Analyzing non-emergency lift assist criterion for the Virginia Beach Fire Department

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Certification Statement

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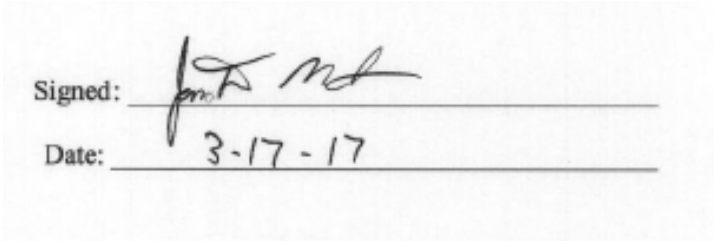

Abstract

The problem was the Virginia Beach Fire Department (VBFD) had not looked at non-emergency lift assist calls that were taking place and evaluated the impact to the organization of those call types. The purpose of this research was to determine a criterion for the non-emergency lift assist calls to determine if differences exist in the types of lift assists being performed and whether those differences should lead to a different approach to handling calls of this nature. Descriptive research was used to evaluate many questions and factors. The questions answered were: (1) What types of calls would fall under the title of non-emergency lift assist (a move from a relatively unsafe to a safe location) versus a comfort move (a move from a relatively safe location to safe location)? (2) Currently, how are non-emergency lift assist calls being handled and is it appropriate? (3) What alternatives are other departments using to handle non-emergency lift assists and when should these alternatives be used? (4) What are the views regarding lift assists and billing? Two surveys were created; one survey specifically tailored to internal VBFD members and a second survey of outside fire departments. 88% of VBFD respondents and 87% of outside respondents believed emergency response apparatus was appropriate for emergency lift assists, while 92% of VBFD responders and 54% of outside surveys did not think emergency response vehicles should be used for non-emergent comfort moves. It was recommended that the Virginia Beach Fire Department evaluate lift assist call types to allow for further delineation and specificity and create additional call types along with exploring the possibility of billing for certain repetitious call types. Additionally, the creation of a workgroup comprised of city departments and outside agencies impacted by lift assists be formed to explore options and develop preventative measures was recommended.

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Background and Significance

The Virginia Beach Fire Department (VBFD) is located in Virginia Beach VA, on the southeastern coastline of the state. The VBFD is roughly 480 members serving the most populous city in the state with approximately 450,000 residents living within a 307-mile area. The VBFD is an all-hazards department providing fire, EMS, hazardous materials, marine and technical rescue services within its' operational branch. The VBFD's services branch provides life safety education, building inspection, fire investigations, along with health and wellness. The VBFD works as one of four agencies that make of the Emergency Response System (ERS) with the others being police, Emergency Medical Services (EMS and emergency communications. Each of these agencies has many interactions with the other ERS departments,

and these interactions have consequences. It should be noted for clarification that the Department of Emergency Medical Services (EMS) is a stand-alone combination volunteer-career department and does not fall under the fire department. Historically, the Department of EMS handled all lift assist calls with the city; however, it would routinely call for VBFD assets to assist for either response time delays of the ambulances or manpower assistance to move larger patients. Over time, the request for "time or distance" by EMS assets grew to the point the VBFD agreed to take the call type over as the primary agency, and EMS is no longer dispatched. Additionally, the VBFD is the host agency for Virginia Task Force 2 which is a FEMA Urban Search and Rescue team comprised of members from both surrounding jurisdictions and the VBFD. The many services provided along with the expanding call volume have placed a strain on VBFD assets along with other city assets and has created a need to look more closely at some of the services routinely provided such as lift assists as their numbers have grown in recent years.

Approximately 37% of the city's residents are 45 or older (About the City, 2016). The 2010 census data showed a substantial increase in the population numbers of people age 45 or older by a significant margin from 29.3% in 1960 to 39.4% in 2010 (United States Census, 2010). The age data shown in the census in combination with the call volume of lift assist calls experienced by the VBFD indicate that this is a problem not likely to go away and will presumably grow. The VBFD participates in the National Fire Incident Reporting System (NFIRS) and uses the commercial program RedNMX by Alpine Software as its' records management system (RMS). Queries of the RMS for each calendar year over the last five years showed a steady increase in the number of lift assists calls with the VBFD responding to 288 lift assist calls in the calendar year 2011 and 1,967 lift assist calls in the calendar year 2016 (RedNMX 2016).

One of the US Fire Administrations' goals is to reduce fire and life safety risk through preparedness, prevention and mitigation (USFA strategic plan, 2014-2018). This research projects supports that goal and more specifically the key initiatives of that goal by identifying stakeholders that need assistance while remaining in their homes and determining how best to support this goal both within the department and utilizing community resources to reduce life safety risks better. Additionally, the Executive Fire Officer Program (EFOP) Executive Development course looks at change management and the ability to identify a problem and the purpose for the change and bring an understanding of why change needs to occur (FEMA, 2016). This research project will allow the Virginia Beach Fire Department to identify what the issue or problem is and then decide a change of business practice to remedy the problem.

Literature Review

Determining how calls are coded or dispatched as a lift assist and then how they are ultimately handled is a difficult challenge as the dispatch centers are pressed to quickly dispatch response units while maintaining accuracy so as not to send unnecessary units. Garner Jr. et al. (2007), researched NFPA 1221 section 6.4 of the 2002 edition and highlighted that call processing needs to be completed in 60 seconds 95% of the time (p. 46). This triaging of the patients' comments that ultimately determines the dispatch type does not allow for a detailed assessment of what the patient needs in the timeframe allotted. The consequences of lost time to triaging versus rapid dispatch and possibly putting additional apparatus on the road must be weighed in the overall system. Cone and MacMillan (2008), identified the consequence of using fire apparatus as it "delayed fire department response to other calls as more distant units responded" (p. 479). Garner Jr. et al. (2007), concluded that EMS systems "should evaluate the impact of withholding dispatch until the completion of the triage process" or in other words

gather more information before sending units so as to more accurately match the response package to the specifics of the call type (p. 47). Garner Jr. et al. (2007), noted that “inappropriate responses to low-acuity patient encounters consume limited and costly resources” and this response will additionally put the public at risk of a possible crash with an emergency vehicle (p. 42). Further compounding the problem is an issue highlighted by Cone and MacMillan (2008), in that “despite a concerted national effort to develop medical necessity standards for EMS, there exists today no agreement” (p. 483). In a study looking at six years of data for a mid-size department, Ahern et al. (2013), found that 4.8% of their EMS incidents were for lift-assist calls with 32.5% of these specific addresses identified accounting for 66.8% of the lift assist calls (p. 53). In other words, there was a repetition of services to specific addresses for this call type, and they later concluded that "neither the EMS system nor the patients are best served by just returning a patient to bed or chair" (p. 55).

The frequency of falls is significant and can have a considerable impact on the patients' quality of life and the systems servicing these calls. Abbott et al. (2014), reviewed data from the United Kingdom's Health service and found that "a third of those aged 65 and over, and half of those aged over 85" fall each year. Also, it was determined the United Kingdom was spending roughly 1.7 billion pounds a year on falls (p. 2). Close et al. (2011), found that this expenditure accounted for “3% of the total National Health Service expenditure in the United Kingdom” (p. 44). In looking over the Census Bureau (2010) report, people 65 years of age and older made up 13.0 percent of the US population and 12.2 percent of Virginia’s population (p. 7). The Census Bureau report (2010) also noted that the age brackets of 45-64 and 65 and older were the two fastest growing population groups in the US at 31.5% and 15.1% respectively when compared to the same data from the 2000 Census (p. 2). In a study by Cheung et al. (2006), 8% of all

emergency calls in London during 2003-2004 were for older adults who had fallen and of this 40 % were not transported to the hospital (p. 1). While looking at this same population group, Cheung et al. (2006), found that there was a higher risk of death and hospital admission when compared to the general population of London of the same age (p. 1). Carden et al. (2005), looked at patients concerning non-transport decisions after calling 911 and found that up to "70% of patients 65 years of age or older who initially refuse transport require follow-up care, with 32% requiring hospital admission" (p. 452). Ahern et al. (2013), looked at lift assist calls as possibly “representing a ‘sentinel event’ or a marker of deterioration in function of the patient” (p. 51). This event could be the impetus to trigger other care or begin interventions “thereby improving the quality of care and reducing the use of financial resources” (p. 51).

Alternatives for lift assist calls are varied and debated as to their effectiveness. In looking at the original triage and dispatch code, Close et al. (2011), found that by labeling or classifying calls as "assist only…many interviewees reported that this formed a picture of a person who had not sustained any injury" (p. 46). Close et al. (2011), identified a part of this problem as being related to some patients perceived loss of independence and many patients were reluctant to be transported to the hospital and were uneasy about taking the emergency responders advice (p. 48). Further clouding of the topic was found in the work of Abbott et al. (2014), who saw conflicting reports between the United Kingdom and the United States concerning using individual risk assessments to tailor intervention programs. The United Kingdom favored the individual risk assessment programs, and the United States did not as "they provide only a small net benefit” (p. 6). Overall, Abbott et al. (2014), concluded that using multiple interventions or tools to assist lift-assist patients was more beneficial than single system approaches (p. 7). Utilizing emergency services to only pick people up and place them back in

their beds or chairs is not helping the problem and Cheung et al. (2006), believes that a "multifactorial intervention" is needed for those patients that are transported to the emergency department so as to prevent further falls or complications. (p. 4).

Responding to and assisting with lift-assists has been demonstrated to be a growing problem locally in Virginia Beach, and both nationally and internationally. The advancing age of the US population along with the significant impact of fall-related calls is well documented and shows no signs of receding. Analyzing, evaluating and determining what response(s) will be used will prove critical to both the final patient outcome and the effect of these call types on fire and EMS departments. Evaluating this issue will require a broad-based response beyond that typically provided from a first response role. The literature review influenced this study by showing the significance of the problem all over the world where similar response matrices exist. The information gathered revealed that all facets of the problem from the initial dispatch evaluation to the eventual turnover to the hospital must be evaluated for opportunities to intervene and provide help beyond just a hospital visit to fix an emergent issue. Additionally, this research shows that repeated falls have societal impacts they need to be considered as people will always have the right to refuse care. Determining when, and if local governance steps in to push a solution will require careful consideration as this touches on people's fundamental right to live the way they choose.

