



2014 NATIONAL EMS PRACTICE ANALYSIS

National Registry of EMTs

2014 National EMS Practice Analysis

National Registry of Emergency Medical Technicians (NREMT[®])

Mission Statement

To serve as the National EMS Certification organization by providing a valid, uniform process to assess the knowledge and skills required for competent practice by EMS professionals throughout their careers and by maintaining a registry of certification status.

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EXECUTIVE SUMMARY

The mission of the National Registry of Emergency Medical Technicians (NREMT) is to serve as the National EMS Certification organization by providing a valid, uniform process to assess the knowledge and skills required for competent practice by EMS professionals throughout their careers and by maintaining a registry of certification status. To help ensure a legally defensible and psychometrically sound credentialing process, it is necessary to understand current practice in the out-of-hospital setting.

Thus, the primary objective of the 2014 National EMS Practice Analysis was to identify the frequency, potential of harm, and impact of tasks performed by cohorts of nationally representative Emergency Medical Responders, Emergency Medical Technicians, Advanced Emergency Medical Technicians and Paramedics. The results of the current study will inform the examination blueprint and item development for each of the NREMT certification examinations.

Methodology

Population setting

The practice of out-of-hospital care involves applying and adapting concepts of emergency medicine to unique, unpredictable, dynamic, and potentially hazardous field environments. Therefore, to be a competent EMS practitioner, one must demonstrate competence in *both* patient care and operational knowledge and skills.

Further, EMS providers are confronted with patients of all types and ages, some frequently and others infrequently; some critical and others not so critical. Importance, therefore, must account for both variables as some situations are frequent but not terribly critical (e.g., flu-like symptoms), while others are infrequent but very critical (e.g., pediatric respiratory arrest).

Study design

The National EMS Practice Analysis is a cross-sectional analysis of a stratified sample of randomly selected, nationally certified EMS professionals who are currently providing out-of-hospital care at all certified provider levels. The American Institutes for Research Institutional Review Board approved this study.

Survey development

The NREMT convened a committee of national subject matter EMS experts. Members of the Practice Analysis Committee are active in EMS as managers, physicians, educators, supervisors, and state-level regulators. All possess expertise and a different perspective on the street level practice of EMS at the four (4) levels of National EMS Certification.

Using previous practice analysis survey instruments as a conceptual and theoretical framework, the Committee updated the tasks that would cover the breadth of patient conditions (including the assessment and management of those patients), operational tasks, and intervention skills (including assessment tasks, medication administration, and patient care tasks) that are currently within the domain of EMS practice.

The task list ultimately serves as the basis for cataloging content developed and delivered via the NREMT cognitive examinations. The list was intended to include the EMS tasks performed by Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician and Paramedic levels. By modifying previous survey items, the Committee identified thirty-three (33) adult and thirty-three (33) pediatric patient presentations that all EMS providers must assess and manage. Further, nine (9) categories of EMS Operations Tasks were identified. A total of seventy-five (75) tasks were included in each survey at all levels.

Due to the variations in scopes of practice between the four (4) levels, the Committee developed separate task lists for assessment, patient care, medication administration, operations, and items related to community EMS for each provider level. Data related to the assessment, patient care, medication administration, operations, and community EMS tasks were collected for research purposes and are not intended to influence the NREMT cognitive test plan.

After completion of task lists for each of the respective national EMS provider levels, the Committee deliberated on the dimensions necessary to determine the importance of a task. The Committee determined that importance would be a function of both the frequency that a task is performed and the criticality of the task.

Data for ten (10) demographic and work-life characteristics were also collected. These data would enable the Committee to determine if any response bias or under/over-representation of any provider characteristics exists in the respondents. It also enabled the Committee to determine if the sample was representative of all nationally certified EMS professionals. Following Committee development of the surveys, the draft survey instruments were cognitively tested. Drafts were administered to individuals ensuring geographic, ethnic, gender, and provider-level diversity. A standard debriefing protocol was followed.

Sampling plan

The population of interest for this study consisted of non-military, nationally certified EMS professionals at all levels of National EMS Certification. At the time of data collection, there were approximately 202,898 civilian nationally certified EMS professionals. The proportion of minorities who held National EMS Certification had not changed appreciably since 2009. Sampling was conducted using a random selection method stratified by minority status for all four (4) levels of certification. In an effort to achieve sufficient minority representation, the same oversampling strategy was employed for the 2014 sample that was used successfully in the 2009 practice analysis. Further, to determine reasonable estimates at a 95% confidence level and an acceptable 5% margin of error for categorical data, power calculations were performed.

Data Collection

To incentivize individuals to participate, each randomly selected EMS provider was mailed a hand-signed letter explaining the study and its importance as well as a decal of their respective certification level. Individuals then received an email two (2) weeks later that highlighted the importance of the practice analysis and provided an individual's URL link to the electronic survey. Those individuals who did not respond received a reminder e-mail stressing the importance of the study each week for a total of three weeks.

Each electronic survey had a unique identifier that linked the results to an individual. The logs were kept confidential from the Committee and were only used to send reminder emails to those who had not participated. No specific individual responses were identified.

Data Analysis

One of the major goals of the practice analysis is to determine the relative importance of job-related activities performed by EMS providers. The Practice Analysis Committee determined that the importance of each task performed by EMS professionals is a function of the frequency that a task is performed and the potential of harm related to that task. Using an additive model for combining scales, a Weighted Importance Score (WIS) formula consisting of 1/3 weight calculated for frequency and 2/3 weight calculated for potential for harm was utilized for each task.

Results

Representativeness of the Sample

The Practice Analysis Committee reviewed the demographics of individuals who responded to the practice analysis survey. These data were compared to population data from the NREMT database and other research initiatives. The Committee determined that the responses in the present study were representative of the population of all levels of nationally certified EMS providers throughout the nation).

Test Plan Development

The goal of the practice analysis is to determine the relative proportions for each of these relationships on each level of the NREMT examination based on the importance of tasks. To determine the balance of the exam, a relative weight for each domain was determined.

The proportion of the examination related to patient care and operations was determined in evaluating the WIS of all patient care tasks as well as the EMS operations section. Responses for adult and pediatric patient care tasks were combined in each of the patient care content areas to determine the final representative proportion for each section in the final test plan (Appendix C).

Based on the examination lengths recommended by the NREMT Standards and Examination Committee and approved by the NREMT Board of Directors, the number of items for each section was determined by relative weight of the section, multiplied by the range of the total number of exam items in the currently approved examinations.

Following the Practice Analysis Committee's review of data, outcome and drafted test plans, the NREMT Board of Directors adopted the four (4) test plans at the November 2014 Board of Directors meeting for implementation on September 1, 2015 (Appendix D).

BACKGROUND OF STUDY

The goal of licensure and certification is to assure the public that individuals who work in a particular profession have met certain standards and are qualified to engage in practice (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 1999). To meet this goal, the requirements for certification and licensure must be based on the ability to practice safely and effectively (Kane, 1982). The practice analysis is a component for developing a legally defensible and psychometrically sound credentialing process.

The primary purpose of a practice analysis is to develop a clear and accurate picture of the current practice of a job or profession, in this case the provision of emergency medical care in the out-of-hospital environment. The results of the practice analysis are used throughout the entire National Registry of Emergency Medical Technicians (NREMT) examination development process, which helps to ensure a connection between the examination content and actual practice. The practice analysis helps to answer the questions, “What are the most important aspects of practice?” and “What constitutes safe and effective care?” It also enables the NREMT to develop examinations that reflect contemporary, real-life practice of out-of-hospital emergency medicine.

As the nation’s EMS certification agency, the NREMT is obligated to develop certification materials that reflect entry-level competency for safe and effective practice of out-of-hospital providers. The National EMS Education Standards and the National EMS Practice Analysis help to determine the distribution of test material. Numerous sources are utilized to determine the depth and breadth of content contained in the national EMS Certification materials, including, but not limited to: the National EMS Education Standards, the National EMS Practice Analysis, the most current American Heart Association guidelines, recommendations from the Centers for Disease Control and Prevention on Trauma Triage, organizational position statements, current peer-reviewed literature, content of EMS textbooks, and the judgments of panels of experts periodically convened by the NREMT that represent the diversity of the national EMS community.

The NREMT conducted its first practice analysis in 1994 and at five-year intervals thereafter (1994, 1999, 2004, 2009). The primary objective of this study, the 2014 National EMS Practice Analysis, was to identify the frequency, potential of harm, and impact of tasks performed by cohorts of nationally representative Emergency Medical Responders, Emergency Medical Technicians, Advanced Emergency Medical Technicians and Paramedics. The results of the current study will inform the examination blueprint and item development for each of the NREMT certification examinations.

METHODOLOGY

Study Population

At the time of the present study, there were four (4) nationally defined levels of EMS providers based on the *National EMS Scope of Practice* and the *National EMS Education Standards and Instructional Guidelines* published in 2009 (Table 1).

Table 1. Nationally Defined Levels of EMS Providers

National Certification Level	Basis
Emergency Medical Responder	National EMS Scope of Practice Model
Emergency Medical Technician	National EMS Scope of Practice Model
Advanced Emergency Medical Technician	National EMS Scope of Practice Model
Paramedic	National EMS Scope of Practice Model

Population Setting

The practice of out-of-hospital care involves applying and adapting concepts of emergency medicine to unique, unpredictable, dynamic, and potentially hazardous field environments. Therefore, to be a competent EMS practitioner, one must demonstrate competence in *both* patient care and operational knowledge and skills.

