



## A Study on Emergency Medical Services (EMS)

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### ABSTRACT

An emergency medical service (or EMS) is a service providing out-of-hospital acute care and transport to definitive care, to patients with illnesses and injuries which the patient believes constitute a medical emergency. EMS is an intricate system, and each component of this system has an essential role to perform as part of a coordinated and seamless system of emergency medical care. This paper studies about the needs of emergency medical services and to suggest the ways to improve and promote the awareness about basic life support and first aid training. The study was conducted among the corporate people, Chennai, and to implement corrective measures. The descriptive study is conducted using a structured questionnaire with "Likert scale". The questionnaire is framed in a facilitating manner to obtain clear and clarified response. The sample size of the project is 120. Non probability random sampling method is chosen to select the samples. Data gathered is analyzed using statistical tool regression, correlation, chi-square, t-test.

**Keywords--** Emergency Medical Service, Hospital, Awareness, Patients

### I. INTRODUCTION

Emergency medical services address situations that result in sudden bodily harm due to injury and other urgent medical conditions. The emergency medical services include the evaluation of the person in the distressed condition, the provision of appropriate pre-hospital care and transportation to an appropriate hospital for the provision of definitive care. Emergency medical care has its greatest impact within several hours of the event when it can prevent death and life-long disability. To stress the importance of timely care, the field developed the term of 'golden hour' (Kobusingye, Hyder, Bishai, Joshipura, Hicks, Mock, 2006). The success of the case depends on accessibility, timely reaction, appropriate stabilization of the condition and rapid delivery of the patient for professional treatment. Therefore, in the success of EMS

policies depend on efficient communication systems, transportation and supplies, trained personnel as well as coordination of all involved parties. Moreover, the EMS services are expensive and should be available to everyone.

### II. RUNNING EFFECTIVE EMS

The quality of services and effectiveness of the EMS depends on four key factors:

- Efficient communication systems – both with patient, transportation and hospital.
- Well trained emergency care personnel who can assess the condition correctly and stabilize the patient to increase chances of survival;
- Efficient transportation systems, appropriate equipment and supplies
- Constant coordination of procedures with hospital care providers

### III. EMERGENCY CARE & AMBULANCE SERVICES

As pioneers of Emergency care in India, Hospitals 24 hours Emergency Care guarantees you the highest levels of skill, expertise and infrastructure. Our protocols are designed to respond quicker, and have proven outcomes that are on par with the very best in the world. We actively leverage our multi-specialty prowess to deliver the crucial edge in emergency care. At an **Emergency Room**, there is always easy and swift access to super specialist surgeons and cutting edge procedures. We have cardiologists, neurologists, neurosurgeons and trauma specialists who are on 24x7 standbys for expert care during a medical emergency. Our long years of experience have taught us the value of every minute. In a Hospitals' Emergency Room, one can be assured of receiving globally benchmarked medical assistance as the team's singular focus is to help patients get better, faster.

We also have dedicated Stroke Physicians led teams to manage strokes and a **cardiologist** is always at the helm 24 x 7 to manage heart attacks. We also track several important metrics to ensure that the care process is smooth and efficient every single time.

Some of these are:

- Door to triage happens in less than 5 minutes
- Access to neurologists, & neurosurgeons within 5 minutes, to assess a stroke
- Door to catch lab time in 20 minutes in stroke

#### ***A legacy of expertise in Emergency Care***

A hospital is a pioneer of modern day emergency care in India. We set up the 'National Network of Emergency Services' to provide emergency care of uniform quality standards across the country. Our 24-hour emergency and trauma care is geared to meet all medical and surgical emergencies, including polytrauma. Protocol driven systems ensure results every single time.

Emergency Care is a scientifically developed protocol-driven emergency system. The system has several unique and innovative features -

- An easy to remember emergency access different number
- Ambulances that is well equipped and manned by trained personnel –indeed a veritable 'Hospital on Wheels'.
- Ambulance Services for remote areas and life-threatening emergencies.
- Effective communication system between the central control room, ambulances and the emergency facilities in the hospitals.
- Standardized emergency rooms in the hospitals that are a part of the network.
- Common functional and medical protocols across the system.
- Training of doctors and other personnel required for pre-hospital and in-hospital care.