Procedures

The Virginia Beach Fire Department (VBFD) as previously described is an all-hazards response agency as many are and have a long history of being the department within the city to go to when emergency communications are unsure of who to send. Due to this history, the VBFD has never said no to a call type or analyzed in depth the need to reduce or modify call

response beyond inadequate resources or severe weather response. To begin addressing this departmental problem, the lift assist issue needed to be defined more clearly and specific questions were developed. Descriptive research was used to assess factors involved and gauge fire service opinions both internally and externally. The questions to be answered were: (1) What types of calls would fall under the title of non-emergent lift assist (a move from a relatively unsafe to a safe location) versus a comfort move (a move from a relatively safe location to safe location)? Introducing this concept of a safe versus unsafe location was necessary as the current dispatch system grouped all assist calls of this nature as "lift assists" without regard to where the person was located. While one call type worked in the past, the Virginia Beach Fire Department was finding a handful of citizens that were calling more than 1100 times over a three-year period with many of these calls being what this research would call a comfort move. (2) Currently, how are non-emergent lift assist calls being handled and is it appropriate? This question would accurately assess what platform (engine, ladder, or other apparatus types) was being used for lift assists of both types. This would allow the Virginia Beach Fire Department to evaluate how it was currently doing business internally and gain insight and member feedback on how this service delivery is being handled. The appropriateness of the service was assessed by adding the comfort move definition to distinguish it from lift assists. Breaking the call type into two call types would allow for a survey of both internal and external members to determine if the two groups felt that lift assists and comfort move fell under the auspices of emergency response. By allowing all members to take the survey to voice their opinion, a collective sense of the appropriateness of this call type could be gathered. (3) What alternatives are other departments using to handle non-emergency lift assists and when should these alternatives be used? This question was developed to allow for all available resources to be considered by members. This

item simply looks for alternatives that the Virginia Beach Fire Department may not have considered so as to allow a thorough comparison and evaluation. (4) What are the views regarding lift assists and billing? This question while broad and potentially subjective allowed for other views to be considered beyond the authors. This is important as what may be important to one person may not hold the same significance to others. Additionally, the question of when should outside intervention be used forces us to look at the appropriateness and possibly legality of forcing decisions on citizens they do not want. Two surveys were created to answer these four questions; one survey specifically tailored to internal VBFD members and a second survey of outside fire departments. The outside survey received 84 responses and was distributed via social media platforms and email using LinkedIn and ICMA groups so a determination of how many people evaluated the survey without responding cannot be captured. The internal VBFD specific survey received 160 responses and was directly emailed to all firefighters and captains (approximately 250) in the VBFD regardless of current assignment. Battalion Chiefs and above were not included in this survey as they do not respond to this call type. While the two surveys used gathered in abundance of information about lift assists, the limitation encountered was that of a cultural bias or perception. While many departments and people were represented, all viewpoints ultimately were from a fire department perspective and inherently had the requisite first responder training position.

Results

Four research questions were addressed by this study utilizing two surveys with a variety of questions designed to identify trends or gather information concerning lift assist calls. (1) What types of calls would fall under the title of non-emergency lift assist (a move from a relatively unsafe to a safe location) versus a comfort move (a move from a relatively safe

location to safe location)? (2) Currently, how are non-emergent lift assist calls being handled and is it appropriate? (3) What alternatives are other departments using to handle non-emergency lift assists and when should these alternatives be used? (4) What are the views regarding lift assists and billing?

The first survey developed was for outside fire department agencies, and a second survey specific to the Virginia Beach Fire Department was created. The two surveys were designed to see if cultural bias within the department showed a difference from a cross section of outside agencies and to gauge the Virginia Beach Fire Department member's thoughts on the research topic. A summary listing of the questions and responses to the outside agencies is listed in Appendix A, and Appendix B provides the questions and replies to the VBFD internal survey.

The first question looked at what characteristic would place a call type under the grouping of a lift assist or to move the patient from a relatively unsafe location to a safe location. This lift type was compared to a comfort move, where the patient is moved from a relatively safe location to a different safe place such as from a bed to a chair. All but one of the outside agency respond to lift assists calls of both types and 87% of the outside respondents, and 88% of VBFD respondents believe lift assists as defined in this research paper should be provided. In contrast, looking at the comfort move as described, only 33% of the outside respondents believed that emergency response should be used for these moves, with 54% thinking it should not and 13% being undecided. The internal VBFD response was more definitive with 84% of respondents stating that comfort moves should not be provided, 10% believing the patients should be moved and 5% undecided on the matter.

The second question addressed how lift assist of both variations was being handled and the appropriateness of the methods used. The VBFD is the primary agency that handles lift assist

calls for the City of Virginia Beach and utilizes engines and ladders as the primary platform and heavy rescues when the other apparatus types are not available. The percentages of respondents and the apparatus (engine, ladder, rescue) they were assigned to was 66%, 27% and 7% respectively which matches the distribution of apparatus in the city. The question of appropriateness may be considered subjective and is subject to personal interpretation; however, the use of the two surveys provided a sense of how the two calls types as defined were received by each group polled. 88% of VBFD respondents and 87% of outside agencies believed emergency response apparatus was appropriate for lift assists, 92% of VBFD respondents did not think emergency response vehicles should be used for comfort moves. Outside agencies were less definitive on comfort moves with 54% thinking this response should not be done, 33% believing it should and 13% of the outside respondents unsure if this service should be provided. The outside survey found that 73% of respondents utilize engine, ladders or rescues for patient moves, 25% utilized ambulances and 2.38% (2 respondents) utilized a non-emergency response unit. The statistical variation in the answers to the two call types defined demonstrated a strong belief within the VBFD that lift assists as defined should be responded to and comfort moves as defined should not be responded to by emergency services. The outside survey showed the same preferences and the VBFD response though with a lower level percentage of respondents believing the comfort moves should not be performed by emergency response vehicles.

Alternatives for lifts assists were sought out with the third question and was specifically addressed to outside agencies as the VBFD only uses emergency response vehicles. Outside agencies were asked to estimate the percentage of lift assist and comfort move calls that were handled by non-emergency units. 63% stated they do not use non-emergency units. 26% of the responses stated they use alternative assets 0-25% of the time with the remainder of the

percentages falling between 2-5%. Three-quarters of the outside agencies referred patients they went to repeatedly to other agencies for help with human services being the most used at 54% followed by private ambulances at 13% and 33% providing specific alternatives such as the county based health authorities, community medicine groups or adult protective service organizations. The alternative agencies mentioned by the outside respondents were all agencies or organizations that are available in the city of Virginia Beach and warrant further investigation.

The final question reviewed the appropriateness of providing and billing for lift assistance for repeat callers. This billing issue was addressed in two ways with a question of should billing be implemented and then digger deeper to evaluate should a threshold exist before a bill is issued and what should the call threshold be. The VBFD survey indicated that 85% believe that lift assists of both types should be billed for with 8% against and 6% undecided. The outside survey garnered a response of 58% believing a bill should be issued to 27% who did not and 14% who were undecided. 88% of VBFD surveys and 58% of outside surveys indicated a call threshold should be established for repeat callers. When given a choice of call thresholds of 1-3, 4-6, 7-9, 10-12 or 12+ calls per year, 40% of VBFD respondents and 34% of outside agencies selected 4-6 calls per year as the most selected response before a bill is issued. Based on the surveys given, both groups believed that repeat patients should be billed for service and that comfort moves were not appropriate uses of emergency response vehicles.

Departmental and survey taker statistics were gathered as well from each survey. The average tenure was sought with an almost even distribution of 20% from each 5-year bracket of time served for the VBFD survey. The outside survey drew 83% of the respondents from people with 20+ years in the fire service. The tenure of the outside survey was attributed to the nature of polling people that were in attendance at the National Fire Academy or held higher positions

within their organizations requiring more time served. EMS levels were gathered with VBFD responders having a nearly even split among Emergency Medical Technician (EMT) Basics, Advanced, and Paramedics. The outside survey respondents were 48% EMT-Basics and 40% Paramedics. The population served by the outside respondents was predominantly 0-50,000 citizens at 51% of the responses with a call volume of 10,000 or less for 64% of the outside respondents served by 100 or less sworn staff 62% of the time. The number of annual lift assists was estimated to be 0-250, 66% of the time and comfort moves annually were estimated to be 0-250, 90% of the time.

Discussion/Implication

Many studies have looked at the impacts of falls on both health care systems and departmental workload. These same studies have attempted to find options, treatments or interventions that reduce the likelihood of falls and return a sense of normalcy to the patient. This research sought to distinguish the type of fall non-emergency versus emergent and gauge the workload and appropriateness of response. As Cone et al., (2008) indicated, emergency responders are quite often returning to the same residence multiple times in a relatively short period, and these falls may represent a "sentinel event" where intervention may help (p.51). As this research indicated, falls have a significant impact on the workload of emergency responders with the study by Close et al. (2011), showing it accounted for 8% of the emergency ambulance responses in London each year (p. 44). Call volumes for the VBFD related to fall code types have risen from 658 in the calendar year 2012, to 1,967 in the calendar year 2016. Another issue with the increased workload identified by Cone et al. (2008), is the cost to the system as most have no mechanism for financial reimbursement if the patient does not get transported (p. 52). Compensation for this type of call does not currently exist within the VBFD and as a non-

transport agency would require a code change at the city level to allow for some reimbursement mechanism to be created. Many of these falls are what this study would call comfort moves where the person had no injury or wish to be transported and simply wanted to be moved from one location to another within their residence. The work of Close et al. (2011), showed this same trend in interviews with London EMS workers who described variations in falls that went from medically induced thereby more serious to simple trips or slips where the person needed assistance to their feet but no medical interventions (p. 46).

A study by Garner et al. (2007) looked at the impact of reducing low acuity patients via dispatching so as to limit the call volume and expense of emergency response (p. 42). This study found that EMS providers and administrators do not believe that many patients need an expedited response or transport (p. 42). This papers' research found that most respondents found that going to lift assists or calls where the patient was in an unsafe location and moving them to a safe location was an appropriate action. In contrast, the comfort move or movement of a patient from a safe location to a different safe location was not deemed appropriate by the majority of both outside agencies that responded and VBFD participants.

In looking at alternative methods for managing this patient type, most outside agency respondents to the survey referred patients to some human services contacts such as adult protective services or a city or county health board. Several of the literature studies reviewed looked at interventions that could prevent the falls either before they occurred or limit reoccurrences. Cheung et al. (2006) investigated the effects of leaving patients that have fallen at home after emergency services have responded and assisted the patient. This study found that just under half of the patients that had fallen and received an emergency response called for emergency services again within two weeks and in some cases called multiple times (p. 3).

Abbott et al. (2014), went further with this thought and looked at the effects of single interventions compared to multiple component interventions as it related to fall prevention. The conclusions reached were that fall prevention methods were effective, but no consensus was reached on how to combine methods to have the maximum effect as each person essentially required a tailored program to their specific needs (p. 7). The research literature identified a need for alternatives to simply picking the patients up, and this study found that many agencies are reaching out for help. The issues defined by the literature reviewed was the individual nature of each person as it relates to why they fall. No consensus was found in the referrals made by the outside agencies taking the survey. A similar conclusion was reached by Close et al., (2011) who stated that "descriptions of falls and the factors that influence decisions point to the need for a consistent message" (p. 49).

