

# [Intervention Name]

## Intervention Concept Model: Research

Research Lead: Researcher name

Engineering Lead: Engineer name

Data Analyst Lead: DA name

Intervention Definition	<p>Case Definitions</p> <ul style="list-style-type: none"><li>• CONIC case definition(s)</li><li>• LIST case definition(s), if applicable:</li><li>• Other case definitions, if applicable:</li></ul> <p>Intervention targets</p> <ul style="list-style-type: none"><li>• Case definition(s) and/or proximal GBD outcomes mortality/disability, diseases, risks, important covariates, related targets)</li><li>• Other important outcomes of the intervention</li><li>• How well does GBD capture intervention targets (eg. missing risks, aggregate causes, etc.)?</li></ul>
Concept Model Diagram	< Insert diagram here. See Template on HUB >
Demographics	<p>Population</p> <ul style="list-style-type: none"><li>• One of: Prospective, Retrospective, Both.</li><li>• Earliest likely start year, earliest likely end year (approximate):</li><li>• Smallest simulation time step (approximate):</li><li>• Locations of Interest (the most likely 1-5 countries to be modeled, or if you need custom locations):</li><li>• Size of largest starting population (approximate):</li><li>• Youngest start-age &amp; oldest end-age:</li><li>• Exit age (at what age to stop tracking simulants):</li></ul> <p>Fertility</p> <ul style="list-style-type: none"><li>• Fertility (one of: None, Deterministic, Crude Birth Rate, Age-Specific Fertility):</li></ul>

	<p><b>Other</b></p> <ul style="list-style-type: none"> <li>• Extenuating Circumstances (shocks, etc.) (if applicable):</li> <li>• Other population Restrictions (if applicable):</li> </ul>
<b>Minimal Model Implementation</b>	<p><b>Coverage Gap</b></p> <p>Review the Hub documentation on coverage gaps. If your intervention fits the framework, provide the following:</p> <ul style="list-style-type: none"> <li>• Target(s) (risk/cause)</li> <li>• Existing Coverage</li> <li>• Effect size (multiplicative)</li> <li>• Treatment algorithm: likely specify target coverage &amp; linear scaleup. Or describe the intervention scenarios do you want to explore, and what parameters would be useful for that exploration/sensitivity analysis</li> </ul> <p><b><i>If you are NOT using the Coverage Gap framework you must provide detailed description of the following:</i></b></p> <p><b>Effects</b></p> <ul style="list-style-type: none"> <li>• Intervention effect on targets (additive, multiplicative, etc.):</li> <li>• Does the size of the effect depend on the quality of treatment? On how long someone has been receiving the intervention? If so, how? Include equations and graphs where possible.</li> </ul> <p><b>Specification</b></p> <ul style="list-style-type: none"> <li>• Are the intervention targets specified in terms of something GBD models directly? If not, include a brief description of the targets and reference the relevant disease or risk section where you lay out the alternative modeling strategy for the intervention targets.</li> </ul> <p><b>Existing Coverage</b></p> <ul style="list-style-type: none"> <li>• Existing Coverage: Is there already coverage of the intervention in your target populations? How should we account for it?</li> </ul> <p><b>Treatment Algorithm</b></p> <ul style="list-style-type: none"> <li>• How do we alter the coverage of the intervention in the target population?</li> </ul>

