

MFM Project

MOSCOW AMBULANCE SERVICE FINAL PRESENTATION

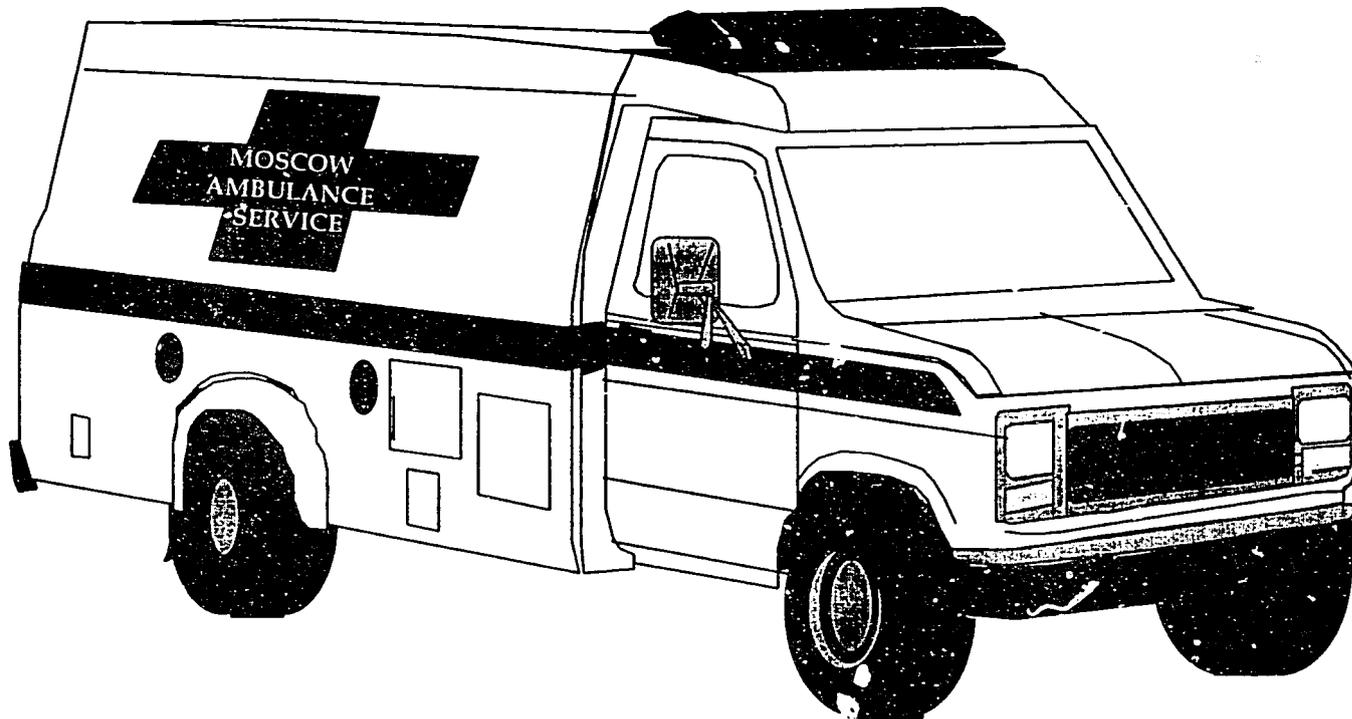
By
Andersen Consulting

Research Triangle Institute
1615 M Street, NW, Suite 740
Washington, DC 20036

Municipal Finance and Management
Project No. 5656
Contract No. CCN-0007-C-00-3110-0

March 9 & 10, 1995





**FINAL PRESENTATION - 9 AND 10 MARCH 1995
7 WEEK PROJECT WAS LED BY QUENTIN MORELLE AND IAN SPRACKLING.**

**ANDERSEN
CONSULTING**
ARTHUR ANDERSEN & CO., S.C.

AGENDA - 9 March 1995

- 9:00 Introduction - Quentin Morelle (AC)
- 9:45 Whom we covered within the Moscow Ambulance Service - Elena Baranova (AC)
- 9:55 Executive interviews and Change Check 50 results - Anneke Van Woudenberg (AC)
- 10:05 Career management, promotions, bonuses (LT strategy) - Anneke Van Woudenberg (AC)
- 11:00 Coffee Break
- 11:15 Information system analysis and critique - Olga Bessalova, Oleg Jigachov, Stanislav Kiselev (AC)
- 12:30 Lunch
- 1:00 Observation results, operating problems and patient care - Irina Luchanskaya, Patrick Gormley (GMAS), Anneke Van Woudenberg (AC)
- 3:00 Coffee Break
- 3:15 Personnel and vehicle utilization - Elena Baranova (AC)
- 4:45 Cost structure and vehicle cost issues - Olga Bessalova & Stanislav Kiselev (AC)
- 4:55 Andersen competition - Elena Baranova (AC)
- 5:00 Comparison table and comments - Patrick Gormley (GMAS)
- 5:45 Conclusions - Quentin Morelle (AC)

AGENDA - 10 March 1995

- 9:00 Presentation of Change Programme - Anneke Van Woudenberg (AC)
- 11:15 Coffee Break
- 11:30 Quick Improvement Suggestions - Stanislav Kiselev (AC)
- 12:30 Lunch
- 1:00 Discussion and Concluding Remarks
- Moscow Ambulance Service
 - Andersen Consulting

THANKS TO

- Mr. Elkis outstanding support throughout the 7 week study. The team were well looked after, had access to information and helped by well selected Moscow ambulance staff.

- - Irina Luchnskaya - Olga Bespalova For their hard work, persistence to obtain required data, patience with demanding Andersen Consultants dedication to substantiate team conclusions with all required evidence and objectivity
- Olga Sokolova - Konstantin Alexankhin
- Svetlana Marchenko - Oleg Jigachov

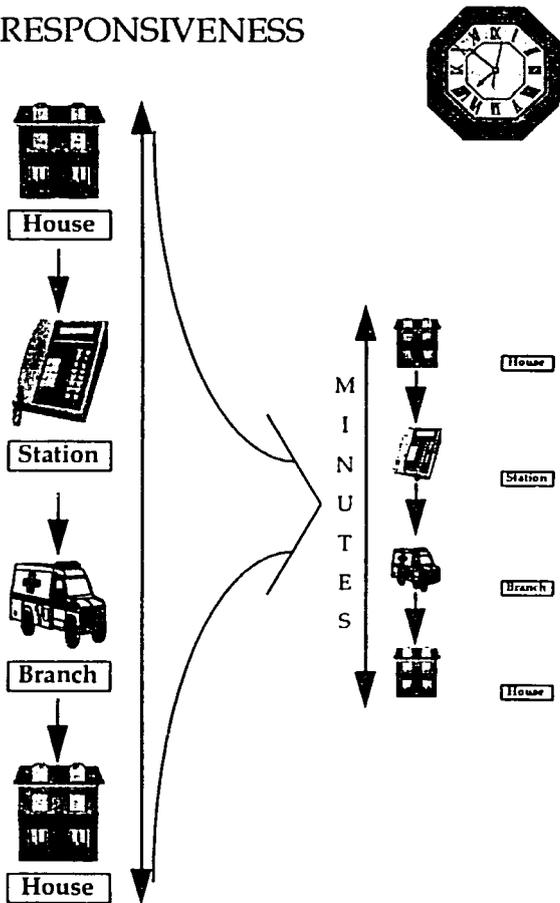
- Moscow ambulance staff for their willingness to provide sensitive and sometimes embarrassing data.

WHAT THIS 7 WEEK STUDY SET ITSELF TO ACHIEVE WAS

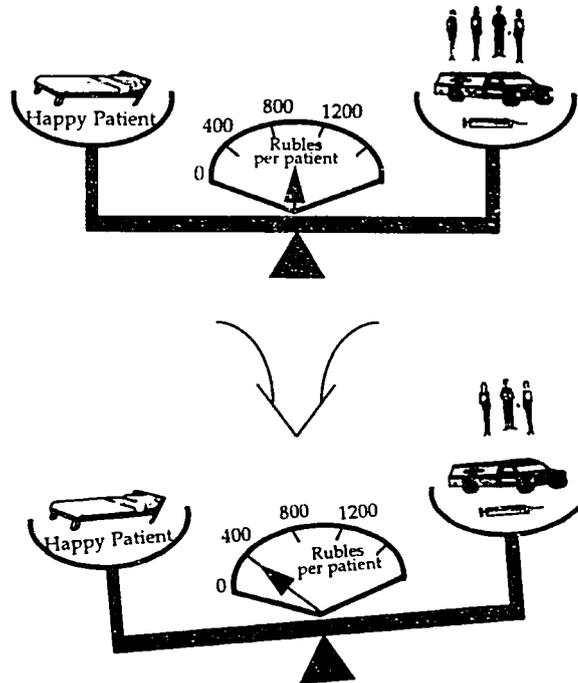
- Gain consensus on all major issues.
- Agree on a practical and feasible change program to be implemented shortly which will seek to improve Moscow Ambulance Service
 - Responsiveness
 - Efficiency
 - Customer satisfaction.
- Support conclusions on facts, findings and expertise.

HOW WE ARE DEFINING

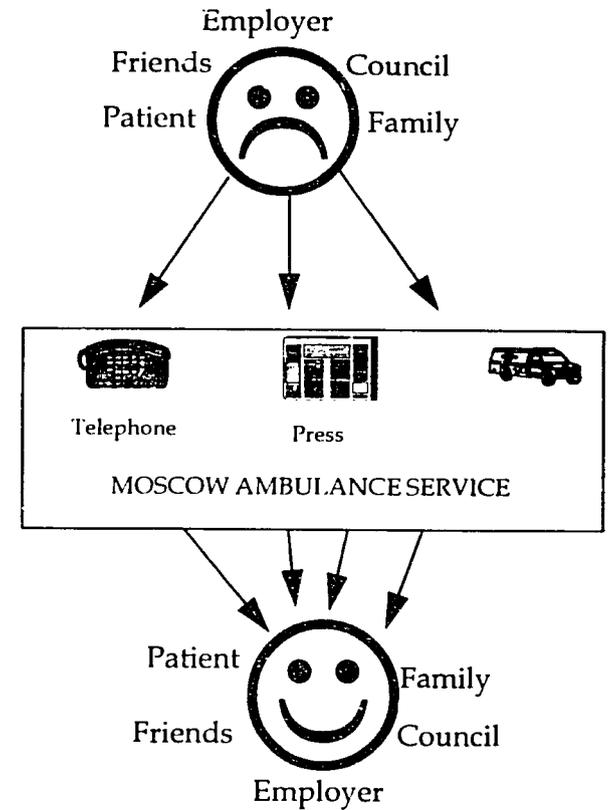
RESPONSIVENESS



EFFICIENCY



CUSTOMER SATISFACTION



LIMITS TO THIS OVERALL REVIEW

1 Time



Due to the short timing of this study all our efforts had to concentrate on the MAS core activities only i.e.. activities related to "O3" calls

2 Communication



While we agreed with Mr Elkis to brief his people on our study progress and findings we had to limit this communication exercise to still achieve our ambitious work program

3 Computer System



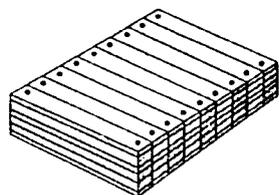
While crucial telephone data is being held on Mr Davydov system, it took 4 weeks to sort out this data on a compatible software and to find out that the data proved inaccurate

4 Unreliable Data



The study for some parts had to use historical data that could not be satisfactorily checked out and hence using potentially unreliable data

EXTENT OF OUR QUANTITATIVE EXERCISE



The use of 440 000 manually inputted figures



The use of 170 000 numbers inputted on 90 computer files



The sorting out of each file using 3 to 5 out of the 10-20 sorting keys in 3-5 different formats producing over 250 graphs

PROJECT STRUCTURE

Steering Committee
Mr Elkis, Mr Al Sharp, Mr I Sprackling

Project Manager
Quentin Morelle

Change Management Team
Anneke Van Woudenberg

- Patrick Gormley (Manchester Amb)
- Irina Luchnskaya
- Olga Sokolova
- Svetlana Marchenko

- Review current strategy
- Executive interview
- Diagnostic 100
- Process mapping
- Observations

Logistics

- Stans Kiselev (AC)
- Olga Bespalova
- Konstantin Alexaknin

- Planning and reporting system
- Costing

Business Analysts

- Elena Baranova (AC)
- Oleg Jigachov
- Ludmila Chernova
- Natach Bulgakova (AC)
- Igor Golovkin (AC)

- Historical performance
- Organisation chart
- Mapping
- Shift patterns
- Skills review

Define Change Program

WHO WE COVERED WITHIN THE MOSCOW AMBULANCE SERVICE

Mr. Elkis

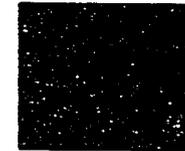


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- Full time project team members.
- Project team members.
- Reviewed study progress.
- Provided information.
- Contributed to executive interviews.
- Diagnostic 100.
- Observations made.
- Andersen competition
- People covered by process flow.

THE MAS STRATEGY

Taking a Closer Look



Good Points:

- A thorough approach
- Numerous implementation ideas
- A section for each department
- Responsibilities for each item
- Time scales



Weaknesses:

- Lacks simple, achievable short term goals
- No central point of control
- Unclear areas for responsibility
- No clearly defined targets
- Lacks a monitoring mechanism
- Unclear overall objectives for each department
- Unrealistic ambitions
- No forward planning beyond 1995

EXECUTIVE INTERVIEWS

Who was Interviewed?
All Deputies (12)
Selected Regional Directors & others (7)

General Impressions

MAS Deputies need to improve:

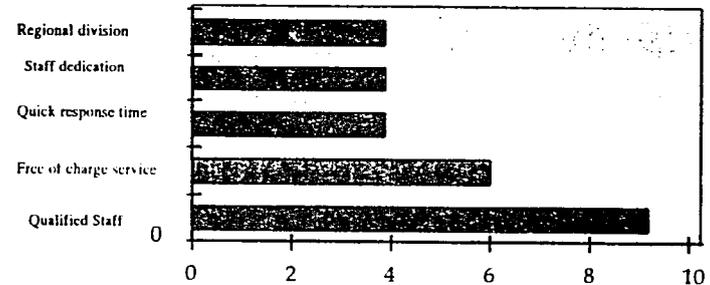
- Teamwork
- Awareness of other departments
- Agreement on a future vision for MAS
- Budgetary control in their departments
- Involvement in future planning
- Monitoring controls in their departments
- Co-ordination with other departments

**All the deputies together
 could only answer 50% of
 the AC competition**

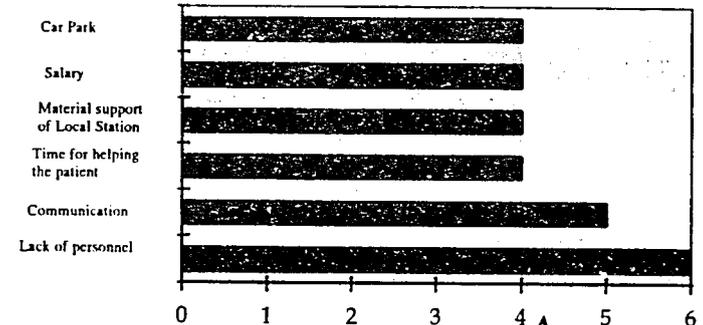


Views of the Deputies

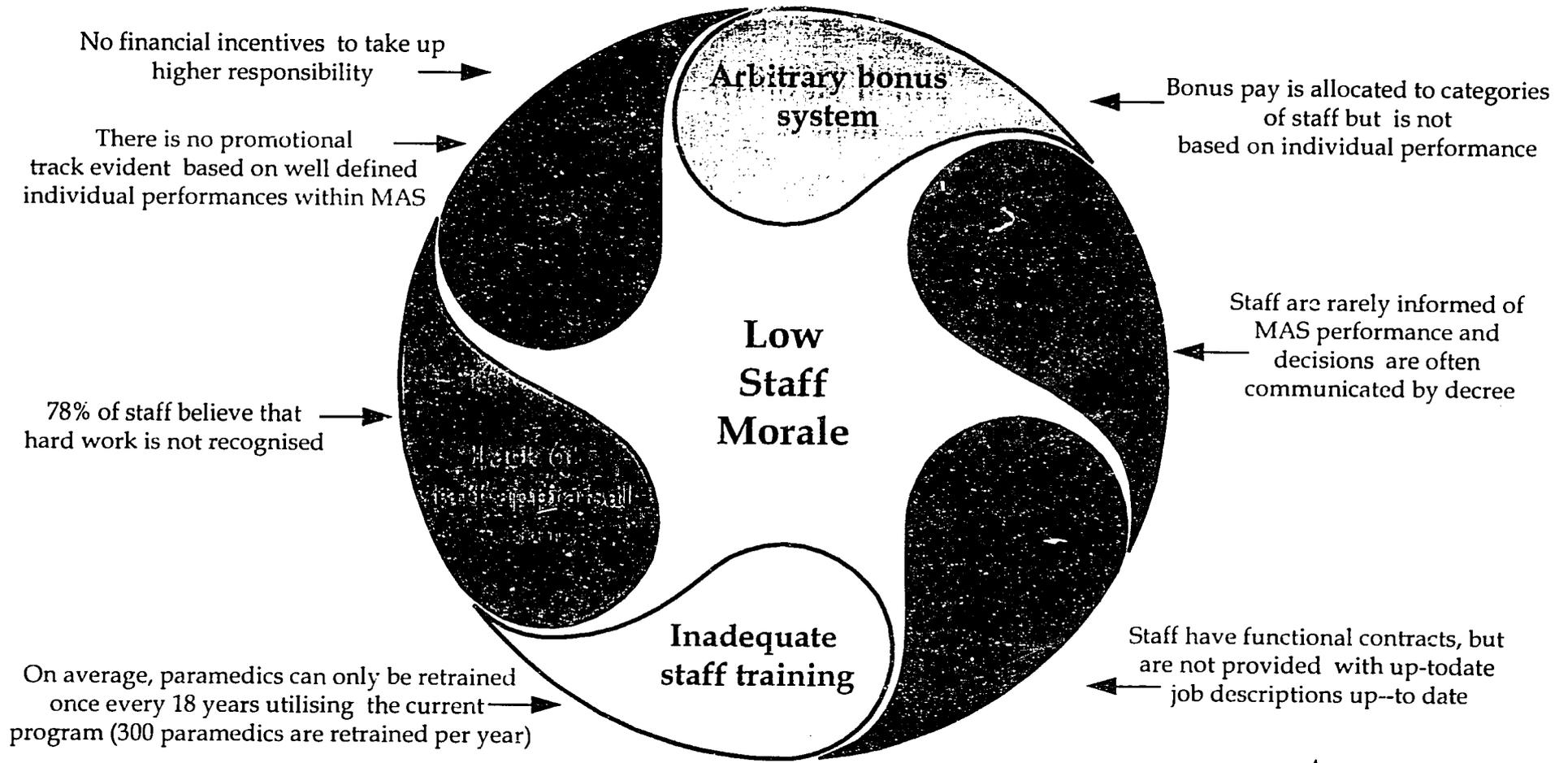
Strengths of MAS



Areas to Improve



MAS PERSONNEL MANAGEMENT



CHANGE CHECK 50 ✓

What is It?

- A questionnaire containing 50 key questions
- Used to determine how employees perceive an organisation
- Completed anonymously to ensure honesty
- Utilised as a tool to see whether an organisation is ready for change

Who Participated?

- Questionnaire given to all Deputies, Regional Directors and various field staff in MAS
- Covered different regions and stations
- 35 people responded
- Great enthusiasm was shown by participants

The Results

What do MAS Employees Think?