This study highlighted this same need for more clearly defined definitions of lift assist as it pertains to dispatch codes. Additionally, the need for a clearly defined support network for referrals and assistance beyond what first responders can provide on the scene. The organizational implications for the Virginia Beach Fire Department are significant as the explosive growth of this call type over the last five years has been demonstrated. Also, the data from the United States Census Bureau supports that the population is aging at a faster rate than in previous decades, placing more individuals into age groups that are highly prone to falling. Attitudes concerning the different lift assist types as described in this study demonstrate that both VBFD members and outside agencies find the patients that have fallen to an unsafe location to be an emergent need that should be handled by emergency services. The volume of these calls has been growing, and the non-reimbursable expense is present to the VBFD so exploring options for reducing or preventing this type of call would have a financial and societal impact. Looking at

how to distinguish better or classify these call types would allow for a better understanding of the impact and may identify trends or characteristics previously unnoticed. Looking at the services available outside of the VBFD will allow for more information to be passed onto the patients and their families and will serve to strengthen the VBFD's ties with other agencies both internal and external to the city.

Recommendations

Calls currently coded as lift assists are growing in volume and have a significant impact on the Virginia Beach Fire Department along with the national and international emergency response communities regarding financial and workforce needs. The increase of calls of this nature matched the growth of the population groups most at risk for falls, warranting further study and evaluation as no indications of slowing or reduction were noted in the research. It is a recommendation from this study that the Virginia Beach Fire Department look at the basic lift assist call and break it out into more detailed call types based on the emergent/non-emergent nature of the call, similar to the variations of fires that the National Fire Incident Reporting allows for. Being able to create these different call types as this study recommends with lift assist versus comfort moves will allow for a greater understanding of the impact of each call type on the organization. All calls for lift assists are currently dispatched to the first due company, and it is left up to the officer to decide what if any resources are needed. It is recommended that the dispatch and communications center have a more detailed triage of the patient to allow for greater distinction and accuracy of the call type.

This study showed that calls typed as a lift assist as this research defined and involving a patient being moved from an unsafe location were important to the respondents and should continue to be responded to. By having the ability to code the calls as lift assists versus a

comfort move, would allow for the impact of outside resources to be better focused on those patients that are falling to unsafe locations and would benefit from outside interventions. Additional, it is recommended that calls defined in this research as comfort moves should be tracked so as to work to eliminate these non-emergent calls. As the literature indicated, most departments have no ability to bill for services when the patient is not transported. This problem is further amplified in the Virginia Beach Fire Department as it is not the transport agency for the City of Virginia Beach. A recommendation from this research would be to look at the city code and evaluate the possibility of charging for services for comfort moves to discourage those calls types that are repetitive and outside the scope of emergency response.

The Virginia Beach Fire Department and emergency services as a whole are not in the business of saying no to requests for aid, and the problem of lift assists has grown rapidly with little research to date. This problem is compounded by the fact that this issue touches on people's rights to live as they chose and not be forced from their homes. The issue has become that the Virginia Beach Fire Department, by continuing to move certain patients that are not in an unsafe location, are giving these citizens a way to stay home at the fire department's expense. By moving a patient for example, from bed to wheelchair is allowing citizens to live at home longer than may have previously been possible. This is a deeply personal decision and should be researched and studied more in depth as the intent is not to force people out of the homes and into assisted living facilities unnecessarily, but to find a balance between services provided that meet the citizens' needs without creating an undue burden on fire departments. It is recommended that a workgroup is developed comprised of members of emergency services, human services, and area health systems to create a resource pool for patients that fall. Fire departments will need to focus in on what the level of service they wish to provide and their

citizenry expects and have an honest discussion about those choices along with methods of fall prevention. A recommendation for future research is to look at the effects of providing services in the home that allow for older citizens to live semi-independently that would otherwise have to move into assisted living facilities. An additional recommendation for future study would be to look at the effectiveness from a staffing and financial standpoint of utilizing fire and emergency personnel from a different response platform. An example of this would be using two people in a small passenger vehicle to respond instead of a one-million-dollar ladder truck.

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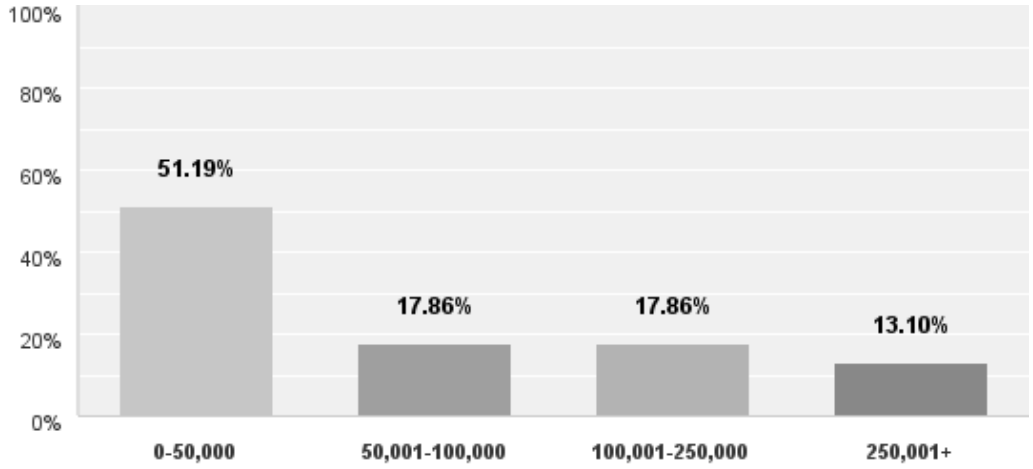
Appendix A: Outside Agency Survey

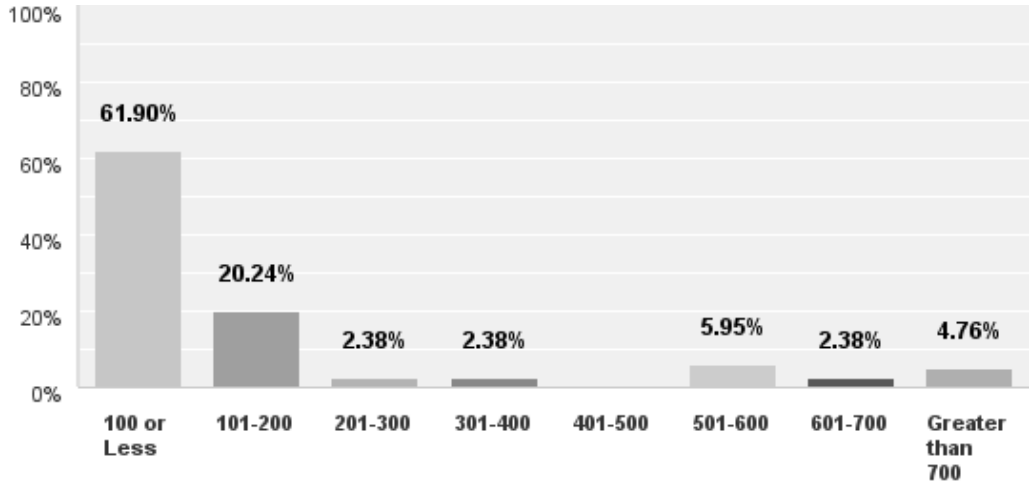
Q1: What is the population served by your department?



Answer Choices	Responses	
0-50,000	**51.19%**	43
50,001-100,000	**17.86%**	15
100,001-250,000	**17.86%**	15
250,001+	**13.10%**	11
Total		**84**

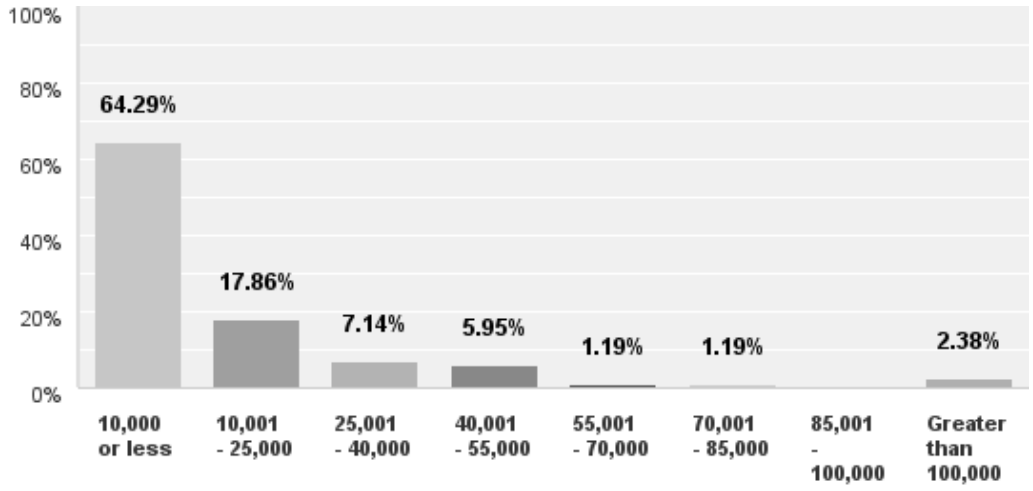
Q2. What is the name of your department? Each answer not included here as it was not used for statistical purposes.

Q3. How many uniformed/sworn staff does your department have?



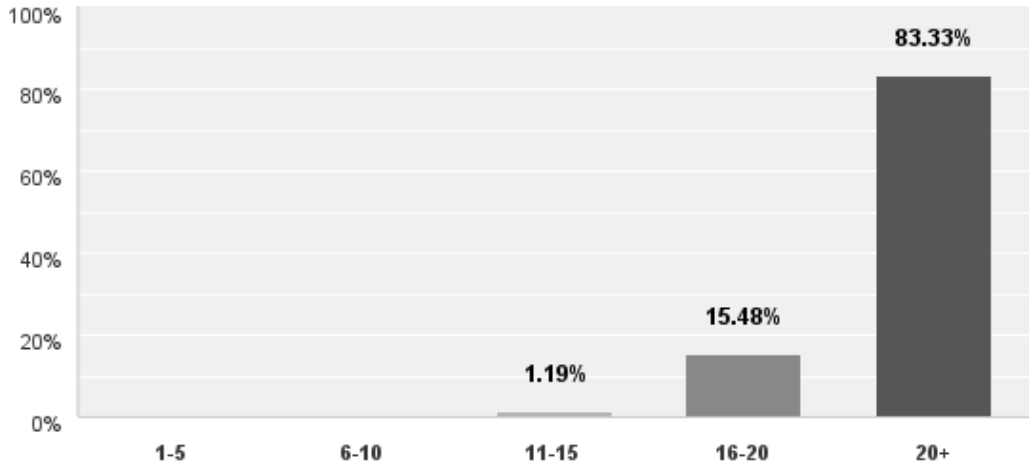
Answer Choices	Responses	
100 or Less	**61.90%**	52
101-200	**20.24%**	17
201-300	**2.38%**	2
301-400	**2.38%**	2
401-500	**0.00%**	0
501-600	**5.95%**	5
601-700	**2.38%**	2
Greater than 700	**4.76%**	4
Total		**84**

Q4: What is the annual call volume for your department?