## **IV. NATIONAL NETWORK OF EMERGENCY SERVICES**

The National Network of Emergency Services is operational across 9 cities in the country (Chennai, Hyderabad, Delhi, Ahmadabad, Kolkata, Pune, Bilaspur, Kakinada and Bengaluru). The system comprises 22 emergency rooms, 60 ambulances and over 500 personnel.

#### ***Ambulance***

Saving time is the first step in saving lives. Ambulance Services are used when ground transport could endanger a patient's life. They are also indispensable when the patient is in a remote area and time is critical. We are equipping each of our hospitals with emergency air ambulance services. The Kolkata hospital has a roof helipad. Our Delhi and Hyderabad hospitals have landing facilities. Both fixed wing aircrafts and helicopters provide the services. Aviation companies take care of the aviation

logistics. Medical aspects like trained personnel, equipment and care are provided by the emergency services. Ambulance services conquer time and distance in emergencies and saves lives.

#### ***Special Services***

Hospitals, also has the unique distinction of redefining corporate health services in the country. From wellness and preventive care, to the treatment of illness and rehabilitation, we have been pioneers in every link of the healthcare chain.

#### ***Preventive Health Checks***

We offer you a wide range of tailor-made packages which have been developed to cater to the needs of a wide cross section of individuals. For more details, please contact our corporate help line. We also offer customized Pre-employment and Annual Health Check packages as per the requirement of your company.

#### ***Occupational Health Centre***

We set up and manage Occupational Health Centers in the campus for corporate. It helps them with easy access to primary health care on the campus itself and also acts as a first aid center in case of emergencies. These centers have a doctor and paramedics / nurses and have the basic medical & surgical equipment required to manage the services.

#### ***On-site Doctor***

We provide the services of on-site doctors for the corporate. The doctors make regular visits to the campus of the corporate for specific durations during the week.

#### ***Ambulance Service***

A hospital offers the facility for transport in case of any emergency. You can call a ambulance. We can also provide an ambulance to be stationed at your campus permanently.

#### ***Screening Camps***

A hospital offers screening camps for corporate. These camps can be conducted on-site at your campus with the help of a state-of-art bus equipped with the basic diagnostic facilities and thus save the time and hassle of the employees to travel to the hospital

#### ***Training and Education***

Hospitals organizes educational programmes for first aid management for corporate employees and trains them in BLS / ALS (Basic Life Support and Advanced life Support) programmes as 'First Responders' for medical emergencies.

#### ***Awareness Lectures***

We organize lectures by specialist doctors and eminent speakers on a range of health and lifestyle management issues. There are also open –sessions with doctors to clarify myths about common health issues.

#### ***On site Telemedicine facility***

Hospital provides onsite Telemedicine facility in areas where medical consultation is not available. Also, we provide specialist consultation where only primary medical care is available.

### **Health and Wellness Workshops**

We do a health profiling of the employees and design customized wellness programmes for the corporate for improving the health quotient of the company. These programmes provide a comprehensive preventive management to decrease the incidence of illness in the corporate employees.

### **Dependent Health Care Programmes**

We have specific healthcare programmes for the welfare of the dependents (parents, spouses and children) of the employees. This ensures that not only the employee, but his family stays healthy for the maximum benefit of the employee and the company.

## **V. CORPORATE EMERGENCY MANAGEMENT SERVICES**

Medical Emergency in an office setting is one of the most critical issues for all the companies. A complete Medical Emergency Management Plan which includes training the employees, providing on-site first aid, ensuring quick and supervised shifting the patient to a hospital and then ensuring the best treatment within the hospital.

### **Industry profile**

The Indian healthcare industry is growing at a rapid pace and is expected to become a US\$280 billion industry by 2020. The Indian healthcare market was estimated at over US\$70 billion in 2012 and is expected to be around US\$145 billion by 2017. According to the Investment Commission of India, the healthcare sector has experienced phenomenal growth of 12 percent per annum in the last 4 years. Rising income levels and growing elderly populations are all factors that are driving this growth. In addition, changing demographics, disease profiles and the shift from chronic to lifestyle diseases in the country has led to increased spending on healthcare delivery. The Indian medical device and equipment market is expected to grow to around US\$ 5.8 billion by 2014 and US\$ 7.8 billion by 2016, growing at a compound annual growth rate (CAGR) of 15.5 per cent, according to a report by Grant Thornton India. India's medical device market is currently the fourth largest in Asia with 700 medical device makers, and ranks among the top 20 in the world, as per data from India Semiconductor Association. The hospital and diagnostics centre in India received foreign direct investment (FDI) worth US\$ 2,057.29 million, while drugs & pharmaceutical and medical & surgical appliances industry registered FDI worth US\$ 11,391.03 million and US\$ 720.41 million, respectively during April 2000 to September 2013, according to data provided by Department of Industrial Policy and Promotion (DIPP). On the back of continuously rising demand, the hospital services industry is expected to be worth US\$ 81.2 billion by 2015. In addition, the Indian hospital services sector revenue is expected to increase at a CAGR of 20 per cent during the period 2012–17, generating immense

possibilities for players in the market, according to a RNCOS report titled, 'Indian Medical Device Market Outlook to 2017'.