- There is a clear recognition that change is needed to improve MAS and now is the time to do it
- MAS is not focused on the patient
- Employees believe that MAS is not working as effectively as possible
- There is a lack of pride in the service
- MAS procedures need to be simplified
- Management systems need to be improved
- There is a lack of effective monitoring
- MAS culture blocks innovation and participation in improving the service
- Current improvement projects are poorly planned
- Participation in change projects needs to be improved



80% of MAS employees agree that MAS needs to improve its service to the people of Moscow



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THERE IS NEED FOR A CLEAR, WELL COMMUNICATED FUTURE DIRECTION FOR MAS

PEOPLE LACK PRIDE IN MAS

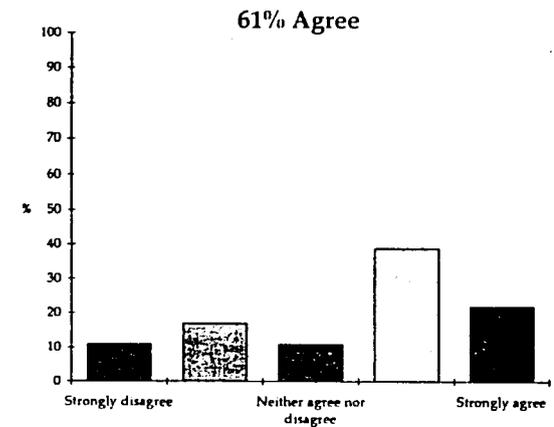
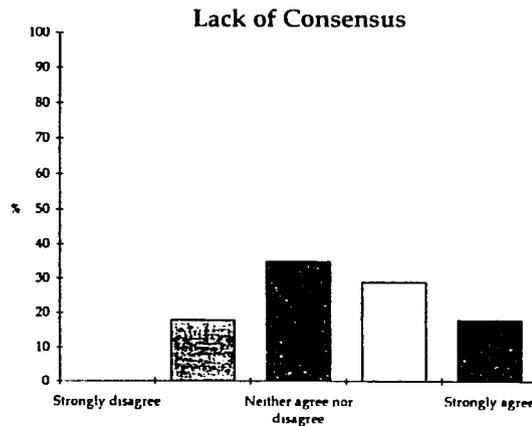
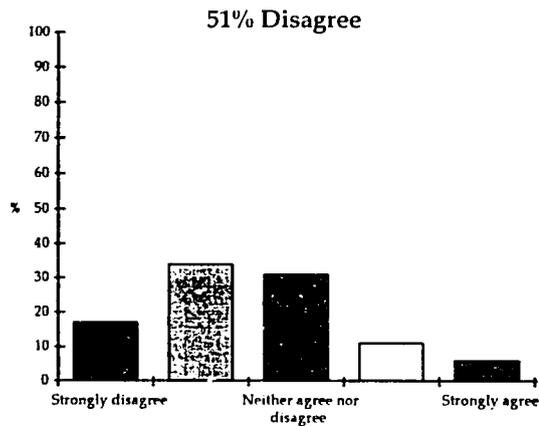
3. MAS has a clear, well communicated future plan to take the service through the next 5 years

What the Field Staff think...

25. People are generally proud to work for MAS

What the Deputies think...

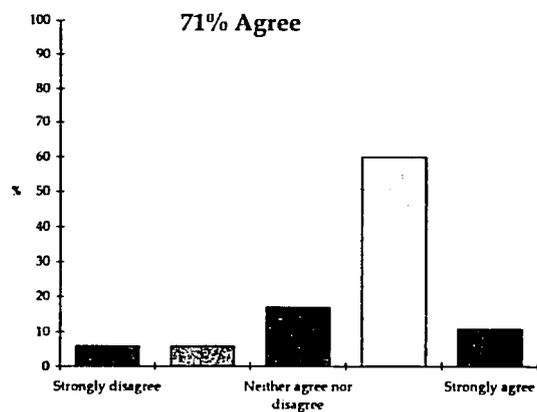
25. People are generally proud to work for MAS



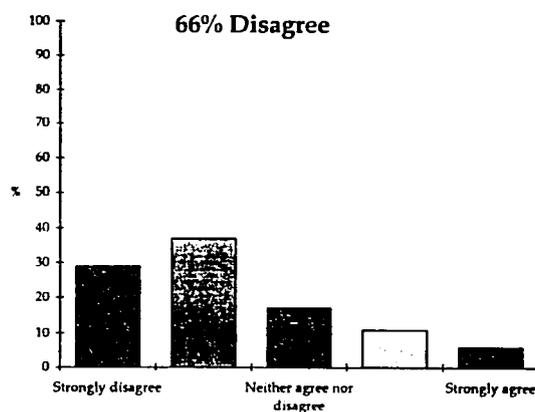
MAS IS FOCUSED ON IMPROVING ITS SERVICE

MANAGEMENT SYSTEMS IN MAS NEED TO BE IMPROVED

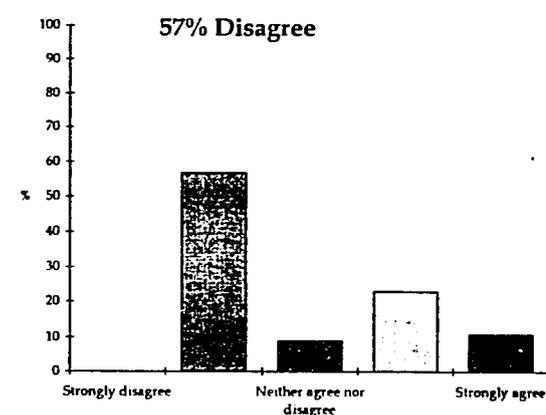
29. MAS has a strong focus on delivering a good service



32. Our computer systems satisfy my needs



43. I have all the tools I need to do my job well



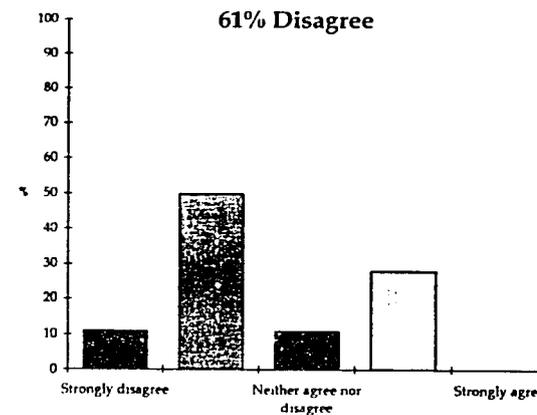
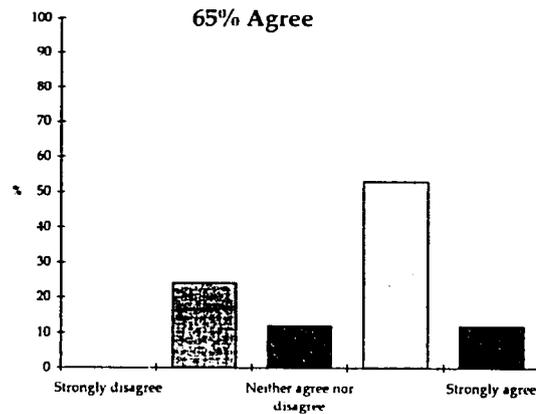
THERE IS A CLEAR DIFFERENCE IN VIEWS ABOUT WHETHER WORK IS BEING MONITORED EFFECTIVELY

What the Deputies think...

What the Field Staff think...

41. MAS has clear measures in place to enable managers to monitor operational performances

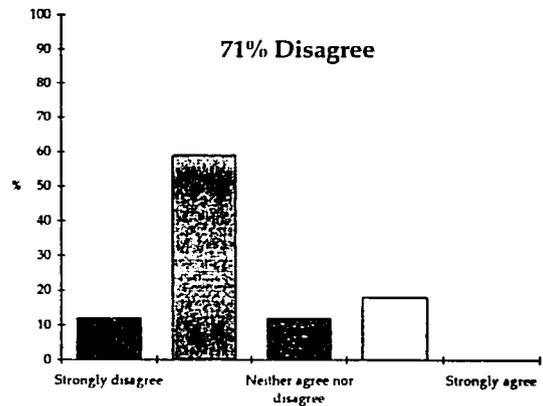
41. MAS clear measures in place to enable managers to monitor operational performances



PEOPLE BELIEVE THAT MAS CAN BE IMPROVED

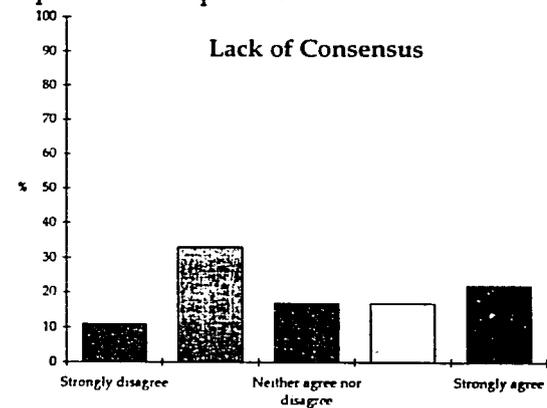
What the Deputies think...

47. We can not improve further the level of service that we provide to our patients



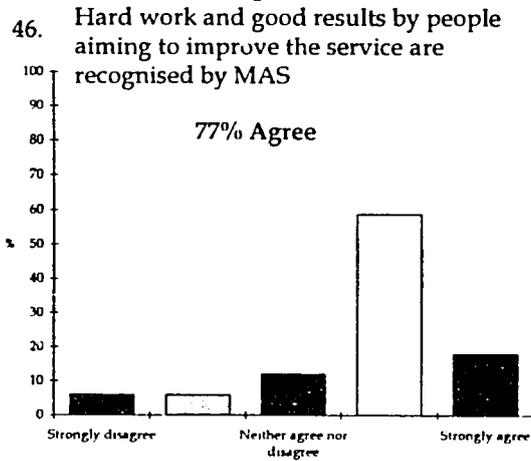
What the Field Staff think...

47. We can not improve further the level of service that we provide to our patients

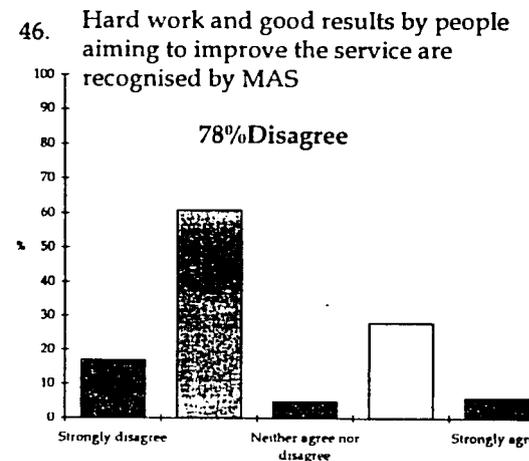


THERE IS A CLEAR DIFFERENCE ABOUT THE RECOGNITION OF WORK BETWEEN MANAGEMENT AND STAFF

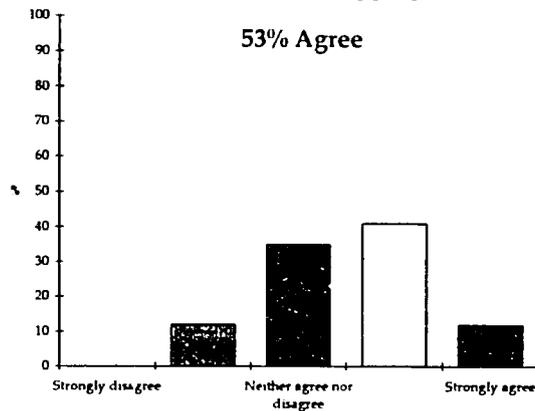
What the Deputies think...



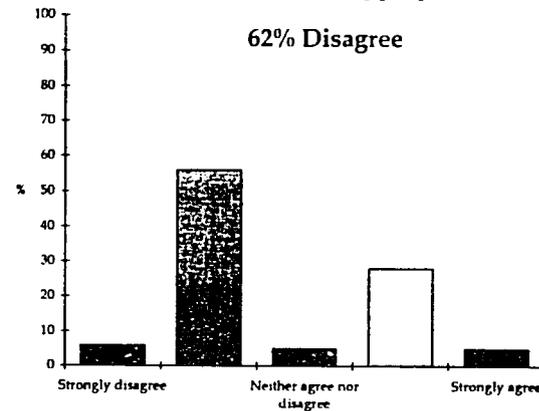
What the Field Staff think...



38. Decisions are not always made at the top but are delegated to the appropriate level



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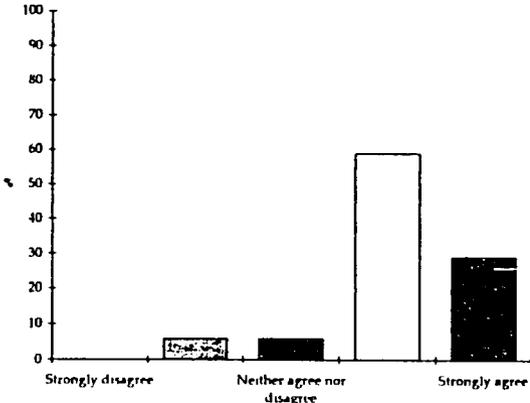


EMPLOYEES BELIEVE STRONGLY THAT A CHANGE PROGRAMME IS NEEDED TO IMPROVE MAS NOW

What the Deputies think...

48. MAS needs a clear Programme focused on improving the service

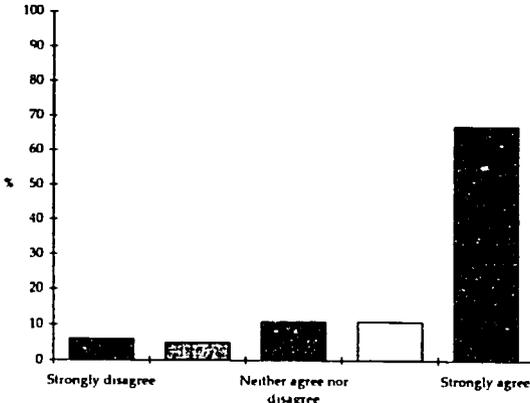
88% Agree



What the field staff think...

48. MAS needs a clear Programme focused on improving the service

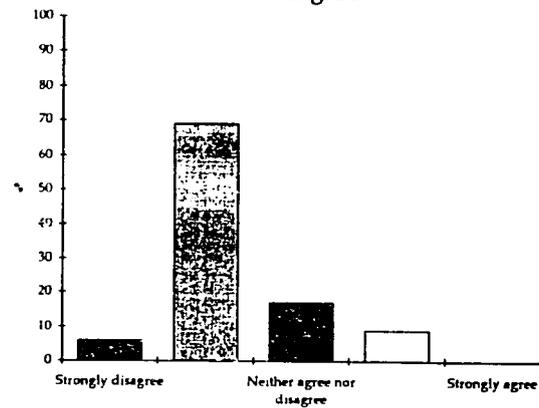
78% Agree



IMPROVEMENT PROJECTS IN MAS ARE POORLY DELIVERED

5. Improvement projects that are initiated by MAS always seem to deliver good results

75% Disagree



MANAGEMENT CONCLUSIONS

Strategy

Lacks achievable short term goals, targets and a clear vision for MAS



Personnel Management

A demotivated work force without clear direction



Heading in Different Directions?



The Executive

Lack co-ordination between departments and are generally unaware of the state of the service



MAS Structure

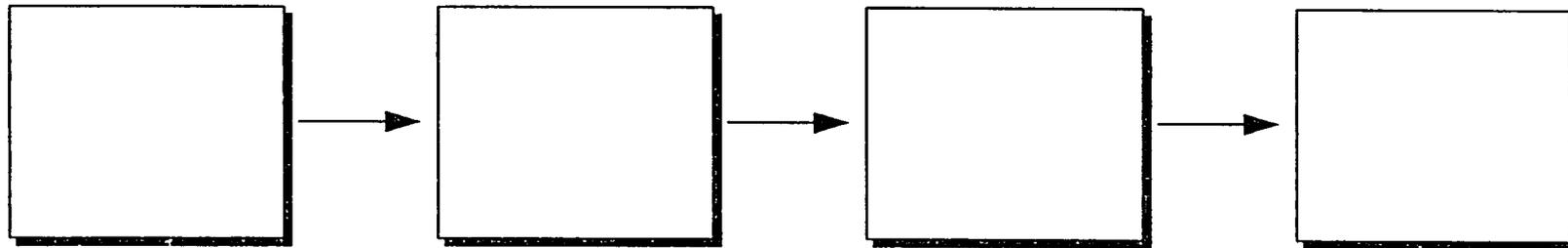
Confused reporting lines



Change Check 50

Employees recognise that MAS drastically needs to improve its service

SYSTEM REVIEW



GEOGRAPHICAL MAP



- Ambulances observed
- Dispatches observed

GEOGRAPHICAL MAP - POINTS TO BE ADDRESSED

<u>STARS</u>	<u>DESCRIPTION</u>
1	The area marked should be serviced by station 32 rather than 6.
2	Area in the region of Local Station N37 is serviced by Local Station N16. It will be logical to pass it on to station N37.
3	This area is being served by three local stations, i.e.. N 14, 7, 1. This area need to be reorganised.
4	Between Station N1 and N7 the border is very complex. It needs simplification.
5 & 6	Remote areas beyond Moscow Circle Road need changing the approach.
7, 4, 8& 9	Local Stations are badly located in their areas.

SYSTEM OPPORTUNITIES

Code	Num	Description	Dept	Subject				
				Planning Manpower	Manpower Monitoring	Standards & Definition	Process Monitoring & Control	Skills & Training
A5	4	Consistent manpower planning requirements and shortages by qualification	HR	X				
A5	5	No understanding of manpower calculations	HR	X				
A4	6	Shift patterns are not flexible	Operat Dept	X				
A4	7	Staffing is not following calls volumes	Operat Dept	X				
B1	19	No clear methodology to calculate staff at a local station	Local station	X				
B5	20	Non flexible shift's patterns at the local station	Local station	X				
B4	21	No average response time set up	Local station	X				
G	49	Salaries are not based on staff turnover nor market research (drivers are paid up to 50% more than doctors)	All MAS	X				
B3	24	No planning and statistics of overtime worked.	Local station		X			
B2	34	No reporting by ambulance crew of arrival time to a patient in real time.			X			
G	35	No feedback from statistics department to local stations and other department in forms of recommendations and prognosis	Stat dept		X			
G	37	No service level monitoring	Locals station		X			
G	42	No monitoring of staff morale and opinion	All MAS		X			
G	45	No PR analysis. Customers do not exactly know what MAS is doing	Chief doctor		X			
G	49	No monthly absenteeism hours lost - no control by individual of absenteeism			X			
B	22	No ready and clear manuals. No standards.	Local station			X		
B7	30	No prerequisite testing of driver's knowledge of Moscow.	Local station			X		
G	41	No criteria to control doctor/ paramedic job performance	All MAS			X		
B2	33	No maps available on ambulances.	Local station			X		
A2	1	No existence of document defining local regions based on 15 min. max. traveling time	Planning, Chief doctor, Methodology, Operat			X		
A3	2	No existence of a yearly budget	Planning			X		
A1	3	No updated job definition since 1989: no description for specialized teams; no PC technology; no regional director job definition.	Chief doctor, Medical care deputy Local station			X		
B	29	Not clear about uniform selection process - new uniforms are criticised by staff.	Local station			X		
B9	31	No preventive measures against attacks. No analysis and lessons	Local station			X		

SYSTEM OPPORTUNITIES

G	38	No quick dismissal procedures	HR			X		
G	43	No clear material incentives for individuals	All MAS			X		
G	44	No clear promotion mechanism (appraisal only once in 5 years)	All MAS			X		
G	39	No updated guidelines to dispose from old equipment	Local station, Chief doctor			X		
G	36	Decisions to buy equipment does not reside with end-user (MAS)	Chief doctor				X	
A8	8	No primary dispatch criteria	Operat Dept				X	
A9	14	No reliable monitoring of calls' number getting through by hour (handset lift up, real conversation, handset unattended)	Operat Dept				X	
A9	9	No monitoring of call loading per channel	Operat Dept				X	
A10	10	No control of a dispatched car once it left the station	Operat Dept				X	
A9	13	Bottleneck between incoming channels and number of operators	Operat Dept				X	
A9	15	No monitoring of average waiting time to get through	Operat Dept				X	
B9	28	Two same sheets are being filled in for dispatching teams. Not required	Local station				X	
B2	32	No system to verify address.	Local station				X	
G	46	Too many steps from initial call to dispatch of ambulance	Oper Dept				X	
G	40	PCs do not have relevant and working applications	All MAS				X	
A9	16	One message log in computer system contains one to five conversation instead of one only	Operat Dept				X	
A9	17	Calls without conversations are recorded for 12-14 seconds	Operat Dept				X	
B4 B1	27	Functions of dispatcher and PC operator are the same (taking calls, dispatching cars, inputting historical data)	Local station				X	
G	47	Many documents are duplicating itself and hand written.	All MAS				X	
B	25	No individual planning of the training. No regular skill's assessment/appraisal	Local station					X
A8	11	No training for PC users	Operat Dept					X
B4	23	No skill matrix	Local station					X
A8	12	No training for paramedics to become dispatchers	Operat Dept					X
A0	18	Paramedics are not getting training every 5 years	Operat Dept					X
G	48	MAS does not have cost alternative to choose for vehicles, building repairs, material suppliers	All MAS					

