

Draft Version of Rapid Response Program

(Will be revised with additional input from advisory group.)

1. Rapid Response Program Project Objectives

Develop a Rapid Response Program for epidemiological investigations of emerging, transboundary and endemic swine diseases with known etiology.

Specific objectives of the program

- Collect molecular and epidemiological information on cases in a timely manner
- Describe the geographical and temporal patterns of spread of emerging or transboundary diseases in the US
- Identify operational linkages (e.g. linkages to feed sources, boar studs, vaccine sources, other swine farms, etc.)
- Use geographical and temporal patterns of spread and operational linkages to endeavor to identify the index case(s) for a new outbreak of an emerging or transboundary diseases in the U.S.
- For individual cases,
 - Identify most likely routes of introduction
 - Identify gaps in biosecurity and common routes of entry
- Create a pool of swine veterinarians and epidemiologists who are formally trained and practiced to conduct epidemiological investigations using a standardized approach and methodology
- Continuously improve biosecurity of individuals and the overall industry to reduce the spread of pathogens of interest for endemic, transboundary and emerging diseases

2. Procedures to achieve these objectives

Phase 1

Establish an Advisory Group

- Consist of 5 members recruited by the project investigators
 - 2 swine veterinary consultants who will also be members of the Rapid Response Corps
 - 1 swine veterinarian employed by a production system or allied industry
 - 1 state animal health official
 - 1 swine epidemiologist from a veterinary college other than Iowa State University
- Topics on which the advisory group will provide input on
 - Requirements and responsibilities of the Rapid Response Corps leaders Rapid Response Corps members, Swine Health Information Center and others
 - The standard epidemiological investigation forms, summary reports and databases
 - Issues related to confidentiality of information and data obtained from producers and veterinarians
 - Content and delivery of the training required of Rapid Response Corps members
 - Adaption of the Investigation Forms for SHIC matrix diseases or categories of disease (e.g. respiratory, enteric, vesicular, etc.)
 - The requirements and responsibilities of the Rapid Response Certification Program for Rapid Response Corps members

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- The advisory group participate in 2 conference calls in year 1 and 1 face-to-face meeting in December of 2016 held in conjunction with the North American PRRS Symposium in Chicago
 - Advisory group members will not receive a stipend but will be reimbursed for travel expenses to the meeting in Chicago

Recruit Rapid Response Corps members

- The Rapid Response Corps will create a ready source of qualified, trained and practiced individuals who have agreed to be activated to conduct epidemiological investigations in the event of an outbreak of a new emerging or transboundary disease in the US
- Corps members may consist of
 - Veterinary consultants
 - State and/or federal animal health officials or representatives
 - Epidemiologists
- Members in states or regions of the country with the needed expertise and willingness to be trained and participate will be identified
- Regions will be established
 - Will start with those established by Dr. Paul Sundberg and adapt if necessary
 - Sufficiently large to be able to recruit individuals in each regions
 - Small enough for the team members to be able to drive to sites in their state or region in order to be able to be on the farm within 72 hours after activation

Develop standard epidemiological investigation forms, summary reports and databases

- Forms and summary reports will be pathogen / disease specific
- Forms and summary reports developed for PRRSV will be used for training
- In the event of an emerging or transboundary disease outbreak, forms and reports will be adapted as necessary, if not already available
- Survey of closed end questions embedded in investigation form
 - This information will be accumulated in a database and will serve as a primary source of information to help meet objectives for a rapid response in the event of an emerging disease
 - Consistent with surveys delivered through PADRAP, the risk assessment tool owned by the American Association of Swine Veterinarians (AASV)
 - Allows for information to be collected prior to cases which will shorten response times
 - Creates a larger database to meet objectives
 - Potential to communicate data with geographic and temporal analysis tools such as BioPortal, Ag Connect

Develop training program and conduct training of Rapid Response Corps members

- Corps members only will be trained

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- Initially, training sessions will be conducted via web conferencing using GoToMeeting
- In the future, face-to-face training in pre-conference sessions may be conducted
 - AASV
 - Leman
 - ISU Swine Disease Conference

Designate / hire a Rapid Response Project Coordinator

- Responsibilities of the Rapid Response Project Coordinator in Phase 1
 - Recruit prospective Rapid Response Corps members from each region
 - Develop forms, reports and procedures
 - Responsible for version management
 - Responsible for adapting forms and procedures for different pathogens and stages of production as need arises (e.g. with an emerging or newly introduced transboundary pathogen)
 - Develop and coordinate training program
 - Develop training material
 - Schedule, promote and coordinate training sessions
 - Maintains list of trained and certified (after phase 2) individuals in each region

Phase 2

Phase 2 is the adaptation of the investigation forms for SHIC matrix diseases and development of a Rapid Response Certification Program.

Adapt the Investigation Forms for SHIC matrix diseases or categories of disease

- Other diseases or categories of disease (e.g. respiratory, enteric, vesicular, etc.) will be identified and the Investigation Form (for PRRSV) will be modified to reflect the unique epidemiological characteristics (primary routes of transmission, etc.) of each.
- Investigation forms will be adapted for five SHIC matrix diseases or five categories of disease
- The most significant modifications will be made to the survey of closed end questions embedded in Investigation form
 - This information will be accumulated in disease-specific databases and will serve as a primary source of information to help meet objectives for a rapid response in the event of an emerging disease

Develop a Rapid Response Certification Program

A Rapid Response Certification Program, necessary to meet the final two objectives of the program will be developed.