### **Market segments of healthcare**

Total healthcare revenues in the country hospitals account for 71 per cent and 13% for pharmaceutical, 9% for medical equipments and suppliers, 4% for medical insurance, 3% for diagnostics.

### **Factors attracting corporate in the healthcare sector recognition as an industry**

In the mid 80's, the healthcare sector was recognized as an industry. Hence it became possible to get long term funding from the Financial Institutions. The government also reduced the import duty on medical equipment's and technology, thus opening up the sector. Since the National Health Policy (the policy's main objective was, Health for all by the year 2000) was approved in 1983, little has been done to update or amend the policy even as the country changes and the new health problems arise from ecological degradation. The focus has been on epidemiological profile of the medical care and not on comprehensive healthcare.

### **Socio-Economic Changes:**

The rise of literacy rate, higher levels of income and increasing awareness through deep penetration of media channels, contributed to greater attention being paid to health. With the rise in the system of nuclear families, it became necessary for regular health check-ups and increase in health expenses for the bread-earner of the family.

### **Brand Development:**

Many family run business houses have set-up charity hospitals. By lending their name to the hospital, they develop a good image in the markets which further improves the brand image of products from their other businesses.

### **Extension to Related Business:**

Some pharmaceutical companies like Wockhardt and Max India, have ventured into this sector as it is a direct extension to their line of business.

### **Opening of the Insurance Sector:**

In India, approx. 60% of the total health expenditure comes from self paid category as against government's contribution of 25-30 %. A majority of private hospitals are expensive for a normal middle class family. The opening up of the insurance sector to private players is expected to give a shot in the arms of the healthcare industry. Health Insurance will make healthcare affordable to a large number of people. Currently, in India only 2 million people (0.2 % of total population of 1 billion), are covered under Mediclaim, whereas in developed nations like USA about 75 % of the total population are covered under some insurance scheme. General Insurance Company has never aggressively marketed health insurance. Moreover, GIC takes up to 6 months to process a claim and reimburses customers after

they have paid for treatment out of their own pockets. This will give a great advantage to private players like Cigna which is planning to launch Smart Cards that can be used in hospitals, patient guidance facilities, travel insurance, etc. The Consultants, Financiers and Insurance Agencies are to benefit from this boom. The insurers will use PPOs that will grow into HMOs, to assume insurance risks on client's behalf. Medical Equipments, Medical Software and Hospitals will see the biggest boom.

#### ***Trends and investments***

The Indian healthcare providers plan to spend Rs 5,700 crore (US\$ 916.40 million) on IT products and services in 2013, a 7 per cent rise over 2012 revenues worth Rs 5,300 crore (US\$ 852.09 million), as per a report by Gartner.

Initiating a new era of quality health facility, telemedicine services were launched by Mr Nitish Kumar, Chief Minister of Bihar, in Patna-based prominent hospitals and those in 22 districts and 82 primary health centers of Bihar.

The Amrita Centre for Nanosciences and Molecular Medicine has developed a nano-medicine that, it claims, will dramatically improve the treatment of drug-resistant chronic myelogenous leukemia (CML, a form of blood cancer), when used in combination with 'Imatinib', the standard drug for CML.

The following are some of the major investments in the sector:

- Trivitron Healthcare has joined hands with India Value Fund Advisors (IVFA) to finance its next phase of growth. IVFA has invested Rs 150 crore (US\$ 24.12 million) for a minority stake in the company.
- IDFC Alternatives has invested Rs 125 crore (US\$ 20.10 million) in Medi Assist Healthcare, a development that continues to reiterate risk capital's strong focus on the sector.
- Cadila Pharmaceuticals Ltd (CPL) has decided to invest another Rs 100 crore (US\$ 16.08 million) on expansion, upgradation and modernisation of its manufacturing unit at Samba in Jammu district.
- Apollo Hospitals and Medtronic Inc are to collaborate to bring an innovative, affordable and portable haemodialysis system in India that can help improve access to care for end stage renal disease (ESRD) patients who need renal replacement therapy. Medtronic intends to develop and manufacture key components of this haemodialysis system in India which will be ready for commercial launch in 2016, the companies said in a joint statement.