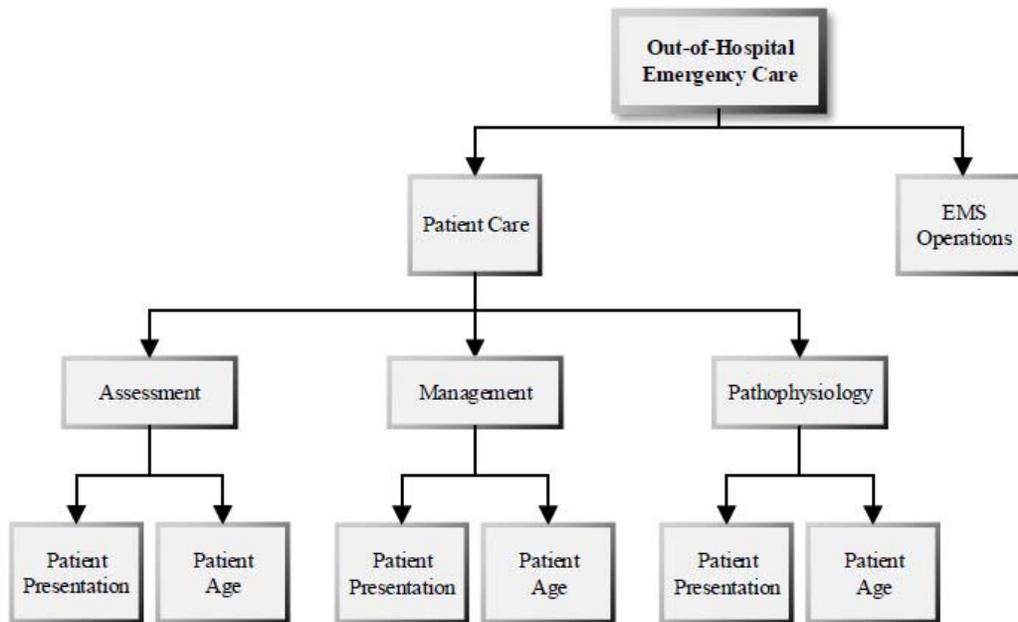
EMS professionals encounter patients of all types and ages. Hence, patient care competence is the combined ability to apply an understanding of the pathophysiology of a patient's presentation to the appropriate assessment and correct management of any patient, regardless of presenting complaint or age. While not all patients are easily categorized, there has been a natural tendency in EMS education to broadly divide patient presentations into four areas: 1) Airway, Respiration & Ventilation, 2) Cardiology & Resuscitation, 3) Trauma, and 4) Medical/Obstetrics/Gynecology. Historically, pediatrics has been considered a separate category, however, the EMS for Children National Resource Center has emphasized that most problems which occur in adults can also occur in pediatric patients. While modification of the approach may be necessary due to age considerations, pediatric content should be fully integrated into EMS education and practice rather than being treated as a separate aspect of EMS practice. Competence in patient care can be represented as demonstrating knowledge and skills in the four patient presentation categories for patients of all ages.

EMS providers are confronted with a variety of patient types, some frequently and others infrequently; some critical and others not so critical.¹ Importance, therefore, must account for both variables as some situations are frequent but not terribly critical (e.g., flu-like symptoms), while others are infrequent but very critical (e.g., pediatric respiratory arrest).

¹ In defining criticality, we have chosen to analyze "Potential for harm." We recognize that to the patient and his/her family, all situations are critical and it is not our intent to trivialize any patient complaint.

To help ensure that the NREMT test plan provides appropriate representation based upon the importance of patient conditions, respondents were asked to rate both the frequency of various patient encounters, as well as the potential of harm to the patient if a particular task was omitted or performed improperly. Combined, these represent the primary domains of out-of-hospital emergency care (Figure 1).

Figure 1. Primary Domains of Out-of-Hospital Emergency Care



Study Design

The National EMS Practice Analysis is a cross-sectional analysis of a stratified sample of randomly selected, nationally certified EMS professionals who are currently providing out-of-hospital care at all certified provider levels. The American Institutes for Research Institutional Review Board approved this study.

Survey Development

To conduct the National EMS Practice Analysis, the NREMT convened a committee of national subject matter EMS experts. Members of the Practice Analysis Committee are active in EMS as managers, physicians, educators, supervisors, and state-level regulators. All possess expertise and a different perspective on the street level practice of EMS at the four (4) levels of National EMS Certification (Appendix A).

Once appointed, all members of the Committee were provided with a copy of the NREMT 2009 Practice Analysis as well as general background information and a review of the literature regarding the purpose and methods of practice analyses. The Committee met in New Orleans, LA on February 17-18, 2014. The Committee members were briefed by NREMT staff about lessons learned during the past EMS practice analyses.

Using previous practice analysis survey instruments as a conceptual and theoretical framework, the Committee updated the tasks that would cover the breadth of patient conditions (including the assessment and management of those patients), operational tasks, and intervention skills (including assessment tasks, medication administration, and patient care tasks) that are currently within the domain of EMS practice.

The task list ultimately serves as the basis for cataloging content developed and delivered via the NREMT cognitive examinations. The list was intended to include the EMS tasks performed by Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician and Paramedic levels. By modifying previous survey items, the Committee identified thirty-three (33) adult and thirty-three (33) pediatric patient presentations that all EMS providers must assess and manage. Utilizing data obtained from the 2006 Designing a Curriculum (DACUM) project, nine (9) categories of EMS Operations Tasks were identified. A total of seventy-five (75) tasks were included in each survey at all levels.

Due to the variations in scopes of practice between the four (4) levels, the Committee developed separate task lists for assessment, patient care, medication administration, operations, and items related to community EMS for each provider level. Further, as indicated in the *National EMS Research Agenda* (National Highway Traffic and Safety Administration, 2001) a paucity of EMS-related research exists. Data related to the assessment, patient care, medication administration, operations, and community EMS tasks were collected for research purposes and are not intended to influence the NREMT cognitive test plan. All research-related tasks are summarized in Table 2.

Table 2. Research-Related Tasks by Provider Level

	Assessment Tasks	Patient Care Tasks	Medication Administration	Operations	Community EMS
EMR	9	18	16	0	0
EMT	14	32	33	7	7
AEMT	19	49	31	8	7
Paramedic	18	58	37	14	7

After completion of task lists for each of the respective national EMS provider levels, the Committee deliberated on the dimensions necessary to determine the importance of a task. The Committee determined that importance would be a function of both the frequency that a task is performed and the criticality of the task.

Based on survey methodology and EMS subject matter expertise, it was determined that each respondent would be asked, “How often do you encounter a patient with this condition?” with the following response categories in order to determine frequency:

- Never
- Once per year or less
- Between once per year and once per month
- Between once per week and once per month
- More than once per week

The criticality for patient presentation types and assessment tasks was assessed by asking the respondents, “What is the potential for harm to the patient if you do not provide proper care?” using the following response categories:

- Little to no potential for harm
- Moderate potential for harm
- Significant potential for harm
- Extreme potential for harm

The criticality of EMS Operations tasks was determined by a slight modification of the leading question, “What is the potential for harm to you, your partner, the patient, or bystanders if you omit or improperly perform each of the following?” utilizing the following response categories:

- Little to no potential for harm
- Moderate potential for harm
- Significant potential for harm
- Extreme potential for harm

For assessment tasks, patient care tasks, routes of medication administration, medication administration tasks and community EMS tasks, an “I am not authorized to perform this task” option was added to the frequency response options. The potential for harm category was replaced by an assessment of the “impact” that interventions have on patient outcome. Specifically, participants were asked to respond to the question, “If you performed this task properly, what effect would it have on the patient while under your care?” with the following response options:

- Worsen
- No impact
- Prevent deterioration
- Improvement
- Life-saving

Data for ten (10) demographic and work-life characteristics were also collected. These data would enable to the Committee to determine if any response bias or under/over-representation of any provider characteristics exists in the respondents. It also enabled the Committee to determine if the sample was representative of all nationally certified EMS professionals. Following Committee development of the surveys, the draft survey instruments were cognitively tested. Drafts were administered to individuals ensuring geographic, ethnic, gender, and provider-level diversity. A standard debriefing protocol was followed.

Following revisions based on the results of the cognitive debriefing, all Committee members approved the final drafts for the four (4) surveys.

Sampling Plan

The population of interest for this study consisted of non-military, nationally certified EMS professionals at all levels of National EMS Certification. At the time of data collection, there were approximately 202,898 civilian nationally certified EMS professionals. The proportion of minorities who held National EMS Certification had not changed appreciably since 2009. Sampling was conducted using a random selection method stratified by minority status for all four (4) levels of certification. In an effort to achieve sufficient minority representation, the same oversampling strategy was employed for the 2014 sample that was used successfully in the 2009 practice analysis. Further, to determine reasonable estimates at a 95% confidence level and an acceptable 5% margin of error for categorical data, power calculations were performed (Bartlett JE, et.al., 2001). The total population, sample size needed to determine statistical differences and random stratified sample drawn is as follows:

Table 3. Power Calculations and Random Sample Determinations

	Population	Responses Needed	Random Sample	White	Minority
EMR	8,652	368	4,660	4,054 (87%)	606 (13%)
EMT	129,791	383	5,285	3,752 (71%)	1,533 (29%)
AEMT	5,547	358	4,285	3,428 (80%)	857 (20%)
Paramedic	58,907	382	5,230	3,399 (65%)	1,831 (35%)

Data Collection

To incentivize individuals to participate, each randomly selected EMS provider was mailed a hand-signed letter explaining the study and its importance as well as a decal of their respective certification level. Individuals then received an email two (2) weeks later that highlighted the importance of the practice analysis and provided an individual's URL link to the electronic survey. Those individuals who did not respond received a reminder e-mail stressing the importance of the study each week for a total of three weeks.

Each electronic survey had a unique identifier that linked the results to an individual. The logs were kept confidential from the Committee and were only used to send reminder emails to those who had not participated. No specific individual responses were identified.

Because of the electronic nature of the study, double answers on items were not possible. All data were entered into a Microsoft Excel (Microsoft Corp., Redmond, WA) database and analyzed in Stata IC 12 (College Station, TX).

