

Data management spreadsheet for use by Priority Setting Partnerships for all questions received. Spreadsheet to be published on the JLA website at www.jla.nihr.ac.uk on completion of the PSP.

PSP Question ID	Uncertainty (also known as summary or indicative question) - should be in a format that will ultimately be of value to the research community)	Original uncertainty (examples)	Evidence that the question is indeed unanswered. (reference, and weblink where available, to the most recent relevant systematic review identified by the PSP, plus a maximum of 2 other systematic reviews, including protocols for future systematic reviews, that the PSP considers relevant.)	Source of Uncertainty (if there are multiple sources, a PSP may wish to show them e.g. 1 x patient, 19 x clinician, 4 x research recommendations)
1	What are the long term effects of vaping? Compared to smoking, ex-smokers, never-smokers and NRT use?	<i>"What are the long term effects of e-cigarette use?" "long term harms to health with relative risk against non smoking and against tobacco"</i>	This is the major concern of most people. Longitudinal studies are needed.	57 x HCP; 155 x Patient
2	What are the short term effects of vaping? Compared to smoking, ex-smokers, never-smokers and NRT use?	<i>"Short term health effects" "What are the short-term harms of vaping compared to tobacco smoking"</i>	Liu, Xing, et al. "Efficiency and adverse events of electronic cigarettes: A systematic review and meta-analysis (PRISMA-compliant article)." <i>Medicine</i> 97.19 (2018). Looks at adverse events in smokers. Doesn't compare to smoking, ex-smoking, non-smokers. Would be good to have a fresh look at this. There are a few well conducted studies e.g.: Ann Intern Med. 2017 Mar 21;166(6):390-400. doi: 10.7326/M16-1107. Epub 2017 Feb 7. Nicotine, Carcinogen, and Toxin Exposure in Long-Term E-Cigarette and Nicotine Replacement Therapy Users: A Cross-sectional Study. Shahab L, Goniewicz ML, Blount BC1, Brown J, McNeill A1, Alwis KU, Feng J, Wang L1, West R. Also there are studies led by Goniewicz. Further studies are needed using a broader range of biomarkers	34 x HCP; 124 x Patient
3	What effect does vaping have on physical health, including risks and benefits? e.g diabetes, cancer, oral health, respiratory conditions, allergies, digestion, physical activity, sexual health, eye health, weight, epilepsy and dementia	<i>"Specific effects on patients with specific conditions, particularly COPD and asthma?" "Does vaping effect oral health"; "I am also curious as to effects that E-Liquids have on users that have diabetes, does it effect sugar levels in anyway etc etc."</i>	Skotsimara, Georgia, et al. "Cardiovascular effects of electronic cigarettes: A systematic review and meta-analysis." <i>European journal of preventive cardiology</i> (2019): 2047487319832975. Cardiovascular effects. Limited findings - based on single studies or non randomised studies. Not enough evidence yet	59 x HCP; 152 x Patient

4	What effect does vaping have on mental health, including any risks and benefits? In adults, children and young people	"What effect does e-cigarette use have on mental health issues?". "Is nicotine beneficial for people with mental health conditions? And if it is then is there any discernible difference between vaping and smoking for them?"	Thomas, Kyla H., et al. "How do smoking cessation medicines compare with respect to their neuropsychiatric safety? A protocol for a systematic review, network meta-analysis and cost-effectiveness analysis." BMJ open 7.6 (2017): e015414. SR only concerned with 18 years and older. Comparing different treatments and effect on neuropsychiatric safety. Hefner, Kathryn, Gerald Valentine, and Mehmet Sofuoglu. "Electronic cigarettes and mental illness: Reviewing the evidence for help and harm among those with psychiatric and substance use disorders." The American journal on addictions 26.4 (2017): 306-315. Looks at perceptions of ecigs and impact on tobacco use in adults. Doesn't look at health effects, risks and benefits.	4 x HCP; 6 x patient
5	What are the risks and benefits of dual use compared with smoking only?	"What are the dangers of dual use (smoking and vaping) compared to smoking alone "	lack of studies	2 x HCP; 6 x Patient
6	What are the health effects for non-smokers who take up vaping?	"For non-smokers/never-smokers, who start to use vapor-products - what could the health consequences be - compared to initiation of smoking instead?" "Longitudinal research following vapers who have never smoked."	not really been addressed. Most e-cig users are ex-smokers or current smokers. Very few are never smokers.	5 x HCP; 7 x patient
