Appendix

Table I

Summary of work packages (objectives and tasks) within the TackSHS project (November 2015 – October 2019).

WP name **(lead institution)** **[No. registration at Clinicaltrials.gov]**	**Objectives**	**Tasks**
WP1. *Coordination and management* (Catalan Institute of Oncology, Spain)	To manage and coordinate all financial, administrative, scientific and communication activities of the project and timely achievements To set up and run the structure for communication To guarantee the successful achievement of the goals of the project To establish equal opportunities within the consortium and ensure a strong interaction among the project's elements and partners To monitor effective implementation of the work plan To control and report ensuring that the project deliverables are met in an integrated and timely manner within the agreed budget To manage the decision-making process To communicate with and report to designated EU project officer To resolve conflict situations and manage risks	Task 1.1 Management and internal communication Task 1.2 Scientific coordination and management Task 1.3 Activities integration and scientific organisation of meetings Task 1.4 Web-based management tool Task 1.5 Quality assurance Task 1.6 Risk management
WP2. *Environmental assessment of SHS exposure in private settings and outdoor settings in Europe*	To develop a protocol explaining in detail the methodology of the environmental assessment of SHS To assess the levels of SHS in a range of private and outdoor settings in different European countries according to the type of setting, smoke-free legislation and socioeconomic characteristics To develop evidence-based policy recommendations for policy makers and health authorities	Task 2.1 Designing and writing of a detailed protocol Task 2.2 Assessment of the levels of SHS Task 2.3 Analysis of data Task 2.4 Dissemination of results

(Public Health Agency of Barcelona, Spain) [NCT03150186]		
WP3. Survey on secondhand smoke and electronic cigarettes in Europe (Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Italy) [NCT02928536]	To estimate the prevalence of current smokers, electronic cigarette users and heated tobacco products users, and passive exposure to SHS and SHA from electronic cigarettes, using original data from a pan-European survey conducted in 12 strategically selected countries To investigate the determinants of SHS and SHA exposure in those countries To analyse the attitudes and perceptions of the adult European population towards tobacco control policies and to limit SHS exposure To study the knowledge and beliefs of the general adult population on the harmful effects of SHS and SHA To compare smoking patterns, electronic cigarette use, and, particularly, SHS and SHA exposure between four middle- and eight high-income countries in Europe To compare smoking patterns, voluntary home smoking ban, and perception on the efficacy of smoking ban as a tobacco control policy between the new data in the selected European countries and data from a companion pan-European survey conducted in 2010	Task 3.1 Conducting a European survey Task 3.2 Analysis of data Task 3.3 Dissemination of results
WP4. Measuring for change: air quality feedback to reduce SHS exposure in the home (University of Stirling, the UK) [NCT03151421]	To establish a methodology to measure air quality in homes of smokers using low-cost, simple particle monitoring devices To quantify SHS exposure levels in the home of smokers and provide feedback that compares the air quality with the median value from local smoke-free homes To evaluate the impact of the intervention in terms of behaviour change (household and car smoking rules) and attitudes towards SHS	Task 4.1 Development of methods to measure SHS Task 4.2 Recruitment of participants Task 4.3 Quantification of SHS in homes Task 4.4 Evaluation of the impact of the intervention and results dissemination
WP5. Exposure to secondhand smoke in outside areas exempted from	To measure SHS in areas exempted from smoke-free legislation in three European countries where comprehensive smoke-free legislation exists	Task 5.1 Patients' recruitment Task 5.2 Training in measurements

