vietnam Science of the Total Environment 557-558:322-330. http://dx.doi.org/10.1016/j.scitotenv.2016.03.070 HERO ID: 3224071

23. Dai, X; He, X; Zhou, Z; Chen, J; Wei, S; Chen, R; Yang, B; Feng, W; Shan, A; Wu, T; Guo, H (2015) Short-term effects of air pollution on out-of-hospital cardiac arrest in Shenzhen, China International Journal of Cardiology 192:56-60. [Letter] http://dx.doi.org/10.1016/j.ijcard.2015.05.016 HERO ID: 3021562

24. Shakerkhatibi, M; Dianat, I; Jafarabadi, MA; Azak, R; Kousha, A (2015) Air pollution and hospital admissions for cardiorespiratory diseases in Iran: artificial neural network versus conditional logistic regression http://dx.doi.org/10.1007/s13762-015-0884-0 HERO ID: 3019591

25. Bravo, MA; Son, J; de Freitas, CU; Gouveia, N; Bell, ML (2015) Air pollution and mortality in São Paulo, Brazil: Effects of multiple pollutants and analysis of susceptible populations Journal of Exposure Science and Environmental Epidemiology 26:150-161. http://dx.doi.org/10.1038/jes.2014.90 HERO ID: 2826843

26. Zahari, M; Zinibrahim, WZW; Ismail, N; Ni, TH (2014) Association between air pollution and hospital admission: Case study at three monitoring stations in Malaysia AIP Conference Proceedings 1602:1178-1184. http://dx.doi.org/10.1063/1.4882633 HERO ID: 2638966

27. Yorifuji, T; Suzuki, E; Kashima, S (2014) Outdoor air pollution and out-of-hospital cardiac arrest in Okayama, Japan Journal of Occupational and Environmental Medicine 56:1019-1023. http://dx.doi.org/10.1097/jom.0000000000000274 HERO ID: 2534628

28. Franck, U; Leitte, AM; Suppan, P (2014) Multiple exposures to airborne pollutants and hospital admissions due to diseases of the circulatory system in Santiago de Chile Science of the Total Environment 468-469:746-756. http://dx.doi.org/10.1016/j.scitotenv.2013.08.088 HERO ID: 2234073

29. Shahi, AM; Omraninava, A; Goli, M; Soheilarezoomand, HR; Mirzaei, N (2014) The Effects of Air Pollution on Cardiovascular and Respiratory Causes of Emergency Admission 2:107-114. https://www.ncbi.nlm.nih.gov/pubmed/26495360 HERO ID: 4252373

30. Zhao, Y; Qian, Z; Wang, J; Vaughn, MG; Liu, Y; Ren, W; Dong, G (2013) Does obesity amplify the association between ambient air pollution and increased blood pressure and hypertension in adults? Findings from the 33 Communities Chinese Health Study International Journal of Cardiology 168:E148-E150. [Letter] http://dx.doi.org/10.1016/j.ijcard.2013.08.071 HERO ID: 2334545

31. Qiu, H; Yu, IT; Wang, X; Tian, L; Tse, LA; Wong, TW (2013) Cool and dry weather enhances the effects of air pollution on emergency IHD hospital admissions International Journal of Cardiology 168:500-505. http://dx.doi.org/10.1016/j.ijcard.2012.09.199 HERO ID: 1527571

32. Costa Nascimento, LF; Francisco, JB (2013) Particulate matter and hospital admission due to arterial hypertension in a medium-sized Brazilian city Cadernos de Saúde Pública 29:1565-1571. http://dx.doi.org/10.1590/0102-311x00127612 HERO ID: 2292035

33. Son, JY; Lee, JT; Park, YH; Bell, ML (2013) Short-term effects of air pollution on hospital admissions in Korea Epidemiology 24:545-554. http://dx.doi.org/10.1097/ede.0b013e3182953244 HERO ID: 1600028

34. Nascimento, LF; Francisco, JB (2013) Particulate matter and hospital admission due to arterial hypertension in a medium-sized Brazilian city Cadernos de Saúde Pública 29:1565-1571. https://www.ncbi.nlm.nih.gov/pubmed/24005922 HERO ID: 2348315

35. Nabavi, SM; Jafari, B; Jalali, MS; Nedjat, S; Ashrafi, K; Salahesh, A (2012) Environmental air pollution and acute cerebrovascular complications: An ecologic study in Tehran, Iran International Journal of Preventive Medicine 3:723-729. https://www.ncbi.nlm.nih.gov/pubmed/23112900 HERO ID: 1526870