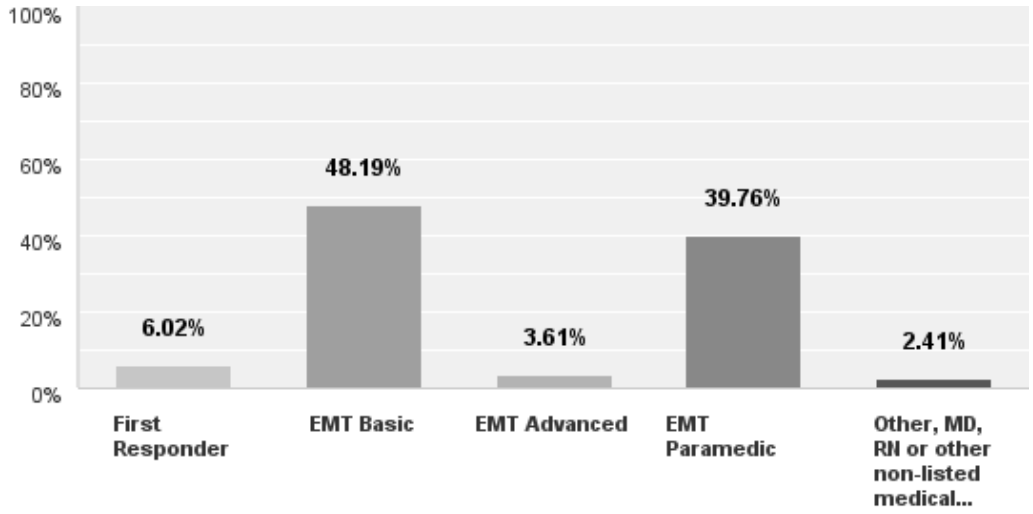
Answer Choices	Responses	
10,000 or less	**64.29%**	54
10,001 - 25,000	**17.86%**	15
25,001 - 40,000	**7.14%**	6
40,001 - 55,000	**5.95%**	5
55,001 - 70,000	**1.19%**	1
70,001 - 85,000	**1.19%**	1
85,001 - 100,000	**0.00%**	0
Greater than 100,000	**2.38%**	2
Total		**84**

Q5: How many years have you been in the fire service?



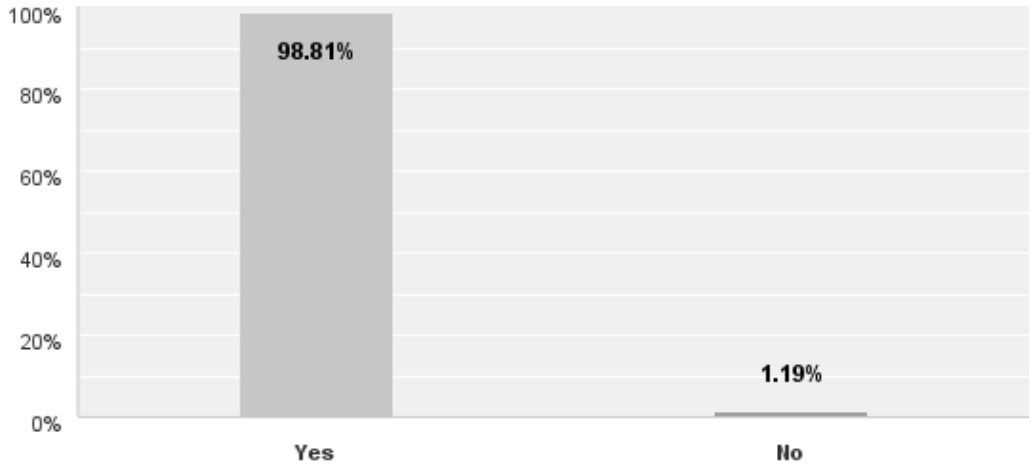
Answer Choices	Responses	
1-5	**0.00%**	0
6-10	**0.00%**	0
11-15	**1.19%**	1
16-20	**15.48%**	13
20+	**83.33%**	70
Total		**84**

Q6: What is your current EMS certification level?



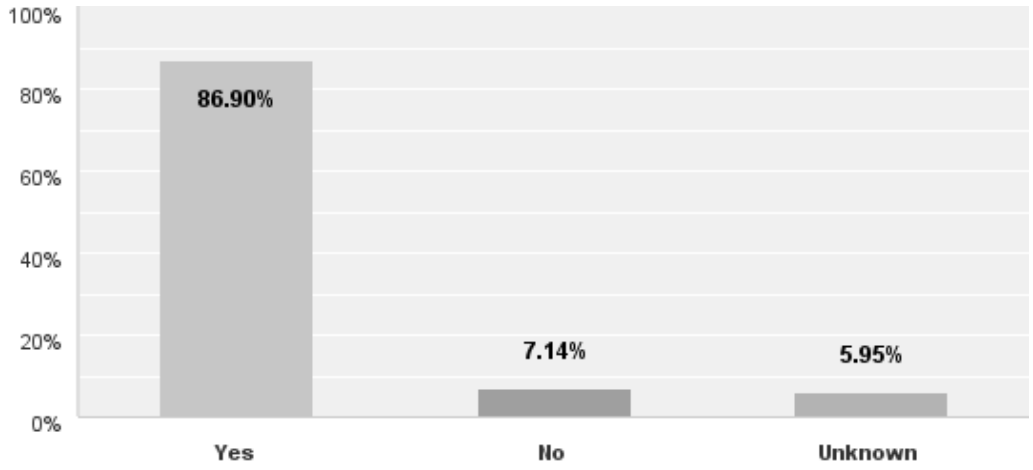
Answer Choices	Responses	
First Responder	**6.02%**	5
EMT Basic	**48.19%**	40
EMT Advanced	**3.61%**	3
EMT Paramedic	**39.76%**	33
Other, MD, RN or other non-listed medical certification	**2.41%**	2
Total		**83**

Q7: Does your department respond to assist people who cannot get up by themselves?



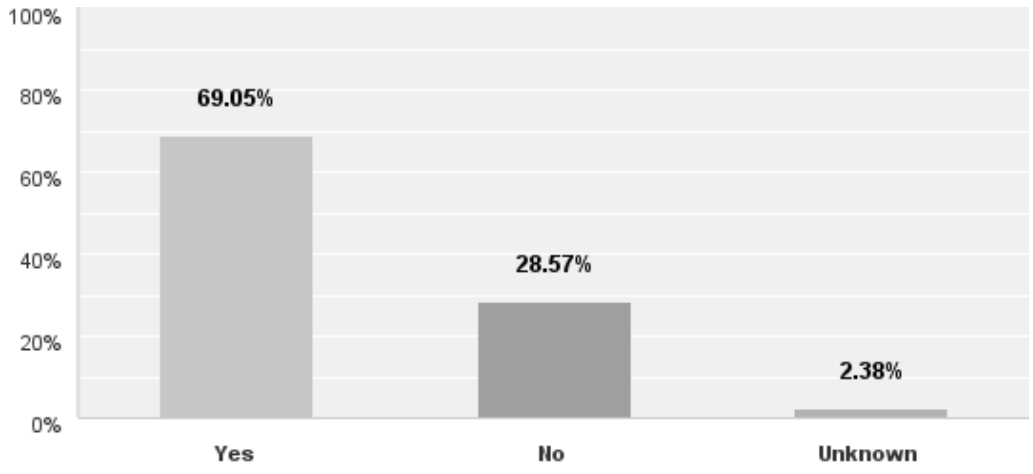
Answer Choices	Responses	
Yes	**98.81%**	83
No	**1.19%**	1
Total		**84**

Q8: Should fire/ems based services be used to assist people who cannot get up on their own?



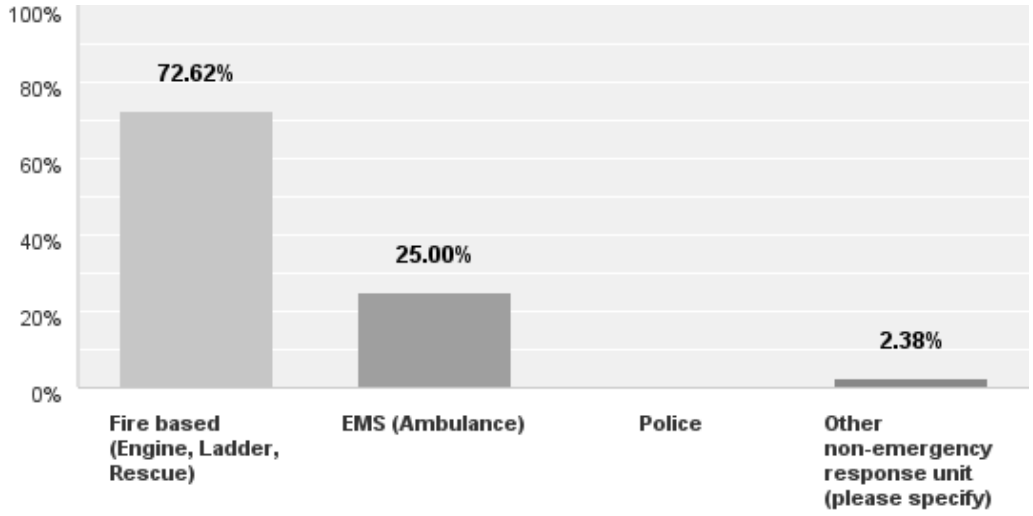
Answer Choices	Responses	
Yes	**86.90%**	73
No	**7.14%**	6
Unknown	**5.95%**	5
Total		**84**

Q9: Is clear guidance on what types of calls involving patients who have fallen you respond to provided by your department?



