

## **Development of a theoretical framework and an operationalized tool for supporting the implementation of health-system guidance at the national and sub-national level**

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**Background:** Health-system guidance (HSG) is expected to assist with making decisions about addressing problems or achieving goals in health systems. However, the implementation of HSG is challenging due to the complexity of health-system policymaking, the diversity of available evidence and vast differences in contexts. Current guideline implementation tools focus on clinical practice guideline implementation and might not be suitable for relatively complex HSG implementation. This research program aims to bridge this gap by developing a theoretical framework and a tool designed to support HSG implementation at both national and subnational levels. It achieves these objectives through three original studies.

**Methods:** We achieve the above objectives through three original studies. The first study used a critical interpretive synthesis of existing literature to develop a theoretical framework. The second study employed a modified Delphi method to identify the components of an HSG implementation tool based on this framework. The third study adopted a formative evaluation study design to explore –through a talk-aloud process with semi-structured interviews with guideline implementers – whether, how, and why the HSG implementers will use the tool and how it can be refined, leading to the development of this tool.

**Results:** In the first study, a theoretical framework was developed to identify 10 facilitators, 10 barriers, nine combined facilitators and barriers, and 11 strategies, with 28 general (versus 12 specific), across six levels: the political system, health system, community, organization, providers, and the public/patients (Please see Appendix 1). Following this, the second study yielded 33 consensus-based candidate components of a tool for HSG implementation. In the third study, seventeen interviews were conducted across 11 countries within six WHO regions, with largely positive feedback on the tool's face validity and usability. Interviewees recognized the tool's overall structure as clear and comprehensive, and the majority expressed a willingness to use the tool for supporting HSG implementation. Based on the above findings, a tool was developed, featuring a one-page quick reference detailing explicit target users and usage instructions, and a comprehensive two-page table presenting 33 items spanning six domains (Please see Appendix 2).

**Conclusions:** These studies collectively offer theoretical and substantive insights into understanding the facilitators, barriers, and strategies crucial for the effective implementation of HSG. The developed HSG implementation framework and accompanying tool can be useful for supporting the implementation of HSG covering varied topics and in different contexts (including low-, middle- and high-income countries).

# Appendix 1: Framework about barriers (-), facilitators (+) and strategies (✓) for supporting the health-system guidance implementation



## Appendix 2: The tool for supporting the implementation of health-system guidance (HSG)

### Quick reference

- **Purpose:** The objective of this tool is to support HSG implementation at the national and/or subnational level. It provides a comprehensive range of items categorized as barriers, facilitators, and strategies across six distinct levels: political system, health system, community, organization, provider, and patient/the public. This tool aims to help HSG implementers assess whether these factors and strategies have been considered when planning HSG implementation.
- **Target audience:** This tool is tailored for HSG implementers – individuals engaging in strategies and activities essential for the practical application of HSG in real-world settings. The primary users of this tool are policymakers and planners responsible for HSG implementation at national or sub-national levels, as well as organizational leaders and program managers. Secondary users encompass a wide range of implementation partners such as researchers, professional associations, healthcare providers, funding agencies, donors, non-governmental organizations (NGOs), civil society organizations, and other key stakeholders engaged in facilitating HSG implementation.
- **Usage instructions:**
  - **Items** serve as prompts to evaluate if their content is relevant and has been considered within your specific context or scenario.
  - **The 'user assessment & feedback' section** enables users to provide detailed explanations or share additional findings.
  - **This tool encourages flexible usage options and scenarios**, such as functioning as a checklist for implementation groups during HSG workshops. In such workshops, the group can evaluate the items, gathering insights and feedback, leading to a detailed summary that identifies key barriers, facilitators, and strategies essential for HSG implementation. Moreover, HSG developers can leverage this tool to integrate implementation considerations into the recommendation development process.
  - When using this tool, it is beneficial to have **individuals or teams with expertise in evidence-informed decision-making** or to seek support from experts in this area.
- **Content and definitions:**
  - **Facilitators** are preceded by (+) and are defined as perceived and experienced/tested factors that increase motivation or action to implement HSG recommendations. Facilitators could be described as enablers, motivators, opportunities, advantages, etc.
  - **Barriers** are preceded by (-) and can be defined as hindering factors that were perceived or reported to lead to not following HSG recommendations. Barriers could be described as challenges, obstacles, difficulties, problems, disadvantages, limitations, restrictions, etc.
  - **Factors** that can be both facilitators and barriers, depending on whether they are framed positively or negatively, are preceded by (±).
  - **Strategies** are preceded by (✓) and can be defined as methods or techniques used to enhance the adoption, implementation, and sustainability of a recommendation or intervention. Strategies could be described as approaches, actions, solutions, responses, tools, etc.
  - **Any factors or strategies that apply to all types of guidelines** (clinical, public health and health systems)—not just health-system guidance—are followed by an asterisk (\*).
- **Illustrative considerations:** If need to know detailed explanations and examples for each item, please click [here](#).
- **Feedback and contact information:** For any inquiries or feedback regarding this tool, please contact us at wangq87@mcmaster.ca. We strongly encourage HSG implementers to utilize this tool in their settings, and we are readily available to provide support and guidance.