36. Costa Nascimento, LF; Francisco, JB; Patto, MBR; Antunes, AM (2012) Environmental pollutants and stroke-related hospital admissions Cadernos de Saúde Pública 28:1319-1324. http://dx.doi.org/10.1590/s0102-311x2012000700010 HERO ID: 1707906

37. Lai, L (2012) Effect of photochemical smog associated with synoptic weather patterns on cardiovascular and respiratory hospital admissions in metropolitan Taipei International Journal of Environmental Health Research 22:287-304. http://dx.doi.org/10.1080/09603123.2011.634390 HERO ID: 2082953

38. Yang, CX; Yang, HB; Guo, S; Wang, ZS; Xu, XH; Duan, XL; Kan, HD (2012) Alternative ozone metrics and daily mortality in Suzhou: The China Air Pollution and Health Effects Study (CAPES) Science of the Total Environment 426:83-89. http://dx.doi.org/10.1016/j.scitotenv.2012.03.036 HERO ID: 1255125

39. Nascimento, LF (2011) Air pollution and cardiovascular hospital admissions in a medium-sized city in São Paulo State, Brazil Brazilian Journal of Medical and Biological Research 44:720-724. http://dx.doi.org/10.1590/s0100-879x2011007500079 HERO ID: 1074225

40. Vera, J (2011) Cerebrovascular disease hospitalizations are associated with increased levels of ozone, and modified by socioeconomic status in Santiago, Chile Epidemiology 22:S202-S202. [Abstract] HERO ID: 4246998

Short-term Ozone Exposure and CVD Panel Studies Excluded from Draft Ozone ISA based on Location (Outside of North America, Europe or Australia)

1. Li, H; Wu, S; Pan, L; Xu, J; Shan, J; Yang, X; Dong, W; Deng, F; Chen, Y; Shima, M; Guo, X (2018) Short-term effects of various ozone metrics on cardiopulmonary function in chronic obstructive pulmonary disease patients: Results from a panel study in Beijing, China Environmental Pollution 232:358-366. http://dx.doi.org/10.1016/j.envpol.2017.09.030 HERO ID: 4168722

2. Zeng, XW; Qian, ZM; Vaughn, MG; Nelson, EJ; Dharmage, SC; Bowatte, G; Perret, J; Chen, DH; Ma, H; Lin, S; de Foy, B; Hu, LW; Yang, BY; Xu, SL; Zhang, C; Tian, YP; Nian, M; Wang, J; Xiao, X; Bao, WW; Zhang, YZ; Dong, GH (2017) Positive association between short-term ambient air pollution exposure and children blood pressure in China-Result from the Seven Northeast Cities (SNEC) study Environmental Pollution 224:698-705. http://dx.doi.org/10.1016/j.envpol.2017.02.054 HERO ID: 3602794

3. Day, DB; Xiang, J; Mo, J; Li, F; Chung, M; Gong, J; Weschler, CJ; Ohman-Strickland, PA; Sundell, J; Weng, W; Zhang, Y; Zhang, JJ (2017) Association of Ozone Exposure With Cardiorespiratory Pathophysiologic Mechanisms in Healthy Adults JAMA Internal Medicine 177:1344-1353. http://dx.doi.org/10.1001/jamainternmed.2017.2842 HERO ID: 3861057

4. Lee, MW; Choi, BG; Kim, SW; Rha, SW; Shim, MS; Kim, DJ; Seo, HS; Oh, DJ; Jeong, MH (2017) Air pollution and short-term clinical outcomes of patients with acute myocardial infarction Clinical and Experimental Pharmacology and Physiology 44:631-638. http://dx.doi.org/10.1111/1440-1681.12755 HERO ID: 3864654

5. Cheng, HC; Pan, RH; Yeh, HJ; Lai, KR; Yen, MY; Chan, CL; Wang, AG (2016) Ambient air pollution and the risk of central retinal artery occlusion Ophthalmology 123:2603-2609. http://dx.doi.org/10.1016/j.ophtha.2016.08.046 HERO ID: 3423848

6. Novack, L; Yitshak-Sade, M; Landau, D; Kloog, I; Sarov, B; Karakis, I (2016) Association between ambient air pollution and proliferation of umbilical cord blood cells Environmental Research 151:783-788. http://dx.doi.org/10.1016/j.envres.2016.09.009 HERO ID: 3455177

