

Appendices

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Putting evidence at the centre of everyday life: Making evidence-based choices the default or easy option

8 December 2025

[MHF product code: LEP 9a]

Appendix 1: Methodological details

We use a standard protocol for preparing living evidence profiles (LEP) to ensure that our approach to identifying research evidence is as systematic and transparent as possible in the time we are given to prepare the profile.

Engaging citizen partners

Citizen partners were engaged after drafts of the living evidence profile report were completed to offer feedback and propose changes that help with clarity.

Organizing framework

To structure our searches for evidence to include in this LEP and to structure our analysis and the presentation of our findings, we drew on an organizing framework developed through the efforts of the [Global Commission on Evidence to Address Societal Challenges](#) (the Global Evidence Commission) following consultations with subject-matter experts and citizen partners, guidance from the [Citizen Leadership Group](#), and from the views and experiences elicited through a [series of citizen panels held in October 2022](#). This organizing framework categorized the range of strategies for supporting citizens to use evidence in everyday life into five overarching strategies. This LEP focuses on one of those strategies, namely **making evidence-based choices the default or easy option**, which consists of four sub-strategies:

- 1) adopting laws to ensure that policies, programs, services and products presented to citizens are based on the best available evidence
- 2) providing rewards or penalties to businesses advertising products depending on whether the products are supported by the available evidence
- 3) supporting big tech companies to ensure that information and products presented to citizens is evidence based
- 4) using strategies that aim to create healthier default options (often called 'nudging' strategies in the literature) but not limiting them to these choices.

We used these sub-strategies to organize the summary tables of the research evidence identified for this LEP.

Identifying research evidence

In April 2024, we searched for evidence syntheses (and protocols for evidence syntheses underway) and for single studies relevant to all five strategies developed by the [Global Evidence Commission](#) in six databases: [Health Systems Evidence](#), [Social Systems Evidence](#), [PubMed/MEDLINE](#), [EBSCOhost](#), [ProQuest](#) and [Web of Science](#). The detailed search strategies for each of the sub-strategies are available upon request.

We retrieved 4,299 total studies across all databases searched. Covidence software was used to coordinate screening with our team of researchers. After duplicates were removed, a single member of the research team assessed 3,304 for relevance to any of the five strategies based on a review of titles and abstracts. A second member of the team then reviewed the allocations and identified potential discrepancies, which were discussed and reconciled between the two team members in a one-on-one meeting.

For the 451 studies that were considered relevant to strategy 1, a single member of the research team assessed the full text of each study, which resulted in a further 379 being removed, and a final set of 72 studies deemed eligible for the analysis. The team used a dedicated virtual channel to discuss and iteratively refine inclusion/exclusion criteria throughout the process, which provided a running list of considerations that all members could consult during the first stages of assessment. Several studies were removed during the final stages of analysis, which have been listed in Appendix 4.

We excluded documents that did not directly address the research question and the organizing framework. We were unable to extract key findings from documents that were written in languages other than Chinese, English, French, Portuguese or Spanish, or were not able to be translated to English via Google applications. We provided any documents that made it to full-text screening and did not have content available in these languages in Appendix 4 containing documents excluded at the final stages of reviewing.

Assessing relevance and quality of evidence

We assessed the relevance of each included evidence document as being of high or low relevance to the research question and sub-strategies of the organizing framework.

Two reviewers independently appraised the methodological quality of the included evidence documents using AGREE II. We used three domains in the tool (stakeholder involvement, rigour of development and editorial independence) and classified guidelines as high quality if they were scored as 60% or higher across each of these domains. Disagreements were resolved by consensus with a third reviewer if needed. AMSTAR rates overall methodological quality on a scale of 0 to 11, where 11/11 represents an evidence synthesis of the highest quality. High-quality evidence syntheses are those with scores of eight or higher out of a possible 11, medium-quality evidence syntheses are those with scores between four and seven, and low-quality evidence syntheses are those with scores less than four. It is important to note that the AMSTAR tool was developed to assess evidence syntheses focused on clinical interventions, so not all criteria apply to those pertaining to health-system arrangements or to economic and social responses. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, an evidence synthesis that scores 8/8 is generally of comparable quality to another scoring 11/11; both ratings are considered 'high scores.' A high score signals that readers of the evidence synthesis can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the evidence synthesis should be discarded, merely that less confidence can be placed in its findings and that the evidence synthesis needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1): S8.)