Data Analysis

One of the major goals of the practice analysis is to determine the relative importance of job-related activities performed by EMS providers. The Practice Analysis Committee determined that the importance of each task performed by EMS professionals is a function of the frequency that a task is performed and the potential of harm related to that task. Using an additive model for combining scales (Sanchez & Levine, 1989), a Weighted Importance Score (WIS) formula consisting of 1/3 weight calculated for frequency and 2/3 weight calculated for potential for harm was utilized for each task.

$$\text{WIS} = 1/3(\text{frequency}) + 2/3(\text{potential for harm})$$

The frequency score for each task ranged from 1 to 5. The potential for harm for each task ranged from 1 to 4. Since we are interested in a provider’s rating of the potential for harm of a task based on personal experience, we excluded any ranking of potential harm if the individual respondent had never performed a particular task as had been done in our previous practice analyses. Thus, a WIS (ranging from 1.0 to 4.33) was calculated for each task.

RESULTS

The questionnaire response rates can be found in Table 4.

Table 4. Provider Level Questionnaire Response Rates

Certification Level	Complete Surveys¹	Partial Surveys²	Response Rate
EMR	614	252	13.8% (19.5%)
EMT	468	303	9.1% (15.0%)
AEMT	605	355	14.5% (23.0%)
Paramedic	818	431	16.2% (24.7%)

1. Individuals who completed the survey and clicked “submit” at the end.

2. Individuals who began the survey but stopped during it/did not click “submit” at the end

Representativeness of the Sample

The Practice Analysis Committee reviewed the demographics of individuals who responded to the practice analysis survey. These data were compared to population data from the NREMT database and other research initiatives. The Committee determined that the responses in the present study were representative of the population of all levels of nationally certified EMS providers throughout the nation (Appendix B).

Test Plan Development

The Committee analyzed the content domain of the National EMS Education Standards, job descriptions, and patient illnesses and injuries based upon their observation and experience as experts in the field. The Committee recommended that the test plan be developed along a number of dimensions:

- Patient Care vs. EMS Operations
- Adult vs. Pediatrics
- Airway, Respiration & Ventilation vs. Cardiology & Resuscitation vs. Trauma vs. Medical/Obstetrics/Gynecology
- Assessment/Pathophysiology vs. Management

The goal of the practice analysis is to determine the relative proportions for each of these relationships on each level of the NREMT examination based on the importance of tasks. To determine the balance of the exam, a relative weight for each domain was determined.

The proportion of the examination related to patient care and operations was determined in evaluating the WIS of all patient care tasks as well as the EMS operations section. Responses for adult and pediatric patient care tasks were combined in each of the patient care content areas to determine the final representative proportion for each section in the final test plan (Appendix C).

Since pediatric presentations occur throughout all content areas, the proportion of the patient care exam content related to adult and pediatric patients was further determined by comparing it to historical data from EMS systems and other published data citing the proportion of pediatric EMS responses and Committee recommendations. A policy recommendation that 15% of all patient care content areas reflect pediatric content and the remaining 85% contain adult and geriatric content was upheld as in our previous practice analyses.

Based on the examination lengths recommended by the NREMT Standards and Examination Committee and approved by the NREMT Board of Directors, the number of items for each section was determined by relative weight of the section, multiplied by the range of the total number of exam items in the currently approved examinations.

Following the Practice Analysis Committee's review of data, outcome and drafted test plans, the NREMT Board of Directors adopted the four (4) test plans at the November 2014 Board of Directors meeting for implementation on September 1, 2015 (Appendix D).

Appendix A
2014 Practice Analysis Committee

Chairman:
David Persse, MD
City of Houston
Public Health Authority & EMS Director
Houston, Texas

Severo Rodriguez, MS, NRP, LP, AEMCA
Executive Director
National Registry of EMTs
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Scott Gilmore, M.D., EMT-P, FACEP
Assistant Professor of Emergency Medicine
Program Director, EMS Fellowship
Division of Emergency Medicine
Washington University School of Medicine
Medical Director
Saint Louis Fire Department
Saint Louis, Missouri

William F. Niemeck, NRP
City of New Orleans
EMS Education Coordinator
New Orleans, Louisiana

Paul Patrick, M.Ed.
NASEMSO President 2014-2016
Deputy Division Director
Utah Department of Health
Family Health and Preparedness
Salt Lake City, Utah

Dee Dee Hillary, LP
EMS Captain
Lancaster Fire Department
Lancaster, Texas

Jason Preston, NREMT-P
Clinical Education Services Manager
American Medical Response
Nashua, New Hampshire

Rob Wagoner, BSAS, NRP
Senior Director
National Registry of EMTs
Columbus, Ohio

Gabe Romero MBA, NRP
Director of Examinations
National Registry of EMTs
Columbus, Ohio

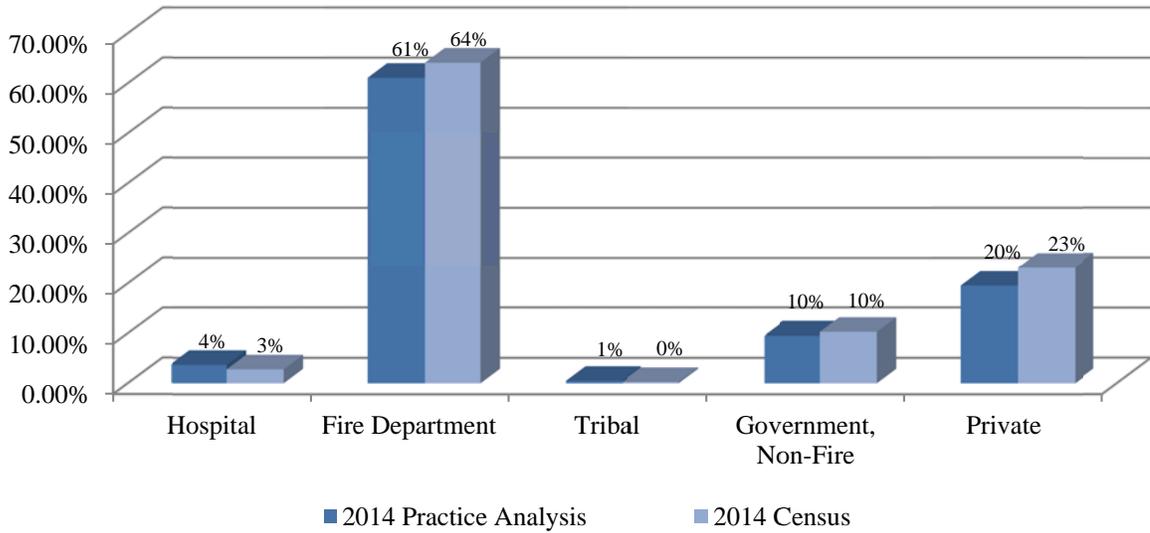
Melissa Bentley MS, NRP
Director of Research
National Registry of EMTs
Columbus, Ohio

Remle Crowe BS, NREMT
EMS Research Fellow
National Registry of EMTs
Columbus, Ohio