7	How do e-cigarettes compare to other treatments for stopping smoking, in terms of effectiveness, cost-effectiveness, long-term abstinence, and relapse to smoking?	"What is the success rate compared to other methods of quitting smoking?" "What are the relapse rate for quitters using E cigs compared to NRT?"	some reviews looking at effectiveness of e-cigarettes, but not in terms of cost-effectiveness, long-term abstinence or relapse. Hersi, Mona, et al. "Effectiveness of stop smoking interventions among adults: protocol for an overview of systematic reviews and an updated systematic review." Systematic reviews 8.1 (2019): 28. Liu, Xing, et al. "Efficiency and adverse events of electronic cigarettes: A systematic review and meta-analysis (PRISMA-compliant article)." Medicine 97.19 (2018). (looks at rates of smoking reduction and smoking cessation in e-cig users. Doesn't compare effectiveness to other methods.) Gentry, Sarah, Nita G. Forouhi, and Caitlin Notley. "Are electronic cigarettes an effective aid to smoking cessation or reduction among vulnerable groups? A systematic review of quantitative and qualitative evidence." Nicotine and Tobacco Research 21.5 (2018): 602-616. (low quality evidence). El Dib, Regina, et al. "Electronic nicotine delivery systems and/or electronic non-nicotine delivery systems for tobacco smoking cessation or reduction: a systematic review and meta-analysis." BMJ open 7.2 (2017): e012680. (only two RCTs, and some cohort studies. Suggests a possible increase in tobacco smoking cessation with ENDS in comparison with ENNDS, but no firm conclusions made. High quality RCTs are needed.)	43 x HCP; 49 x patient

8	How effective are e-cigarettes for smoking cessation in patients with mental health problems? And what effect do they have on mental health?	"Use in inpatient mental health settings - any association with smoking cessation longer term". "most importantly the quitting rates on this cluster [mental health patients] (which shows a high prevalence) with a proper guidance on their mental-care center."	very limited research for patients with mental health problems	1 x HCP; 1 x Patient
9	How safe are e-cigarettes in pregnancy, compared to smoking and NRT use?	"Are e cigarettes safe to use in pregnancy" "Are they safer than NRT use in pregnancy? "	very limited research for pregnancy	4 x HCP; 4 x Patient
10	What effect does vaping in pregnancy (and when breastfeeding) have on the health outcomes of the fetus and baby, compared to smoking? Including any long term effects	"What are the effects of vaping on the fetus?" "WHAT IS THE IMPACT ON BABIES GROWTH AND DEVELOPMENT"	very limited research for pregnancy	13 x HCP; 3 x Patient
11	How effective are e-cigarettes in pregnancy for smoking cessation? And compared to other treatments?	"Quit rates compared to licensed pharmacotherapy, in preg women"	very limited research for pregnancy	3 x HCP; 1 x Patient
12	Will prescribing e-cigarettes to pregnant smokers encourage smoking cessation, and reduce risk of relapse?	"CAN WE PRESCRIBE FOR INPATIENTS IN MATERNITY SERVICES AS A CHOICE"	very limited research for pregnancy	1 x Patient
13	What effect does second hand vape have on adults (including pregnant women), children and animals, and how does this compare to second hand smoke?	"Is there 'second hand smoke' type implications from being around people who vape?" "Are they safe to use around babies/children?". "I would also like to see some research on the effect on household pets of people who vape in their homes, as I have read that PG can be harmful to cats and dogs."	more corroborating evidence would be helpful. Farsalinos, Konstantinos E., and Gene Gillman. "Carbonyl emissions in e-cigarette aerosol: a systematic review and methodological considerations." <i>Frontiers in physiology</i> 8 (2018): 1119. (emissions substantially lower than cigarettes. Unable to compare studies. Didn't look at effect on health, just emissions.). Hess, I. M., Kishen Lachireddy, and Adam Capon. "A systematic review of the health risks from passive exposure to electronic cigarette vapour." <i>Public Health Res Pract</i> 26.2 (2016): e2621617. (No meta analysis. 16 studies. EC vapour has the potential to lead to adverse health effects. The risk from being passively exposed to EC vapour is likely to be less than the risk from passive exposure to conventional cigarette smoke). Health risks from passive vape not been extensively researched. more studies needed.	25 x HCP; 60 x Patient
14	What are the impacts of vaping on indoor and outdoor air quality, and how does this compare to other air pollutants?	"What are the short, medium and long term risks of vaping compared with Living in an environment with high levels of air pollution" "Secondhand vapor compared to clean air what are the differences?"	Abidin, Najihah Zainol, et al. "Electronic cigarettes and indoor air quality: a review of studies using human volunteers." <i>Reviews on environmental health</i> 32.3 (2017): 235-244. (Few studies, and inconsistent evidence). Fernández, Esteve, et al. "Particulate matter from electronic cigarettes and conventional cigarettes: a systematic review and observational study." <i>Current environmental health reports</i> 2.4 (2015): 423-429. (literature review and an observational study. Not a meta analysis.)	1 x HCP; 9 x Patient

15	Does second hand vape leave a stain or smell on clothes and furniture?	"Is there similar effects to smoking in the house ie clothes/furniture transfer. Staining etc with vaping."	no research	1 x Patient
16	What impact do restrictions on vaping (e.g. including vaping in smoke free policies; age limits; tank size) have on smoking behaviour and smoking cessation? as well as perceptions of harm from vaping?	"Why do so many businesses, councils and health care trusts include vaping in their smoke free policies?" "The impact of public use bans, specifically by health trusts treating vaping as smoking, on the uptake and perception of smokers toward vaping." "What measures would increase the number of employers, cafés and public houses that welcome considerate vaping?"	Cann, K. F., K. D. Heneghan, and T. Knight. "The impact of restricting the use of e-cigarettes in public places: a systematic review." Journal of Public Health 40.3 (2017): 533-539. SR looks at restrictions of vaping in public places and impact on switching behaviour. (no studies were found for this). Secondary question looked at ability to use e-cigarettes in public places as a reason for use and attitudes towards this among smokers.	10 x HCP; 35 x Patient
