

## MCA Subcommittee

### Agenda

**May 14, 2024**

1:00 p.m. to 3:00 p.m.

Microsoft Teams meeting

[Click here to join the meeting](#)

**Or call in (audio only)**

**248-509-0316 Phone Conference ID: 247 248 624#**

- I. Attendance:  
Member Roll call:  
**Debbie Condino-chair, Michael Bentley, Dr. Bigsby, Ken Cummings, Dr. Domeier, Bonnie Kincaid, Bob Miljan, Dr. Reece, Eric Snidersich, Aaron Sogge, Jason Stevens, Bruce Trevithick, Rob Warnemuende.**
- II. Call to Order
- III. Approval of agenda and minutes
- IV. Old Business
  - a. Patient Movement Ad Hoc – Debbie Condino
  - b. Protocol Roll out Report – KK
  - c. Medical Director Opportunity Quick Sheet (attachment) - KK
  - d. Medical Director Requirements Recommendations
    - i. Defining ‘practices emergency care’ (attachment)
- V. New Business
  - a. Protocols Statistics Report DRAFT (attachment) – KK
  - b. MCA Assessment Report FINAL (attachment) - KK
- VI. Adjourn
- VII. Next meeting: June 4, 2024, at 1 p.m.

## MEDICAL DIRECTOR QUALIFICATIONS – enforcement and clarification of current statute

GOAL: Shore up terms and processes related to MCA medical director qualifications and maintenance of said qualifications. It is proposed that we communicate and uphold what exists in statute before we write anything additional into rules.

### IDENTIFIED PROBLEMS:

- 1) Department does not currently track the qualifications that are expressed in the statute. This can be rectified by collecting the documentation and creating a tracking system with expiration dates.
- 2) What does 'practicing emergency medicine' mean?

Proposed interpretation:

**Practices Emergency Medicine: Participates in patient care or oversees patient care in a setting that receives patients via ambulance for emergency care.**

Summary of position:

Medical directors of EMS systems play a key role in clinical oversight overseeing agencies and personnel providing training, quality review and permission to practice. All aspects of medical care administered by an EMS service require the active involvement of a licensed physician medical director with expertise in the environment in which the EMS service's response occurs.

A physician board-certified in EMS medicine is best prepared to provide physician oversight of EMS, serving in the role of EMS medical director.

## STATUTE

### Option 1

The medical director shall be a physician who is:

board certified in emergency medicine by a national organization approved by the department (*also referred to as em boarded*)

#### **ACTION: DEPARTMENT COLLECT AND TRACK EXPIRATION OF BOARD CERTIFICATIONS**

ABEM – American Board of Emergency Medicine

AOBEM – American Osteopathic Board of Emergency Medicine

American Board of Physician Specialties

**What other organizations should be on this list?**

or who practices emergency medicine and is certified in both advanced cardiac life support and advanced trauma life support by a national organization approved by the department, and who meets other standards set forth in department rules.

## MEDICAL DIRECTOR QUALIFICATIONS – enforcement and clarification of current statute

### Option 2

who practices emergency medicine

Practices Emergency Medicine: Participates in patient care or oversees patient care in a setting that receives patients via ambulance for emergency care.

Additional:

- Practice has not lapsed for more than 12 months
- If practice has lapsed for 12 months express
  - The advisory body makes a recommendation to keep the medical director on
  - The department issues written consent, terms, and timelines for reevaluation of the physician in the role (i.e., what level of knowledge and engagement is the physician is to maintain)

AND

### **ACTION: DEPARTMENT COLLECT AND TRACK EXPIRATION OF ACLS and ATLS CERTIFICATIONS**

ACLS

American Heart Association

American Red Cross

European Resuscitation Council (ERC)

Australian Resuscitation Council

Who should be on this list?

ADVANCED TRAUMA LIFE SUPPORT

American College of Surgeons

Who should be on this list?

# Medical Control Authorities in Michigan

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## Evaluation Report

Prepared by MPHI

May 2024



## Executive Summary

### Overview of Evaluation

Medical control authorities (MCAs) are designated by MDHHS Bureau of Emergency Preparedness, EMS, and Systems of Care (BEPESOC) to supervise and coordinate EMS systems within their regional jurisdictions. MCAs provide medical control to their region's life support agencies (LSAs), which provide prehospital care and transport before a patient is received at a hospital, free-standing emergency department (FSED), or free-standing outpatient facility (FSOF). MCAs are administered by participating hospitals, FSEDs, and FSOFs in each MCA region.

MCAs have a crucial role in the provision of safe, effective EMS to their communities. MPHI's evaluation approach was designed for MDHHS and other relevant stakeholders to learn more about the current capacity of MCAs in Michigan. The purpose of the evaluation was to understand the organizational strengths and effectiveness of MCAs so that gaps and challenges can be identified and addressed. The data generated by this evaluation is meant to be used by stakeholders to better support MCAs and implement policies that encourage best practices and address the current challenges that MCAs face.

### Evaluation Approach

First, the evaluation team finalized the scope of data collection through document review and extensive input from MDHHS BEPESOC leaders. Subsequently, data collection tools, including two surveys, were developed collaboratively using an evaluation framework, and then programmed within the RedCAP survey environment. First, the Phase 1 survey, along with a data extraction template to collect basic organizational and functional information about the MCAs, was sent to one key contact at each MCA. Second, the Phase 2 survey was disseminated to MCA stakeholders to collect more comprehensive and role-specific data. Once the surveys were closed, data was analyzed to identify factors that contribute to the or ineffectiveness of MCAs.

### Key Takeaways

#### Phase 1

#### *Overall Structure of MCAs*

#### Common Organization Structures

- **46%** are organized as a **specific department of a hospital**.
- **30%** are organized as an **independent corporation**.

#### Common Staffing Models

- **57%** use a staffing model in which **staff are employed by another entity and are shared** between that work and the work of the MCA.
- **26%** use a staffing model in which **staff are employed by and are fully dedicated to MCA work**.

### Common Funding Sources

- **61%** received **monetary contributions** from hospitals.
- **48%** received **in-kind support** from hospitals.

### Website and App Usage

- **68%** have an **official website**.
- **55%** have **websites containing their protocols**.
- **39%** use an **app**.

### Medical Director Appointment and Training

- **51%** of MCAs have a medical director who was **appointed within the last five years**.
  - Among medical directors appointed within the last five years, **54% completed educational programs** specific to medical directors since 2020.
- Medical director educational training programs taken included:
  - **MCA Trauma Conferences (70%)**
  - **In-person MCA Training (26%)**
  - **Recorded MCA Training on MI-TRAIN (26%)**

### Communications

- **96%** of MCAs **record communication** between field EMS units and hospitals **electronically**.
  - Over half (**56%**) maintain records for **more than 6 months**
- **78%** of MCAs have a communication records maintenance mechanism in which **the hospital receives and maintains transmission**.
- **10%** of MCAs maintain communication records by **an accessible cloud-based platform**.

### Protocol Distribution and Awareness

- In **87%** of MCAs, EMS personnel are supplied with the current protocol **through their agency**.
- **54%** are supplied the current protocol through the **MCA website**.
- **37%** are supplied the current protocol via phone app update.
- In **89%** of MCAs, licensed EMS personnel are **made aware of their MCA's protocols** through **agency assurance**.

### LSA Credentialing and Monitoring

- **56%** of MCAs have a **formal process for granting authority to LSAs**.
- **46%** of MCAs **do not monitor LSA availability**.

### Phase 2

#### Years of Experience

- **44%** of respondents held their current position for **one to five years**.
- **44%** held their current position for **more than five years**.

### *Time Allocation*

- **45%** of respondents spend **less than five hours a week** on MCA work.
- **24%** spend **more than 20 hours a week**.
- **Ideally**, a majority (**79%**) would spend **more than five hours a week** on MCA work, compared to the 55% who do so currently.

### *Training*

- **41%** of respondents **attended an in-person MCA training**.
- **Most (83%)** respondents **rated the training as very useful** (seven or above), with an average rating of 8.1.

### *MCA Handbook*

- About **1 in 3 (33%)** respondents had **thoroughly read or were familiar with the handbook**.
- About **1 in 4 (25%)** **did not know an MCA handbook existed**.

### *Understanding of MCA Structure and Functions*

- Over **80%** of respondents said they had a **comprehensive understanding for each topic** (rating of seven or above):
  - **87%** for **processes and requirements for personnel credentialing**.
  - **85%** for **processes and requirements for agency licensure**.
  - **84%** for **statutory responsibilities of an MCA's functions**.
  - **83%** for **statutory responsibilities for an MCA's structure**.
  - **80%** for **protocol submission processes**.

### *MCA Bylaws*

- **49%** of respondents said their **bylaws were updated in the last five years**.
- Notably, **almost half (46%)** reported that they were **not sure when bylaws were last updated**.

### *Perception of MCA Effectiveness*

- **82%** of respondents said **their MCA was very effective** (rating of seven or higher).

### *Regional Activities*

- **66%** of respondents agreed or strongly agreed that their MCA regularly participates in a **Regional Trauma Advisory Committee (RTAC)**.
- **68%** agreed or strongly agreed that **their MCA regularly participates in a Regional Trauma Network (RTN)**.
- **79%** agreed or strongly agreed that their MCA has been involved in the **development of regions for systems of care (SOC)**, such as stroke, STEMI, and trauma.

### Quality Improvement

- **75%** of respondents agreed or strongly agreed that **their MCA has a defined quality improvement process.**
- Only **51%** reported they **receive reports of quality indicators.**

### Knowledge Test

- Overall, **67%** of survey respondents **selected correct responses** for most knowledge test questions.
- **97%** was the highest rate of correct answers, for whether an **MCA can revoke or suspend an EMS license.**
- **47%** was the lowest rate of correct answers, for whether the **authority of an MCA comes from the bylaws.**
- When stratified by respondent primary role, the **lowest overall score** on the knowledge test was among **PSRO members (64%),** followed by **MCA Board and Advisory Body members (66%)** and **key staff (69%).**
- **MDs and AMDs** had the **highest overall score** on the knowledge test, getting **75%** correct on average.

### Key Recommendations and Action Steps



#### **Updated manuals and handbooks and accessibility of materials.**

- Creation and distribution of a “quick manual” for those who may not read the MCA Handbook in full – especially for Board, Advisory Body, and PSRO members.
- Development of a new MCA Handbook which is regularly updated based on need.
- Creation of easily accessible MCA manuals and handbooks that are published electronically and provided in hard copy as needed.



#### **Improved data collection for regular oversight of MCAs.**

- Regular collection of relevant data points regarding the structure and functions of all MCAs.
- Creation and regular maintenance of databases encompassing relevant data points.



#### **Increased enforcement of MCA policies and procedures.**

- Level-setting with all stakeholders to stress importance and legal weight of MCA protocols.
- Administration of regular knowledge tests regarding understanding of MCA policies and procedures.
- Implementation of other enforcement mechanisms, as needed.



#### **Increased stakeholder engagement.**



- Review of knowledge test results with stakeholders based on composite scores, especially MCA Board, Advisory Body, and PSRO.
- Increased engagement with stakeholders, including enhanced feedback and input mechanisms for Advisory Body and MCA Board.



**Continued, consistent training and education.**

- Provision of regular education and training opportunities regarding MCA policies and procedures, not just upon onboarding.
- Continued knowledge dissemination at conferences, workshops, and other educational forums.

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## Introduction

Medical control authorities (MCAs) are designated by the state of Michigan to supervise and coordinate emergency medical services (EMS) in a specific geographic jurisdiction. MCAs are authorized by the Public Act 368 of 1978 (i.e., Public Health Code) to oversee EMS services in their regions. MCAs are overseen by the Michigan Department of Health and Human Services (MDHHS) Bureau of Emergency Preparedness, EMS, and Systems of Care (BEPESOC) and must adhere to its policies.

## Background

MCAs are designated by MDHHS to supervise and coordinate their respective EMS systems as prescribed, adopted, and enforced through protocols approved by MDHHS. MCAs provide medical control to life support agencies (LSAs), which provide prehospital care and transport before a patient is received at a hospital or emergency department. They engage in a wide range of functions and can generally take many different types of structures. They do not receive any state or federal funding and are responsible for acting in the best interests of the EMS systems in their region.

MCAs are administered by participating hospitals in each region. Any hospital, free-standing emergency department (FSED), or free-standing outpatient facility (FSOF) that receives emergency patients can participate in the MCA. Participating members can have representatives on the MCA Board, which is required to comprise mostly of hospital and FSED/FSOF representatives. All members of the MCA must comply with MDHHS-approved MCA protocols.

Additionally, each MCA has a medical director, appointed with the advice of the Advisory Body, who is a board-certified emergency medicine physician tasked with providing medical control to the participating LSAs. The MCA's Advisory Body consists of representatives of participating LSAs, including different types and levels of EMS personnel. Many MCAs also have clerical or administrative staff who engage in other MCA responsibilities, including training and continuing education, personnel testing, medication management, quality improvement, and data entry. Finally, MCAs have professional standard review organizations (PSROs), which are focused on reviewing quality improvement data and improving quality of care.

## Evaluation Purpose

MCAs have a crucial role in the provision of safe, effective EMS to communities in Michigan. Due to the essential nature of MCAs, the purpose of this evaluation was to understand the organizational strengths and effectiveness of MCAs so that gaps and challenges can be identified and addressed, and best practices can be documented and replicated. The data generated by this evaluation is meant to be used by relevant stakeholders to better support MCAs and implement policies that encourage best practices as well as address current challenges.

## Evaluation Approach

MPHI developed an evaluation approach so that MDHHS and other relevant stakeholders could learn more about the current capacity of MCAs in Michigan. This included learning more about the current structure and functions of MCAs. MPHI started its evaluation process by finalizing the scope of data collection through document review and meeting with MDHHS BEPESOC leaders. Subsequently, using a comprehensive evaluation framework, the evaluation team developed data collection tools, including two surveys, which were disseminated to the MCAs. Once data was collected, MPHI analyzed the data to look at factors that contribute to the effectiveness and inefficiencies of MCAs.

### Document Review

At the start of the evaluation, MPHI conducted a document review to gather existing information about the structure and functions of MCAs in Michigan. MPHI first reviewed the most recent (2017) edition of the MCA Handbook which was prepared by BEPESOC. The handbook is a guide for hospital administrators, clinical providers, LSA leaders, EMS personnel, medical directors, and staff involved in MCA administration and work. The MPHI evaluation team reviewed the 54-page document and took notes on key terms and areas of work.

The evaluation team also reviewed a prior evaluation of Michigan MCAs conducted in 2012, including the associated evaluation survey and results. This 2012 survey formed the basis of the surveys that were developed for the present evaluation. Further document review was facilitated through the development of the initial data collection tool, along with which individual MCAs were asked to send their department-approved protocols and bylaws.

### Framework Development

MPHI developed an evaluation framework with guidance from the MCA Handbook, the 2012 MCA evaluation, and other areas of interest for the BEPESOC team which were determined through conversation with them. The evaluation framework was developed systematically, using information gathered from the document review. The three domains that were developed were: Descriptive Information, Structure and General Operations, and Processes for Providing Key Functions. Under each domain, evaluation concepts and data resources for potential metrics and questions were determined. This framework laid the foundation for survey development.

### Initial Data Collection

The evaluation team created an Excel spreadsheet with multiple tabs to capture relevant information from each MCA. The first worksheet collected demographic and staffing data from each MCA. This included geographic and demographic data, the number of staff employed, full-time equivalents (FTEs) dedicated to MCA work, number of EMS providers stratified by certification level.

The second worksheet collected the names of participating hospitals, as well as their zip code and trauma level designation. The last two worksheets collected data about the rosters of the MCA Board and Advisory Body (when a separate entity from the MCA Board). These spreadsheets collected names, email contact information, which agency the person belonged to, hospital or non-hospital membership, designated statutory role they were filling, title at their place of employment, and board position, if they held one.

## Surveys

MPHI programmed two surveys on the RedCAP platform, each designed to address different aspects of the MCA evaluation. Additionally, the Initial Data Collection spreadsheets were sent out along with the survey.

The first survey (Phase 1 Survey) was sent out to only one key contact at each MCA. Concurrently, the Initial Data Collection tool was also sent out to these key contacts. Once the Phase 1 Survey was closed, the second survey (Phase 2 Survey) was sent to various types of MCA staff and stakeholders to get their perspectives on their work with MCAs. For the Phase 2 Survey, many MCAs had multiple respondents, while Phase 1 produced only one response per responding MCA.

### Phase 1 Survey

Using the framework developed for the evaluation, MPHI developed questions within all three domains of the evaluation. Questions that were not selected for Phase 1 were planned to be used in the Phase 2 Survey. The BEPESOC team reviewed a draft of the Phase 1 Survey and provided feedback before MPHI started programming the survey. Overall, 47 questions were selected for the final survey.

Questions were organized into general questions (e.g., MCA name), structure and operations (e.g., type of organization, staffing model, Board and Advisory Body, medical director and staff, funding, communications), and key function processes (e.g., protocol development, protocol adherence, EMS credentialing, quality improvement, participation in public safety answering points and dispatch, discretionary activities).

After the survey was programmed in RedCAP, it was sent by BEPESOC staff to one key contact at each of the MCAs, with MPHI developing recruitment language for the survey which contained clear communication that only MPHI staff would have access to the survey data.

### Phase 2 Survey

The evaluation framework was also used to develop Phase 2 questions. The Phase 2 Survey was designed to ask specific questions about MCA functions, including those that are role-specific, as well as qualitative, open-ended questions about stakeholder perspectives on MCA work.

The survey included general questions for various types of MCA staff and stakeholders. Questions were about protocols, regional trauma collaboration, and quality improvement.

Role-specific questions were also included (i.e., specific questions for medical director or assistant medical director, key staff, voting members of MCA Board, participants of the Advisory Body, and PSRO members). Additionally, one section was dedicated to an 11-question “knowledge test” which was proposed by the BEPESOC team as a metric of how knowledgeable MCA staff and stakeholders were about MCA structure and functions.

After the survey was programmed in RedCAP, it was sent by key staff at each MCA to relevant staff and stakeholders, once again using recruitment language that MPHI developed.

### Data Analysis

Initial analysis of Phase 1 and Phase 2 data was conducted using SPSS. Basic analysis consisted of generating descriptive statistics from quantitative data that was received from MCAs. Descriptive statistics included frequencies and other forms of univariate analysis. Phase 1 data was combined with the initial data collection tool data to facilitate inferential crosstab and chi-square analysis. Further data analysis examined differences across trauma region, type of organization, type of staffing structure, and primary role within the MCA. Additionally, qualitative analysis was conducted to extract themes from the responses to open-ended questions from Phase 1 and Phase 2.

## Phase 1 and Initial Data Collection Results

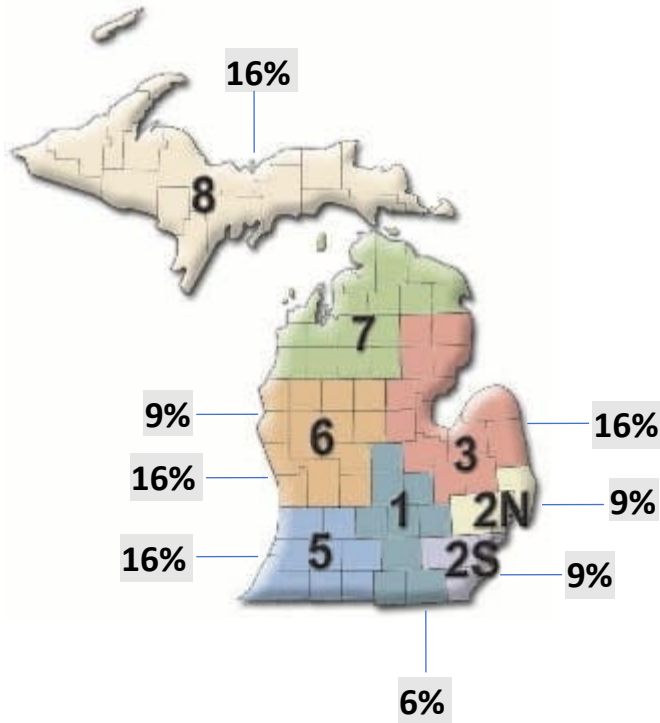
### Survey Response Overview

A total of 42 respondents provided complete responses to the Phase 1 survey, as well as 4 incomplete responses. The overall survey response rate was 71%.

### Overall Structure

#### Trauma Region

Respondents reported which trauma region their MCA belonged to. As shown in Figure 1, of those who reported their region, 6% of MCAs were from Region 1, 9% from Region 2N, 9% from Region 2S, 16% from Region 3, 16% from Region 5, 11% from Region 6, 9% from Region 7, 16% from Region 8, and 3% from multiple regions.



**Figure 1. MCA Survey Participation by Michigan Trauma Region.**

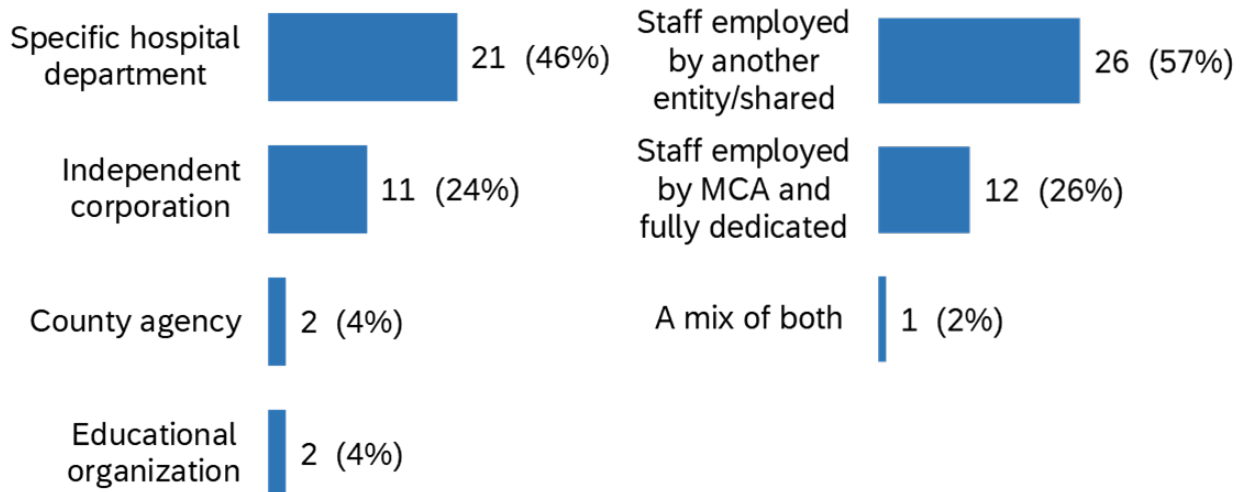
#### Organizational and Staffing Structure

MCAs vary greatly in the way they are structured. Some MCAs are independent organizations, while others are affiliated with member hospitals or are part of an educational or county organization. An MCA's staffing model, which is related to its organizational structure, can vary greatly as well; MCAs are often either employed or shared between another entity, employed by the MCA itself, or have a mix of both models.

Respondents were asked about the organizational structure of their MCA. Among the respondents, almost half (46%) the reporting MCAs are organized as a specific department of a hospital, 30% as an independent corporation such as a 501c3, 4% as an entity or unit within a county agency, and 4% as an entity or unit within an educational organization (Figure 2, left). Another 22% had some other type of organizational structure, including a hospital-led but independent entity, or a combination of multiple types of organizational structures.

Respondents were further asked about their MCA's staffing model. Among the respondents, 57% had a staffing model in which staff are employed by another entity and are shared between that work and the work of the MCA, 26% of MCAs had a staffing model in which staff are employed by and fully dedicated to MCA work, and 2% had a mix of both models (Figure 2, right). Another 15% had some other type of staffing model. Other reported staffing models included part-time or full-time employment by a hospital with added position tasks related to the MCA, part-time administrative or coordination roles, part-time medical director roles, or on an as-needed basis.

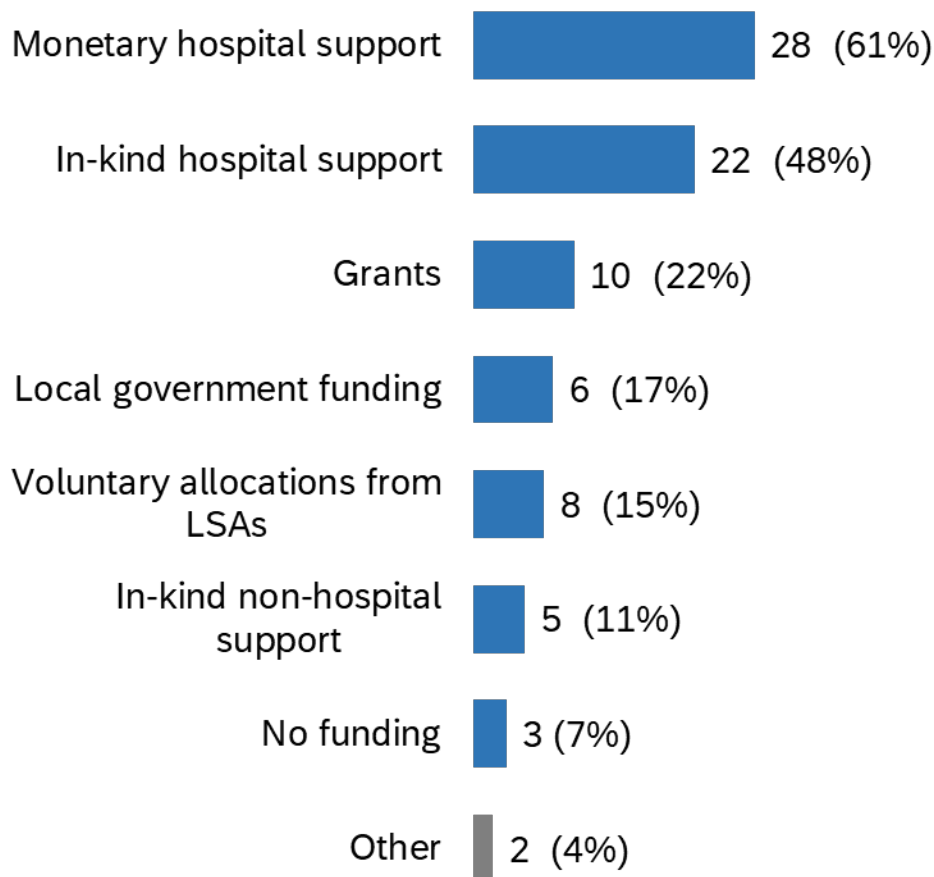




**Figure 2. MCA Organizational Structure (left) and Staffing Model (right).**

#### Funding Sources

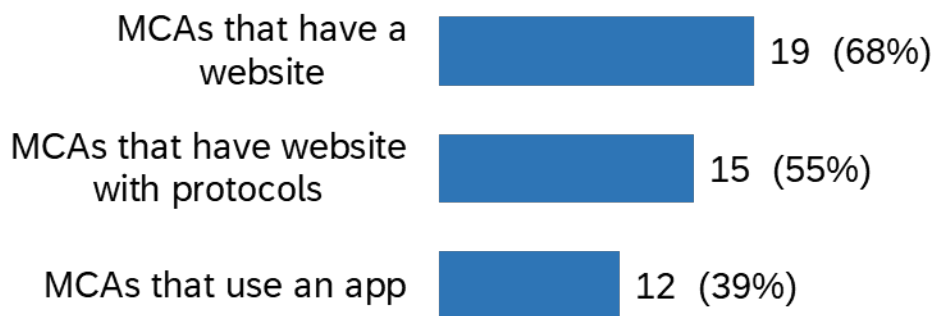
Respondents were asked how their MCA is funded. They reported that MCAs derive their funding from various sources, including monetary contributions from hospitals (61%), in-kind support from hospitals (48%), grants such as those from a community foundation or United Way (22%), local government funding (17%), voluntary allocations from LSAs (15%), in-kind support from a non-hospital entity (11%). A few MCAs (7%) do not receive any funding at all. Another 4% of MCAs receive funding from another source not listed (Figure 3).



**Figure 3. Funding Sources.**

#### Use of Official Website and App

Respondents were asked if their MCA has an official website. Results showed that 68% of MCAs have an official website, and 55% have websites containing their protocols. Respondents were also asked if their MCA has an app. Results showed that 39% of MCAs use an app (Figure 4).