Preparing the profile

Each included document is cited in the reference list at the end of the LEP. For each included evidence synthesis and single study, we prepared a small number of bullet points and an overarching declarative statement of the findings, alongside additional study characteristics (e.g., date of last search, methodological quality, study jurisdiction). Findings from all the evidence documents are then used to summarize key messages in the profile report. Protocols and titles/questions have their titles hyperlinked, given that findings are not yet available.

Appendix 2: Details about each identified evidence synthesis

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
Sub-strategy 1: Adopting laws to ensure that policies, programs, services and products presented to citizens are based on the best available evidence (n=2)	While alcohol reduction strategies such as alcohol labelling and restrictions on alcohol marketing and advertising have been promoted through the public-private partnership of the English Public Health Responsibility Deal, effective evidence-based alcohol reduction strategies should focus on community mobilization, use of law enforcement and incentives for alcohol alternatives such as low-strength alcohol or alcohol-free products (1)	High	No	6/9 (AMSTAR rating by McMaster Health Forum)	2013	No	None identified
	In response to evidence on high levels of alcohol consumption in Latvia, the Latvian government established policies to restrict the contents of alcohol advertisements to 1) prevent the creation of content promoting unsafe alcohol use and 2) include a disclaimer about alcohol's negative impact on health (2) However, implementation has been slow, and many planned activities have not been executed	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	2020	No	None identified
Sub-strategy 2: Providing rewards or penalties to businesses advertising products depending on whether the products are supported by the available evidence	No evidence syntheses identified						
Sub-strategy 3: Supporting big tech companies to ensure that information and products presented to citizens is evidence based (n=4) (Search 1 , Search 2 , Search 3)	Artificial intelligence, particularly machine learning and neural networks, is widely employed in social networks, with diverse accuracy rates, for automatic detection of fake news, highlighting the prevalence of machine learning algorithms and the effectiveness of convolutional networks, recurrent networks, and long short-term memory networks; the evidence synthesis also emphasized the need for integrating models into social networks, like X (formerly Twitter), to combat the spread of fake news effectively (3)	High	No	1/9 (AMSTAR rating by McMaster Health Forum)	December 2021	No	None identified
	Artificial intelligence tools are very effective in detecting fake news in social networks, with success rates over 90%, offering valuable support to researchers and individuals addressing this challenge (4)	High	No	0/9 (AMSTAR rating by McMaster Health Forum)	November 2019	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
	Fake news spread widely during the COVID-19 pandemic in 2021, fuelled by low awareness and literacy, while AI-based tools like machine and deep learning proved effective in detecting misinformation on topics such as vaccines, the virus, cures, treatments and prevention (5)	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	August 2022	No	None identified
	Smartphone based applications and activity trackers involving personalized goal setting, monitoring and behavioural instructions show promise for improving physical activity; however, the evidence is limited due to poor reporting across studies and may be improved by using theory-based development and evaluation (6) Social networking through physical activity apps were generally not well perceived	High	No	5/9 (AMSTAR rating by McMaster Health Forum)	2018	No	None identified
Sub-strategy 4: Using strategies that aim to create healthier default options (often called 'nudging' strategies in the literature) but not limiting them to these choices (n=40) (Search 1, Search 2, Search 3)	Nudging-based interventions show potential to increase vaccine confidence/uptake, with the most promising evidence found for strategies like incentives to parents and healthcare workers, making information more salient and using trusted messengers (7)	High	No	7/9 (AMSTAR rating by McMaster Health Forum)	May 2021	No	None identified
	Non-price interventions, such as social comparison, commitment devices, goal setting, and labelling, can significantly reduce energy consumption in private households, though effect sizes vary, underscoring the need for impact evaluations to scale behavioural policy efforts (8)	High	No	5/9 (AMSTAR rating by McMaster Health Forum)	June 2018	No	None identified
	Front-of-package (FOP) nutrition labels help consumers identify healthier products but have limited effectiveness in nudging consumers towards healthier choices, and they may create halo effects, improving perceptions of both healthy and unhealthy products, with interpretive nutrient-specific labels influencing purchase intentions of healthier products only (9)	High	No	3/11 (AMSTAR rating by McMaster Health Forum)	May 2019	No	None identified
	Nudging interventions, like reminders and gamification, can help improve health behaviours in diabetic patients, with their effectiveness depending on how they are delivered and the traits of the patients themselves (10)	High	No	6/10 (AMSTAR rating by McMaster Health Forum)	May 2020	No	None identified
	Diet interventions for older adults, such as dietary education and healthier meal services, have been shown to be positive (e.g., improving dietary variety, nutritional status, and health-related eating behaviours), especially for reducing the risk of chronic diseases when multicomponent interventions are used (11)	High	No	6/10 (AMSTAR rating by McMaster Health Forum)	February 2016	No	None identified
	Colour-coded labels, like the traffic light system and Nutri-Score, are better than warning labels at encouraging healthier choices, showing the	High	No	8/11 (AMSTAR rating by	May 2021	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
	value of mandatory front-of-pack labelling to help consumers make informed decisions (12)			McMaster Health Forum)			