17	What impact does allowing vaping in prisons have on smoking behaviour and smoking cessation rates?	"Is vaping allowed in prisons now that smoking has been banned?"	no research	2 x HCP
18	What testing should be done on the flavourings, ingredients and devices to ensure they are safe?	"What tests are done on different eliquid flavourings?" "Why aren't ingredients of the flavourings required to be listed?"	more research would be useful	2 x HCP; 16 x Patient
19	How effective are public health anti-smoking and/or vaping campaigns? What is the economic impact? And what effect do these have on different populations?	"What is the effect of tobacco taxation or other anti-smoking policies on economically, mentally ill or otherwise disadvantaged smokers". "Effectiveness of public health smoking efforts that include vaping vs those who don't"	not enough research	5 x Patient
20	How addictive are e-cigarettes compared with regular cigarettes?	"Is nicotine less addictive when vaped than it is when smoked in a traditional cigarette?" "I would like the question to be answered, " is nicotine still addictive outside of smoking" once and for all."	more research would be useful	14 x HCP; 37 x Patient
21	What are the risks and benefits of nicotine consumption, and/or nicotine cessation?	"Does nicotine really harm teen's developing brains?" "What are nicotine's health and mental benefits?" "Is nicotine (at the concentrations used in e-cigs) as toxic as many would have us believe?"	more corroborating evidence would be helpful.	4 x HCP; 27 x Patient
22	How much nicotine is consumed when vaping compared to smoking?	"If someone switches from tobacco to vaping what effect does this have on the amounts of nicotine they receive?" "How much nicotine actually gets into the body compared to cigarettes."	not enough research	8 x HCP; 12 x Patient
23	How does nicotine strength affect probability of quitting smoking, and/or quitting vaping? And what impact does nicotine strength have on health?	"How does reducing nicotine affect probability of giving up vaping?" "How effective is lower percentage nicotine liquid, and would higher percentage (as currently banned by the EU) be more effective especially for new switchers? This would measure the unintended consequences of the TPD?"	not enough research	2 x HCP; 14 x Patient

24	What is the prevalence of vaping (including dual use) in adults (including pregnant women), children and never smokers?	"Prevalence of vaping in children and adult non smokers" "Who smoke e-cigarettes? Non (cigarette) smokers, ex-smokers, smokers trying to quit (dual use), ex smokers who had succeeded etc". "How many pregnant women vape"	Smokers Toolkit regularly looks at this information in the UK, but it doesn't include pregnancy (or postpartum), or other specialist groups (although currently looking at preg and pp in CRUK funded study). Yoong, Sze Lin, et al. "Prevalence of electronic nicotine delivery systems (ENDS) use among youth globally: a systematic review and meta analysis of country level data." Australian and New Zealand journal of public health 42.3 (2018): 303-308. SR exploring prevalence of ENDS use in those younger than 20 years. Doesn't differentiate between ex-smokers and never smokers.	26 x HCP; 13 x Patient
25	What impact do flavourings have on e-cigarette usage, smoking behaviour and health, in adults and children, and smokers and non-smokers?	"Do different eliquid flavourings have different health implications?" "Role of flavours/product variability in keeping adult smokers with histories of failed quit attempts off of cigarettes."	Zare, Samane, Mehdi Nemati, and Yuqing Zheng. "A systematic review of consumer preference for e-cigarette attributes: Flavor, nicotine strength, and type." PloS one 13.3 (2018): e0194145. SR exploring flavour preferences. The search included any age. Looks at preferences, not at initiation or behaviours	12 x HCP; 56 x Patient
26	What are the risks and benefits of other products (e.g. heat-not-burn, swedish snus, juul, shisha) on the user and bystanders? And should these be treated the same as e-cigarettes?	"How does e-cigarette vapour compare with heated tobacco vapour in terms of positives and negatives?". "How do e-cigarettes compare with Swedish Snus in terms of harms?" "What alternative e-cigarettes are available e.g. e-shisha; what are the health effects; who is using them, etc.?"	Simonavicius, Erikas, et al. "Heat-not-burn tobacco products: a systematic literature review." Tobacco control (2018): tobaccocontrol-2018. Mainly looking at differences between independent and industry funded studies. Looks at harmful toxicants. More evidence needed on risks to user and bystanders.	5 x HCP; 10 x Patient
27	What effect do the ingredients, chemicals and flavourings have on health, and how does this differ from cigarettes?	"How the ingredients in eliquid may or may not affect health. This must include various additives such as sweeteners etc." "What ingredients in common e-juices are carcinogenic and what are the levels of carcinogens relative to cigarettes?"	Zulkifli, Aziemah, et al. "Electronic cigarettes: a systematic review of available studies on health risk assessment." Reviews on environmental health 33.1 (2018): 43-52. looks at 4 ingredients (nicotine, PG, glycerol, 1,2-propanediol). Only 4 studies. Inconsistent evidence. Would be useful to have human studies here rather than in vitro or mice studies	13 x HCP; 43 x Patient