#### ***Indian healthcare market - a key player in the global healthcare industry***

The Indian healthcare sector has emerged as one of the largest service sectors in India. Healthcare spending in India is expected to rise by 12% per annum. As per an estimate, during 2012, healthcare spending contributed 8% of GDP and employed around 9 million people. Rising

incomes and growing literacy are likely to drive higher per capita expenditure on healthcare. The trend is shifting from infectious diseases to lifestyle diseases.

- The medical equipment market is growing at a rapid pace. The demand for hi-tech products is close to 80 percent of the overall market in India. Major international medical equipment companies are lining up their investments in India for setting up local bases.
- Over the past few years, medical tourism has gained momentum in India. Increasing number of patients from developed countries are getting quality health services in India for less than half the price prevailing in their countries. India is becoming a popular medical tourist destination in Asia. At present, medical tourism is a 2 billion US\$ (dollar) business and is expected to grow substantially in the future.
- Over the last five years, the Indian pathology industry has been growing at an estimated compound annual growth rate of 20% per annum. Many of the renowned Indian pathology laboratories are expanding globally by signing outsourcing contracts with hospitals in Europe and other countries for pathological services. Outsourcing of pathology and laboratory tests by foreign hospital chains is becoming a huge opportunity because of the high cost differential in India.

#### ***Medical tourism***

Health tourism is gaining momentum in India. While quoting from a McKinsey study commissioned by the CII, Mr Vayalar Ravi, Union Minister for Overseas Affairs, Government of India, highlighted that the health tourism industry in India could become a US\$ 5 billion business by 2015. With the finest and experienced specialists and technological edge along with latest equipment and state-of-the-art infrastructure, Indian health tourism industry is gaining momentum. The industry in India is also expected to record revenue worth US\$ 1 billion per annum, growing at around 18 per cent and is expected to touch US\$ 2 billion by 2015. India has witnessed an influx of patients from Africa, CIS countries, Gulf and SAARC nations, Pakistan, Bangladesh and Myanmar, who mainly come for organ transplant, orthopedic, cardiac and oncology problems. Kerala has the potential to become the hub and most preferred destination for health tourism with highly qualified doctors and some of the best hospitals and resorts in the country, highlighted Mr Oommen Chandy, Chief Minister, Kerala. Furthermore, Mr A P Anil Kumar, the State Tourism Minister, pointed that Kerala is the fastest growing tourism destination in India. Last year, 1 million foreign and 10 million domestic tourists visited the state. Apollo Health City - Hyderabad has become the first hospital in the country to be recognized as the "Best Medical Tourism Facility for 2009-2010" by Ministry of Tourism - Government of India. Hospitals India, we unite exceptional clinical success rates and superior technology with centuries-old traditions of Eastern care and warmth, as we

truly believe the world is our extended family-something our 20 million patients across the globe can warmly affirm. This has made Hospitals as one of the most desired medical tourism destinations in India.

#### **Government initiatives**

The Republic of Hungary has signed a bilateral agreement with India for promotion and development of traditional systems of medicine. The memorandum of understanding (MoU) will boost bilateral cooperation between the two countries in the areas of traditional medicines, which will open new vistas for exploring the potential of economic, commercial and tourism development in both the countries. The Government of India has allocated Rs 3,000 crore (US\$ 482.32 million) in the 12th Five-Year Plan (2012–17) for development of the medical device sector, said Mr S Eswara Reddy, Deputy Drugs Controller of India. With medical devices to be brought under the ambit of the Drugs and Cosmetics (Amendment) Bill, 2013, the Government is looking to strengthen its infrastructure to oversee this sector. Moreover, 100 per cent FDI is permitted for health and medical services under the automatic route. Also, the Department of Health Research has decided to set up a Medical Technology Assessment Board to evaluate all kinds of Medical Technologies.

