POLICY PROFILE

Hub-and-Spoke Type Policies

RAND-USC SCHAEFFER OPIOID POLICY TOOLS AND INFORMATION CENTER

Direct state and/or federal funding to implement multiple geographically based coordinated care networks in which patients receive short-term intensive inpatient or outpatient care until stabilized, then are referred to other outpatient practices for supportive services and medication for opioid use disorder (MOUD) in primary care settings or community-based practices. Each network forms a system of care with a primary organizing agency (hub) that identifies, collaborates, and subcontracts with a network of substance use and mental health treatment providers (spokes) to provide integrated medication treatment.

A panel of experts rated how they expect this type of policy to affect four outcomes: *opioid use disorder (OUD) treatment engagement*, *OUD treatment retention*, *OUD remission*, and *opioid overdose mortality*. Another panel of experts rated the policy on four implementation criteria: *acceptability* to the public, *feasibility* of implementation, *affordability* from a societal perspective, and *equitability* in health effects.

POLICY RECOMMENDATION ACCORDING TO EXPERT RATINGS

OPPOSE	UNCERTAIN	**SUPPORT**

SUMMARY OF EXPERT RATINGS

OUTCOMES	EFFECT RATING		
OUD Treatment Engagement	HARMFUL	LITTLE-TO-NO	**BENEFICIAL**
OUD Treatment Retention	HARMFUL	LITTLE-TO-NO	**BENEFICIAL**
OUD Remission	HARMFUL	LITTLE-TO-NO	**BENEFICIAL**
Opioid Overdose Mortality	HARMFUL	LITTLE-TO-NO	**BENEFICIAL**
CRITERIA	**IMPLEMENTATION RATING**		
Acceptability	LOW	MODERATE	**HIGH**
Feasibility	LOW	**MODERATE**	HIGH
Affordability	LOW	**MODERATE**	HIGH
Equitability	LOW	MODERATE	**HIGH**

SUMMARY OF EXPERT COMMENTS

- Experts expect these policies to increase OUD treatment engagement and retention by improving access, coordination, comprehensiveness, and care quality, thus increasing OUD remission and decreasing overdose mortality.
- Experts believe the public supports increasing access to care and continuity of care to address the overdose epidemic.
- Moderate feasibility is due to geographic variability in infrastructure, cooperation among different health care providers and organizations, and existing resources.
- Although cost-effective, these policies are resource-intensive to initiate and sustain.
- High rating for equitability reflects experts' perceptions of improved coordination and greater access to care, as well as better community engagement as a result of these policies.

THE PANELS AND RESULTS INFORMING THIS POLICY PROFILE ARE FULLY DOCUMENTED IN

Smart, R., Grant, S., Gordon, A. J., Pacula, R. L., & Stein, B. D. (2022). Expert panel consensus on state-level policies to improve engagement and retention in treatment for opioid use disorder. *JAMA Health Forum*, 3(9), e223285. As of July 31, 2023: https://www.rand.org/t/EP69031.html

Grant, Sean, Rosanna Smart, Adam J. Gordon, Rosalie Liccardo Pacula, and Bradley D. Stein. (2023). Expert views on state policies to improve engagement and retention in treatment for opioid use disorder: A qualitative analysis of an online modified-Delphi process. *Journal of Addiction Medicine*. As of December 4, 2023: https://www.rand.org/t/EP70324.html

For a complete list of OPTIC Policy Profiles, visit www.rand.org/policy-profiles.

To view this Policy Profile online, visit www.rand.org/t/RBA3054-23.

Outcomes Summaries

OUD TREATMENT ENGAGEMENT

Percentage of people meeting the criteria for an OUD diagnosis who receive two or more OUD treatment services (including medication for OUD) within 34 days of initiating treatment.

EFFECT RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
BENEFICIAL	Funding for short-term intensive care, easier access to outpatient treatment, and expanded pathways to care would increase treatment engagement (e.g., starting MOUD and coordinated care), especially in underserved areas with previously scarce pathways to care.	"This policy generally increases access to treatment and also facilitates long-term, coordinated care"
LITTLE-TO-NO	Depends on the implementation (e.g., appropriate subcontracting and reimbursement mechanisms, access to hub, outreach and handoff from hub to spokes).	"Depends on the implementation and buy-in from hubs"
HARMFUL	N/A	N/A

OUD TREATMENT RETENTION

Percentage of people meeting the criteria for an OUD diagnosis who remain continuously enrolled in OUD treatment services for at least six months.

EFFECT RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
BENEFICIAL	Increased treatment engagement will lead to increases in treatment retention. More comprehensive and coordinated care (e.g., shared medical records, opportunity for patients not doing well to return to the hub) will increase retention.	"The hub and spoke model allows for more access/options for [treatment], and can be especially beneficial in rural areas. I see accessibility and coordinated care going hand and hand with retention"
LITTLE-TO-NO	Limited evidence to rate policies as harmful or beneficial. Costs, treatment accessibility and quality, and the availability of social supports may influence treatment retention.	"The caveat is implementation with good fidelity, the data is not as robust on these specific outcomes, especially long term"
HARMFUL	N/A	N/A

Outcomes Summaries

OUD REMISSION

Percentage of people meeting the criteria for an OUD diagnosis who do not experience OUD symptoms (other than a craving, desire, or urge for opioid) for at least 12 months.