**Figure 4. Use of Websites and Apps.**

## Medical Director Appointment, Training, Reporting and Responsibilities

Respondents were asked if the medical director at their MCA was appointed in the last five years. Slightly over half (51%) of the participating MCAs reported having a medical director who was appointed within the last five years. Those respondents with medical directors appointed in the last five years were asked further questions about their appointment and training.

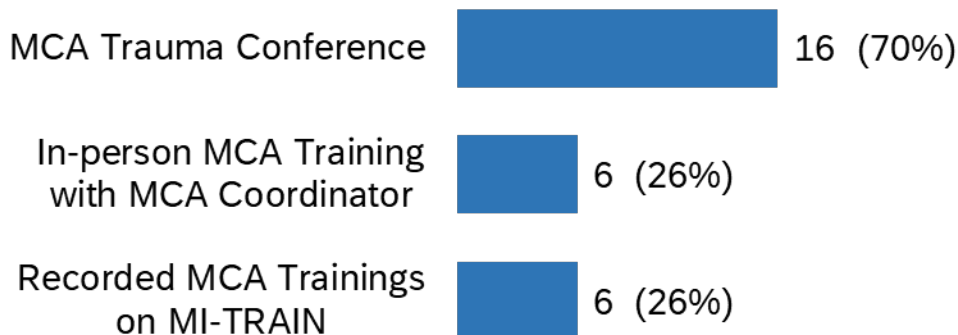
Respondents were asked to describe the process of appointing a medical director at their MCAs. Content analysis results demonstrated that there were some common themes in appointment processes. These themes, listed from most common to least common, are presented in Table 1, along with selected quotes that fall under each theme.

**Table 1. Common Medical Director Appointment Processes.**

Theme	Quotes
<b>Medical director is selected through an MCA Board and/or Advisory Body process (n=9)</b>	<p><i>MCAB nominates, votes, and recommends appointment to Board of Trustees.</i></p> <p><i>The Medical Director candidate was suggested to the Advisory Body by the (then) current Medical Director. The Advisory Body voted to accept the recommendation and the candidate was appointed by the Board.</i></p> <p><i>Nominations were provided by the MCA Board, reviewed and voted on by the Advisory Board, then submitted to the Executive Committee for approval.</i></p>
<b>Medical director is appointed by MCA-affiliated hospital(s) and/or by a candidate search at the hospital (n=7)</b>	<p><i>The position is posted within local hospitals and candidates submit CV/resume to the board.</i></p> <p><i>The medical director was appointed by hospital staff and the employing agency. Candidates identified through ED staffing availability and willingness.</i></p> <p><i>Every three years the Medical Director is appointed by either [of two local hospitals].</i></p>
<b>Medical director role is a part of existing hospital role tasks (n=6)</b>	<p><i>The current medical director is also the current director of the ER as well, this position has been "attached" to that position and when ER directors change, so does the med control director.</i></p> <p><i>The medical director is an employee of the MCA sponsoring hospital. Part of their role includes MCA medical director.</i></p>

Among MCA medical directors appointed within the last 5 years, 54% had completed educational programs specific to medical directors since 2020. These educational programs

included MCA Trauma Conferences (70%), in-person MCA Training with the MCA Coordinator (26%), and recorded MCA Training on MI-TRAIN (26%) (Figure 5).



**Figure 5. Education Programs Completed by Medical Directors Since 2020.**

Another 35% of MCA medical directors took other types of trainings, including the National Association of EMS Physicians (NAEMSP) course for medical directors, remote education programs, Nationally Registered EMT (NREMT) Paramedic training, an EMS state director-provided course, board-provided education for EMS physicians, and various conferences (e.g., Regional Healthcare Coalition, National Healthcare Coalition, Homeland Security, State MCA, Local MCA, etc.).

Respondents were asked an open-ended question about how their MCA’s medical director interacts with Board members. They shared that in most MCAs, the medical director is a part of Board and Advisory Body meetings and sometimes leads those meetings as well. In these cases, the medical director may either be a voting or non-voting member of the Board. In some MCAs, the medical director leads meetings with LSAs and hospital staff, including administration, and regularly interacts and provides updates through emails and in-person staff meetings.

Respondents were also asked how the medical director reports to the Board. They shared that in most MCAs, the medical director reports to the Board on issues related to the EMS system through regular Board meetings. Some medical directors also use quarterly Board meetings and executive board member meetings to provide their reports. Apart from meetings, medical directors often use email, phone, and the Teams application for reporting. In some MCAs, reporting is done by the medical director’s liaison or in coordination with the MCA’s key staff.

Respondents were further asked how medical directors receive input from the Advisory Body. They shared that, in most cases, medical directors receive input during Advisory Body meetings and through periodic formal meetings with members. In many cases, the medical

director is also a Board or Advisory Body member and directly receives feedback from other staff. Medical directors also receive input through email, phone, or via formal liaison.

### Communications

Respondents were asked if their MCA records communications between field EMS units and hospitals electronically. Almost all (96%) of the responding MCAs record communication between field EMS units and hospitals electronically. Among these MCAs, over half (56%) maintain records for more than 6 months, 22% maintain communication records for less than 6 months, and the remaining 4% maintain records for some other length of time.

Respondents were asked how communication records are maintained by their MCAs. In over 78% of MCAs, the hospital receives and maintains transmission, while 10% of MCAs maintain communication records by using an accessible cloud-based platform. Additionally, 12% of MCAs maintain records by other methods, such as meetings, an online countywide bulletin board, apps, podcasts, and verbal communications.

### Quality Improvement

Respondents were asked if their MCA has a currently functioning Quality Improvement (QI) program in place. Most MCAs (86%) said they have a currently functioning QI program in place, while 12% said they do not have one. The remaining 2% of MCAs shared that they are not aware if they have a currently functioning QI program in place.

Respondents were asked how often their MCA's QI activities are evaluated. More than half of the MCAs (54%) shared that their QI activities are evaluated monthly, 22% evaluate them quarterly, and 19% of MCAs evaluate them as needed. The remaining MCAs (5%) shared that their QI activities are evaluated at some other frequency.

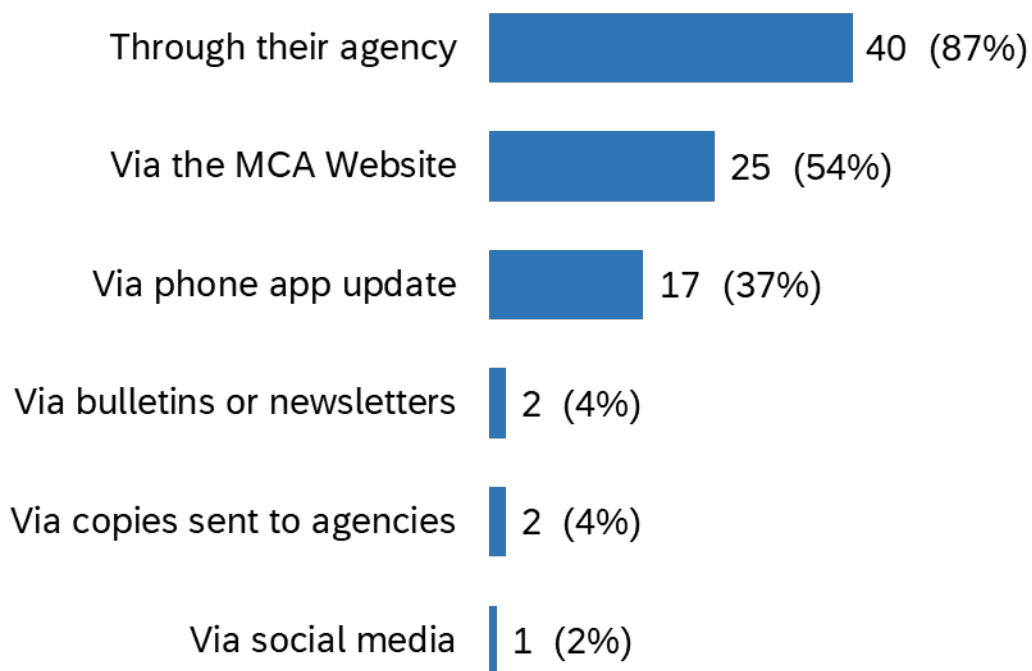
Respondents were asked about the type of QI activities their MCA regularly participates in. Most MCAs (74%) regularly participate in providing feedback to LSAs, 70% regularly participate in data review work, 70% regularly participate in audit of patient care documentation, and 61% regularly participate in training and education.

### Protocol Adherence

Respondents were asked how EMS personnel within each MCA are supplied with the current MCA protocol. In most MCAs (87%), EMS personnel are supplied with the current protocol through their agency, over half (54%) are updated through the MCA website, 37% via a phone app update, 4% via bulletins or newsletters, 4% via hard or digital copies sent to agencies, and 2% via social media (Figure 6).

Respondents were further asked how EMS personnel are made aware of protocols. Survey results showed that in most MCAs (89%), licensed EMS personnel are made aware of their MCA's protocols through agency assurance, 15% through annual testing of licensees, 4% through training and education, and 4% through reviews and audits. Another 15% of

respondents reported some other way of making personnel aware of protocols, such as through the licensee renewal process, updates and memos, and meetings.



**Figure 6. Methods of Protocol Distribution.**

#### EMS and LSA Credentialing and Monitoring

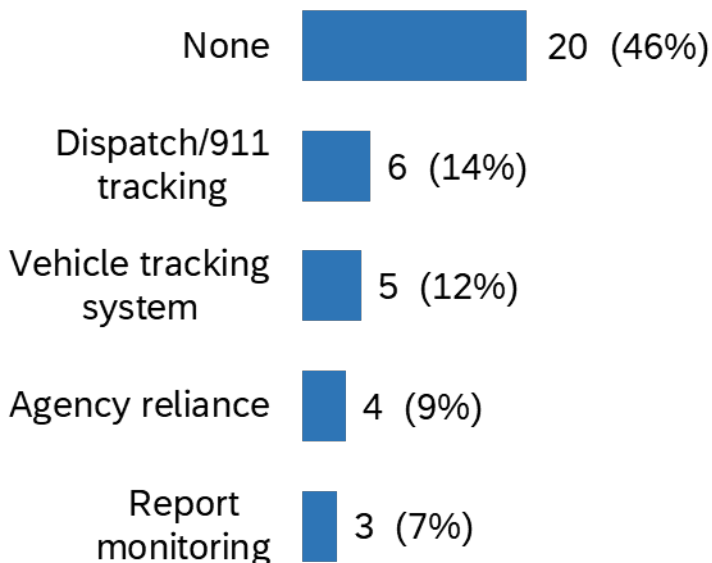
##### Granting MCA Authority to LSAs

Respondents were asked if their MCA has a formal process in place to grant LSAs authority to function within its jurisdiction. A little over half (56%) of the responding MCAs have a formal process for granting authority to LSAs, while 21% said they do not have any formal process. The remaining 23% of respondents shared that they were not sure if their MCA had a formal process for granting LSAs authority. Following up, respondents were asked to describe their MCA's formal process to grant authority to LSAs to function. Most respondents stated that their MCA has an application process and that LSAs must meet the minimum requirement for credentialing within the MCA, along with application review by Advisory Body members. Some MCAs also require that the participating LSAs maintain records of required certifications and licensure and receive feedback through quality assurance.

##### Monitoring LSA Availability

Respondents were asked to share how MCAs monitor LSA availability. Results showed that 14% of MCAs monitor LSA availability through dispatch and 911 tracking logs, 12% through a vehicle tracking system, 9% through agency reliance, and 7% through report monitoring. However, 46% of the MCAs reported that they do not monitor the availability of LSAs (Figure

7). Another 12% of respondents said they had other ways of monitoring LSA availability, including on an as-needed basis, and through radio.



**Figure 7. Mechanisms for Monitoring LSA Availability.**

## Phase 2 Results

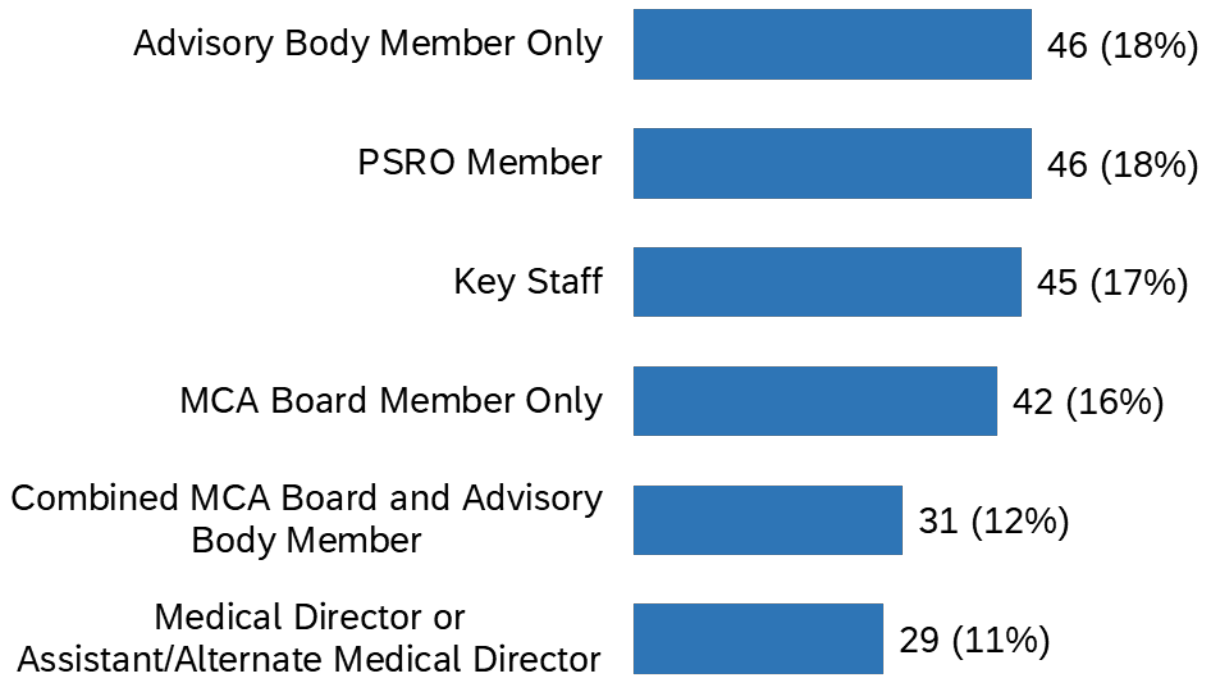
### Survey Results Overview

There were 262 complete responses to the Phase 2 survey, out of 286 total responses.

Respondents included staff, medical directors, assistant or alternate medical directors, MCA Board members, Advisory Body participants, PSRO members, and other staff and stakeholders who are involved in MCA work throughout the state.

### Respondent Role

Respondents were asked about their primary role within their MCA. Overall, the greatest proportion of respondents were Advisory Body members (18%) and PSRO members (18%), followed by key staff (17%) and MCA Board members (16%). Additionally, another 12% were members of a combined Advisory Body and MCA Board, and 11% were medical directors (MDs) or assistant medical directors (AMDs) (Figure 8). Another 8% had another role not listed above, including fire chiefs, those in leadership roles related to operations and administration, and first responders.



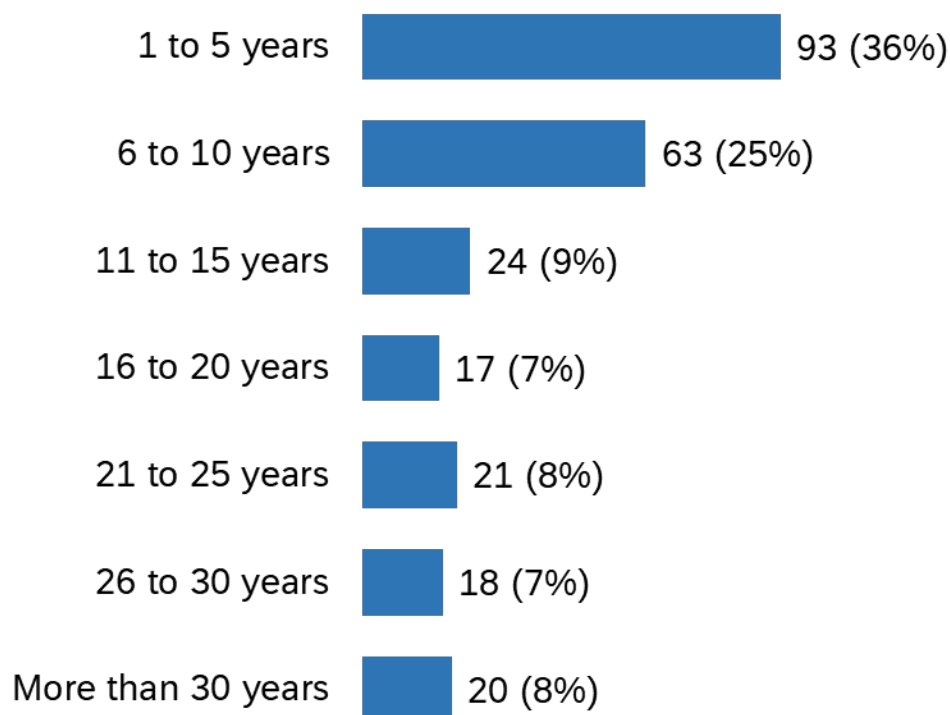
**Figure 8. Primary MCA Role of Phase 2 Respondents.**

Many respondents hold multiple roles simultaneously within their MCA. When all respondent roles were taken into consideration, 40% were PSRO members, 15% were key staff, 25% were MCA Board members, 15% were members of a combined Advisory Body and Board, 24% were Advisory Body participants, and 12% were MDs or AMDs. Another 6% had another role not listed. Almost one in three respondents (32%) held more than one role within their MCA, and almost 14% held more than two roles.

### Years of Experience

Respondents were asked about the amount of MCA experience they had. When asked how long they have served with the MCA they are currently affiliated with, the largest portion (44%) responded that they had held this position for more than five years, while another 44% had held their position for one to five years. However, when asked about **overall** MCA experience, regardless of which MCA, a large portion of stakeholders said they had one to five years of experience (36%), while almost one in four (23%) had over 20 years of experience (Figure 9).





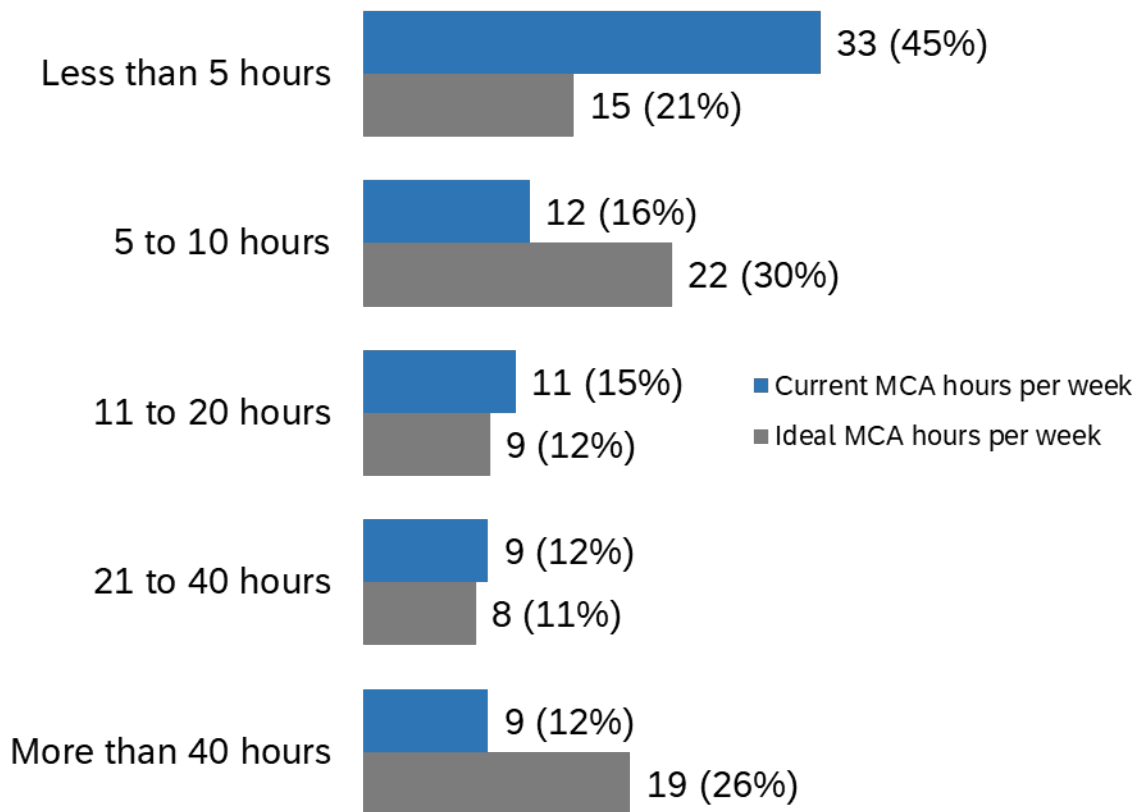
**Figure 9. Number of Years of Experience Working with Any MCA.**

Over half (55%) of the MDs and AMDs had worked with their MCA for over five years. A similar pattern was noted among key staff members, 58% of whom had worked with their current MCA for over five years, while 80% had been there over three years. Board members had mixed employment lengths at their current MCA, with about 46% of the members having worked with the MCA less than two years.

Interestingly, a significant portion of staff had between one and five years of experience with MCAs in general, including 43% of PSRO members, 38% of MCA Board members, 37% of Advisory Body members, 35% of MDs and AMDs, and 29% of key staff. Most staff had under 15 years of experience working with MCAs.

#### Time Allocation

Respondents were asked about their time commitment to MCA work. Specifically, they were asked how much time they dedicate to MCA work, as well as how much time they ideally would dedicate to MCA work, free of any other constraints. Overall, almost half (45%) of the respondents spent less than five hours a week on MCA work, while 16% spent five to ten hours, and 15% spent 11 to 20 hours. Almost a quarter (24%) spent more than 20 hours a week. Ideally, however, a majority (79%) would spend more than five hours a week on MCA work, compared to the 55% who do so currently (Figure 10).

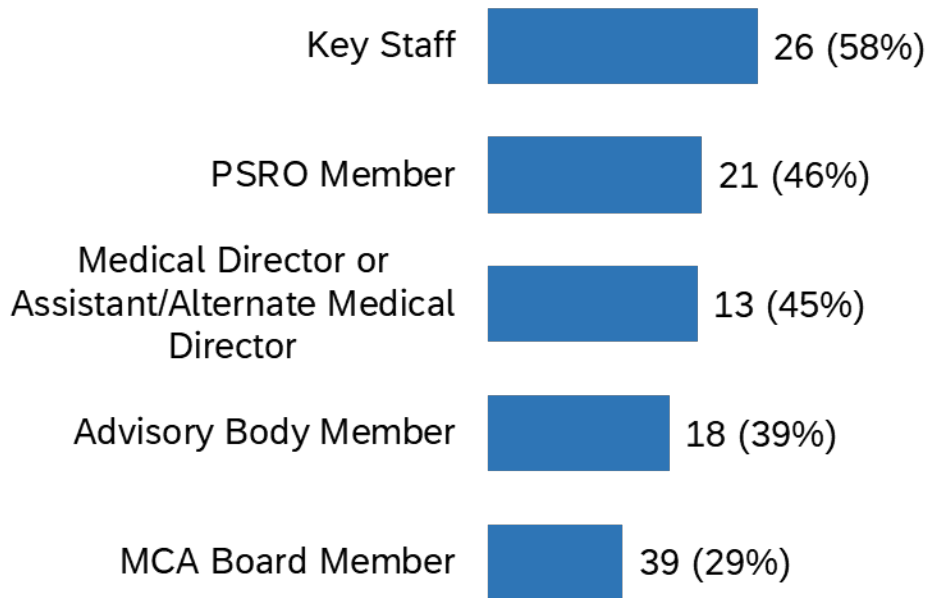


**Figure 10. Current and Ideal Time Allocation for MCA Work.**

Group differences among respondents representing different primary roles were also examined. Almost all (97%) MDs and AMDs spend under 20 hours a week on MCA-related work, with a little over half (52%) spending less than five hours. However, most (79%) would ideally schedule more than 5 hours of work a week, with 45% wanting to dedicate five to ten hours. Key staff are more spread out in terms of how many hours of work they spend on MCA tasks, but about one in five (20%) spend more than 40 hours a week on MCA tasks. However, among those who work less than 40 hours, the majority work less than 20 hours a week. Ideally, about half of the key staff respondents would spend between 21 and 40 hours a week on their work as opposed to only 18% who do so currently.

### Training

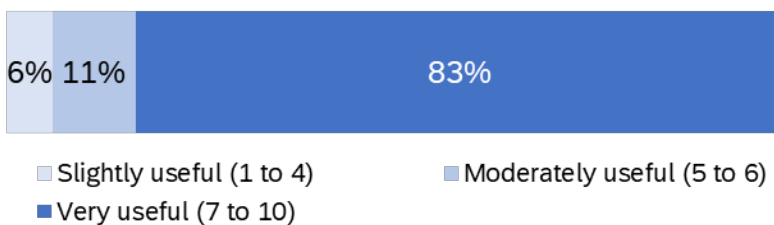
Respondents were asked if they had taken an in-person MCA training. Overall, 41% attended an in-person MCA training provided to them by the MCA Coordinator. Further analysis to explore group differences showed that key staff had the highest rates of attendance (58%) for in-person training, followed by PSRO Members (46%) and MDs or AMDs (45%) (Figure 11). Among the stakeholders with the lowest attendance, MCA Board members, 29% had attended the training.



**Figure 11. In-Person MCA Training Attendance by Primary Role.**

Those respondents who completed an in-person MCA training were asked how long ago it was held. A little less than half (47%) of the survey respondents reported that their in-person MCA training was held more than three years ago.

Respondents were also asked to rate their opinion on the quality of the in-person MCA training on a Likert-type scale ranging from 1 (not at all useful) to 10 (extremely useful). Results showed that 83% of respondents rated the training as very useful (7 or above), with an average rating of 8.1 (Figure 12).



**Figure 12. Perceived Usefulness of In-Person MCA Training.**

As a follow-up, survey respondents were invited to provide additional information regarding the parts of the in-person training that they found most useful. Content analysis results

showed that the most frequently reported themes included education on MCA policy, structure, and role, face-to-face, hands-on aspects, and collaboration and networking. These results are summarized in Table 2.

**Table 2. Useful Parts of In-Person MCA Training.**

Theme	Quotes
<b>Education on policy, structure, and role (n=32)</b>	<p><i>Despite having lots of MCA experience, it is always good to get a refresh of different aspects of the MCA role and function as well as the state's perspective on that role.</i></p> <p><i>Legislative review, role and responsibilities of the MCA and participants</i></p> <p><i>just gaining familiarity with what a med control is and what it does, its structure and statutes, etc.</i></p> <p><i>learning about the MCA and their role in every day running of the MCA</i></p>
<b>Face-to-face, hands-on (n=15)</b>	<p><i>the face to face aspect is helpful</i></p> <p><i>Real time communication and education in person demonstrations, practice</i></p> <p><i>Hands-on AED reviews.</i></p>
<b>Collaboration and networking (n=15)</b>	<p><i>networking discussions</i></p> <p><i>Networking; Peer support</i></p> <p><i>We have had multiple trainings – collaboration</i></p>
<b>New protocol review (n=7)</b>	<p><i>Implementation of new protocol and training</i></p> <p><i>state update on protocols</i></p>

Respondents were also asked how the in-person training they attended could be improved. Common themes that emerged from content analysis included more trainings, more interactive, hands-on aspects, more participation from different staff, and the availability of virtual options. These results are summarized in Table 3.

