

Analysis of Un-availed Dispatch and Vehicle Busy in Andhra Pradesh

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A Retrospective Analytical and Quasi-Experimental Study Design

Objectives of the study



- **To understand the pattern of Un-availed Dispatch and Vehicle Busy .**
- **To identify and state the major reasons.**
- **To identify maximum contributory segments.**
- **To conduct a Root- Cause analysis.**
- **To suggest strategies for improvement.**
- **To implement them on a pilot basis and monitor their effect.**

- **Type of Study:** Retrospective analytical study design.
- **Location of study:** Andhra Pradesh
- **Duration of study:** 4 months
- **Sampling type:** Purposive sampling (selecting segments giving maximum number of such cases)
- **Sampling frame:** UAD and VB cases in selected segments for the months of December, January and February.
- **Data (information) to be collected-**
 - Secondary data from IT/IS department of GVK EMRI A.P.
 - Primary Data has to be collected by interviewing the subjects from selected segments with the help of data collection tool.
- **Data collection tools-** Semi-structured questionnaire

Un-availed Dispatch (UAD)



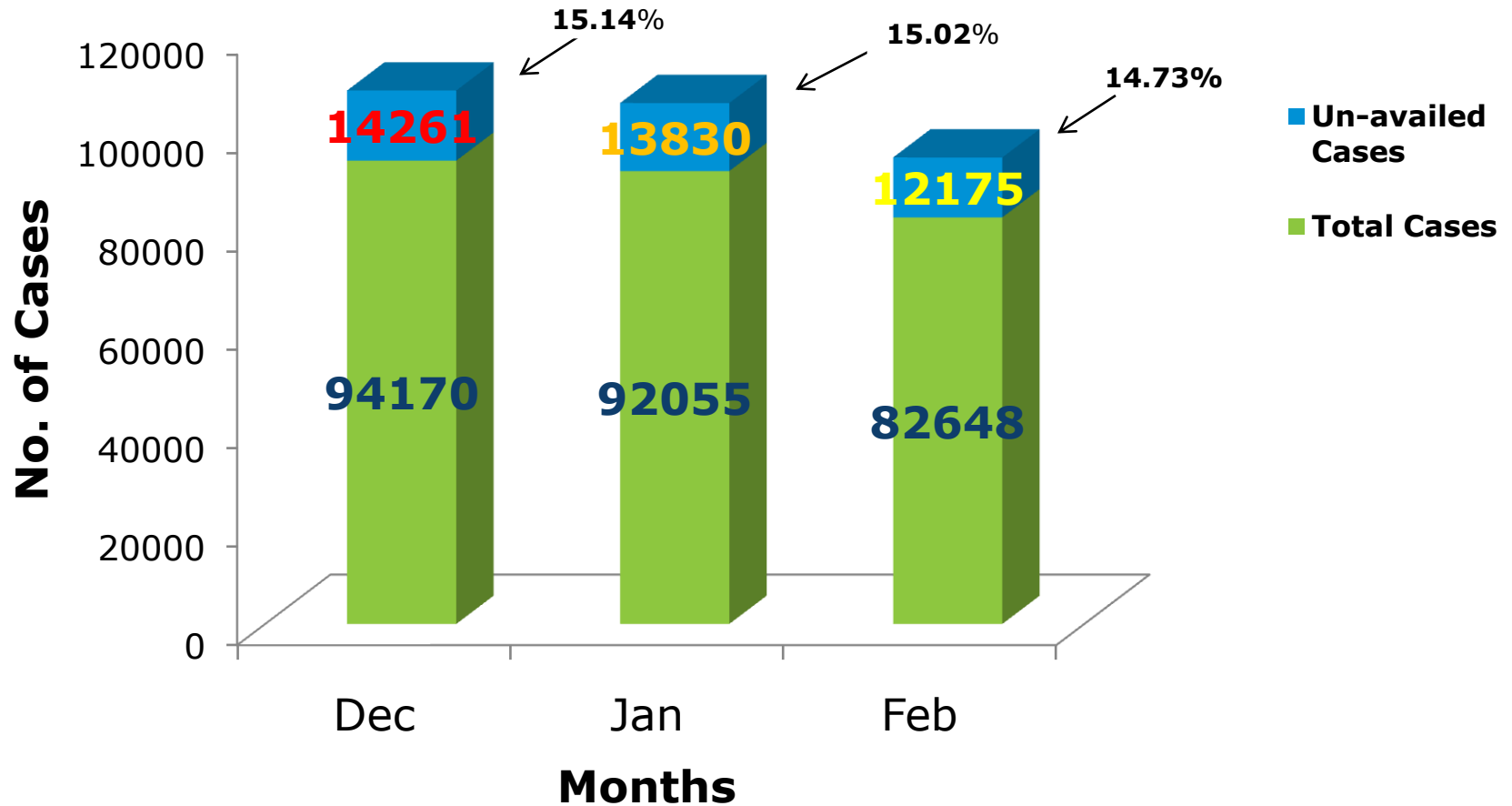
Definition:

- Dispatches where ambulance could not find or serve the patient.

Factors affecting UAD:

1. Response Time: Time taken by ambulance to reach patient= Call to Wheel + Base to Scene time.
2. Type of Emergency.
3. Base to Scene Distance
4. EMT response.

Trend of Unavailed Dispatch including SNR enroute in A.P.



Selection of Districts in A.P

GVK

EMRI

CALL 108
EMERGENCY

S R	DISTRICT	COUNT of CASES	% of Total UAD cases
1	RANGAREDDY	3636	9.0%
2	HYDERABAD	2361	5.9%
3	VISHAKAPATNAM	2342	5.8%
4	WARANGAL	2243	5.6%
5	GUNTUR	2077	5.2%
6	KRISHNA	2045	5.1%
7	MAHABUB NAGAR	2007	5.0%
8	CHITTOOR	1988	4.9%
9	EAST GODAVARI	1952	4.8%
10	NALGONDA	1899	4.7%
11	KARIM NAGAR	1868	4.6%
12	ANANTAPUR	1690	4.2%
13	WEST GODAVARI	1610	4.0%
14	KURNOOL	1451	3.6%
15	KHAMMAM	1387	3.4%
16	NELLORE	1357	3.4%
17	KADAPA	1296	3.2%
18	PRAKASAM	1279	3.2%
19	MEDAK	1253	3.1%
20	NIZAMABAD	1222	3.0%
21	ADILABAD	1172	2.9%
22	VIZIANAGARAM	1170	2.9%
23	SRIKAKULAM	958	2.4%
24	Grand Total	40266	100.0%