## **VI. NEED FOR THE STUDY**

This study indicates the need for specific interventions to access essential emergency services in hospitals, examine the effective awareness about basic life support and first-aid training program conducted in hospitals and educating basic emergency care and protocols at health facilities to public. This study is done mainly to know obstacles faced by public accelerating right services at the right time. Need to view effective reach health campaign to public in emergency medical situation. The emergency medical service need to provide appropriate and timely interventions to treat the patient at the scene of the incident without doing further harm. Emergency medical services(EMS) is to either provide treatment to those in need of urgent medical care, with the goal of satisfactorily treating the presenting conditions, or arranging for timely removal of the patients to the next point of definitive care.

#### **Objectives of the study**

- To evaluate the effectiveness of emergency medical services
- To understand the level of awareness towards emergency medical services
- To identify the campaign benefits and to ascertain the expectations
- To suggest ways to improve health campaign

## **VII. SCOPE OF THE STUDY**

This study helps in obtaining knowledge about over all processes involved in the emergency medical services and also helps to increasing awareness about basic life support and first aid training. This study will also help in understanding services rendered by hospitals and promote about various emergency health campaigns. This study mainly conducted in the Chennai region. A study on effectiveness of health campaign to promote awareness in emergency medical services.

## **VIII. REVIEW OF LITERATURE**

**Anne Siri Johnsen (2013)** this study states that Helicopter emergency medical services (HEMS) aim to bring highly specialised crews to the major incident for triage, treatment and transport. When the site is difficult to access, HEMS may be the only mode of transportation of both personnel and patients. This systematic review will identify, describe and appraise literature regarding the role of HEMS in medical response to major incidents. We aim to improve knowledge on HEMS role in a major incident and provide a basis for future research.

**Saver, Jeffrey L., et al. (2015)** This is study related to stroke, but it's not in here because of that. In the Field Administration of Stroke Therapy — Magnesium Trial (FAST-MAG), a large, multi-agency randomized control trial was conducted to test the efficacy of prehospital administration of magnesium sulfate to stroke patients as a neuroprotective agent. The authors concluded that the "trial did not show a treatment benefit of magnesium sulfate administered in the prehospital setting among patients in whom hyperacute stroke was suspected." What's fascinating about FAST-MAG is not the results, but the methods — a section of research articles often overlooked. In ambulances across Los Angeles and Orange County, the researchers managed to conduct a large, blinded placebo trial. That means that during the study, paramedics administered a drip to stroke patients without knowing each time if it was magnesium or a placebo (a drip without the medication, such as normal saline). This helps ensure that the administration is random, and patients aren't chosen to receive the medication because they are in better or worse condition. Blinded, randomized control trials are the gold standard in medical research. They are difficult enough in hospitals, let alone the prehospital setting. More studies like this need to be performed, not simply to test new treatment possibilities, but also to affirm some current practices that have never been validated with clinical research.

## **IX. RESEARCH METHODOLOGY**

<b>Research Design</b>	Descriptive research
<b>Data Sources</b>	Primary data Secondary data
<b>Research Instruments</b>	Questionnaire : 4 demographic questions and 14 questions on emergency medical services
<b>Sampling</b>	<b>Simple Random Sampling</b>
<b>Sampling Units</b>	Apollo, Dr.Mehta's, Parvathy, St.Isabel's, Hindu Mission and Fortis Malar Hospital
<b>Sample Size</b>	120 Respondents
<b>Area Of Study</b>	Chennai City
<b>Period Of Study</b>	2016-2017
<b>Analytical Tools</b>	Regression/Correlation/Chi-square /T-test

## X. LIMITATIONS OF THE STUDY

- Time was the major constraint in the study process.
- There is a chance of personal bias which affects the accuracy of data.
- It is assumed that the information given by the respondents is authentic and best of their knowledge.
- The accuracy of findings is limited by the accuracy of statistical tools used for analysis.
- The study only conducted the survey Apollo, Dr.Mehta's, Parvathy, St.Isabel's, Hindu Mission and Fortis Malar Hospital

## XI. STATISTICAL TOOLS

### *Chi Square test*

Age vs likely usage of hospital emergency medical services

Null hypothesis (H0):

There is no significant difference between age and likely usage of hospital emergency medical services.

Alternative Hypothesis (H1):

There is significant difference between age and likely usage of hospital emergency medical services.