28	What are the differences between all the available devices? Are any devices safer or more effective than others?	"how safe are the different types of ecigs compared to each other". "There are so many different vaping products how do I know which one is best suited to me?"	devices change so quickly. Difficult to research.	16 x HCP; 22 x Patient
29	How does salt nicotine compare to freebase nicotine in terms of risks and benefits to health?	"How does nic-salt liquid compare to regular freebase nicotine liquid in terms of health implications, effectiveness as tobacco replacement, addictiveness (for never smokers), and environmental impact."	no research	2 x HCP; 18 x Patient
30	What is the risk from burning cotton or coils? Are some types better than others? How do we eliminate the metal?	"What kind of negative health problems could arise from the burning of cotton found in coils?". "What can be done to completely eliminate metals from the vapour?"	no research	28 x Patient

31	How do the different temperatures and power levels affect health? Is there an optimum temperature?	"Health effects of different wattage usage, for example wattages above 50 or/and higher volts on devices? compared with smoking". "Safe temperatures to vape at?"	no research	1 x HCP; 23 x Patient
32	What are the public perceptions of e-cigarettes and vape shops (including the views of children and young people), and do these views differ between different populations? And how can we improve understanding?	"Does the public understand the health differences between conventional smoking and e-smoking?" "Is there any social stigma associated with the use of e-cigarettes? Should there be any stigma associated with them? i.e. Are e-cigarettes more socially acceptable than cigarettes, and if so, how/why has that difference arisen?"	Xu, Ying, et al. "E-cigarette awareness, use, and harm perception among adults: a meta-analysis of observational studies." PLoS One 11.11 (2016): e0165938. looks at awareness and use of EC. Current smokers had the greatest awareness. Tomaszewski, Amy. "The perceived effects of electronic cigarettes on health by adult users: A state of the science systematic literature review." Journal of the American Association of Nurse Practitioners 28.9 (2016): 510-515. (The majority of e-cigarette users perceive they are less harmful to health than traditional cigarettes). Still a lot more to be done on public awareness and perceptions.	18 x HCP; 32 x Patient
33	What are the views of healthcare professionals of e-cigarettes for smoking cessation (including in pregnancy)? And how can we improve knowledge?	"What is the most effective way of increasing knowledge about vaping amongst health professionals, particularly within primary care?" "Why do health care professionals still continue to insist that vaping is harmful and how do we better educate them in passing on the correct information regarding vaping?"	Erku, Daniel A., et al. "Beliefs and self-reported practices of healthcare professionals regarding electronic nicotine delivery systems (ENDS): a mixed-methods systematic review and synthesis." Nicotine & Tobacco Research (2019). SR exploring HCP attitudes - doesn't look at pregnancy. Doesn't suggest how to improve knowledge/change attitudes.	11 x HCP; 17 x Patient
34	What is the best way to educate adults and children about vaping, and to provide information about vaping products and device safety (including battery safety)?	"Is there a consumer guide on different vaping products that would tell me about nicotine delivery, ease of use, cost, safety concerns?" "I'd like to see better information for new vapers about battery safety."	limited research. Yang, Ling, et al. "Electronic cigarettes: incorporating human factors engineering into risk assessments." Tobacco control 23.suppl 2 (2014): ii47-ii53. (Yang, Ling, et al. "Electronic cigarettes: incorporating human factors engineering into risk assessments." Tobacco control 23.suppl 2 (2014): ii47-ii53.)	11 x HCP; 16 x Patient
35	How are e-cigarettes represented in the media? And what impact does this have on public perceptions, attitudes and behaviours?	"Should they be allowed to be advertised?" "The impact on perceptions of vaping caused by the media from misreporting and exaggerating claims."	Collins, Lauren, et al. "E-cigarette marketing and communication: how e-cigarette companies market e-cigarettes and the public engages with e-cigarette information." Nicotine and Tobacco Research 21.1 (2018): 14-24. (SR explores how marketing may affect perceptions but doesn't assess the effect on behaviour/smoking/cessation. Looks at portrayal in the media too.)	3 x HCP; 13 x Patient
36	How can we motivate smokers to try e-cigarettes for smoking cessation?	"How to motivate smokers to try and stick with vaping". "How can e-cigarettes be promoted or provided to people that may be otherwise reluctant to try them or reluctant to visit a vape shop?"	no research	3 x HCP; 7 x Patient