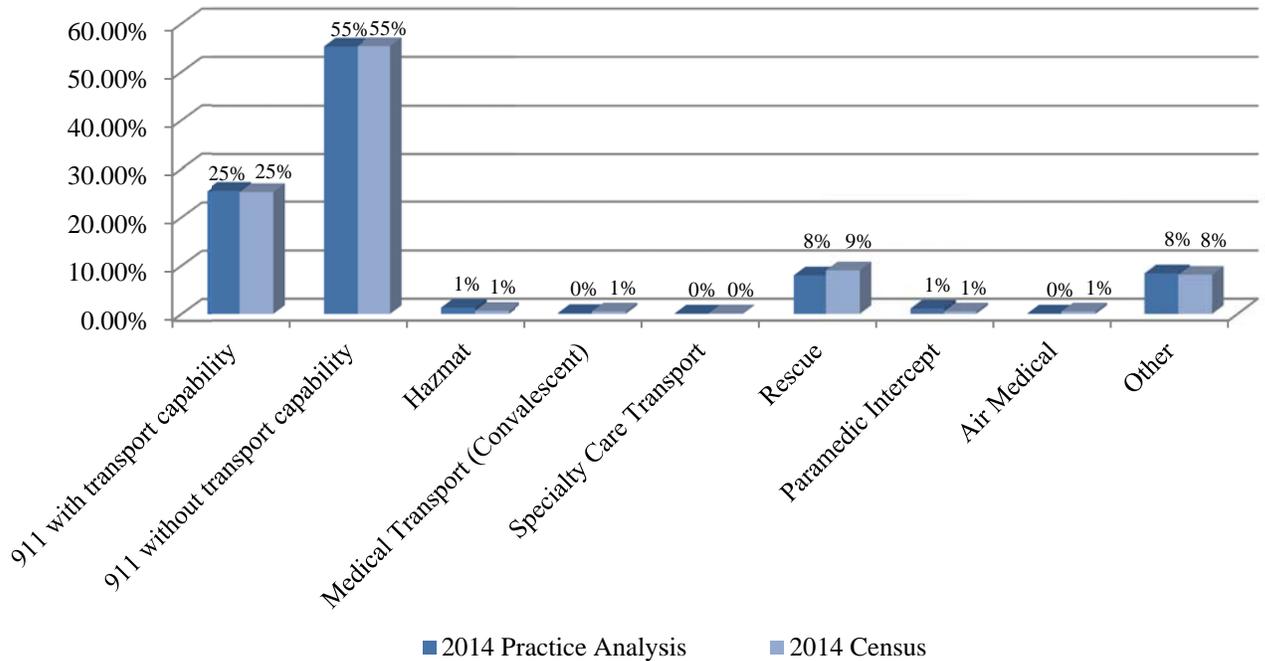
Appendix B Respondent Demographics

Emergency Medical Responders

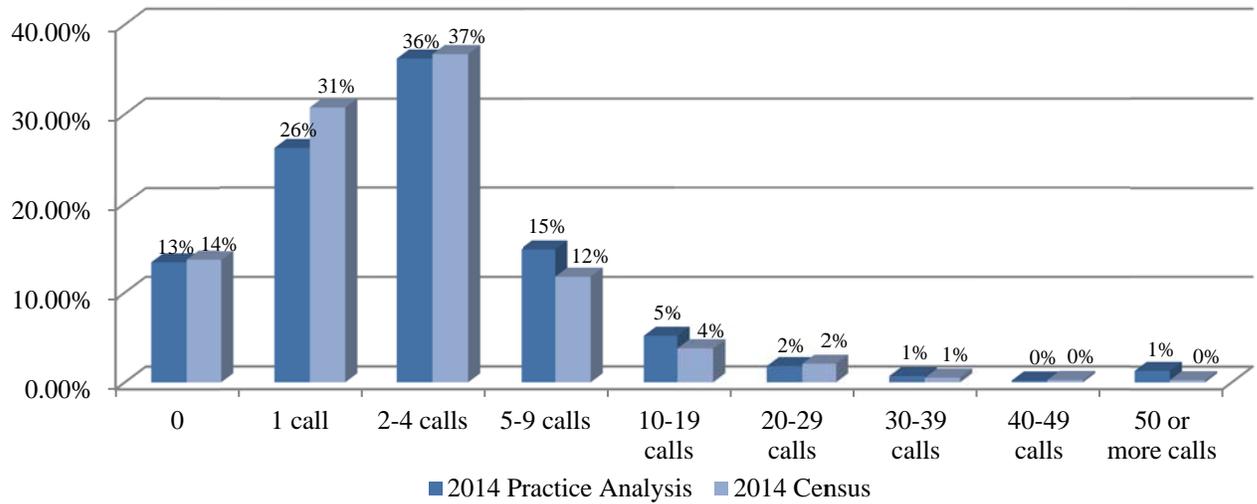
EMR: Main EMS Organization



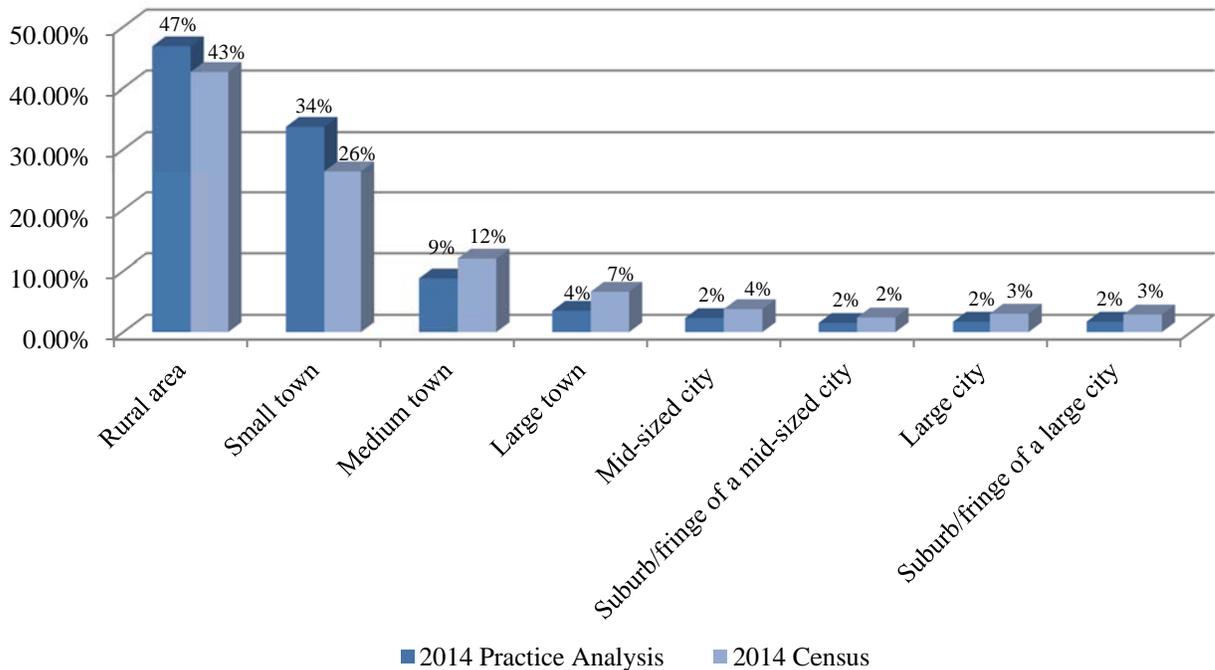
EMR: Primary Service Type



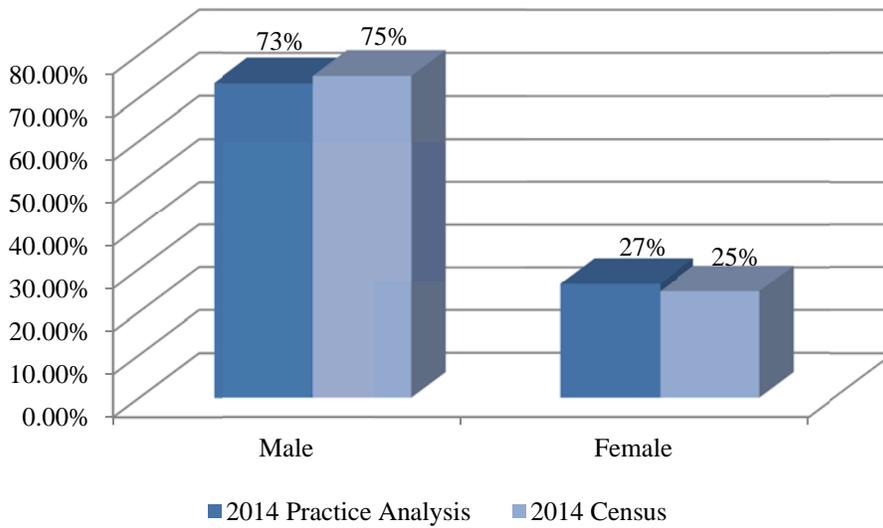
EMR: Weekly Call Volume