Selection of Segments



Selection Criteria for Segments: **30% of all cases in the district.**

HYDERABAD

SR. No	SEGMENTS	COUNT	% of total
1	GANDHI	316	13%
2	CHARMINAR	187	8%
3	MEHADHIPATNAM	169	7%
4	LANGER HOUSE	146	6%

WARANGAL

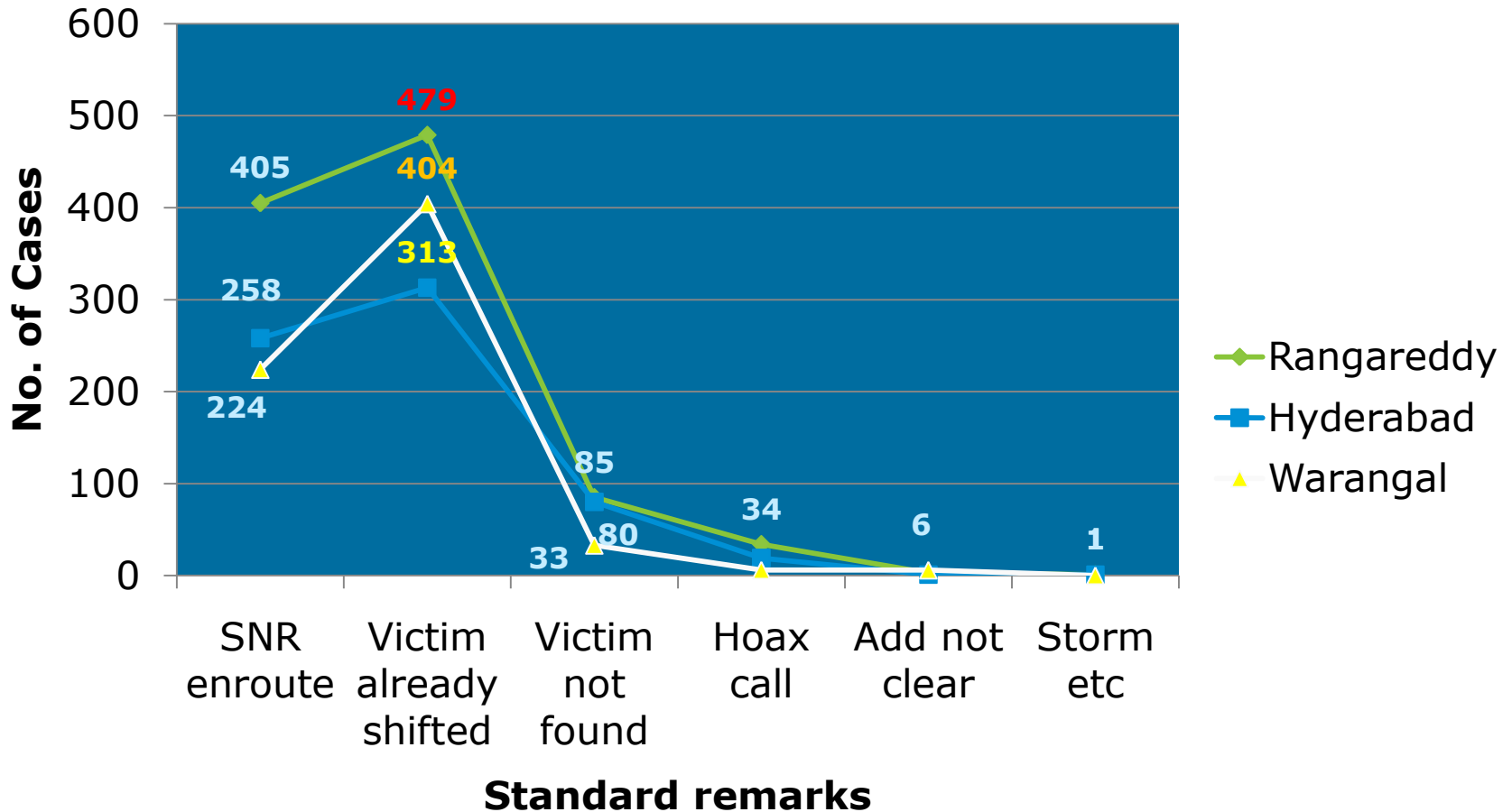
SR. No	SEGMENTS	COUNT	% of total
5	HANMAKONDA	302	13%
6	WARANGAL	184	8%
7	MARRIPEDA	126	6%
8	MULUG	111	5%

RANGAREDDY

SR. No	SEGMENTS	COUNT	% of total	SR No	SEGMENTS	COUNT	% of total
9	KUKATPALLY	347	10%	12	L.B.NAGAR	172	5%
10	UPPAL	249	7%	13	MALKAJGIRI	170	5%
11	QUTBULLAPUR	181	5%				

Un-availed Cases based on Standard Remark

For selected segments:



Contribution of Emergencies in selected Districts to Unavailed-cases

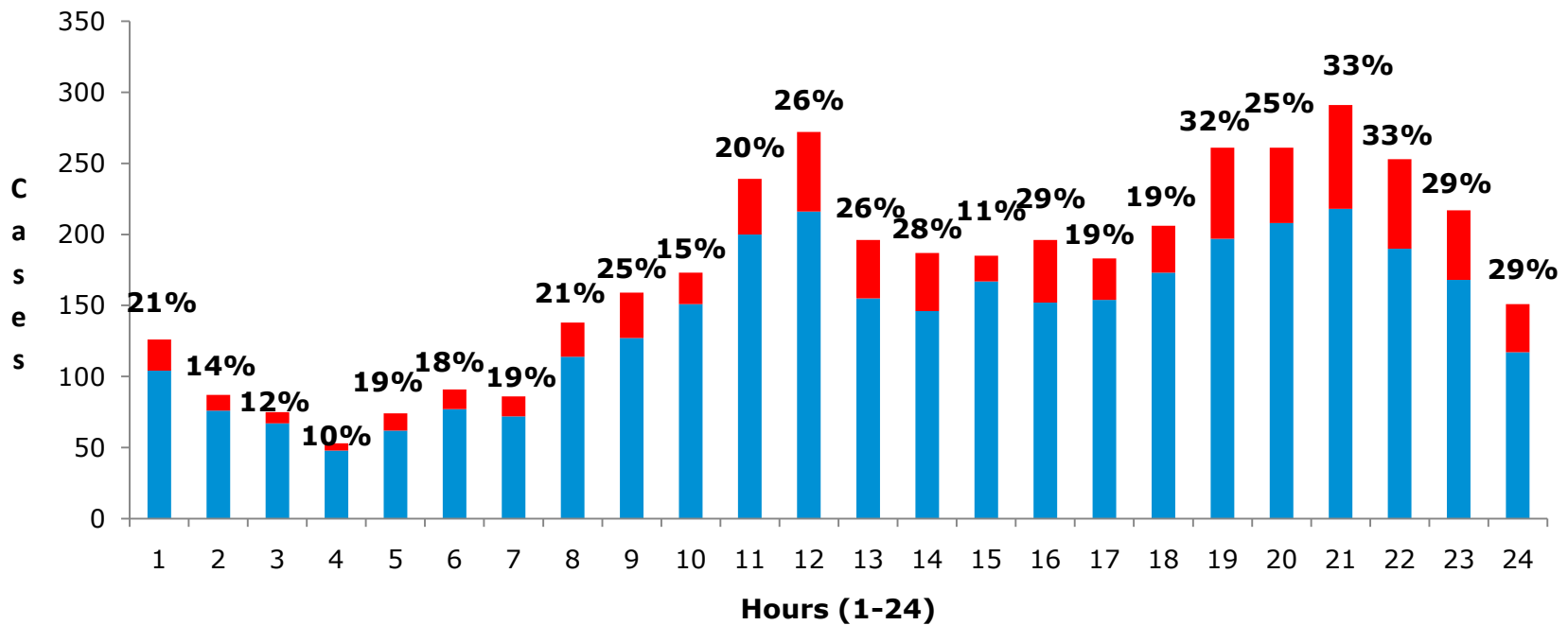


- Out of total cases **34.3%** in **Hyderabad**, **33.4%** in **Rangareddy** and **17.8%** in Warangal are trauma (vehicular) emergencies.
- Suprizingly the **Others Category** has the maximum contribution to the total cases.
 - Others Category actually comprises of cases which are wrongly tagged and belong to other categories according to medical chief compliant.
 - For eg; Trauma (vehicular) and Pregnancy cases increased by 25% on adding cases from Others Category.