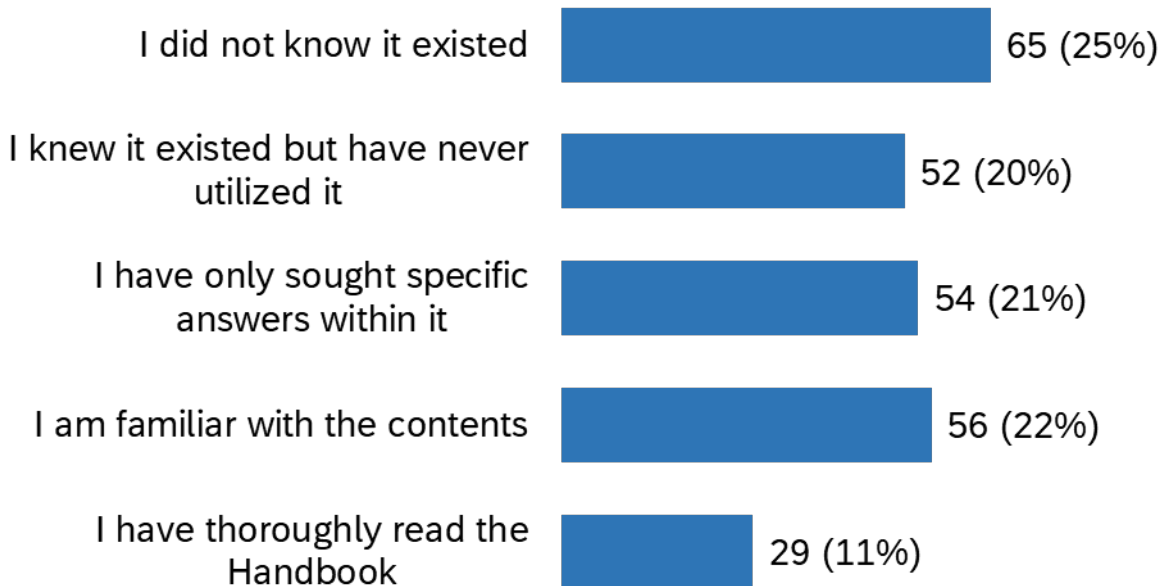
**Table 3. Ways MCA In-Person Training Could Be Improved.**

Theme	Quotes
<b>More trainings (n=14)</b>	<p><i>Have more trainings on skills not used very often</i></p> <p><i>More of it and experienced persons providing the training.</i></p> <p><i>Have more of them, covering different topics.</i></p>

	<i>Develop an introduction to MCA course, that MCA staff not as familiar could take, but then expand on that, and include best practicing from across the MCA's in the state.</i>
<b>More hands-on, interactive aspects (n=7)</b>	<i>Provide real life, blinded examples of who a PSRO functions using cases as an evaluative tool. The PSRO role is a critical one and needs greater attention. more hands on instead of power point Realistic simulations</i>
<b>More participation from different staff (n=4)</b>	<i>Greater participation of Members More participation from road providers more physician involvement, or experienced paramedics</i>
<b>Virtual options (n=3)</b>	<i>Offering a virtual option, I think will increase availability to MCA members</i>

[MCA Handbook](#)

Respondents were asked about their familiarity with the most recent MCA handbook. Results showed that only 11% of survey respondents had thoroughly read the handbook, 22% were familiar with the handbook, and 21% sought only specific answers within the handbook. By contrast, 25% of respondents did not know an MCA handbook existed, while another 20% knew of its existence but never utilized it (Figure 13).



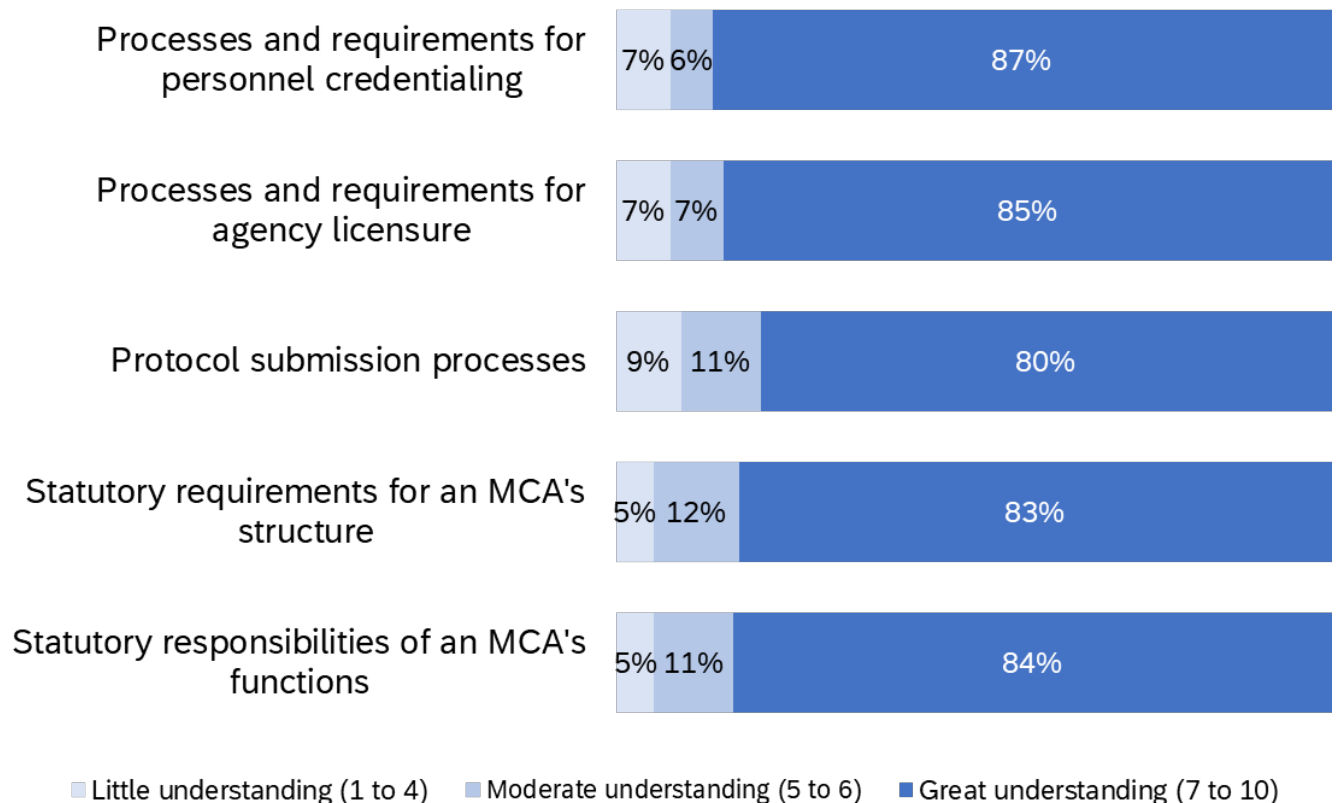
**Figure 13. Level of Familiarity with MCA Handbook.**

Group differences were examined based on the primary role of respondents. The lowest rates of familiarity with the MCA Handbook were among members of the MCA Board, Advisory Body, and PSRO. Among these groups, 41% of Advisory Body participants did not know it existed, followed by PSRO members (28%), combined Advisory Body and Board members (26%), and MCA Board members (21%).

### Understanding of MCA Structure and Functions

Survey respondents were asked to rate their own understanding of various facets of MCA structure and functions. They rated their understanding of each topic based on a Likert-type scale ranging from 1 (no understanding) to 10 (full understanding).

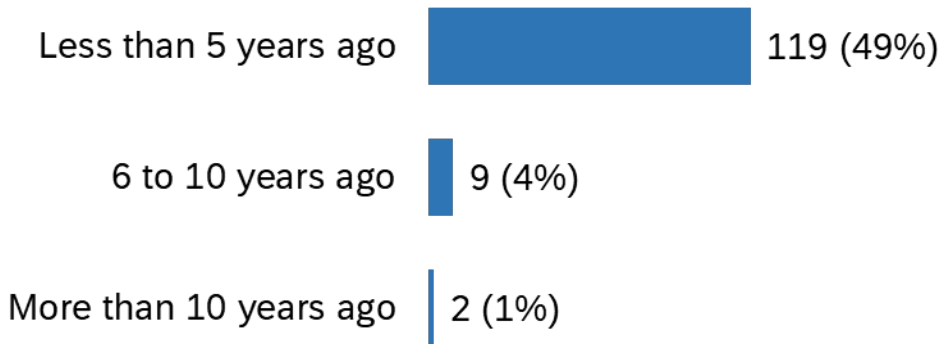
Results showed that at least 80% of respondents provided a rating of seven or higher (i.e., comprehensive understanding) for each topic. Overall, 87% of respondents provided a rating of seven or higher for their understanding of processes and requirements for personnel credentialing, 85% for processes and requirements for agency licensure, 84% for statutory responsibilities of an MCA's functions, 83% for statutory requirements for an MCA's structure, and 80% for protocol submission processes (Figure 14).



**Figure 14. Self-Reported Level of Understanding of MCA Processes and Requirements.**

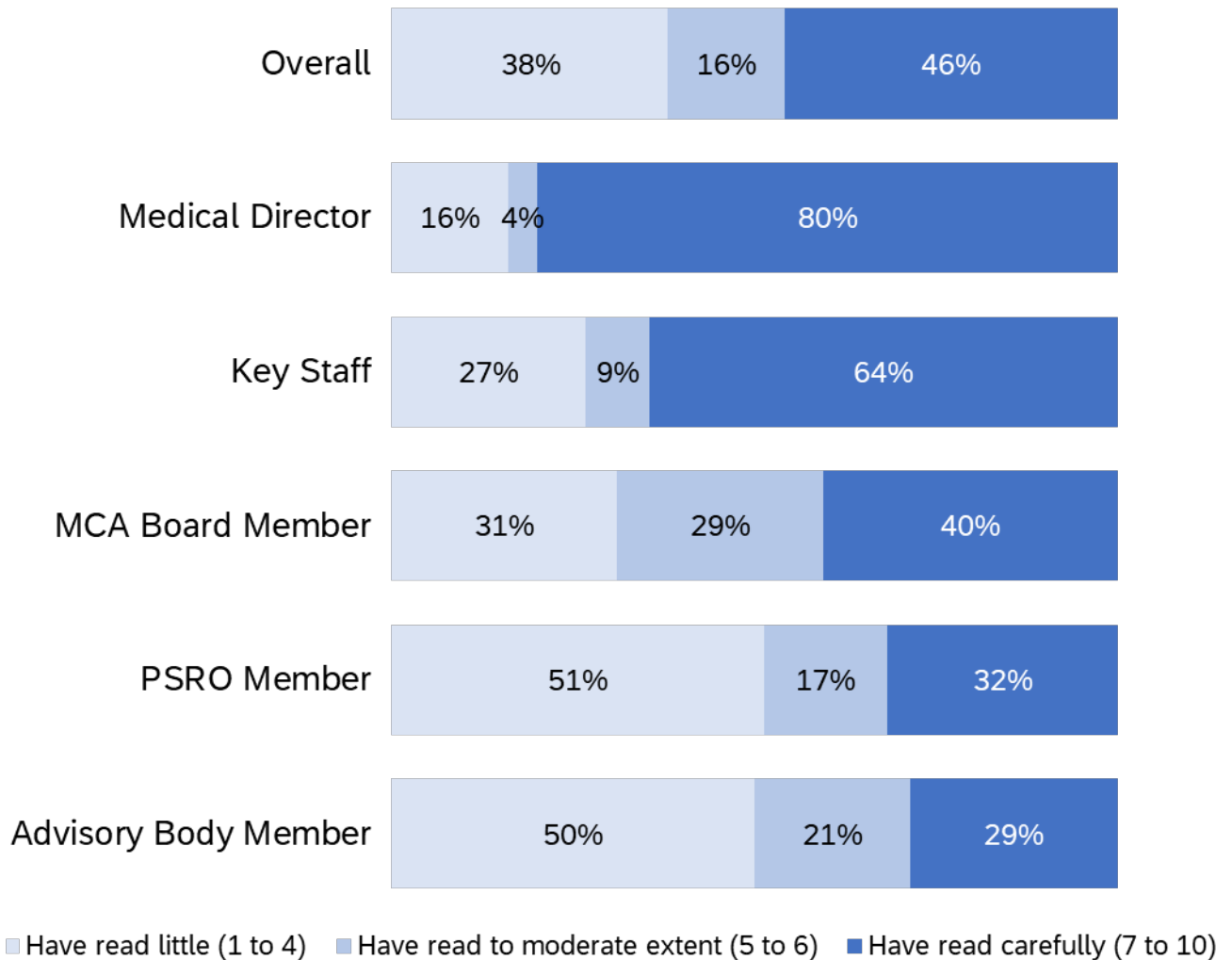
## MCA Bylaws

Survey respondents were asked when their MCA's bylaws were last updated. Almost half of the respondents (49%) said their bylaws were updated in the last five years and another 5% reported an updated occurring 6 or more years earlier (Figure 15). Notably, almost half (46%) reported that they were not sure when bylaws were last updated.



**Figure 15. Last Time MCA Bylaws Were Updated.**

Survey respondents were asked how well they had read the bylaws, on a Likert-type scale ranging from 1 (I haven't read the bylaws at all) to 10 (I have carefully read the bylaws). Only 46% provided a rating of seven or higher (i.e., read the bylaws comprehensively). The stakeholders who provided the highest proportion of ratings of seven or higher were medical directors (80%) and key staff (64%). Conversely, the stakeholders who reported the lowest proportion of ratings of seven or higher were MCA Board (40%), PSRO (32%), and Advisory Body (29%) members (Figure 16).



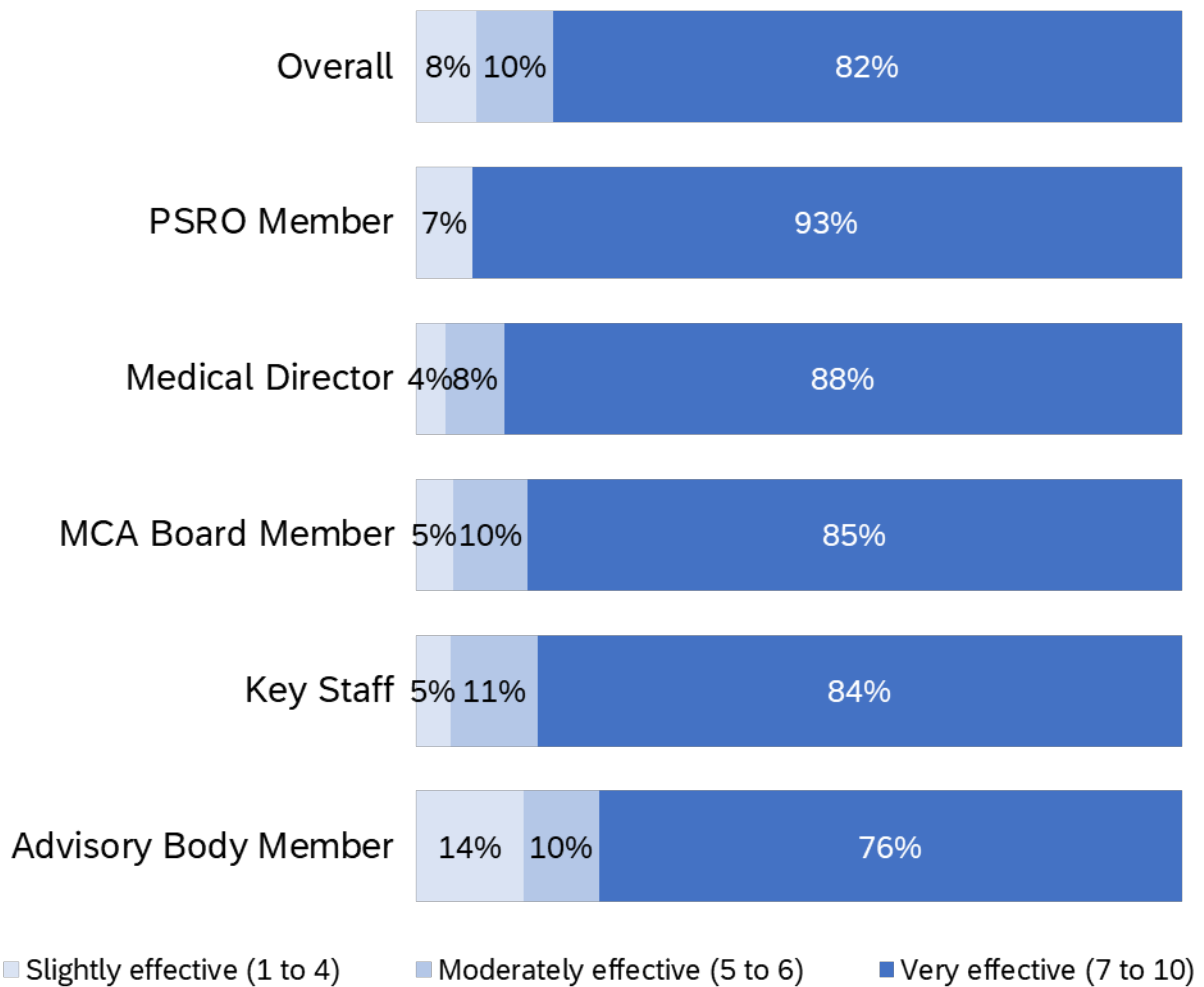
**Figure 16. Self-Reported Comprehensiveness of Reading MCA Bylaws by Primary Role.**

### Perception of MCA Effectiveness

Respondents were asked, on a Likert-type scale ranging from 1 (not at all effective) to 10 (extremely effective), their perception of how effective their MCA is. Overall, 82% provided a rating of seven or higher (i.e., very effective).

Group differences in perceived MCA effectiveness based on the primary role of respondents were observed. The highest proportion of ratings of seven or higher came from medical directors and assistant medical directors (93%), followed by key staff (88%). The lowest proportion of ratings of seven or higher were from Advisory Body (76%), PSRO (84%), and MCA Board members (85%) (Figure 17).





**Figure 17. Perceived Overall Effectiveness of MCA by Primary Role.**

An open-ended question was also asked about respondents’ perspectives on how their MCA can become more effective. Content analysis results showed that respondents’ most frequently reported themes were collaboration and engagement among all stakeholders, such as hospitals, LSAs, and the MCA Board, better communication, more staffing, more funding, and training and education (Table 4).

**Table 4. Ways MCA Can Become More Effective.**

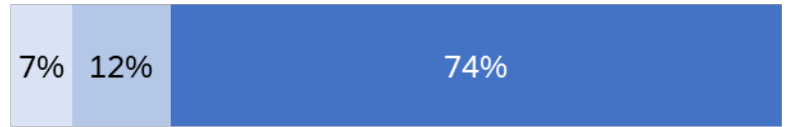
Theme	Quotes
<b>Collaboration and engagement between all stakeholders (n=34)</b>	<i>Be involved in EMS, currently there is little to no involvement from our medical director.</i> <i>improved relationships between all agencies involved, increased collaboration and shared goals, dedicated focus to advancement and improvement</i>

	<i>Continued engagement by Physician, Nursing and EMS leaders in our County.</i>
<b>Better communication (n=16)</b>	<i>Better communication and orientation for new members Better communication to agencies and field personnel Better communication of upcoming changes</i>
<b>More staffing (n=15)</b>	<i>they can employ additional people to be able to improve the Data/QA/QI process, work on additional studies and research, and improve MCA provided education.  Have full time staff  I think one of the bigger problems is that they are understaffed.</i>
<b>More funding (n=14)</b>	<i>increased funding and cooperation from health systems.  grant money to extent our community outreach Having legislation that fully funds MCA activities to get more parity with other states</i>
<b>Training and education (n=12)</b>	<i>Continued generation of EMS focused educational activities, and to create more mentoring opportunities for all levels of clinicians that participate in MCA functions.  We need an active education committee and an annual assessment to touch base with each credentialed personnel annually  More communication and training for field personnel</i>

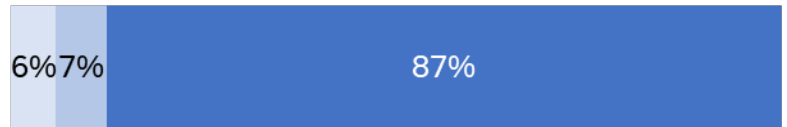
**Protocol Circulation, Feedback, and Enforcement**

Respondents were asked to indicate, on a Likert-type scale, their level of agreement or disagreement that their MCA engages in protocol circulation and feedback processes. Of the respondents, 87% agreed or strongly agreed that their MCA circulates proposed protocols to provide affected entities ample opportunity to comment prior to adoption, and 74% agreed or strongly agreed that their Advisory Body has a standard process for providing feedback on proposed protocols (Figure 18).

The Advisory Body has a standard process for providing feedback on proposed protocols.



Proposed protocols are circulated so that all affected entities have ample opportunity to comment prior to adoption.



**Figure 18. Self-Reported Participation in Protocol Feedback Processes (top) and Circulation (bottom).**

Survey respondents were asked about their MCA’s processes for ensuring protocols are circulated effectively and that end users have received them. The most common processes reported included protocols being sent to agency administrators (80%), protocols being posted on a public site (49%), and protocols being sent directly to personnel (45%). About 7% of respondents said they used other processes not listed above, including reviewing protocols at MCA Board and Advisory Body meetings, using a mobile phone application, and sending protocols out to MCA Board members, often prior to meetings. In addition, 13% of survey respondents reported that they were not sure which processes their MCA used for protocol circulation.

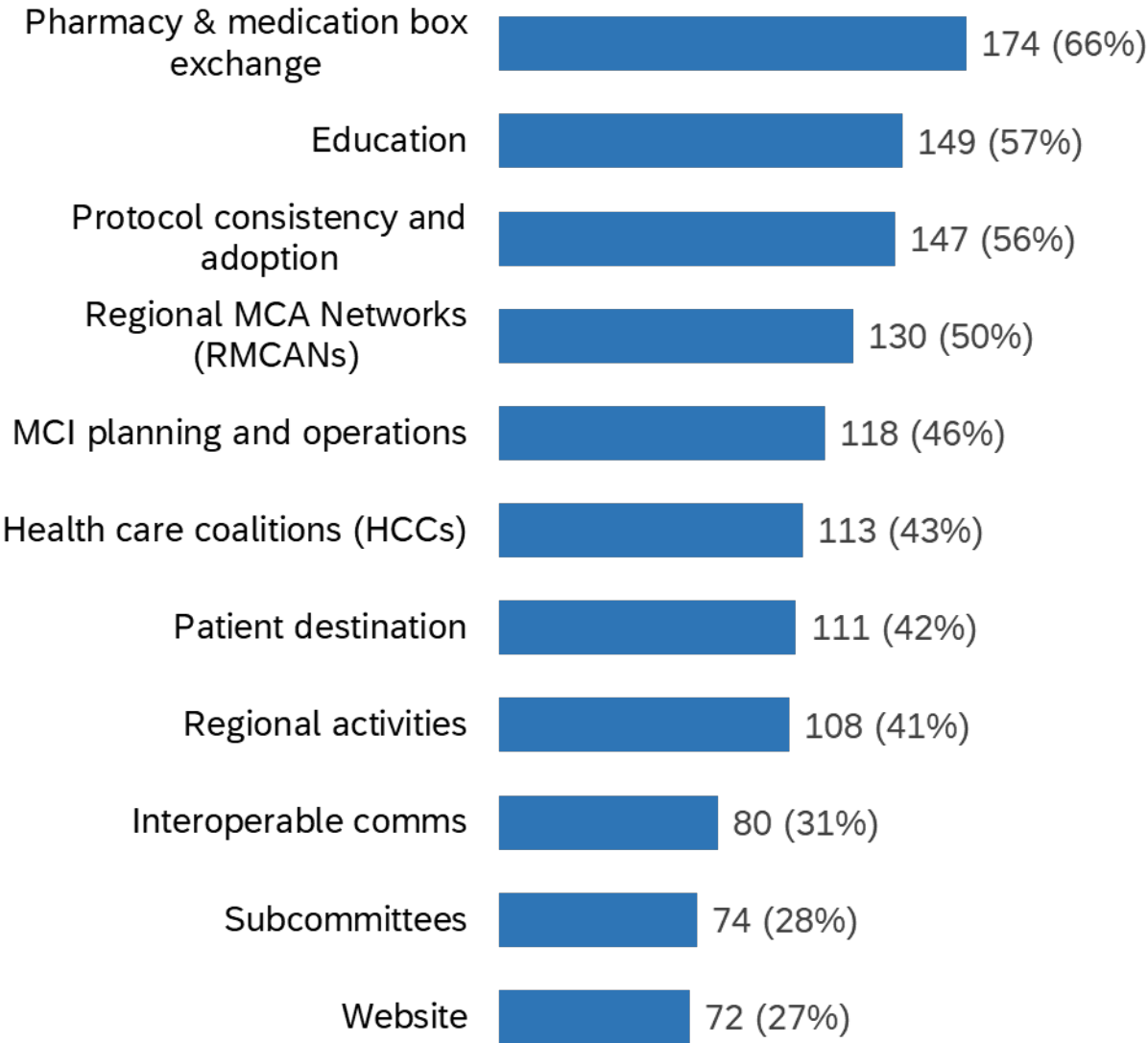
Finally, respondents were asked about awareness about MCA protocols among the leaders of member hospitals and FSEDs. Specifically, respondents were asked if their MCA make hospital and FSED leaders aware of protocols that may affect their operations, and if a formal procedure was in place to ensure that all hospitals and FSEDs adhere to the MCA protocols that apply to them. Overall, 71% of respondents said that hospital and FSED leaders and staff are made aware of MCA protocols that might impact their operations. However, only 55% of respondents said there is a formal procedure in place to ensure that all hospitals and FSEDs within their MCA adhere to relevant protocols.

### Regional Activities

Respondents were asked their level of agreement that their MCA participates in various regional leadership activities. Specifically, they were asked about their participation in a Regional Trauma Advisory Committee (RTAC), Regional Trauma Network (RTN), and in the development of regional systems of care (SOC), such as stroke, STEMI, and trauma. Among the respondents, 66% said they agree or strongly agree that their MCA regularly participates in a RTAC, and 68% that their MCA regularly participates in a Regional Trauma Network (RTN). In addition, 79% agreed or strongly agreed that their MCA has been involved in the development of regions for systems of care (SOC), such as stroke, STEMI, and trauma.

Respondents were further asked about their participation in other activities and organizations at the regional level. These include pharmacy and medication box exchange (66%), education

(57%), protocol consistency and adoption (56%), regional MCA networks (50%), mass casualty incident (MCI) planning and operations (46%), health care coalitions (43%), patient destination (42%), other regional activities (41%), interoperable comms (31%), subcommittees (28%), and websites (27%) (Figure 19). Content analysis results showed that the most reported other types of regional activities were various emergency preparedness exercises and drills.



**Figure 19. Participation in Regional Activities.**

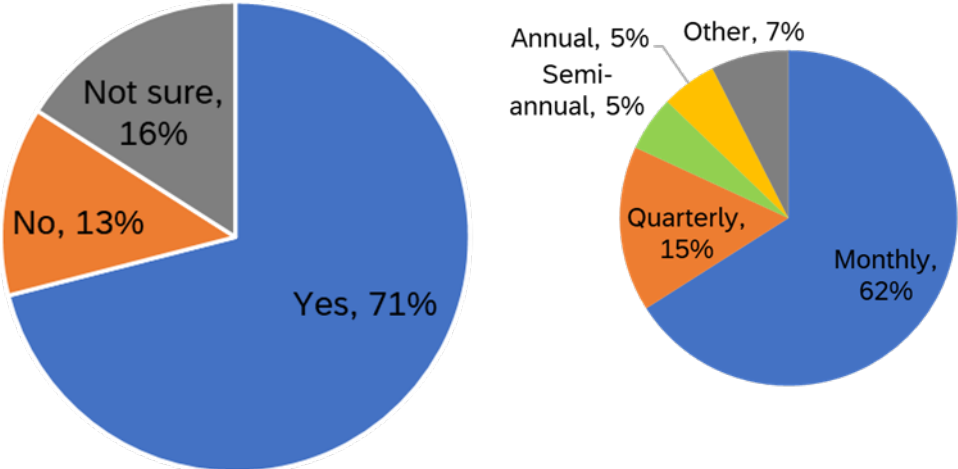
Survey respondents were asked if they knew who their MCA representative on the HCC. Almost half (46%) of the respondents said they knew who represented them on the HCC.

**Quality Improvement**

Respondents were asked to indicate their level of agreement or disagreement with a statement expressing the view that their MCA has a defined quality improvement (QI) process. Results showed that 75% of respondents agreed or strongly agreed that their MCA has a

defined quality improvement process. Respondents were also asked how often they receive regularly scheduled reports about MCA quality indicators. By contrast to the 75% of respondents who reported that their MCA has a defined QI process, only 51% reported they receive reports of quality indicators.