smoke-free legislation and acute health effects in patients with chronic lung disease (TobaccoFree Research Institute Ireland) [NCT03074734]	To recruit a panel of patients with COPD and asthma in the same three European countries To monitor personal exposure to SHS in areas exempted from legislation in pubs, bars and casinos using novel monitoring technologies To simultaneously monitor the respiratory effects, as indicated by changes in breath sounds, and peak flow rates in the same people supported by diary cards	Task 5.3 Monitoring of air pollution and breath sounds Task 5.4 Data collection, analysis and dissemination
WP6. Clinical impact of secondhand exposure to e-cigarette emissions on the respiratory system of healthy adults (Hellenic Cancer Society, Greece) [NCT03102684]	To assess the impact of passive exposure to e-cigarette aerosol on indexes of pulmonary resistance, reactance and impedance To evaluate the extent to which passive exposure to e-cigarette vapour impacts exhaled NO and exhaled breath condensate metabolites among healthy adults To assess the mediating effect of e-cigarette battery output on pulmonary outcomes and indexes	Task 6.1 Formulation of exposure protocols Task 6.2 Experimental laboratory trials Task 6.3 Data cleaning and analysis Task 6.4 Dissemination of results
WP7. Secondhand tobacco smoke in experimental and real-life conditions: methods of measurement (IRCCS – National Institute of Oncology, Italy)	To compare different methods to measure SHS and SHA (real-time and time-integrated measurements of PM and gas-phase pollutants) To calibrate different real-time PM counting devices to be used in the TackSHS Project against certified gravimetric methods To evaluate the feasibility of the selected measurement methods of SHS and e-cigarette aerosols in experimental and real-life environments	Task 7.1 Comparison of methods Task 7.2 Calibration of devices Task 7.3 Trial of measurements in laboratory and real conditions Task 7.4 Dissemination of results
WP8. Secondhand exposure to emissions from electronic cigarettes: personal and environmental assessment in confined spaces (Catalan Institute of Oncology, Spain)	To systematically review the published studies on passive exposure to e-cigarette aerosol, including controlled laboratory analysis of the aerosols produced by e-cigarettes, and studies assessing bystander's exposure with environmental markers and personal biomarkers To investigate environmental and bystanders' exposure to e-cigarette aerosol in controlled conditions in a car and a room	Task 8.1 Systematic review of existing evidence Task 8.2 Controlled experiments in a car and a room Task 8.3 Observational study in homes Task 8.4 Analysis of samples and data processing

	To investigate environmental and bystanders' exposure to e-cigarettes aerosols in real-life conditions at homes of e-cigarettes users	Task 8.5 Dissemination of results
WP9. Attributable mortality and morbidity to secondhand smoke in Europe (Institute for the Study and Prevention of Cancer, Italy)	To review the methods and data on attributable mortality and morbidity to SHS for European countries To develop algorithms of calculation of attributable mortality and morbidity to SHS To update data on attributable mortality and morbidity to SHS for EU countries	Task 9.1 Literature review on AMM and SHS Task 9.2 Development of algorithms to calculate AMM Task 9.3 Estimation of AMM in Europe Task 9.4 Dissemination of results
WP10. Economic impact of secondhand tobacco smoke on morbidity and mortality and Return on Investment of Interventions (Cartagena Technical University, Spain)	To develop a Return on Investment Model able to assess the cost-effectiveness, budget impact and a wider set of social return on investment metrics of policies aimed at reducing exposure to secondhand smoke To evaluate the Return on Investment of policies aimed at reducing exposure to secondhand smoke across European countries, with country-specific versions of the model, and to translate the results into policy proposals	Task 10.1 Design of cost-effectiveness and cost-utility models Task 10.2 Development of country-specific models Task 10.3 Assessment of impact and dissemination
WP11. Dissemination of project findings (European Network for Smoking and Tobacco Prevention, Belgium)	To develop and maintain a project webpage on the ENSP website To set up a network of interested policy makers, health professionals and other stakeholders, and to maintain communication and dissemination with this network To organise one interim workshop with experts and stakeholders, to evaluate the approaches and the first results of the project, and to make recommendations for further work To organise a final project conference To ensure varied forms of dissemination, including written and audiovisual materials	Task 11.1 Development and maintaining of the project website Task 11.2 Setting-up of a network Task 11.3 Interim workshop Task 11.4 Final conference Task 11.5 Other forms of results and project dissemination and communication

COPD: chronic obstructive pulmonary disease; E-cigarette: electronic cigarette; ENSP: European Network for Smoking and Tobacco Prevention; EU: European Union; NO: nitrogen monoxide; PM: particulate matter; SHA: second-hand aerosol from electronic cigarettes; SHS: second-hand tobacco smoke; UK: United Kingdom; WP: work-package.