Hourly contribution of UAD to total Cases

In (U) segments: Gandhi, Kukatpally & Hanmakonda

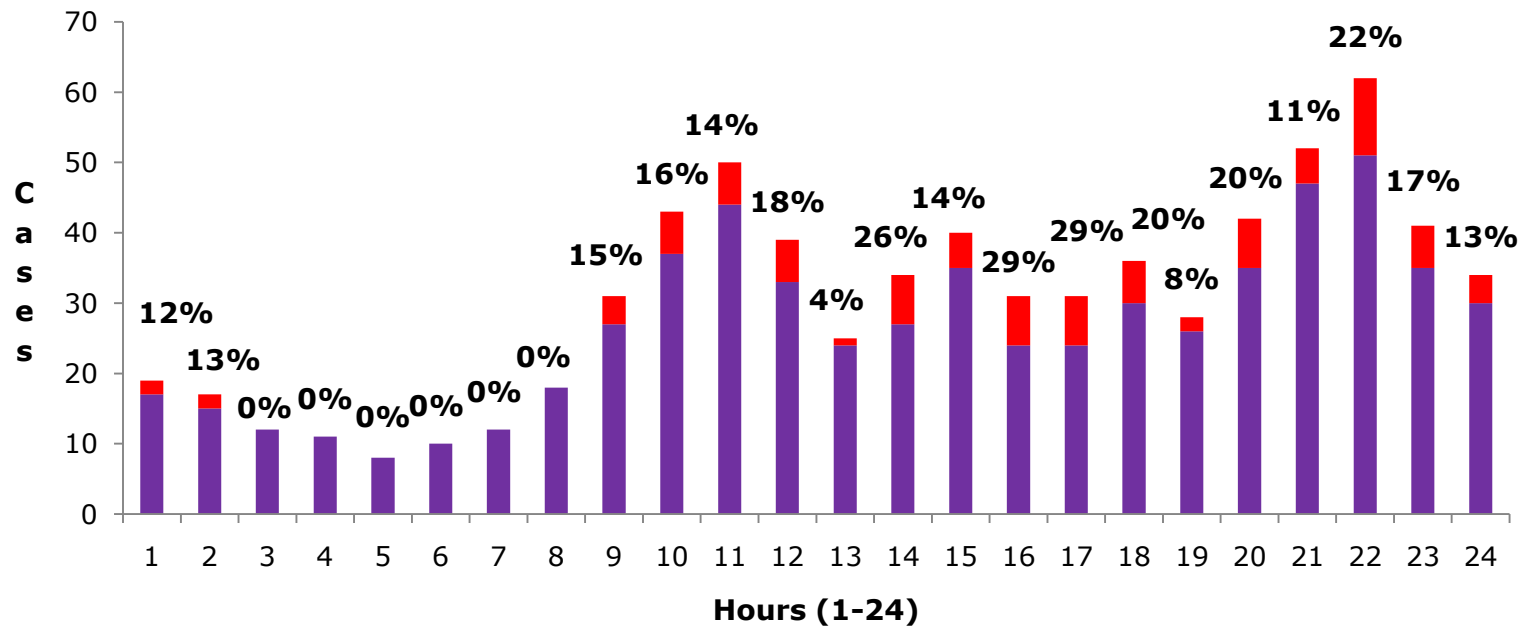
UAD v/s Total Cases



Hourly contribution of UAD to total Cases

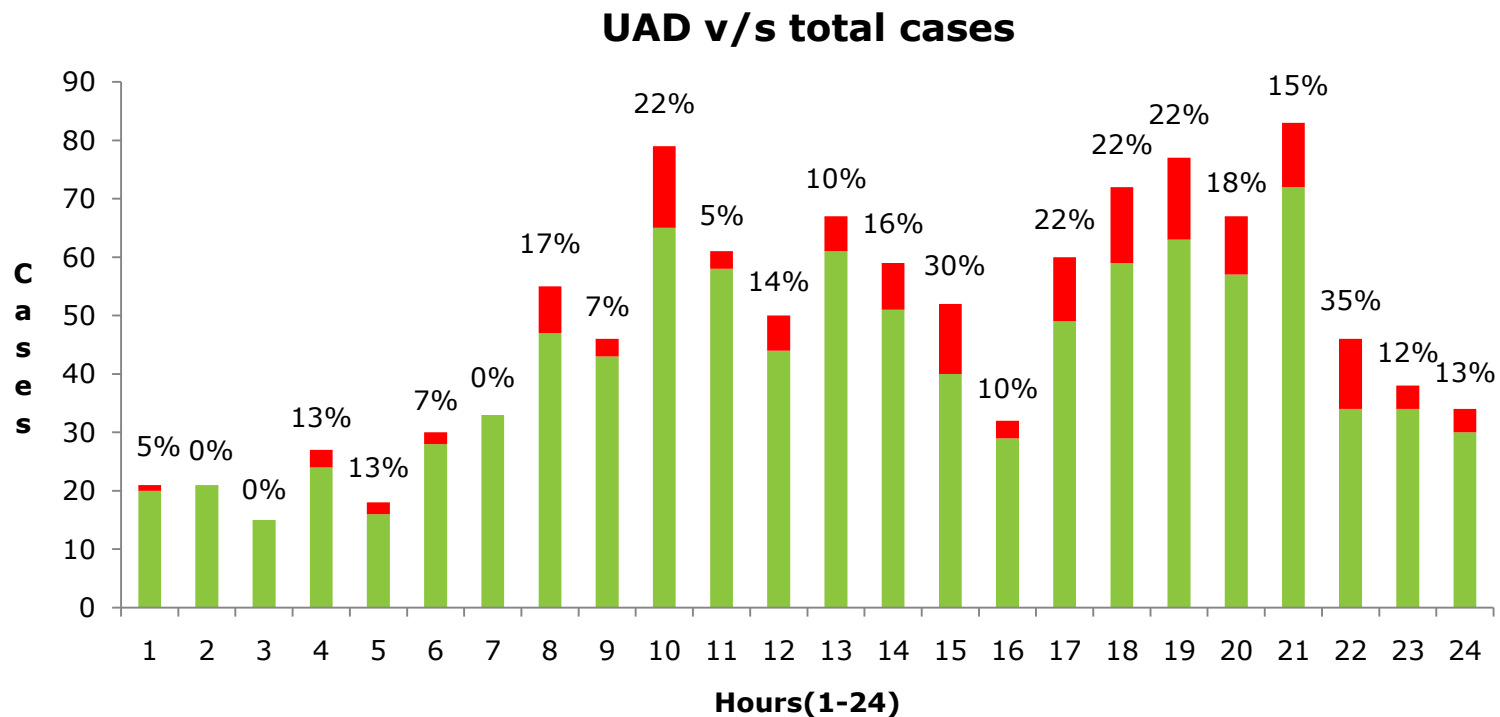
In Warangal (R) segment: Marripeda

UAD v/s total cases



Hourly contribution of UAD to total Cases

In Warangal (T) segment: Mulug



Contribution of Emergencies to Unavailed-cases in Segments



<u>GANDHI</u>				<u>KUKATPALLY</u>			
Sr No	Emergency Name	Count of Cases	% of total	Sr No	Emergency Name	Count of Cases	% of total
1	Trauma (Vehicular)	114	36%	1	Trauma (Vehicular)	170	49%
2	Epilepsy	32	10%	2	Pregnancy related	18	5%
3	Trauma (non Vehicular)	14	4%	3	Cardiac/Cardiovascular	17	5%
4	Pregnancy related	13	4%	4	Trauma (non Vehicular)	16	5%
5	Acute Abdomen	10	3%	5	Epilepsy	11	3%

<u>HANAMKONDA</u>			
Sr No	Emergency Name	Count of Cases	% of total
1	Trauma (Vehicular)	127	42%
2	Suicide attempt	21	7%
3	Epilepsy	18	6%
4	Cardiac/Cardiovascular	13	4%
5	Respiratory	9	3%

Contribution of Emergencies to Unavailed-cases in Segments



<u>MARRIPEDA</u>				<u>MULUG</u>			
Sr No	Emergency Name	Count of Cases	% of total	Sr No	Emergency Name	Count of Cases	% of total
1	Suicide attempt	32	25%	1	Acute Abdomen	26	23%
2	Trauma (Vehicular)	22	17%	2	Trauma (Vehicular)	17	15%
3	Pregnancy related	9	7%	3	Fevers / Infections	12	11%
4	Assault	6	5%	4	Pregnancy related	10	9%
5	Acute Abdomen	5	4%	5	Suicide attempt	8	7%

B to S distance & Response Time per Emergency per Segment

- Gandhi - Emergency: Trauma (Vehicular)**

Dist in Km	R T in mins	Cases	Total	Dist inKm	R T in mins	Cases	Total	Dist in Km	R T in mins	Cases	Total		
1 (TC- 13)	5	5	38%	3 (TC- 10)	10	2	100%	5 (TC- 8)	10	2	25%		
	6	1	62%		11	3			11	1	100%		
	7	1			12	1			13	1			
	8	1			13	2			14	1			
	9	1			21	1			16	1			
	14	1		22	1	19	1						
	16	2	4 (TC- 12)	10	1	100%	6 (TC- 2)	25	1	100%			
2 (TC- 11)	9	3		100%	11			3	6		14	1	100%
	10	2			13			1	7 (TC- 2)		20	1	100%
	11	1			14			1	22		1		
	12	2			15			2	9		39	1	100%
	13	1			16			2	10		17	1	100%
	14	1			17		1	Total		59			
	29	1	22		1	Blank		22					

B to S distance & Response Time per Emergency per Segment

• Hanmakonda - Emergency: Trauma (Vehicular)

Dist in Km	R T in mins	Cases	Total	Dist in Km	R T in mins	Cases	Total	Dist in Km	R T in mins	Cases	Total
1 (TC- 18)	3	2	33%	3 (TC- 11)	9	3	100%	6 (TC- 9)	7	1	22%
	4	2			10	4			9	1	
	5	2			12	1			12	2	78%
	6	3	13		2	13			1		
	7	3	14		1	14			2		
	10	1	67%	4 (TC- 12)	7	1	8%		15	1	
	12	1			10	1	16	1			
	14	1			12	1		7 (TC- 5)	12	1	20%
18	1	13	1		15	2			80%		
		14	4		16	1					
2 (TC- 12)	7	3	100%	5 (TC- 9)	15	1				100%	8 (TC- 9)
	8	1			16	1	19	1			
	9	1			17	1	21	3			
	10	1			22	1	22	1			
	11	1			100%	13	3	26	1		
	14	1		14		2	9		23	1	100%
	15	1		16		1			10 (TC- 3)	18	1
	18	2		17		1				23	1
	20	1		22		1	27			1	
				23	1						

B to S distance & Response Time per Emergency per Segment

Emergency: Pregnancy Related

GANDHI				KUKATPALLY				HANAMKONDA				MARRIPEDA				MULUG			
Dist in Km	R T in mins	Case s	Total	Dist in Km	R T in mins	Case s	Total	Dist in Km	R T in mins	Case s	Total	Dist in Km	R T in mins	Case s	Total	Dist in Km	R T in mins	Cas es	Total
1	5	1	50%	5	28	1	100%	1	16	1	100%		4	1	33%	1	3	1	50%
	10	1	50%	7	22	1	100%	2	8	1	100%		1	7	1		67%		
Grand Total		2		8	16	1	100%		5	14		1	100%	7	38	1		100%	
Blank		10				22		1				17			1	100%	13		
				16	18	1	100%	11	17	1	100%	13	18	2	100%	3	16	1	100%
				Grand Total		5		Grand Total		5		19	40	1	100%	23	32	1	100%
				Blank		4		Blank		1		Grand Total		7		Grand Total			
												Blank		2					

Un-availed Cases by Call to Wheel Time

GANDHI						KUKATPALLY						HAMNAKONDA					
T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total
1	3	34%	11	2		1	11	50%	11	1		1	5	54%	10	1	
2	21		12	2		2	37		14	1		2	54		11	1	
3	42		13	1		3	62		25	1		3	55		Total	208	100%
4	48	66%	18	2		4	43	50%	37	1		4	37	46%			
5	32		20	1		5	27		41	1		5	29				
6	22		21	1		6	20		Total	219	100%	6	12				
7	11		42	1		7	9					7	5				
8	7		Total	199	100%	8	3					8	3				
9	3					9	2					9	6				

Un-availed Cases by Call to Wheel Time

MARRIPEDA						MULUG					
T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total	T (in mins)	Cases	% of Total
1	5	49%	8	1		1	3	61%	8	2	
2	8		9	1		2	16		9	1	
3	15		19	1		3	13		10	1	
4	9	51%	21	1		4	5	39%	11	1	
5	6		23	1		5	3		12	1	
6	3		Total	56	100%	6	2		55	1	
7	5					7	4		Total	53	100%

ERO TAGGING with Call to Wheel time in UAD Cases



- Call to wheel time > 5 mins in selected segments.