37	How can e-cigarettes be incorporated into a smoking cessation programme or treatment guidelines? How will this differ for different populations?	"Will stop smoking services ever recommend/offer ecigarettes as a means of quitting?" "What happens if you provide e-cigarettes and vape liquid on the NHS?"	some information available through NCSCT, but more research could be done.	11 x HCP; 3 x Patient
38	What impact would financial incentives of e-cigarettes have on smoking cessation? E.g. reduced price or free for certain populations.	"Could we see a reduction in VAT on vaping products to further encourage smokers to switch to vaping?" "If e-cigarettes were provided for free to certain populations could this help people quit smoking. I'm thinking of people with low income who might not have the money to invest in vape equipment and are put off by the start up costs, specifically homeless people, or people from deprived areas, people on benefits or accessing food banks."	more evidence needed.	2 x HCP; 3 X Patient
39	What is the best way to help people reduce nicotine strength, quit vaping and avoid relapse to smoking?	"What are the best ways to help people who want to quit e-cigarettes?". "Do vapers ever come off nicotine or will they be vaping all their lives or need help to quit?"	more evidence needed.	8 x HCP; 11 x Patient
40	Can advice from healthcare professionals lead to better outcomes for smoking cessation if accurate information is provided about e-cigarettes?	"Should dentists recommend e-cigs to smokers?" "What should the advice or support offer from GPs, pharmacists, newsagents, smoking cessation professionals look like?"	more evidence needed.	6 x HCP; 4 x Patient
41	Are vape shops a suitable environment to provide smoking cessation support?	"Are vape shops a smoking cessation intervention in their own right? i.e are these environments and communities adding to the success of e-cigarettes in helping people quit."	no research	2 x HCP; 3 X Patient
42	How can hospitals better support patients to stop or reduce their smoking with the use of e-cigarettes?	"Can ecigs be effective in an acute hospital setting (general or mental health) to help reduce smoking rates (smokefree policies)".	more evidence needed.	2 x HCP; 1 x Patient
43	Why do children and young people start vaping? And how are they accessing e-cigarettes?	"If kids are Vaping Why are the doing so? Peer pressure? Cloud Chasing? Like the flavors? Because it is "Cool"?". "Where are children able to get/buy e-cigs?"	more evidence needed.	3 x HCP; 7 x patient
44	What are the barriers and facilitators for e-cigarette use for smoking cessation? What different barriers may exist for those with mental health problems or heavily dependent smokers?	"what stops people switching to e cigarettes? What are the psychological barriers? Doubts?" "What are common barriers and facilitators to using e-cigarettes to quit smoking?"	more evidence needed.	5 x HCP; 6 x Patient
45	Why do never-smokers (including children) start vaping, and how/should we be discouraging never-smokers from starting vaping?	"Research about how why people are going straight to vaping from non smoking." "How can we discourage young people vaping (when we don't know yet what harm it is doing)."	more evidence needed.	1 x HCP; 6 x Patient
46	What are the different ways that people vape, and can this have an impact on health? (e.g. mouth to lung vs direct; frequency, nicotine strength).	"How does different ways of vaping (MTL, DL, bottom feeding etc) affect your health?" "How does vaping a mouth-to-lung device differ from a high wattage cloud chasing device?". "Is there a maximum volume of E liquid you should vape in a day?"	more evidence needed.	4 x HCP; 24 x Patient
47	What are the trajectories to and from vaping and smoking? Including reasons for relapse to smoking, and accidental quitting.	"How long do smokers use these devices before stopping altogether?" "Whats going on with 'accidental' quitting (when dual users stop smoking without the specific intention of doing so)? What factors are involved in that? It seems to good to be true."	lack of studies, but is the focus of a current CRUK funded study.	3 x HCP; 4 x Patient

48	How are people currently accessing vaping equipment? What are the preferred sources? And how can we increase availability of vape products?	"Accessibility - should they be more accessible, aka if you run out of cigarettes you know you can get some from all shops, if you run out of vape juice lose your vape you're stuck." "are people buying devices on the internet?"	more evidence needed.	1 x HCP; 7 x Patient
49	What impact has vaping had on the prevalence of smoking, initiation of smoking or experimentation with other drugs or addictive behaviours?	"Links of vaping with other recreational substance use". "Are ecigarettes a gateway to other addictions?" "Does vaping act as a gateway to smoking for non-smokers, particularly young people".	Soneji, Samir, et al. "Association between initial use of e-cigarettes and subsequent cigarette smoking among adolescents and young adults: a systematic review and meta-analysis." JAMA pediatrics 171.8 (2017): 788-797. (Ages 14-30 years. Never smokers at baseline, and past 30 days cigarette smoking at follow up). some information available from ASH and PHE reviews.	11 x HCP; 29 x Patient
50	What is the environmental impact of e-cigarettes, in terms of the production and disposal of units and packaging?	"Surely vaping as a whole (the device, batteries, refills in plastic bottles) is more damaging to the environment?" "What is the impact on the environment due to the disposal of electronic cigarettes (the device itself, used batteries and used coil heads)?" "Environmental impact of 10ml bottles."	no research	14 x Patient
