

**Emergency Medical
Dispatching
Committee Recommendations**



CUYAHOGA COUNTY
Executive Edward FitzGerald

January 2013

PREFACE

In early 2012, Cuyahoga County identified the need for a Countywide Emergency Medical Dispatching (EMD) protocol. As part of that effort, the Cuyahoga County Office of Emergency Management, through the Cuyahoga County Emergency Services Advisory Board convened the Cuyahoga Emergency Medical Dispatching Committee. Participation on the committee was solicited from public safety and communications professionals.

“We understand the importance of having baseline, standard EMD protocols throughout Cuyahoga County. These protocols will give dispatches the tools to provide lifesaving medical information to callers while waiting for first responders. We know these protocols can and will save lives.”

Ed FitzGerald, Cuyahoga County Executive

The Committee's purpose is to research and analyze the current status of EMD within Cuyahoga County, discuss the development of countywide, emergency dispatching protocols, and to recommend baseline procedures and policies to be used by dispatchers, over the phone, during emergency situations.

Currently only 62% of Cuyahoga County dispatch centers have standardized EMD protocols, with virtually none sharing the same protocols. Of those 62%, the type of software and products used by dispatchers for EMD varies. As a result, the Committee will meet regularly and work together to standardize baseline procedures and protocols, training, and procurement of EMD products.

Emergency Medical Dispatching Committee

The Emergency Medical Dispatching (EMD) Committee has been working consistently over the past year to support Cuyahoga County's commitment to public safety.

The EMD Committee is made up of ten (10) members and is responsible for recommending policies and procedures for emergency medical dispatching. Specifically, the EMD Committee discussed the feasibility of suggesting a countywide EMD protocol based on presentations from various vendors. The findings of this analysis can be found below.

As such, the EMD Committee recommends that each PSAP implement EMD guidelines based on the National Highway Transportation Safety Administration (NHTSA) and the American Society for Testing and Materials (ASTM).

Respectfully,

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Brecksville Fire Department
Mayfield Heights Police Department
Strongsville Police Department
911 Coordinator – Cuyahoga County
Chagrin Falls Police Department
WestCom
EastCom
Lyndhurst Police Department
Solon Police Department
City of Cleveland Emergency Medical Services

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I. INTRODUCTION

In May 2012, the Emergency Medical Dispatching (EMD) Committee was formed as an ad hoc committee to the Cuyahoga County Emergency Services Advisory Board. The Committee met five (5) times between May and September 2012. The purpose of the EMD Committee was to research and analyze the current status of EMD within Cuyahoga County and recommend countywide policies and procedures to support countywide EMD protocols.

As part of their research of existing protocols, the EMD Committee surveyed each of the 45 Public Safety Answering Points (PSAPs) throughout the county.

Results concluded (Appendix A):

- 17 PSAPs currently have no EMD protocols in place
- 3 PSAPs have designed and implemented their own EMD program
- 25 PSAPs have varied levels of protocols and training¹

Of the 42 agencies that do not have formal protocols in place, many do not provide training, do not offer pre-arrival instruction to callers, and/or have determined that they are unable to provide the service or that the service is unnecessary.

Based on the results of the survey, it was determined that a need exists to establish countywide EMD protocols.

Purpose of this Document

The purpose of this document is two-fold and specific to the implementation of Emergency Medical Dispatching protocols countywide. First, the document will analyze three current products that are designed to assist in EMD. Second, the document offers a recommendation for the type of standards and protocols that should be adopted countywide; the document offers a recommendation for a product that will assist PSAPs in adopting countywide protocols.

¹ These PSAPs may have protocols but no training, limited training without protocols, or outdated training and protocols.

II. PRODUCT REVIEW

Emergency Medical Dispatch (EMD) is the first link in the chain of emergency medical services. Trained call takers, operators, and dispatchers, using guide cards or customized software, can quickly assess information provided by a caller, and implement life saving protocols. The operators can prioritize a call, dispatch appropriate response personnel, and provide pre-arrival instructions to help treat the patient until responding units arrive.

Below is an analysis of three (3) vendors who provided additional information to the EMD Committee. Each vendor was researched, assessed, and analyzed based on the needs of Cuyahoga County (Appendix B). The Committee ultimately made a recommendation for product support based on the information provided by the vendors. This recommendation can be found in Section III.

Association of Public Safety Communications Officials (APCO) International

APCO International “is the world’s largest organization of public safety communications professionals. It serves the needs of public safety communications practitioners worldwide – and the welfare of the general public as a whole – by providing complete expertise, professional development, technical assistance, advocacy and outreach².”

