

Using an agent-based model to explore how knowledge brokers influence the policy making process

Policy making is a complex process, characterized by people and behaviors that interact dynamically over time and in non-linear ways. When preparing to make decisions, policy makers must consider what research evidence will support potentially efficient and high-impact policy alternatives. They must also assess the potential impact of different alternatives given the unique policy context. Lacking access to contextually-relevant evidence can inhibit its use in policy making. **Knowledge brokers could help address these barriers.** Knowledge brokers are individuals who assess and compile evidence for particular policies, facilitate connections between policy makers and researchers, and provide training to policy makers.



Because policy making decisions affect complex systems, it is difficult to anticipate or identify the impact of these decisions without using formal modeling to simulate interactions. **This study is the first use of an agent-based model (ABM) to explore children’s mental health policy making dynamics and simulate the impacts of knowledge broker interventions.**

Study authors used data from surveys and interviews with state-level mental health agency (MHA) officials to inform the development of an ABM in which policy makers have various degrees of influence over decisions. These policy makers interact in a network before and after knowledge brokers engage with them. The surveys and interviews revealed that knowledge brokers can indeed help address barriers to research use. **The simulation results suggest that the presence of knowledge brokers can: 1) influence consensus formation, 2) accelerate policy decisions, and 3) increase the likelihood that policies with a strong evidence-base are adopted.**

RESEARCH BRIEF based on this article: Combs T, Nelson KL, Luke D, McGuire FH, Cruden G, Henson RM, Adams DR, Hoagwood KE, Purtle J (2022). Simulating the role of knowledge brokers in policy making in state agencies: An agent-based model. Health Services Research. 2022:1-16. [doi:10.1111/1475-6773.13916](https://doi.org/10.1111/1475-6773.13916).

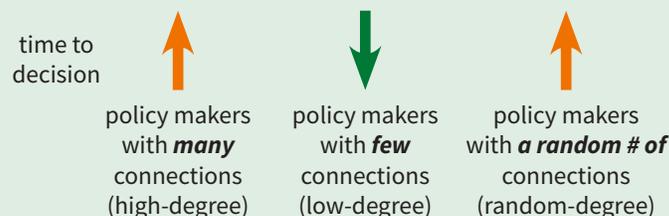
KEY TAKEAWAYS FROM THE RESEARCH

In the model, policy makers reached decisions on **high-quality** and **low-quality** policies in **less than 1/2 the time** than for **moderate-quality** policies



(In the model, policy quality was based on the strength of evidence for the policy combined with the alignment of the policy with an agency’s mission & budget.)

When knowledge brokers were present (introduced in the model), **time to a policy decision increased** or **decreased** depending on the connectedness of the policy makers



“ The prototype ABM suggests that **when knowledge brokers are present and policy options with strong research evidence support are present**—and the cost of implementation is aligned with an agency’s resources as well as mission or scope (i.e., context)—**such policies are more likely to be adopted.** ”

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