Respondents were asked about the involvement of their MCA’s PSRO in regular review of QI data from LSAs. A majority (71%) of respondents said that their MCA’s PSRO reviews QI data on a regular basis. When asked about the frequency of such reviews, a little over half (52%) of those who said their PSRO regularly reviews such data reported that their PSRO reviews QI data monthly, while 18% said such reviews occur quarterly. Smaller proportions of respondents reported semi-annual (4%), annual (4%), or other frequencies (6%) of QI data review (Figure 20).



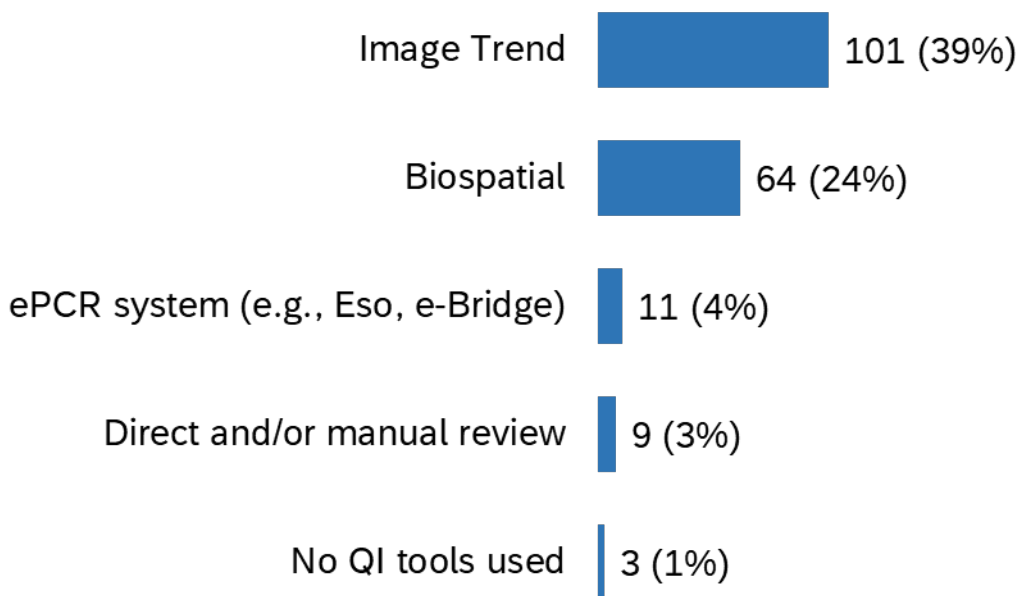
**Figure 20. Whether PSRO Regularly Reviews QI Data (left) and Review Frequency (right).**

Respondents were further asked about their level of agreement with a statement expressing the view that the Medical Director at their MCA uses QI data to improve upon aspects of patient care. Results showed that 75% of the respondents agreed or strongly agreed that the Medical Director at their MCA uses QI data to improve patient care.

Respondents were asked about the monitoring of QI benchmarks within their MCA. Overall, 51% of respondents said their MCA regularly monitors QI benchmarks. When asked about the frequency of such monitoring, 40% said they are monitored monthly, and 26% said they are monitored quarterly. Smaller proportions of respondents reported semi-annual, annual, or other frequencies of QI benchmark monitoring.

MCAs often use QI data tools, such as Biospatial and Image Trend, to keep track of data and benchmark monitoring. When respondents were asked about which tools or methods of QI data management their MCA uses, 39% said their MCA uses Image Trend, 25% use Biospatial, 11% use an Electronic Patient Care Record (ePCR) such as Eso or e-Bridge, 3% receive direct

reporting from LSAs and conduct a direct, manual review of data, and 1% does not use any QI data tool (Figure 21). Another 5% use some other tool or method of QI data management not listed above. Notably, almost half (45%) of the respondents said they were not sure which tools their MCA uses.



**Figure 21. Quality Improvement Data Management Tools and Methods.**

### Knowledge Test

To gauge respondents’ understanding of an MCA’s structure and functions, an 11-question knowledge test with true or false answers was proposed by the BEPESOC team. Overall results, as well as results stratified by respondent primary role, are reported below (Table 5).

Composite scores out of 100 were calculated for each respondent primary role category as well, with equal weight given to all 11 questions.

Across all questions, 67% of respondents selected the correct response. The highest portion of current answers was with regards to whether an MCA can revoke or suspend an EMS license, which 97% of all respondents answered correctly. By contrast, the lowest rate of correct answers was for whether the authority of an MCA comes from the bylaws created by the MCA, with less than half (47%) of respondents answering this question correctly.

When stratified by respondent primary role, the lowest overall score on the knowledge test was among PSRO members, at 64%. The next lowest score was among Board and Advisory Body members (66%) and key staff (69%). MDs had the highest score on the knowledge test, getting 75% correct on average.

**Table 5. Knowledge Test Results.**

Questions	Correct Answers (%)
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	<i>Overall</i>	<i>MDs and AMDs</i>	<i>Key Staff</i>	<i>Board &amp; Advisory Body</i>	<i>PSRO Members</i>
<b>An MCA can revoke or suspend an EMS personnel license.</b>	61%	58%	78%	59%	54%
<b>An MCA can revoke or suspend an EMS personnel's MCA privilege.</b>	97%	92%	100%	97%	97%
<b>A protocol is a recommendation or guideline for clinical care.</b>	62%	71%	44%	67%	63%
<b>A protocol carries the weight of the law.</b>	56%	46%	76%	53%	47%
<b>An MCA is to be administered by participating hospitals.</b>	84%	88%	93%	84%	77%
<b>An MCA is to be administered by participating EMS agencies and personnel.</b>	50%	63%	66%	42%	47%
<b>An MCA Board must be a majority (50% plus one) of hospital representatives.</b>	62%	65%	71%	60%	61%
<b>An MCA Board must be a majority (50% plus one) of EMS agencies and personnel.</b>	68%	75%	73%	68%	58%
<b>The authority of an MCA comes from the bylaws created by the MCA.</b>	47%	67%	61%	42%	35%
<b>The authority of an MCA is a delegation from the Department that can be granted or removed.</b>	83%	83%	88%	78%	87%
<b>An emergency protocol requires approval from MDHHS.</b>	72%	50%	73%	75%	77%
<b>Overall Score</b>	<b>67%</b>	<b>69%</b>	<b>75%</b>	<b>66%</b>	<b>64%</b>

### Role-Specific Results

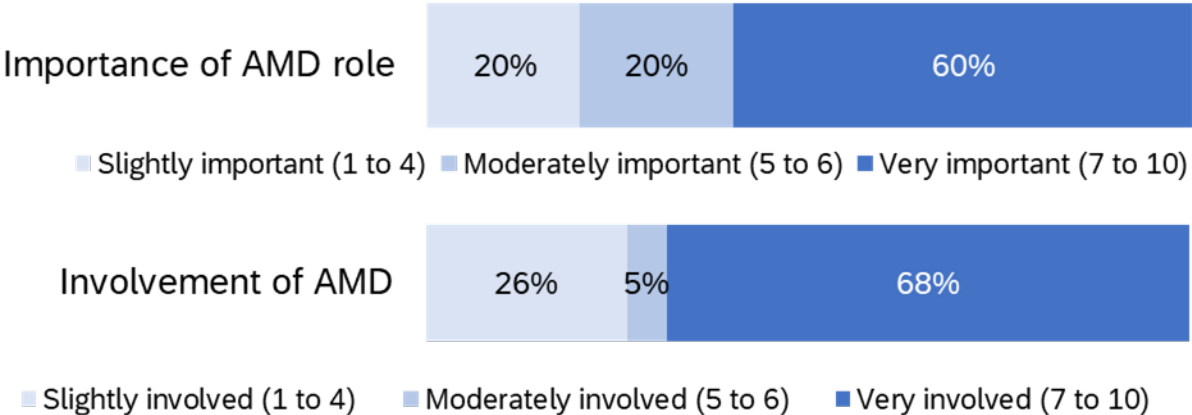
#### Medical Directors and Assistant Medical Directors

Medical Directors (MDs) and Assistant Medical Directors (AMDs) were asked if their role in the MCA is contingent on another position they hold, such as one within a hospital. Results showed that more than half (56%) of MDs and AMDs reported that their role in their MCA was not contingent on another position, but a significant portion (40%) reported having a contingent role.

MD and AMD respondents were asked how they work with other bodies within their MCA, specifically the Advisory Body, PSRO, and Board. When asked about how they receive input from the Advisory Body, most respondents (92%) said they receive input by attending Advisory Body meetings, 52% by being notified as needed, and 32% by receiving a regular report. When asked how they receive information from the PSRO, MDs and AMDs said they do so by attending their meetings (88%), being notified as needed (44%), and receiving a regular report (36%).

MDs and AMDs were also asked if and how they report to the Board of Directors. Overall, 74% of respondents said they report to the Board. When asked about specific ways in which they report to the Board, 70% of respondents reported that they attend Board meetings, 48% notify the Board as needed, and 26% provide a regular report.

MDs were lastly asked to provide their subjective rating of the importance of the assistant medical director’s role in the MCA on a Likert-type scale ranging from 1 (not at all important) to 10 (extremely important). Results showed that 60% of MDs provided a rating of 7 or higher (i.e., very important) When asked how involved the assistant medical directors is in daily medical activities, 68% reported a rating of 7 or higher (i.e., very involved) (Figure 22).



**Figure 22. Subjective Rating of the Importance (top) and Involvement (bottom) of Assistant Medical Director.**

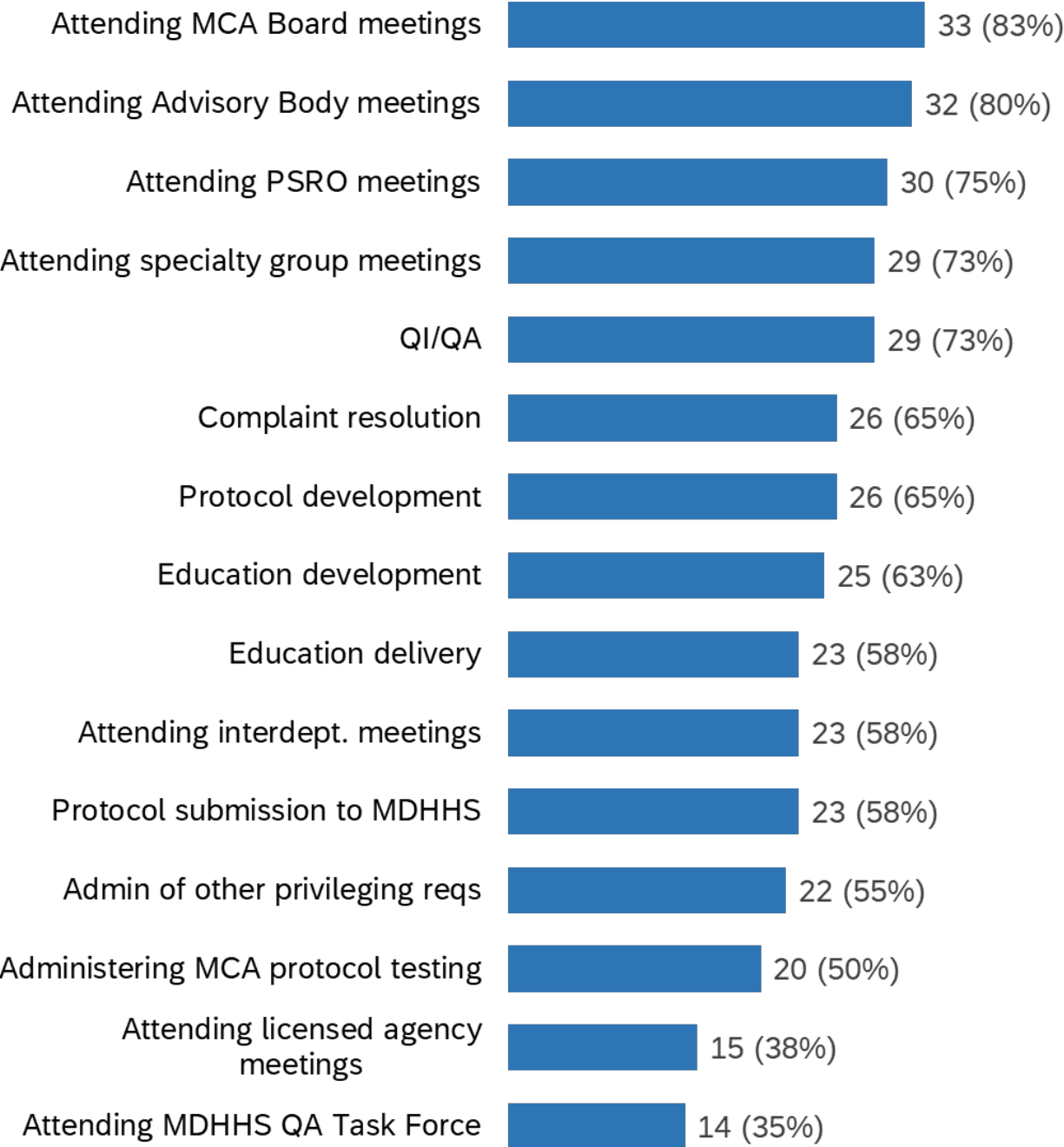
**Key Staff**

Key staff respondents were asked about their title within their MCA. Most respondents (75%) said they have a title within their MCA, such as executive director, key staff, general manager, or operations manager. They were also asked about how their employment at their MCA is structured. Results showed that 28% of key staff respondents were employed by an MCA which is an independent organization full-time, and 3% part-time. Another 15% are employed full-time, while 35% were part-time, by a hospital, EMS agency, or education institution.

Key staff respondents were asked the duties their role encompassed. The most frequently reported duties include attending MCA Board meetings (83%), attending Advisory Body meetings (80%), attending PSRO meetings (75%), attending specialty group meetings (e.g. fire chiefs, education, dispatch, emergency management, etc.) (73%), quality improvement and quality assurance (73%), complaint resolution (65%), protocol development (65%), education development (63%), attending interdepartmental meetings (58%), education delivery (58%), protocol submission to MDHHS (58%), attending licensed agency meetings (38%), and attending MDHHS Quality Assurance Task Force meetings (35%) (Figure 23). Additionally, of the respondents, 8% said they had other job duties, which included involvement in regional



activities, business and financial oversight, involvement in pharmacy processes and compliance, website development, continuing education sponsorship, and other duties as assigned.

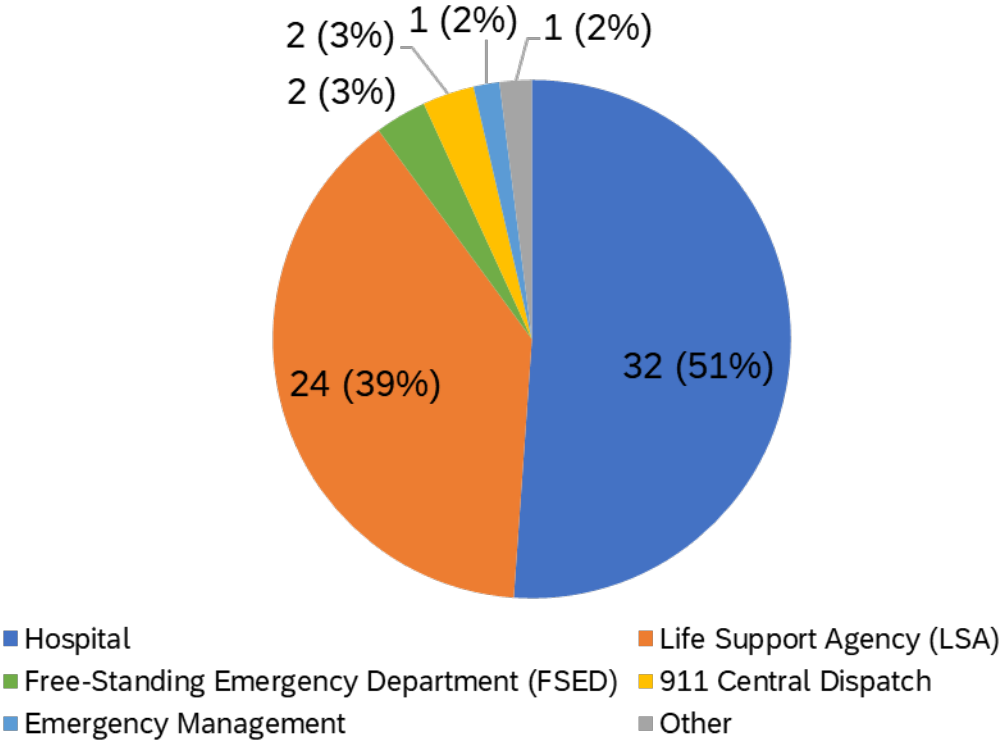


**Figure 23. Key Staff Responsibilities.**

**MCA Board Members**

MCA Board members were asked what type of entity they represented within the Board. The most common entity represented by MCA Board members who responded to the survey were

hospitals (51%), followed by LSAs (39%), and FSEDs (3%). Another 3% represented 911 Central Dispatch, 2% represented emergency management, and 2% belonged to some other type of entity (Figure 24).

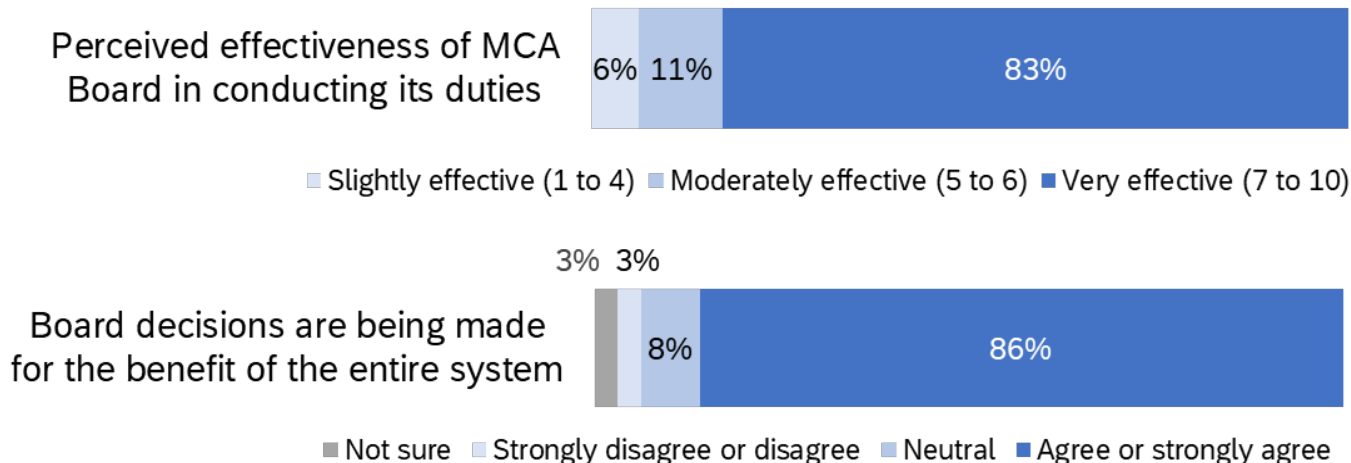


**Figure 24. MCA Board Representation by Type of Entity.**

Respondents were asked how frequently the MCA Board meets. The greatest portion of MCA Board members (48%) reported that they meet every two months, while 24% meet quarterly, and 18% meet monthly. Another 10% of respondents reported meeting annually.

MCA Board members were asked to rate the effectiveness of the MCA Board in conducting its duties on a Likert-type scale ranging from 1 (not effective at all) to 10 (extremely effective). On average, they provided an effectiveness rating of 7.8. Overall, 83% of respondents rated the effectiveness of their MCA Board at 7 or higher (very effective) (Figure 25, top).

MCA Board respondents were further asked their level of agreement, on a Likert-type scale, that Board decisions are being made for the benefit of the entire system as opposed to the benefit of any individual member. A great majority, 86%, of MCA Board member respondents agreed or strongly agreed (Figure 25, bottom).



**Figure 24. Perceived Effectiveness of Board (top) and the Degree to Which Board Decisions Benefit the Entire System (bottom).**

Finally, MCA Board members were asked to respond to an open-ended question about ways by which their work could become more effective. Content analysis results showed that the most frequently reported themes in responses included the following, in order of frequency, with the most frequent suggestions listed first:

- More hospital and medical director leadership.
- Increased training and education opportunities, including a better understanding among Board members about EMS performance metrics.
- Greater participation and time commitment to Board duties.

#### Advisory Body Participants

Advisory Body respondents were asked about their meeting frequency. The greatest number of respondents (47%) reported that they met monthly, while another 39% met every two months, and 14% met quarterly. When asked about their meeting attendance, more than half (63%) of the respondents reported that they attended more than three-quarters of scheduled meetings, and a vast majority, 86%, attended at least half the time.

Advisory Body participants were asked to rate their level of agreement that the Advisory Body provides meaningful input into the appointment of the current medical director on a Likert-type scale. Overall, 54% agreed or strongly agreed with this statement (Figure 26, top).

Advisory Body participants were also asked about their subjective perspective of the effectiveness of their work, using a Likert-type scale ranging from 1 (not effective at all) to 10 (extremely effective). When asked to rate the effectiveness of the Advisory Body in conducting its duties on a scale of 1 (not effective at all) to 10 (extremely effective), 71% provided a rating of 7 or higher (very effective) (Figure 26, bottom).

The Advisory Body provides meaningful input into the appointment of the current Medical Director.



■ Not sure ■ Strongly disagree or disagree ■ Neutral ■ Agree or strongly agree

Perceived effectiveness of Advisory Body in conducting its duties



■ Slightly effective (1 to 4) ■ Moderately effective (5 to 6) ■ Very effective (7 to 10)

**Figure 26. Level of Agreement that Advisory Body Provides Meaningful Input into Medical Director Appointment (top) and Perceived Effectiveness of Advisory Body (bottom).**

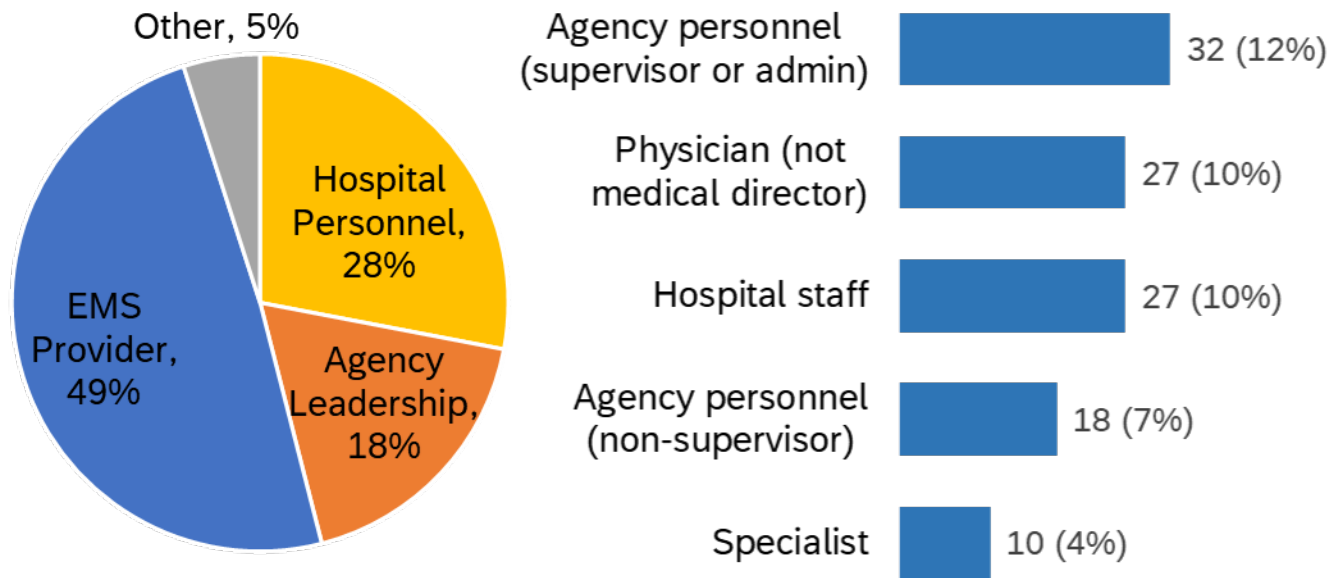
Finally, Advisory Body participants were asked to respond to an open-ended question about ways in which their work could become more effective. Content analysis results showed that the most frequently reported themes in responses included the following, in order of frequency, with the most frequent suggestions listed first:

- Increased participation and interaction in meetings.
- Better communication between the MCA, hospitals, and agencies.
- More training and education opportunities.
- Better analysis of benchmarks and data.
- Increased ability to provide input and set MCA goals and objectives.

#### PSRO Members

Respondents who were PSRO members were asked what type of entity they represented. Almost half the respondents (49%) are EMS providers, 28% are hospital personnel, and 18% represent agency leadership. Another 5% represented other types of entities (Figure 27, left).

PSRO members were asked about the type of position they represented on the PSRO. The types of positions represented on the PSRO include agency personnel who hold a supervisory or administrative position (12%), physicians other than the MD (10%), hospital staff (10%), agency personnel who do not hold a supervisory or administrative position (7%), and specialists (4%) (Figure 27, right).



**Figure 27. Entities Represented by PSRO Respondents (left) and Positions Represented on PSRO (right).**

PSRO member respondents were asked if there are regularly scheduled PSRO meetings, as well as the frequency of such meetings. An overwhelming majority (97%) of PSRO members said that their PSRO has regularly scheduled meetings. Of those who reported having regularly scheduled meetings, 92% also said that an agenda is sent out for the meeting. Among those who have regularly scheduled meetings, 84% have monthly meetings, while 14% have meetings every two months.

As PSROs often review sensitive data, respondents were asked if they have signed a non-disclosure agreement. More than half (56%) of respondents said they have signed a non-disclosure agreement.

Finally, PSRO respondents were asked about their awareness of and utilization of the Just Culture program, which focuses on MCA shared accountability and patient safety. About 41% of PSRO respondents reported that they are aware of the Just Culture program. Only 28% of PSRO respondents reported that their PSRO actively utilizes the Just Culture program.

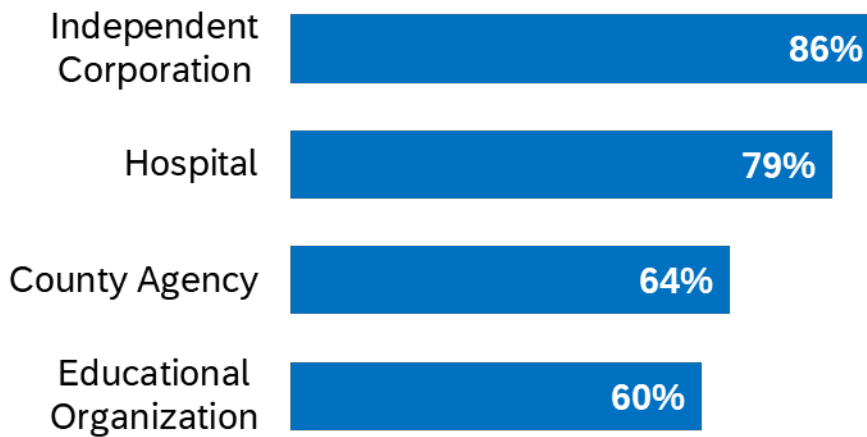
**Predictors of MCA Performance**

Phase 2 results were also analyzed regarding group differences in selected variables identified as potential predictors of MCA performance. The organizational structure and staffing model of MCAs, as well as medical director experience and frequency of quality improvement evaluation were examined as predictors of various facets of MCA performance, such as reported MCA effectiveness, understanding of MCA processes and requirements, familiarity with the MCA handbook, comprehensiveness of reading MCA bylaws, and existence of well-established protocol circulation and quality improvement processes.

### Organizational Structure

Results showed that MCAs with an independent corporation structure had a greater portion of respondents (86%) reporting that their MCA was very effective (rating of 7 or higher), compared to 79% for MCAs within a hospital, 64% for MCAs within a county agency, and 60% for MCAs within an educational organization (Figure 28).