<b>Domain 1: Political system</b>	
<b>Items</b> [(+) <i>facilitator</i> , (-) <i>barrier</i> , (±) <i>facilitator/barrier</i> , (✓) <i>strategy</i> , * <i>general</i> ]	<b>User assessment &amp; feedback</b>
(±) Stable (or unstable) political environment	
(+) Political support or commitment related to HSG	
(+) Stakeholder support and buy-in for HSG*	
(+) Robust evidence infrastructures for supporting HSG implementation*	
(-) Changes in leadership roles involving HSG-supporting politicians and public servants	
(-) Interest groups (such as for-profit companies, unions representing a category of health workers or groups of patients with shared healthcare needs) that mobilize when faced with the potential for concentrated costs (and benefits)*	
(✓) <b>Obtain</b> policymaker buy-in and push for policy changes to support HSG implementation*	
(✓) <b>Develop</b> documents that contextualize the HSG – alongside national evidence about the problem and its causes, options to address them, and key implementation considerations – to support national decision-making	
<b>Overall assessment &amp; feedback at the political-system level</b>	
<b>Domain 2: Health system</b>	
<b>Items</b> [(+) <i>facilitator</i> , (-) <i>barrier</i> , (±) <i>facilitator/barrier</i> , (✓) <i>strategy</i> , * <i>general</i> ]	<b>User assessment &amp; feedback</b>
(±) Adequate (or inadequate) resources, including financial budgets (constraints), workforce, facilities, equipment, and information and communication technology-based monitoring and evaluation system*	
(+) Strong networks and multisectoral collaboration	
(-) Requiring significant adjustments to health-system governance arrangements (who can make what decisions), financial arrangements (how money flows through the system), and delivery arrangements (how care is organized to meet people's needs)	
(✓) <b>Establish</b> an HSG implementation network	
(✓) <b>Engage</b> diverse health-system stakeholders in HSG implementation	
<b>Overall assessment &amp; feedback at the health-system level</b>	
<b>Domain 3: Community</b>	
<b>Items</b> [(+) <i>facilitator</i> , (-) <i>barrier</i> , (±) <i>facilitator/barrier</i> , (✓) <i>strategy</i> , * <i>general</i> ]	<b>User assessment &amp; feedback</b>
(±) Social norms and values in local communities regarding HSG-informed decisions	

(±) Community-level facilities and infrastructure*	
(±) Community engagement*	
(✓) <b>Conduct</b> pilot and multi-phased HSG implementation*	
<b>Overall assessment &amp; feedback at the community level</b>	
<b>Domain 4: Organization</b>	
<b>Items</b> [(+) <i>facilitator</i> , (-) <i>barrier</i> , (±) <i>facilitator/barrier</i> , (✓) <i>strategy</i> , * <i>general</i> ]	<b>User assessment &amp; feedback</b>
(+) Physically and intellectually supportive organizational environments*	
(+) Alignment of HSG recommendations with organizational culture and priorities	
(-) Limited organizational capacities*	
(-) Limited organizational collaboration*	
(✓) Provide on-site support for HSG implementation*	
(✓) <b>Link</b> HSG implementation to organizational improvement programs	
<b>Overall assessment &amp; feedback at the organizational level</b>	
<b>Domain 5: Providers</b>	
<b>Items</b> [(+) <i>facilitator</i> , (-) <i>barrier</i> , (±) <i>facilitator/barrier</i> , (✓) <i>strategy</i> , * <i>general</i> ]	<b>User assessment &amp; feedback</b>
(-) Training challenges*	
(-) Inertia of previous practice*	
(-) Workload*	
(+) Endorsement or support from key opinion leaders among managers, health workers and/or patients, families and caregivers involved in advisory councils and other bodies*	
(±) Perceived or experienced benefits and costs related to HSG implementation, such as financial incentives and professional development opportunities*	
(✓) <b>Provide</b> training to enhance knowledge, attitude and skills about HSG and its implementation*	
(✓) <b>Provide</b> audit and feedback on professional practice*	
<b>Overall assessment &amp; feedback at the provider level</b>	
<b>Domain 6: Patients/public</b>	
<b>Items</b> [(+) <i>facilitator</i> , (-) <i>barrier</i> , (±) <i>facilitator/barrier</i> , (✓) <i>strategy</i> , * <i>general</i> ]	<b>User assessment &amp; feedback</b>
(-) Socioeconomic disadvantages*	
(+) Perceived or experienced benefits of HSG*	
(✓) <b>Provide</b> education and support activities*	
<b>Overall assessment &amp; feedback at the patients/public level</b>	