As an international organization focused on public safety communications, APCO International works collectively with PSAPs nationwide to develop 911 standards and serve as the premier organization for public safety communications information.

The APCO EMD program is based on the National Highway Transportation Safety Administration’s (NHTSA) national standard curriculum for EMD. In addition, the program incorporates the current American Society for Testing and Materials (ASTM) international guidelines in a comprehensive EMD package.

² <http://apcointl.org/about-apco.html>

Implementation of the program takes approximately three (3) to six (6) months. The program includes: customization of EMD guide cards, software, establishment of review and quality assurance/quality improvement committees, training of employees, resolution of logistical matters, and public education. In addition, each agency implementing the APCO EMD program must have a Medical Director. The Medical Director works with each agency and other members of the local EMS community to customize the EMD program, provide management, and medical guidance.

The program provides EMD guide cards which can be customized by each agency to fit their individual needs. APCO Institute personnel will assist in customizing guide cards. Guide cards come in two versions:

- Standard Version – Based on NHTSA National Standards for EMD
- Custom Version – Customized by the agency

In addition to the guide cards, APCO also offers emergency response software called “911 Advisor.” The software is intended to guide operators or call takers in providing EMD information while simultaneously recording the call.

In order to participate in the APCO EMD program, all call takers, operators, etc., must complete a formal basic telecommunicator training program along with CPR certification as prerequisites to EMD training. The APCO Institute can provide this training.

Once certified, Emergency Medical Dispatchers are required to re-certify every two years. During that two-year period, they are required to complete twenty-four (24) hours of Continuing Dispatch Education (CDE). In addition, individuals must maintain a current CPR certification. The CDE program must be organized around the standards of care, practice, and responsibilities of the EMD and meet certain specific objectives.

Dispatchers within the County who are currently certified through another agency can obtain APCO certification through a reciprocity program. The program requires a current EMD certification and current CPR certification. APCO provides an eight-hour, on-line course to obtain their EMD certification.

Analysis

APCO offers a comprehensive and versatile EMD program with structure that is conducive to the goals of Cuyahoga County. The program provides an opportunity for the County to be an active partner in support of participating agencies with training and continuing education needs. The APCO program also provides the ability for each agency to tailor their own EMD program to fit their needs while maintaining consistency countywide.

As a result, the Emergency Medical Dispatching Committee will be recommending this product.

National Academies of Emergency Dispatch (NAEMD) / Priority Dispatch

The National Academy of Emergency Dispatch (NAEMD) is a “professional organization dedicated to promoting excellence in emergency dispatching by setting professional industry standards and recognizing the agencies and individuals who meet those standards.”³ The Mission of the National Academies of Emergency Dispatch is “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.”⁴

The NAEMD program focuses on post-dispatch and pre-arrival instructions for medical emergencies that dispatchers can provide over the telephone.

The Academy sets and maintains standards while working with Priority Dispatch Corp., as well as other contract organizations to create products, materials, and provide services that meet or exceed those standards. Priority Dispatch Corp. has a current contract for publishing, distributing, and training for the protocols maintained by the Academy.

The Academy provides protocols which are always a standardized, structured, scripted universal interrogation process that identifies the Chief Complaint,

³ <http://www.naemd.org/>

⁴ <http://www.naemd.org/>

recommends a response level, gathers crucial information for responders, and provides Pre-Arrival Instructions to callers prior to the arrival of emergency units.

The EMD Certification course meets or exceeds all national criteria set by ASTM, U.S. Department of Transportation, National Association of EMS Physicians, and others.

Initial EMD certification requires the applicant:

- Read and write at a high school graduate or GED level,
- Complete an Academy approved 3-day (24 hour) EMD Course, taught by an Academy-Certified Instructor
- American Red Cross approved CPR certification
- Abide by the Academy's Code of Ethics, Code of Conduct and professional practice standards
- A two-hour computer based training, the Advanced EMD Training Lesson

Recertification is required every two years. During that two year period, they are required to complete twenty-four (24) hours of Continuing Dispatch Education (CDE).

The Academy provides additional training and support for Fire and Police dispatch protocol along with an EMD Advancement Series and Supervisor and Communications Manager training.

Analysis

Overall, the committee determined that the program was very well designed, but did not meet the needs of Cuyahoga County. Specifically, the program is protocol based and offers a standardized, structured, scripted, universal interrogation process. It does not allow for customization of call handling except in response procedures. All candidates would be required to attend in-class instruction provided by Academy instructors. This may create problems for many agencies attempting to schedule classes and staff centers around the class schedule. The Academy does offer opportunities for training of on-staff instructors. However, the prerequisites and training protocol are stringent and may prove to be costly and difficult to maintain.