N o	ERO id	C to W time (mins)	N o	ERO id	C to W time (mins)	N o	ERO id	C to W time (mins)	N o	ERO id	C to W time (mins)	N o	ERO id	C to W time (mins)
1	eroa108223	7	13	eroa108355	7	25	eroa36983	6	37	eroa38535	7	49	eroa39361	6
2	eroa108228	6	14	eroa108355	7	26	eroa37333	8	38	eroa39074	6	50	eroa39361	8
3	eroa108232	6	15	eroa19150	8	27	eroa37409	42	39	eroa39074	9	51	eroa42879	6
4	eroa108308	6	16	eroa19150	9	28	eroa37463	6	40	eroa39076	18	52	eroa43661	7
5	eroa108309	20	17	eroa30861	6	29	eroa37463	11	41	eroa39079	42			
6	eroa108311	7	18	eroa30861	9	30	eroa38234	7	42	eroa39080	7			
7	eroa108314	6	19	eroa32017	8	31	eroa38236	8	43	eroa39080	14			
8	eroa108314	7	20	eroa34251	10	32	eroa38236	11	44	eroa39348	7			
9	eroa108315	6	21	eroa35334	9	33	eroa38388	6	45	eroa39349	6			
10	eroa108315	8	22	eroa36866	10	34	eroa38389	7	46	eroa39353	55			
11	eroa108315	9	23	eroa36880	6	35	eroa38528	7	47	eroa39354	7			
12	eroa108348	6	24	eroa36982	6	36	eroa38529	11	48	eroa39355	11			

Checking for Cases with Multiple Dispatch of Ambulances



- Cases within 1 km Base to Scene distance of selected segments.
- Out of all 166 cases, Case closure data was available of only 82 cases.
- On calling back the Callers to check Multiple Dispatch, 38 responded. The rest were not reachable, switched of or not responding.
- Out of 38 responders, 26 replied that they had not used GVK EMRI 108 ambulance service while 11 replied that they had; indicating 11 out of 38 cases of multiple dispatch.
- Almost all of the Multiple Dispatch cases took place in Hanamkonda segment (10).

Caller Response of Recent UAD Cases



- **20 UAD Cases within 1 km B to S distance and with Response time of < 5 mins for March and April month till 13 April 2013 were called:**
- **To check for Multiple Dispatches- Only 2 out of 20 (1 from Gandhi, other from Marripeda)**
- **To check for ERO's behavior- Only one out of 20 Callers said ERO was rude and he was disappointed with the service, 18 said ERO was soft spoken and 1 did not respond to this question.**
- **To check for EMT calling on his way to scene-**
 - i. **6 out of 20: EMT didn't call**
 - ii. **7 out of 20: EMT called once**
 - iii. **4 out of 20: EMT called twice**
 - iv. **2 out of 20: EMT called thrice.**
- **To check for EMT intimation about ETA- 3 out 20 were not intimated, 10 were . The ETA they gave ranged from 10 to 30 minutes.**
- **To check for EMT intimation about distance- Only in 2cases EMT mentioned distance; 1 case as 4km and 2nd 18 km.**
- **Wrong Tagging- 3 SNR cases: in 1 case victim said that they donot require service in conference call, similar in 2 case. In 3rd case when EMT called victim before moving from base the patient said SNR.**

UAD Cases per EMT



S. N	Emt no	Emt name	District	UAD Ct	% of Total	S.N	Emt no	Emt name	District	UAD Count	% of Total
1	9372	L.Suresh	Warangal	59	2%	16	4252	S.M. Ahmed	Hyderabad	37	1%
2	37698	Ravindra Mandal	Hyderabad	53	2%	17	6491	D. Surender	Warangal	37	1%
3	22308	Papa Tantati	Rangareddy	52	2%	18	9329	B. Nagaraju	Warangal	37	1%
4	12650	Prasanna Thanagala	Rangareddy	50	2%	19	9335	P. Naresh	Warangal	37	1%
5	9045	Ambadas A	Hyderabad	48	2%	20	13954	Dashrat	Rangareddy	37	1%
6	39192	Raghpathi	Hyderabad	48	2%	21	13796	K.Swathi	Warangal	36	1%
7	20560	V. Nagaraju	Rangareddy	47	2%	22	37670	Suresh M	Rangareddy	36	1%
8	4141	MD. Dastagir	Warangal	44	2%	23	5280	Ashok Kumar B	Hyderabad	35	1%
9	5610	J. Sudha	Warangal	44	2%	24	4070	Raju Kadari	Hyderabad	34	1%
10	9321	J. Karnakar	Warangal	42	2%	25	32204	Venkateshwarlu K	Rangareddy	34	1%
11	33093	Sudhakar	Hyderabad	42	2%	26	33002	V. Kumar Shiluvveru	Hyderabad	34	1%
12	6482	K. Sateesh	Rangareddy	41	2%	27	19688	Krishna Prasad V	Rangareddy	33	1%
13	20587	M.S. Reddy	Warangal	41	2%	28	32965	Mallesh Karkuri	Rangareddy	33	1%
14	33853	P. Pragidimarri	Rangareddy	41	2%	29	108083	Not available	Hyderabad	32	1%
15	21207	K.S. Dasari	Hyderabad	38	1%	30	17010	R. Gantagogu	Rangareddy	31	1%

In selected segments:

From above data- Warangal- 9 EMTs, Rangareddy- 11 EMTs, Hyderabad- 10 EMTs. 19 EMTs had 30-20 UADs, 59 had 19-5 UADs, 56 had <=5 UADs and 106 EMTs had 1 UAD in the past 3 months. Total cases: 2660, Total EMTs- 271.

Analysis of Caller Phone no.

- **Multiple cases assigned through same caller nos:**

Sr No	Caller number	Total unavailed cases	District	Caller
1	4039191900	19	Multiple	Other
2	9959098388	10	Hyderabad	EMT
3	9704550832	6	Hyderabad	EMT
4	9490160543	5	Warangal	EMT
5	9492025010	5	Warangal	Other
6	9949995429	4	Rangareddy	EMT
7	9949995431	4	Rangareddy	EMT

SrNo	Caller number	Total unavailed cases	District	Caller
8	4023261166	4	Hyderabad	Other
9	8008303342	4	Warangal	EMT
10	8179621806	4	Warangal	EMT
11	8179621815	4	Warangal	Other
12	8978801543	4	Hyderabad	EMT
13	9866554079	3	Rangareddy	EMT

- **22 callers have called 3 times and 98 callers have called 2 times**
- **Total calls of this kind were 135**
- **9 out of above 13 set of calls were made by EMT.**

Observations on listening few of above Calls .