7. Wiwatanadate, P (2014) Acute air pollution-related symptoms among residents in Chiang Mai, Thailand Journal of Environmental Health 76:76-84. https://www.ncbi.nlm.nih.gov/pubmed/24645417 HERO ID: 2348639

8. Elkadhi, H; Ben Hamida, R (2014) The short-term effects of air pollution on health in Sfax (Tunisia): An ardl cointegration procedure In Proceedings of the 2014 international conference & utility exhibition on green energy for sustainable development (ICUE): Jomtien Palm Beach Hotel and Resort, Pattaya City, Thailand, 19-21 March 2014. Pathum Thani, Thailand: Asian Institute of Technology. HERO ID: 2971340

9. Shields, KN; Cavallari, JM; Hunt, MJ; Lazo, M; Molina, M; Molina, L; Holguin, F (2013) Traffic-related air pollution exposures and changes in heart rate variability in Mexico City: A panel study Environmental Health: A Global Access Science Source 12:7. http://dx.doi.org/10.1186/1476-069x-12-7 HERO ID: 1521393

10. Zhang, J; Zhu, T; Kipen, H; Wang, G; Huang, W; Rich, D; Zhu, P; Wang, Y; Lu, SE; Ohman-Strickland, P; Diehl, S; Hu, M; Tong, J; Gong, J; Thomas, D (2013) Cardiorespiratory biomarker responses in healthy young adults to drastic air quality changes surrounding the 2008 Beijing

Olympics Research report (Health Effects Institute) 174:5-174. https://www.ncbi.nlm.nih.gov/pubmed/23646463 HERO ID: 1640392

11. Steinvil, A; Shmueli, H; Ben-Assa, E; Leshem-Rubinow, E; Shapira, I; Berliner, S; Kordova-Biezuner, L; Rogowski, O (2013) Environmental exposure to combustion-derived air pollution is associated with reduced functional capacity in apparently healthy individuals Clinical Research in Cardiology 102:583-591. http://dx.doi.org/10.1007/s00392-013-0569-y HERO ID: 1640396
12. Huang, W; Zhu, T; Pan, X; Hu, M; Lu, SE; Lin, Y; Wang, T; Zhang, Y; Tang, X (2012) Air pollution and autonomic and vascular dysfunction in patients with cardiovascular disease: Interactions of systemic inflammation, overweight, and gender American Journal of Epidemiology 176:117-126. http://dx.doi.org/10.1093/aje/kwr511 HERO ID: 1255463
13. Jia, X; Song, X; Shima, M; Tamura, K; Deng, F; Guo, X (2011) Acute effect of ambient ozone on heart rate variability in healthy elderly subjects Journal of Exposure Science and Environmental Epidemiology 21:541-547. http://dx.doi.org/10.1038/jes.2011.18 HERO ID: 839873
14. Poursafa, P; Kelishadi, R; Lahijanzadeh, A; Modaresi, M; Javanmard, SH; Assari, R; Amin, MM; Moattar, F; Amini, A; Sadeghian, B (2011) The relationship of air pollution and surrogate markers of endothelial dysfunction in a population-based sample of children BMC Public Health 11:115. http://dx.doi.org/10.1186/1471-2458-11-115 HERO ID: 1255306
15. Sérgio Chiarelli, P; Amador Pereira, LA; Nascimento Saldiva, P; Ferreira Filho, C; Bueno Garcia, ML; Ferreira Braga, AL; Conceição Martins, L (2011) The association between air pollution and blood pressure in traffic controllers in Santo André, São Paulo, Brazil Environmental Research 111:650-655. http://dx.doi.org/10.1016/j.envres.2011.04.007 HERO ID: 785805

Short-term Ozone Exposure and Mortality Studies Excluded from Draft Ozone ISA Based on Location (Outside of North America)

1. Javanmardi, P; Morovati, P; Farhadi, M; Geravandi, S; Khaniabadi, YO; Angali, KA; Taiwo, AM; Sicard, P; Goudarzi, G; Valipour, A; De Marco, A; Rastegarimehr, B; Mohammadi, MJ (2018) Monitoring the impact of ambient ozone on human health using time series analysis and air quality model approaches Fresenius Environmental Bulletin 27:533-544. HERO ID: 4261889

