

## How Do We Determine Which Policies and Strategies Are Effective? Evidence Review Process

The Prenatal-to-3 Policy Impact Center aims to serve as an integral resource that policy leaders, scholars, advocates, and funders can turn to for comprehensive reviews of the evidence on state policies that intend to strengthen outcomes for infants, toddlers, and their families. To be this resource, the Policy Impact Center seeks to identify, through rigorous and impartial analysis, the most effective state policies for supporting the prenatal-to-3 (PN-3) period—those which will enhance maternal and child health, foster parenting skills and family supports, strengthen early care environments, and reduce racial and ethnic disparities.

This document outlines the process our team follows to conduct comprehensive, systematic reviews of the evidence and to reach conclusions about the effectiveness of state policies and strategies to create the conditions in which young children and their families can thrive. These conditions, made clear by decades of research on the science of the developing child, are represented by our eight PN-3 policy goals, listed below.

### Prenatal-to-Three Policy Goals



Access  
to Needed  
Services

Families have access to necessary services through expanded eligibility, reduced administrative burden, and identification of needs and connection to services.



Parental Health  
and Emotional  
Wellbeing

Parents are mentally and physically healthy, with particular attention paid to the perinatal period.



Parents'  
Ability  
to Work

Parents have the skills and incentives for employment and the resources they need to balance working and parenting.



Nurturing  
and Responsive  
Child-Parent  
Relationships

Children experience warm, nurturing, stimulating interactions with their parents that promote healthy development.



Sufficient  
Household  
Resources

Parents have the financial and material resources they need to provide for their families.



Nurturing  
and Responsive  
Child Care in  
Safe Settings

When children are not with their parents, they are in high-quality, nurturing, and safe environments.



Healthy  
and Equitable  
Births

Children are born healthy to healthy parents, and pregnancy experiences and birth outcomes are equitable.



Optimal Child  
Health and  
Development

Children's emotional, physical, and cognitive development is on track, and delays are identified and addressed early.

**Step 1:** Identify potential state-level policies for comprehensive review. States can implement a wide variety of policies to support the health and wellbeing of infants, toddlers, and their families. To identify state-level policies for review, we conducted an exhaustive search of the prenatal-to-3 landscape and solicited input from experts and stakeholders. Whenever possible, we consider policies to be review-eligible when we identify a clear regulatory or statutory policy that has been studied at the state or national level; however, we also identify large-scale initiatives, strategies, and programs that have been studied as proposed solutions for improving conditions for young children and their families.

To be considered for a comprehensive review, identified policies must meet four criteria: 1) the policy is theoretically related to our eight PN-3 policy goals; 2) states must have leverage (authority to design, implement, or enforce) over the policy; 3) the policy must have been implemented in a state or setting large enough to study; and 4) the impact of the policy must have been studied. If a policy does not meet these four criteria, we can only discuss the goals the policy seeks to address and the theory of why it would be expected to impact PN-3 outcomes. Not all potential state strategies have been studied at a statewide level; in these instances, we can review the effectiveness of programs or initiatives that have the potential to be scaled up.

**Step 2:** Review policy background, scale, and goals. To better understand the specifics of a state policy and how it might support the prenatal-to-3 period, we begin our comprehensive reviews by researching its background, history, structure, scale, and implementation. We identify which of the eight PN-3 policy goals the policy aims to address and what outcomes it is expected to impact. We also seek to understand how policy characteristics differ across state contexts and how that variation may lead to differences in outcomes for children and their families.

**Step 3:** Conduct a broad scan of peer-reviewed and gray literature related to the policy and determine generalizability. Using theoretically-driven search parameters, keywords, and trusted search engines, we identify and collect all relevant literature related to the policy. The collected literature may include peer-reviewed academic research, government reports, working papers, and meta-analyses. Statewide regulatory or statutory policies have often been studied at scale, but the same is not true for strategies that have not yet been implemented statewide. States have greater variability in the design and scale of strategies, which limits our ability to generalize about the effectiveness of a particular strategy at the population level. For large-scale initiatives, strategies, and programs, we can only review their effectiveness as state *strategies* with no clear or optimal state lever, in contrast to clearly defined statewide *policies*.

