Attachment 1

FEDERALLY FUNDED RESEARCH AND DEVELOPMENT (FFRDC) TECHNICAL EXECUTION PLAN (TEP)

U.S. Department of Homeland Security

Pandemic Disease Triggers for Nonpharmaceutical Intervention Decision Making

Countering Weapons of Mass Destruction Office
Office of the Chief Medical Officer
and
Homeland Security Systems Engineering and Development Institute (HSSEDI)

Version: **2.0**

Date: March 17, 2020

1. Outcome

The outcome of a successful effort will be the mitigation of the Pandemic Influenza as well as other Pandemic Disease outbreaks within the United States. State and local leaders need to have access to data and pandemic experts to inform their decisions regarding non-pharmaceutical intervention escalation as well as retrograde throughout the critical period of outbreak. Reduction in the extent of the previously mentioned disease outbreak and preservation of the U.S. healthcare system will save lives.

2. Task Objectives

The objectives of the task are:

1. Define Pandemic Disease "triggers" (e.g., cases, ICU admissions, deaths) most critical to decision makers.
2. Align non-pharmaceutical interventions (NPI) that influence disease progression
3. Provide supporting disease models that track the disease and can inform decisions and actions to "bend the curve."
4. Convey information in #'s 1, 2, and 3 above to key officials at state, local and national levels who are responsible for making community-protecting decisions for the enhancement of NPIs and their retrograde.

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3. Background

The spread of Pandemic Disease is a Public Health Emergency presenting extraordinary health, economic and sociopolitical risks. Leaders at the municipal, county and state level across the nation need clear guidelines about when and how to enact and subsequently eliminate nonpharmaceutical interventions (NPIs) in their jurisdictions during the current outbreak. The DHS Chief Medical Officer plays a key role in interagency coordination of efforts, including outreach to state and local leaders responsible for strategic alignment of NPIs.

The Department of Homeland Security's immediate need is to understand and demonstrate trade-space considerations for non-pharmaceutical intervention (NPI) and Targeted, Layered Mitigation (TLM) decision options for local, state, and national leaders. Identifying "triggering events" and coupling them with appropriate state/local decision making is key and something the FFRDC can demonstrate. The triggers would be refined iteratively as the outbreak extends/ recurs, to find the optimal time and layers to be employed and eventually eliminated.

HSSEDI will align directly with the Department of Health and Human Services (HHS) FFRDC operated by MITRE to bring together a wide range of medical, public health, health systems, data analysis, and communications expertise to support this effort.

4. Technical Approach (Analytic Methodology)

HSSEDI will apply the following approach to engage, inform and guide key decision makers at the state and local levels. This approach is primarily targeted to mayors, governors and emergency response leaders for the initiation of critical decision points and triggers to enact and reverse NPI implementation efforts.

The Contractor will:

- In collaboration with industry specialists and experts, ensure a thorough real-time review of the literature and any relevant information to inform near-term action in support of Pandemic Response efforts,
- Provide guidance for early implementation and enhancement of NPIs to state and local leaders through a series of convenings, and,
- As the pandemic progresses, the Contractor will identify, collect, and analyze data to enable near real-time learning to state and local leaders for the eventual appropriate retrograde of NPI implementation efforts.

HSSEDI will track with the Federal Interagency Operational Plan as the event moves from Operational Phase 2A through Phase 3. See Figure 2.

The duration of the work will depend on the severity and length of nation-wide impact.

Daily, weekly and end-of-event information will be developed with the intent of raising awareness among federal, state and local leaders about ways to mitigate the actual or potential

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threat of Pandemic Disease outbreak as well as the potential elimination of NPI efforts when warranted.

The level of effort will be focused on the first 2-3 months of the performance period. Heavier effort will occur during March, April and likely will tail off as the epidemic worsens and becomes more widespread.

In the event retrograde triggers are adequately met, implementation and reduction plans will be developed with the intent of a public transition to normalization.