EFFECT RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
BENEFICIAL	Increased treatment engagement and retention could lead to increases in OUD remission. More comprehensive and coordinated care (e.g., access to various levels of care, individually tailored care) could increase remission.	"Having connections to specialized, comprehensive treatment programs that can address ongoing drug use through a wide range of services and referrals may make a significant dent on remission"
LITTLE-TO-NO	Population-level impacts on OUD remission are challenging to achieve, and there is limited evidence to rate these policies as harmful or beneficial. Availability of recovery services may influence OUD remission.	"Very few hub and spoke models I have witnessed include community-based peer support services focused on recovery rather than treatment continuation"
HARMFUL	N/A	N/A

OPIOID OVERDOSE MORTALITY

Per capita rates of fatal overdose related to opioids, including opioid analgesics (e.g., oxycodone), illegal opioids (e.g., heroin), and synthetic opioids (e.g., fentanyl).

EFFECT RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
BENEFICIAL	More accessible, comprehensive, coordinated, and evidence-based care (including MOUD and naloxone distribution) should decrease overdose mortality.	"For patients struggling, having easy access to the hub will hopefully increase retention in vulnerable patients and allow them to remain in treatment. Leaving treatment is a time particularly high risk for overdose"
LITTLE-TO-NO	There is limited evidence to rate these policies as harmful or beneficial. They would not improve access for those without the ability to pay for care.	"There is not a large literature on this outcome for hub-and-spoke models, and there are also a lot of intervening factors that impact mortality outcomes, so the decrease in mortality may not be very large"
HARMFUL	N/A	N/A

Implementation Criteria Summaries

ACCEPTABILITY

The extent to which the policy is acceptable to the general public in the state or community where the policy has been enacted.

IMPLEMENTATION RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
HIGH	General public is favorable to increasing access to care and continuity of care to address the overdose epidemic (especially in rural/remote areas).	"For the models that are out there, it seems to have been embraced by the public. I think the general public can see how it creates opportunity in areas that maybe didn't have access in the past or didn't have access to specialist through the hub."
MODERATE	General public is likely not to be familiar with or have strong opinions about these policies. Among those who are, some may not like the cost.	"No obvious reason why this would be viewed negatively, except that it is probably not familiar to the general public"
LOW	N/A	N/A

FEASIBILITY

The extent to which it is feasible for a state or community to implement the policy as intended.

IMPLEMENTATION RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
HIGH	Use cases demonstrate feasibility, given sufficient infrastructure, leadership, and resources.	"There is growing evidence on implementation of these models on which to build policies in systems that address feasibility concerns"
MODERATE	Geographic variability in feasibility due to potential implementation difficulties related to infrastructure (e.g., local capacity for hubs and spokes, telemedicine, technical assistance, trained providers), cooperation among different health care providers and organizations (e.g., willingness of primary care providers to participate), and existing resources.	"This requires MUCH more infrastructure support, funding, training, and technical assistance than most states have anticipated. Everyone wants to say they are offering hub and spoke, but few (outside of [Vermont]) have actually given adequate support to the spoke sites (in terms of funding, infrastructure development, or training/technical assistance). It is feasible, but takes a lot more than most states have anticipated"
LOW	Limited feasibility based on real-world evidence that the Vermont hub-and-spoke model did not replicate in other states. Difficult to implement given fragmented health care system, siloing of behavioral health care, and the stigma surrounding MOUD.	"This did not work that well when implemented in California based on Vermont model—they lacked the dynamic individuals that made Vermont work—not sure what the answer is—the idea is great"

Implementation Criteria Summaries

AFFORDABILITY

The extent to which the resources (costs) required to implement the policy are affordable from a societal perspective.

IMPLEMENTATION RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
HIGH	High upfront costs would be offset by long-term cost-effectiveness through more-efficient care and reductions in morbidity and mortality.	"Upfront costs will be required, depending on state, but data shows that there is a cost savings when hub and spoke models [are] implemented (e.g., Vermont)"
MODERATE	Concerns about policies being resource-intensive to initiate and sustain.	"These care models tend to be resource intensive, although it's commensurate with the need of the population"
LOW	Failed replications have been extremely costly.	"The [Vermont] model was an epic failure in [Los Angeles] County. Tens of millions of dollars were wasted"

EQUITABILITY

The extent to which the policy is equitable in its impact on health outcomes across populations of people who use opioids.

IMPLEMENTATION RATING	SUMMARY OF EXPERT OPINION	REPRESENTATIVE QUOTATIONS
HIGH	Improved coordination, greater access to care, and better understanding of diverse communities through broader networks of health care expertise and community support services, especially when implemented in remote and previously underserved areas.	"This model can decrease inequities/health disparities when strategically placing 'spokes' in areas of need for whom residents access care the least"
MODERATE	Depends on how it is implemented. It has the potential to increase overall access, though likely to be utilized best by patients and communities who already have more resources.	"I think this would both increase access for all people and could potentially widen disparities in MOUD due to its being an innovation that will likely be best capitalized on by those with the most resources"
LOW	Implementation will need to purposely center on equity and deliberately maintain an equity lens throughout.	"Unless it has explicit programming and protections built in to engage and make accessible to groups historically excluded from care, including Black, Latinx, and Native American populations, then there is a substantial risk that it will exacerbate underlying racial and ethnic inequities."

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