2. Mo, Z; Fu, Q; Zhang, L; Lyu, D; Mao, G; Wu, L; Xu, P; Wang, Z; Pan, X; Chen, Z; Wang, X; Lou, X (2018) Acute effects of air pollution on respiratory disease mortalities and outpatients in Southeastern China Scientific Reports 8:3461. http://dx.doi.org/10.1038/s41598-018-19939-1 HERO ID: 4245155

3. Xue, X; Chen, J; Sun, B; Zhou, B; Li, X (2018) Temporal trends in respiratory mortality and short-term effects of air pollutants in Shenyang, China Environmental Science and Pollution Research. http://dx.doi.org/10.1007/s11356-018-1270-5 HERO ID: 4245349

4. Zhao, L; Liang, HR; Chen, FY; Chen, Z; Guan, WJ; Li, JH (2017) Association between air pollution and cardiovascular mortality in China: a systematic review and meta-analysis Oncotarget 8:66438-66448. http://dx.doi.org/10.18632/oncotarget.20090 HERO ID: 4166686

5. Costa, AF; Hoek, G; Brunekreef, B; Ponce de Leon, ACM (2017) Effects of NO2 exposure on daily mortality in São Paulo, Brazil Environmental Research 159:539-544. http://dx.doi.org/10.1016/j.envres.2017.08.041 HERO ID: 4166778

6. Sun, Q; Wang, W; Chen, C; Ban, J; Xu, D; Zhu, P; He, MZ; Li, T (2017) Acute effect of multiple ozone metrics on mortality by season in 34 Chinese counties in 2013-2015 Journal of Internal Medicine 283:481-488. http://dx.doi.org/10.1111/joim.12724 HERO ID: 4245701

7. Maji, S; Ahmed, S; Siddiqui, WA; Ghosh, S (2017) Short term effects of criteria air pollutants on daily mortality in Delhi, India Atmospheric Environment 150:210-219. http://dx.doi.org/10.1016/j.atmosenv.2016.11.044 HERO ID: 3605543

8. Wang, Li; Bai, Yu; Zhang, F; Wang, W; Liu, X; Krafft, T (2017) Spatiotemporal Patterns of Ozone and Cardiovascular and Respiratory Disease Mortalities Due to Ozone in Shenzhen http://dx.doi.org/10.3390/su9040559 HERO ID: 3843499

9. Yin, P; Chen, R; Wang, L; Meng, X; Liu, C; Niu, Y; Lin, Z; Liu, Y; Liu, J; Qi, J; You, J; Zhou, M; Kan, H (2017) Ambient Ozone Pollution and Daily Mortality: A Nationwide Study in 272 Chinese Cities Environmental Health Perspectives 125:117006. http://dx.doi.org/10.1289/ehp1849 HERO ID: 4166659

10. Lee, MW; Choi, BG; Kim, SW; Rha, SW; Shim, MS; Kim, DJ; Seo, HS; Oh, DJ; Jeong, MH (2017) Air pollution and short-term clinical outcomes of patients with acute myocardial infarction Clinical and Experimental Pharmacology and Physiology 44:631-638. http://dx.doi.org/10.1111/1440-1681.12755 HERO ID: 3864654

11. Jie, Yu (2017) Air pollution associated with sumatran forest fires and mortality on the Malay Peninsula Polish Journal of Environmental Studies 26:163-171. http://dx.doi.org/10.15244/pjoes/64642 HERO ID: 3845890

12. Lin, H; Wang, X; Liu, T; Li, X; Xiao, J; Zeng, W; Ma, W (2017) Air pollution and mortality in China Advances in Experimental Medicine and Biology 1017:103-121. http://dx.doi.org/10.1007/978-981-10-5657-4_5 HERO ID: 4245904

13. Chen, K; Zhou, L; Chen, X; Bi, J; Kinney, PL (2017) Acute effect of ozone exposure on daily mortality in seven cities of Jiangsu Province, China: No clear evidence for threshold Environmental Research 155:235-241. http://dx.doi.org/10.1016/j.envres.2017.02.009 HERO ID: 3603100

14. Hunova, Iva; Brabec, M; Maly, M; Knobova, V; Branis, M (2017) Major heat waves of 2003 and 2006 and health outcomes in Prague Air Quality, Atmosphere and Health 10:183-194. http://dx.doi.org/10.1007/s11869-016-0419-y HERO ID: 3873193

