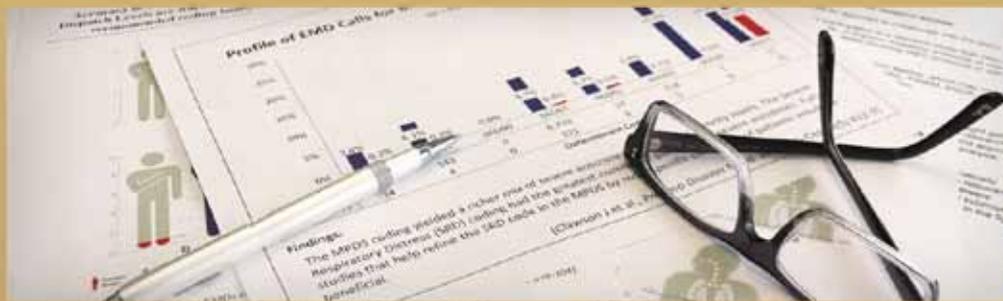


# RESEARCH



International Academies of Emergency Dispatch®





## INTRODUCTION TO THE INTERNATIONAL ACADEMIES OF EMERGENCY DISPATCH® (IAED™)

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### MISSION

To advance and support the public-safety emergency telecommunications professional and ensure that citizens in need of emergency, health, and social services are matched safely, quickly, and effectively with the most appropriate resource.

### GOALS AND OBJECTIVES

- I. To use and promote the fundamental principles of the scientific method in the pursuit of the Mission.
- II. To advocate a single, scientifically defensible protocol that becomes the unifying standard under which all professional emergency dispatchers practice.
- III. To advance professionalism within the dispatch community by establishing and promoting an ethics policy as well as minimum standards for curriculum, instruction, certification, recertification, and accreditation of centers.
- IV. To provide opportunities for members to improve themselves and their organizations through facilitation of communication, providing comprehensive information resources and creating high-quality training and continuing dispatch education through seminars, publications, and other media designed to meet our members' needs.
- V. To establish and promote a collegial, research-based culture that welcomes the expertise of many disciplines through the creation of standing committees, task forces, and subgroups that reach out to other organizations and advise the Academies.
- VI. To be recognized as the authoritative, independent voice that represents the emergency dispatcher and enhances the profession.

## SCIENTIFIC RESEARCH

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### WHY RESEARCH?

- I. To validate the efficacy of IAED protocols for Police, Fire, and Medical services.
- II. To improve the IAED unified protocols for Police, Fire, and Medical.
- III. To discover and investigate new dispatch methodologies, technologies, and practices.
- IV. To share dispatch experiences and expertise.
- V. To promote continuing dispatch education (CDE).
- VI. To promote the use of IAED protocols.

### INSTITUTIONAL REVIEW BOARD (IRB)

In 2007, the IAED registered an IRB (IORG0005364 - IRB #00006450) with the U.S. Department of Health and Human Services (HHS), Office for Human Research Protections (OHRP). The IRB consists of 9 members with multidisciplinary expertise/professions, including laypersons. The current Chairman of the IAED's IRB is Jerry Overton. The main role of the IRB is to review research proposals with an aim to ensure three major things:

- I. **Respect and Protection for Persons:**  
Treat individuals as autonomous agents with regard to goals, opinions, decisions, and self-determination, and protect persons with diminished autonomy.
- II. **Beneficence:**  
Efforts made to secure the person's well-being—Do no harm while maximizing possible benefits.
- III. **Justice:**  
Guarantee fairness in distribution of resources or what is deserved: to each person an equal share, according to individual need, individual effort, societal contribution, and merit.



## WHY COLLABORATE IN RESEARCH WITH IAED?

The IAED is uniquely placed to offer experience and expertise in the conduct of ethical scientific research studies, which include the following:



### EXPERIENCE WITH SCIENTIFIC PUBLICATIONS

IAED researchers have published numerous studies in widely circulated, peer-reviewed, and non-refereed Journals. Some of these include Circulation, Resuscitation, Prehospital and Disaster Medicine (PDM), Emergency Medical Journal (EMJ), STROKE, Prehospital Emergency Care (PEC), and IAED's Journal of Emergency Dispatch (JED).