**Step 4:** Identify the studies that attempt to measure a causal relationship between the policy or strategy and prenatal-to-3 outcomes. To narrow the scope of the review to only those studies that attempt to identify the causal impact of a policy or strategy on prenatal-to-3 outcomes, we apply a number of exclusion criteria related to the following: relevance of the population studied, relevance of the outcomes examined, rigor of the research design, and strength of the analytic methods used. Research on other populations or outcomes is considered but does not factor into our conclusions about the causal impact of a policy or strategy on the prenatal-to-3 period specifically.

**Step 5:** Thoroughly review the studies identified in Step 4 to determine if a study successfully meets the standards of evidence for a strong causal study. A strong causal study has a well-executed research design and rigorous analytic methods that allow for causal inference between the policy or strategy and a particular outcome. Randomized control trials (RCTs), which are generally considered the gold standard of evaluation, are rare in evaluations of policy because policies usually affect entire populations, rather than a randomly assigned subset of people. Quasi-experimental designs (QEDs) and longitudinal studies with adequate controls for internal validity are more commonly used to study policy impacts and can provide estimates of causality. In addition to an appropriate research design, a strong causal study must have a sufficiently large, representative sample and methodologically rigorous analyses.

Many studies of policies are cross-sectional or observational in their design, and although they may show an association between a policy and an outcome, the studies cannot adequately account for issues of selection or confounding variables to isolate the causal impact of a policy. Our conclusions are informed by studies that make the best possible attempts at identifying a causal relationship, but because most studies are not RCTs, causality may not be able to be confirmed. When available, rigorous meta-analyses that include a sufficient number of studies are also considered as strong causal evidence.

**Step 6:** For each strong causal study reviewed, determine the direction (beneficial, null, or detrimental) of the impact of the policy or strategy on each policy goal indicator measured. An indicator is a specific, measurable metric that represents a broader policy goal. A strong causal study may measure the impact of a policy or strategy on one or more indicators within and across policy goals. In the table example below, each letter represents a distinct strong causal study, and the letter’s placement specifies the direction of the study’s findings for each indicator. If studies measure indicators in a similar way (e.g., low birthweight and very low birthweight), they are grouped into the same indicator (birthweight). Null impacts are defined as statistically insignificant at the 0.05 level.

*Table 1: Evidence of Effectiveness by Policy Goal (example)*

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts
Parents’ Ability to Work	Labor force participation	C, K	A, D, F, G	I, M
Sufficient Household Resources	Earnings/income	A, C, D, F, G, K, M		I
	Poverty	E, G, M	O	
Healthy and Equitable Births	Birthweight	J, Q		
	Infant mortality	H, J, N		
	Maternal mortality	B		
Parental Health and Emotional Wellbeing	Clinical health measures	Q		
	Maternal mental health	Q		
Nurturing and Responsive Child-Parent Relationships	Time spent reading with child	R		
	Neglect	L		
	Physical abuse		L	

**Step 7:** For each policy goal, determine the overall impact of the evidence. Each indicator measured by a strong causal study aligns with one of our eight PN-3 policy goals. To determine the overall impact of the policy or strategy on each policy goal, we weigh the number, direction, and effect size of all aligned indicators. We also consider the year of publication, the data source, the study sample size, and the trends for those effects that do not reach the cutoff for statistical significance. We exercise professional judgment to weigh all of these factors when determining a policy or strategy’s impact on each policy goal (see the Overall Findings column in Table 2 below).

For goals with evidence from two or more<sup>1</sup> strong causal studies we assign the following designations:

Impact of the Policy or Strategy on Goal	Definition
Positive	The weight of the evidence, given all considered factors, indicates a beneficial impact on the policy goal
Mostly Positive	The majority, but not all, of the evidence indicates a positive impact on the policy goal
Mixed	The findings include a relatively even combination of beneficial, null, and/or detrimental impacts on the policy goal
Null	The weight of the evidence, given all considered factors, indicates a null impact on the policy goal
Negative	The weight of the evidence, given all considered factors, indicates a detrimental impact on the policy goal

For outcomes with evidence from fewer than two<sup>2</sup> strong causal studies, we add “trending” to the designation, and the evidence can be trending positive, mixed, null, or negative.