15. Willers, SM; Jonker, MF; Klok, L; Keuken, MP; Odink, J; van Den Elshout, Sef; Sabel, CE; Mackenbach, JP; Burdorf, A (2016) High resolution exposure modelling of heat and air pollution and the impact on mortality Environment International 89-90:102-109. http://dx.doi.org/10.1016/j.envint.2016.01.013 HERO ID: 3270996

16. Li, J; Woodward, A; Hou, XY; Zhu, T; Zhang, J; Brown, H; Yang, J; Qin, R; Gao, J; Gu, S; Li, J; Xu, L; Liu, X; Liu, Q (2016) Modification of the effects of air pollutants on mortality by temperature: A systematic review and meta-analysis Science of the Total Environment 575:1556-1570. http://dx.doi.org/10.1016/j.scitotenv.2016.10.070 HERO ID: 3422989

17. Bedada, GB; Raza, A; Forsberg, B; Lind, T; Ljungman, P; Pershagen, G; Bellander, T (2016) Short-term exposure to ozone and mortality in subjects with and without previous cardiovascular disease Epidemiology 27:663-669. http://dx.doi.org/10.1097/ede.0000000000000520 HERO ID: 3358341

18. Song, X; Liu, Y; Hu, Y; Zhao, X; Tian, J; Ding, G; Wang, S (2016) Short-Term Exposure to Air Pollution and Cardiac Arrhythmia: A Meta-Analysis and Systematic Review International Journal of Environmental Research and Public Health 13. http://dx.doi.org/10.3390/ijerph13070642 HERO ID: 3355899

19. Dastoorpoor, M; Idani, E; Khanjani, N; Goudarzi, G; Bahrampour, A (2016) Relationship Between Air Pollution, Weather, Traffic, and Traffic-Related Mortality http://dx.doi.org/10.5812/traumamon.37585 HERO ID: 4247426

20. Qin, L; Gu, J; Liang, S; Fang, F; Bai, W; Liu, X; Zhao, T; Walline, J; Zhang, S; Cui, Y; Xu, Y; Lin, H (2016) Seasonal association between ambient ozone and mortality in Zhengzhou, China International Journal of Biometeorology 61:1003-1010. http://dx.doi.org/10.1007/s00484-016-1279-8 HERO ID: 3455101

21. Khaniabadi, YO; Goudarzi, G; Daryanoosh, SM; Borgini, A; Tittarelli, A; De Marco, A (2016) Exposure to PM10, NO2, and O3 and impacts on human health Environmental Science and Pollution Research 24:2781-2789. http://dx.doi.org/10.1007/s11356-016-8038-6 HERO ID: 3456311

22. Sadeghi, M; Ahmadi, Ali; Baradaran, A; Masoudipoor, N; Frouzandeh, S (2015) Modeling of the relationship between the environmental air pollution, clinical risk factors, and hospital mortality due to myocardial infarction in Isfahan, Iran Journal of Research in Medical Sciences 20:757-762. http://dx.doi.org/10.4103/1735-1995.168382 HERO ID: 3067434

23. Bravo, MA; Son, J; de Freitas, CU; Gouveia, N; Bell, ML (2015) Air pollution and mortality in São Paulo, Brazil: Effects of multiple pollutants and analysis of susceptible populations Journal of Exposure Science and Environmental Epidemiology 26:150-161. http://dx.doi.org/10.1038/jes.2014.90 HERO ID: 2826843

24. San Tam, W; Wong, T; Wong, AHS (2015) Association between air pollution and daily mortality and hospital admission due to ischaemic heart diseases in Hong Kong Atmospheric Environment 120:360-368. http://dx.doi.org/10.1016/j.atmosenv.2015.08.068 HERO ID: 3066668

25. Li, T; Yan, M; Ma, W; Ban, J; Liu, T; Lin, H; Liu, Z (2015) Short-term effects of multiple ozone metrics on daily mortality in a megacity of China Environmental Science and Pollution Research 22:8738-8746. http://dx.doi.org/10.1007/s11356-014-4055-5 HERO ID: 3014709

26. Bae, S; Lim, YH; Kashima, S; Yorifuji, T; Honda, Y; Kim, H; Hong, YC (2015) Non-Linear Concentration-Response Relationships between Ambient Ozone and Daily Mortality PLoS ONE 10:e0129423. http://dx.doi.org/10.1371/journal.pone.0129423 HERO ID: 3010281