MAS SYSTEM REVIEW - HIGHLIGHTED OPPORTUNITIES

• Manpower:

- No updated job definition since 1989
- No understanding of manpower calculations
- No standards of providing service
- No criteria to control doctor/paramedic job performance
- No quick dismissal procedures

• Process:

- Absence of a document defining local regions based on 15 minutes maximum traveling time
- Shift patterns are not flexible
- Staffing is not following calls volumes
- No primary dispatch criteria
- No monitoring of adequate call loading per channel
- No control of a dispatched car
- No system to verify address. No map

• Procurement:

- Decisions to buy equipment does not reside with end-user
- MAS does not have cost alternative to choose for vehicles, building repairs, material suppliers

• Empowerment:

- All this opportunities are to be developed and implemented only through participants empowerment at all MAS levels



TELEPHONE OPERATOR

Obs _____
 Date _____ M T W T F S S
 Time _____
 Whom _____

OBS # _____
 Page _____ out of _____
 Location # _____
 Personnel # _____

#	Action/Time	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		Totals					
		15	30	45	0	15	30	45	0	15	30	45	0	15	30	45	0	15	30	45	0	15	30	45	0	15	30	45	0	15	30	45	0	Vol	Time	Avg	
1	Answer call																																				
2																																					
3	Emergency call (Form 1)																																				
4	Consultation call for Doctor																																				
5	Follow-up call for Dispatcher																																				
6	Inquiries call																																				
7	Wrong number																																				
8	Complaint call																																				
9																																					
10	Chatting																																				
11																																					
12	Wait for next call																																				
13																																					
14	Walking																																				
15																																					
16	Take a break																																				
17																																					
18	Go to lunch																																				
19																																					
20	Total																																				

Comments:
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CENTRAL DISPATCHER

Obs _____
 Date _____ M T W T F S S
 Time _____
 Whom _____

OBS # _____
 Page _____ out of _____
 Location # _____
 Personnel # _____

#	Action/Time																															Totals			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Net	Time	Avg	
1	Receive Form 1																																		
2																																			
3	Receive/pass info to Station																																		
4																																			
5	Confer with Crew																																		
6																																			
7	Confer with Hospital Dept																																		
8																																			
9	Confer with Radio Room																																		
10																																			
11	Confer with Supervisor/other																																		
12																																			
13	Fill out Form 2																																		
14																																			
15	Help other Dispatcher																																		
16																																			
17	Chatting																																		
18																																			
19	Go to toilet/break																																		
20																																			
21	Go to lunch																																		
22																																			
23	Total																																		

Comments:

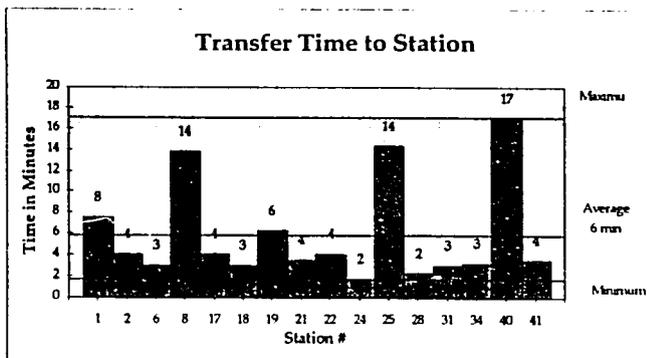
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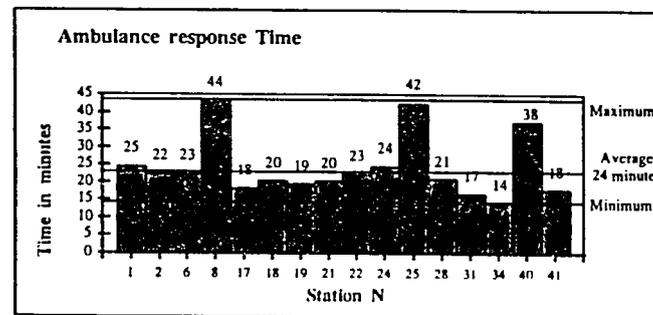
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OBSERVATION RESULTS

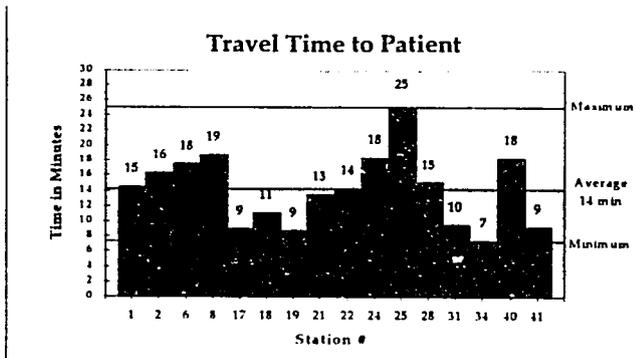


Average transfer time to station - 6 minutes

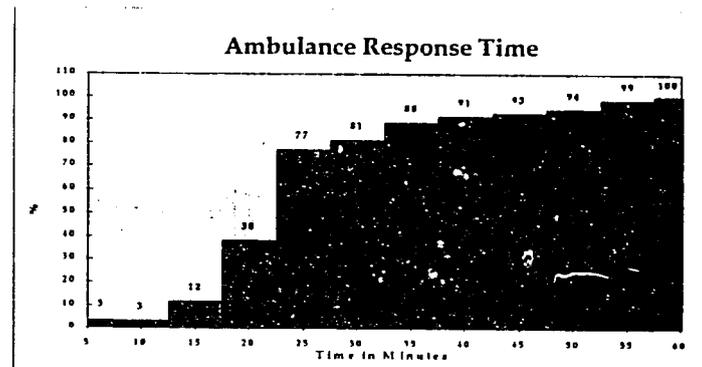


Average response time from reception of 03 call to arrival at the patient site - 24 minutes

Please Note!
A member of the AC team was present when these results were observed.

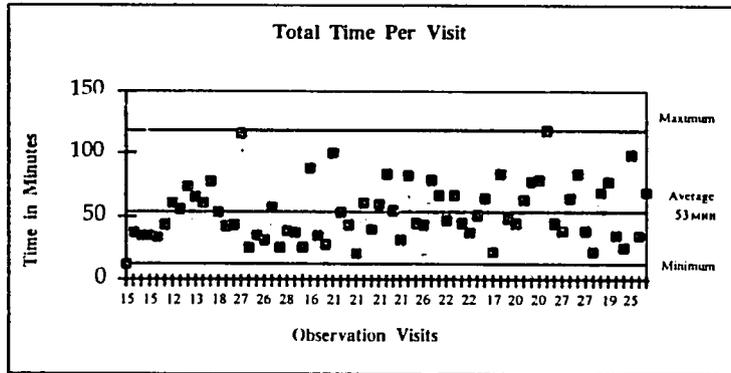


Average crew travel time to patient site from crew receiving call to arrival - 14 minutes

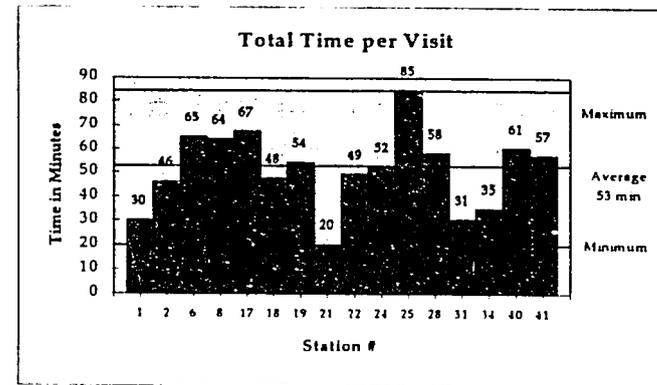


Only 38% of ambulances are arriving to the scene within 20 minutes of receiving the call

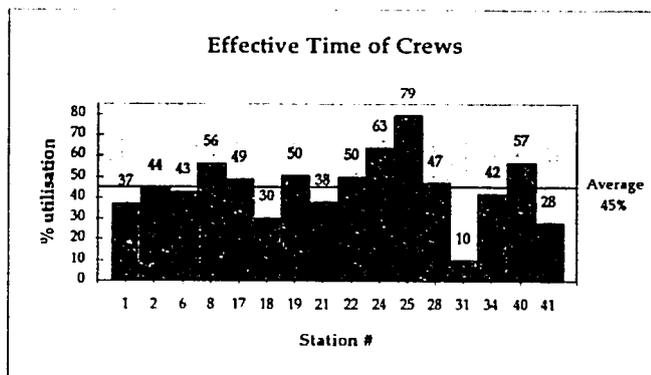
OBSERVATION RESULTS



Ambulance crews are utilised on average only 45% of the time



On average crews spend 53 minutes on a call - from the time they receive the call to the time they are free



Effectiveness of crews varies between stations

Effective time of crews is based on the time a crew receives a call to the time they are free. This does not include travel time back to the station as this is not considered to be effective time.



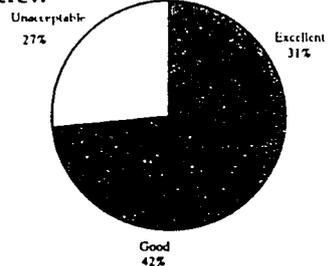


KEY FINDINGS

Action	Minutes
Transfer time to station	6
Ambulance response time	24
Travel time to scene	14
Time spent on scene	28
Total time per visit	53

Crew effectiveness	45%
--------------------	-----

Assessment of information transferred to the crew



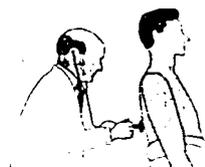
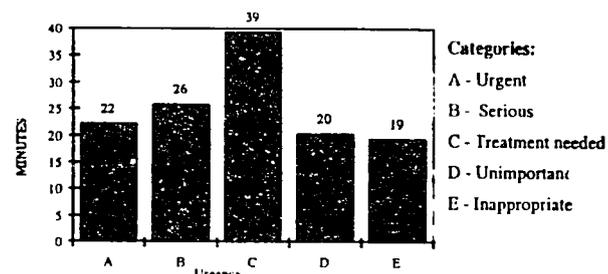
In 27% of cases important information is not transferred to the crew

PATIENT CARE



URGENCY

Response time according to the urgency

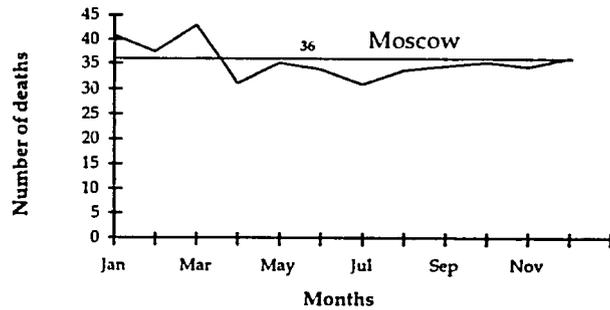


CARE TO PATIENT

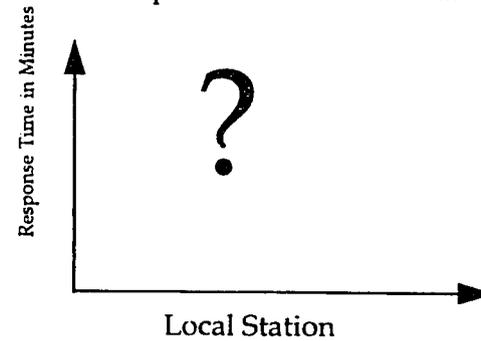
1. Shocking	2 %
2. Unacceptable	10 %
3. Satisfactory	25 %
4. Good	47 %
5. Excellent	16 %

CURRENT SERVICE PROVIDED TO THE PATIENT

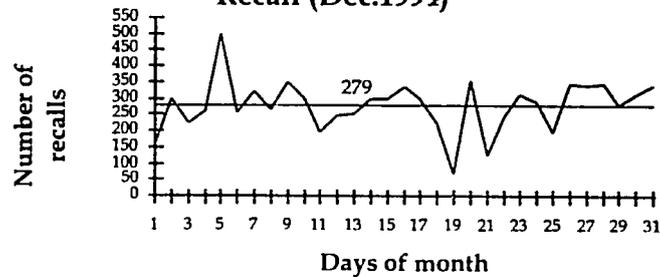
"03" Dead at arrival per month, 1993, per 1,000,000 population



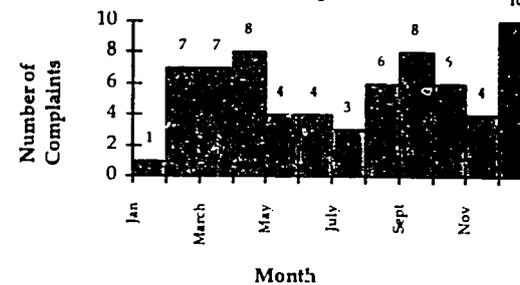
Response Time to "03" call



Recall (Dec.1994)



Reasoned Complaints in 1994

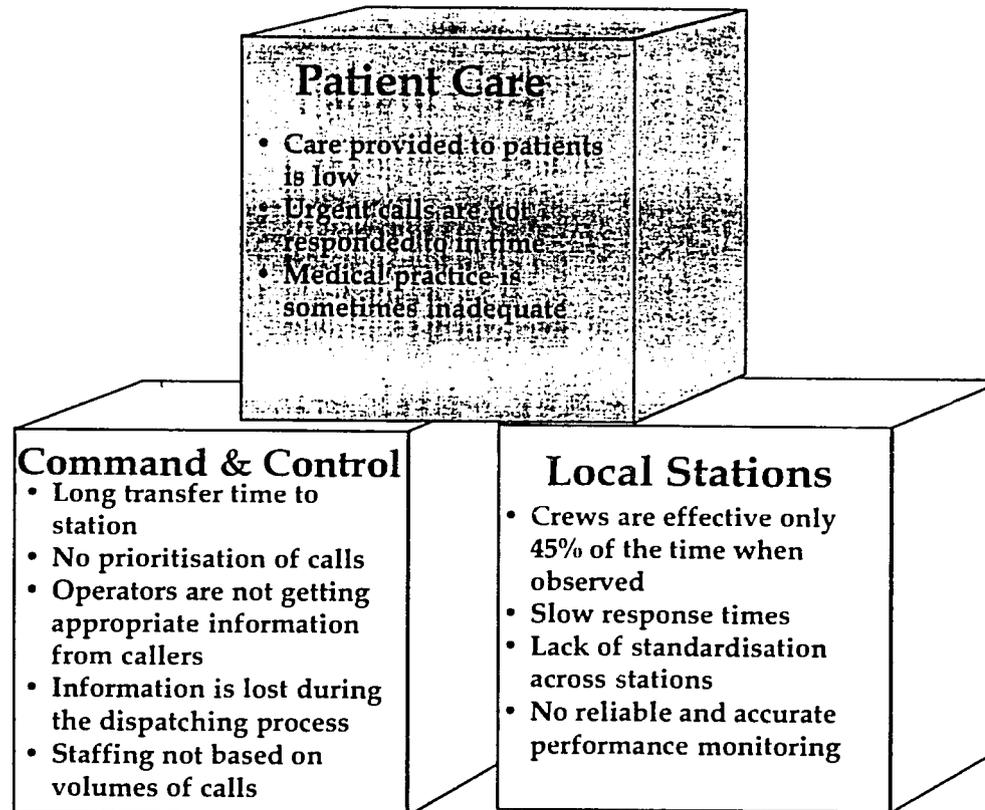


OPERATING PROBLEMS

				Similar Stories	System	Process	People
1	25 Jan 1995 18:00	Patrick Gormley	<ul style="list-style-type: none"> • 29 crews on Station 45 • Calls outstanding for other areas up to 60 minutes 		✓	✓	
2	23 Feb 1995 20:30	Quentin Morelle	<ul style="list-style-type: none"> • Only 4 out of 10 03 calls got through • 1 call took more than eight minutes to get through • Only 11-14 operators were at telephones at the time • 10 minutes later 7 out of 10 calls answered within 15 seconds 		✓		✓
3	24 Feb 1995 08:45	Quentin Morelle	<ul style="list-style-type: none"> • 03 call not answered for 20 minutes 		✓		✓
4	01 Feb 1995 16 Feb 1995	Patrick Gormley	<ul style="list-style-type: none"> • Equipment lacking to transport patient appropriately to Ambulance from site 		✓		
5	15 Feb 1995	Patrick Gormley	<ul style="list-style-type: none"> • Ambulance requested inappropriately • Inappropriate use of "specialist crew" 		✓	✓	

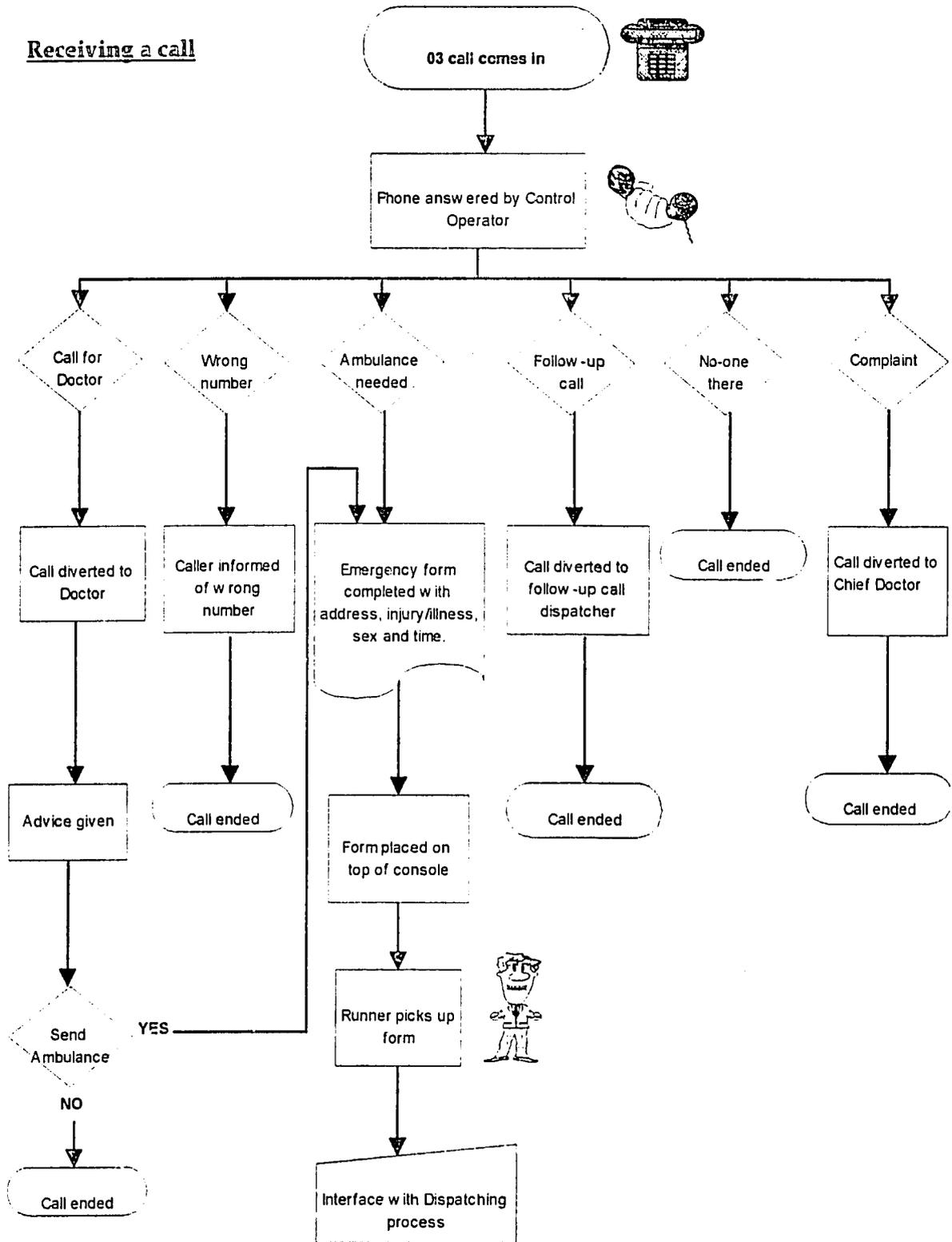
OBSERVATION CONCLUSIONS

MAS Needs to Make Improvements

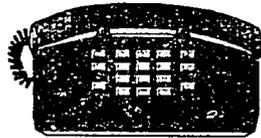


The Building Blocks of a Top Quality Service **ANDERSEN
CONSULTING**

Receiving a call

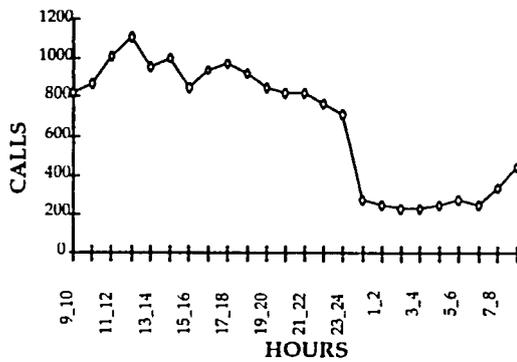


"03 OPERATORS

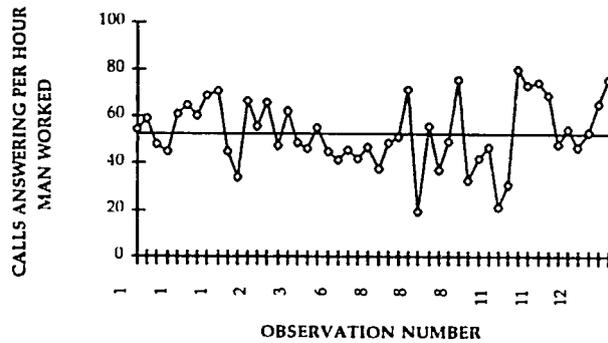


- MANPOWER UTILISATION

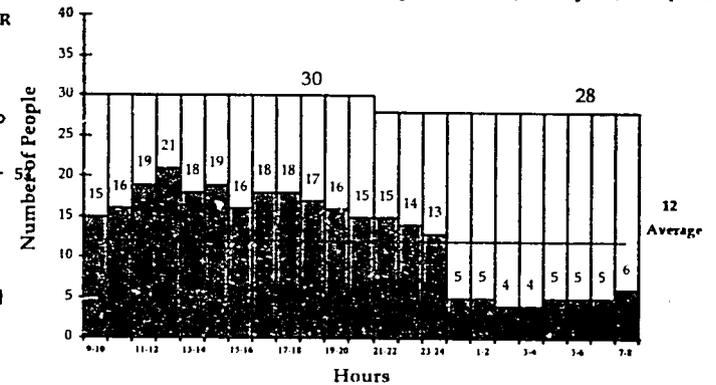
TOTAL CALLS Fri., 27 Jan. 1995



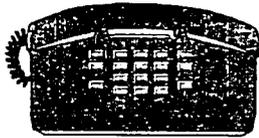
NUMBER OF CALLS PER EFFECTIVE OPERATOR HOUR