OBSERVATIONS

1. 19 previous cases were diverted from 104
2. 7 IFT cases registered by EMT went UAD
3. 9 Cases where EMT called to transfer case to other EMT due to various reasons- VB, Vehicle Breakdown, unable to reach scene etc
4. 3 cases where EMT called to get back the previous assigned case which he had transferred
5. 11 cases EMT got the patient and called ERC to get it assigned and take Incident ID and Call time. Out of which 7 were Reverse Transport cases, 1 was EMTs relative, 2 were RTA. In 1 case EMT gave first aid to the victim
6. 3 cases where police had called but no ERO conference call
7. 3 calls were from Railway Station
8. 6 cases Caller was calling for independent reasons. 1 Caller called thrice for RTA case. Each case was different . The caller seemed drunk.
9. No Call details were available for 5 calls.
10. In 1 case call got disconnected when ERO said Namaste 108
11. There was Confusion about a case because of which the case went into SNR once and UAD once

Summary



Un-availed Dispatch

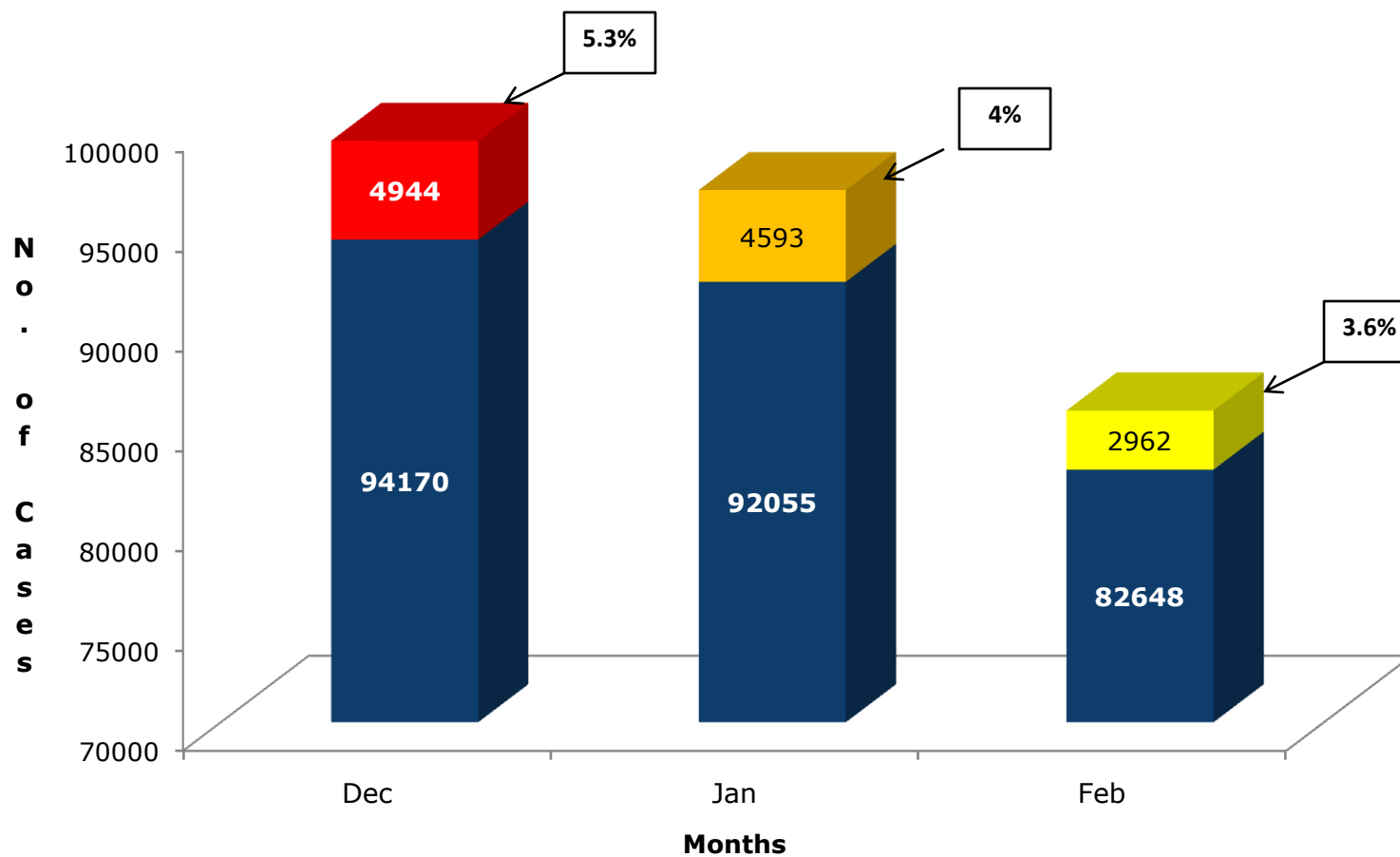
- **Selected Districts: Rangareddy, Hyderabad & Warangal (3)**
- **Segments selected: 13. Detailed Analysis: 3 segments.**
- **Observations:**
 1. **Un-availed dispatch cases % has reduced progressively over Dec, Jan and Feb.**
 2. **Peak evening hours of UAD match with those of total cases but not in afternoon.**
 3. **Maximum cases: with Standard Remark- Victim not found, Emergency type-trauma(vehicular); Hoax calls very few compared to total calls.**
 4. **Maximum cases- within 1km radius of ambulance Base location (17%).**
 5. **Lowest no. of cases with response time > 20 mins.**
 6. **Data challenges.**
 7. **Repetition of UAD cases from same no.**
 8. **UAD cases per EMT: Out of 271 EMTs, 4 EMTs have > 50 UAD cases & 10 EMTs have > 40 UAD cases.**

Vehicle Busy



Cases where ambulance cannot be assigned due to ambulance being busy, already on a dispatch for another emergency and the caller denies service because of the distance for next available ambulance.

Trend of Vehicle Busy in A.P.



Selection of Districts in A.P

SrNo	Districts	Count	% of total
1	<u>VISHAKAPATNAM</u>	<u>1227</u>	10%
2	<u>RANGAREDDY</u>	<u>1037</u>	8%
3	<u>EAST GODAVARI</u>	<u>1002</u>	8%
4	<u>MAHABUB NAGAR</u>	<u>704</u>	6%
5	KHAMMAM	690	6%
6	VIZIANAGARAM	690	6%
7	KRISHNA	681	5%
8	SRIKAKULAM	602	5%
9	HYDERABAD	537	4%
10	KURNOOL	526	4%
11	WARANGAL	525	4%
12	KARIM NAGAR	524	4%

SrNo	Districts	Count	% of total
13	CHITTOOR	499	4%
14	GUNTUR	484	4%
15	ANANTAPUR	451	4%
16	WEST GODAVARI	382	3%
17	NALGONDA	367	3%
18	NELLORE	328	3%
19	MEDAK	306	2%
20	NIZAMABAD	279	2%
21	KADAPA	275	2%
22	ADILABAD	233	2%
23	PRAKASAM	150	1%
24	Grand Total	12499	

Selection of Mandals in A.P

Selection Criteria for Mandals: 25% of all VB cases in the district.