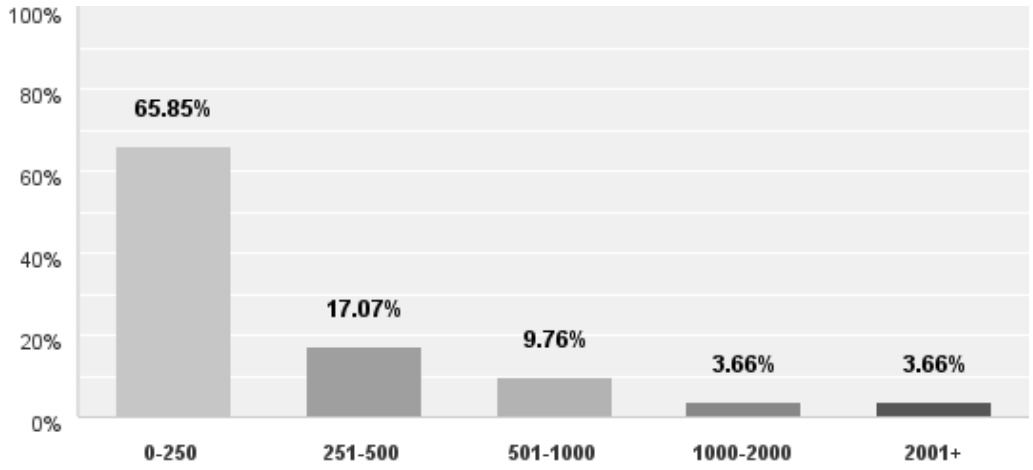
Answer Choices	Responses	
Yes	**69.05%**	58
No	**28.57%**	24
Unknown	**2.38%**	2
Total		**84**

Q10: What platform does your department provide assistance to people who cannot get up on their own?



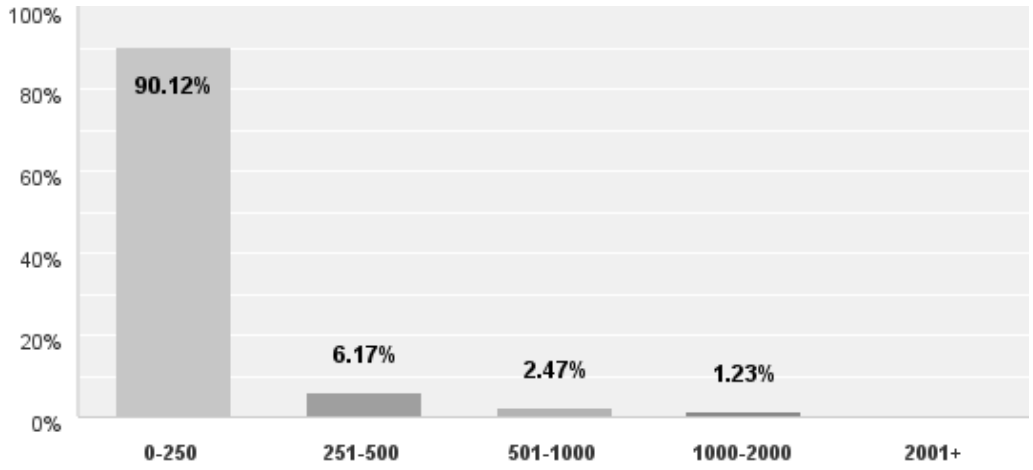
Answer Choices	Responses	
Fire based (Engine, Ladder, Rescue)	**72.62%**	61
EMS (Ambulance)	**25.00%**	21
Police	**0.00%**	0
Other non-emergency response unit (please specify)	**2.38%**	2
Total		**84**

Q11: How many lift assists does your department perform a year?



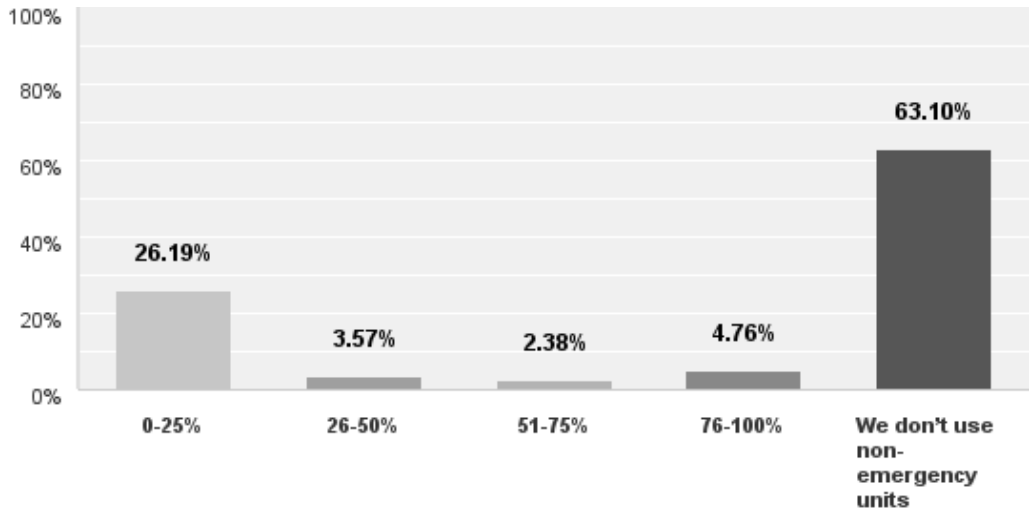
Answer Choices	Responses	
0-250	**65.85%**	54
251-500	**17.07%**	14
501-1000	**9.76%**	8
1000-2000	**3.66%**	3
2001+	**3.66%**	3
Total		**82**

Q12: How many comfort moves does your department perform a year?



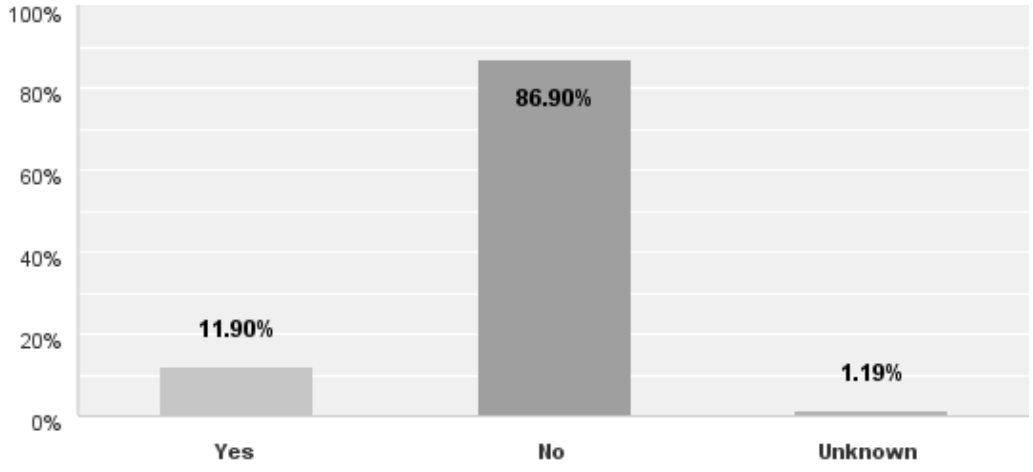
Answer Choices	Responses	
0-250	**90.12%**	73
251-500	**6.17%**	5
501-1000	**2.47%**	2
1000-2000	**1.23%**	1
2001+	**0.00%**	0
Total		**81**

Q13: What % of lift assist calls and comfort move calls are handled using non-emergency response units?



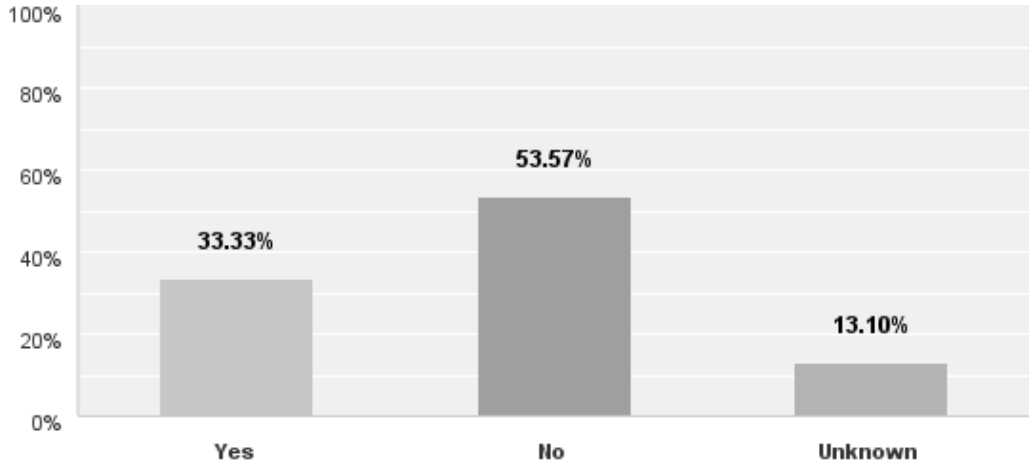
Answer Choices	Responses	
0-25%	26.19%	22
26-50%	3.57%	3
51-75%	2.38%	2
76-100%	4.76%	4
We don't use non-emergency units	63.10%	53
Total		**84**

Q14: Does a patient that has fallen, but has not been injured receive an emergency (lights and siren) response?



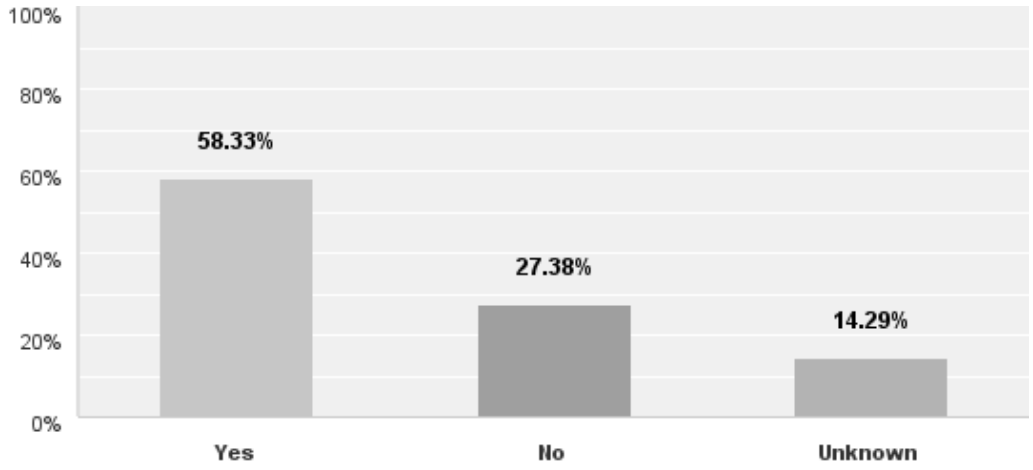
Answer Choices	Responses	
Yes	**11.90%**	10
No	**86.90%**	73
Unknown	**1.19%**	1
Total		**84**

Q15: Should emergency response units be used to provide a comfort move to people who request it i.e. bed to wheelchair, nursing home assistance, etc....?