The Committee did not feel this was a feasible option for Cuyahoga County.

PowerPhone

PowerPhone, Inc. has been providing emergency response tools and training for 28 years, in all 50 states and 13 countries.⁵ Their system, “Total Response” combines training, tools and quality assurance. PowerPhone is the most used EMD program in Cuyahoga County.

PowerPhone relies on “Total Response” training. The training is based on an approach that applies flexible guidance and techniques for handling emergency calls.⁶ The training focuses on three areas, call taking, information gathering, and quality assurance. All call taking protocols can be customized to meet local needs.

PowerPhone certification requires three (3) day in-class instruction and certification is valid for two (2) years. Recertification and additional training opportunities are available through the PowerPhone online university.

Analysis

Overall, the committee determined that the program was very well designed, but did not meet the needs of Cuyahoga County. While at this time, PowerPhone is the EMD program most used countywide, the Committee was concerned about PowerPhone customer service, training availability, and the lack of oversight by the company.

III. RECOMMENDATION

It was unanimously agreed that APCO International is the recommend provider for EMD materials, training, and protocols for Cuyahoga County.

While the program may seem intensive, the committee determined that APCO offers the tools to aid jurisdictions in providing consistent emergency medical care to its residents, and versatility to change and adjust based on the needs of the county and its agencies.

⁵ <http://www.powerphone.com/about/>

⁶ <http://www.powerphone.com>

The EMD Committee recommends that each PSAP implement guidelines for dispatcher assisted Basic Life Support (BLS). These Guidelines should be based on the National Highway Transportation Safety Administration (NHTSA) and the American Society for Testing and Materials (ASTM), Standard Practice for Emergency Medical Dispatch, and focus on providing pre-arrival instruction for, at a minimum, the most life threatening situations where time is of the essence.

In addition, the EMD Committee recommends that each PSAP implement a Criteria Based or Protocol Based medical dispatching program that includes written step-by-step instructions for dispatchers to follow. This program must be reviewed and approved by a local medical authority and includes on-going continuous training, including American Heart Association approved CPR and AED certification. A Quality Assurance/Quality Improvement (QA/QI) program designed to monitor any EMD program is recommended in order to establish ongoing program improvement goals.

The EMD Committee recommends that Cuyahoga County select APCO for EMD training, from the three major providers identified in Appendix B, and implement a county-wide EMD program. Cuyahoga County should identify, train and maintain on-staff instructors certified in the APCO program. In addition, the County should provide periodic continuing education programs and classes to support of the program. The County should also coordinate ongoing, periodic CPR and AED training as specified by the American Heart Association.

It is also recommended that the County provide financial support to participating PSAPs for the purchase of guide cards, flip card, and /or software provided by APCO. The EMD Committee recommends that each PSAP should be outfitted with guide cards as a minimum; software programs would be added as funding becomes available.