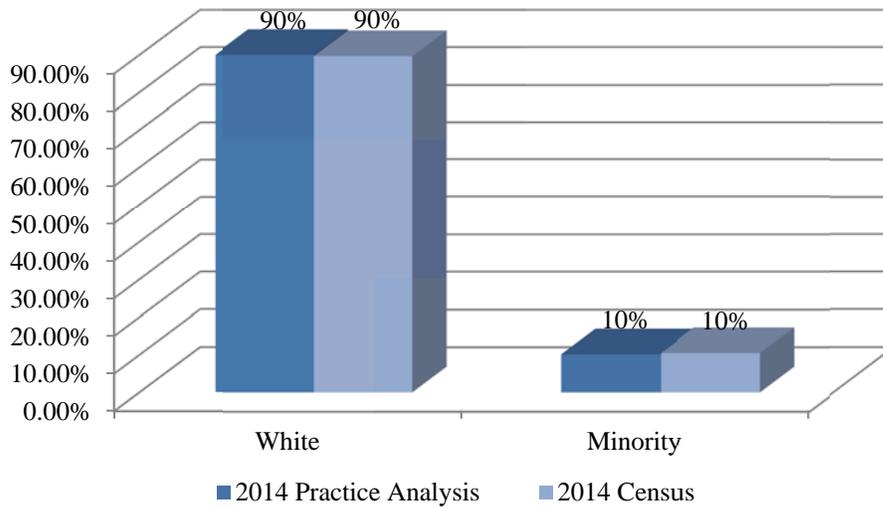
EMR: Community Size



EMR: Sex

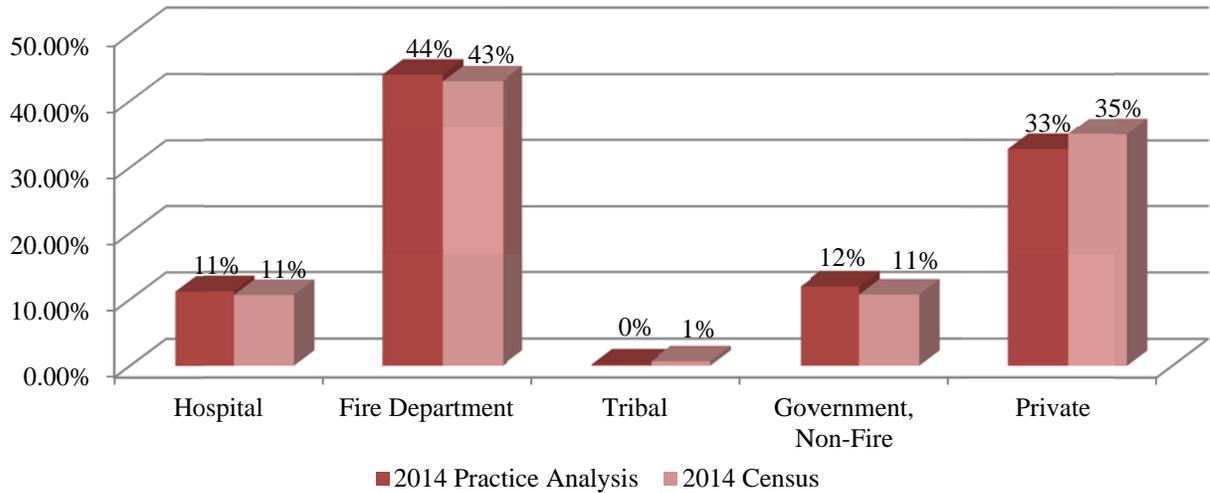


EMR: Race

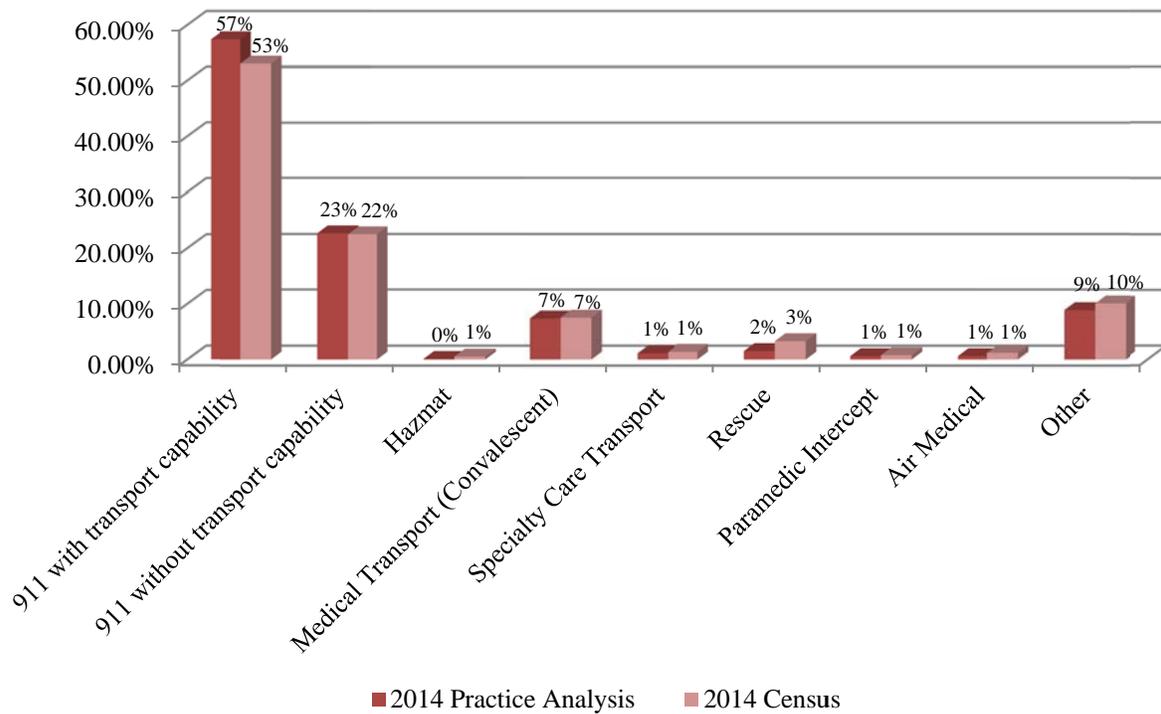


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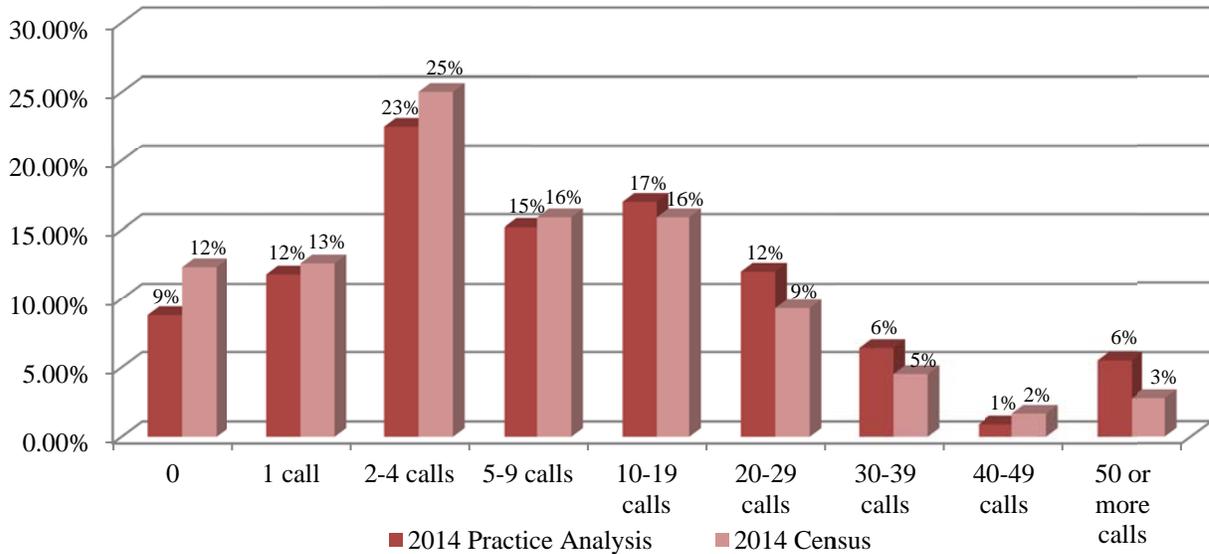
EMT: Main EMS Organization