	<ul style="list-style-type: none"> <li>At what timestep (or date) does your change go into effect? Eg. one-time intervention; distributed over time; provided due to a specific event (eg health outcome or facility visit).</li> </ul> <p>Scenarios</p> <ul style="list-style-type: none"> <li>What scenarios are you analyzing (e.g. community vs healthcare delivery platform)</li> </ul>
<p><b>Full Model Implementation</b></p>	<p>Coverage Gap</p> <ul style="list-style-type: none"> <li>Difference from minimal model implementation (if applicable)</li> </ul> <p>Effects</p> <ul style="list-style-type: none"> <li>Difference from minimal model implementation (if applicable)</li> </ul> <p>Specification</p> <ul style="list-style-type: none"> <li>Difference from minimal model implementation (if applicable)</li> </ul> <p>Existing Coverage</p> <ul style="list-style-type: none"> <li>Difference from minimal model implementation (if applicable)</li> </ul> <p>Treatment Algorithm</p> <ul style="list-style-type: none"> <li>Difference from minimal model implementation (if applicable)</li> </ul> <p>Scenarios</p> <ul style="list-style-type: none"> <li>Difference from minimal model implementation (if applicable)</li> </ul>
<p><b>Risk Specifications</b></p> <p>If applicable</p>	<p>[GBD Risk Name Here] (for each gbd risk)</p> <ul style="list-style-type: none"> <li>rei_id</li> <li>distribution of exposure data (One of: dichotomous, ordered polytomous, unordered polytomous, normal, lognormal, or ensemble)</li> <li>Does your intervention require an alternative model of exposure? If so, what is it? Can we easily translate between your alternative model and the GBD model?</li> <li>What diseases and measures (e.g. incidence rate, excess mortality, etc.) are affected by this risk? If you have an alternative exposure model, how is the effect size related?</li> <li>Is this risk mediated by any other risks in your model. If so, how should we handle the mediation?</li> <li>Are there any PAF of one relationships with causes in your model? If so, what do they mean and how should we handle them?</li> </ul>

	<ul style="list-style-type: none"> <li>Does this risk apply only to certain ages or sexes? Any other restrictions?</li> <li>What data sources are used to inform your risk model (if applicable)?</li> </ul>
<b>Cause Specifications</b>	<p>[ GBD Cause Name Here ] (for each gbd cause...)</p> <ul style="list-style-type: none"> <li><b>cause_id</b></li> <li>Modelable_entity_id (if applicable)</li> <li>What outcomes are affected by this cause? Either mortality, disability, or both.</li> <li>Should this model include sequelae?</li> <li>Should this model include etiologies?</li> <li>Does this cause apply only to certain ages or sexes? Any other restrictions?</li> <li>What data sources are used to inform your cause model?</li> <li>Epidemiology Type, one of SI (susceptible-infected), SIS (susceptible-infected-susceptible), SIR (susceptible-infected-recovered), Neonatal, Other (include description):</li> <li>Deviation from standard calculation (if applicable):</li> </ul>
<b>Costing Strategy</b>  If applicable	<p><b>Unit Cost</b></p> <ul style="list-style-type: none"> <li>How and when is the unit cost incurred?</li> </ul> <p><b>Programmatic Cost</b></p> <ul style="list-style-type: none"> <li>Are your programmatic costs tied directly to the unit cost? If not, how and when are they incurred?</li> </ul>
<b>Desired Outputs</b>	<p><b>Primary Model Outcomes</b></p> <ul style="list-style-type: none"> <li>Total lives saved (total, and cause-specific) at country level (yearly &amp; aggregate)</li> <li>Change in (all-cause, and cause-specific) deaths per live birth (yearly)</li> <li>Total intervention cost at country level (yearly &amp; aggregate)</li> <li>ICERs for all-cause &amp; cause-specific deaths &amp; YLLs (using aggregated costs, deaths, and YLLs)</li> </ul> <p><b>Secondary Model Outcomes</b></p> <ul style="list-style-type: none"> <li>Change in U5MR per 100K (all-cause &amp; cause-specific, yearly)</li> <li>Change in risk exposure (yearly)</li> </ul> <p><b>Non-Standard Model Outcomes</b></p> <ul style="list-style-type: none"> <li>For each non-standard outcome, provide a detailed description of how the outcome is calculated</li> </ul> <p><b>Stratification of Metrics</b></p>

	<ul style="list-style-type: none"><li>• How should outputs be stratified? (Eg. by age, sex, risk exposure level, treatment category)</li></ul>
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