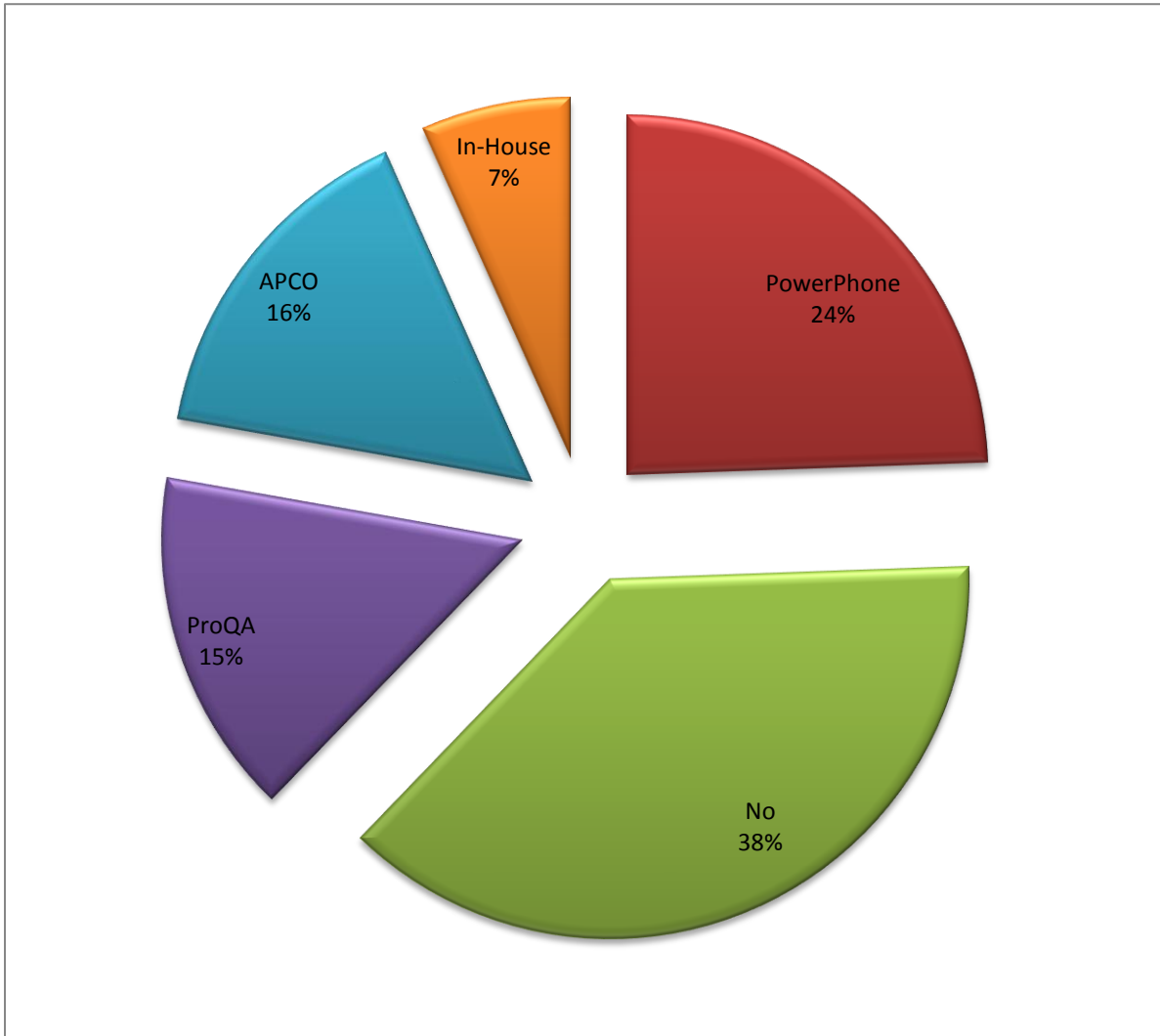
Finally, it is recommended that CECOMS operators be trained in APCO EMD protocols and be equipped with guide cards or software at each work station. This would allow CECOMS to serve as an EMD back-up location for all other PSAPs.

The EMD committee has expressed preferences for the individual providers (Appendix B). Also included is a breakdown by company of the estimated costs involved (Appendix C).

Based on the analysis and final recommendation above, the EMD Committee has provided supporting documentation based on provider analysis in Appendix B. Also included is a breakdown by company of the estimated costs involved (Appendix C).

Appendix A

Cuyahoga County



PSAP EMD CERTIFICATION PERCENTAGES

Appendix B

Cuyahoga County Primary Safety Access Point - EMD Certification Status

PSAP	Population	Disp./shift	EMD Certified	Notes
Bay Village Police	15,651	0	APCO	WESTCOM
Beachwood Police	11,953	3/3/2	PowerPhone	
Bedford Heights Police	10,751	2/2/1	No	NO EMD (plan to merge and put protocol in place)
Bedford Police	13,074	2/2/1	No	NO EMD (plan to merge and put protocol in place)
Berea Police	19,093	1/1/1	PowerPhone	
Bratenahl Police	1,197	1/1/1	No	dispatches all calls; emergency medical calls then transferred to Cleveland EMS
Brecksville Police	13,656	2/2/1	PowerPhone	Also incorporates EMD training into dispatch field training using scenarios.
Broadview Heights Police	19,400	2/2/1	No	use flip book acquired some time ago, but no current training or certification
Brooklyn Fire and Police	11,169	1/1/1	No	CPR certified, but no further pre-arrival instructions available.
Brooklyn Heights Village	1,543	2/2/1	No	dispatched by Cuyahoga Heights
Brook Park Police	19,212	2/2/2	No	NO EMD (dispatchers feel a real need for EMD training)
Chagrin Falls Police	4,233	2/2/1	In-house	Program approved by Chagrin, Orange and Woodmere Fire Chiefs and Medical Directors
Cleveland Heights Police	638	2/2/2	APCO	EASTCOM
Cleveland EMS	396,815	15	ProQA	Protocol in use and is approved by Dr. Collins
Cuyahoga CECOMS		3	N/A	All calls transferred to primary PSAP
Cuyahoga Heights Police	638	2/2/2	ProQA	All CPR certified also. Currently no written procedures
East Cleveland Fire and Police	17,843	2/2/2	No	Emergency Medical calls transferred to Fire Department
Euclid Police	48,920	3/3/2	ProQA	
Fairview Park Police	16,826	0	APCO	WESTCOM
Garfield Heights Police	28,849	2/2/1	In-house	Training provided by FD
Gates Mills Police	2,270	2/1/1	ProQA	
Highland Heights Police	8,345	1/1/1	No	NO EMD
Highland Hills Police	1,130	1/1/1	No	NO EMD
Independence Police	7,133	2/2/2	PowerPhone	
Lakewood Police	52,131	2/2/2	No	Some dispatchers are EMD trained but no protocols have been used in some time.
Linndale Village	179		N/A	9-1-1 calls routed to Cleveland
Lyndhurst Police	14,001	1/2/1	PowerPhone	Not always implemented due to staffing constraints