**Independent Corporation MCA** participants were more likely to report greater MCA effectiveness (7 out of 10 or higher).



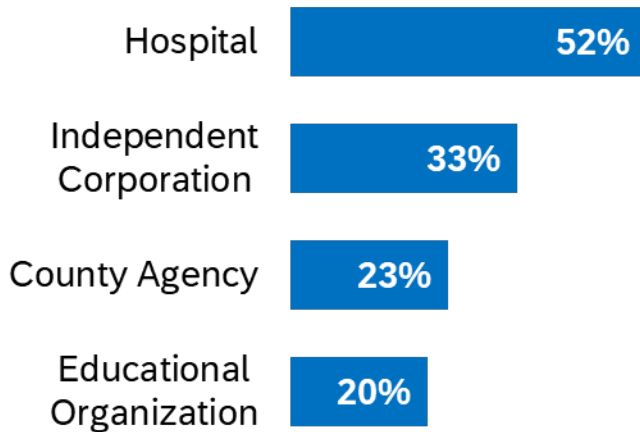
**Figure 28. MCA Effectiveness by Organizational Structure.**

Respondents from MCAs that are independent corporations also reported higher levels of agreement with the idea that their MCA allows circulation of proposed protocols that give all parties ample time to comment prior to adoption (87%), that their MCA has a defined quality improvement process (81%), and that they receive regularly scheduled reports of MCA quality indicators (60%).

MCAs that are independent corporations had respondents with a comprehensive understanding (7 or higher) of the statutory responsibilities of an MCA's functions (90%), statutory requirements for an MCA's structure (86%), protocol submission processes (79%), and agency licensure processes and requirements (85%). Respondents from MCAs within a hospital reported the highest levels of understanding of personnel credentialing processes and requirements (93%). Once again, respondents from MCAs within an educational organization or a county agency had the lowest levels of self-reported understanding of various MCA processes and requirements, in all areas they were asked about.

MCAs within a hospital had the greatest proportion of respondents reporting being very familiar (rating of 7 or higher) with the MCA Handbook, 52%. This was followed by those from MCAs that are independent corporations (33%), those within a county agency (23%), and those within an educational organization (20%) (Figure 29).

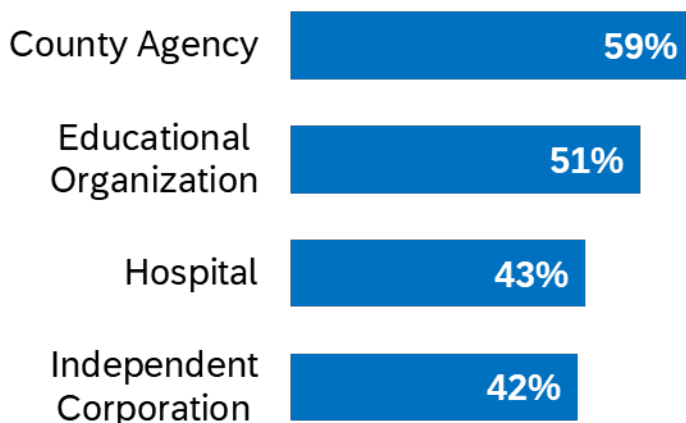
**Hospital MCA** participants were more likely to report greater familiarity with the MCA handbook (7 out of 10 or higher).



**Figure 29. Familiarity with the MCA Handbook by Organizational Structure.**

Interestingly, respondents from MCAs within an educational organization or a county agency reported the highest ratings of how comprehensively they had read their MCA’s bylaws, with 59% reporting having read their bylaws carefully (rating of 7 or higher). The lowest proportions of respondents reporting they had read their bylaws carefully were from MCAs within a hospital (43%) and from MCAs that are independent corporations (42%) (Figure 30).

**County Agency MCAs** participants were more likely to report comprehensive review of bylaws (7 out of 10 or higher).



**Figure 30. Comprehensive Review of Bylaws by Organizational Structure.**

### Staffing Model

Compared to MCAs that share staff with another entity, MCAs that have staff fully dedicated to the MCA have respondents with a slightly greater understanding of various MCA processes and requirements, in all areas they were asked about. This was also true for ratings of MCA effectiveness; 84% of respondents from MCAs where staff are employed entirely by the MCA rated their MCA as being very effective, compared to 77% from MCAs with shared staff (Figure 31, top).

Respondents from MCAs with fully dedicated staff also reported higher levels of agreement that their MCA provides ample opportunity to comment on proposed protocols (88%) compared to those from MCAs with shared staff (79%) (Figure 31, bottom).

**Fully Dedicated Staff MCA** participants were more likely to report greater MCA effectiveness (7 out of 10 or higher).



**Fully Dedicated Staff MCA** participants were more likely to report providing protocol input.



**Figure 31. MCA Effectiveness (top) and Protocol Input (bottom) by Staffing Model.**

Finally, respondents from MCAs with fully dedicated staff reported higher levels of agreement that MCA has a defined quality improvement process (82%) and that they receive regularly scheduled reports of quality indicators (54%) compared to those from MCAs with shared staff (67% and 45%, respectively) (Figure 32).



**Fully Dedicated Staff MCA** participants were more likely to report a quality improvement process.



**Fully Dedicated Staff MCA** participants were more likely to report receiving regularly scheduled reports of quality indicators.



**Figure 32. MCA Quality Improvement Process (top) and Regularly Scheduled Reports of Quality Indicators (bottom) by Staffing Model.**

Interestingly, a significantly greater proportion of respondents from MCAs that share staff with another entity reported reading their MCA’s bylaws carefully (62%) compared to those employed entirely by the MCA (36%).

#### Medical Director Experience

MCAs with medical directors appointed over five years ago yielded more respondents familiar with the MCA handbook. Respondents from these MCAs also had a greater understanding of various MCA processes and requirements, in all areas they were asked about. This was also true when respondents were asked their level of agreement that there is ample opportunity to comment on proposed protocols; 93% of respondents from MCAs with more experienced medical directors agreed or strongly agreed compared to 81% of respondents from MCAs with medical directors appointed less than 5 years ago (Figure 32, top).

Respondents from MCAs with medical directors appointed more than 5 years ago reported a higher level of agreement that their MCA has a defined quality improvement process (81%) compared to those from an MCA with a medical director appointed less than 5 years ago (74%) (Figure 32, bottom). There was no substantial difference when respondents were asked their level of agreement that they receive regularly scheduled reports of quality indicators.

Participants from **MCA**s with **experienced medical directors** were more likely to report providing protocol input.



Participants from **MCA**s with **experienced medical directors** were more likely to report a quality improvement process.



**Figure 32. MCA Protocol Input (top) and Quality Improvement Process (bottom) by Medical Director Experience Level.**

However, MCAs with recently appointed medical directors had more respondents (90%) reporting that their MCA was very effective, compared to 77% among those from MCAs with medical directors appointed over five years ago. In addition, a greater portion of respondents from MCAs with medical directors appointed within the last five years reported that they had carefully read the handbook (47%) compared to those from MCAs with medical directors appointed more than five years ago (39%) (Figure 33).

Participants from **MCA**s with novice medical directors were more likely to report greater MCA effectiveness (7 out of 10 or higher).



Participants from **MCA**s with novice medical directors were more likely to report that they had carefully read the MCA handbook (7 out of 10 or higher).



**Figure 33. MCA Effectiveness (top) and Handbook Review (bottom) by Medical Director Experience Level.**

While there was no major difference in most performance indicators among respondents from MCAs that conduct monthly and quarterly QI evaluations, those that conducted QI evaluations on an as-needed basis had consistently lower performance results. This was true for familiarity with the MCA handbook, understanding of MCA processes and requirements, rating of overall MCA effectiveness, and perceived opportunity to comment on proposed protocols.

### Key Recommendations and Action Steps



#### **Updated manuals and handbooks and accessibility of materials.**

- Creation and distribution of a “quick manual” for those who may not read the MCA Handbook in full – especially for Board, Advisory Body, and PSRO members.
- Development of new MCA Handbook which is regularly updated based on need.
- Easily accessible MCA manuals and handbooks that are published electronically and provided in hard copy if needed.



#### **Improved data collection for regular oversight of MCAs.**

- Regular collection of relevant data points regarding the structure and functions of all MCAs.

- Creation and regular maintenance of databases encompassing relevant data points.



### **Increased enforcement of MCA policies and procedures.**

- Level-setting with all stakeholders to stress importance and legal weight of MCA protocols.
- Administration of regular knowledge tests on understanding of MCA policies and procedures.
- Other enforcement mechanisms, as needed.



### **Increased stakeholder engagement.**

- Review of knowledge test results with stakeholders based on composite scores, especially MCA Board, Advisory Body, and PSRO.
- More engagement with stakeholders, including increased feedback and input from Advisory Body and MCA Board.



### **Continued, consistent training and education.**

- Provision of regular education and training opportunities regarding MCA policies and procedures, not just upon onboarding.
- Continued knowledge dissemination at conferences, workshops, etc.

## QUICK SHEET for medical director engagement

[SOM EMS WEBSITE](#) – know it and use it



### Protocols and MCAs

View state protocols, MCA resources, & the  
Scope of Practice.

[Protocols and MCAs](#) - protocols, description of responsibilities, forms, MCA handbook, scope of practice documents, MCA directory, upcoming MCA events, etc.)

[STATE COMMITTEES AND SUBCOMMITTEES](#) – please check this link for meeting schedules, etc.

**EMS Coordination Committee - recommend you virtually attend at least one.**

Subcommittees:

- Air Medical
- Bylaws/Nominating
- Compliance and Ethics
- Critical Care (AD HOC)
- Education
- Legislative
- Patient Movement (AD HOC)
- Rural
- Ambulance Operations
- Communications
- Committee on Pediatric Medicine
- Data
- EMS Safety
- **Medical Control Authority - recommend you virtually attend at least one.**
- **Quality Assurance Task Force (QATF) - recommend you virtually attend at least one.**

### [STATE TRAINING](#)

[Initial High-Level Overview/Orientation](#) for medical directors (pwpt to view)

[2024 Core Concepts/Building Block Training](#) – for medical directors, key staff, MCA board, advisory body, PSRO, etc. (3 hour in person training that will be converted to online for viewing after 2024)

- Basics of Michigan MCA structure and legal underpinnings
- Protocols – anatomy of a protocol and processes for submission and approval
- Complaints/Compliance – requirements and processes

2025 Training – will include expansion on building blocks & other topics, along with medical director specific training conducted by Dr. Fales.

QUICK SHEET for medical director engagement

### **NON-STATE TRAINING**

National Association of EMS Physicians

Course: [Foundations of Medical Oversight Course \(FOMOC\)](#)

Course: [National EMS Medical Directors Course and Practicum 2024](#)

Trauma and Emergency Response Infrastructure, Inc (not vetted)

Course: [Guide for Preparing Medical Directors](#)

### **NON-STATE ORGANIZATIONS**

Michigan Association of EMS Systems (MAEMSS)

Meets shortly before the EMSCC meeting. Days and times vary.

Contact Damon Gorelick: [damongorelick@demca.org](mailto:damongorelick@demca.org))

[Michigan College of Emergency Physicians](#)

Meets before or after EMSCC meetings. Days and times vary.

# Protocol Statistics

DRAFT

This is not for distribution



**MISSION:**

Michigan Department of Health and Human Services (MDHHS) provides opportunities, services, and programs that promote a healthy, safe and stable environment for residents to be self-sufficient.



# Goal

The 2023-2024 Protocol Suite is an attempt to have all MCAs delivering the same quality care across the state.

Prior to this, the department was only anecdotally able to estimate how many MCAs were utilizing the state protocols as written.

This document is a snapshot of MCA acceptance rates of state protocols as written, along with a look at specific selections made by MCAs within certain protocols.

# Protocol Acceptance Rates

- Acceptance % refers to the number of MCAs evaluated that have accepted the state model protocols as written.
  - 45 of 59 (76% of MCAs) used for acceptance rate calculations

# Section 1: General Treatment

Protocol Number		Acceptance
1.1	General Pre-Hospital Care	98%
1.2	Abdominal Pain (Non-Traumatic)	100%
1.3	Nausea & Vomiting	100%
1.4	Syncope	100%
1.5	Shock	98%
1.6	Anaphylaxis/Allergic Reaction	100%
1.7	Adrenal Crisis	100%
1.8	Behavioral Emergencies	100%
1.9	Opioid Overdose Treatment and Prevention	100%
1.10	Foreign Body Airway Obstruction	100%

# Section 2: Trauma and Environmental

<b>Protocol Number</b>		<b>Acceptance</b>
2.1	Adult/Pediatric Trauma Triage	100%
2.2	General Trauma	100%
2.3	Burns	100%
2.4	General Crush Injury	98%
2.5	Soft Tissue and Orthopedic Injuries	96%
2.6	Spinal Injury Assessment	100%
2.7	Traumatic Arrest	100%
2.8	Drowning/Submersion Injury	100%
2.9	Poisoning/Overdose/Environmental Exposure	96%
2.10	Heat Emergencies	100%
2.11	Hypothermia/Frostbite	98%
2.12	Head Injury (TBI)	100%
2.13	Bleeding Control (BCON)	98%
2.14	Hemorrhagic Shock	98%
2.15	Sexual Assault	100%

# Section 3: Adult Treatment

<b>Protocol Number</b>		<b>Acceptance</b>
3.1	Altered Mental Status	98%
3.2	Stroke or Suspected Stroke	76%
3.3	Respiratory Distress	100%
3.4	Seizures	100%
3.5	Sepsis	100%
3.6	Hyperactive Delirium Syndrome with Severe Agitation	100%
3.7	Crashing Adult/Impeding Arrest	98%

# Section 4: Pediatric Treatment

Protocol Number		Acceptance
4.1	Pediatric Medication Emergency Dosing and Intervention Cards	100%
4.2	Childbirth and OB Emergencies	100%
4.3	Newborn/Neonatal Assessment and Resuscitation	100%
4.4	Pediatric Altered Mental Status	80%
4.5	Pediatric Respiratory Distress, Failure or Arrest	100%
4.6	Pediatric Fever	98%
4.7	Pediatric Seizures	100%
4.8	Safe Transport of Children in Ambulances	100%
4.9	Pediatric Crashing Patient/Impending Arrest	98%

# Section 5: Adult Cardiac

Protocol Number		Acceptance
5.1	General Cardiac Arrest	100%
5.2	Bradycardia	100%
5.3	Tachycardia	96%
5.4	Pulmonary Edema/Cardiogenic Shock	100%
5.5	Chest Pain/Acute Coronary Syndrome	100%
5.6	ROSC Adult	100%

# Section 6: Pediatric Cardiac

Protocol Number		Acceptance
6.1	Pediatric Cardiac Arrest - General	96%
6.2	Pediatric Bradycardia	100%
6.3	Pediatric Tachycardia	96%
6.4	Pediatric ROSC	100%



# Section 7: Procedures (1 of 2)

Protocol Number		Acceptance
7.1	12-Lead ECG	100%
7.2	Child Abuse and Neglect	100%
7.3	Crime Scene Management	100%
7.4	Vulnerable Adult Abuse, Neglect or Exploitation	100%
7.5	CPAP	100%
7.6	Dead on Scene/Termination of Resuscitation	80%
7.7	Do Not Resuscitate	100%
7.8	Electrical Therapy	100%
7.9	Airway Management	100%
7.10	Helmet Removal	100%
7.12	Oxygen Administration	100%
7.13	Pain Management	100%
7.14	Patient Assessment	100%

# Section 7: Procedures (2 of 2)

Protocol Number		Acceptance
7.15	Documentation and Patient Care Records	96%
7.16	Patient Restraint	100%
7.17	Patient Procedural Sedation	100%
7.18	Pleural Decompression	100%
7.19	Refusal of Care; Adult and Minor	100%
7.20	Spinal Precautions	100%
7.21	Blood Glucose Level Testing	100%
7.22	Tourniquet Application	100%
7.23	Vascular Access & IV Fluid Therapy	100%
7.24	End Tidal Carbon Dioxide Monitoring	100%
7.25	MI POST	100%
7.27	Transport of Adult Ventilator Dependent Patients	100%
7.28	LVAD	100%

# Section 8: Systems (1 of 2)

Protocol Number		Acceptance
8.1	Downgrade of response	93%
8.2	Patient Prioritization and Use of Lights and Sirens	76%
8.3	Transport Destination and Diversion	72%
<b>8.4</b>	<b>OB High Risk Delivery Transport Guidelines (MCA Optional Protocol)</b>	<b>33%</b>
<b>8.5</b>	<b>ALS/LALS Intercept (MCA Optional Protocol)</b>	<b>48%</b>
8.6	Dispatch	91%
<b>8.7</b>	<b>ALS to BLS Transfer of Care (MCA Optional Protocol)</b>	<b>54%</b>
<b>8.8</b>	<b>Air Ambulance Personnel Scope of Practice (MCA Optional)</b>	<b>57%</b>
8.9	Helicopter Utilization	93%
8.10	Infection Control & Communicable Disease	96%
8.11	Immunization and Testing	98%
8.12	Communications Failure	98%
8.13	Electronic Records & EMS Information System	98%
8.14	Protected Health Information (PHI)	100%
8.15	Inter-Facility Patient Transfers	80%

# Section 8: Systems (2 of 2)

Protocol Number		Acceptance
8.16	Licensure Level Requirement of Attendant During Transport (MCA Optional)	54%
8.17	Medical Control Privileges	85%
8.18	Responsibilities of Participants in the MCA System	91%
8.19	On-Scene Physician Interaction	93%
8.20	Protocol Deviation	98%
8.21	Violent/Chemical/Hazardous Scene	91%
8.22	Medical Examiner Notification and Body Disposition	96%
8.23	Safe Delivery of Newborns	100%
8.24	Complaint Investigation & Resolution	96%
8.25	Disciplinary Action Appeal	98%
8.26	EMS Provider Criminal Charges and Convictions	100%
8.27	Quality Improvement Program	98%

# Selections Within Protocols

- The following slides are a snapshot of specific selections made within protocols by MCAs.

# MCA Data Utilized

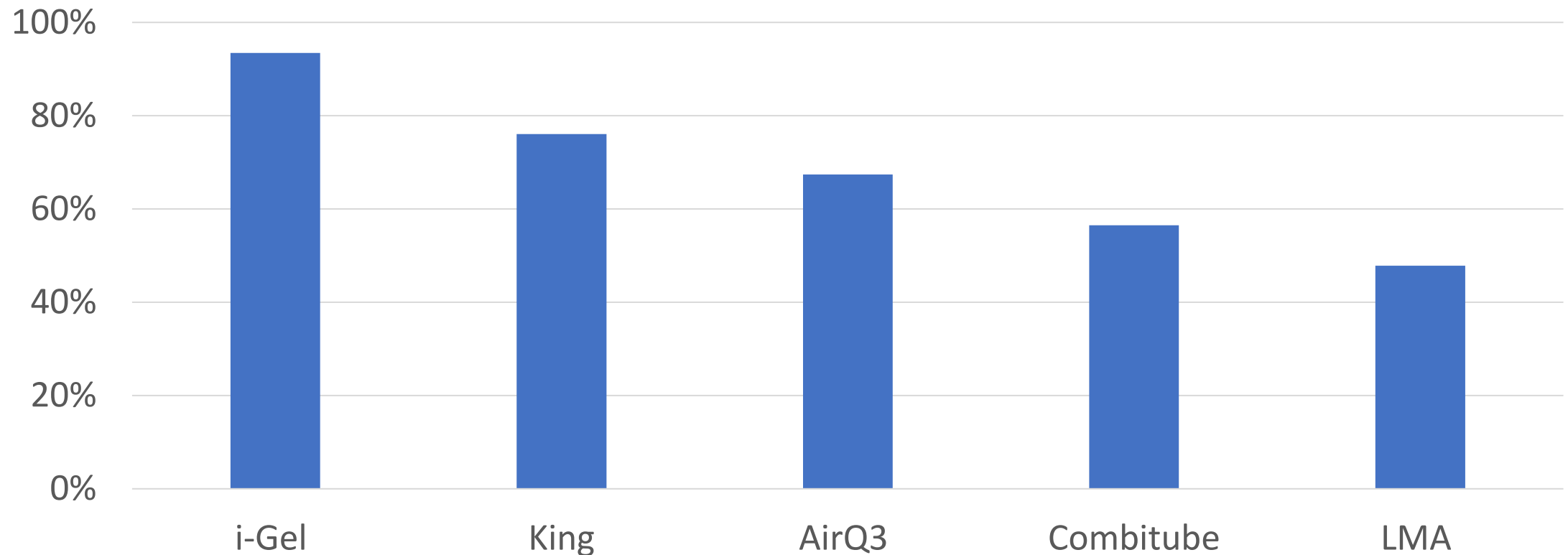
- 50 MCA pending roster profiles created, referred to as “Rosters” (85% of MCAs) – high confidence of accuracy
  - These are rosters of agencies participating in optional equipment or procedures. Pending (or expected) roster profiles are built from evaluation of protocols submitted.
- 46 self report forms, referred to as “S3 Forms” (78% of MCAs) – moderate confidence of accuracy
  - S3 forms were inspected for perceived accuracy (blanks, misalignments, etc.)
    - S3 form with minimal issues were clarified by referencing the protocol
    - S3 forms with major issues were discarded due to time commitment for clarification
    - Areas of S3 forms with known reference to a non-state protocol were eliminated.
  - S3 forms manually merged to single spreadsheet for cumulative picture

# Airway

- ✓ Availability of SGAs
- ✓ Number of SGA Options
- ✓ Primary/Default Airway
- ✓ Cricothyrotomy vs. No Cricothyrotomy
- ✓ Number of Cricothyrotomy Options
- ✓ Cricothyrotomy Procedure Frequency
- ✓ HFNO

# Airway Availability of SGAs

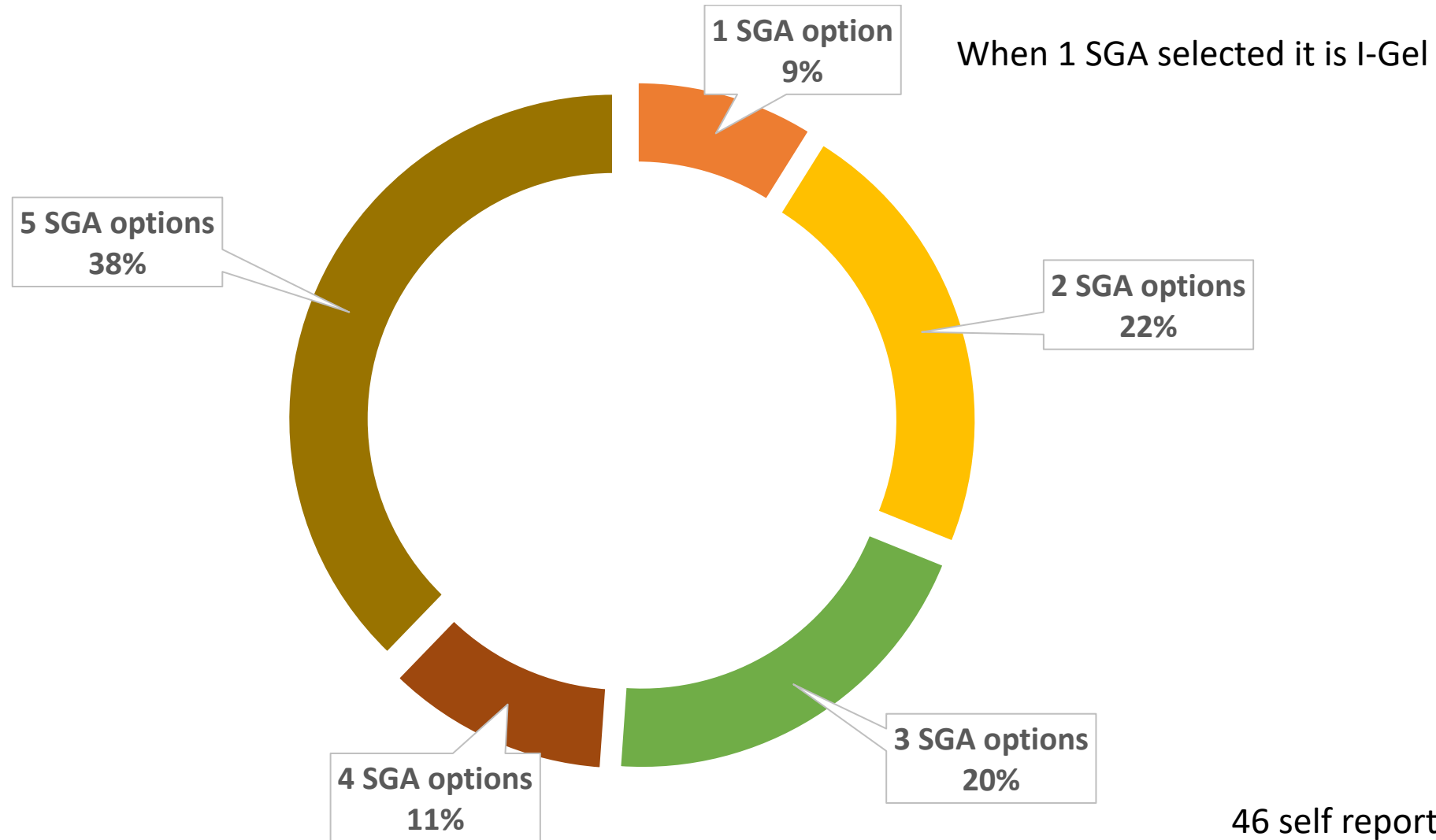
Availability of SGAs – the % of MCAs that allow the specific airway



\*\*The MCAs NOT carrying i-Gel have 1 large agency in common which carries both AirQ3 and LMA