### COUNCIL OF RESEARCH

In addition to the existence of the IRB, the IAED has a well established Council of Research, currently chaired by Brett Patterson. The group comprises scientists who are skilled in various dispatch research domains. Members of the Council of Research include Jeff Clawson, M.D. (Chair, Council of Standards Rules Group); Greg Scott, MBA, EMD-Q® (Operations Research Analyst); Tracey Barron, MCPara, BSc, PGCE, PGDip (Research and Studies Officer); and Chris Olola, Ph.D. (Director of Biomedical Informatics and Research). The Council of Research has an open-door policy with all agencies that require technical and general scientific research support.

### EFFECTIVE AND ECONOMICAL STUDIES

As the saying goes, "many hands make light work." The more agencies with which we collaborate, the faster we will be able to accrue data, as well as conduct and conclude effective studies. This approach also cuts down on costs associated with conducting these studies. Additionally, the large samples will also give

credence to our research findings or outcomes. This collaboration is vital, especially for studies of rare outcomes such as cardiac arrest. Multi-center studies also allow us to make geographic and demographic comparisons, a process that no individual agency is able to complete alone.

### PROMPT STUDY DEVELOPMENT, DATA ANALYSIS, AND TIMELY SUBMISSION OF MANUSCRIPTS

Rather than spend your valuable time and budget enlisting researchers to collect and analyze your data, the Academy has seasoned staff who can perform those functions. In addition to the savings you'll receive, study development, data analysis, interpretation of the results, and initial manuscript drafts will ensue promptly. Completed manuscripts will be submitted quickly, in a publishable format. This process accords collaborating agencies and IAED to conclude studies and begin new studies in less time. This also ensures that any data published is from a recent and relevant version of the protocol.

### EXPERTISE IN DATA INTEGRATION FROM DISPARATE SOURCES

Through the use of commercial and proprietary software, the IAED can help agencies combine their CAD, ProQA®, LowCode™, and AQUA™ data. IAED experts can assist in applying this data to publishable study material.

### OUTCOME DATA

Although outcome data may be (at the moment) mainly relevant and accessible to EMS, there are foreseeable future opportunities where outcome data may be integrated with PPDS™ and FPDS® databases, for research purposes. IAED neither collects nor maintains patients' hospital outcome data. Agencies enjoy a relationship with hospitals to which they transport patients. Through this link, we can explore the potential of integrating dispatch, EMS/paramedic, and hospital outcome data, and perform effective and more definitive outcome-based studies. So far, IAED has mostly concentrated its efforts on doing research without hospital outcome data. Due to the unavailability of integrated hospital-based outcome data, IAED's research has focused mainly on protocol validation and enhancement, descriptive studies, and using dispatch- and EMS/paramedic-collected data. IAED would like to move to outcome-based research studies and with your agency's help this goal can be realized. The ideal combination includes centers using protocol at accreditation compliance levels, field response units associated with those centers, and the outcomes associated with those responses. In the case of medical protocol, the Academy is interested in the patient outcome data from receiving hospitals. For law enforcement, it could mean comparing Pre-Arrival Instructions to apprehension.



## PROTOCOL EVALUATION, IMPROVEMENT, AND EVOLUTION

Your participation in dispatch research helps to ensure protocol evaluation and improvement. This, in turn, has positive effects on your dispatch center's efficiency and effectiveness. It is through the findings from dispatch studies that we will obtain evidence to initiate and support protocol evolution.

## WHEN TO COLLABORATE WITH IAED ON RESEARCH STUDIES

There are two main opportunities for agencies to collaborate with the IAED:

- I. The IAED may request your participation in a research study that helps us investigate, understand, validate, or improve Academy protocols or standards.
- II. Anytime you discover a topic of interest involving IAED protocols or standards that you wish to investigate.