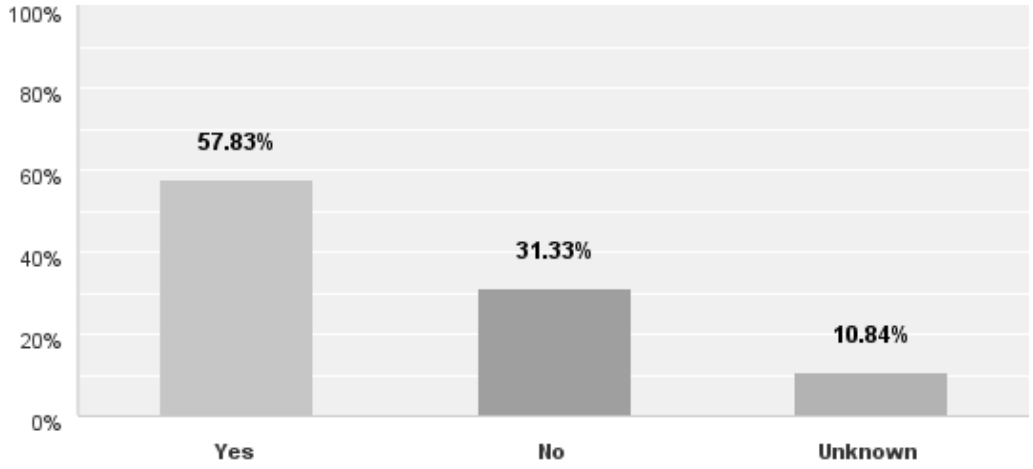
Answer Choices	Responses	
Yes	33.33%	28
No	53.57%	45
Unknown	13.10%	11
Total		84

Q16: Should patients who need lift assistance be billed for repeat use of emergency services?



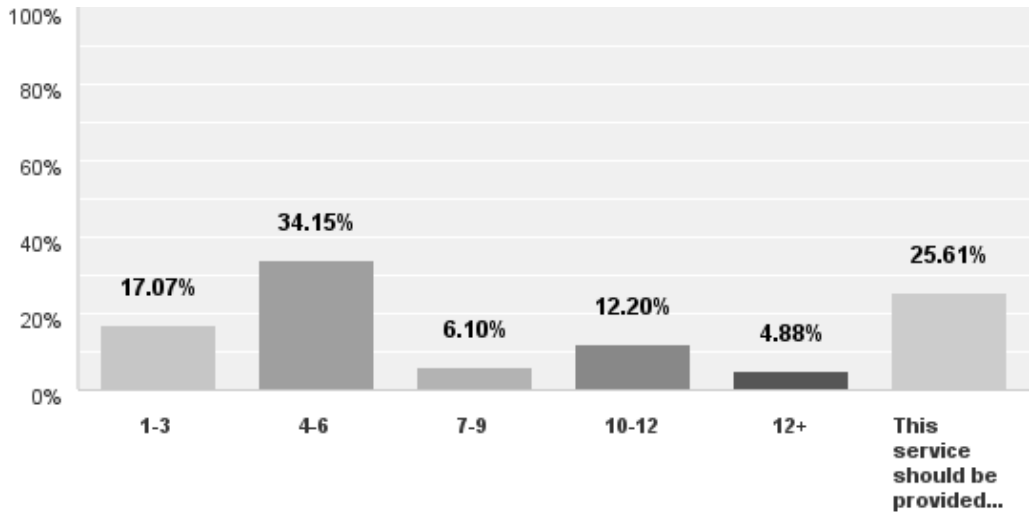
Answer Choices	Responses	
Yes	58.33%	49
No	27.38%	23
Unknown	14.29%	12
Total		84

Q17: Should a call threshold (number of calls per year) be established for patients repeatedly calling for lifting assistance or comfort moves before a bill is issued?



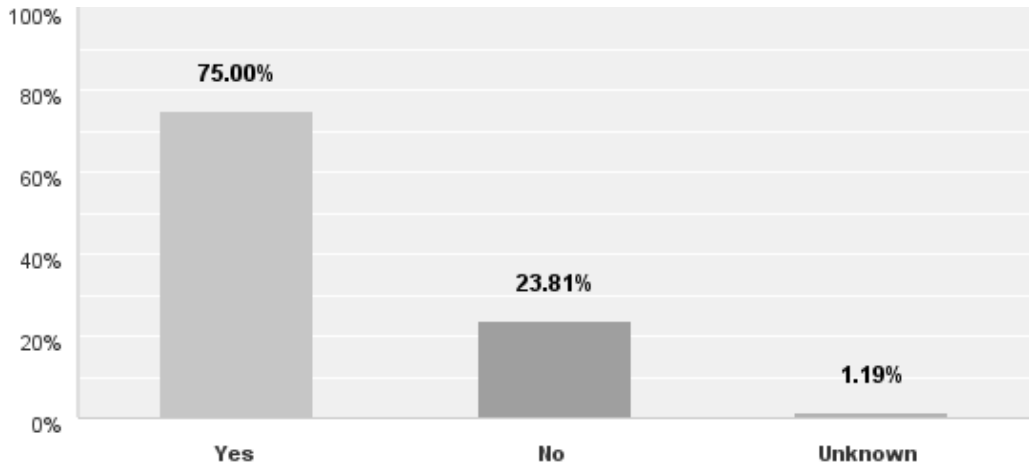
Answer Choices	Responses	
Yes	**57.83%**	48
No	**31.33%**	26
Unknown	**10.84%**	9
Total		**83**

Q18: If a bill is to be issued to repeat patients based on calls per year, what should the call threshold be?



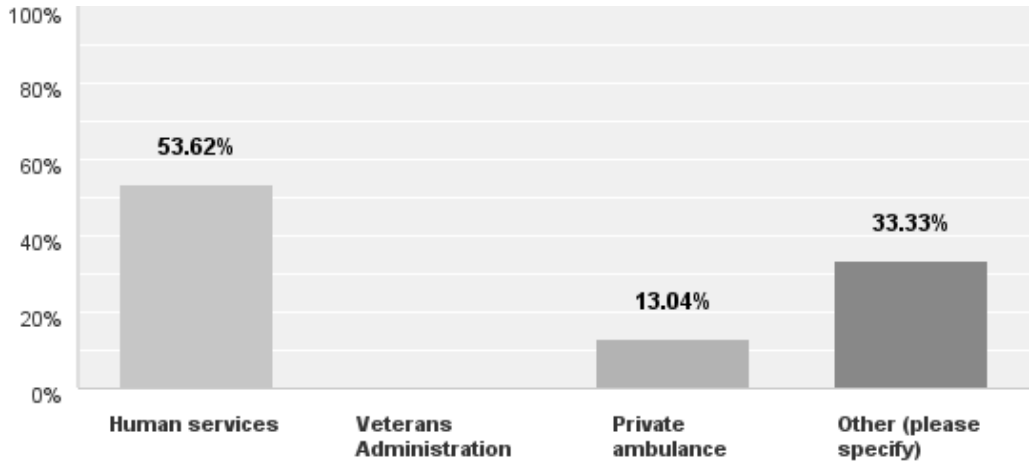
Answer Choices	Responses	
1-3	**17.07%**	14
4-6	**34.15%**	28
7-9	**6.10%**	5
10-12	**12.20%**	10
12+	**4.88%**	4
This service should be provided without a bill for service	**25.61%**	21
Total		**82**

Q19: Do you refer repeat patients requiring lift assistance or comfort moves to other agencies for assistance?



Answer Choices	Responses	
Yes	**75.00%**	63
No	**23.81%**	20
Unknown	**1.19%**	1
Total		**84**

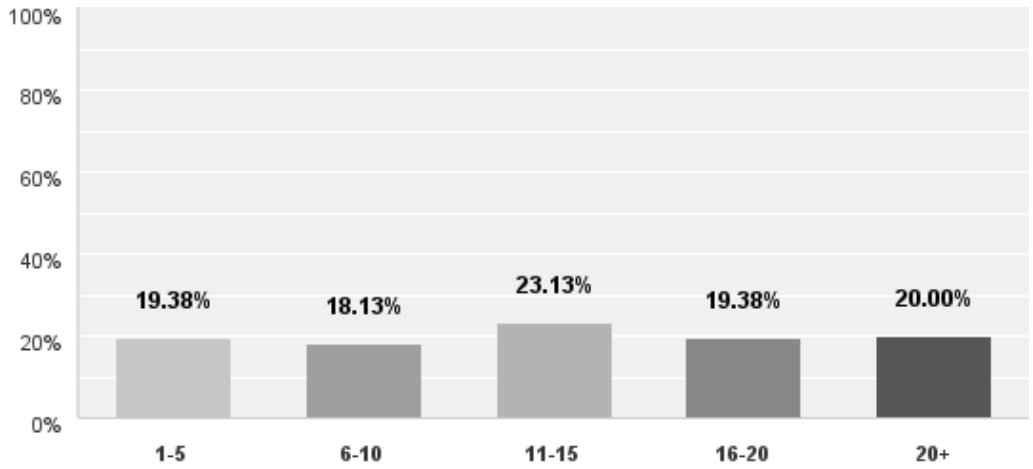
Q20: What outside agencies do you use for lifting assistance?



Answer Choices	Responses	
Human services	**53.62%**	37
Veterans Administration	**0.00%**	0
Private ambulance	**13.04%**	9
Other (please specify)	**33.33%**	23
Total		**69**

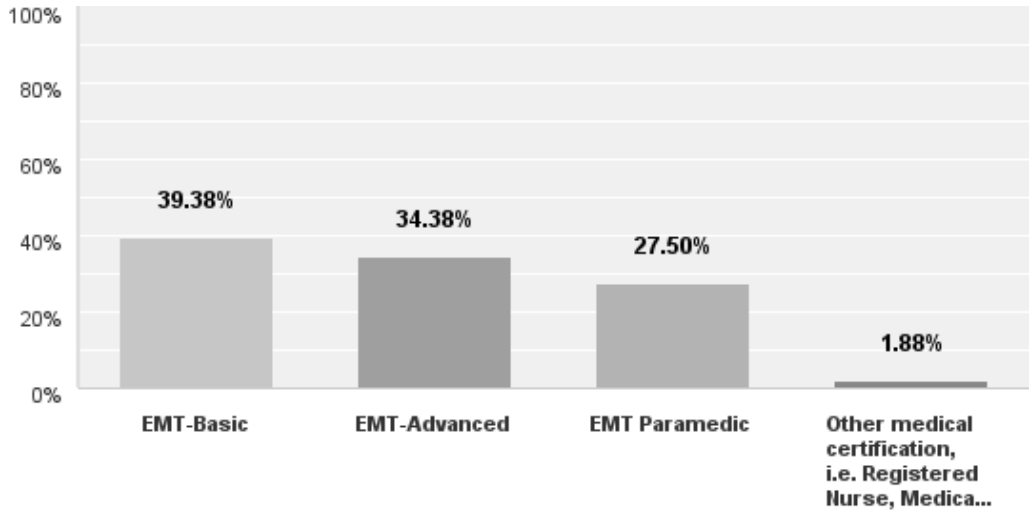
Appendix B: VBFD Internal Survey

Q1: How many years have you been in the VBFD?