27. Shah, AS; Lee, KK; Mcallister, DA; Hunter, A; Nair, H; Whiteley, W; Langrish, JP; Newby, DE; Mills, NL (2015) Short term exposure to air pollution and stroke: systematic review and meta-analysis BMJ 350:h1295. [Review] http://dx.doi.org/10.1136/bmj.h1295 HERO ID: 2823464

28. Samoli, E; Peng, RD; Ramsay, Tim; Touloumi, G; Dominici, F; Atkinson, RW; Zanobetti, A; Le Tertre, A; Anderson, HR; Schwartz, J; Cohen, A; Krewski, D; Samet, JM; Katsouyanni, K (2014) What is the impact of systematically missing exposure data on air pollution health effect estimates? Air Quality, Atmosphere and Health 7:415-420. http://dx.doi.org/10.1007/s11869-014-0250-2 HERO ID: 3023383

29. Li, C; Fang, D; Xu, D; Wang, B; Zhao, S; Yan, S; Wang, Y (2014) Main air pollutants and diabetes-associated mortality: a systematic review and meta-analysis European Journal of Endocrinology 171:R183-R190. [Review] http://dx.doi.org/10.1530/eje-14-0287 HERO ID: 2534535

30. Yang, WS; Wang, X; Deng, Q; Fan, WY; Wang, WY (2014) An evidence-based appraisal of global association between air pollution and risk of stroke International Journal of Cardiology 175:307-313. http://dx.doi.org/10.1016/j.ijcard.2014.05.044 HERO ID: 2348784

31. Guo, Y; Li, S; Tawatsupa, B; Punnasiri, K; Jaakkola, JJ; Williams, G (2014) The association between air pollution and mortality in Thailand Scientific Reports 4:5509. http://dx.doi.org/10.1038/srep05509 HERO ID: 2348873

32. Breitner, S; Wolf, K; Devlin, RB; Diaz-Sanchez, D; Peters, A; Schneider, A (2014) Short-term effects of air temperature on mortality and effect modification by air pollution in three cities of Bavaria, Germany: a time-series analysis Science of the Total Environment 485-486:49-61. http://dx.doi.org/10.1016/j.scitotenv.2014.03.048 HERO ID: 2369640

33. Amancio, CT; Nascimento, LF (2014) Environmental pollution and deaths due to stroke in a city with low levels of air pollution: ecological time series study Sao Paulo Medical Journal 132:353-358. http://dx.doi.org/10.1590/1516-3180.2014.1326733 HERO ID: 2534078

34. Chen, R; Cai, J; Meng, X; Kim, H; Honda, Y; Guo, YL; Samoli, E; Yang, X; Kan, H (2014) Ozone and daily mortality rate in 21 cities of East Asia: how does season modify the association? American Journal of Epidemiology 180:729-736. http://dx.doi.org/10.1093/aje/kwu183 HERO ID: 2519100

35. Bell, ML; Zanobetti, A; Dominici, F (2014) Who is more affected by ozone pollution? A systematic review and meta-analysis American Journal of Epidemiology 180:15-28. [Review] http://dx.doi.org/10.1093/aje/kwu115 HERO ID: 2520256

36. Williams, ML; Atkinson, RW; Anderson, HR; Kelly, FJ (2014) Associations between daily mortality in London and combined oxidant capacity, ozone and nitrogen dioxide Air Quality, Atmosphere and Health 7:407-414. http://dx.doi.org/10.1007/s11869-014-0249-8 HERO ID: 2533505

37. Shaposhnikov, D; Revich, B; Bellander, T; Bedada, GB; Bottai, M; Kharkova, T; Kvasha, E; Lezina, E; Lind, T; Semutnikova, E; Pershagen, G (2014) Mortality related to air pollution with the moscow heat wave and wildfire of 2010 Epidemiology 25:359-364. http://dx.doi.org/10.1097/ede.0000000000000090 HERO ID: 2369626

38. Hůnová, I; Malý, M; Rezáčová, J; Braniš, M (2013) Association between ambient ozone and health outcomes in Prague International Archives of Occupational and Environmental Health 86:89-97. http://dx.doi.org/10.1007/s00420-012-0751-y HERO ID: 1274309

39. Rosenthal, FS; Kuisma, M; Lanki, T; Hussein, T; Boyd, J; Halonen, JI; Pekkanen, J (2013) Association of ozone and particulate air pollution with out-of-hospital cardiac arrest in Helsinki, Finland: evidence for two different etiologies Journal of Exposure Science and Environmental Epidemiology 23:281-288. http://dx.doi.org/10.1038/jes.2012.121 HERO ID: 1668178