51	What are the financial cost savings of vaping compared to smoking for the individual?	"The total 'cost of vaping' for those still abstinent after 52 weeks compared to their expected tobacco expenditure for the year." "What are long term costs of vaping compared to smoking".	more research would be useful	4 x HCP; 6 x Patient
52	What are the financial implications for the government, and the pharmaceutical and tobacco industry, of the introduction of e-cigarettes, in terms of loss of revenue from tax?	"What are the financial implications for the government, and the pharmaceutical and tobacco industry, of the introduction of e-cigarettes, in terms of loss of revenue from tax?" "How much money loses the pharma industry because of electronic cigarettes?"	more research would be useful	1 x HCP; 3 x Patient

PSP unique identifier (allocated by JLA team)	Record ID (allocated by JLA team)	PSP Name	PSP Question ID	Total number of verified uncertainties identified by the PSP	The uncertainty (also called summary or indicative question). Ideally in a format that will ultimately be of value to the research community. Researchable, but not usually in research question format.	Explanatory note (a plain language summary of up to 150 words, explaining key points of the uncertainty and why it is important, for research funders to begin working on. PSPs may wish to include examples of the original survey submissions here). Also notes from the final workshop discussion may be useful.	Date of the priority setting workshop	Rank of the uncertainty at the final workshop. (If no rank was agreed, please indicate)	Evidence that the question is indeed unanswered. (reference, and weblink where available, to the most recent relevant systematic review identified by the PSP, plus a maximum of 2 other systematic reviews, including protocols for future systematic reviews, that the PSP considers relevant.)	Health Research Classification System (high level HRCS code to be allocated by the JLA team unless the PSP prefers to complete this)
		E-cigarettes	T	212	What are the long term effects of vaping? Compared to smoking, ex-smokers, never-smokers and NRT use?	Example of original uncertainty: "What are the long term effects of e-cigarette use?" "long term harms to health with relative risk against non smoking and against tobacco"	20-Sep-19	1	More longitudinal studies are needed. Some people have been vaping for 10 years now, so it is possible to now look at the long-term effects.	
		E-cigarettes	H	56	What effect do the ingredients, chemicals and flavourings have on health, and how does this differ from cigarettes?	Example of original uncertainty: "How the ingredients in e-liquid may or may not affect health. This must include various additives such as sweeteners etc." "What ingredients in common e-juices are carcinogenic and what are the levels of carcinogens relative to cigarettes?"	20-Sep-19	2	Zulkifli, Aziemah, et al. "Electronic cigarettes: a systematic review of available studies on health risk assessment." Reviews on environmental health 33.1 (2018): 43-52. looks at 4 ingredients (nicotine, PG, glycerol, 1,2-propanediol). Only 4 studies. Inconsistent evidence. Would be useful to have human studies here rather than in vitro or mice studies	
		E-cigarettes	M	16	What effect does vaping in pregnancy (and when breastfeeding) have on the health outcomes of the fetus and baby, compared to smoking? Including any long term effects.	Example of original uncertainty: "What are the effects of vaping on the fetus?" "WHAT IS THE IMPACT ON BABIES GROWTH AND DEVELOPMENT"	20-Sep-19	3	Very limited research in pregnancy, and some are concerned about the effect when breastfeeding.	
		E-cigarettes	D	2	How effective are e-cigarettes for smoking cessation in patients with mental health problems? And what effect do they have on mental health?	Example of original uncertainty: "Use in inpatient mental health settings - any association with smoking cessation longer term". "most importantly the quitting rates on this cluster [mental health patients] (which shows a high prevalence) with a proper guidance on their mental-care center."	20-Sep-19	4	Very limited research for patients with mental health problems	
		E-cigarettes	K	11	What are the barriers and facilitators for e-cigarette use for smoking cessation? What different barriers may exist for those with mental health problems or heavily dependent smokers?	Example of original uncertainty: "What stops people switching to e-cigarettes? What are the psychological barriers? Doubts?" "What are common barriers and facilitators to using e-cigarettes to quit smoking?"	20-Sep-19	5	Some qualitative studies are available but much more research is needed.	
		E-cigarettes	Q	92	How do e-cigarettes compare to other treatments for stopping smoking, in terms of effectiveness, cost-effectiveness, long-term abstinence, and relapse to smoking?	Example of original uncertainty: "What is the success rate compared to other methods of quitting smoking?" "What are the relapse rate for quitters using E cigs compared to NRT?"	20-Sep-19	6	Some discussions in the workshop that this has already been answered. There is some evidence that e-cigarettes are effective for stopping smoking, but very limited research on long-term abstinence and relapse to smoking, and this was felt to be a priority.	