VISHAKHAPATNAM			
Sr No	Mandal	Count	% of Total
1	VISAKHAPATNAM	89	7%
2	ANAKAPALLI	70	6%
3	MUNCHINGPUT(ITDA)	62	5%
4	GAJUWAKA	54	4%
5	CHODAVARAM	48	4%

RANGAREDDY			
Sr No	Mandal	Count	% of Total
1	MALKAJGIRI	48	5%
2	RAJENDRANAGAR	48	5%
3	TANDUR	46	4%
4	HAYATNAGAR	38	4%
5	IBRAHIMPATNAM	37	4%
6	YACHAREM	36	3%

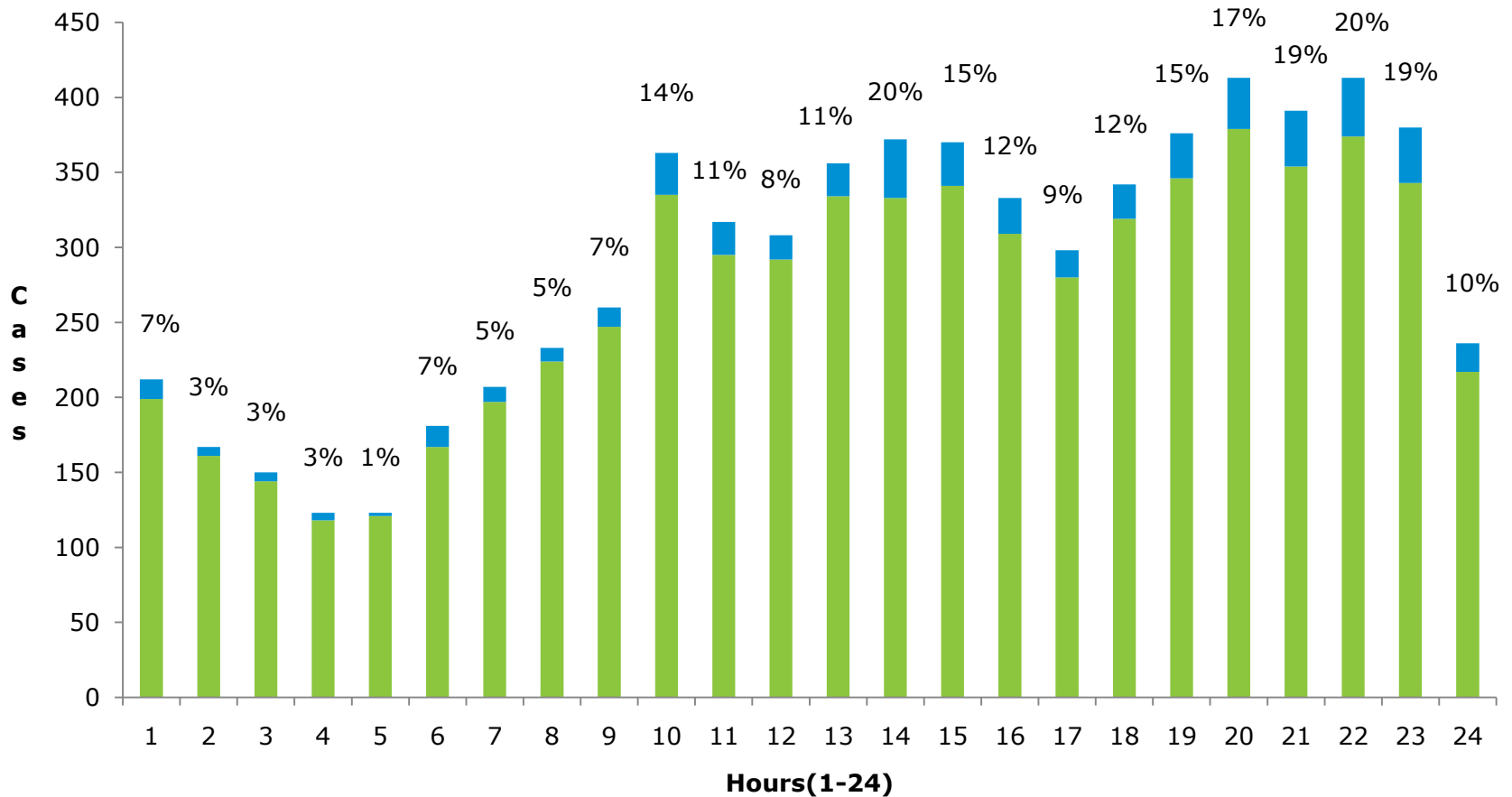
MAHABUB NAGAR			
Sr No	Mandal	Count	% of Total
1	MAHABUB NAGAR	48	7%
2	FAROOQNAGAR	47	7%
3	JADCHERLA	29	4%
4	NAGARKURNOOL	26	4%
5	DEVARKADRA	21	3%

EAST GODAVARI			
Sr No	Mandal	Count	% of Total
1	KAKINADA	94	9%
2	RAMPACHODAVARAM (ITDA)	51	5%
3	PITHAPURAM	50	5%
4	PEDDAPURAM	44	4%
5	RAJAHMUNDRI	44	4%

Hourly contribution of VB to total Cases

In 8 selected mandals:

VB v/s Total Cases



Hourly contribution of VB to total Cases

ANAKAPALLI								FAROOQNAGAR							
Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total
1	32	5	16%	13	66	5	8%	1	24	0	0%	13	24	2	8%
2	30	4	13%	14	40	5	13%	2	10	0	0%	14	17	3	18%
3	18	0	0%	15	40	5	13%	3	19	1	5%	15	18	2	11%
4	12	1	8%	16	39	3	8%	4	13	0	0%	16	23	3	13%
5	13	1	8%	17	37	3	8%	5	9	0	0%	17	25	1	4%
6	21	1	5%	18	34	1	3%	6	10	0	0%	18	43	4	9%
7	18	0	0%	19	37	3	8%	7	18	0	0%	19	41	2	5%
8	30	0	0%	20	47	3	6%	8	13	0	0%	20	42	3	7%
9	32	0	0%	21	36	4	11%	9	20	0	0%	21	48	9	19%
10	47	4	9%	22	41	4	10%	10	28	1	4%	22	40	7	18%
11	33	3	9%	23	51	10	20%	11	20	0	0%	23	29	5	17%
12	43	2	5%	24	33	1	3%	12	29	2	7%	24	24	2	8%