Number of Operators Available per Hour on January, 27, 1995(Friday)

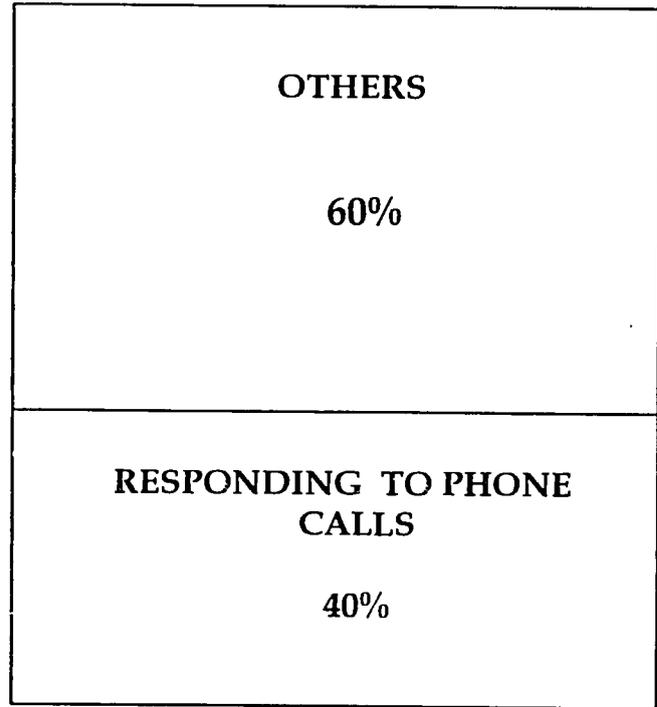
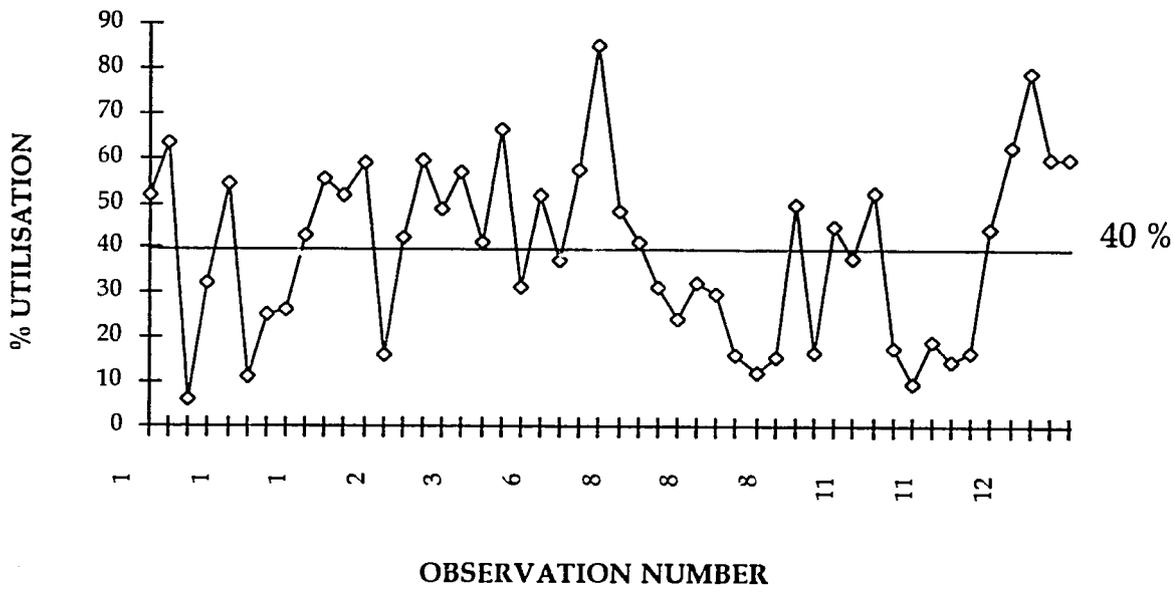


"03 OPERATORS - WORKING TIME WHEN



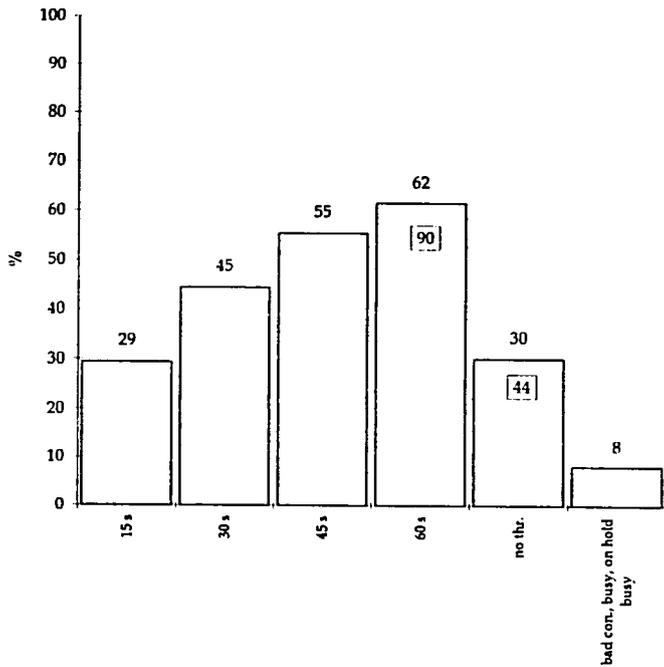
OPERATORS WERE ATTENDING THEIR POST

TELEPHONE OPERATORS MANPOWER UTILISATION WHEN AT THE WORK POSITION

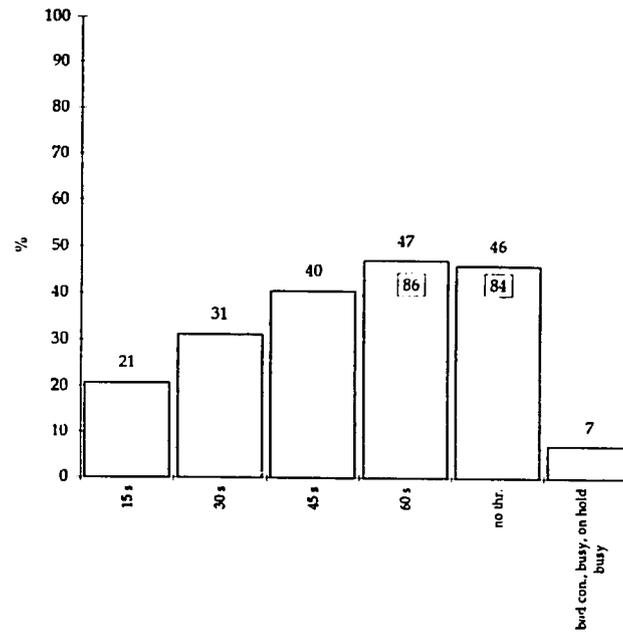


"03" TELEPHONE RESPONSE TIME

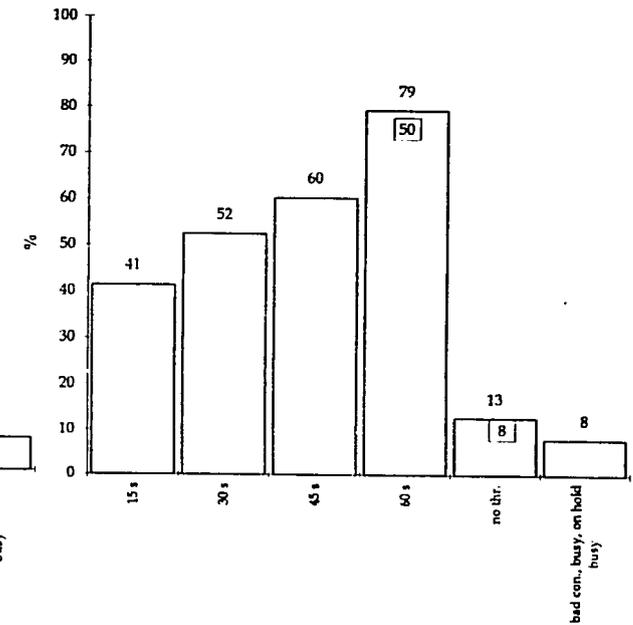
FROM 22:01 TO 1:00

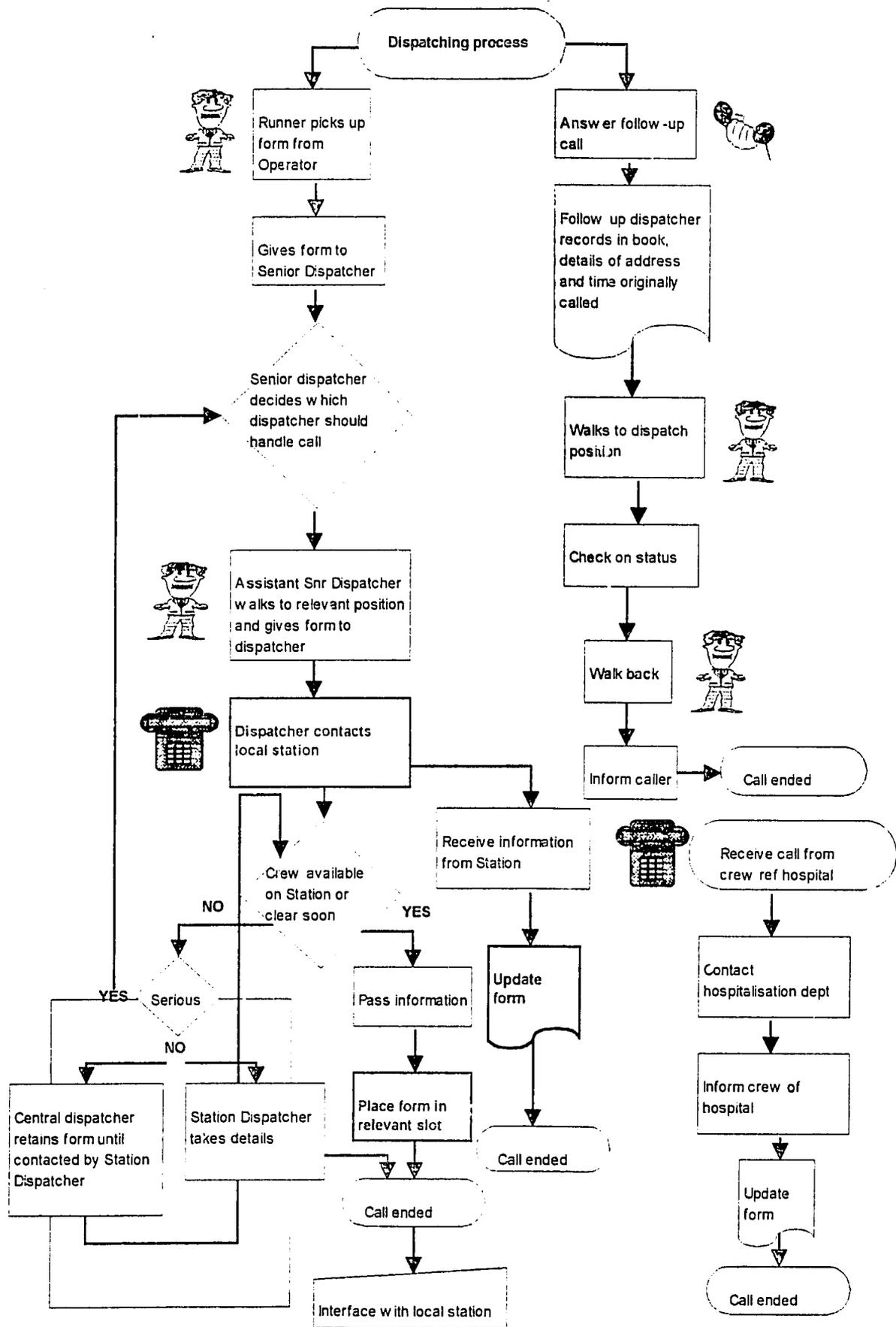


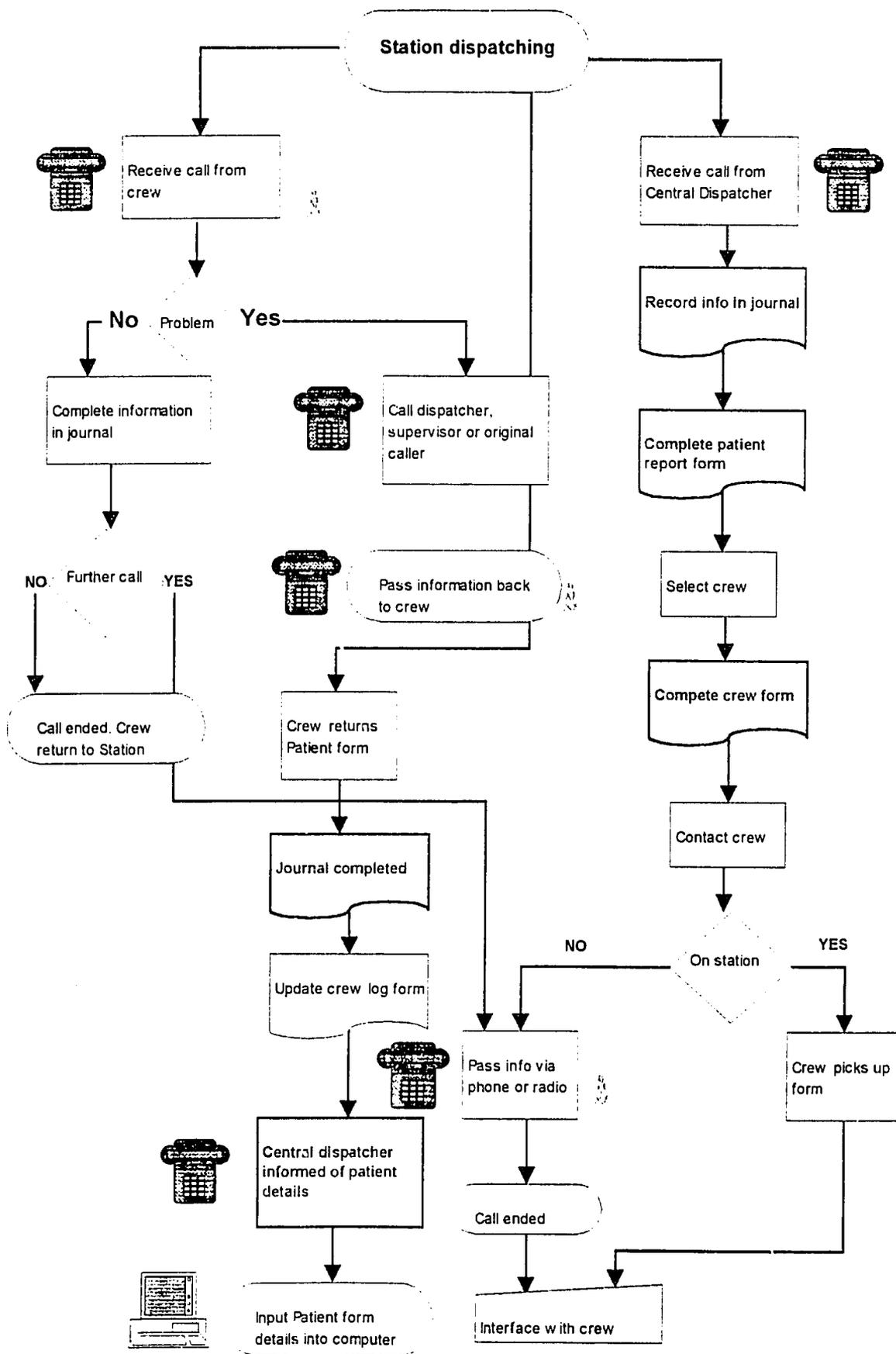
FROM 8:01 TO 22:00



FROM 1:01 TO 8:00

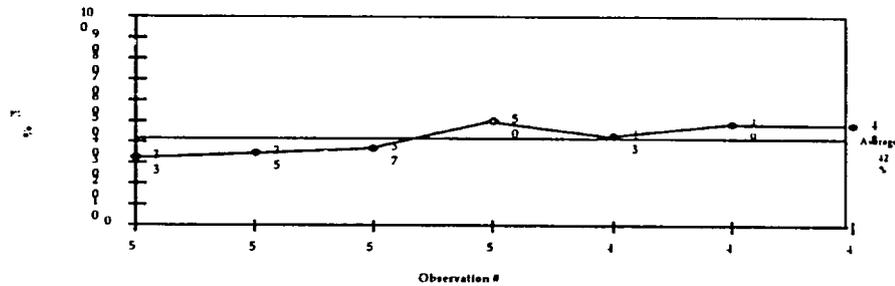




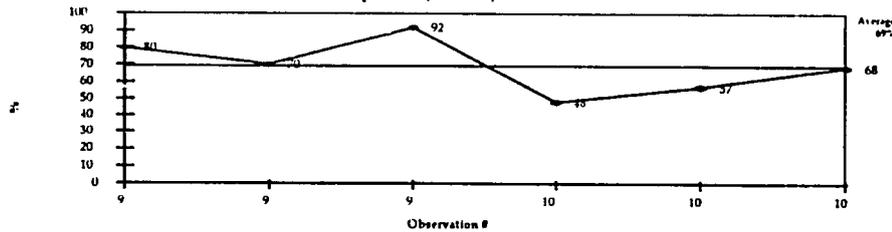


DISPATCHER AND LOCAL STATION 1 FEBRUARY 1995 (WEDNESDAY)