		E-cigarettes	U	45	What impact do restrictions on vaping (e.g. including vaping in smoke free policies; age limits; tank size) have on smoking behaviour and smoking cessation? as well as perceptions of harm from vaping?	Example of original uncertainty: "Why do so many businesses, councils and health care trusts include vaping in their smoke free policies?" "The impact of public use bans, specifically by health trusts treating vaping as smoking, on the uptake and perception of smokers toward vaping." "What measures would increase the number of employers, cafes and public houses that welcome considerate vaping?"	20-Sep-19	7	Cann, K. F., K. D. Heneghan, and T. Knight. "The impact of restricting the use of e-cigarettes in public places: a systematic review." Journal of Public Health 40.3 (2017): 533-539. SR looks at restrictions of vaping in public places and impact on switching behaviour. (no studies were found for this). Secondary question looked at ability to use e-cigarettes in public places as a reason for use and attitudes towards this among smokers.	
		E-cigarettes	L	18	What testing should be done on the flavourings, ingredients and devices to ensure they are safe?	Example of original uncertainty: "What tests are done on different e-liquid flavourings?" "Why aren't ingredients of the flavourings required to be listed?"	20-Sep-19	8	More research would be useful	
		E-cigarettes	O	1	Will prescribing e-cigarettes to pregnant smokers encourage smoking cessation, and reduce risk of relapse?	Example of original uncertainty: "CAN WE PRESCRIBE FOR INPATIENTS IN MATERNITY SERVICES AS A CHOICE"	20-Sep-19	9	One trial has been conducted on financial incentives for quitting smoking in pregnancy. More research is needed to determine whether e-cigarettes should be available on prescription for pregnant smokers.	
		E-cigarettes	R	85	What effect does second hand vape have on adults (including pregnant women), children and animals, and how does this compare to second hand smoke?	Example of original uncertainty: "Is there 'second hand smoke' type implications from being around people who vape?" "Are they safe to use around babies/children?". "I would also like to see some research on the effect on household pets of people who vape in their homes, as I have read that PG can be harmful to cats and dogs."	20-Sep-19	10	Discussions in the workshop suggested that if there is more evidence on second hand vape (i.e. that it is not harmful) then more people might be inclined to switch to vaping from smoking.	
		E-cigarettes	C	16	How are e-cigarettes represented in the media? And what impact does this have on public perceptions, attitudes and behaviours?	Example of original uncertainty: "Should they be allowed to be advertised?" "The impact on perceptions of vaping caused by the media from misreporting and exaggerating claims."	20-Sep-19	11	Collins, Lauren, et al. "E-cigarette marketing and communication: how e-cigarette companies market e-cigarettes and the public engages with e-cigarette information." Nicotine and Tobacco Research 21.1 (2018): 14-24. (SR explores how marketing may affect perceptions but doesn't assess the effect on behaviour/smoking/cessation. Looks at portrayal in the media too). Particularly relevant now given the recent deaths in America from vaping, and how this has been reported in the UK.	
		E-cigarettes	S	10	Can advice from healthcare professionals lead to better outcomes for smoking cessation if accurate information is provided about e-cigarettes?	Example of original uncertainty: "Should dentists recommend e-cigs to smokers?" "What should the advice or support offer from GPs, pharmacists, newsagents, smoking cessation professionals look like?"	20-Sep-19	12	More research is needed on this.	
		E-cigarettes	I	14	How can e-cigarettes be incorporated into a smoking cessation programme or treatment guidelines? How will this differ for different populations?	Example of original uncertainty: "Will stop smoking services ever recommend/offer e-cigarettes as a means of quitting?" "What happens if you provide e-cigarettes and vape liquid on the NHS?"	20-Sep-19	13	Some information available through NCSCT, but more research is needed.	
		E-cigarettes	N	68	What impact do flavourings have on e-cigarette usage, smoking behaviour and health, in adults and children, and smokers and non-smokers?	Example of original uncertainty: "Do different e-liquid flavourings have different health implications?" "Role of flavours/product variability in keeping adult smokers with histories of failed quit attempts off of cigarettes."	20-Sep-19	14	Qualitative and anecdotal evidence suggests that flavours are really useful for helping people quit smoking. More evidence on this would be useful to strengthen the argument that flavours are essential, especially given the fact that some states in America are now banning flavours.	
		E-cigarettes	B	158	What are the short term effects of vaping? Compared to smoking, ex-smokers, never-smokers and NRT use?	Example of original uncertainty: "Short term health effects"; "What are the short-term harms of vaping compared to tobacco smoking"	20-Sep-19	15	Although PHE do state that the evidence suggests e-cigarettes are 95% safer than smoking, with the recent deaths in America from vaping more research and evidence would give weight to this position statement, particularly if we can have more research on a broader range of biomarkers.	
		E-cigarettes	A	3	How can hospitals better support patients to stop or reduce their smoking with the use of e-cigarettes?	Example of original uncertainty: "Can ecigs be effective in an acute hospital setting (general or mental health) to help reduce smoking rates (smokefree policies)." "With the smokefree policy coming into force to ensure hospitals are smokefree, allowing patients to vape on site can help with them remaining smoke free at hospital."	20-Sep-19	16	No research on this. Recently a trust in Birmingham has opened a vape shop in the hospital, but as yet there is no evidence on the effect this has had.	