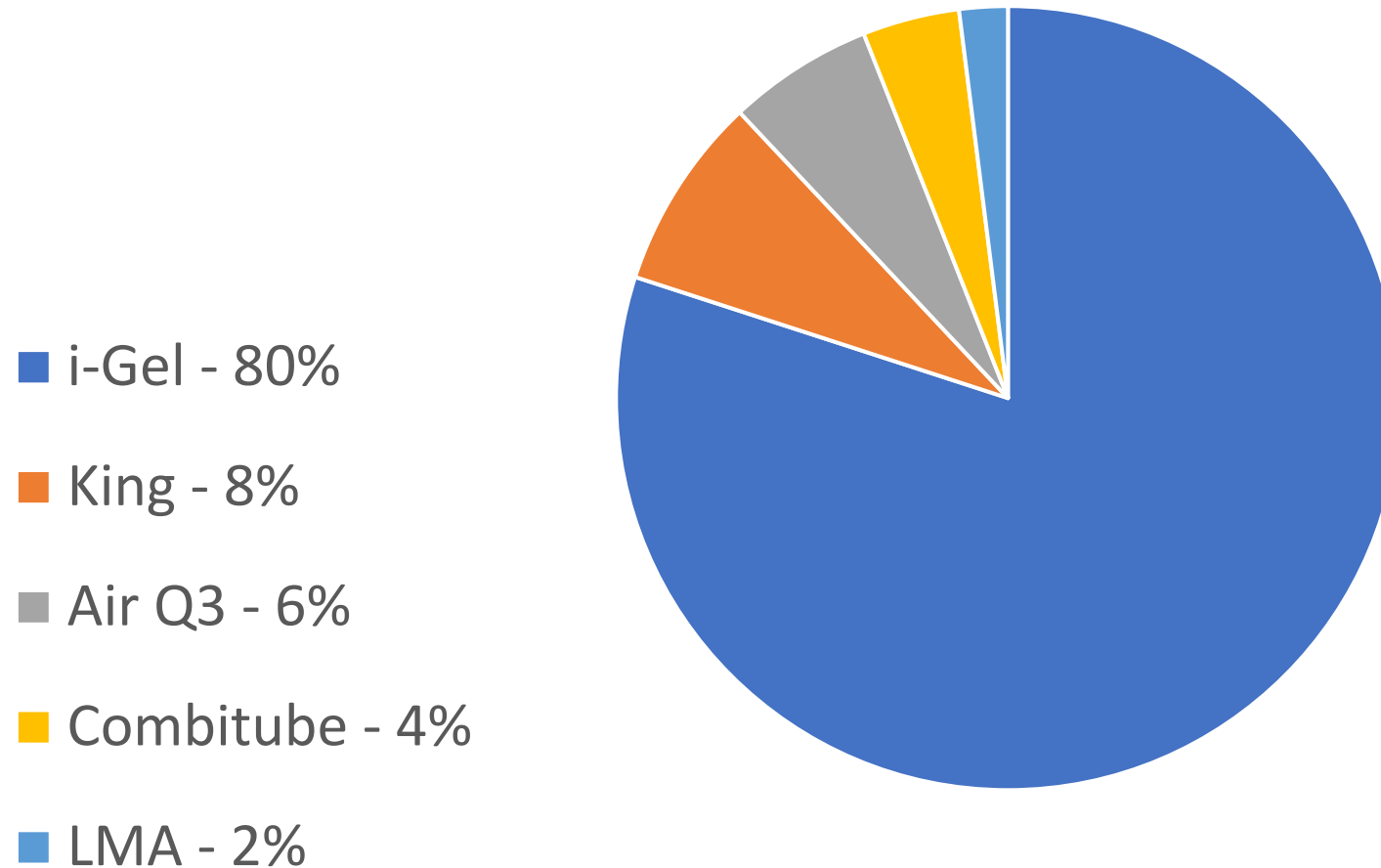


# How many SGA options are MCAs selecting?

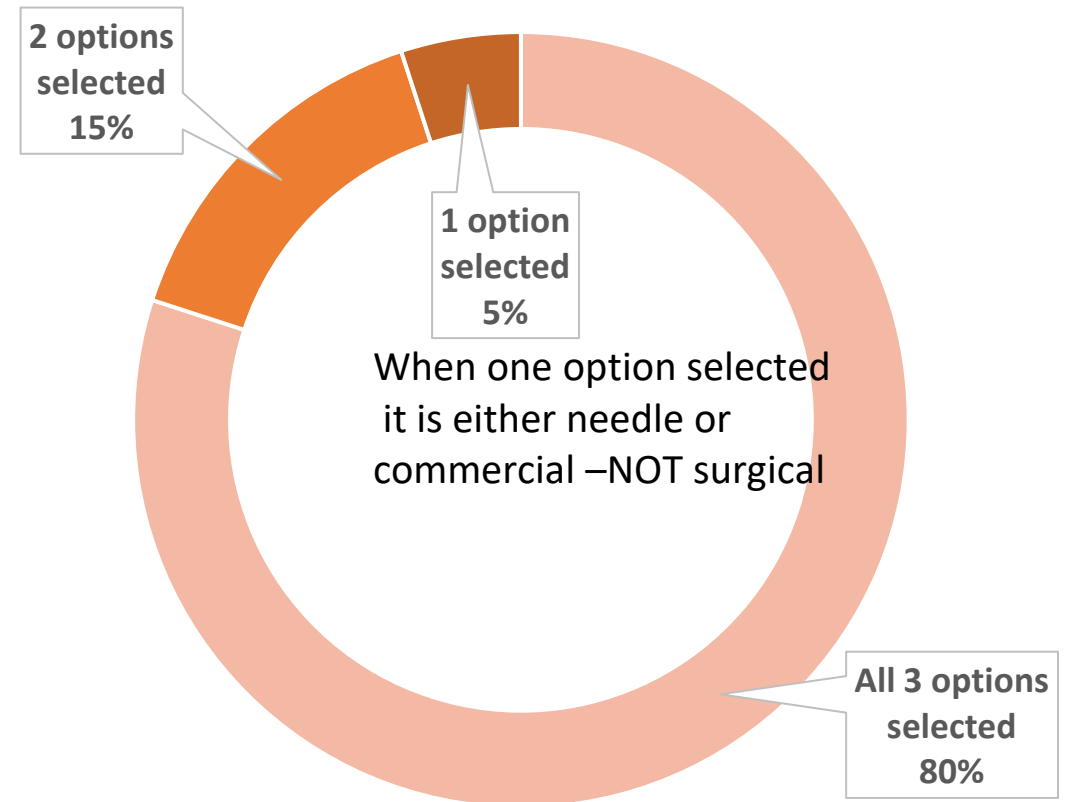
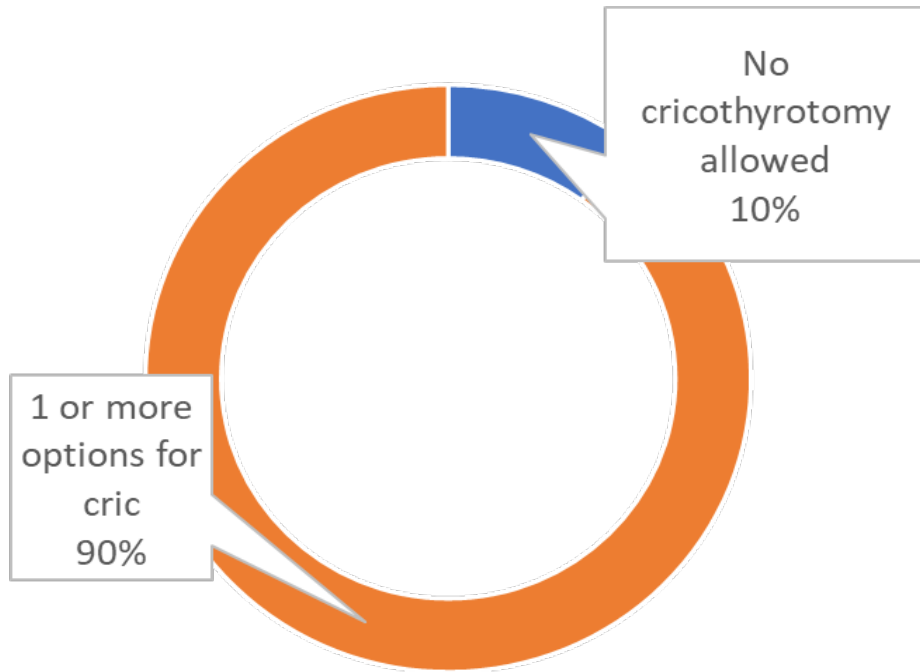


# Primary SGA Airway Selection

## Primary/Default SGA selected



# Airway Cricothyrotomy

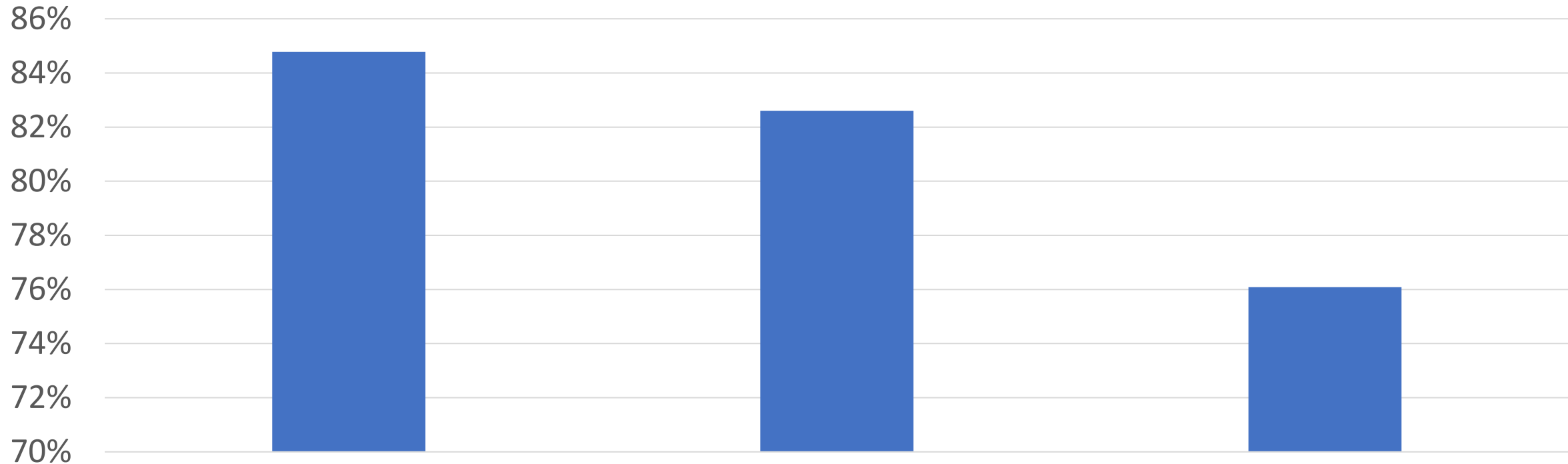


# Airway Cricothyrotomy

% of MCAs



### Cricothyrotomy Options Available within an MCA



That have this  
method as an option

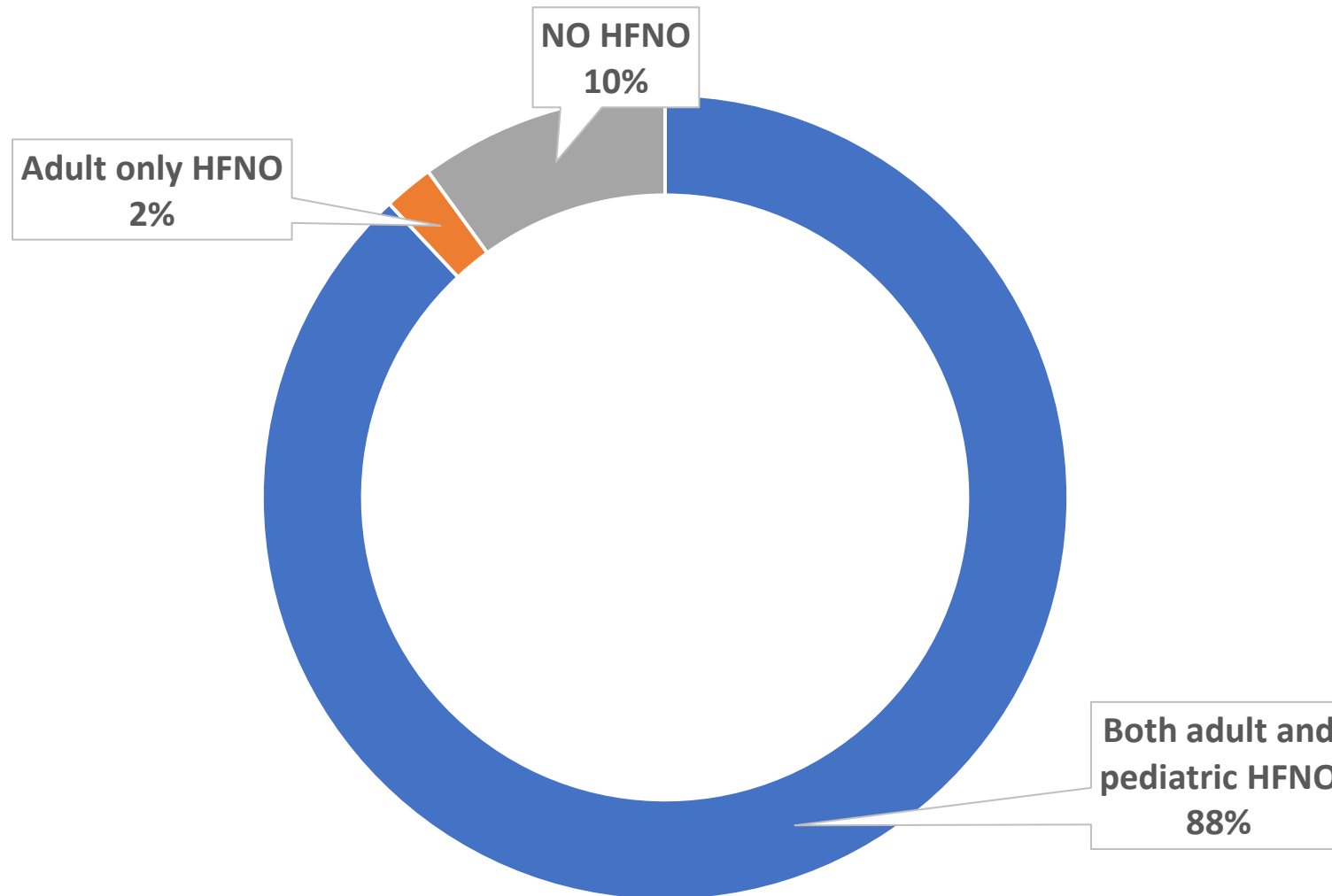


Needle

Surgical

Commercial

# Airway Interfacility HFNO



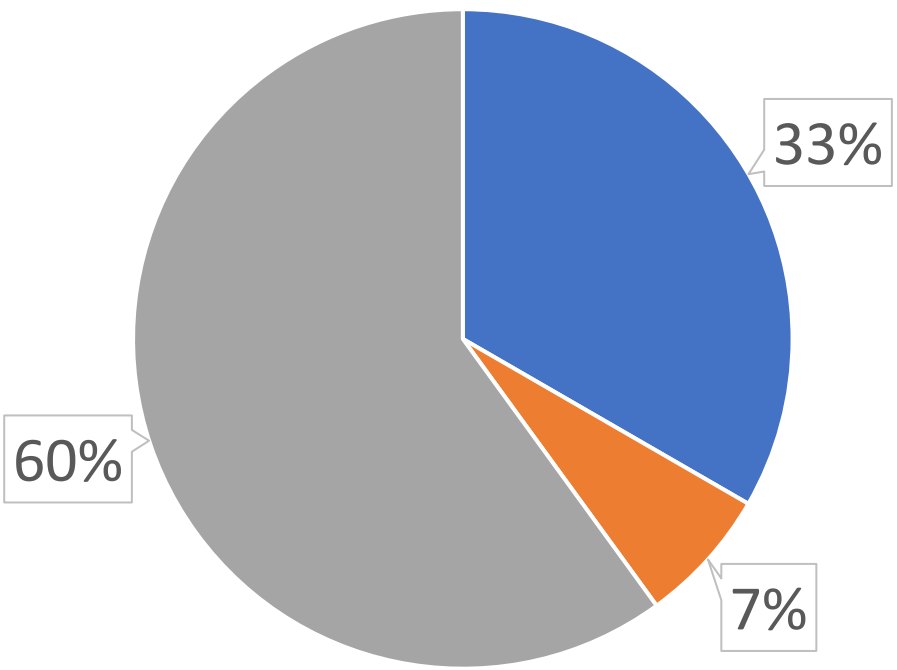
# Medications

- ✓ Cardiac
  - Amiodarone vs. Lidocaine
  - Regular Narrow SVT Medication Use
  - Irregular Narrow SVT Medication Use
- ✓ Pain Management
  - Medications carried
  - Ketamine
- ✓ Hyperactive Delirium Syndrome
  - Ketamine vs. Midazolam
- ✓ Ketamine
- ✓ Pediatrics
- ✓ Epinephrine Auto-Injector vs. Draw Up

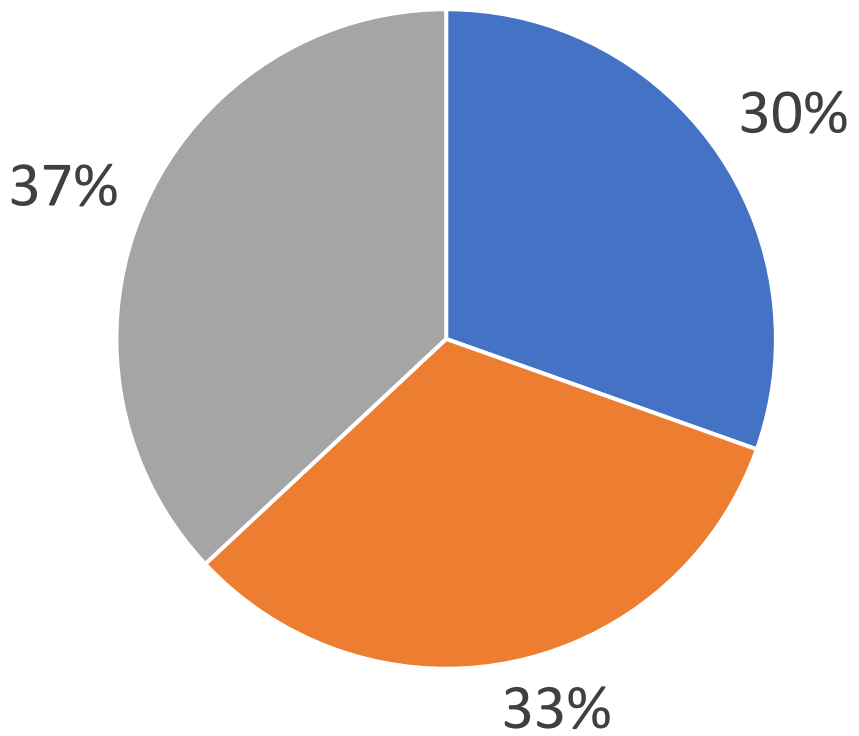
# Medications - Cardiac (Adults vs. Peds)

Amiodarone vs. Lidocaine in Cardiac Arrest

### 5.1 Adult Cardiac Arrest



### 6.1 Pediatric Cardiac Arrest

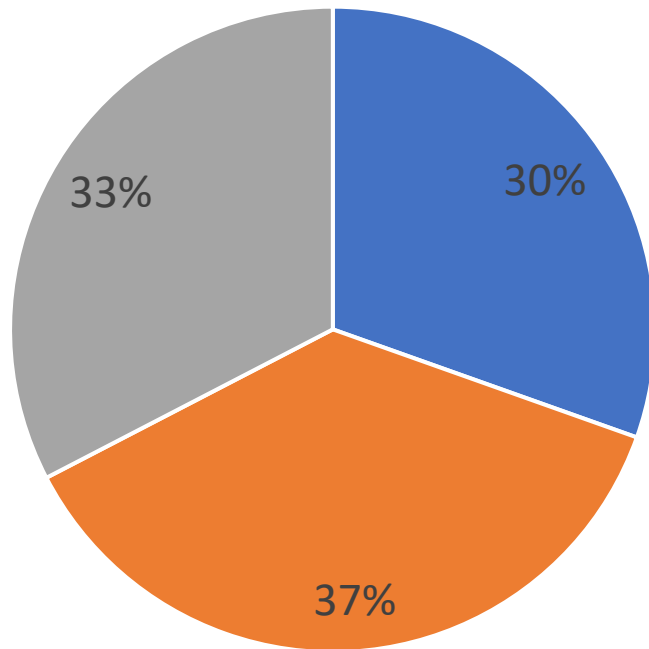


● Amiodarone ONLY selected    ● Lidocaine ONLY selected    ● Both Amiodarone & Lidocaine selected

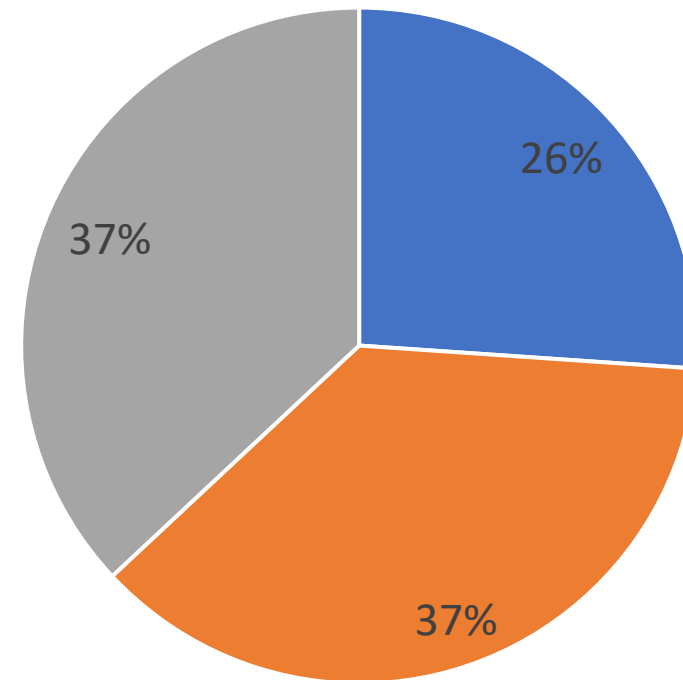
# Medications – Cardiac (Adults vs. Peds)

## Amiodarone vs. Lidocaine in Wide Complex Tachycardia

### 5.3 Adult Tachycardia –Wide Complex



### 6.3 Pediatric Tachycardia-Wide Complex



● Amiodarone ONLY selected    ● Lidocaine ONLY selected    ● Both Amiodarone & Lidocaine selected

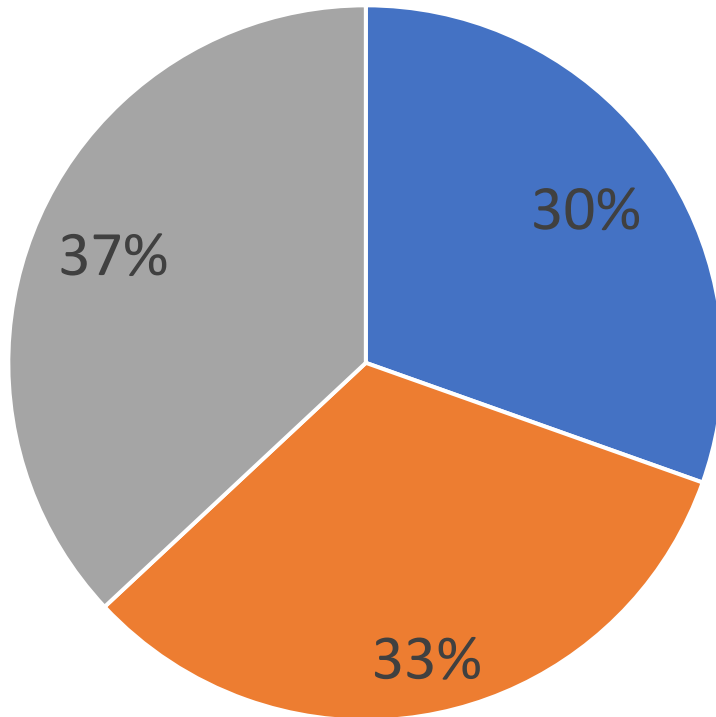


# Medications – Cardiac PEDIATRICS

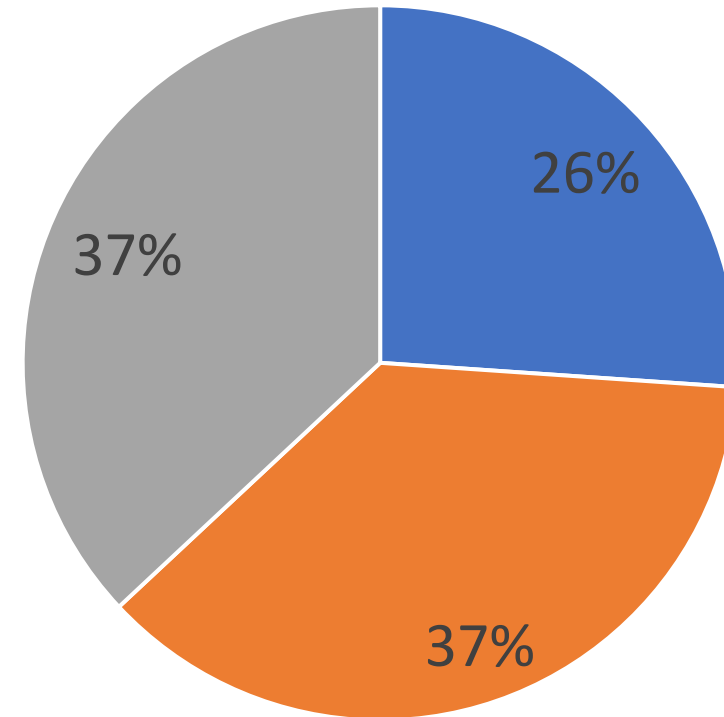
Amiodarone vs. Lidocaine

Cardiac Arrest vs. Wide Complex Tachycardia

### 6.1 Pediatric Cardiac Arrest



### 6.3 Pediatric Tachycardia-Wide Complex



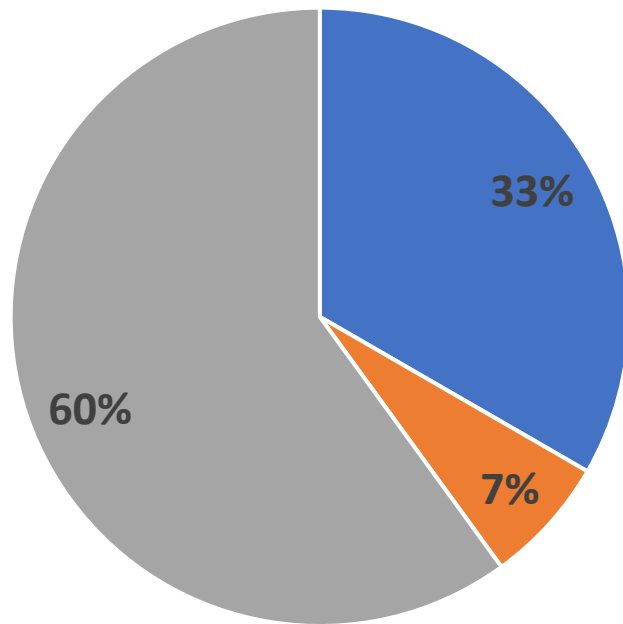
● Amiodarone ONLY selected    ● Lidocaine ONLY selected    ● Both Amiodarone & Lidocaine selected