40. Yan, M; Liu, Z; Liu, X; Duan, H; Li, T (2013) Meta-analysis of the Chinese studies of the association between ambient ozone and mortality Chemosphere 93:899-905. http://dx.doi.org/10.1016/j.chemosphere.2013.05.040 HERO ID: 2332984

41. Ng, CF; Ueda, K; Nitta, H; Takeuchi, A (2013) Seasonal variation in the acute effects of ozone on premature mortality among elderly Japanese Environmental Monitoring and Assessment 185:8767-8776. http://dx.doi.org/10.1007/s10661-013-3211-6 HERO ID: 1642858

42. Lai, HK; Tsang, H; Wong, CM (2013) Meta-analysis of adverse health effects due to air pollution in Chinese populations BMC Public Health 13:360. http://dx.doi.org/10.1186/1471-2458-13-360 HERO ID: 1639313

43. Chen, Kai; Yang, H; Ma, Z; Bi, Jun; Huang, Lei (2013) Influence of temperature to the short-term effects of various ozone metrics on daily mortality in Suzhou, China Atmospheric Environment 79:119-128. http://dx.doi.org/10.1016/j.atmosenv.2013.06.004 HERO ID: 2333428

44. Shang, Y; Sun, Z; Cao, J; Wang, X; Zhong, L; Bi, X; Li, H; Liu, W; Zhu, T; Huang, W (2013) Systematic review of Chinese studies of short-term exposure to air pollution and daily mortality Environment International 54:100-111. [Review] http://dx.doi.org/10.1016/j.envint.2013.01.010 HERO ID: 1520367

45. Moshammer, H; Hutter, HP; Kundi, M (2013) Which metric of ambient ozone to predict daily mortality? Atmospheric Environment 65:171-176. http://dx.doi.org/10.1016/j.atmosenv.2012.10.032 HERO ID: 1558903

46. Lin, H; An, Q; Luo, C; Pun, VC; Chan, CS; Tian, L (2013) Gaseous air pollution and acute myocardial infarction mortality in Hong Kong: A time-stratified case-crossover study Atmospheric Environment 76:68-73. http://dx.doi.org/10.1016/j.atmosenv.2012.08.043 HERO ID: 1817825

47. Liu, Tao; Li, TT; Zhang, Y; Xu, Y; Lao, XQ; Rutherford, S; Chu, C; Luo, Y; Zhu, Qi; Xu, X; Xie, H; Liu, ZR; Ma, W (2013) The short-term effect of ambient ozone on mortality is modified by temperature in Guangzhou, China Atmospheric Environment 76:59-67. http://dx.doi.org/10.1016/j.atmosenv.2012.07.011 HERO ID: 2082936

48. Ou, CQ; Wong, CM; Ho, SY; Schooling, M; Yang, L; Hedley, AJ; Lam, TH (2012) Dietary habits and the short-term effects of air pollution on mortality in the Chinese population in Hong Kong Journal of Epidemiology and Community Health 66:254-258. http://dx.doi.org/10.1136/jech.2009.103275 HERO ID: 842616

49. Atkinson, RW; Yu, D; Armstrong, BG; Pattenden, S; Wilkinson, P; Doherty, RM; Heal, MR; Anderson, HR (2012) Concentration-Response Function for Ozone and Daily Mortality: Results from Five Urban and Five Rural UK Populations Environmental Health Perspectives 120:1411-1417. http://dx.doi.org/10.1289/ehp.1104108 HERO ID: 1258303

50. Wong, CM; Rabl, A; Thach, TQ; Chau, YK; Chan, KP; Cowling, BJ; Lai, HK; Lam, TH; Mcghee, SM; Anderson, HR; Hedley, AJ (2012) Impact of the 1990 Hong Kong legislation for restriction on sulfur content in fuel Research report (Health Effects Institute) 5-91. https://www.ncbi.nlm.nih.gov/pubmed/23316618 HERO ID: 1521497

51. Faustini, A; Stafoggia, M; Cappai, G; Forastiere, F (2012) Short-term effects of air pollution in a cohort of patients with chronic obstructive pulmonary disease Epidemiology 23:861-879. http://dx.doi.org/10.1097/ede.0b013e31826767c2 HERO ID: 1528724