Phase	1A	1B	1C	2A	2B	2C	3
Operational Phase	Normal Operations	Elevated Threat/Credible Threat	Near Certainty or Credible Threat	Activation and Movement	Resource Employment	Intermediate Operations	Retrograde Operations
CDC Interval	None	Investigation	Recognition	Initiation	Acceleration		Deceleration
Trigger	No Specific Threat	Identification of confirmed human case with potential to cause significant human disease and potential to cause pandemic.	Confirmation of multiple human case clusters with characteristics indicating limited human-human transmission and heightened potential for pandemic. Determination of significant potential for public health emergency.	Demonstration of efficient and sustained human-human transmission. Declaration of Public Health Emergency	Increase in number of cases or increase rates of infection. Healthcare system burden exceeds State resource capabilities. State/Local request for assistance that required Federal coordination.	Increasing rate of infection in the United States indicating established transmission, with long term service disruption and critical infrastructure impacts. Presidential Stafford Ace Declaration.	Plateau or reduction in infection rates or reduction in number of cases. Progressive elimination of impacts to critical infrastructure. Federal assistance and resources impose gradual reduction in support resources to state/local impact.

Figure 1 - Phase Indicators and Triggers

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5. Alignment of study to Focus Areas and Missions

Table 1 below aligns the projected STE allocations to the IDIQ focus Areas and QHSR Mission Areas.

Table 1: Focus Areas to the QHSR Mission Areas Relationship Matrix

At the intersection of the appropriate Focus Area row and QHSR Mission Area column, enter a numeric value for the level of effort in terms of STEs.	QHSR Missions					
HSSEDI Focus Areas	Mission 1: Prevent Terrorism and Enhance Security	Mission 2: Secure and Manage Our Borders	Mission 3: Enforce and Administer Our Immigration Laws	Mission 4: Safeguard and Secure Cyberspace	Mission 5: Strengthen National Preparedness and Resilience	Maturing and Strengthening Homeland Security
1: Acquisition Planning and Development	0.0	0.0	0.0	0.0	0.0	0.0
2: Concept Exploration, Experimentation, and Evaluation	0.0	0.0	0.0	0.0	0.0	0.0
3: Information Technology, Communications, and Cyber Security	0.0	0.0	0.0	0.0	0.0	0.0
4: Systems Architecture and Integration	0.0	0.0	0.0	0.0	1.5	0.0
5: Technical Quality and Performance	0.0	0.0	0.0	0.0	0.0	0.0
6: Independent Test and Evaluation	0.0	0.0	0.0	0.0	0.0	0.0

6. Deliverables and Schedule

The FFRDC shall provide the following deliverables (predicated in calendar days) according to Table below, and the most current Project Management Plan (PMP), as approved by the DHS Contracting Officer or COR.

Table 2: Deliverables

Scope Ref.	Deliverable Name	Abstract Required? (y/n)	Delivery Date
4.0.1	Project Management Plan (PMP) (Draft) **IDIQ Requirement**	N	15 days after award

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4.0.2	Project Management Plan (PMP) (Final) **IDIQ Requirement**	N	30 days after award
4.0.3	Task Order Project Kickoff Briefing **IDIQ Requirement**	N	Within 30 days of project award date
4.0	Daily updates of triggers and NPI based on emerging disease data analyses and modeling Weekly "convening" of governors, mayors, public health, and the senior staffs responsible to making or influencing NPI decisions. Weekly updates of triggers and NPI based on emerging disease data analyses and modeling		Daily or as needed Weekly or as needed Weekly or as needed

The FFRDC shall provide all deliverables under this task order directly to the IDIQ COR, IDIQ Contracting Officer, and Task Order Contracting Officer. The Task Order COR shall provide copies of all final deliverables to the DHS FFRDC Program Management Office (PMO) within 30 days of receipt. An unclassified abstract, 100 to 200 words in length, and at least five keywords, or a completed Standard Form 298, "Report Documentation Page," shall accompany each major deliverable, as indicated in Table 2.

The FFRDC shall deliver a document with identified triggers and specific NPI's that should be taken when each trigger is met. Additionally, the FFRDC shall deliver a similar document for when NPI's can be removed and return towards baseline based on similarly identified triggers.

The FFRDC shall deliver a monthly status report by the 20th of the following month containing metrics pertaining to financial, schedule, technical progress, deliverable status, and risk information related to the task. The FFRDC task lead and the COR will discuss relevant issues in evaluating the task priorities for the next period; and update the program plan as necessary.