### age \* Crosstabulation

Count							
		Q13					
Age		5	4	3	2	1	Total
<24		10	21	6	2	1	40
25-30		18	20	2	4	2	46
30-35		5	8	3	1	1	18
35-40		0	2	0	1	0	3
40 above		8	1	3	1	0	13
Total		41	52	14	9	4	120

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.262 <sup>a</sup>	16	.255
Likelihood Ratio	21.649	16	.155
Linear-by-Linear Association	.160	1	.690
N of Valid Cases	120		

a. 17 cells (68.0%) have expected count less than 5. The minimum expected count is .10.

**Interpretation:**

Since the calculated value is greater than tabulated value, null hypothesis is rejected and there is significant difference between age and likely usage of hospitals emergency services.

**Regression:**

Emergency situation vs likely usage of hospital emergency medical services

**Null hypothesis (H0):**

There is no significant difference between emergency situation and likely usage of hospital emergency medical services.

**Alternative Hypothesis (H1):**

There is significant difference between emergency situation and likely usage of hospital emergency medical services.

**Model Summary**

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.263 <sup>a</sup>	.069	.061		1.001

a. Predictors: (Constant), Q5

**ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.778	1	8.778	8.767	.004 <sup>a</sup>
	Residual	118.147	118	1.001		
	Total	126.925	119			

a. Predictors: (Constant), Q5

b. Dependent Variable: Q13

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.392	.232		5.988	.000
	Q5	.305	.103	.263	2.961	.004

a. Dependent Variable: Q13

**Interpretation:**

Since the calculated value is lesser than the tabulated value, null hypothesis is accepted. Hence there is no significant difference between emergency situation and likely usage of hospitals emergency medical services.

**Regression:**

Ambulance services vs likely usage of hospital emergency medical services

**Null hypothesis (H0):**

There is no significant difference between Ambulance services and likely usage of hospital emergency medical services.

**Alternative Hypothesis (H1):**

There is significant difference between Ambulance services and likely usage of hospital emergency medical services.

**Model Summary**

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.143 <sup>a</sup>	.021	.012		1.026

a. Predictors: (Constant), Q12

**ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.585	1	2.585	2.453	.120 <sup>a</sup>
	Total					

Residual	123.281	117	1.054		
Total	125.866	118			

Predictors: (Constant), Q12

b. Dependent Variable: Q13

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.626	.276		5.883	.000
	Q12	.176	.112	.143	1.566	.120

a. Dependent Variable: Q13

**Interpretation:**

Since the calculated value is greater than the tabulated value, null hypothesis is rejected. Hence there is significant difference between Ambulance services and likely usage of hospital emergency medical services.

**Analysis using karl pearson's correlation**

Null hypothesis (H0):

There is no significant difference between objectives of the BLS and first aid training vs BLS and first aid training at hospitals covering all basic emergency needs.

Alternative hypothesis (H1):

There is significant difference between objectives of the BLS and first aid training vs BLS and first aid training at hospitals covering all basic emergency needs.

**Correlations**

		Q14	Q15
Q14	Pearson Correlation	1	.665**
	Sig. (2-tailed)		.000
	N	120	120
Q15	Pearson Correlation	.665**	1
	Sig. (2-tailed)	.000	
	N	120	120

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Interpretation:**

Since the calculated value is greater than the tabulated value, null hypothesis is rejected and there is significant difference between objectives of the BLS and first aid training vs BLS and first aid training at hospitals covering all basic emergency needs.

**T-TEST**

Null hypothesis (H0):

There is no significant difference between marital status and likely usage of hospital emergency medical services.

Alternative Hypothesis (H1):

There is significant difference between marital status and likely usage of hospital emergency medical services.

	N	Mean	Std. Deviation	Std. Error Mean
Maritalstatus	120	1.39	.490	.045
Q13	120	2.02	1.033	.094

	Test Value = 0					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Maritalstatus	31.101	119	.000	1.392	1.30	1.48
Q13	21.479	119	.000	2.025	1.84	2.21

**Interpretation:**

Since the calculated value is greater than the tabulated value, null hypothesis is rejected. Hence there is significant difference between marital status and usage of emergency medical services.