52. Reyna, MA; Bravo, ME; López, R; Nieblas, EC; Nava, ML (2012) Relative risk of death from exposure to air pollutants: a short-term (2003-2007) study in Mexicali, Baja California, México International Journal of Environmental Health Research 22:370-386. http://dx.doi.org/10.1080/09603123.2011.650153 HERO ID: 1542232

53. Pascal, M; Wagner, V; Chatignoux, E; Falq, G; Corso, M; Blanchard, M; Host, S; Larrieu, S; Pascal, L; Declercq, C (2012) Ozone and short-term mortality in nine French cities: Influence of temperature and season Atmospheric Environment 62:566-572. http://dx.doi.org/10.1016/j.atmosenv.2012.09.009 HERO ID: 1606069

54. Romieu, I; Gouveia, N; Cifuentes, LA; de Leon, AP; Junger, W; Vera, J; Strappa, V; Hurtado-Díaz, M; Miranda-Soberanis, V; Rojas-Bracho, L; Carbajal-Arroyo, L; Tzintzun-Cervantes, G; HEI Health Review Committee (2012) Multicity study of air pollution and mortality in Latin America (the ESCALA study) Research report (Health Effects Institute) 0:5-86. https://www.ncbi.nlm.nih.gov/pubmed/23311234 HERO ID: 1668197

55. Tao, Y; Huang, W; Huang, X; Zhong, L; Lu, SE; Li, Y; Dai, L; Zhang, Y; Zhu, T (2012) Estimated acute effects of ambient ozone and nitrogen dioxide on mortality in the Pearl River Delta of Southern China Environmental Health Perspectives 120:393-398. http://dx.doi.org/10.1289/ehp.1103715 HERO ID: 999411

56. Yang, CX; Yang, HB; Guo, S; Wang, ZS; Xu, XH; Duan, XL; Kan, HD (2012) Alternative ozone metrics and daily mortality in Suzhou: The China Air Pollution and Health Effects Study (CAPES) Science of the Total Environment 426:83-89. http://dx.doi.org/10.1016/j.scitotenv.2012.03.036 HERO ID: 1255125

57. Son, JY; Lee, JT; Kim, H; Yi, O; Bell, ML (2012) Susceptibility to air pollution effects on mortality in Seoul, Korea: A case-crossover analysis of individual-level effect modifiers Journal of Exposure

Science and Environmental Epidemiology 22:227-234. http://dx.doi.org/10.1038/jes.2012.6 HERO ID: 1034976

58. Goldberg, MS; Gasparrini, A; Armstrong, B; Valois, MF (2011) The short-term influence of temperature on daily mortality in the temperate climate of Montreal, Canada Environmental Research 111:853-860. http://dx.doi.org/10.1016/j.envres.2011.05.022 HERO ID: 837140

59. Faustini, A; Stafoggia, M; Berti, G; Bisanti, L; Chiusolo, M; Cernigliaro, A; Mallone, S; Primerano, R; Scarnato, C; Simonato, L; Vigotti, MA; Forastiere, F (2011) The relationship between ambient particulate matter and respiratory mortality: A multi-city study in Italy European Respiratory Journal 38:538-547. http://dx.doi.org/10.1183/09031936.00093710 HERO ID: 699138

60. Garrett, P; Casimiro, E (2011) Short-term effect of fine particulate matter (PM2.5) and ozone on daily mortality in Lisbon, Portugal Environmental Science and Pollution Research 18:1585-1592. http://dx.doi.org/10.1007/s11356-011-0519-z HERO ID: 732548

61. Namdeo, A; Tiwary, A; Farrow, E (2011) Estimation of age-related vulnerability to air pollution: assessment of respiratory health at local scale Environment International 37:829-837. http://dx.doi.org/10.1016/j.envint.2011.02.002 HERO ID: 757785

62. Pascal, M; Chatignoux, E; Wagner, V; Blanchard, M; Corso, M; Falq, G; Host, S; Larrieu, S; Pascal, L; Declercq, C (2011) Seasonal effect of ozone concentrations on mortality in 9 French cities Epidemiology 22:S193-S194. http://dx.doi.org/10.1097/01.ede.0000392275.12251.a7 HERO ID: 4257835

63. de Almeida, SP; Casimiro, E; Calheiros, J (2011) Short-term association between exposure to ozone and mortality in Oporto, Portugal Environmental Research 111:406-410. http://dx.doi.org/10.1016/j.envres.2011.01.024 HERO ID: 689856