Table 2: Overall Impact on Policy Goal (example)

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Findings
Parents’ Ability to Work	Labor force participation	C, K	A, D, F, G	I, M	Mixed
Sufficient Household Resources	Earnings/income	A, C, D, F, G, K, M		I	Positive
	Poverty	E, G, M	O		
Healthy and Equitable Births	Birthweight	J, Q			Positive
	Infant mortality	H, J, N			
	Maternal mortality	B			
Parental Health and Emotional Wellbeing	Clinical health measures	Q			Trending Positive
	Maternal mental health	Q			
Nurturing and Responsive Child-Parent Relationships	Time spent reading with child	R			Mostly Positive
	Neglect	L			
	Physical abuse		L		

<sup>1</sup> Two or more strong studies that include more than one location, author, or data set

<sup>2</sup> Or multiple studies that include only one location, author, or data set

If the weight of the evidence within a goal indicates overall impacts are positive, mostly positive, trending positive, or mixed (mostly beneficial and null), then the policy or strategy is aligned with and impacts that policy goal.

**Step 8:** Use the information from Step 7 to determine the overall support for policy or strategy effectiveness. In this step, we consider the direction of the policy or strategy’s impact on each policy goal studied to determine the overall support for a policy or strategy’s effectiveness to create the conditions in which children and their families thrive. A policy or strategy can be considered effective if it significantly improves outcomes for at least one of our eight PN-3 policy goals, though it does not need to positively impact each goal. For those goals for which the impact is mixed, we consider the balance of beneficial, null, and detrimental impacts. Based on our assessment, we assign the following designations:

Overall Designation of Policy or Strategy Effectiveness	Definition
Effective	Positive, mostly positive, or mixed <sup>3</sup> impacts on at least one policy goal
Needs Further Study	The evidence is insufficient (not studied for the prenatal-to-3 population, not rigorously studied, or unstudied)
Ineffective	Substantial evidence of null impacts
Harmful	Substantial evidence of mixed <sup>4</sup> or negative impacts

In the example findings presented in Table 2 above, the overall impacts on policy goals range from mixed to positive. Because the impacts are positive or mostly positive for at least one policy goal, we call this policy effective overall, even though it is not an effective strategy for improving parents’ ability to work. States may prioritize certain goals and might be primarily interested in the effect of a policy or strategy on a particular goal.

Policy Goal	Overall Goal Impact	Overall Policy or Strategy Effectiveness
Parents’ Ability to Work	Mixed	<b>Effective</b>
Sufficient Household Resources	Positive	
Healthy and Equitable Births	Positive	
Parental Health and Emotional Wellbeing	Trending Positive	
Nurturing and Responsive Child-Parent Relationships	Mostly Positive	

<sup>3</sup> If the weight of the evidence indicates mostly beneficial or null impacts

<sup>4</sup> If the weight of the evidence indicates detrimental impacts

**Step 9:** Conduct a broader analysis of the policy or strategy beyond its overall effectiveness. In these longer-term analyses, we will examine a number of important considerations that influence the impact a policy or strategy can have on prenatal-to-3 outcomes. These considerations include:

1. *Scale – How big is the impact, and how can it be maximized?* We want to discuss the number of children and families impacted, the size of the impact, and the elements of the policy that are most effective (e.g., 12 weeks of paid family leave or a refundable state earned income tax credit).
2. *Equity and Inclusivity – Does the policy reduce disparities in outcomes among racial and ethnic groups or socioeconomic statuses? Does it impact noncustodial parents?*
3. *Cost-Benefit Analysis – Do the benefits of the policy outweigh the costs? What is the expected return on the investment?*
4. *Feasibility – Is the policy simple or complex to implement? Is there political will for it to be adopted and implemented?*