7. Travel (Completed by FFRDC)

Travel may be necessary to meet and coordinate interagency exchanges of information on this task. The FFRDC shall provide trip reports, if requested, to the Task Order COR for all non-local travel within 30 days of completion of travel. The DHS Task User must approve all foreign travel. Advance notice for all foreign travel must be provided in accordance with the user's policies and regulations. The FFRDC must notify the DHS Task Order COR before arrival of visitors from foreign countries.

Travel, including local non-commuting travel, shall be reimbursed in accordance with the Federal Travel Regulation. Daily commuting costs shall not be reimbursed. Long-distance travel not specified in this Task Order may be permitted, however, must be pre-approved by the Task Order COR.

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8. Period of Performance

The period of performance is six months from date of task order award.

9. Security Requirements.

All work performed under this Task Order is Sensitive but Unclassified unless otherwise specified by DHS. This Task Order will require access to the following information (check all applicable boxes):

(b)(7)(E)

9.1 All unclassified "For Official Use Only" (FOUO) work is expected to occur at the "medium" level per the National Institute of Standards and Technology (NIST) 800-60 (Federal Information Processing Standard (FIPS) Security Categorization) and the Federal Information Security Management Act (FISMA). Any work at the "high" FOUO level per the FISMA, or any work at the classified level, shall be performed on a stand-alone computer system accredited in accordance with the FISMA and applicable DHS policies.

9.2 The HSSEDI shall comply with all requirements of the Protected Critical Infrastructure Information (PCII) Program set out in the PCII Act, in the implementing regulations published in the Interim Rule, and in the PCII Procedures Manual as they may be amended from time to time, and shall safeguard PCII in accordance with the procedures contained therein.

9.3 The HSSEDI shall ensure that each of its employees, consultants, and subcontractors who work on the PCII Program have executed non-disclosure agreements (NDAs) in a form prescribed by the PCII Program Manager. The HSSEDI shall ensure that each of its employees, consultants and subcontractors has executed a NDA and agrees that none of its employees, consultants or sub-contractors shall be given access to PCII without having previously executed a NDA.

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9.4 The FFRDC shall adhere to all applicable government laws, regulations, orders, guides, and directives pertaining to classified, Sensitive But Unclassified (SBU), FOUO, or personally identifiable information. The contractor shall safeguard SBU, FOUO information specifically in accordance with DHS Management Directive 11042.1 and in compliance with HSAR Class Deviation 15-01 Safeguarding of Sensitive Information.

9.5 The contractor shall use S&T's accredited GSSs to accomplish this work when applicable. The use of any other DHS accredited network must be reviewed and approved by S&T's OCIO prior to its use.

9.6 If classified work is required under this Task Order, the Task Order COR shall provide specific guidance to the HSSEDI as to which work will be conducted in a classified manner and at which classification level. If such DHS-guidance conflicts with other applicable guidelines (e.g., DOE, DOD, etc.), the HSSEDI shall adhere to the more stringent guidelines as determined by the Task Order COR and DHS HSSEDI PMO Director. The HSSEDI shall also adhere to other applicable government orders, guides, and directives pertaining to classified or confidential work.

10. Safeguarding/Storage:

a. No safeguarding/storage needed at the FFRDC.

b. Classified work will be performed at the following location(s) (enter N/A if not applicable):

Classified Work Locations

N/A	N/A

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Points of Contact

Government POCs	Corresponding FFRDC POCs
Program Manager (b)(6) Medical Officer DHS/CWMD (b)(6)	**FFRDC Task Lead** (b)(6) Sr. Principal Systems Engineer (b)(6)
Contracting Officer's Representative (COR) (b)(6) EMS Program Manager DHS/CWMD/CMO (b)(6)	**FFRDC Program Director** (b)(6) Portfolio Director HSSEDI Mission Enablers (b)(6)
Contracting Officer (b)(6) Contracting Officer DHS/OPO/CWMDAD (b)(6)	**FFRDC Contracts Manager** (b)(6) Contracts Manager MITRE Public Sector Contracts (b)(6)
Suitability/Fitness Point of Contact (b)(6) Security Manager DHS/CWMD (b)(6)	**FFRDC Security Staff** (b)(6) Personnel Security Manager MITRE Personnel Security Services (b)(6)

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