Cuyahoga County Primary Safety Access Point - EMD Certification Status

PSAP	Population	Disp./shift	EMD Certified	Notes
Maple Heights Police	23,138	2/2/2	No	NO EMD (plan to merge and put protocol in place)
Mayfield Heights	19,155	2/2/1	PowerPhone	
Mayfield Village Police	3,460	1/1/1	PowerPhone	Flip cards used as needed.
Middleburg Heights Police	15,946	1/1/1	PowerPhone	Dispatchers also certified in CPR. Recertification for both every two years.
North Olmsted Police	32,718	3/3/2	ProQA	
North Royalton Police	30,444	2/2/1	No	Interested in County program
Newburgh Heights Police	2,167		N/A	merged with Cuyahoga Heights
North Randall Police	1,027	1/1/1	No	
Oakwood Police	3,667		N/A	merged with Walton Hills
Olmsted Falls Police	9,024	1/1/1	PowerPhone	
Olmsted Township Police	13,513	1/1/1	No	NO EMD
Parma Heights Police	20,718	1/1/1	No	Do not provide EMD service due to staffing constraints
Parma Police	81,601	3/3/3	ProQA	Use ProQA Software and flip charts as back up.
Pepper Pike Police	5,979		N/A	merged with Beachwood
Richmond Heights Police	10,546	1/1/1	No	Some dispatchers are EMD trained but no protocols have been used in some time.
Rocky River Police	20,213	0	APCO	WESTCOM
South Euclid Police	22,295	1/1/1	PowerPhone	Not always implemented due to staffing constraints
Shaker Heights Police	28,448	2/2/2	APCO	EASTCOM
Solon Police	23,348	3/3/3	In House	In house training approved by Solon EMS Medical Director
Strongsville Police	44,750	3/3/3	ProQA	re-certify every two years.
University Heights Police	13,539	1/1/1	APCO	EASTCOM
Walton Hills Police	2,281	2/2/1	No	Currently looking for certification opportunities for their dispatchers.
Warrensville Heights Police	13,542	1/1/1	PowerPhone	
Westlake Police	32,729	2/2/2	APCO	WESTCOM
EASTCOM	secondary psap		APCO	also CPR certified. Have SOP in place and use EMD guidecards provided by APCO.
WESTCOM	secondary psap		APCO	Flip cards approved by medical control for WeShare Paramedic Protocols

Appendix C

EMD PROVIDER COMPARISON BY COMPANY				
Points of Consideration	APCO	NAEMD	PowerPhone	Comments
Pre-requisites	Telecommunications CPR	Diploma or GED CPR	None	
Initial hours of training required	24 + 8 hours agency specific training	24	24	APCO training costs can be reduced by utilizing trained staff Instructors
Cost of initial training per candidate	\$429.00 \$89.00 book fee	\$320.00	1-3 - \$389/student 4-6 - \$349/student 7+ - \$319/student	
Initial training available on-line	Yes	No	Yes	
Continuing Education Required	12 per year	12 per year	None	
Re-certification available on-line	Yes	Yes	Yes	
Instructor training available	Yes On-line class - \$509.00	Yes	No	
Emergency fire and police Dispatch available	Yes	Yes	Yes	
Medical oversight required	Yes	Yes	No	
Tablet costs	Cards - \$299.00 Edit fee - \$325.00		\$249	
QA/QI	Yes	Yes	\$3,500/Agency	
Re-certification costs	CDE and CPR update is only requirement	24 hours CDE and CPR \$50.00 test fee	\$129.00	
Reciprocity/cost	8 - hour course (\$59.00)		\$495.00 for up to six people	