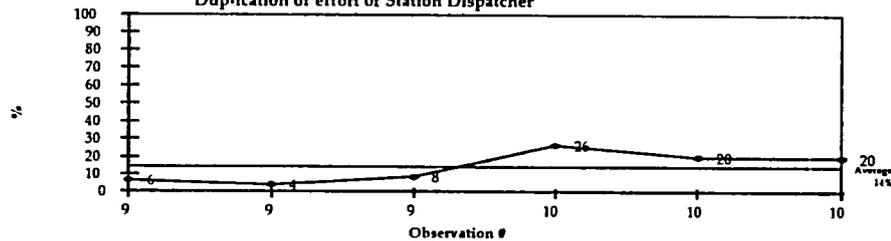
Effectiveness of Central Dispatcher (Staff 38)



Effectiveness of Station Dispatcher (Staff 90)



Duplication of effort of Station Dispatcher

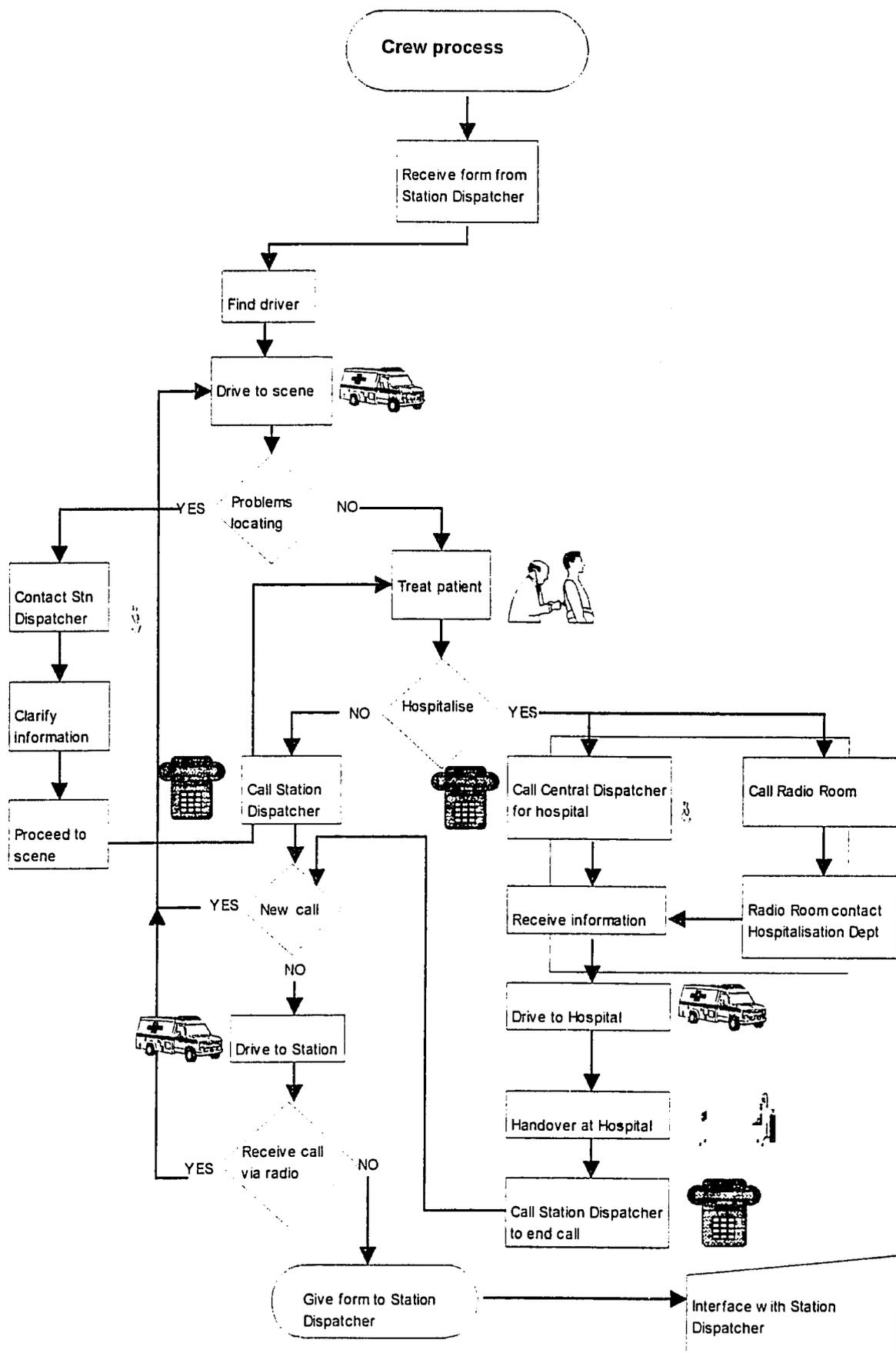


Dispatchers and
Local Dispatches
(128 Staff)

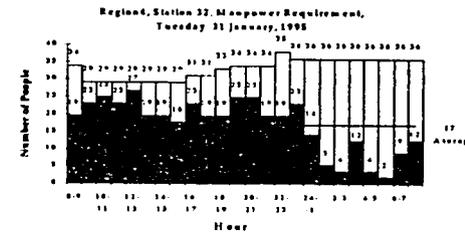
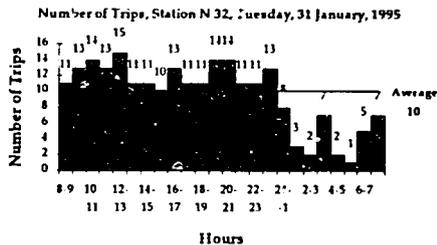
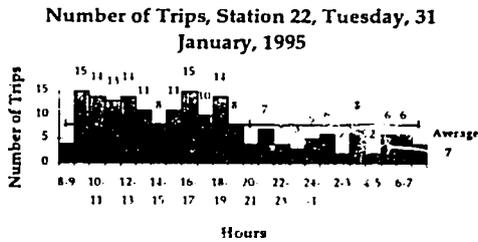
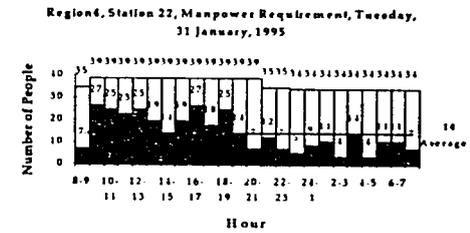
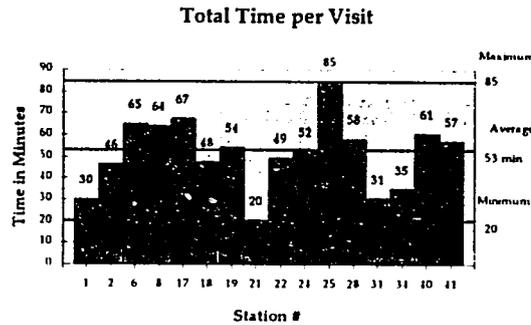
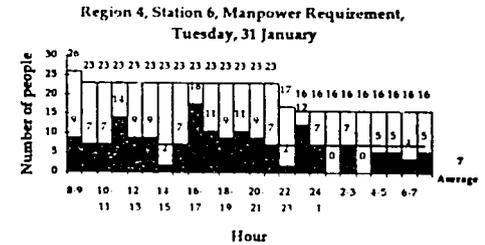
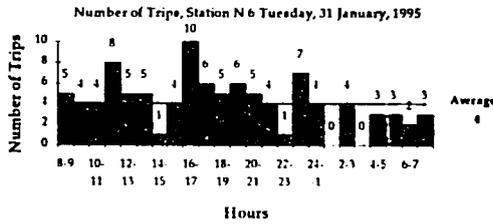
Other non
required
activities
(63 staff)
49 %

Required

51 %
 $38 \times 0.4 + 90 \times 0.55 =$
65 staff

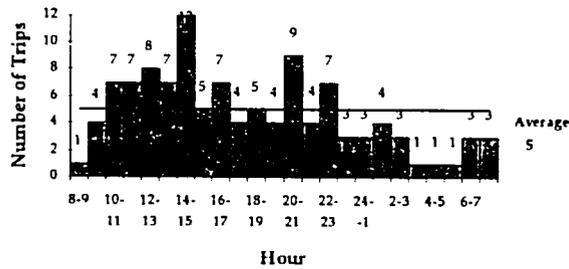


REGION N4, AMBULANCE STAFF REQUIREMENT

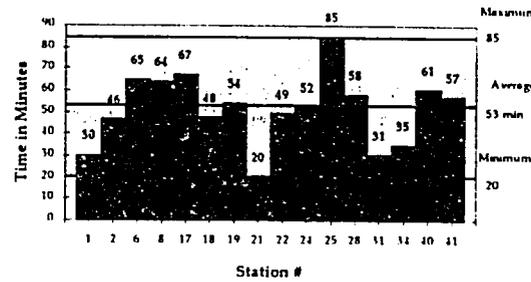


REGION N10, AMBULANCE STAFF REQUIREMENT

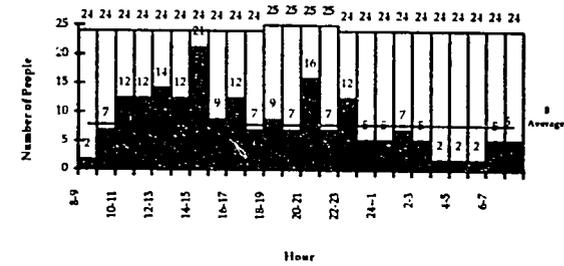
Number of Trips, Station N 34, Tuesday, 31 January, 1995



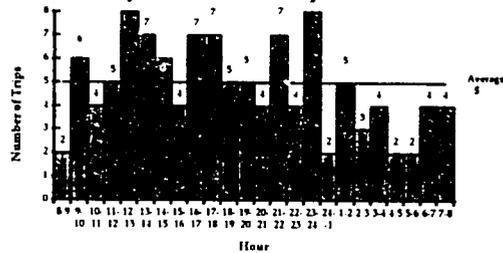
Total Time per Visit



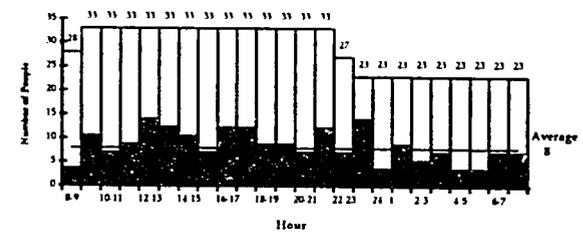
Station 34, Manpower Requirement, Tuesday, 31, 1995



Number of Trips, Station N 2, Tuesday, 31 January, 1995

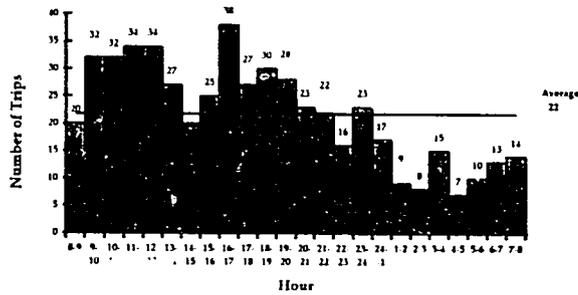


Station 2, Manpower Requirement, Tuesday, 31 January, 1995

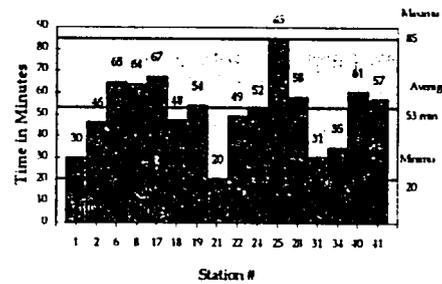


TOTAL FOR 2 REGIONS AMBULANCE STAFF REQUIREMENT

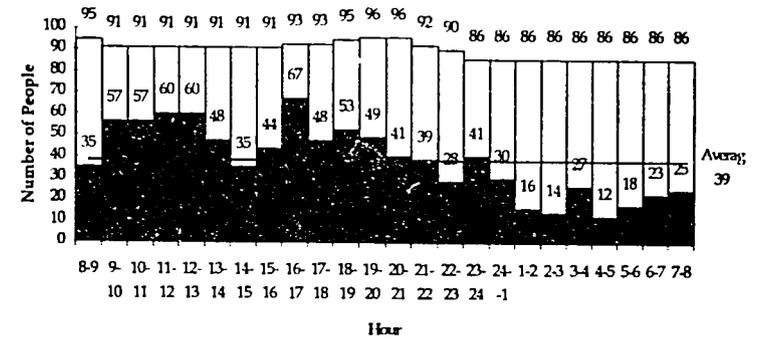
Number of Trips, Region 6, Stations # 6, 22, 32, Tuesday, 31 January, 1995



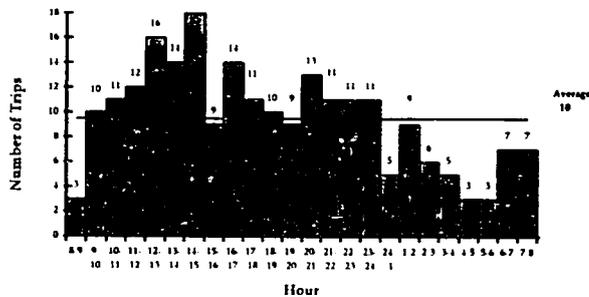
Total Time per Visit



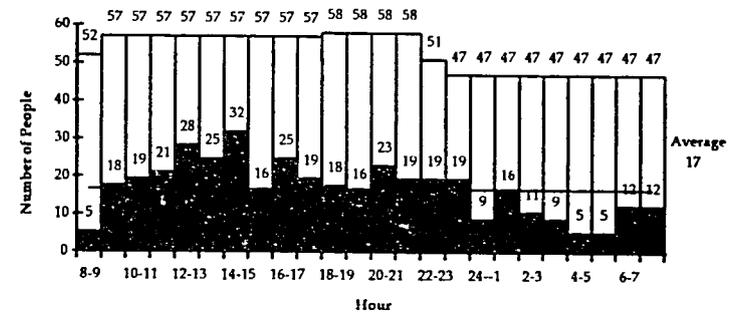
Region N4, Stations 6, 22, 32, Tuesday



Number of Trips, Region 10, Stations # 2, 34, Tuesday, 31 January, 1995

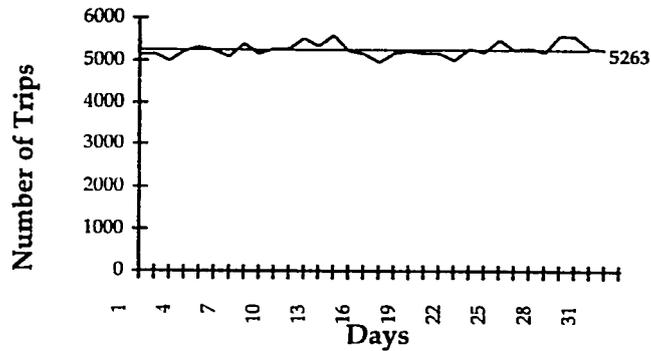


Region N10, Stations 2, 34, Tuesday

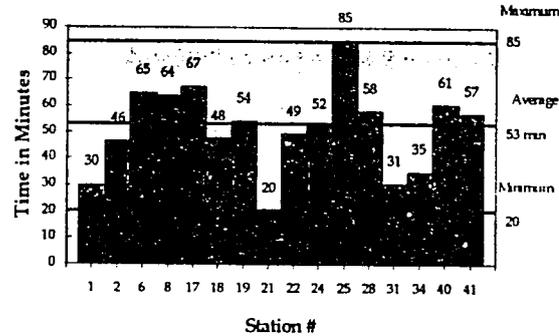


AMBULANCE CAR REQUIREMENT BY REGION FOR DECEMBER 1994 AT 100% UTILISATION

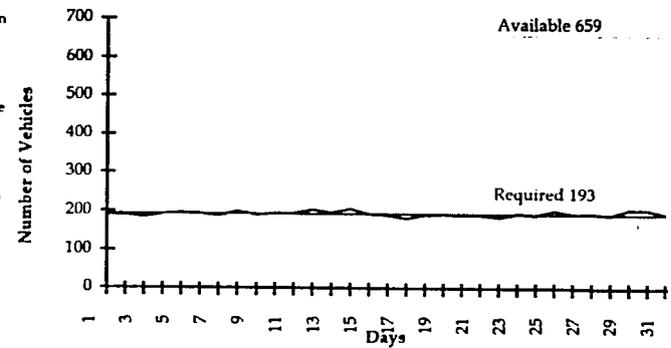
Ambulance Visits per Average Day in December 1994



Total Time per Visit

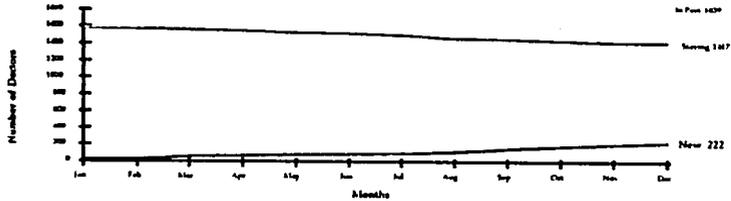


Vehicles per Average Day in December 1994

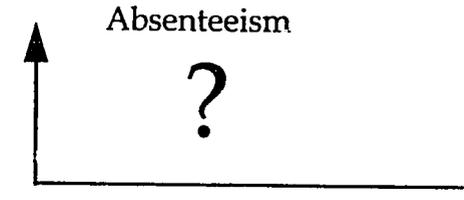
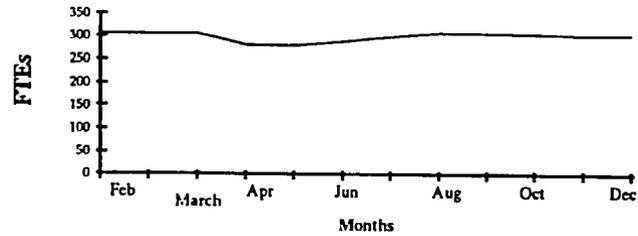


AMBULANCE SERVICE MANPOWER FLUCTUATIONS

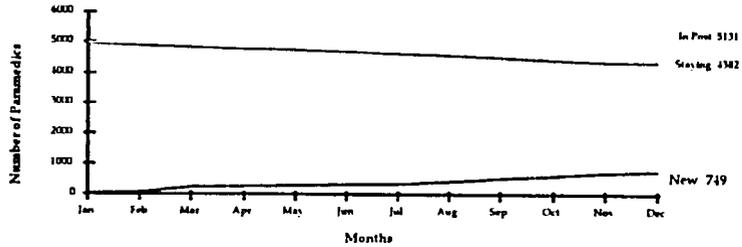
Turnaround of Doctors in 1994



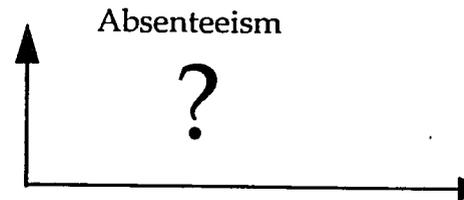
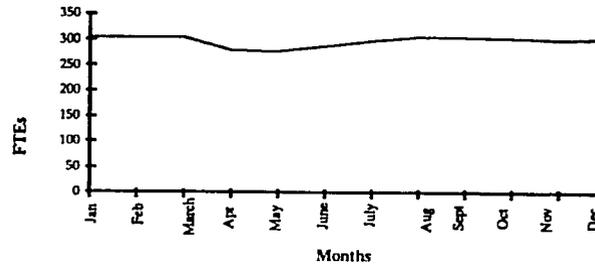
Overtime (Doctors) in 1994



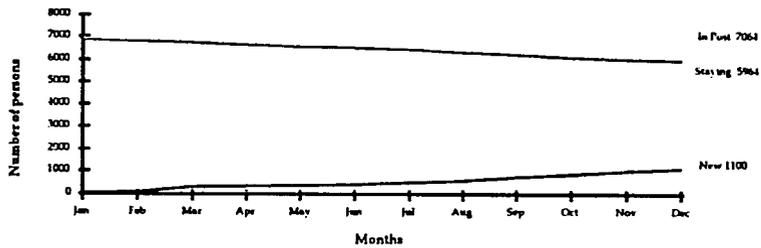
Turnaround of Paramedics in 1994



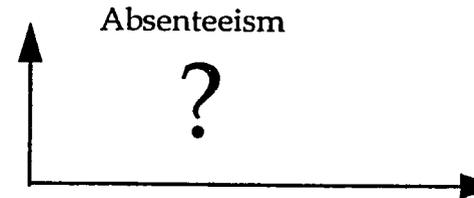
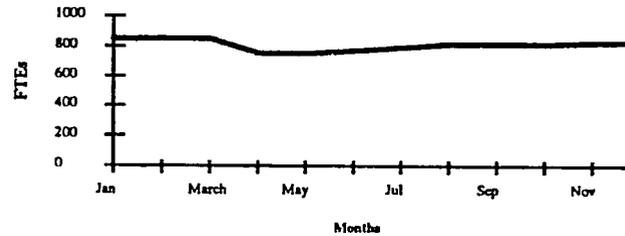
Overtime (Paramedics)