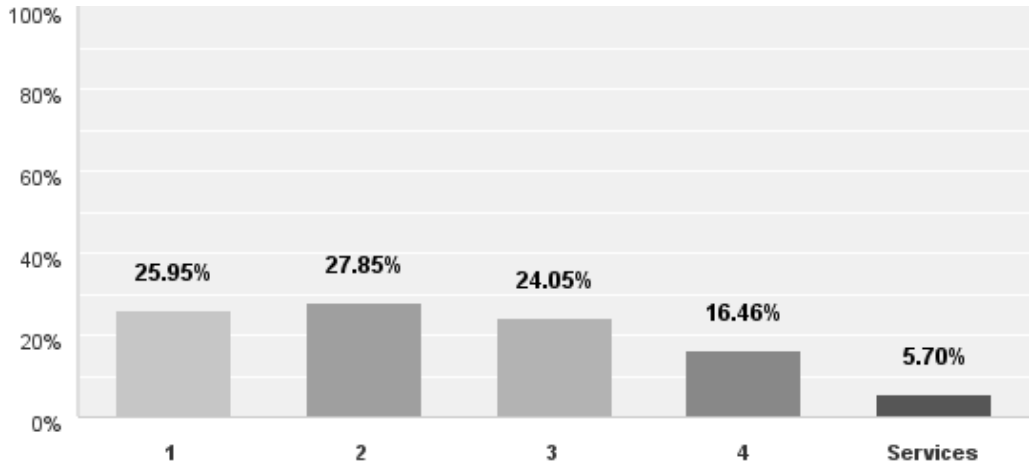
Answer Choices	Responses	
1-5	19.38%	31
6-10	18.13%	29
11-15	23.13%	37
16-20	19.38%	31
20+	20.00%	32
Total		160

Q2: What is your current EMS certification level? Check all that apply.



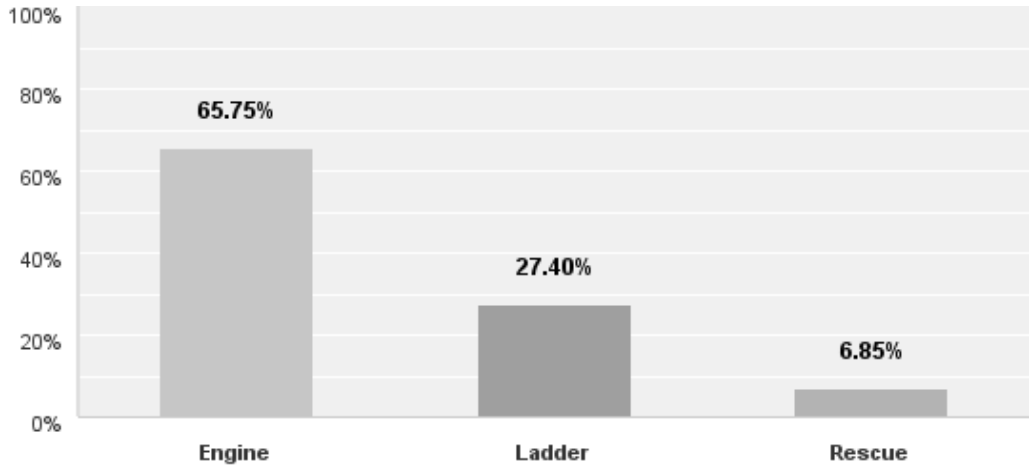
Answer Choices	Responses	
EMT-Basic	39.38%	63
EMT-Advanced	34.38%	55
EMT Paramedic	27.50%	44
Other medical certification, i.e. Registered Nurse, Medical Doctor etc...	1.88%	3
Total Respondents: 160		

Q3: What battalion are your currently assigned to?



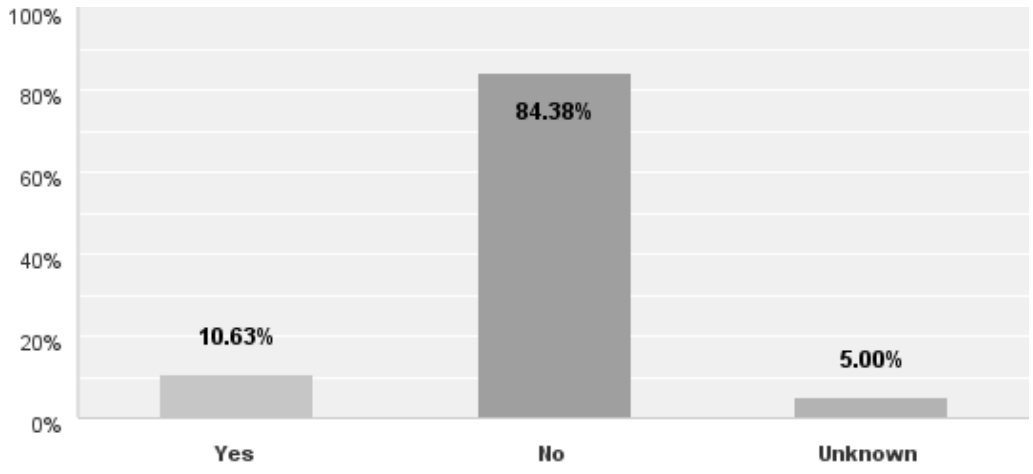
Answer Choices	Responses	
1	25.95%	41
2	27.85%	44
3	24.05%	38
4	16.46%	26
Services	5.70%	9
Total		158

Q4: What type of apparatus are you assigned to?



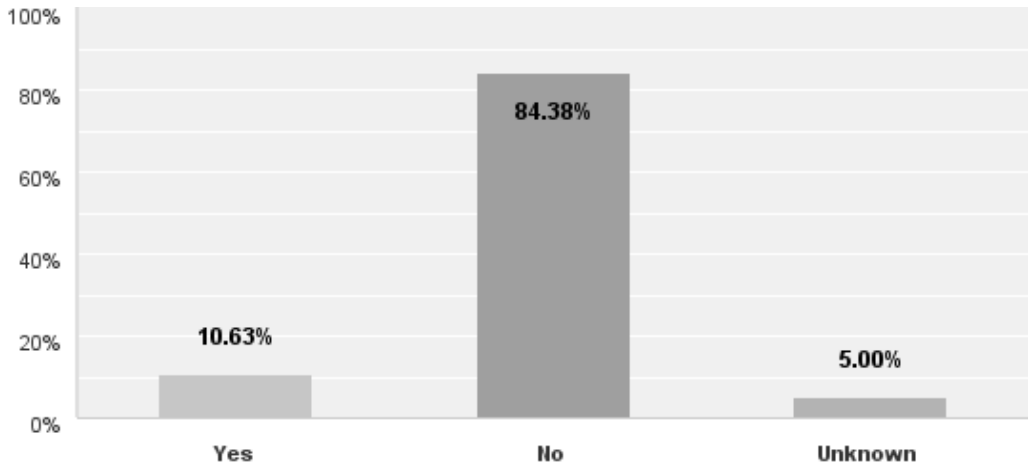
Answer Choices	Responses	
Engine	**65.75%**	96
Ladder	**27.40%**	40
Rescue	**6.85%**	10
Total		**146**

Q5: Should fire based services be used to provide lift assists (from relative unsafe location to safe location)?



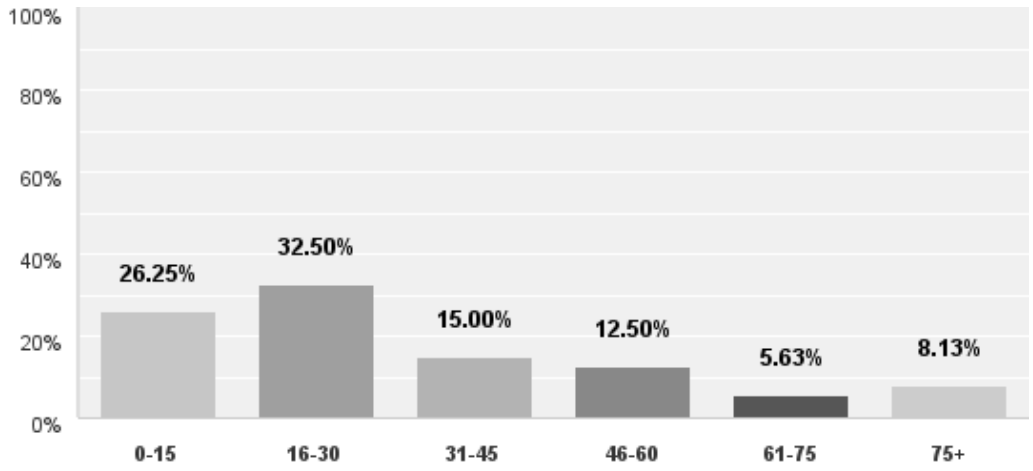
Answer Choices	Responses	
Yes	**10.63%**	17
No	**84.38%**	135
Unknown	**5.00%**	8
Total		**160**

Q6. Should fire based services be used to provide comfort moves (from a safe location to safe location)?