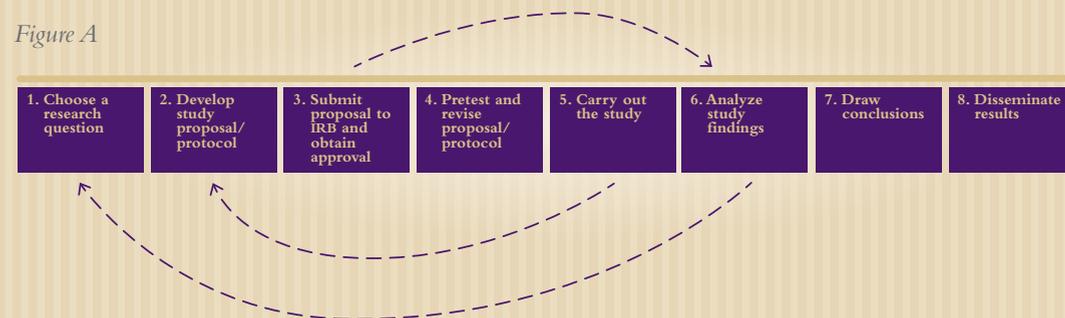
For any study, the IAED may request data from your agency, which may include ProQA, ePCR, CAD, hospital data (including outcomes), LowCode, and AQUA data. These data are scrubbed to eliminate any personal, identifying information.

## CONDUCTING RESEARCH STUDIES AND PUBLISHING MANUSCRIPTS

Conducting research studies and publishing manuscripts involves eight general steps: development of research question/hypothesis, writing of research study proposal, submission of research study proposal to the IRB for review and approval, pretesting and revising proposal, data collection/conducting study, data analysis, interpretation of findings/results, and dissemination of findings.

Disseminating the findings involves writing the manuscript (usually several revisions), formatting the manuscript to meet the destination journal's requirements, submitting the manuscript to the destination

Figure A



journal, responding to reviewers' comments—at times a good number of them—and proofreading and submitting the final version of the manuscript, if accepted for publication. These steps are summarized in Figure A.

## HIGHLIGHTS OF TOPICS INCLUDED IN ONGOING RESEARCH STUDIES

- I. Identification of stroke symptoms in alert patients who fall without injury.
- II. The accuracy of the Medical Priority Dispatch System's™ (MPDS®) Diagnostic Tool in identifying signs and symptoms of Meningococcal Disease.
- III. The ability of the Determinant Codes found in MPDS Protocol 10: Chest Pain (Non-Traumatic) in accurately predicting acute myocardial infarction (AMI).
- IV. Time interval from stroke symptoms onset until 9-1-1 is called as determined by Emergency Medical Dispatchers using the Medical Priority Dispatch System.
- V. Assessing the correlations between GCS/Respiratory rate and difficulty speaking between breaths (DSBB).
- VI. Standardization of emergency calltaking process, call-processing time intervals, and consistency in call-grading using the Police Priority Dispatch System™ (PPDS).
- VII. PPDS (armed/unarmed individual/group) antisocial behavior reporting.
- VIII. Evaluation of the level of lawsuits encountered by emergency communications centers and EMS systems based on the use of the Medical Priority Dispatch System compared to other methods of dispatch processing.
- IX. Accredited Centers of Excellence (ACE) vs. Non-ACE: call-processing time comparisons.

## SUMMARY OF PUBLISHED RESEARCH MANUSCRIPTS

DISCIPLINE	PUBLISHED	SUBMITTED	ONGOING	ON HOLD	TOTAL
MEDICAL	10	4	7	15	36
POLICE			3		3
FIRE			1		1
GENERAL			2		2
<b>TOTAL</b>	<b>10</b>	<b>4</b>	<b>13</b>	<b>15</b>	<b>42</b>



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