	Placing food products differently, by order or proximity, can shape consumer choices, but more robust studies are needed to measure the long-term impact on food intake and assess potential compensatory behaviours (13)	High	No	7/10 (AMSTAR rating by McMaster Health Forum)	February 2015	No	None identified
	Moral reminders, external commitments (i.e., pledges and honour codes), and priming are the most frequently studied interventions to reduce individual-level dishonesty, while architectural nudges like defaults and sludge have been underdeveloped (14)	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	May 2022	No	None identified
	Nudging interventions aimed at increasing the choice, sales or servings of fruits and vegetables have a moderately significant effect, with the largest impact observed for altering the placement of food and combined nudges (15)	High	No	8/11 (AMSTAR rating by McMaster Health Forum)	Dec 2016	No	None identified
	Nudge strategies increase healthier dietary choices by an average of 15.3%, measured by frequency and caloric intake, with most studies conducted in wealthier countries, particularly the United States (16)	High	No	5/11 (AMSTAR rating by McMaster Health Forum)	2014	No	None identified
	Most public health nudging interventions, especially those related to diet and nutrition, were effective in promoting healthy lifestyle changes, but there is lack of critical reflection on implicit health assumptions, cultural acceptability, context-free assumptions of nudging theory, and their implications for public health contexts (17)	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	April 2019	No	None identified
	Nudging strategies, particularly information and position nudges, show potential in improving population dietary behaviours, with some indications of greater effectiveness in low socio-economic position groups; although limited evidence and varying socio-economic position proxies warrant caution in interpreting the findings (18)	High	No	7/10 (AMSTAR rating by McMaster Health Forum)	January 2018	No	• Socio-economic status
	Traffic-light labelling and other nudging strategies can help encourage healthier food choices, but experimental field studies have found that measuring their true impact on eating habits is challenging (19)	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	July 2019	No	None identified
	While governments have been slow to act, restaurant owners can use marketing and choice architecture strategies to promote healthier options (20)	High	No	4/9 (AMSTAR rating by	December 2016	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
				McMaster Health Forum)			
	Nudging interventions improved hand hygiene as a preventive measure against COVID-19, highlighting the value of incorporating them into public health strategies for managing the virus and future pandemics, rather than viewing them as unconventional tools (21)	High	No	4/9 (AMSTAR rating by McMaster Health Forum)	November 2020	No	None identified
	Nudges such as reminders, planning prompts, small financial incentives and feedback had significant positive effects on self-management outcomes for adults with chronic diseases, while evidence for improved disease control outcomes was limited, suggesting that these types of nudges can be generally recommended to policymakers to enhance chronic disease self-management (22)	High	No	7/10 (AMSTAR rating by McMaster Health Forum)	April 2018	No	None identified
	Research on digital nudging found concentrations in privacy/security, e-commerce/marketing, and social media contexts with limited exploration of online nudge patterns, while behavioural outcomes rarely involved decreases, and most studies occurred in disconnected, non-personalized choice environments, prompting nine future research questions (23)	High	No	1/9 (AMSTAR rating by McMaster Health Forum)	January 2021	No	None identified
	67 nudge strategies were found for preventing and controlling neglected tropical diseases, with a focus on general health behaviours like handwashing, primarily using decision assistance tactics such as commitment and reminders, and most strategies meeting moderate to high ethical standards (24)	High	No	5/9 (AMSTAR rating by McMaster Health Forum)	November 2021 (year of publication)	No	None identified
	The choice architecture movement that aims to help people make better decisions for themselves and society lacks clear process-level explanations and comprehensive summaries of boundary conditions for different interventions (25)	High	No	2/10 (AMSTAR rating by McMaster Health Forum)	May 2016	No	None identified
	The effectiveness of green nudges varies based on factors like the choice of levers, mechanisms, techniques, visibility, where they are applied, and their geographical context (26) • Feasibility and visibility are the biggest determining factors in the efficacy of green nudges • Other factors include desirability, awareness, accessibility and emotional reasoning	High	No	7/9 (AMSTAR rating by McMaster Health Forum)	2022	No	None identified
	Successful nudging strategies for preventing tobacco and alcohol consumption in adults include increasing information salience, offering incentives and providing feedback, especially when part of multi-component interventions (27)	High	No	3/9 (AMSTAR rating by	January 2023 (year of publication)	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
				McMaster Health Forum)			
	Nudges to increase physical activity or reduce sedentary behavior were used in 26 studies, with most targeting physical activity through stair climbing prompts, while interventions for sedentary behavior were more diverse, including digital and mixed approaches (28)	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	June 2020	No	None identified
	Four common digital nudging strategies were found in online grocery stores: labelling, healthier swap suggestions, default options and increased salience, with labeling being the most frequently used, but studies often lacked clear descriptions of the user interface features, limiting insights into their effectiveness (29)	High	No	5/9 (AMSTAR rating by McMaster Health Forum)	January 2023 (year of publication)	No	None identified
	Nudging in Human-Computer Interaction involves 23 mechanisms across six categories, influenced by 15 cognitive biases; These were represented by a framework for technology-mediated nudging (30)	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	May 2019 (year of publication)	No	None identified