Total Turnaround in 1994



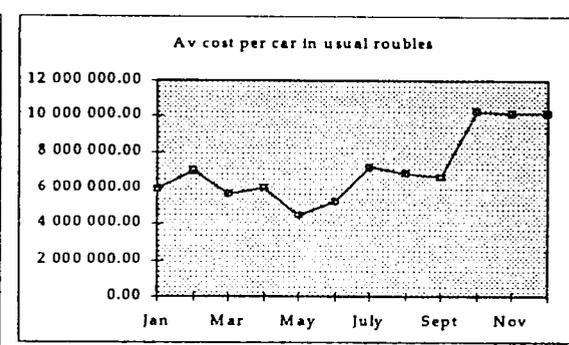
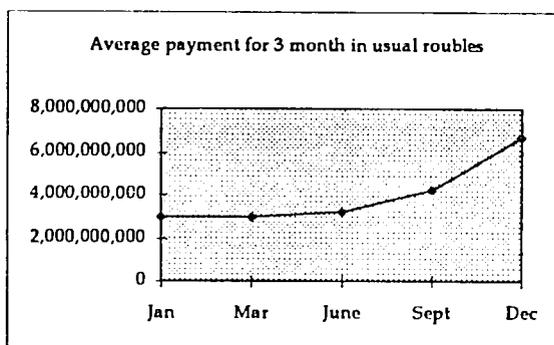
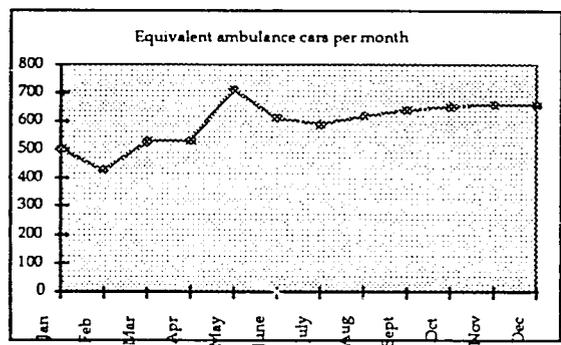
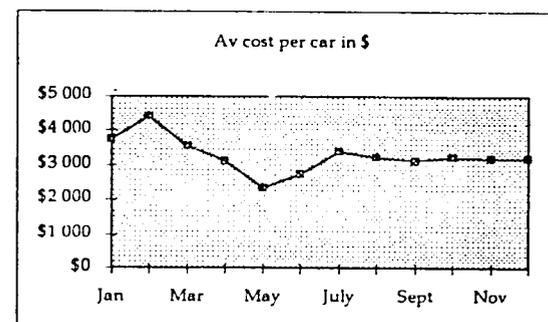
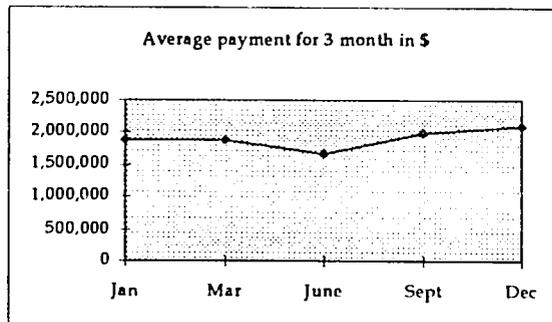
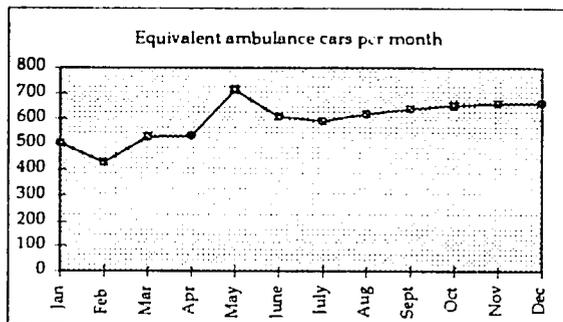
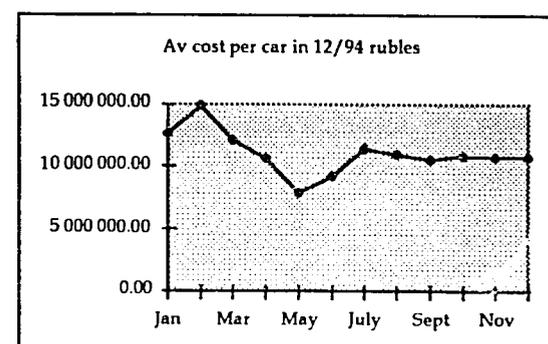
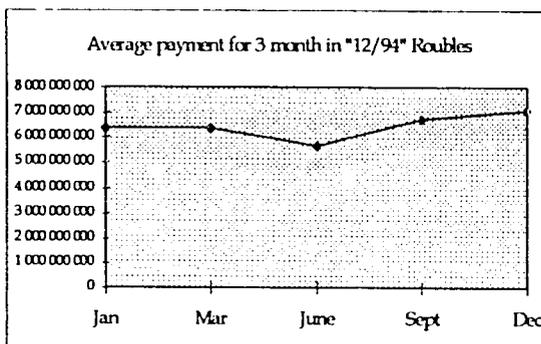
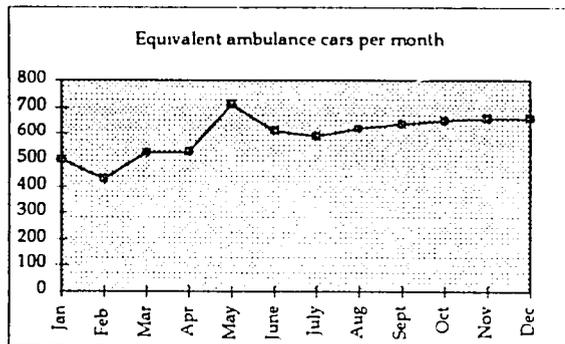
Overtime (Total)



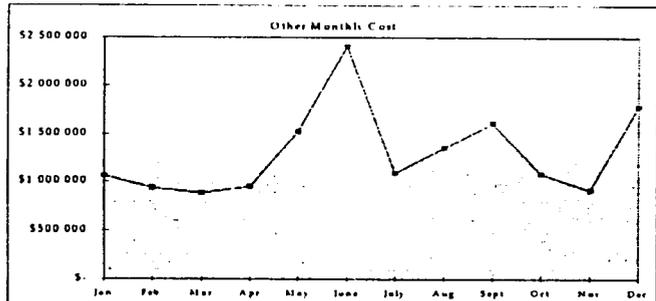
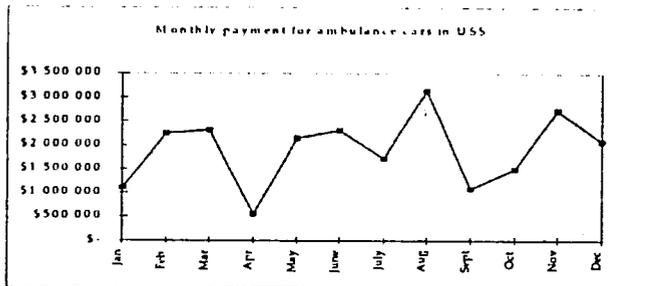
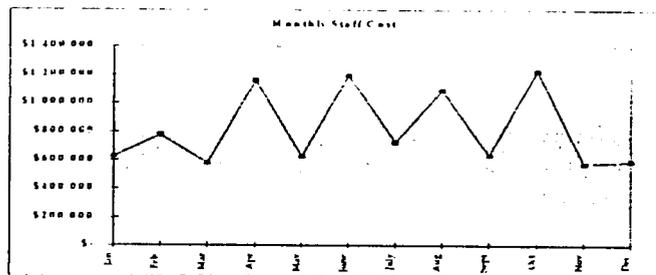
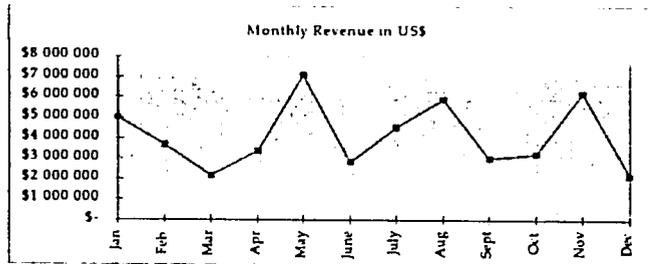
CONCLUSIONS FROM NUMERICAL EXERCISE

1. Comparison of available and required staffing levels suggest that currently "03" operators as well as field personnel at the local stations is about 50% higher than the requirements at 100% efficiency assuming that shifts, promotion, individual monitoring and dismissal procedures would suit operating requirement.
2. Overtime hours are recorded but not necessarily reduced to the minimum requirements.
3. Current monitoring of individual daily performances is nonexistent and lead to very poor customer service by the telephone operators mediocre productivity and customer service in the individual stations.
4. There is no hourly absenteeism analysis on a monthly basis for the total MAS. We would suspect absenteeism to exceed 15% which is substantial but there is no available data to prove it.
5. There is no regular telephone monitoring procedure that helps to analyze response time to customer calls and take timely actions.
6. Ambulance car requirement from MAS suggest that the current number of ambulances could be reduced if a detailed analysis by hour by individual working day by station for the last 2 years is performed on each individual station and properly implemented.
7. Turnaround of personnel is 16%. There is no exit interview procedure to analyze reasons for staff leaving the service.
8. Response times from "03" call to ambulance arrival are recorded in stations but the data is unreliable and overly optimistic.

VEHICLE COST

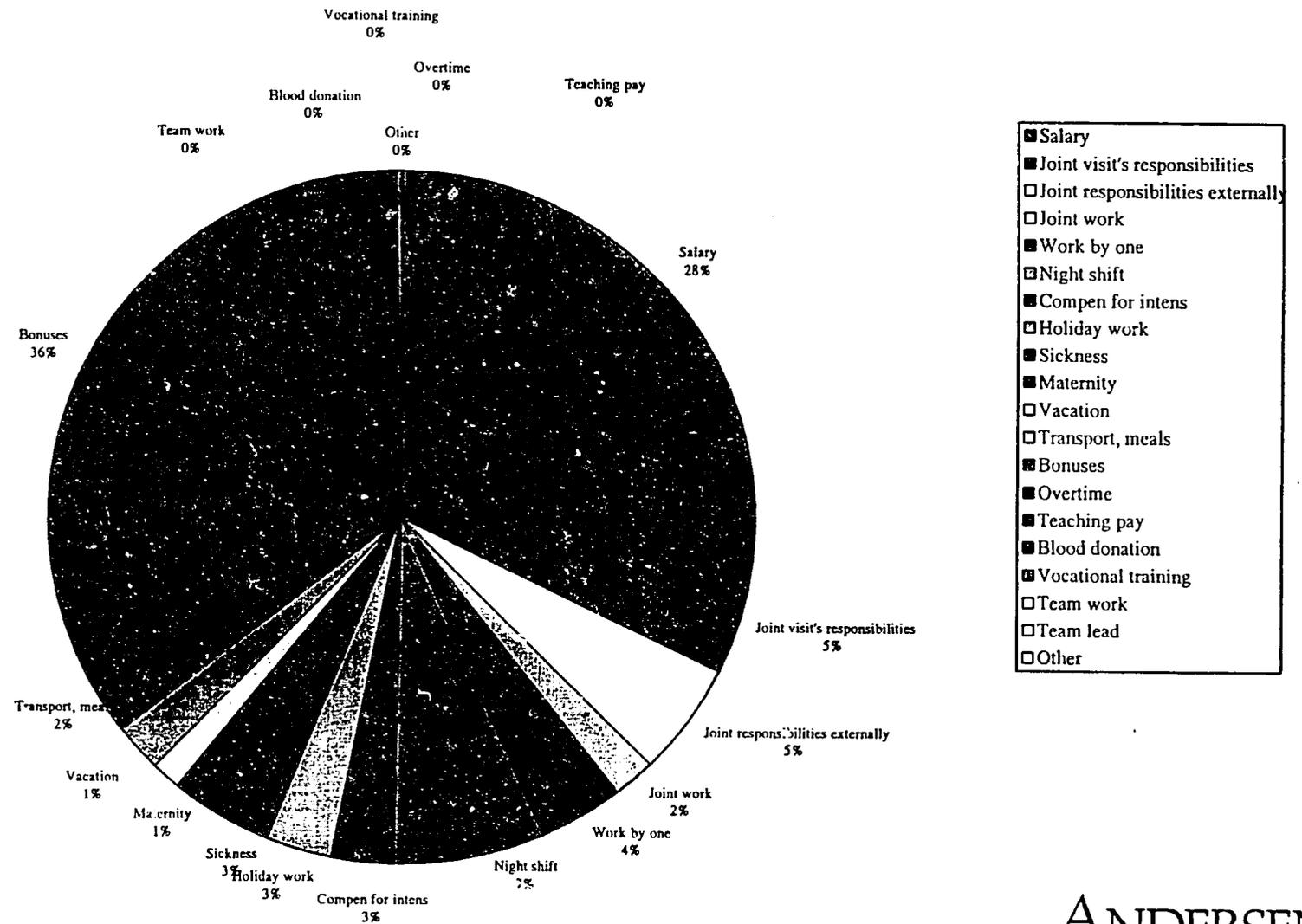


MAS CURRENT COST STRUCTURE



YEARLY TOTAL				
	Number	Average in mln rbl	Total in bln rbl	Total in mln \$
Revenue		106 bln	106	\$ 48
Staff (FTE)	7600	2,8	21	\$ 10
Vehicles	600	86	51	\$ 23
Other			34	\$ 15

MAS SALARY STRUCTURE IN JANUARY 1995



OBSERVATIONS AND CONCLUSIONS FROM COSTING

- The MAS does not have yearly budget which makes it difficult to plan and fund long-term improvement projects
- The revenues cannot be planned in terms of precise time and amount
- Payments are being made with no understanding of invoices due to excessive complexity (28 salary variables, 6 car variables)
- Ambulance rent is two to three times as expensive as Moscow market rates
- MAS does not have alternatives for vehicles, building repairs, material suppliers

COMPARISON TABLE (MOSCOW/GREATER MANCHESTER)

Indicators		Moscow Ambulance Service	Greater Manchester Ambulance Service
N U M B E R	Static population	9.1 m	2.7 m
	Total cost	\$49	\$27m
	Disposable/drug costs	\$968,452	\$335,000
	Vehicle costs	\$37,000	\$7,715
	Number of staff (full time equivalent)	7,951	720
	Number of vehicles	600	75
	Number of calls per day	13,828	780
	Number of visits per day	5,263	700
	Working hours per year per full-time employee	1,750	2,028
	Holidays per employee per year (excluding Public Holiday)	24 - 27	16
R A T I O S	\$ spend per capita	\$5.3	\$15.1
	Disposable and drugs cost per 1000 capita	\$ 106	\$ 124
	Vehicle cost as % of total cost	48%	3%
	Vehicle per 1 million population	66	28
	Staff per 1 million population	874	267
	Visits per 1,000 population	213	92
	Hospitalisations per 1000 population per year	62	89
	Number of visits per FTE per year	238	350
	Calls responded to within 14 minutes (start talking-Ambulance arrive)	3%	98.3%
	Staff cost as % of total cost	20	70
	Assault per 1000 staff	2	226
Absenteeism	+15%	3.5%	

ANDERSEN COMPETITION

QUESTION	DEPUTIES (6)			OTHER (10)			STUDY RESPONSE
	1	4	1	1	8	1	
1 How many full-time staff are currently employed by the Moscow Ambulance Service in January 1995 (number of full-time employees)	7,400	8,200	9,000	700	7,100	10,000	6,180
2 Of the total number of staff what is the % of people whom are involved in the field (%)	72%	84%	98%	6%	55%	85%	75%
3 How many call does the ambulance service receive on a normal weekday in January 1995 (number of calls)	3,500	5,600	6,000	3,000	6,800	10,000	9,000
4 How many calls are waiting to be answered at any time between 9-12am on a normal weekday in January 1995 (number of calls)	10	200	1,200	50	600	1,600	?
5 What is the average waiting time to get through an operator between 18.00 and 20.00 during a normal weekday in January 1995 (sec waiting on the phone to get through)	20	40	150	10	140	240	60 sec +
6 What is the average time between reception of an "03" call and the arrival of the Ambulance (minutes)	17	23	25	17	25	35	30+ min
7 What is the average time between the reception of an "03" call and the arrival of the patient at the hospital (minutes).	45	58	60	30	65	90	70+ min
8 What is the % of calls during normal weekday which do require an ambulance (% of ambulances sent per 100 "03" calls).	10%	45%	98%	11%	50%	80%	37%
9 How many "03" call patients are being treated by an ambulance crew during a 24 hour shift in January 1995. What is the average for the whole service (number of patients 24 hour crew).	13	14	15	7	13	32	9
10 How much time are ambulance crews waiting to be sent to an emergency (% waiting time of their overall working time).	13%	20%	30%	10%	20%	30%	65%
11 How many staff left the service over the last 12 months.	850	1,000	1,200	100	700	3,000	1,100
12 How many follow-up calls do we receive per day.	50	-	250	30	410	1,000	278
13 How many ambulances were operational on a normal day in January 1995.	560	700	1,000	170	550	750	655
14 How many patients are transported to the hospital on a normal day in January 1995.4	1500	1,700	2,200	1,100	1,400	2,000	1,400

Winner: Ludmila Chernova

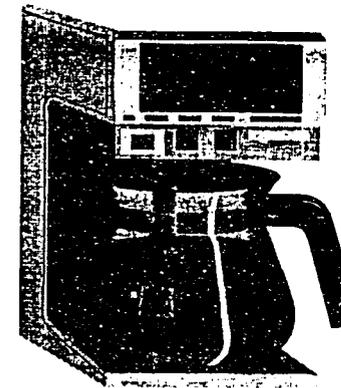
Second: Oleg Zigachev

Third: Matevasch and Lisichkin

**ANDERSEN
CONSULTING**
ARTHUR ANDERSEN & CO., S.C.

CONCLUSION - ANDERSEN COMPETITION

- All deputies were asked to take part in competition, only 5 answered
- Only one of the respondents was able to answer half of the questions properly (16 people were asked: 5 deputies, 1 department head, 2 doctors, 2 engineers, 5 operators, 1 paramedic)
- Deputies and other staff have widely different views on basic MAS facts, but they are always keen to discuss their views at length
- Staff and deputies feel uncomfortable with factual information like numbers or percentages
- And the winner is Mrs Ludmila Chernova
Second is: Oleg Zigachev
Third is: Lisichkin



PATRICK GORMLEY OVERALL OBSERVATIONS

<p>What is Bad?</p>	<ul style="list-style-type: none">• The quality of service delivery to the patient (response time, standard of equipment and vehicles clinical practice)• Managers lack of knowledge of the functions of the service• Lack of monitoring of clinical practice• Overall perception and satisfaction of the service by the Moscow public.
<p>Why I believe drastic improvements can be made!</p>	<ul style="list-style-type: none">•The employees are mostly well educated and qualified and thereby able to be trained/re-trained.•There are sufficient resources (finances/human) to implement changes•By defining the objective of the service an adequate response can be provided to both the emergency and non-urgent patient.

CONCLUSIONS



1. TOP QUALITY AMBULANCE SERVICE:

Within 18-24 months MAS could, if given full support from the city of Moscow, provide Muscovites with medical treatment at the highest standard.



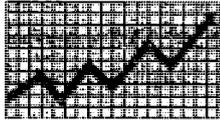
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The overall work force collaborated openly and positively to our study. We believe that MAS driven by Mr Elkis is able to assimilate the dramatic changes required to become a top quality provider of health by December 1996.



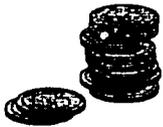
3. PEOPLE:

A radical review of staff management procedures needs to be implemented. This would include changing the organisation structure, shift patterns, job descriptions, performances monitoring, staff payment, promotions, training and dismissal procedures.