# Medications – Cardiac ADULTS

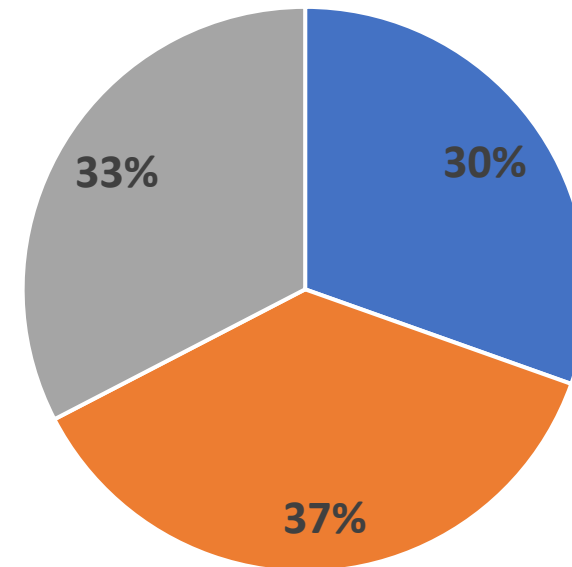
Amiodarone vs. Lidocaine

Cardiac Arrest vs. Wide Complex Tachycardia

## 5.1 Cardiac Arrest



## 5.3 Tachycardia-Wide Complex



■ Amio ■ Lido ■ Both

● Amiodarone ONLY selected

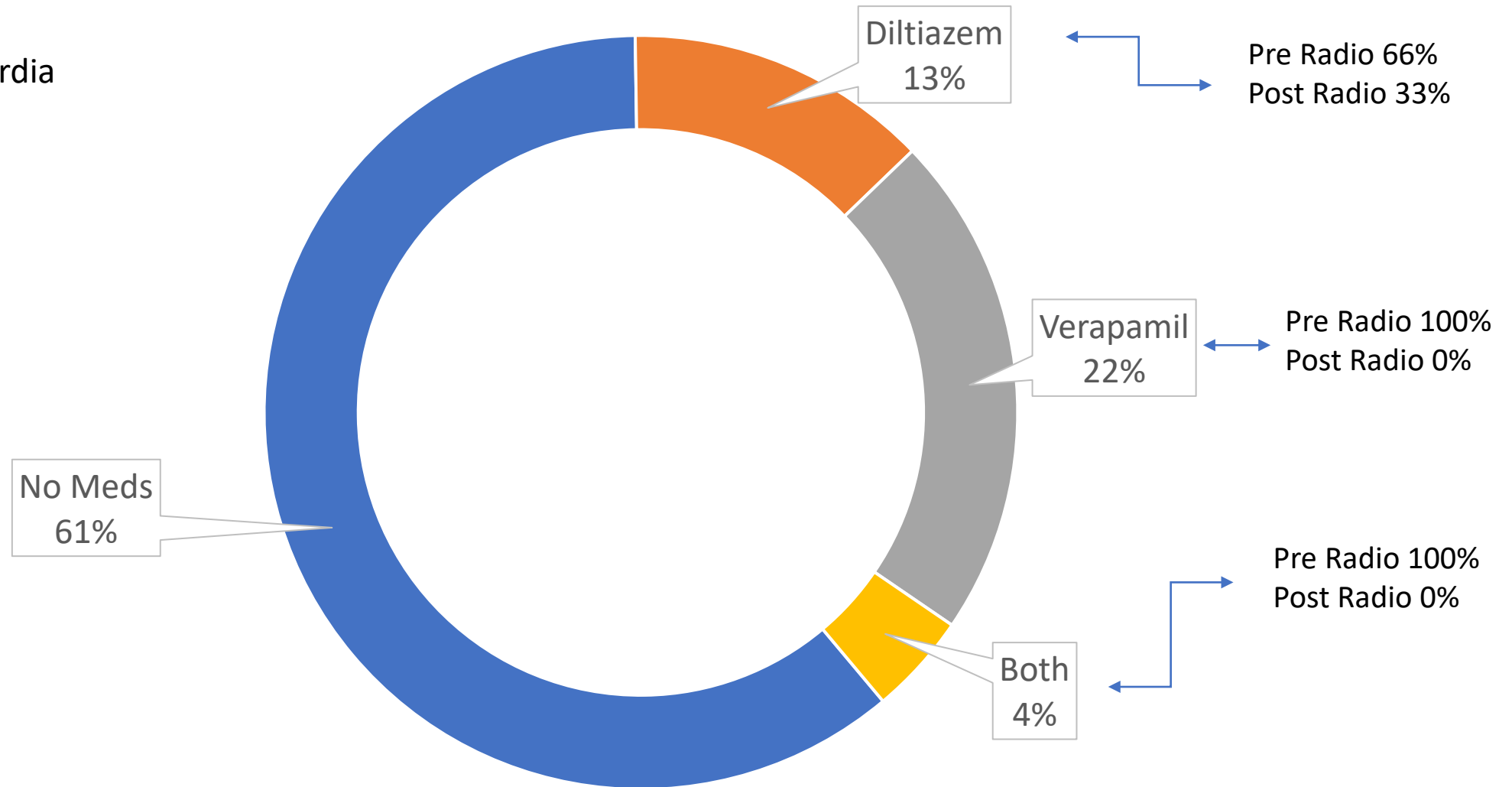
● Lidocaine ONLY selected

● Both Amiodarone & Lidocaine selected

# Medications - Cardiac ADULTS

Diltiazem vs. Verapamil vs. No medications  
Regular Narrow SVT

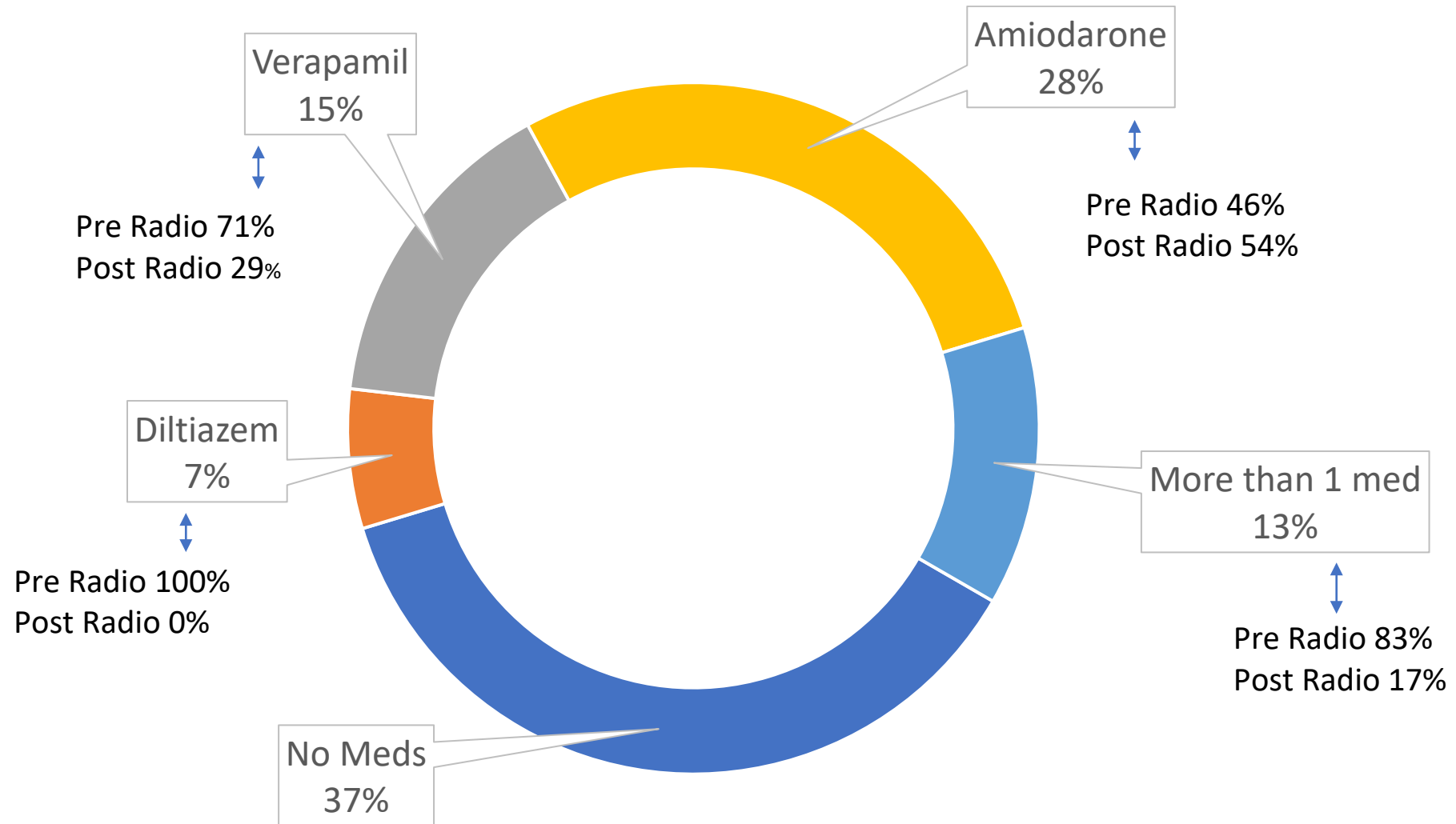
5.3 Tachycardia



# Medications – Cardiac ADULTS

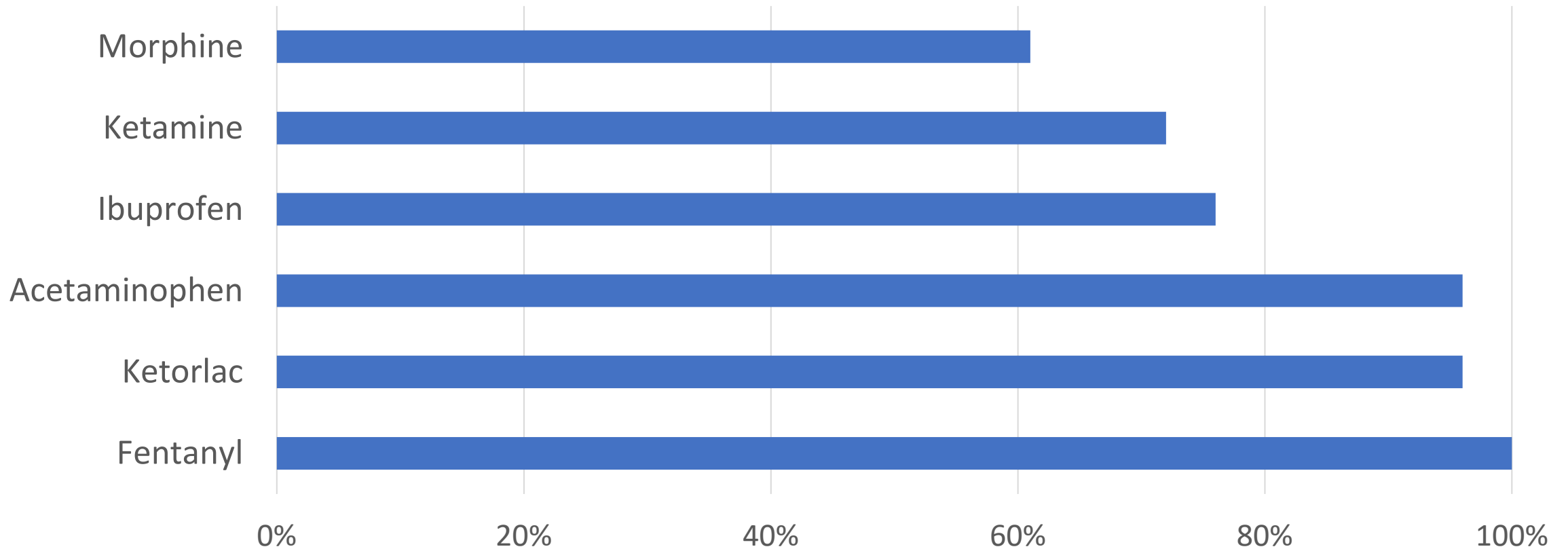
Diltiazem vs. Verapamil vs. No medications  
Irregular Narrow SVT

5.3 Tachycardia

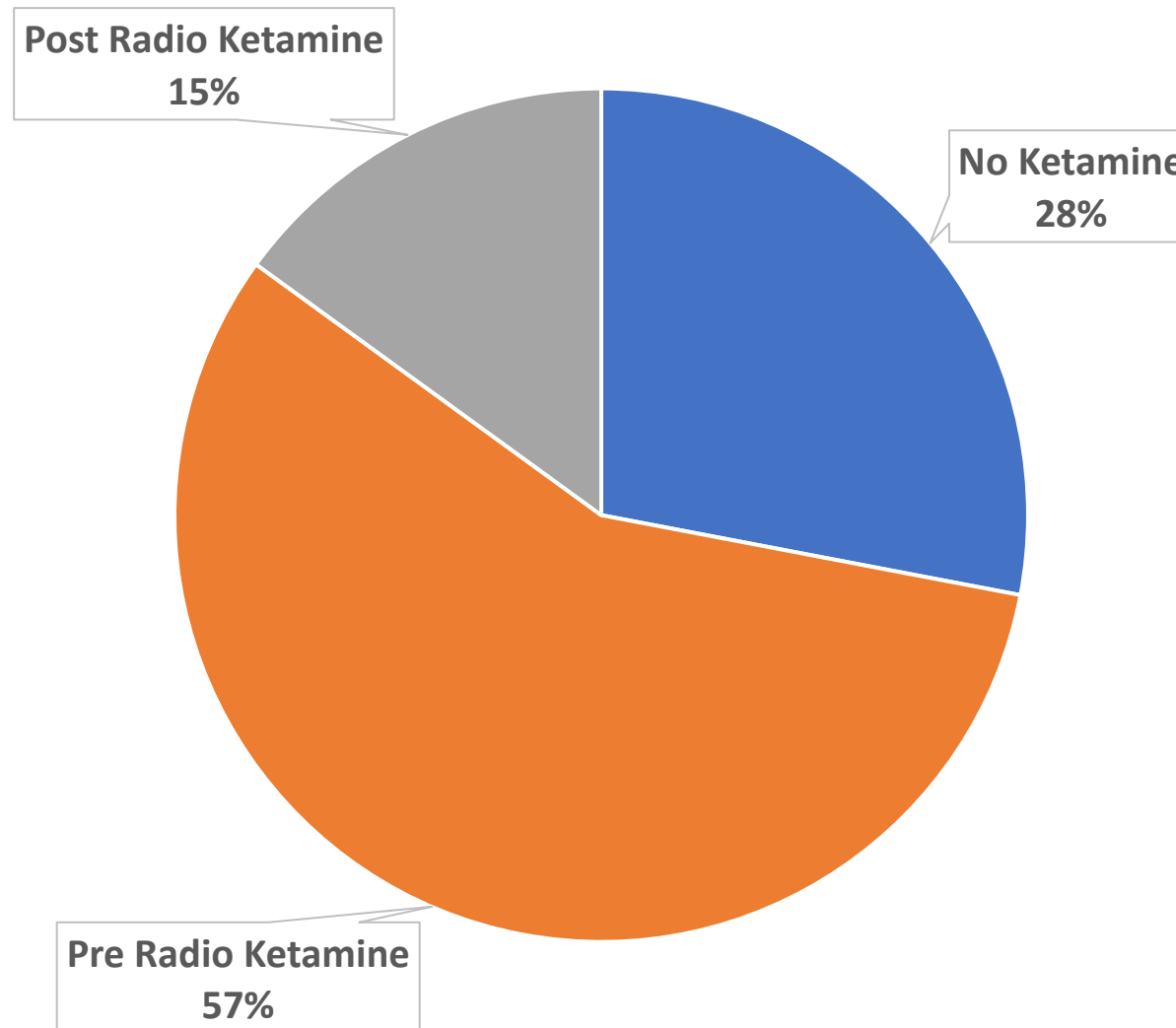


# Medications Pain Management

% of MCAs Carrying these Medications

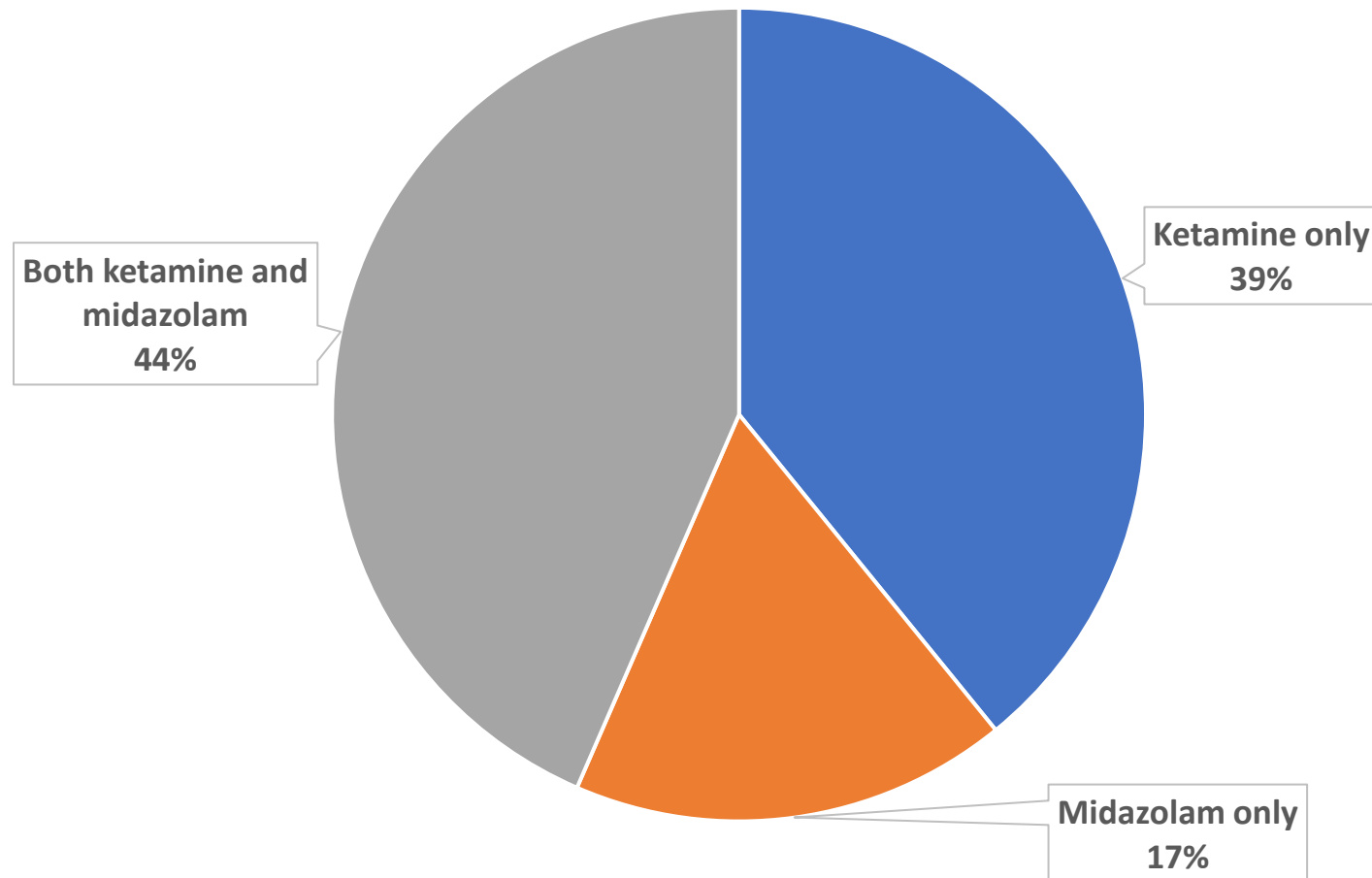


### Ketamine for Pain Management



# Hyperactive Delirium Syndrome

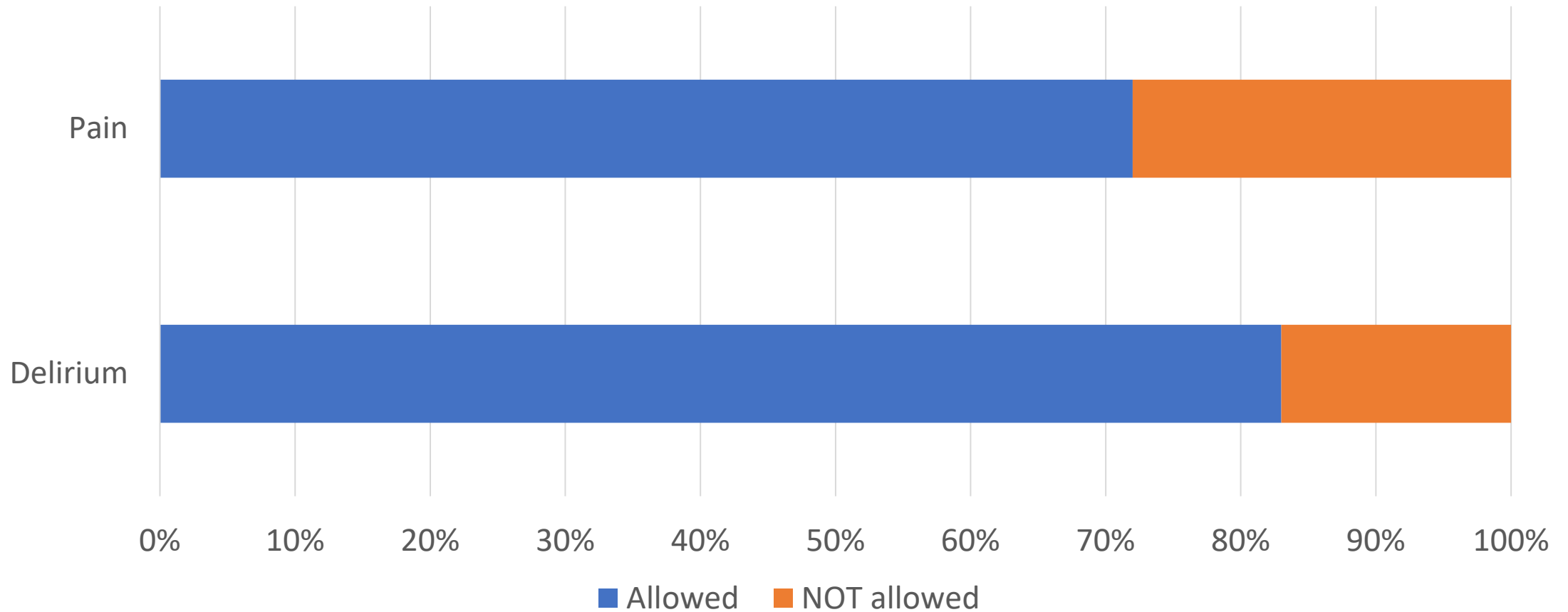
### Ketamine vs. Midazolam



# Medications

## Ketamine

% of MCAs that allow use of ketamine for specific conditions





## Auto-Injector vs. Draw Up

When a selection was made for use of auto-injectors and/or draw up epinephrine, it was used consistently through all applicable protocols by MCAs

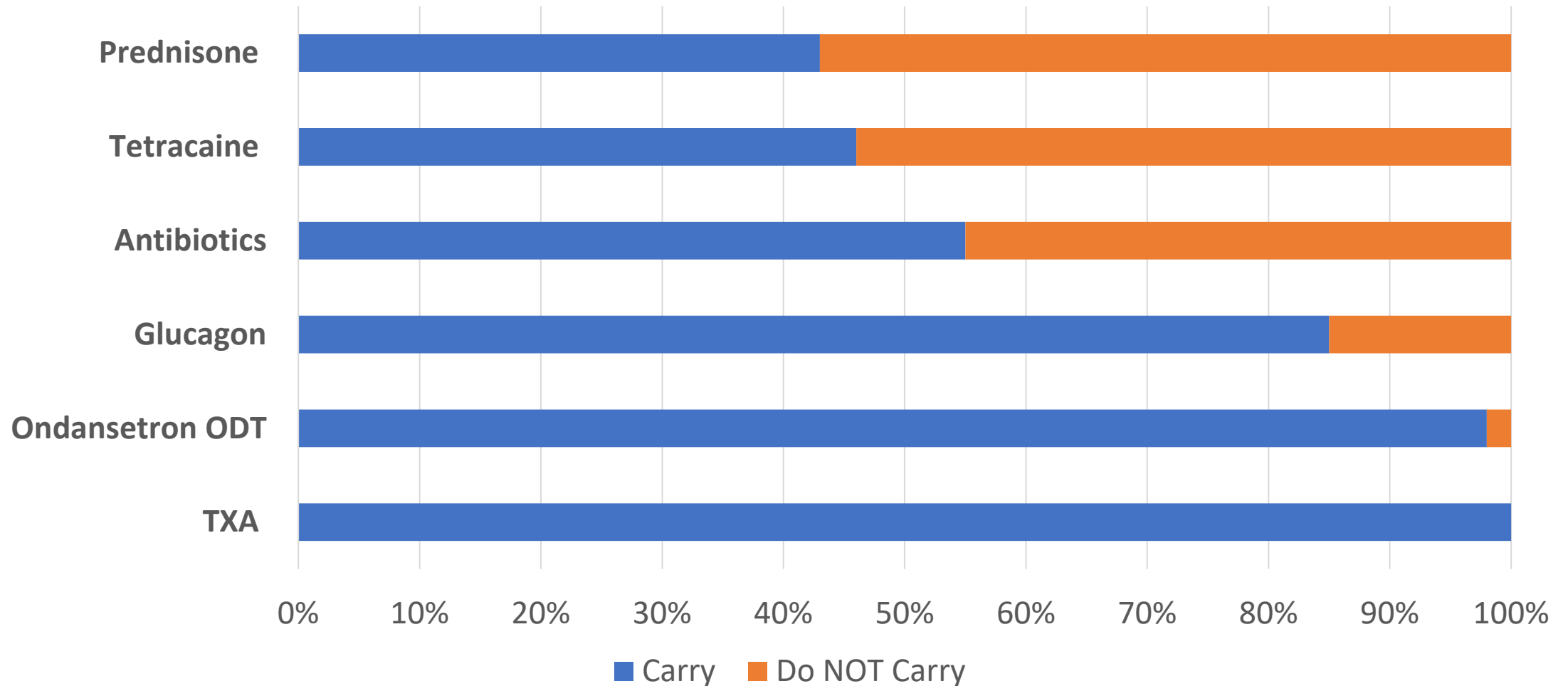
- ✓ 82% of MCAs will participate in MFR Agencies Utilizing Epi Auto-Injectors
  - Unknown how many agencies per MCA will/will not participate
  - Unknown if remaining 18% of MCAs will have no MFR epi administration or will utilize draw up epinephrine for MFR.
  
- ✓ 96% of MCAs will participate in draw up epinephrine for BLS and/or MRF
  - ✓ BLS draw up epinephrine appears to be an option in 100% of MCAs participating in draw up epinephrine
  - ✓ MFR draw up epinephrine appears to be an option 89% of MCAs participating in draw up epinephrine
    - Unknown how many agencies per MCA will/will not participate

# MCA Optional Medications

- ✓ Overview of Optional Medications Carried vs. Not Carried
- ✓ Prednisone
- ✓ Antibiotics
- ✓ Glucagon
- ✓ Ondansetron
- ✓ Pediatric Specific Medications

# MCA Optional Medications Carry vs. Do Not Carry

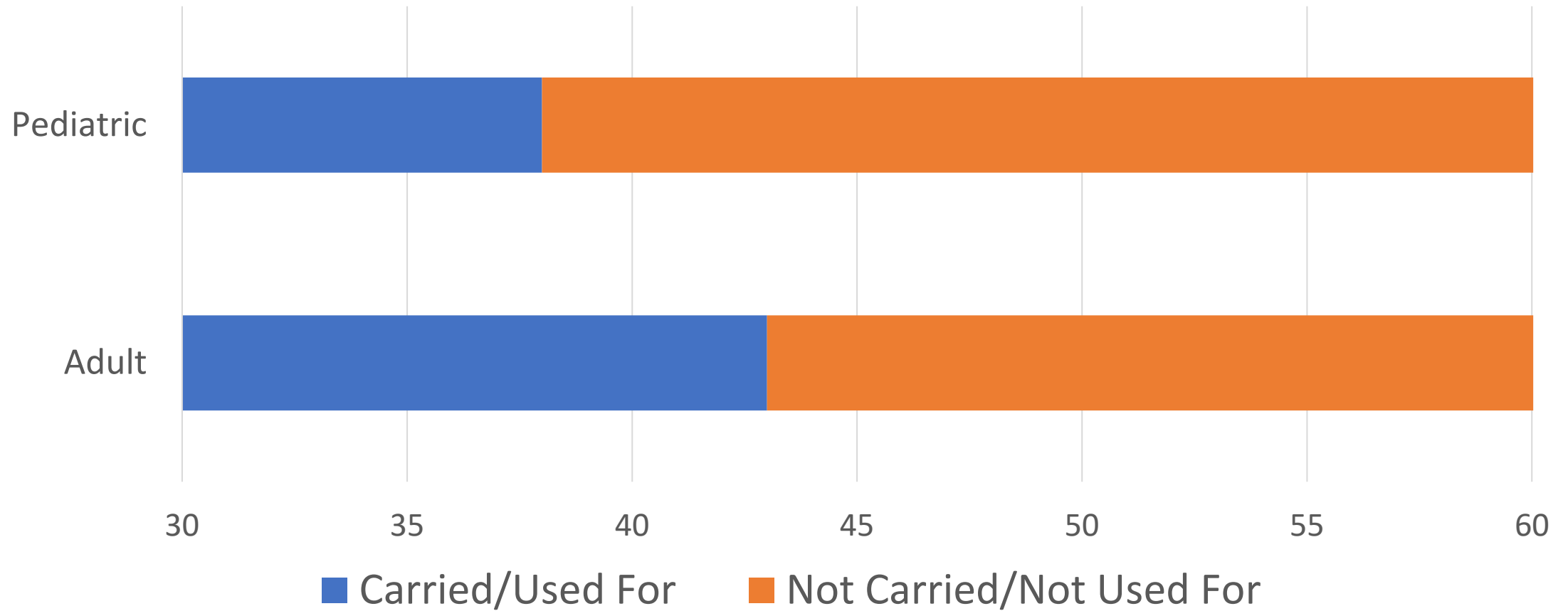
% of MCAs that carry the optional medication