	Dietary nudging interventions often affect disadvantaged and less disadvantaged groups differently, with cognitive nudges sometimes favouring the less disadvantaged and behavioral nudges occasionally benefiting the more disadvantaged (31)	High	No	5/9 (AMSTAR rating by McMaster Health Forum)	June 2021	No	Socio-economic status
	A review on the ethics of nudging found four major ethical issues associated with nudging: violation of autonomy, questions regarding the effectiveness of nudges in improving welfare, concerns about long-term adverse effects, and potential harm to democracy and deliberation (32)	High	No	2/9 (AMSTAR rating by McMaster Health Forum)	January 2023 (year of publication)	No	None identified
	A review of nudge interventions for healthy diet and physical activity found proximity and presentation changes to be effective for healthier dietary choices, while the effectiveness of labelling, availability, prompting, functional design and sizing remains inconclusive (33)	High	No	6/10 (AMSTAR rating by McMaster Health Forum)	July 2021 (year of publication)	No	None identified
	“Salience” and “priming” nudges generally promoted healthier food choices, but the evidence was limited and inconsistent due to variations in study quality, populations and outcome measures (34)	High	No	6/10 (AMSTAR rating by McMaster Health Forum)	July 2016 (year of publication)	No	None identified
	Nudge interventions for weight loss in overweight individuals had significant but mild effects on weight loss, body mass index, and waist circumference, with stronger results in younger and more obese individuals, though their effectiveness decreased over time (35)	High	No	7/11 (AMSTAR rating by	2020	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
				McMaster Health Forum)			
	More than 80% of studies on nudging interventions to promote healthy food choices showed positive results, but they also pointed out the need for further replications and scaling up of these interventions (36)	High	No	4/9 (AMSTAR rating by McMaster Health Forum)	September 2018	No	None identified
	‘Policy mixes’ in environmental policy, incorporating behavioural tools (e.g., nudges and frames) and reflective tools (e.g., deliberative events and incentives for individuals to ‘think’), often lack comprehensive consideration of broader governance aspects, contextuality and flexibility, suggesting a need for a more holistic and multidisciplinary approach to Behavioural Public Policy (37)	High	No	3/9 (AMSTAR rating by McMaster Health Forum)	November 2022 (year of publication)	No	None identified
	Interventions using nudges related to social norms, reminders or social norms with disclosure effectively change food waste behaviours at the household level, while disclosure alone (i.e., revealing environmental costs of food waste) was not as effective, highlighting the potential for nudge techniques to positively impact food waste reduction and the importance of further research in this area (38)	High	No	6/10 (AMSTAR rating by McMaster Health Forum)	March 2021	No	None identified
	Green nudging interventions can encourage sustainable practices among farmers and consumers, but they should complement, not replace, stronger environmental and food policies (39)	High	No	5/9 (AMSTAR rating by McMaster Health Forum)	May 2019	No	None identified
	Transparent defaults, when combined with specific choice framing and structuring, enhance nudge success without compromising ethical concerns, highlighting the importance of design choices in default nudges (40)	High	No	1/9 (AMSTAR rating by McMaster Health Forum)	April 2020	No	None identified
	Defaults that set specific choices help reduce meat consumption by making plant-based options easier, with the way they are presented and their level of intrusiveness influencing their effectiveness (41)	High	No	9/10 (AMSTAR rating by McMaster Health Forum)	December 2020	No	None identified
	Digital nudging-based interventions occurring through presentations and aimed at increasing disclosure is effective at promoting behaviour digital privacy change and can reduce cognitive load, framing effects and optimism bias (42)	High	No	7/11 (AMSTAR rating by McMaster Health Forum)	September 2020	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
	Nudge messages regarding safe practices during the COVID-19 pandemic including themes of increasing commitment, avoiding fake news, promoting hand hygiene, and maintaining social distance are a low-cost, effective and easily implemented public health strategy (43)	High	No	1/9 (AMSTAR rating by McMaster Health Forum)	2020	No	None identified
	Nudging may occur through digital or conventional platforms, typically using a choice option; however, the effects of digital platforms vary vastly across studies and additional research is needed to understand the mechanisms and effectiveness of nudging (44)	High	No	4/10 (AMSTAR rating by McMaster Health Forum)	2018	No	None identified
	Using choice architecture to guide people towards desired outcomes was found to be effective, but the ethical implications of nudging for individuals' betterment remain a subject of debate, although this approach is currently employed in financial markets to influence investment choices and information presentation, offering potential for regulators to encourage ethical decision-making among financial intermediaries as well (45)	Low	No	0/9 (AMSTAR rating by McMaster Health Forum)	November 2018	No	None identified
	Information receivers' perceptions of nudge messages may be influenced by the willingness to receive, sensitivity and understanding of information, level of prior understanding, and environmental circumstances; understanding these factors can help increase the effectiveness of nudge interventions (46)	High	No	1/9 (AMSTAR rating by McMaster Health Forum)	Not stated	No	None identified
Protocol	This study will assess how nudge interventions, including choice architecture nudges (such as default options, active choice, framing effects and order effects) and social nudges (such as accountable justification and pre-commitment or publicly declared pledge/contract), influence health professionals' decisions to overuse or underuse health services (47)						