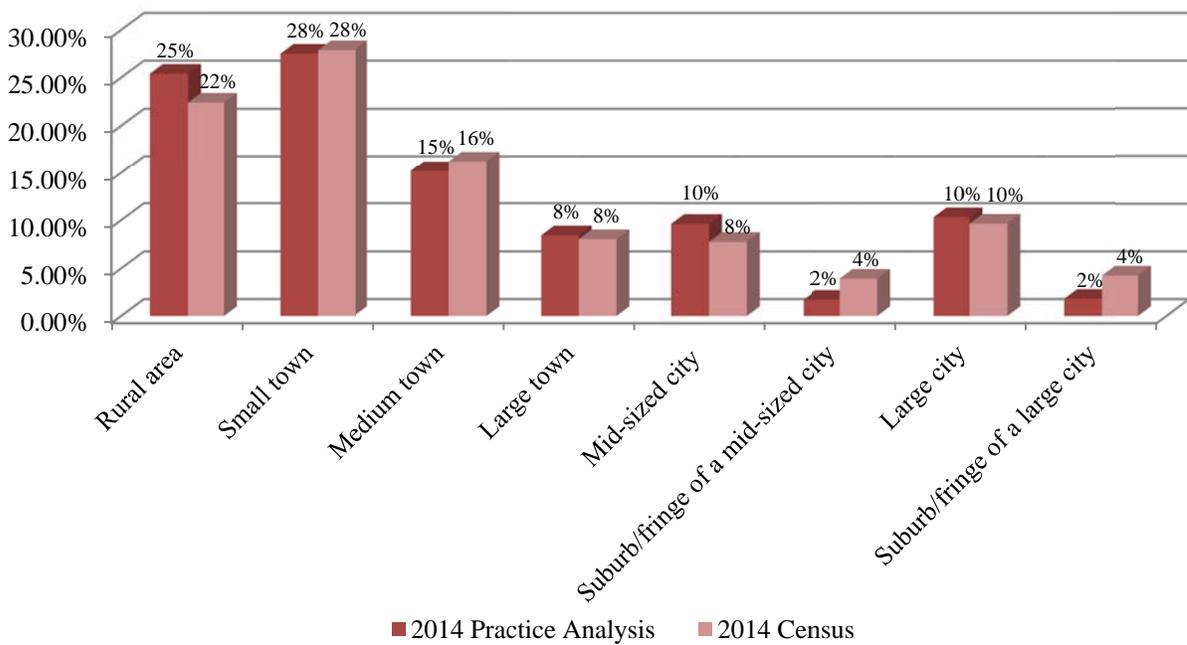
EMT: Primary Service Type



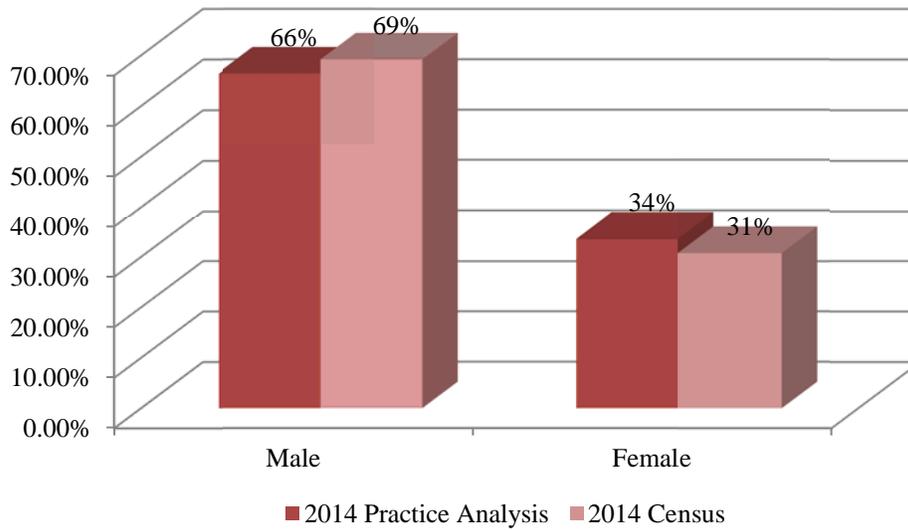
EMT: Weekly Call Volume



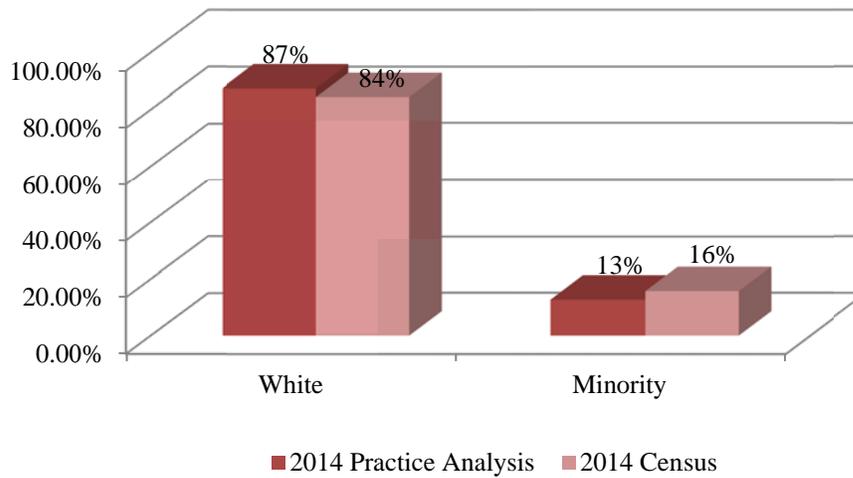
EMT: Community Size



EMT: Sex

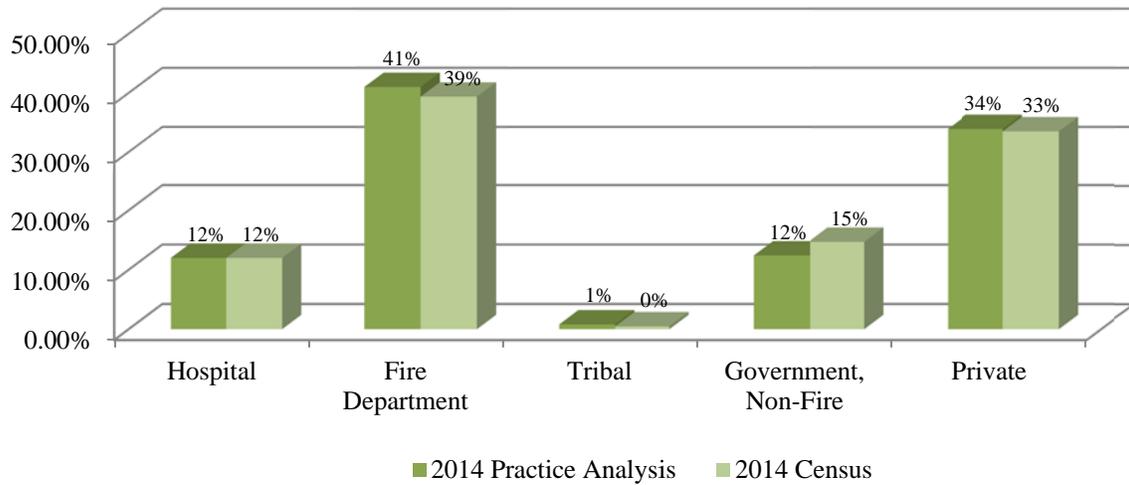


EMT: Race

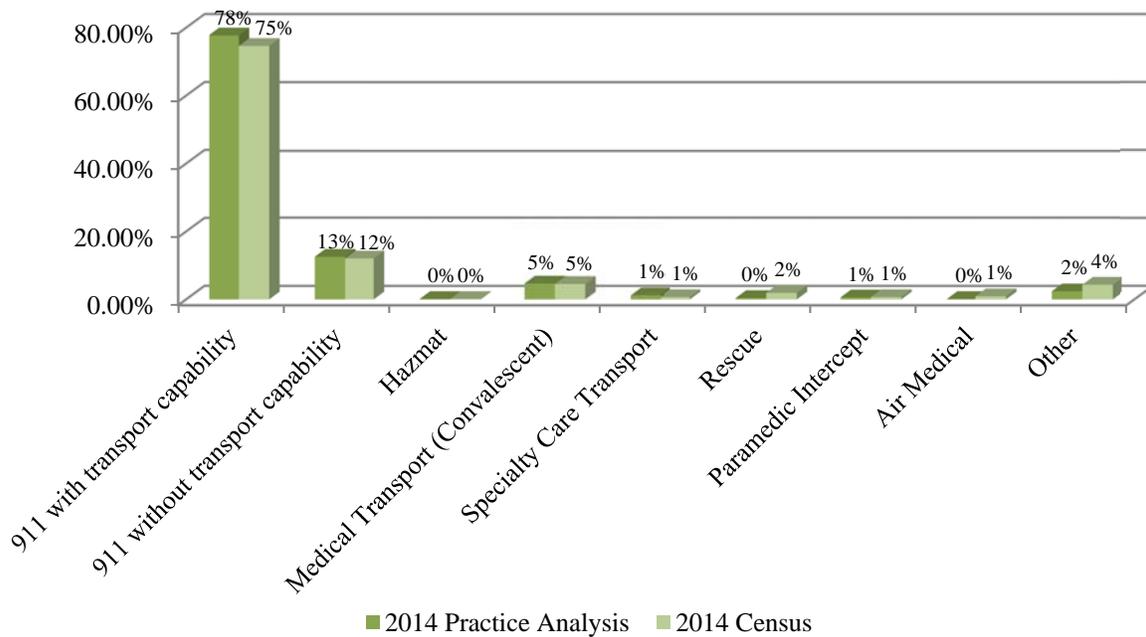


Advanced Emergency Medical Technician:

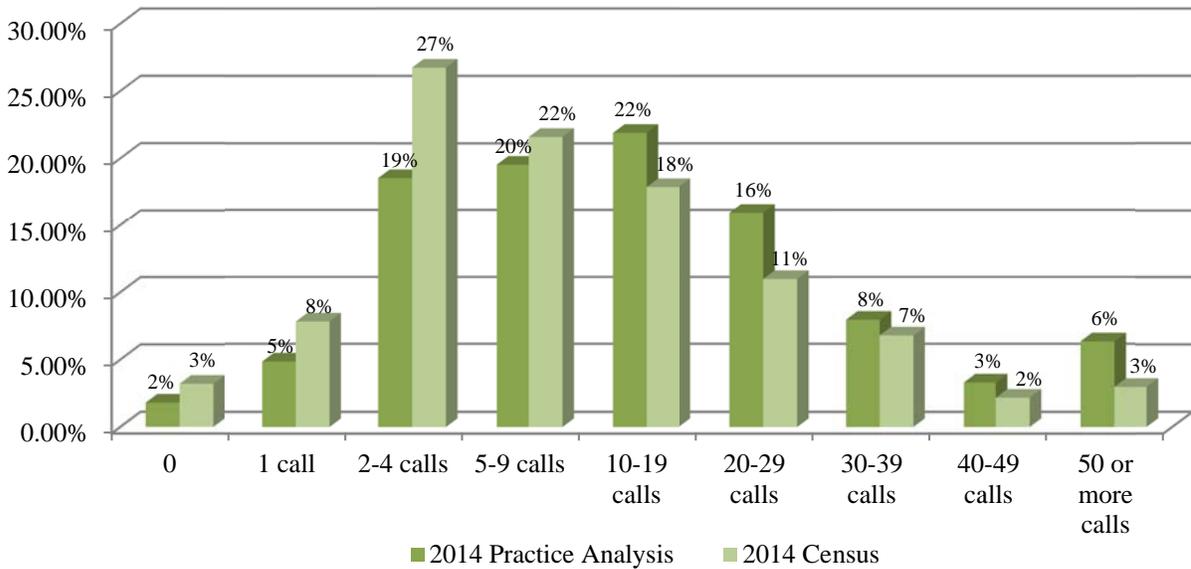
AEMT: Main EMS Organization



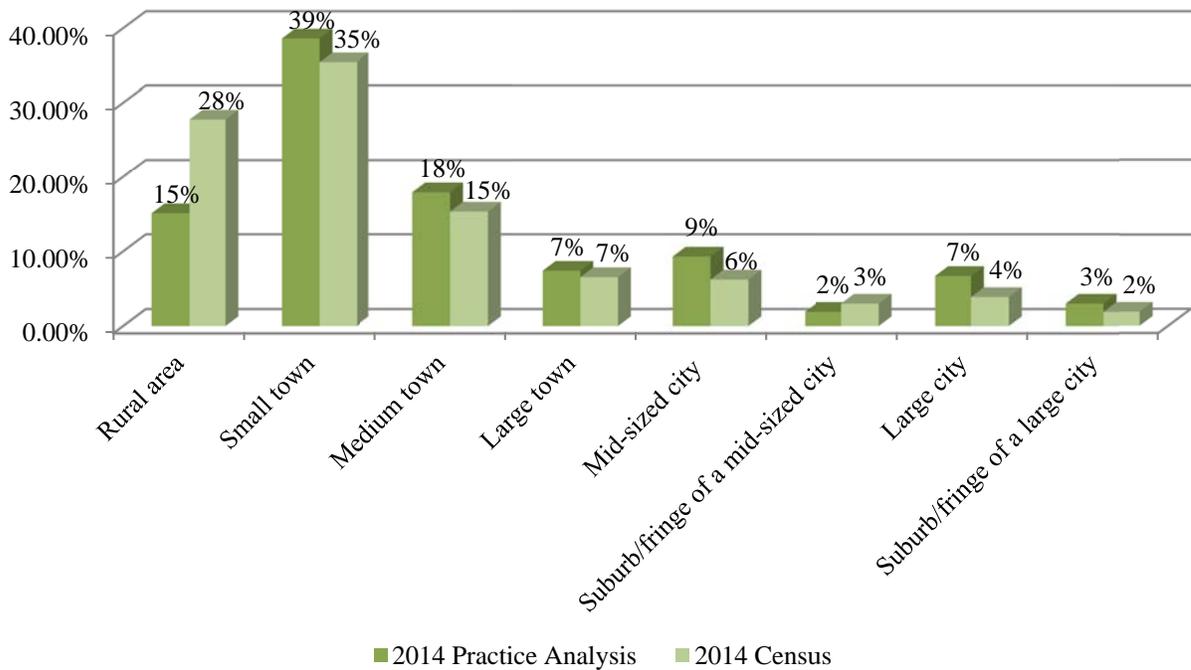
AEMT: Primary Service Type



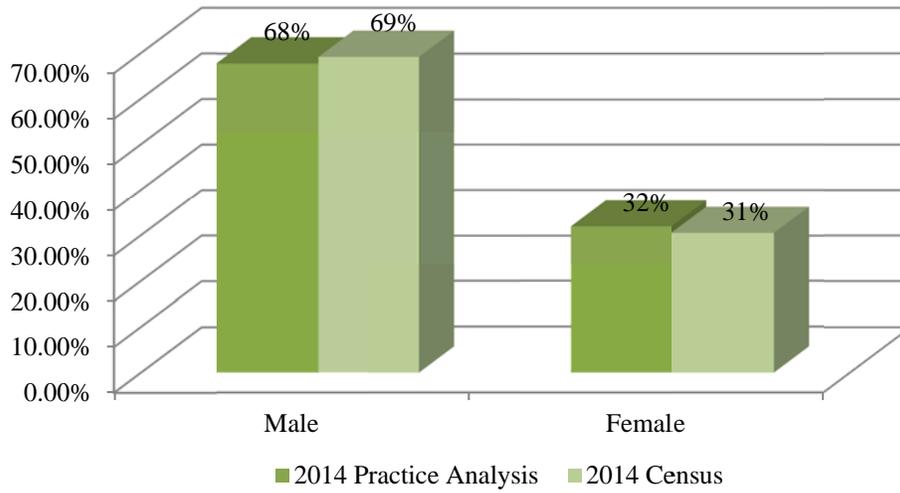
AEMT: Weekly Call Volume



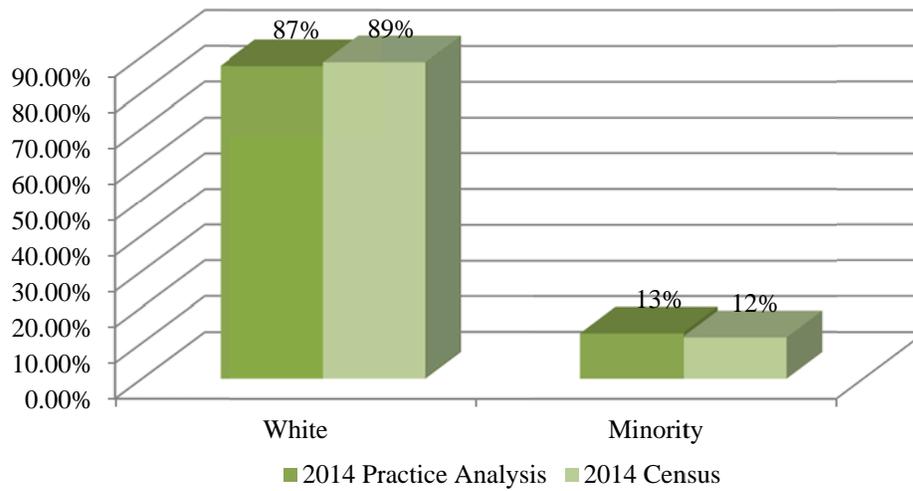
AEMT: Community Size



AEMT: Sex

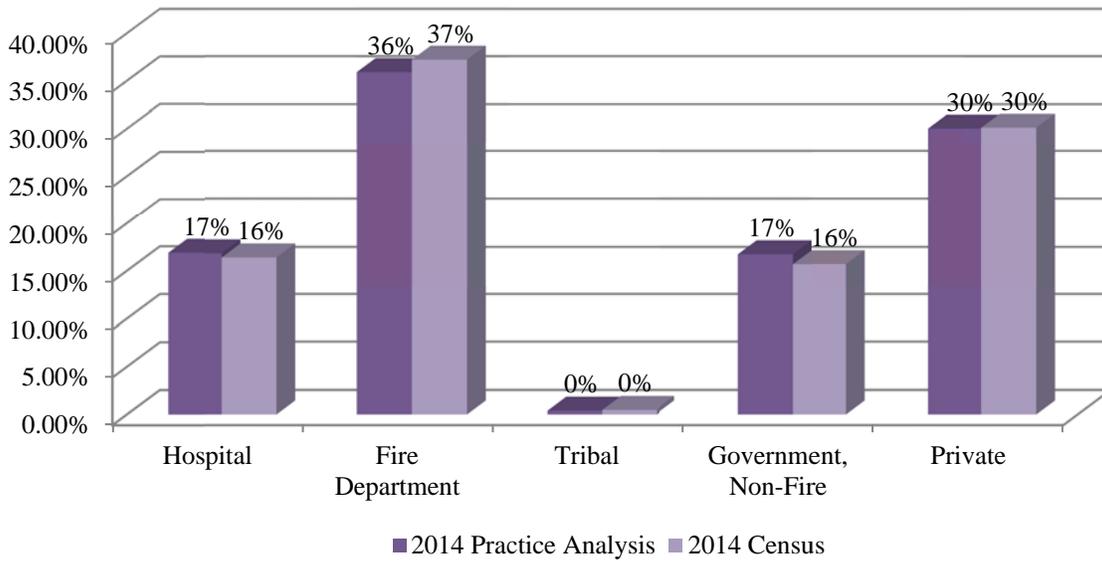


AEMT: Race

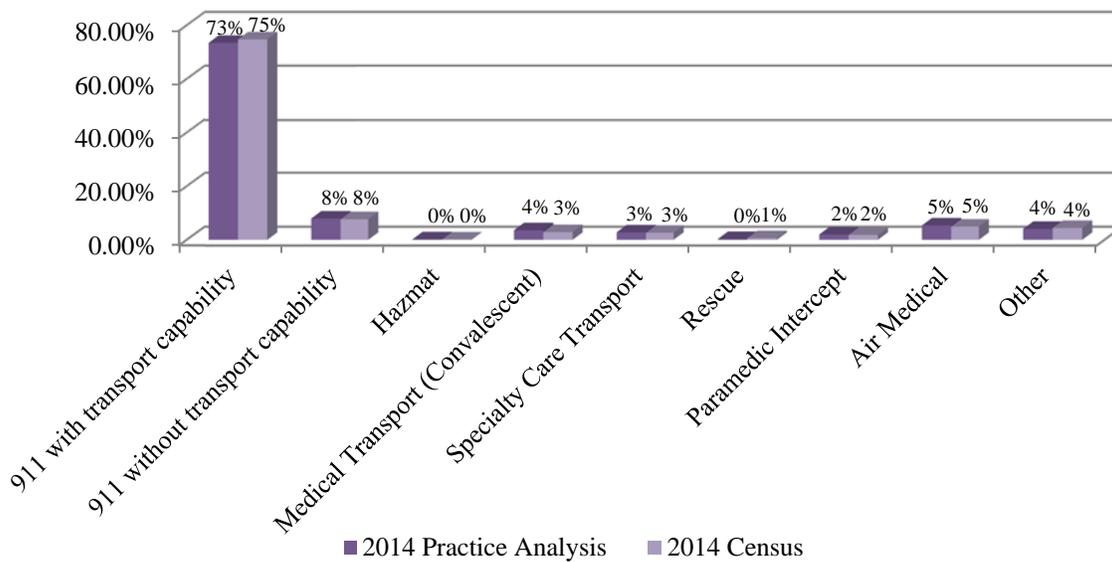


Paramedic:

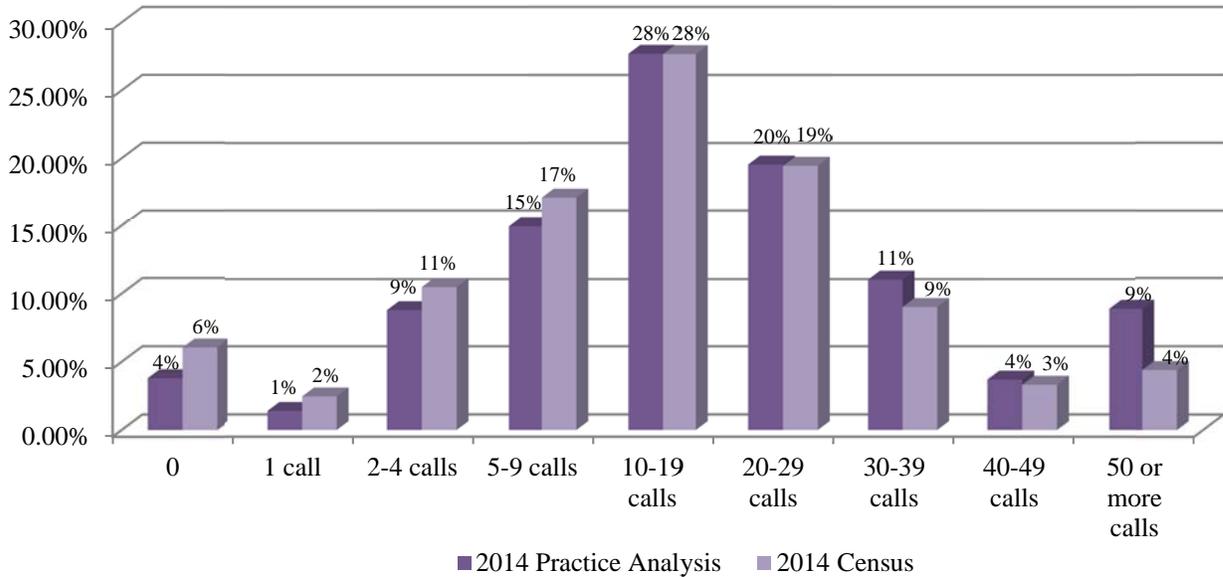
Paramedic: Main EMS Agency



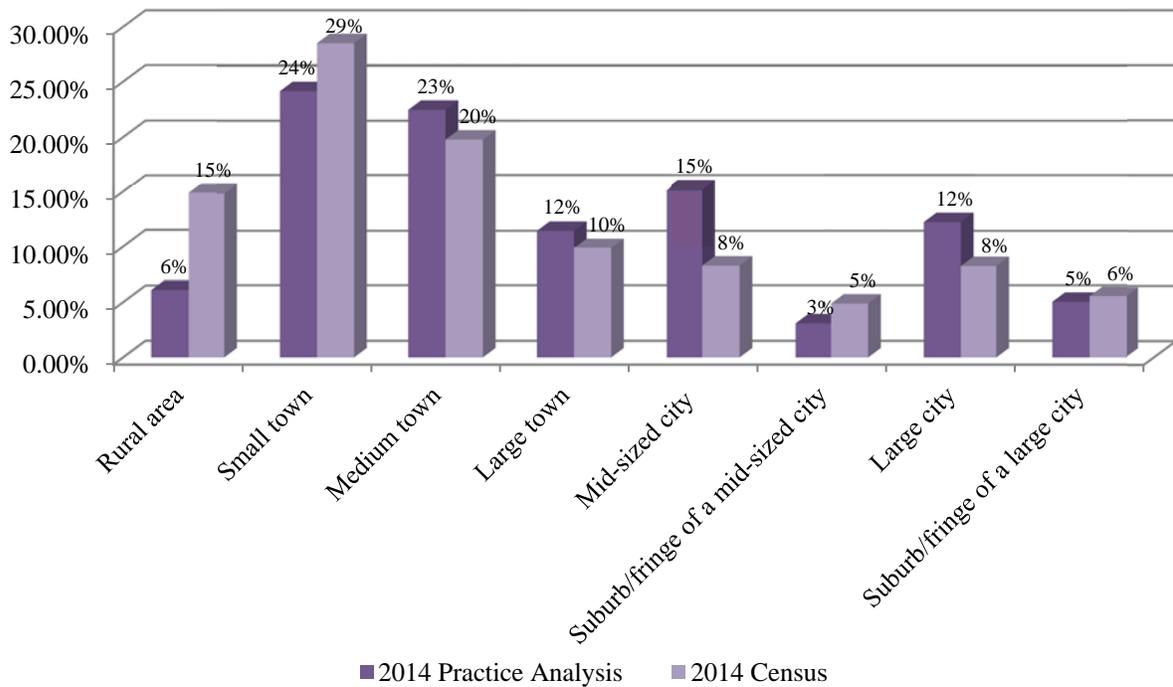
Paramedic: Primary Service Type



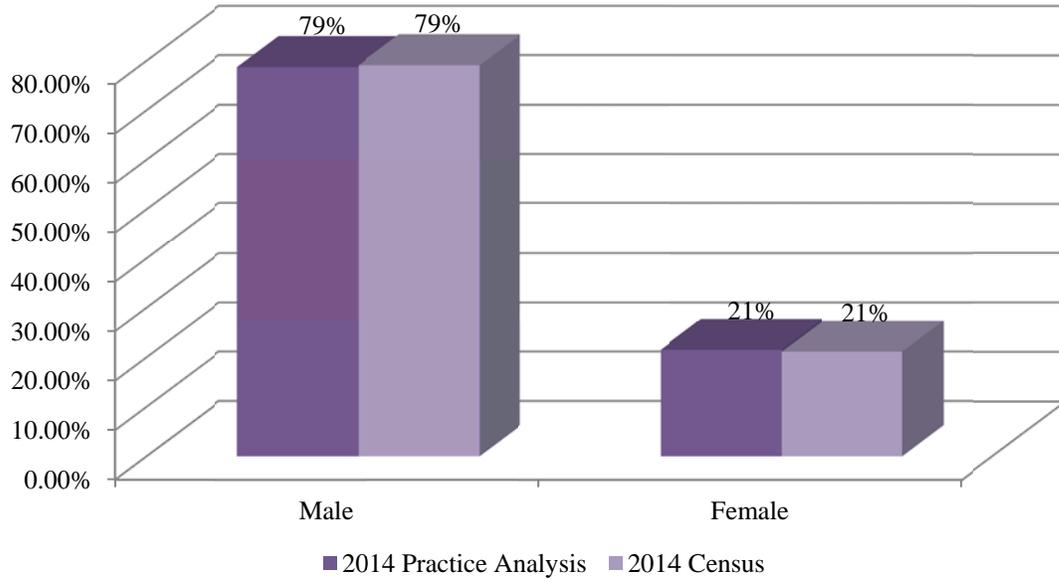
Paramedic: Call Volume



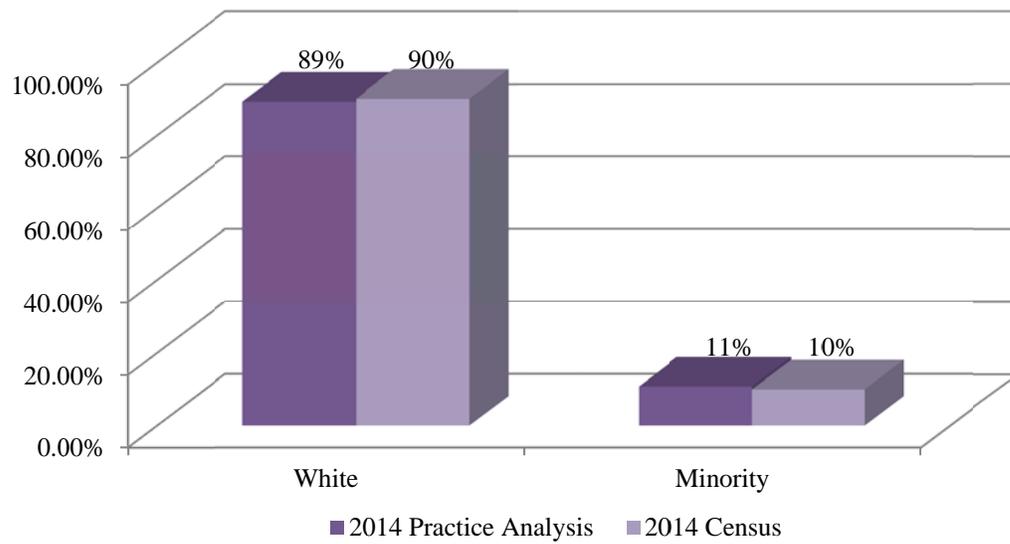
Paramedic: Community Size



Paramedic: Sex



Paramedic: Race



Appendix C
2014 Practice Analysis Test Plan: Sections with Tasks

AIRWAY, RESPIRATION & VENTILATION (7 Tasks) (includes assessment, pathophysiology and management)
1. Airway Management
2. Ventilation
3. Respiratory Distress
4. Respiratory Failure
5. Respiratory Arrest
6. Upper Airway Respiratory Emergencies
7. Lower Airway Respiratory Emergencies

CARDIOLOGY & RESUSCITATION (6 Tasks) (includes assessment, pathophysiology and management)
1. Chest Discomfort
2. Cardiac Rhythm Disturbance
3. Cardiac Arrest
4. Stroke-like Symptoms
5. Post-resuscitation Care
6. Hypotension/Hypertension from a Non-traumatic Cause

TRAUMA (7 Tasks) (includes assessment, pathophysiology and management)
1. Bleeding
2. Chest Trauma
3. Abdominal/Genitourinary Trauma
4. Orthopedic Trauma
5. Soft Tissue
6. Head/Neck/Face/Spine Trauma
7. Multisystem Trauma

Appendix C (continued)
2014 Practice Analysis Test Plan: Sections with Tasks

MEDICAL, OBSTETRICS AND GYNECOLOGY (12 Tasks) (includes assessment, pathophysiology and management)
1. Neurological Emergencies
2. Abdominal Disorders
3. Immunological Emergencies
4. Infectious Disease
5. Endocrine Emergencies
6. Psychiatric Emergencies
7. Toxicological Emergencies
8. Hematological Emergencies
9. Genitourinary/Renal Emergencies
10. Gynecological Emergencies
11. Obstetrical Emergencies
12. Special Healthcare Needs

EMS OPERATIONS (9 Tasks) (includes assessment, pathophysiology and management)
1. Maintain Vehicle and Equipment Readiness
2. Operate Emergency Vehicles
3. Provide Scene Leadership
4. Resolve an Emergency Incident
5. Provide Emotional Support
6. Maintain Medical/Legal Standards
7. Maintain Community Relations
8. Provide Administrative Support
9. Enhance Professional Development

Appendix D
2014 Practice Analysis Test Plan for All Levels

Emergency Medical Responder (90-110 items)	
Content Area	% of Exam Content
Airway, Respiration & Ventilation (85% adult / 15% pediatric)	18% - 22 %
Cardiology & Resuscitation (85% adult / 15% pediatric)	20% - 24 %
Trauma (85% adult / 15% pediatric)	15% - 19%
Medical/Obstetrics/Gynecology (85% adult / 15% pediatric)	27% - 31%
EMS Operations	11% - 15%

Emergency Medical Technician (70-120 items)	
Content Area	% of Exam Content
Airway, Respiration & Ventilation (85% adult / 15% pediatric)	18% - 22%
Cardiology & Resuscitation (85% adult / 15% pediatric)	20% - 24%
Trauma (85% adult / 15% pediatric)	14% - 18%
Medical/Obstetrics/Gynecology (85% adult / 15% pediatric)	27% - 31%
EMS Operations	10% - 14%

Advanced Emergency Medical Technician (135 items)	
Content Area	% of Exam Content
Airway, Respiration & Ventilation (85% adult / 15% pediatric)	18% - 22%
Cardiology & Resuscitation (85% adult / 15% pediatric)	21% - 25%
Trauma (85% adult / 15% pediatric)	14% - 18%
Medical/Obstetrics/Gynecology (85% adult / 15% pediatric)	26% - 30%
EMS Operations	11% - 15%

Appendix D (continued)
2014 Practice Analysis Test Plan for All Levels

Paramedic (80-150 items)	
Content Area	% of Exam Content
Airway, Respiration & Ventilation (85% adult / 15% pediatric)	18% - 22%
Cardiology & Resuscitation (85% adult / 15% pediatric)	22% - 26%
Trauma (85% adult / 15% pediatric)	13% - 17%
Medical/Obstetrics/Gynecology (85% adult / 15% pediatric)	25% - 29%
EMS Operations	10% - 14%