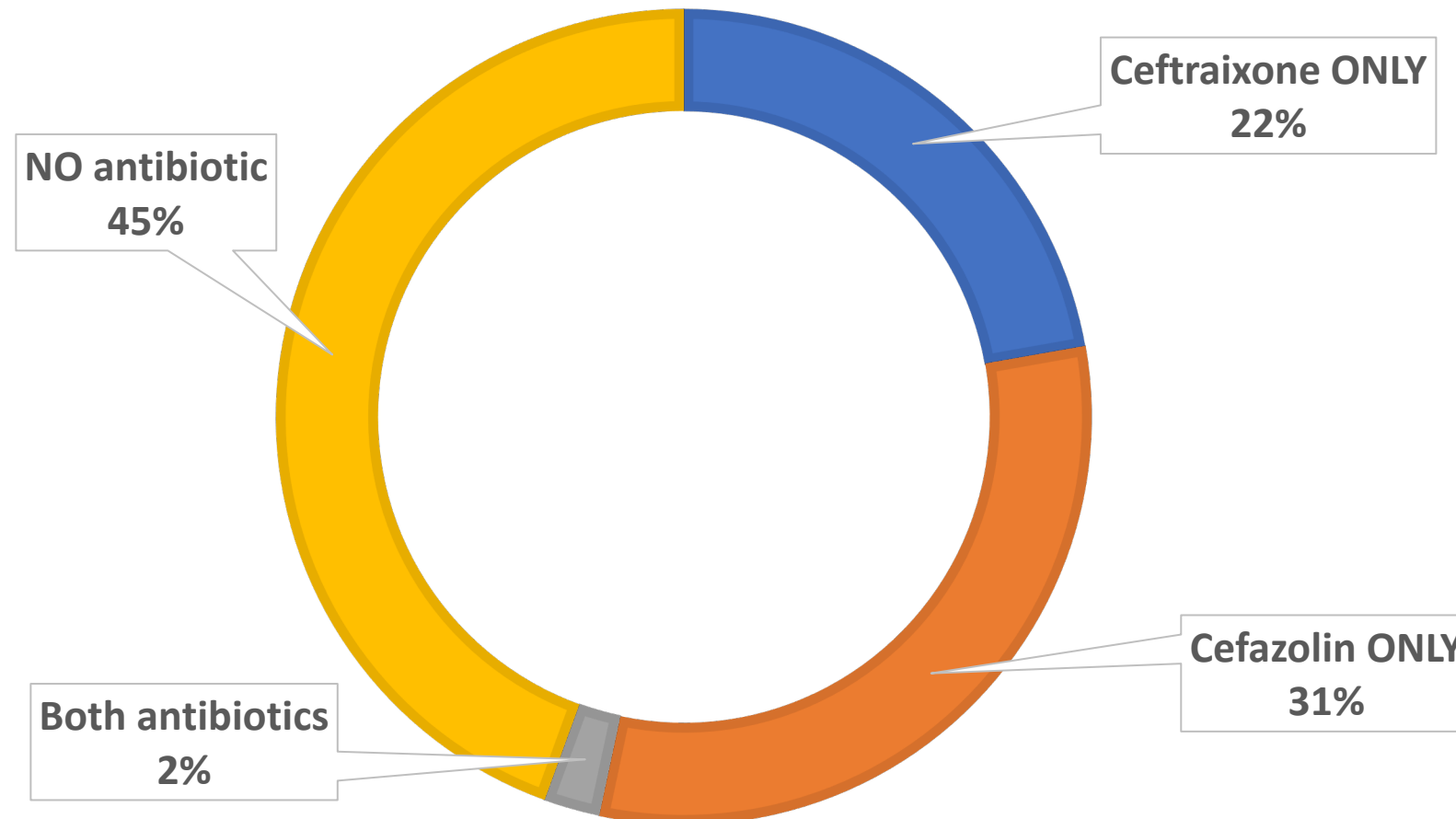
# MCA Optional Medications

## Prednisone

### Adult vs. Pediatric

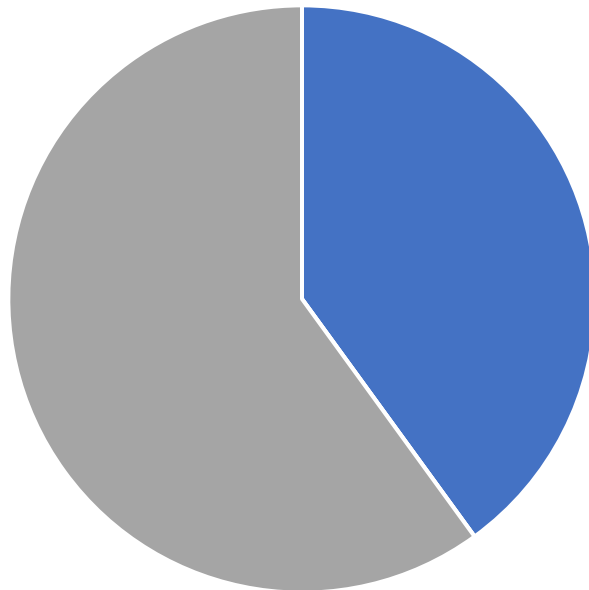


### Antibiotic selection in 2.5 Soft Tissue and Orthopedic Injuries



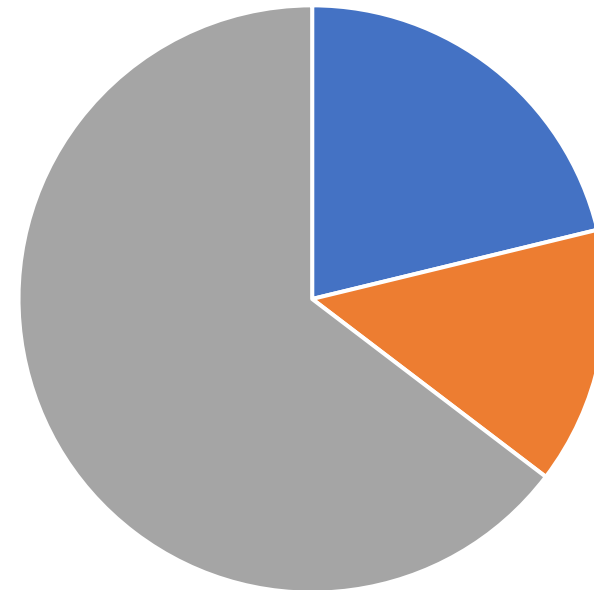
### Administration selection when only 1 antibiotic selected

#### Ceftriaxone administration



- Slow IVP ONLY - 40%
- Infusion ONLY - 0%
- Both Slow IVP and Infusion - 60%

#### Cefazolin administration

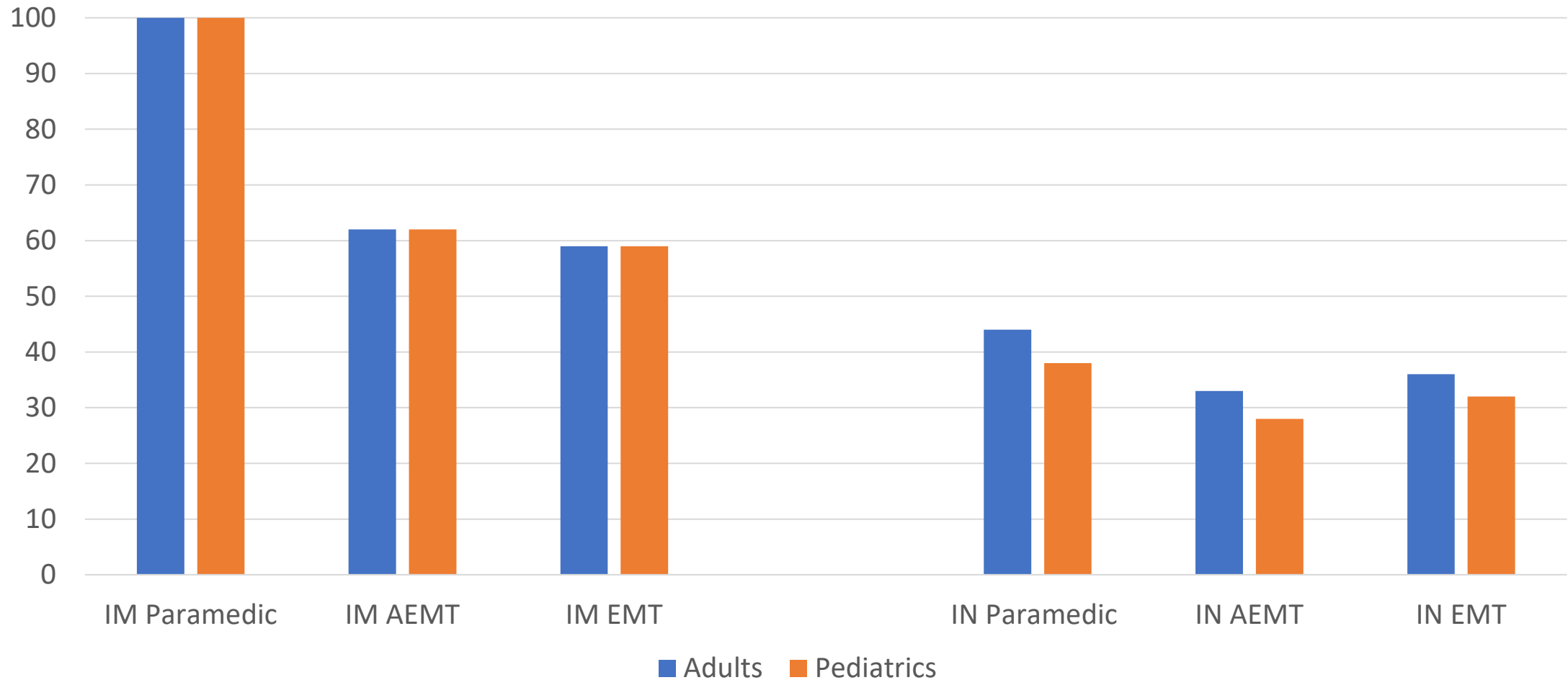


- Slow IVP ONLY - 21%
- Infusion ONLY - 14%
- Both Slow IVP and Infusion - 65%

# MCA Optional Medications

## Glucagon

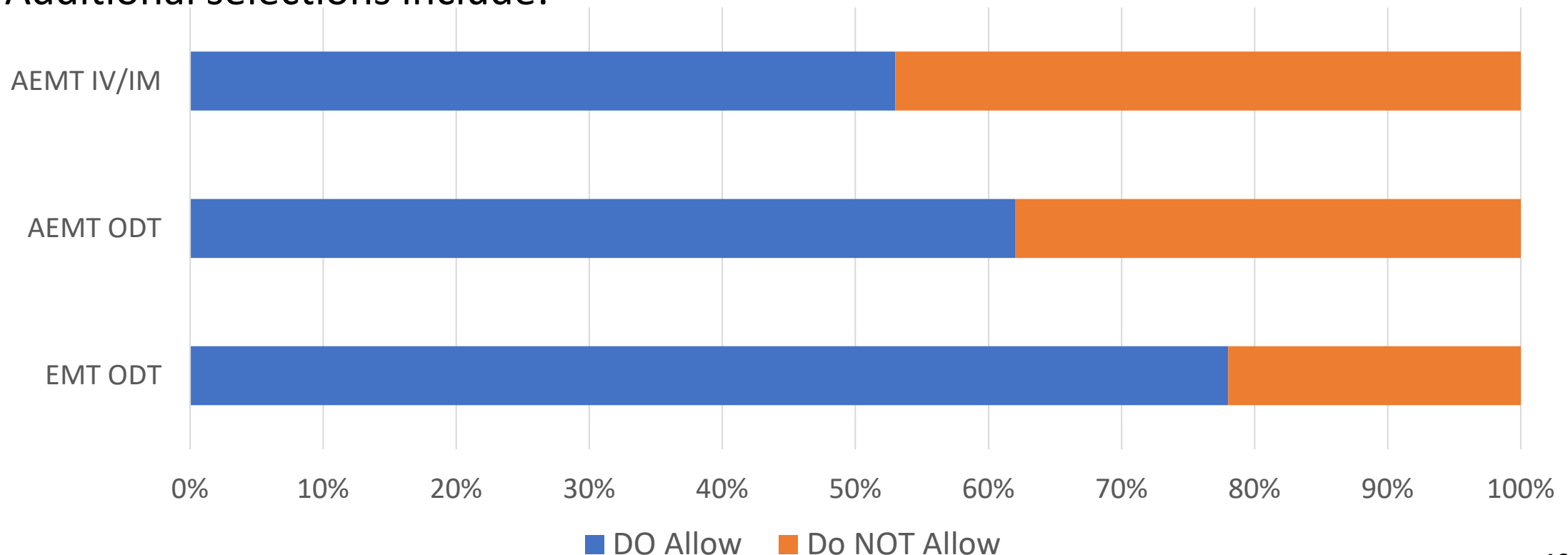
### Administration routes and licensure levels selected for glucagon



# MCA Optional Medications

## Ondansetron

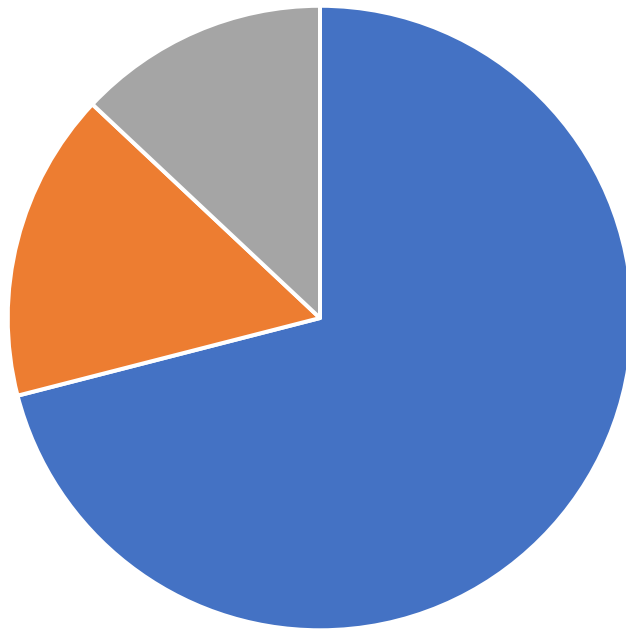
- ❖ 98% of reporting MCAs carry ODT ondansetron – paramedic administration is the default when ODT ondansetron is chosen
- ❖ All MCA's carry IV/IM ondansetron – paramedics may administer (was not optional)
- ❖ Additional selections include:





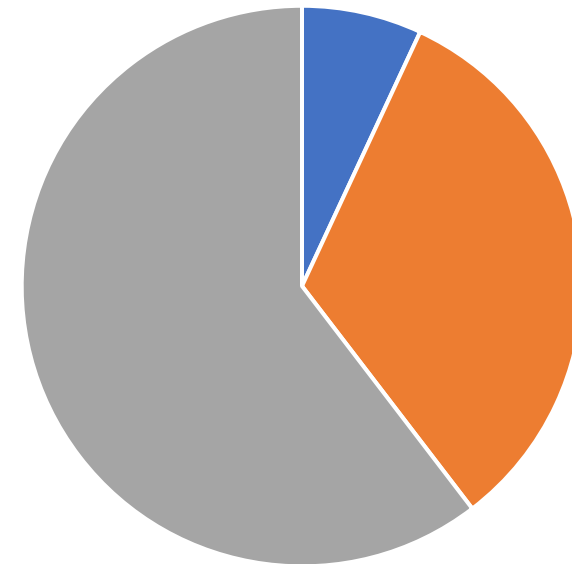
# Pediatric Specific Medication Selections

Racepinephrine vs. Epinephrine



- Racepinephrine only
- Epinephrine nebulized only
- Both

Ibuprofen vs. Acetaminophen

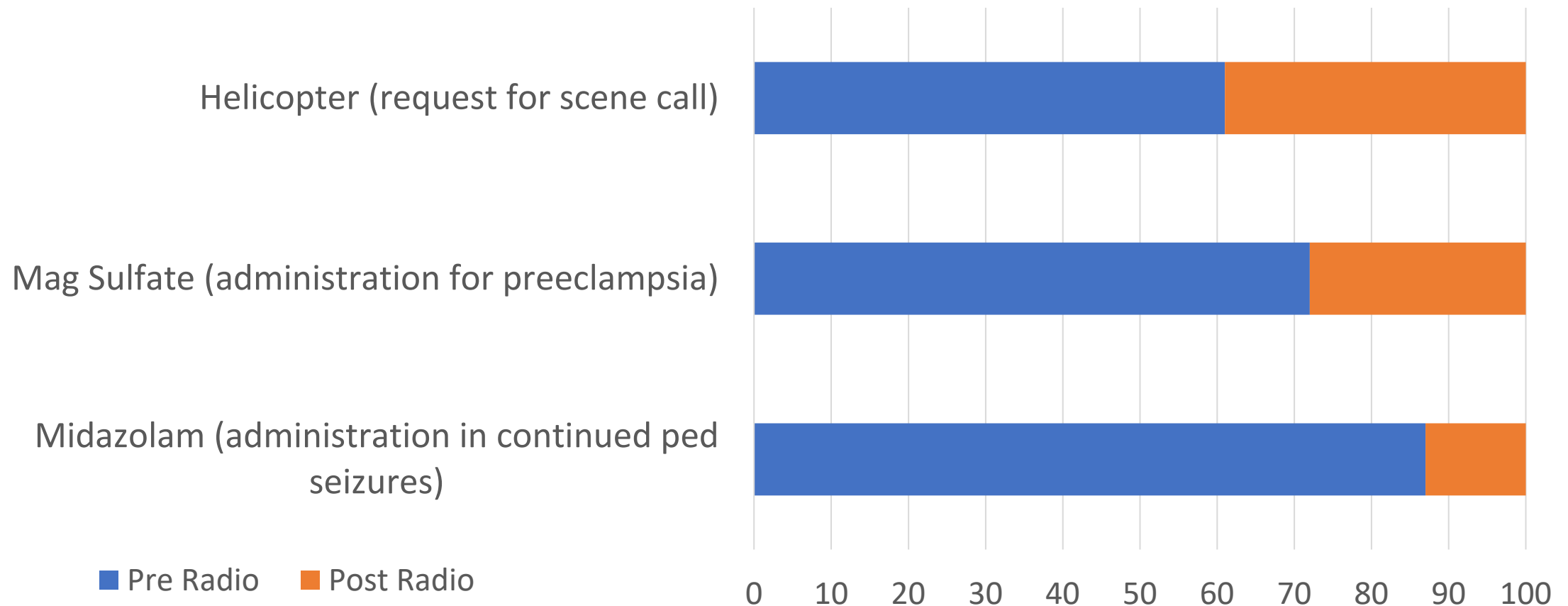


- Ibuprofen only
- Acetaminophen only
- Both

# Miscellaneous

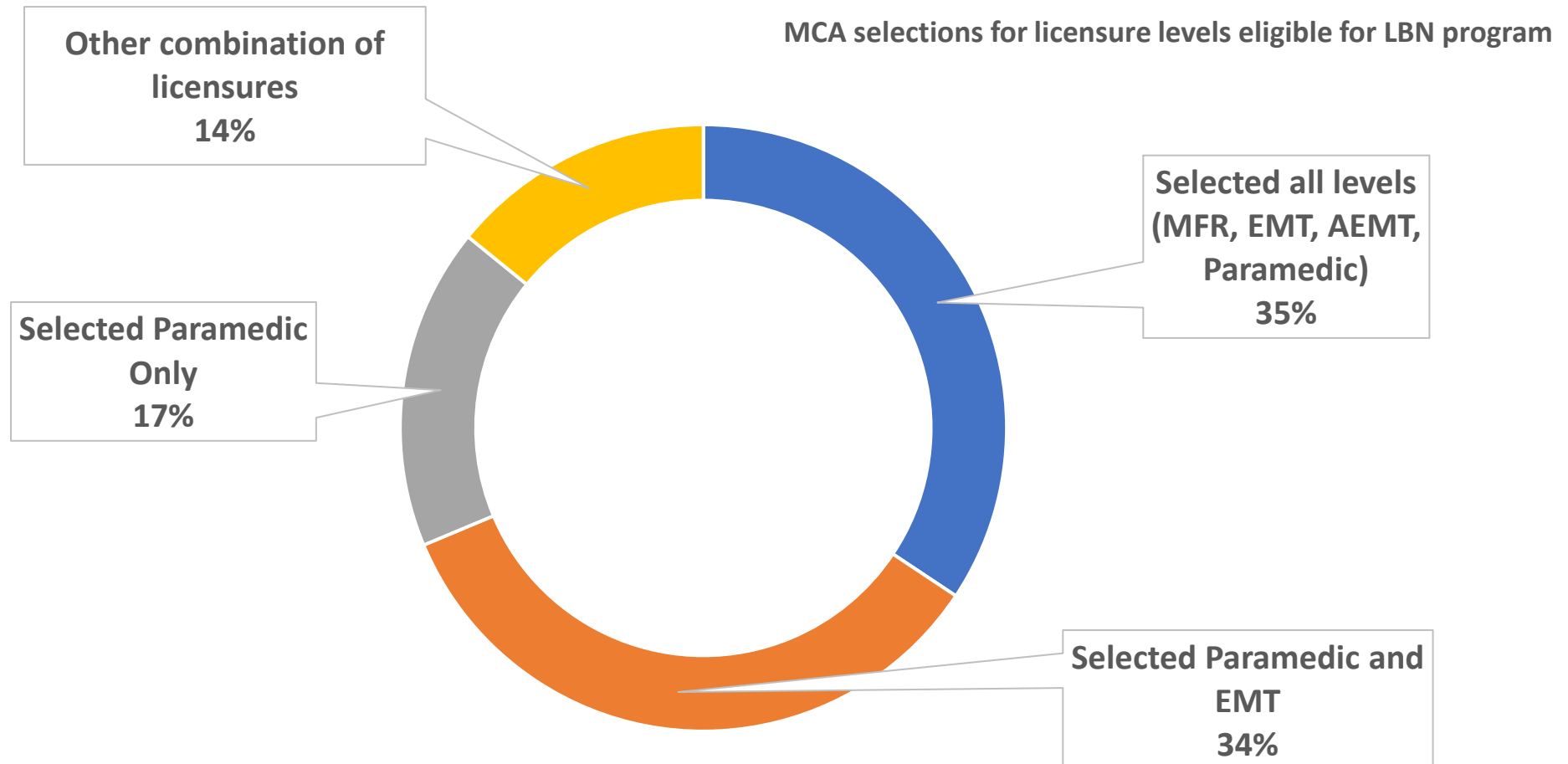
- ✓ Pre Radio vs. Post Radio Selections (not covered elsewhere)
- ✓ Leave Behind Naloxone
- ✓ Utilization of Allowable Skills
- ✓ ALS Optional Skills/Equipment
- ✓ All Level Optional Equipment

# Miscellaneous Pre Radio vs. Post Radio



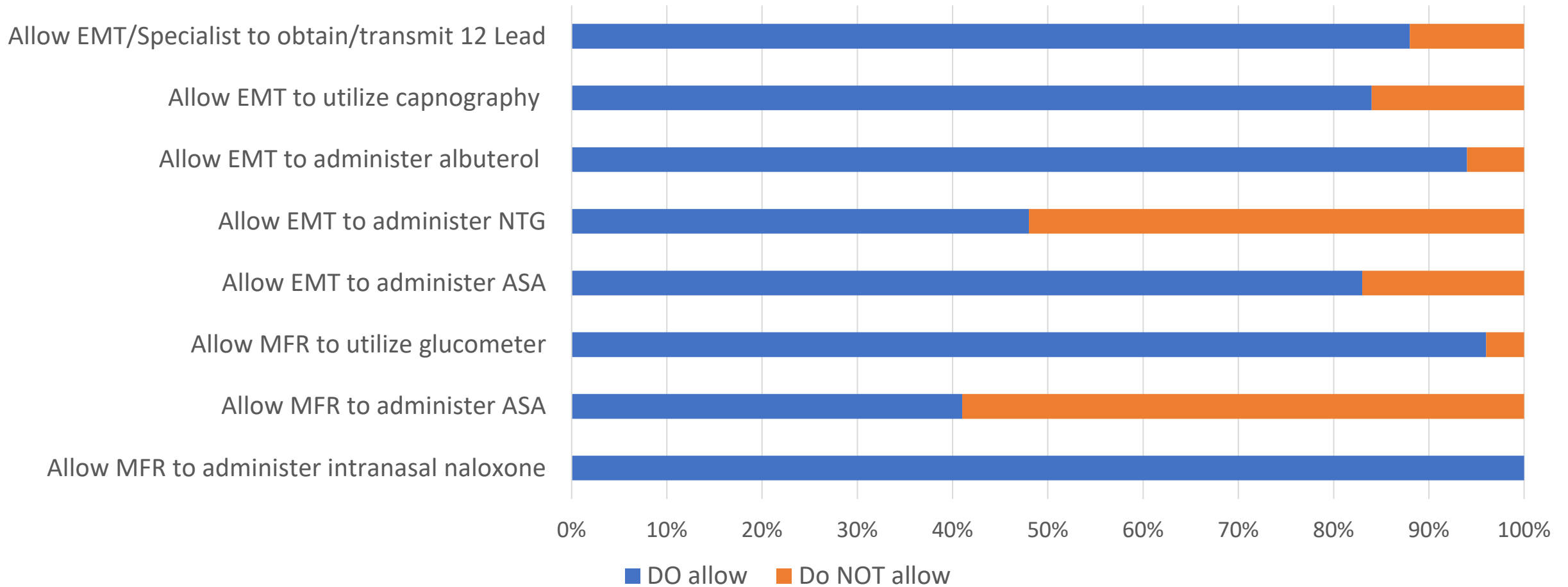
# Miscellaneous Leave Behind Naloxone

- ❖ 66-76% of MCAs are believed to be participating in leave behind naloxone (LBN).

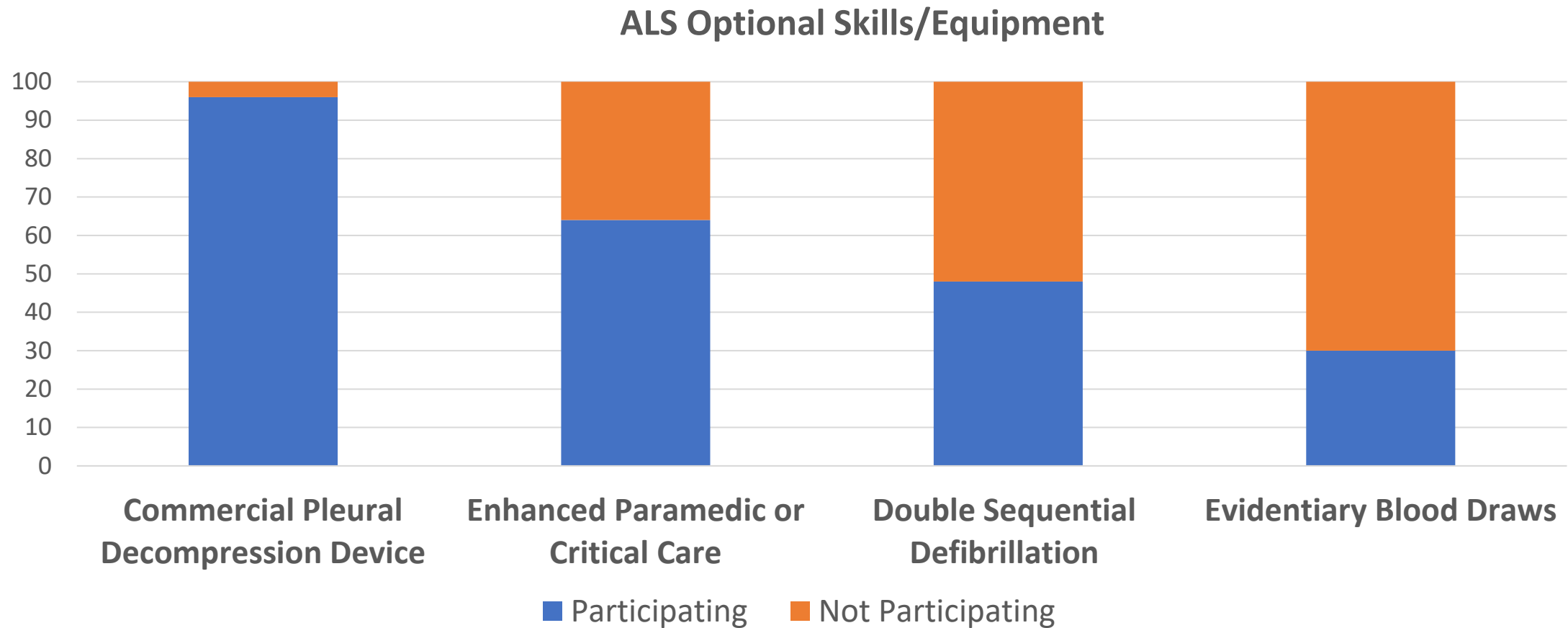


# Miscellaneous Utilization of Allowable Skills

**% of MCAs that allow utilization of skill**



# Miscellaneous ALS Optional Skills/Equipment



# Miscellaneous Optional Skills/Equipment

### Optional Skills/Equipment - All Levels