4. PROCESS:

The overall process of buying goods and services (vehicles, buildings, systems, instruments), financial management and the allocation of ambulance per call need to be redesigned and supported by flexible systems.



**5. SAVINGS AND FUNDS REQUIRED FOR
VAST QUANTIFIABLE BENEFITS**

The MAS budget for last year (1994) was \$48 million. If MAS is provided with \$50 million in 1995, 1996 and 1997 it could self finance the improvements. These would include:

- immediate response to "03" telephone calls - 80% of calls responded to within 3 tones (15 seconds) and 98% of calls responded to within 6 tones (30 seconds) instead of 20% and 30% currently during day time
- fast assistance to the people of Moscow with 80% of real emergency calls (excluding non-urgent calls) being responded to within 25 minutes
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- a top quality service of which the Moscow government can be proud with 70% of patients being "satisfied or highly satisfied" with MAS
- high morale of all the MAS staff due to vastly improved professional environment and 50 to 100% increase in total revenues per hour worked.

“Striving for Success”
A Change Programme

Moscow Ambulance Project

March 1995

What it Covers

- ◆ Benefits
- ◆ Requirements from the City of Moscow
- ◆ Requirements from MAS
- ◆ Overall approach
- ◆ Details of the Programme

Benefits

City of Moscow

- A top quality Ambulance Service for Muscovites
- Fast response to 03 phone calls (80% responded to within 15 seconds)
- Decrease in ambulance response times to real emergencies
- Decrease in the MAS budget by 1997 providing savings of \$5 million
- Public satisfaction in the service

MAS Executive & Staff

- A top quality Ambulance Service
- Pride in the service
- Reduction in working hours with same pay
- Improved working conditions
- Increased efficiency
- Appropriate monitoring
- Proper vehicles and equipment
- Clear promotional criteria
- Adequate training

City of Moscow Requirements

- ◆ Complete support for the change programme
- ◆ Clear budget definition and authority for MAS
- ◆ Financial backing
- ◆ Support for changes involving:
 - Contracting out of services such as vehicle supply
 - Reducing staff hours without reducing pay
 - Redesigning key forms in the service
 - Utilising new reporting documents for health authorities

MAS Requirements

- ◆ Acceptance of “work less for same pay” principle
- ◆ Change in shift patterns
- ◆ Performance monitoring of all staff
- ◆ New promotion scheme
- ◆ Job descriptions and contracts
- ◆ Management to provide to the change team:
 - 20 full-time top quality MAS employees
 - Recruitment of 10 top level graduates
 - Payment of overtime to team members

Overall Approach

Receive go ahead from City of Moscow

Public Relations

Inform staff of changes and gain support for programme

Re-engineering

Improve process in Command & Control and Local Stations

People Management

Redefine job descriptions, shift patterns and job monitoring

Support Team

Review procurement, strategy and support regional roll out

Information Technology

Analyse and redesign information systems

Cultural Change

On the ground coaching in medical practice and patient care

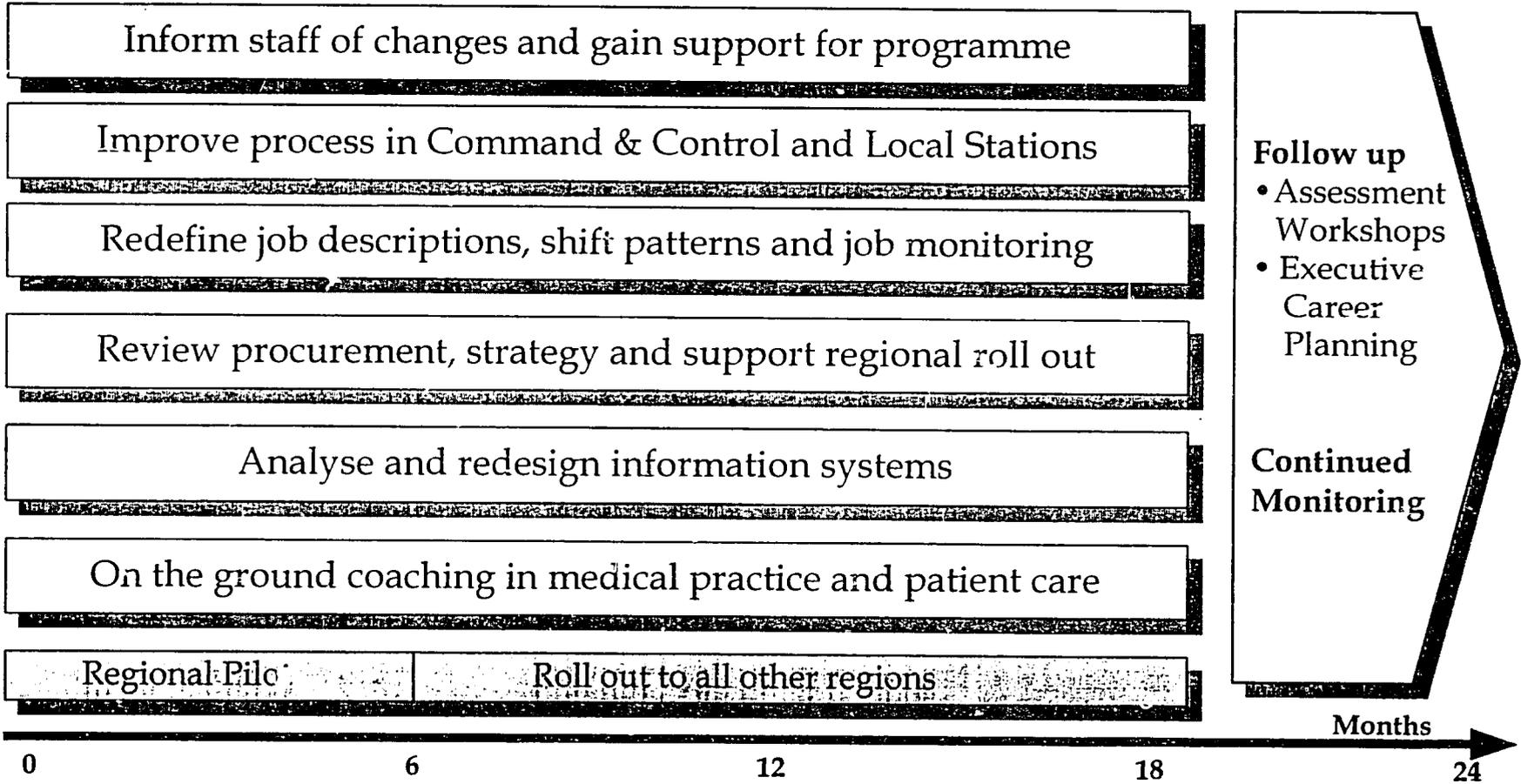
Time Scales

Regional Pilot

Roll out to all other regions

Follow up
 • Assessment Workshops
 • Executive Career Planning

Continued Monitoring



Moscow Ambulance proposed change program

City of Moscow

- 1 Official go ahead
- 2 Ratify finance with foreign Bank
- 3 Give full budgetary discretion
- 4 Give full support
 - staff & deputies reactions
 - Contracting out (MT, IT, Build)
 - Same pay for 1/2 time
 - Redesigning forms
 - Provision of INFO to City

Tracking satellite system

Command & Control system

Public Relations

Sell change program - videos - presentation - brief letters To: - staff - station chiefs - deputies - unions	Update everyone on - progress - achieved benefits - analyses results & required - training workshops	- be aware of latest rumors - organize workshops - invite teams for different briefings - provide logistics support - contact press - manage communication system
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Reengineering

Pilot zone 1		Roll out other regions		
Analysis (stations / com & cont) - volumes by day - turn around times - manpower req. - shifts - IT systems - Training requirements - MIS	Coach zone 1 - com & cont - stations - decrease work hours - prioritization	Region 2,3,4	Region 5,6,7,8	Reg 9,10,11

People management

- job definition - reg1, report lines - shifts calculat. - redesign org. str - hiring & firing proc	Sell new shift patterns - setup train. workshops	Implement shifts, new job desc. and training workshops	Roll-out		
			Shifts patterns + job desc. Region 2,3,4	Region 5,6,7,8	Reg 9,10,11

Support team

- communications system & building layout - vehicle, buildings, instruments, disp & drugs - monitoring syst vehicles & buildings mainten. - vision, strategy, LT plans, buildings	Support reengineering Roll-out			
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Information Technology

analyse & redesign information systems: - operators - vehicle - buildings	Develop forms and PC spread	Install and coach dispatch	Roll-out		
			Install and coach disp. Region 2,3,4	Region 5,6,7,8	Reg 9,10,11

Cultural change

On the floor coaching (3 Manchester Amb. staff)				
Station chiefs & team	Region 1 staff + UK Visit	Region 2,3,4	Region 5,6,7,8	Region 9,10,11

Follow-up assessment workshops
 - top management career planning
 - movement planning by position by month

Monitorin



Public Relations

Gaining Support From MAS Employees for the Change Programme

First Three Months

Gain support from all staff for change programme and inform them of proposals through:

- Presentations
- Promotional videos
- Briefing notes

Present in small groups to:

- Deputies
- Station chiefs
- Union personnel
- Field staff

Following 18 Months

Continued updating of staff on:

- Current progress
- Benefits achieved
- Results to date
- Latest rumors

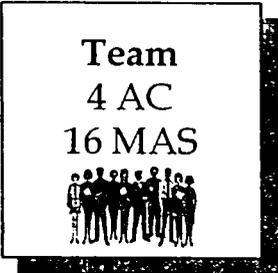
Organise:

- Workshops
- Training courses
- Communication meetings

Manage external & internal press

Re-engineering

The Two Track Approach



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Command & Control

Key Goals

- To simplify the process
- To increase efficiency
- To exercise control
- Responsiveness

Methods

- Devise new forms to simply process
- Introduce prioritization
- Regionalism dispatching
- Increase dispatchers control over crews
- Computerize dispatching system
- Monitor performance
- Streamline staffing levels

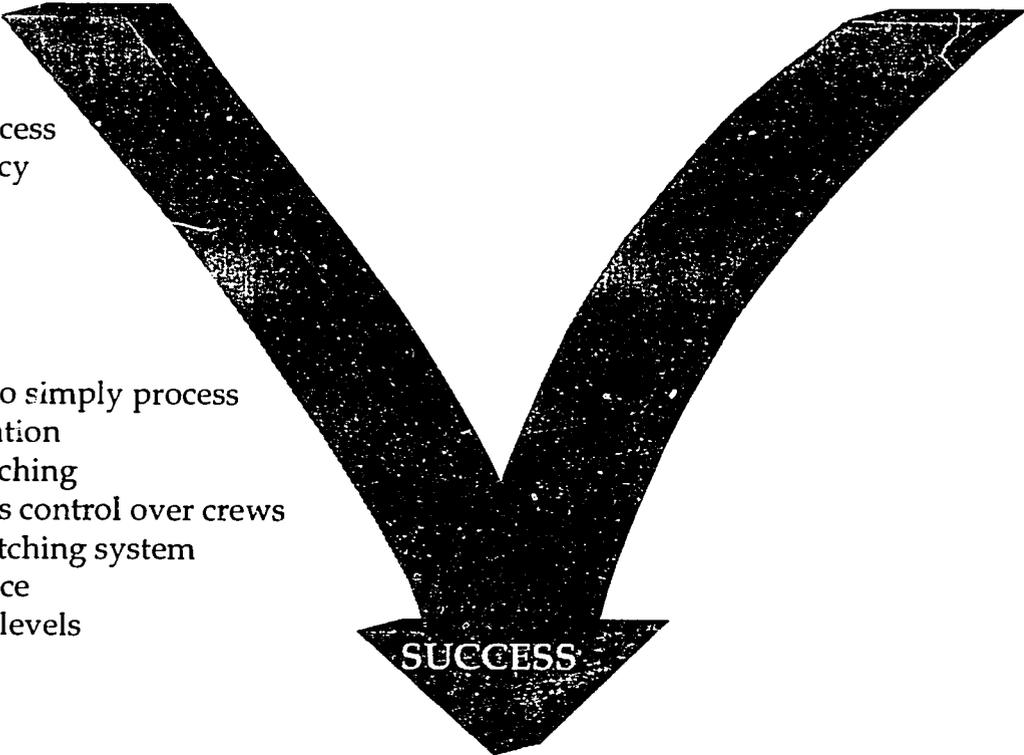
Local Stations

Key Goals

- To improve patient care
- To increase crew efficiency
- To decrease delays

Methods

- Analyze volumes per day
- Analyze turnaround times
- Devise accurate staffing levels
- Change shift patterns
- Improve communications between field staff and center
- Introduce monitoring of crews
- Introduce job descriptions
- Assess individual performance
- Introduce updated technology

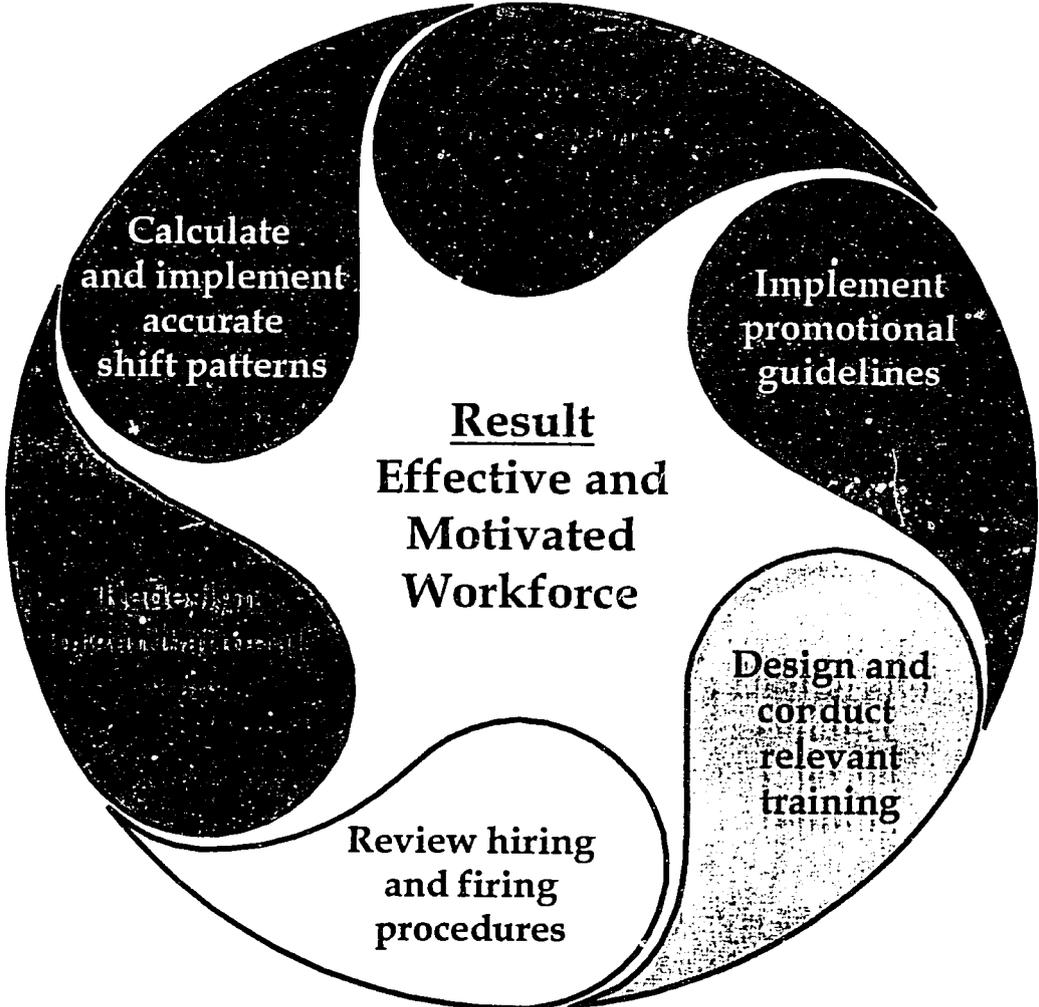


FOLLOWING 12 MONTHS -
PHASED ROLL OUT TO OTHER REGIONS

Team
3 AC
6 MAS



People Management



Time Scales

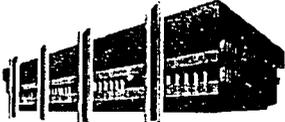
- 6 month regional pilot
- 12 month roll out to other regions

Team
1 AC
4 MAS



Support Team

First 6 Months

<p>Analyse procurement procedures for:</p> <ul style="list-style-type: none"> • Vehicles • Equipment • Drugs & disposables 	<p>Review:</p> <ul style="list-style-type: none"> • MAS vision • Strategy • Long term planning <p>Monitor:</p> <ul style="list-style-type: none"> • Vehicle systems • Building maintenance 	<p>Analyse & redesign:</p> <ul style="list-style-type: none"> • Building layout • communication system 
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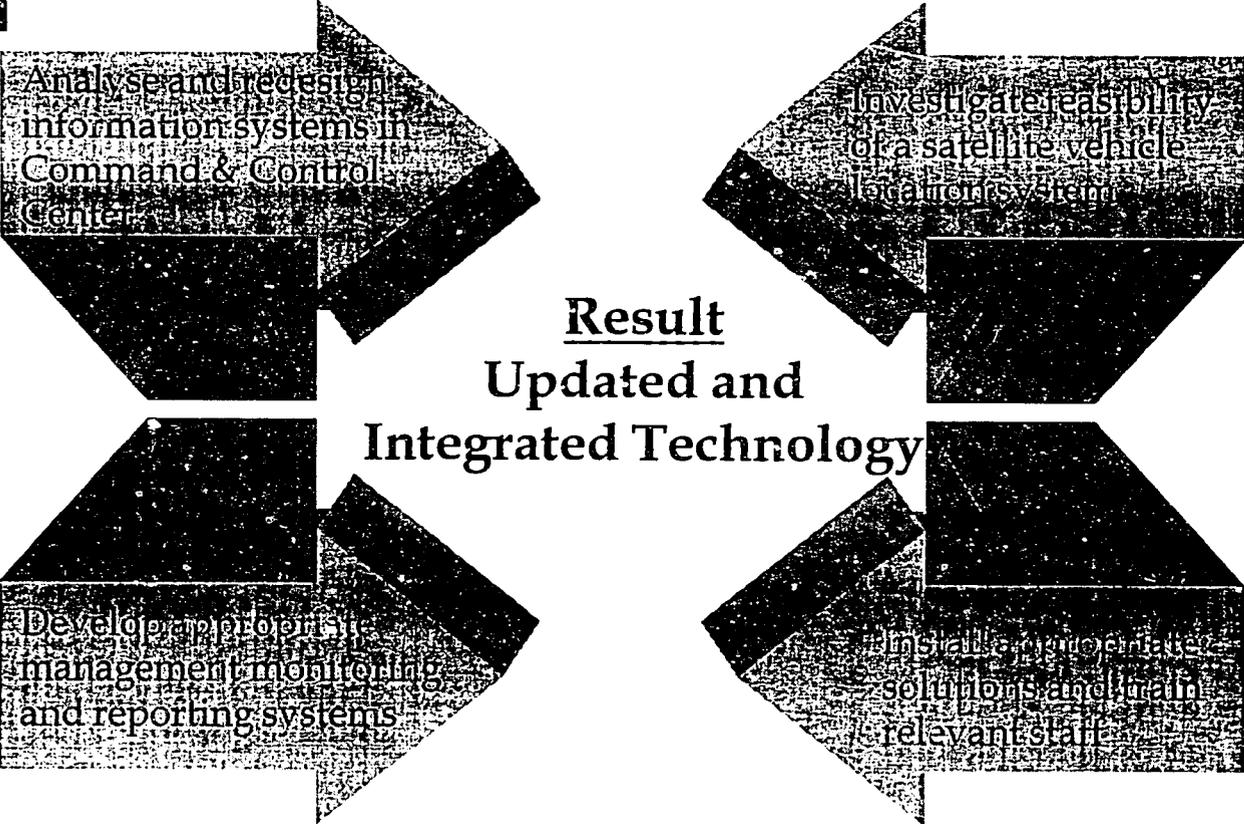
Following 12 Months