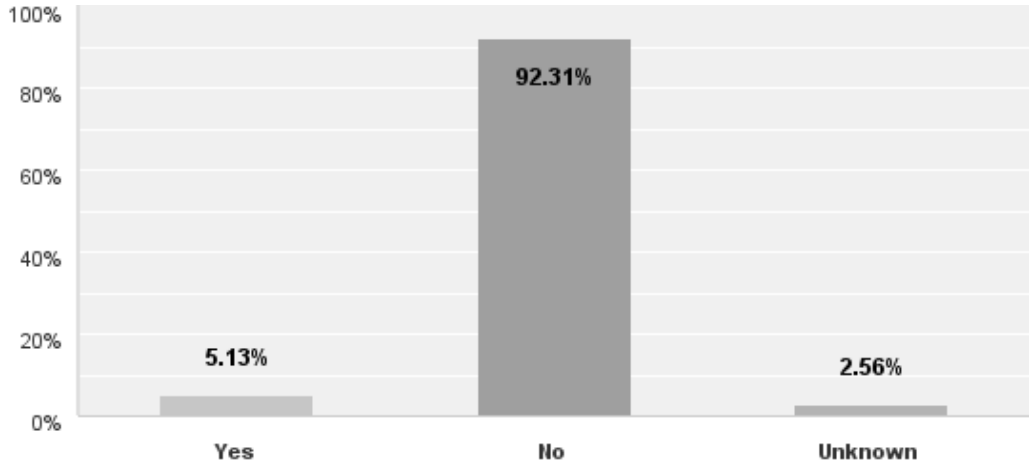
Answer Choices	Responses	
Yes	**10.63%**	17
No	**84.38%**	135
Unknown	**5.00%**	8
Total		**160**

Q7: How many lift assists and comfort moves have you performed in the last 12 months approximately?



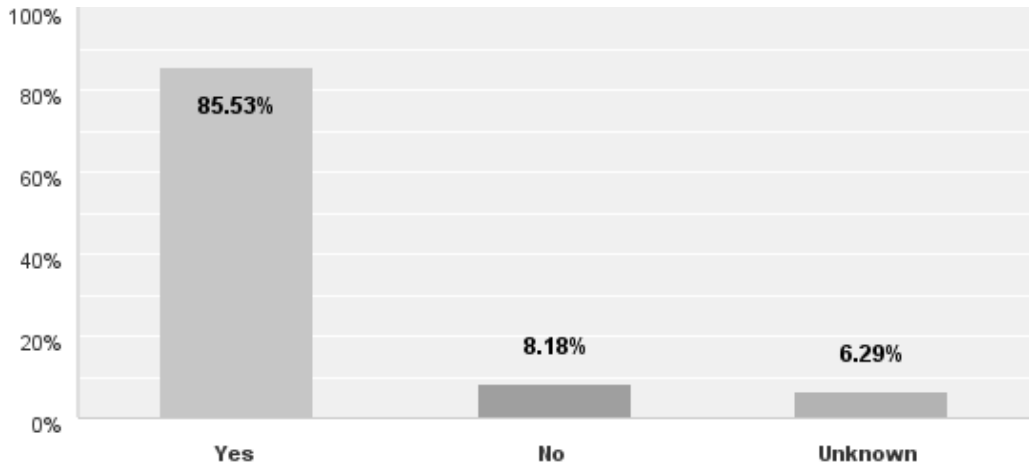
Answer Choices	Responses	
0-15	26.25%	42
16-30	32.50%	52
31-45	15.00%	24
46-60	12.50%	20
61-75	5.63%	9
75+	8.13%	13
Total		160

Q8: Should emergency response units be used to provide a comfort move to people who request it i.e. bed to wheelchair, nursing home assistance, etc.…?



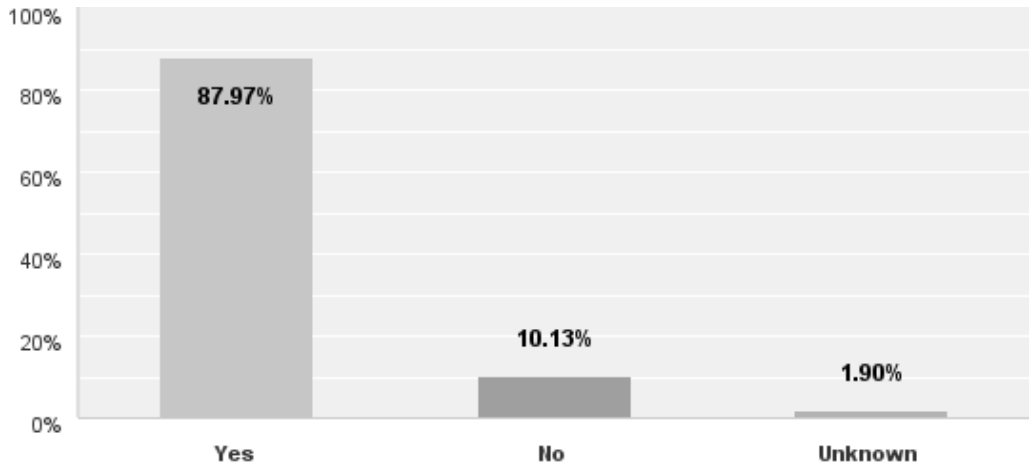
Answer Choices	Responses	
Yes	5.13%	8
No	92.31%	144
Unknown	2.56%	4
Total		156

Q9: Should patients who call for lift assistance or comfort moves be billed for repeat use of emergency services?



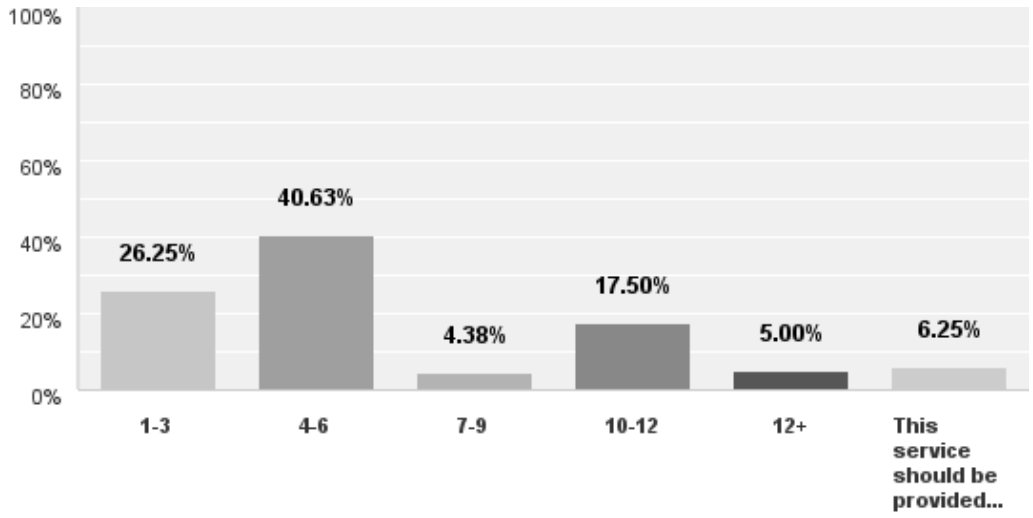
Answer Choices	Responses	
Yes	**85.53%**	136
No	**8.18%**	13
Unknown	**6.29%**	10
Total		**159**

Q10: Should a call threshold (number of calls per year) be established for patients repeatedly calling for lifting assistance before a bill is issued?



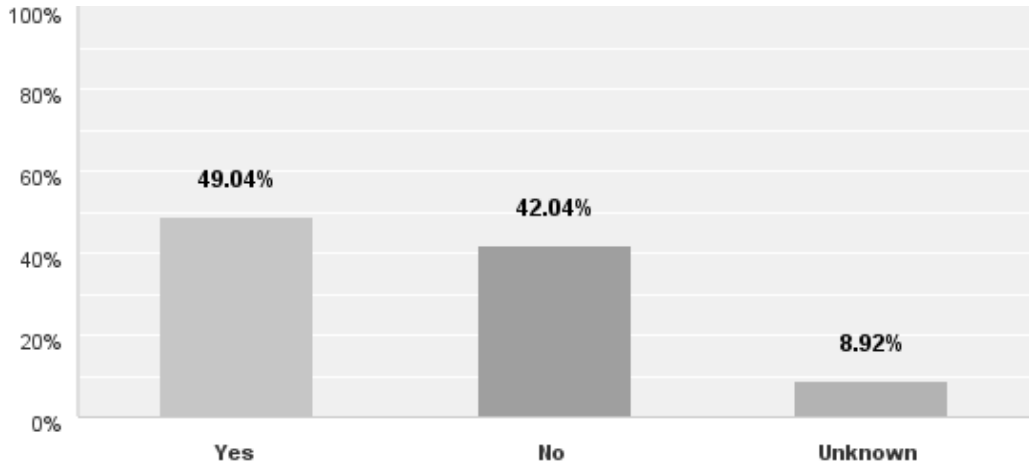
Answer Choices	Responses	
Yes	**87.97%**	139
No	**10.13%**	16
Unknown	**1.90%**	3
Total		**158**

Q11: If a bill is to be issued to repeat patients based on calls per year, what should the call threshold be?



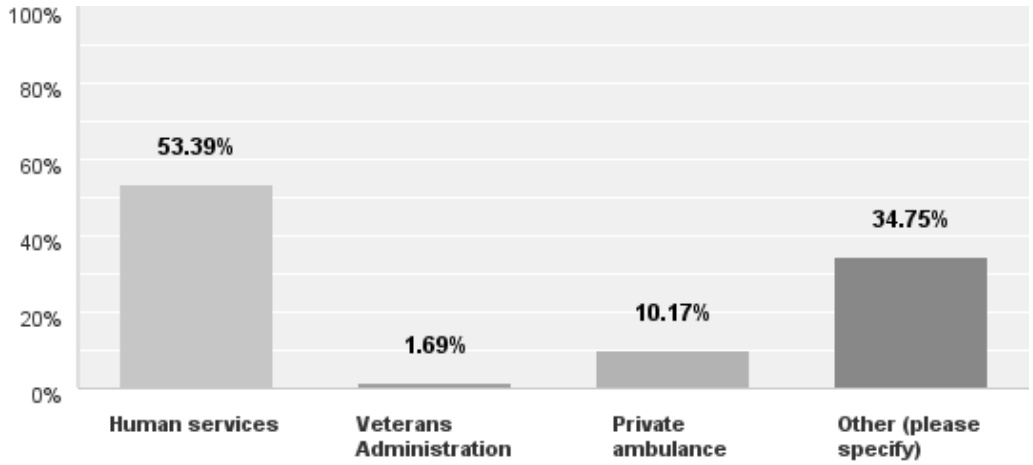
Answer Choices	Responses	
1-3	**26.25%**	42
4-6	**40.63%**	65
7-9	**4.38%**	7
10-12	**17.50%**	28
12+	**5.00%**	8
This service should be provided without a bill.	**6.25%**	10
Total		**160**

Q12: Do you refer repeat patients requiring lift assistance to other agencies for assistance?



Answer Choices	Responses	
Yes	49.04%	77
No	42.04%	66
Unknown	8.92%	14
Total		157

Q13: What outside agencies have you referred patients to?



Answer Choices	Responses	
Human services	**53.39%**	63
Veterans Administration	**1.69%**	2
Private ambulance	**10.17%**	12
Other (please specify)	**34.75%**	41
Total		**118**