Hourly contribution of VB to total Cases

KAKINADA								MAHABUB NAGAR							
Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total
1	36	3	8%	13	57	7	12%	1	20	1	5%	13	19	0	0%
2	20	0	0%	14	59	8	14%	2	19	1	5%	14	33	0	0%
3	25	3	12%	15	58	7	12%	3	11	0	0%	15	30	0	0%
4	16	1	6%	16	51	5	10%	4	14	1	7%	16	29	0	0%
5	25	1	4%	17	40	1	3%	5	7	0	0%	17	21	0	0%
6	35	4	11%	18	59	1	2%	6	16	5	31%	18	27	2	7%
7	33	4	12%	19	52	11	21%	7	15	2	13%	19	36	3	8%
8	34	1	3%	20	57	11	19%	8	22	4	18%	20	47	2	4%
9	46	3	7%	21	53	1	2%	9	16	1	6%	21	41	4	10%
10	53	6	11%	22	53	5	9%	10	36	5	14%	22	42	5	12%
11	46	3	7%	23	53	4	8%	11	17	7	41%	23	28	3	11%
12	36	1	3%	24	33	2	6%	12	21	1	5%	24	19	1	5%

Hourly contribution of VB to total Cases

MALKAJGIRI								RAJENDRA NAGAR							
Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total
1	34	3	9%	13	31	3	10%	1	20	0	0%	13	38	2	5%
2	23	0	0%	14	41	5	12%	2	19	0	0%	14	30	4	13%
3	18	0	0%	15	50	1	2%	3	21	0	0%	15	37	6	16%
4	17	2	12%	16	32	2	6%	4	14	0	0%	16	41	4	10%
5	16	0	0%	17	25	1	4%	5	15	0	0%	17	43	2	5%
6	26	0	0%	18	31	0	0%	6	23	0	0%	18	38	1	3%
7	24	0	0%	19	46	4	9%	7	15	1	7%	19	51	3	6%
8	25	1	4%	20	44	3	7%	8	37	0	0%	20	49	4	8%
9	32	1	3%	21	44	4	9%	9	26	1	4%	21	54	4	7%
10	41	3	7%	22	58	7	12%	10	32	1	3%	22	49	3	6%
11	58	0	0%	23	49	3	6%	11	36	1	3%	23	52	5	10%
12	32	0	0%	24	27	5	19%	12	43	4	9%	24	26	2	8%

Hourly contribution of VB to total Cases

RAMCHODAVARAM(ITDA)								VISHAKHAPATNAM							
Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total	Hrs	T.Cases	V.B Cases	VB% total
1	6	0	0%	13	27	1	4%	1	27	1	4%	13	68	2	3%
2	5	1	20%	14	16	1	6%	2	35	0	0%	14	103	13	13%
3	6	1	17%	15	26	3	12%	3	26	1	4%	15	82	5	6%
4	14	0	0%	16	29	4	14%	4	18	0	0%	16	67	3	4%
5	10	0	0%	17	28	5	18%	5	19	0	0%	17	51	5	10%
6	6	1	17%	18	29	7	24%	6	32	3	9%	18	64	7	11%
7	23	2	9%	19	24	2	8%	7	43	1	2%	19	66	2	3%
8	22	1	5%	20	28	0	0%	8	49	2	4%	20	57	8	14%
9	14	3	21%	21	28	2	7%	9	51	4	8%	21	65	9	14%
10	36	4	11%	22	27	3	11%	10	69	4	6%	22	60	5	8%
11	30	4	13%	23	13	1	8%	11	54	4	7%	23	64	6	9%
12	24	5	21%	24	7	0	0%	12	59	1	2%	24	47	3	6%

Analysis of VB Cases from 1 am to 6 am.



- **Out of 46 VB cases from 1 am to 6 am, data of previous cases is available for only 10.**
- **Out of 46 VB cases, 12 were from Anakpali and Kakinada, 8 were from Mahabub Nagar, 5 were from Malkajgiri and Vishakhapatnam, 3 from Rampachodavaram and 1 from Farooq Nagar. Total EM count is also high during these hours at Anakpali & Kakinada.**
- **All 7 previous cases in Anakapali were taken in King George hospital . In complete 24 hrs out of 38 VB cases from Anakapali, around half (20) cases are taken to KGH.**

Diff between Admit to base time and Assign to admit time

- In the selected segments for previously assigned cases (173):

S. No	Diff between Admit to Base time and Case Assign to Admit time (hh:mm)	Time of Case	Mandals	EMT Id
1	1:36	16:27	ANAKAPALLI	6876
2	0:43	21:14	ANAKAPALLI	6599
3	1:36	15:28	ANAKAPALLI	6876
4	0:28	17:34	ANAKAPALLI	4043
5	0:57	17:31	ANAKAPALLI	12668
6	0:29	15:08	ANAKAPALLI	6248
7	0:42	11:31	RAMPACHODAV ARAM(ITDA)	18143
8	0:42	11:13	RAMPACHODAV ARAM(ITDA)	18143

- As per raw data of Dec'13, Jan'14 and Feb'14:
- Rangareddy- highest no. of trips & 2nd highest VB cases
- Vishakhapatnam ranks 6th in no. of trips and highest in VB cases.
- Mahabub Nagar ranks 9th in no. of trips & 4th highest in Vb cases
- East Godavari ranks 14th out of 23 districts in no. of trips & is 3rd highest in VB cases
- Thus, relation between no. of trips and VB cases is inconclusive and differs from district to district.

Ambulance Downtime v/s VB in AP



S.N	District	Mandal	Avg amby downtime per Amby per month	VB for Mandal
1	East Godavari	Rampachodavaram	5.6 days	15%
2	East Godavari	Kakinada	5.4 days	12%
3	Mahabub Nagar	Mahabub Nagar	4.6 days	8%
4	Mahabub Nagar	Farooq Nagar	6.6 days	10%
5	Vishakhapatnam	Anakpali	18.6 hours	9%
6	Vishakhapatnam	Vishakhapatnam	3 days	10%
7	Rangareddy	Malkajgiri	6.25 days	7%
8	Rangareddy	Rajendra Nagar	7.25 hrs	8%

In Malkajgiri, average ambulance downtime is one of highest (6.25 days, but VB is lowest among 8 mandals.

Summary



Vehicle Busy

- **Selected Districts: Rangareddy, Vishakhapatnam, Mahabub Nagar, East Godavari(4)**
- **Segments selected: 21 Detailed Analysis: 3 segments**
- **Observations:**
 1. **VB cases % has reduced progressively over Dec, Jan and Feb.**
 2. **Peak evening hours of VB match with those of total cases but not in afternoon.**
 3. **No significant relation between No. of Trips and VB cases**
 4. **Data challenges.**

Recommendations



Briefing of EMTs from Gandhi, Kukatpally and Hanamkonda to:

- 1. Call the victim constantly on their way to the scene and inform them about their estimated time to arrive.**
- 2. Instantaneous Case closure of UAD cases.**
- 3. Call in ERC once they have admitted the victim and they are free.**

Night time relocation of:

- 4. Ambulance of Police Station Chodavaram closer to Gosha hospital base location**
- 5. Ambulance of Rural Police station Yelamanchili to Petrol Pump Kasimkota**
- 6. Token of appreciation to EMTs with lowest UAD cases and highlighting EMTs with high no. of such cases.**
- 7. Warning to EMTs responsible for fake UAD cases.**
- 8. Discussing with Mahindra Satyam on modifying application of SNR en-route database.**

THANK YOU