**Summary of findings**

- 38% of respondents belong to the age group <24.
- 57% of respondents are male.
- 60% of respondents are single.
- 41% of respondents are earning a salary of 20000-40000 per month.
- 50% of the respondent agreed that emergency medical services (EMS) are available at the time of emergency situation.
- 66% of the respondent chosen all the above (Hoardings/Signage board, Press advertisement, E-mailers/Whatsapp campaign, Fliers/Pull outs).
- 46% of respondent choose 1066 ambulance to call first in emergency needs.
- Almost 73% of respondent prefer 108 ambulance services number during emergency.
- 45% of respondent chosen advertisement as best medium for knowing emergency services of hospital.
- Almost 78% of respondent chosen yes that their family members are aware of ambulance contact number.
- 65% of respondent chosen corporate tie up as well known source of awareness for first aid and basic life support training conducted.
- 51% of respondent are satisfied ambulance services reach on time during emergency.
- 43% of respondent rated 4 choosing Apollo hospitals for any emergency services required.
- 49% of respondent strongly agree that basic life support and first aid training were clearly defined.
- 47% of respondents highly satisfied that basic life support and first aid training conducted by hospitals covered all basic emergency needs.
- Almost 81% of respondents said that they will recommend basic life support and first aid training to their friends/family members.
- 43% of respondents rated 5(high) recommending Apollo hospitals emergency services to friends/family members.

**SUGGESTION**

- Promote standard of care with high potential for improving EMS outcomes.
- They need to be more reliably to deliver the most appropriately trained person to the patient's side in a timely manner and ensure each patient is directed to the most appropriate healthcare facility based on his/her medical condition.
- Health profiling of the people need to be customized and programmed well to get to know their perfect details so that they may not be any mistakes.
- Awareness about basic life support and first aid education training need to be conducted for students and public.
- Media advertisement, hoardings/signage boards, fliers need to be given about ambulance services, so that people get aware and contact during emergency.
- Development of advanced evidence – based programmes for trainees.
- Provision of improved information to the public about the availability of emergency medical services and their optimal usage.

**XII. CONCLUSION**

This paper studies about the needs of emergency medical services and to suggest the ways to improve and promote the awareness about basic life support and first aid training. EMS is an integral part of every community's total health care delivery system. Consistent evaluation of clinical and response performance indicators are crucial components in ensuring that first response services are operating at peak efficiency. Adequate communication could improve efficacy and lead to better health care

**REFERENCES**

- [1] A Langhelle, HM Lossius, T Silfvast, HM Björnsson, FK Lippert, A Ersson, E Søreide, 2004, International EMS Systems: The Nordic Countries, Resuscitation, Volume 61, Issue 1, Pages 9–21
- [2] A Public Policy Paper by FARE, 2005, Air Medicine: Accessing the Future of Health Care
- [3] A S Whitelaw, R Hsu, A R Corfield, S Hearn, 2006, Establishing a Rural Emergency Medical Retrieval Service, Emergency Medical Journal, Volume 23, Issue 1, Pages 76–78

[4] Anne Siri Johnsen , Sabina Fattah, Stephen J M Sollid , Marius Rehn, Impact of helicopter emergency medical services in major incidents, Published 19 August 2013 volume 3, issue 8

[5] Anders Rostrup ,Bjørn Bjelland, Mårten Sandberg, Medical emergency motorcycle, Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine,2009 **17:9**

[6] Blair L Bigham, Jason E Buick,Steven C Brooks,Laurie J Morrison, Patient Safety in Emergency Medical Services, **Article** in Prehospital Emergency Care ,volume16(1):20-35 · January 2012

[7] Booz, Allen and Hamilton for Department of Health, Social Services & Public Safety (Belfast) and Department of Health & Children (Dublin), 2004, Feasibility Study on

[8] Ken Zafren et Al, 1996, Outcome Assessments and Air Ambulance Services, The Lancet, Volume 347, Issue 9018, Page 1843

[9] Lawner BJ , emergency medical services, Am J Emerg Med. 2012 Jul;30(6):966-71.

[10] Saver, Jeffrey L., et al. "Prehospital use of magnesium sulfate as neuroprotection in acute stroke." *New England Journal of Medicine* 372.6 (2015): 528-536.

[11] S J Caldwell, T R J Parke, C A Graham, P T Munro, 2005, Aeromedical Retrieval to a University Hospital Emergency Department in Scotland, Emergency Medical Journal, Volume 22, Issue 1, Pages 53–55

[12] Olli-Pekka Rynänen, Timo Iiro, Janne Reitala, Heikki Pälve and Antti Malmivaara, Is advanced life support better than basic life support in prehospital care, Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine2010, page18:62

#### **WEBSITES**

- [www.jems.com](http://www.jems.com)
- [www.wikipedia.com](http://www.wikipedia.com)
- [www.google.com](http://www.google.com)
- [www.ems.com](http://www.ems.com)