Appendix 3: Details about each identified single study

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations
<i>Sub-strategy 1:</i> Adopting laws to ensure that policies, programs, services and products presented to citizens are based on the best available evidence (n=1)	The Australian complementary medicine advertising policy implemented strict guidelines for the advertising of complementary medicines and was met with non-compliance from the industry, indicating regulatory violation and reflecting the limited evidence supporting the use of these treatments (48) - Complaints included breaches of the Therapeutic Goods Act - For high level complaints a negation process was conducted - Low level complaints were terminated with an obligations letter	High	<i>Publication date:</i> February 2021 <i>Jurisdiction studied:</i> Australia <i>Methods used:</i> Qualitative study	None identified
<i>Sub-strategy 2:</i> Providing rewards or penalties to businesses advertising products depending on whether the products are supported by the available evidence	No single studies identified			
<i>Sub-strategy 3:</i> Supporting big tech companies to ensure that information and products presented to citizens is evidence based	No single studies identified			
<i>Sub-strategy 4:</i> Using strategies that aim to create healthier default options (often called 'nudging' strategies in the literature) but not limiting them to these choices	No single studies identified			

Appendix 4: Documents that were excluded in the final stages of review

Document type	Hyperlinked title
Sub-strategy 1	
Article	Constructing options for health care reform in Hong Kong
Article	How much better is better regulation? Assessing the impact of the better regulation package on the European Union – a research agenda
Article	Japanese social welfare policies for the aged and implications on policy making in China
Article	Senior ranking police officers, perception of evidence-based policing and police fatalities
Article	Social policies designed to prevent sexual violence: The Emperor's new clothes?
Article	The policy-demand for social research in civil justice: The UK perspective
Article	Why did Swiss citizens vote to ban tobacco advertising?
Essay	Falsehoods and facts about drugs and the people who use them
Essay	Two cheers for evidence: Law, research, and values in education policymaking and beyond
Policy brief	Options to approach health litigation in Brazil: A policy brief
Sub-strategy 2	
Article	The role of marketing in pharmaceutical research and development
Sub-strategy 3 (none identified)	
Sub-strategy 4	
Article	A review of nudges: Definitions, justifications, effectiveness
Article	An exploratory study on the policy implications of nudge as a catalytic policy tool
Article	Combating misinformation through nudging
Article	It's time we put agency into behavioural public policy
Article	Making healthy choices easier: Regulation versus nudging
Article	Nudge nudge, think think: Two strategies for changing civic behaviour
Article	Nudges or mandates? The ethics of mandatory flu vaccination
Article	Nudge plus: Incorporating reflection into behavioral public policy
Article	Nudge to health: Harnessing decision research to promote health behavior
Article	Nudge versus boost: How coherent are policy and theory?
Article	Nudging as an environmental policy instrument
Article	Seeing the nudge from the trees: The 4S framework for evaluating nudges
Article	Simple nudges that are not so easy
Article	The use of green nudges as an environmental policy instrument
Article	Why nudging is not enough
Pre-print	Nudge theory: Literature, effectiveness, applications, implications and recommendations

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