		E-cigarettes	G	4	How effective are e-cigarettes in pregnancy for smoking cessation? And compared to other treatment	Example of original uncertainty: "Quit rates compared to licensed pharmacotherapy, in preg women".	20-Sep-19	17	Very limited research in pregnancy, but a trial is underway: PREP trial (Pregnancy Trial of E-cigarettes and Patches).	
		E-cigarettes	F	51	How addictive are e-cigarettes compared with regular cigarettes?	Example of original uncertainty: "Is nicotine less addictive when vaped than it is when smoked in a traditional cigarette?" "I would like the question to be answered, 'is nicotine still addictive outside of smoking' once and for all."	20-Sep-19	18	More research would be useful	
		E-cigarettes	Y	10	What effect does vaping have on mental health, including any risks and benefits? In adults, children and young people.	Example of original uncertainty: "What effect does e-cigarette use have on mental health issues?" "Is nicotine beneficial for people with mental health conditions? And if it is then is there any discernible difference between vaping and smoking for them?"	20-Sep-19	19	Thomas, Kyla H., et al. "How do smoking cessation medicines compare with respect to their neuropsychiatric safety? A protocol for a systematic review, network meta-analysis and cost-effectiveness analysis." BMJ open 7.6 (2017): e015414. SR only concerned with 18 years and older. Comparing different treatments and effect on neuropsychiatric safety. Hefner, Kathryn, Gerald Valentine, and Mehmet Sofuoglu. "Electronic cigarettes and mental illness. Reviewing the evidence for help and harm among those with psychiatric and substance use disorders." The American journal on addictions 26.4 (2017): 306-315. Looks at perceptions of ecigs and impact on tobacco use in adults. Doesn't look at health effects, risks and benefits.	
		E-cigarettes	V	12	What are the health effects of vaping for never-smokers and ex-smokers?	Example of original uncertainty: "For non-smokers/never-smokers, who start to use vapor-products - what could the health consequences be - compared to initiation of smoking instead? this is not referring to passive vape. I am thinking of one person in particular who wanted to know if it would be harmful for him to start vaping. He is an ex-smoker (quit for over 30 years) but still misses smoking."	20-Sep-19	20	No research on this. Very few people vape who are not a smoker or recent ex-smoker.	

		E-cigarettes			How can we motivate smokers to try e-cigarettes for smoking cessation?	Example of original uncertainty: "How to motivate smokers to try and stick with vaping". "How can e-cigarettes be promoted or provided to people that may be otherwise reluctant to try them or reluctant to visit a vape shop?"	20-Sep-19	21	No research on this.
		E-cigarettes	X	10					
		E-cigarettes			What are the views of healthcare professionals of e-cigarettes for smoking cessation (including in pregnancy)? And how can we improve knowledge?	Example of original uncertainty: "What is the most effective way of increasing knowledge about vaping amongst health professionals, particularly within primary care?" "Why do health care professionals still continue to insist that vaping is harmful and how do we better educate them in passing on the correct information regarding vaping?"	20-Sep-19	22	More research is needed on education and training for healthcare professionals.
		E-cigarettes	P	28					
		E-cigarettes			What is the best way to educate adults and children about vaping, and to provide information about vaping products and device safety (including battery safety)?	Example of original uncertainty: "Is there a consumer guide on different vaping products that would tell me about nicotine delivery, ease of use, cost, safety concerns?" "I'd like to see better information for new vapers about battery safety."	20-Sep-19	23	No systematic reviews on this.
		E-cigarettes	E	27					
		E-cigarettes			How safe are e-cigarettes in pregnancy, compared to smoking and NRT use?	Example of original uncertainty: "Are e-cigarettes safe to use in pregnancy". "Are they safer than NRT use in pregnancy?"	20-Sep-19	24	Very limited research in pregnancy.
		E-cigarettes	W	8					
		E-cigarettes			What are the risks and benefits of nicotine consumption, and/or nicotine cessation?	Example of original uncertainty: "Does nicotine really harm teen's developing brains? "What are nicotine's health and mental benefits?" "Is nicotine (at the concentrations used in e-cigs) as toxic as many would have us believe?"	20-Sep-19	25	Limited research on this. Most of the research is in animals. More studies with humans is needed.
		E-cigarettes	Z	31					
		E-cigarettes							
		E-cigarettes			What are the impacts of vaping on indoor and outdoor air quality, and how does this compare to other air pollutants?	Example of original uncertainty: "What are the short, medium and long term risks of vaping compared with Living in an environment with high levels of air pollution". "Secondhand vapor compared to clean air what are the differences?"	20-Sep-19	26	Abidin, Najihah Zainol, et al. "Electronic cigarettes and indoor air quality: a review of studies using human volunteers." Reviews on environmental health 32.3 (2017): 235-244. (Few studies, and inconsistent evidence). Fernández, Esteve, et al. "Particulate matter from electronic cigarettes and conventional cigarettes: a systematic review and observational study." Current environmental health reports 2.4 (2015): 423-429. (literature review and an observational study. Not a meta analysis.)
		E-cigarettes	J	10					