**SMDM COVID-19 Modeling Special Committee**

**Overview:**

* SMDM COVID-19 Modeling Committee seeks to immediately create a public commons of decision tools and resources for decisionmakers responding to the COVID-19 pandemic.
* Decisions relevant to patient and population care, delivery system organization, and policy formulation are all in scope.
* We aim to assemble a useful knowledge base from SMDM members and their networks.
* Our goal is to provide a method of connecting the needs of diverse decisionmakers to evidence-based decision models which can inform timely response to the COVID-19 pandemic.

**Scope of Models**

* Target is **COVID-19 decision models**
* COVID-19 decision models are defined as quantitative models which allow users to evaluate decisions between multiple alternatives in situations of uncertainty related to the prevention, diagnosis, treatment, or management of COVID-19
* We expect the models and their analysis to gather together underlying evidence, to assess the consequences of each alternative, to clarify dynamics of trade-offs involved in selected alternatives, and to aid decisionmakers in selecting an action

**Model Characteristics:**

* Core set of model characteristics to be abstracted for all models in the repository.
* Summary information will allow decisionmakers to determine the potential appropriateness of the model with their decisionmaking uncertainties:

| **Characteristics** | **Entry/Options** | **Instructions** | **Comments** |
| --- | --- | --- | --- |
| Authors | Free text | Enter first and last name of primary co-author(s) of the decision model |  |
| Institution | Free text | Enter the primary institution of the model’s lead author |  |
| Modeling Group/Consortium | Free text | If the model is part of a larger modeling group or consortium representing multiple institutions, list this group/consortium |  |
| Model Objective | Free Text | Free text overview of the modeling objective |  |
| Purpose of the Model | Check all that apply:   * Predicting epidemic parameters * Predicting epidemic parameters and mitigation * Hospital capacity planning * Diagnostic testing capacity/planning * Other (free text) | Check all potential uses of the model. Note that epidemic parameters include both virus and disease dynamics. If other purposes of the model are planned, please check other and enter in free text planned purpose. | If over time we start seeing some “other” purposes which could be grouped together as a category we could add in additional categories to the listing choices |
| Model Type | Choose one:   * Decision tree * Markov (cohort) model * Microsimulation (individual) model * Dynamic model (including SIR models) * Discrete event simulation model * Other (free text) | Choose a model type to describe the underlying model representation. |  |
| Evidence Sources | Xxx | Xxx | Xxx |
| Target Population (Level) | Check all that apply:   * Global * Regional-Global * Country-Specific * Regional-Country * State * County * City * Health System * Hospital * Other (free text) | Please check the target population for the model. If the target population is able to be changed amongst the different levels ensure that multiple levels are checked |  |
| Target Population Details | Free text | Provide free text description about the target population level for the model | In addition to the target population level above which is by pre-defined categories, this entry allows the user to provide additional details about their target population |
| Tailoring Capabilities | * Yes, tailoring abilities built in to model structure/analysis * Yes, with modification of underlying data * Uncertain * No | Please check whether tailoring of the model to a different target population is feasible given underlying structure (and if supported by evidence specific to that population) | Trying to get at here that although models might be focused on a specific target population – they might be able to be tailored to differing populations |
| Interventions and Comparators | Check all that apply:   * School closures * Social distancing * Stay-at-home order * Symptom-based testing * Asymptomatic-testing * Contact tracing * Isolating * Travel restrictions * Vaccinations * Treatments * Status quo * Other (free text) | Check all of the interventions and comparators that are compared within the decision model. |  |
| Outcomes Assessed | Check all that apply:   * Size of epidemic * Number of identified cases * Number of hospitalizations * Number of ICD beds required * Number of ventilators required * Deaths * Years of life lost * Quality-adjust life years lost * Costs * Other (free text) | Check all outcomes that are able to be assessed by the decision model |  |
| Open Source Availability/Location | Choose one:   * Under development, to be open source * Under development, to be available by request * Under development, not planned open source * Open source, free text for link * Available by request, email for requests * Not available open source | Indicate the availability of the model through open source. If under development please indicate whether the model when ready will be shared through open source.  For those models listed as open source – please input in the link to source | Do we need an option for a model that isn’t open source but is available for people to modify/tailor online through a portal – not sure how to incorporate in |
| Software/Programming Language | Free text | Enter the software or programming language used for the underlying decision model | Should this be a checklist rather than free text? If yes what is a listing of potential software/languages to include |
| Publication(s) Citation and Date | Free text | Please list any peer review publication for the decision model. If there is a published online report (which is not peer reviewed) please list that here with date |  |
| Website (if available) | Free text web address | Website address for access to the model, analysis results, and related publications |  |
| Contact information for authors | Free text email address | Email address to be used for inquiries about the decision model | Mandatory |

**Other things to consider:**

* Do we want to do any sort of quality score?
* Will need to allow updates over time as models are modified
* For submissions done online, will be verify before posting?