- Create a pool of swine veterinarians and epidemiologists who are qualified,

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formally trained and practiced to conduct epidemiological investigations using a standardized approach and methodology

- Continuously improve biosecurity of individuals and the overall industry to reduce the spread of pathogens of interest for endemic, transboundary and emerging diseases

The Rapid Response Certification Program creates the opportunity and responsibility for “peace-time” practice which is the most important part of the plan to assure that Rapid Response Corps members are adequately prepared to respond in a timely and effective manner. Today, PRRSV is the one for which the epidemiological investigations are most developed. Epidemiological investigations for endemic diseases (PRRS, PED, TGE) offer opportunities to practice and provide value in their own right. The value arises from identifying gaps in biosecurity, enabling and motivating continuous improvements to external biosecurity that benefit producers, their neighbors and the entire industry. Proactively and continuously improving biosecurity of the entire industry will leave it better prepared to minimize the impact of the next transboundary or emerging disease. This also serves to populate the database so there is already a baseline set of information on a significant percentage of swine farms when outbreaks of transboundary or emerging diseases occur.

- Certification only required for Rapid Response Team Leaders
 - Veterinarians
 - Epidemiologists
- Requirements
 - Development of additional training and completion of training
 - Demonstration of competency / practice
 - Must complete at least 5 epidemiological investigations on endemic diseases (PRRS/PED/SVA) in year 1
 - Must complete 2 investigations annually in subsequent years

New responsibilities of Rapid Response Project Coordinator in phase 2

The responsibilities outlined below would be for Response Team Leaders who are working toward certification and in the event of a new outbreak of an emerging or transboundary disease in the US

- For Response Team Leaders working toward certification on endemic cases (PRRSV)
 - First point of contact to coordinate investigations
 - Gathers information about cases from herd veterinarian and owner / manager
 - Collects and summarizes other relevant data that is available
 - Weather data
 - Google Earth images of premises and surrounding area
 - Information from a completed risk assessment survey in PADRAP
 - Prepares and delivers investigation form to Rapid Response Team Leader
 - Works with Rapid Response Team Leader to schedule investigation
 - Receives epidemiological investigation form from Rapid Response Team Leader

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- upon completion of the investigation
 - Rapid Response Team Leader is responsible for drafting investigation summary report
 - Enters data from investigation summary report into database
 - Maintains database and controls access

- In the event of an emerging or transboundary diseases in the US
 - Point of contact to coordinate investigations in the event of an emerging or transboundary disease outbreak
 - Informs Swine Health Information Center (SHIC) if notification of case does not come through SHIC
 - Others informed
 - State animal health official or a representative
 - American Association of Swine Veterinarians
 - National Pork Board
 - National Pork Producers Council
 - Works with SHIC to recruit Rapid Response Team Leader and team members from the Rapid Response Corps in region where case occurred
 - Gathers information about cases from herd veterinarian and owner / manager
 - Collects and summarizes other relevant data that is available
 - Weather data
 - Google Earth images of premises and surrounding area
 - Information from a completed risk assessment survey in PADRAP
 - Prepares and delivers investigation form to Rapid Response Team Leader
 - Works with SHIC and Rapid Response Team Leader to schedule investigation
 - Receives epidemiological investigation form from Rapid Response Team Leader upon completion of the investigation
 - Rapid Response Team Leader is responsible for drafting investigation summary report
 - Enters data from investigation summary report into database
 - Maintains database and controls access

- Responsibilities of others
 - Rapid Response Team Leader
 - Works with herd veterinarian, producer representative (owner / manager) and other Rapid Response Team Members to
 - Determine who will attend or be available to answer questions or provide information before, during and after the investigation meeting
 - Determine location of the investigation meeting and facilities to be visited, if any
 - Determine what samples will be collected for diagnostics
 - Diagnostic costs are the responsibility of the producer unless funds are available through the SHIC

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- Arranges for travel to investigation meeting(s)
- Responsible for drafting and submitting a final investigation summary report
 - Submits report to SHIC and the Rapid Response Project Coordinator
- Rapid Response Team Members
 - Attend investigation meeting(s) and perform other functions (eg. sample collection and submission, etc.) as necessary to conduct the investigation
 - Works with Rapid Response Team Leader to draft the investigation summary report
- Swine Health Information Center
 - During a new emerging or transboundary disease outbreak in the US
 - Serves as first point of contact when cases occur
 - SHIC will offer options for members of the Rapid Response Team and arrange funding to support them and their work. Usual expenses associated with travel for the Response Team Members and appropriate consultation fees will be paid

3. Schedule/timeline for proposed research.

Complete Phase 1 (Year 1): August 1, 2016 to July 31, 2017

Designate a Rapid Response Project Coordinator	October 1, 2016
Recruit Rapid Response Advisory Group members	October 1, 2016 - December 1, 2016
Advisory Group members meet at North American PRRS Symposium	December 3-4, 2016
Recruit Rapid Response Corps members	March 1, 2017
Develop standard epidemiological investigation forms, summary reports and databases	March 1, 2017
Develop training program and conduct training of Rapid Response Corps members	July 31, 2017
Project update provided to SHIC and AASV Swine Health Committee	March 1, 2017

Complete Phase 2 (Year 2): August 1, 2017 to July 31, 2018

Develop a Rapid Response Certification Program	December 1, 2017
Adapt the investigation forms for SHIC matrix diseases	July 31, 2018
Project update provided to SHIC and AASV Swine Health Committee	March 1, 2018