Support regional roll-out

Team
1 AC
2 MAS



Information Technology



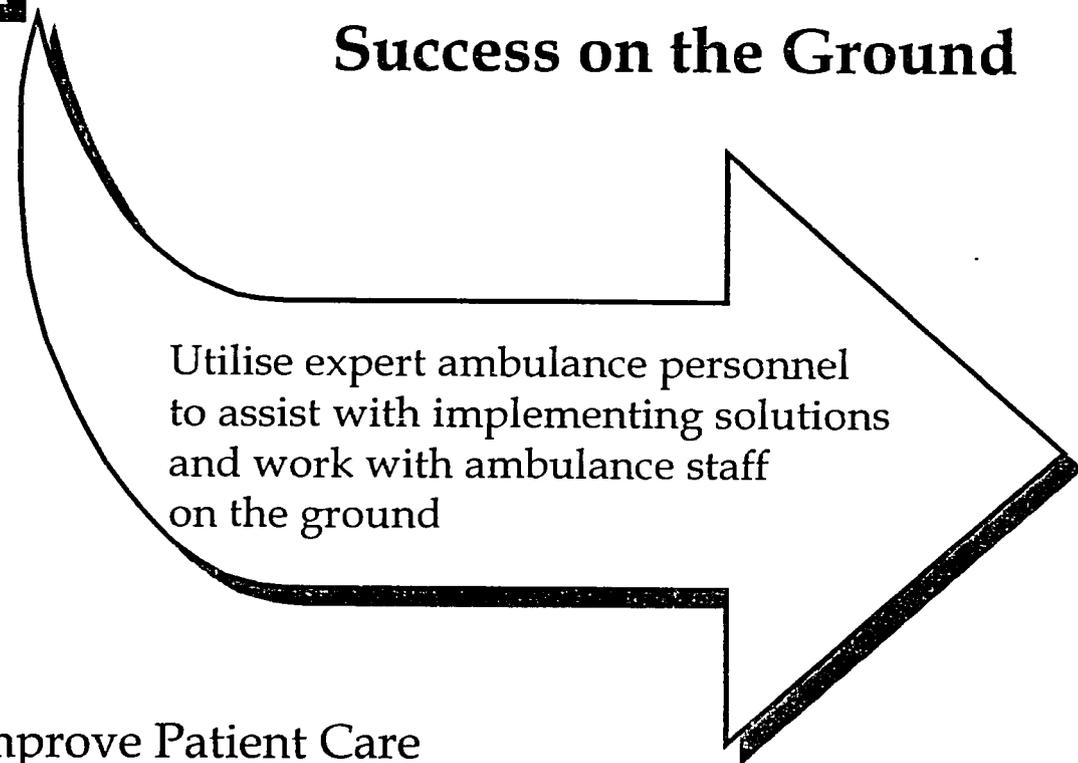
Result
Updated and Integrated Technology

First 6 months -develop solutions
Following 12 months - regional roll out

Cultural Change



Success on the Ground



18 Months

Expert coaching in each region as new solutions and methods are implemented

Consider taking some staff to the UK for training

Improve Patient Care



Improve Medical Practice



CONCLUSIONS



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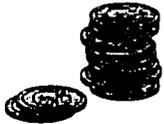
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SUGGESTIONS - EASY FIRST

	SUGGESTIONS		IMPL.	DIFFICULT	COST	BENEFITS	TIME	RISKS
			I E	H M L	H M L	H M L	H M L	H M L
1	Remove individual dispatch clocks and synchronize wall clocks at regular intervals.	OP	I	L	L	M	S	L
2	Have Operators designate the dispatch area via a tick box system on the call logging form. Dispatch areas could be displayed in a form above each operator position to help them designate areas.	OP	I	L	L	M	S	L
4	Implement open door policy	PR	I	L	L	M	S	L
5	Define local regions based on 15 minutes maximum traveling time.	SPBA	I	M	L	M	L	L
6	Clarify overtime payment: in emergency, if people are called from home, they do not get overtime rate, but even less than usual salary.	HR	I	M	L	L	H	L
7	Monitor adequate call loading per channel.	OP	I	M	M	H	M	L
8	Introduce a system of lights and timers to be set above each operating position. When an operator has finished filling in a form she pushes a button activating a light and timer above her position. The light alerts the runner to pick up a form.	OP	I	M	M	H	S	L
9	Arrange initial training for some drivers who are not from Moscow to overcome bad knowledge of local regions.	HR	I	M	M	H	S	L
10	Update guidelines to dispose from old equipment.	SPBA	I	M	M	M	M	M
11	Develop an approach to bottleneck between incoming channels and number of operators.	OP	I	M	H	H	S	M
12	Decrease the service area for Station 42 due to its' inability to cope with the volume.	GM	I	M	H	H	M	M
13	Provide all ambulance crews with a hand held radio.	OP	I	M	H	H	M	M
14	Develop preventive measures against attacks. Make its' analysis available to everyone involved in visits.	HR	I	M	H	M	M	L
15	Training/retraining of doctors/paramedics (proper qualifications). Ensure proper qualifications are maintained.	HR	I	M	H	M	M	M
16	Integrate Hospitalization Department with C&C.	OP	I	H	L	H	H	M
17	Monitor calls' number getting through by hour (hand set lift up, real conversation, hand set unattended).	OP	I	H	M	M	M	M
18	Monitor average waiting time to get through.	OP	I	H	M	M	M	L
19	Develop and introduce common standards for MAS's patient care (in form of clear manuals).	OP	I	H	M	M	L	L
20	Eliminate the duplication of service areas by Station 37 and Station 16.	GM	I	H	M	M	M	H
21	Eliminate the duplication of service areas by Station 1, Station 7 and Station 14.	GM	I	H	M	M	M	H
22	Introduce a more stringent drug controlling system.	SPBA	I	H	M	L	M	M
23	Introduce a system of lights for the dispatching system to monitor workload and available resources. Green light would indicate available ambulances, blue light would indicate no availability and red light would indicate no availability and call outstand	OP	I	H	H	H	M	L
24	The radio system should be relocated to the C&C center.	OP	I	H	H	M	M	M
25	Update and develop new job definitions.	HR	I	H	H	L	L	M

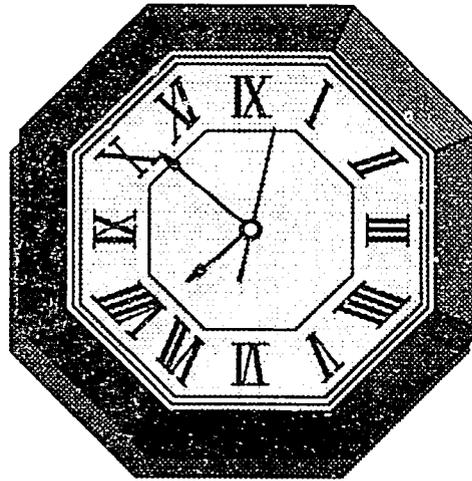
SUGGESTIONS - EASY FIRST

26	Develop an approach to providing service outside Moscow circle road: 1. Pass all services to the region's ambulances. 2. Arrange stand-by locations for crews.	GM	E	M	H	H	L	M
27	Implement clear material incentives for individuals.	HR	E	M	H	M	M	M
28	Arrange training for PC users.	OP	E	M	H	M	M	M
29	Start a public education and PR program to educate the public and attain better relations.	PR	E	M	H	M	M	M
30	Redesign call logging form to be user friendly and provide more accurate information.	OP	E	M	M	H	M	L
31	Introduce yearly budget planning.	SPBA	E	M	M	H	M	L
32	Arrange training for paramedics to become dispatchers.	HR	E	M	M	H	M	L
33	Simplify and clarify functions of dispatcher at the local station (now dispatcher and PC operator are the same (taking calls, dispatching cars, inputting historical data)).	OP	E	M	M	M	M	L
34	Develop and set up average response time.	OP	E	M	M	M	M	L
35	Increase line control by adding additional teams and increasing their effectiveness	OP	E	M	M	L	M	M
36	Plan and analyze overtime work.	OP	E	H	M	H	M	L
37	Empower Department Heads by giving them more control over their Departments and providing them with a set budget to control.	HR	E	H	M	H	M	H
38	Develop an approach to analyze all statistics in the statistics department and to feedback it to local stations and other department in forms of recommendations and prognosis.	IT	E	H	M	H	L	L
39	Develop and introduce new hiring and dismissal procedures.	HR	E	H	M	H	L	H
40	Scrap all drivers and train doctors in defensive driving.	HR	E	H	M	H	M	M
41	Develop and introduce primary dispatch criteria.	OP	E	H	M	M	M	H
42	Integrate the Planning and Accounting Departments into one Financial Department to centralize economic and financial issues.	SPBA	E	H	M	M	M	M
43	Introduce a priority system in the C&C room.	OP	E	H	M	M	M	H
44	Abandon station dispatchers.	OP	E	H	M	M	M	H
45	Develop methodology to calculate staff at local stations.	HR	E	H	H	H	M	H
46	Install system to verify address in C&C center and local station using electronic map.	OP	E	H	H	H	L	H
47	Simplify the information flow and define necessary documents to be filled in.	IT	E	H	H	H	L	M
48	Make shift patterns to be flexible.	OP	E	H	H	H	L	H
49	Make staffing at C&C center and local stations to follow calls volumes.	OP	E	H	H	H	M	H
50	Develop system or criteria to control doctor/paramedic job performance.	HR	E	H	H	H	L	H
51	Make MAS to decide what equipment to buy.	SPBA	E	H	H	H	M	H
52	Closely monitor and negotiate service agreements to have cost alternative for vehicles, building repairs, material suppliers.	SPBA	E	H	H	H	M	H
53	Dispatchers to log and time all ambulance movements.	OP	E	H	H	H	M	H

SUGGESTION: 1 - REMOVE INDIVIDUAL DISPATCH CLOCK AND SYNCHRONIZE ALL CLOCKS REGULARLY

CURRENTLY

Dispatchers have clocks not being synchronized. This leads to wrong time recorded and make it difficult to get a proper picture about timely arrival of the car.



PROPOSED

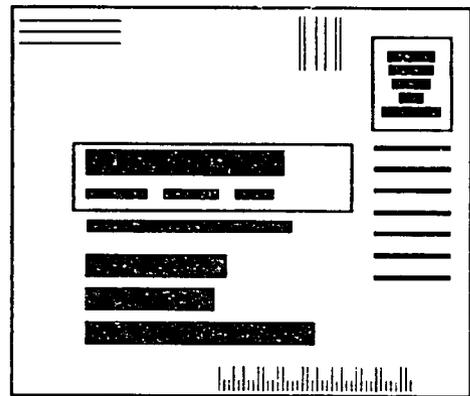
Take individual clock off.
Install 4 large electronic clocks.
Increase the accuracy of a recorded time.

BENEFIT	Everybody concerned will have a proper time to build up practice, calculations, etc.	COST	2 weeks to select and buy proper clocks	DIFFICULTY	Major task here is to finance this operations
----------------	--	-------------	---	-------------------	---

SUGGESTION: 2 - SELECT DISPATCH AREA VIA A TICK BOX ON THE CALL LOGGING FORM.

CURRENTLY

Have Operators designate the dispatch area via a tick box system on the call logging form. Dispatch areas could be displayed in a form above each operator position to help them designate areas.



PROPOSED

Design the special tick box on the form to point out directly to the dispatch area.

BENEFIT	The time for identifying the local station, closest to the patient, will be minimized.	COST	2 weeks to change the form and arrange training for dispatchers.	DIFFICULTY	It will be difficult to change the form.
----------------	--	-------------	--	-------------------	--

SUGGESTION: 4 - IMPLEMENT OPEN DOOR POLICY

CURRENTLY
 Every department within MAS works in room with locked door.



PROPOSED
 Ask everyone, when they work to open their office doors.

BENEFIT	Enable people to watch activity levels elsewhere and increases opportunity to communicate.	COST	Responding to staff concerns	DIFFICULTY	Some members of staff and deputies will not implement this new philosophy with enthusiasm.
----------------	--	-------------	------------------------------	-------------------	--

SUGGESTION: 5 - DEFINE LOCAL REGIONS BASED ON 15 MINUTES MAXIMUM TRAVELING TIME

CURRENTLY

The local regions areas were defined 10 years ago.

Changed geographical and demographic situation make it difficult to reach a patient within 15 minutes since taking a call.



PROPOSED

Redefine the local regions borders.

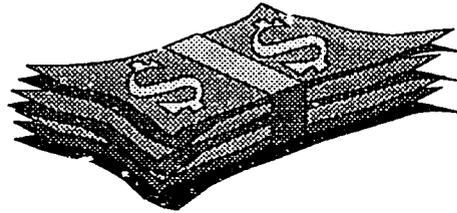
Relocate some of the stations to the new positions.

BENEFIT	Patients will get assistance within 15 min	COST	4 manweeks to analyze and define regions border. Capital to relocate/build up stations.	DIFFICULTY	It will be difficult to get approval and fund for relocation of stations
----------------	--	-------------	---	-------------------	--

SUGGESTION: 6 - CLARIFY OVERTIME PAYMENT IN EMERGENCY

CURRENTLY

If people are called from home , they do not get overtime rate, but even less than usual salary.



PROPOSED

Redefine the overtime rate to reflect the overtime work.

BENEFIT	Staff will have good morale and incentive to work overtime	COST	2 weeks to define overtime payment procedure	DIFFICULTY	It can be difficult to get this change in line with regulations.
----------------	--	-------------	--	-------------------	--

SUGGESTION: 7 - MONITOR ADEQUATE CALL LOADING PER CHANNEL

CURRENTLY

The telephone system is not designed to balance the number of call per button.



PROPOSED

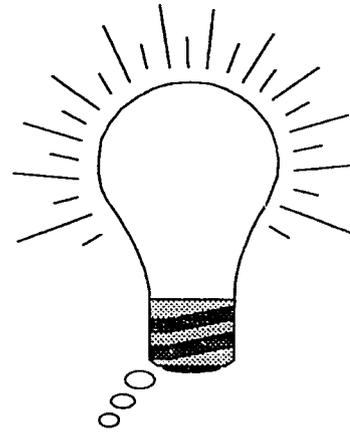
Analyse loading per button per hour and rebalance.

BENEFIT	The average response time will be decreased.	COST	6 weeks to analyse loading.	DIFFICULTY	The process will require good analytical skills.
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SUGGESTION: 8 - INTRODUCE A SYSTEM OF SIGNALING LIGHTS FOR DISPATCHERS

CURRENTLY

The dispatchers are filling in call register's slips and putting them on their desks. Usually it takes some time for them to be picked up.



PROPOSED

Set up light above each operating position. When an operator has finished filling a form, she pushes a button activating a light. The light alerts the runner to pick up a form.

BENEFIT	The time for call and form processing will be decreased.	COST	5 weeks to identify and install a proper system.	DIFFICULTY	It is difficult to find funds for this installation.
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SUGGESTION: 9 - ARRANGE INITIAL TRAINING FOR DRIVERS WITHOUT KNOWLEDGE OF MOSCOW MAP

CURRENTLY

Drivers are arriving to Moscow sometimes with a bad knowledge of local map.

Usually it takes some time for a driver to get knowledge of Moscow. As a result, a lot of time is spent, trying to find a patient site.



PROPOSED

Arrange training for all drivers to let them know the best routes to various addresses.

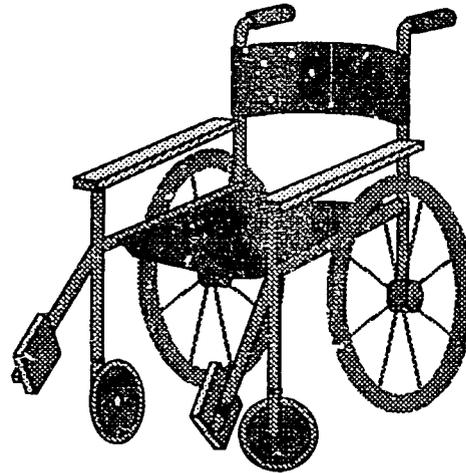
BENEFIT	The time of arrival to a patient site will be decreased.	COST	Main cost is on-going training for new drivers plus usage of various materials.	DIFFICULTY	Non-Muscovites usually work a short period of time which makes this training on-going and it would require a special instructor
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SUGGESTION: 10 - UPDATE GUIDELINES TO DISPOSE FROM OLD EQUIPMENT

CURRENTLY

Present guidelines are not relevant to the extensive usage of equipment by doctors.

Sometime it is not possible to dispose of broken apparatus.



PROPOSED

Update guidelines to reflect usage of new equipment under new circumstances.

BENEFIT	Doctors and MAS will have proper rules how to keep and dispose of equipment	COST	6 weeks to analyze and update existing regulations	DIFFICULTY	The difficulty here is that these norms are established at the Ministerial level.
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SUGGESTION: 12 - DECREASE THE SERVICE AREA FOR STATION 42

CURRENTLY

The service area for Station 42 too big and it is difficult to cope with the calls volume.



PROPOSED

Decrease the service area by reallocating resources within the region.

BENEFIT	The patients' calls will go through more quickly than now	COST	3 weeks to identify resources to redefine the service area and assess the opportunity.	DIFFICULTY	Allocation of the new resources and definition of the new borders.
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SUGGESTION: 13 - PROVIDE ALL AMBULANCE CREWS WITH A HAND HELD RADIO

CURRENTLY

It is very difficult to maintain stable connection around Moscow and almost impossible to register the arrival of the car to a patient site



PROPOSED

Provide each car with a hand held radio for better co-ordination and control.

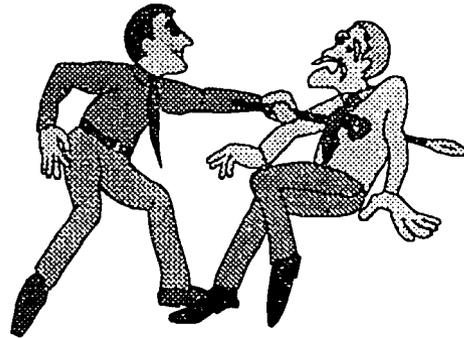
BENEFIT	C&C center will get overall control over locations of cars and teams' actions.	COST	US\$150 000 - 200 000 and 8 weeks to install radios	DIFFICULTY	Main difficulty here is to get finance to select and install equipment
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SUGGESTION: 14 - DEVELOP PREVENTIVE MEASURES AGAINST ATTACKS.

CURRENTLY

The staff is not well informed about attacks. Analysis and recommendations are not done and not distributed to the doctor and paramedics.

Staff do not have any recommendation what to do in case of attacks.



PROPOSED

Develop an overall approach to protecting MAS staff against assaults, making their rights equal to the police.

Analyze all collected data on a number attacks to draw recommendations.

BENEFIT	Doctors and paramedics will know what to do in case of attack. It will improve staff morale.	COST	5 weeks to analyze collected material, meet victims and draw recommendations.	DIFFICULTY	Sometimes victims are reluctant to speak out and give details.
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SUGGESTION: 15 - TRAINING/RETRAINING OF DOCTORS/PARAMEDICS

CURRENTLY

No practical training provided by MAS.
 No follow up training
 No training for usage of the new equipment.
 Medical practice is outdated



PROPOSED

Develop and introduce modern methods of professional training to increase the service level and increase the usage of modern technology

BENEFIT	Patients will get qualified assistance. The crews will behave more professionally. The equipment will be used properly.	COST	2 weeks to develop training programs and define the control system.	DIFFICULTY	The training will require some material resources from MAS.
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SUGGESTION: 16 - INTEGRATE HOSPITALIZATION DEPARTMENT WITH C&C CENTER

CURRENTLY

Hospitalization and C&C center are the separate units. If the patient is needed to be placed to the hospital his details should be copied again by Hosp. Dept.



PROPOSED

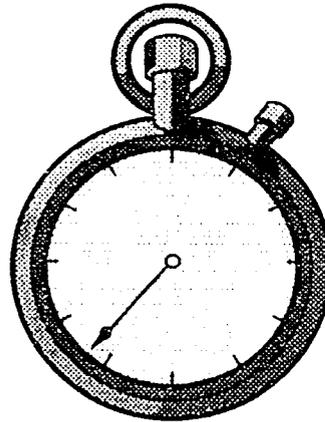
Integrate two departments to decrease workflow and make it easier and quicker for a patient to be placed in hospital

BENEFIT	The crews will get information about the placement to a hospital quicker and it will be easier to control cars	COST	5 weeks to develop approach and define the hardware used.	DIFFICULTY	The new model would require new processes and procedures. The cost of new equipment needs to be paid.
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SUGGESTION: 17 - MONITOR CALLS' NUMBER GETTING THROUGH BY HOUR

CURRENTLY

No monitoring of calls number getting through by hour (handset lift up, real conversation, handset unattended).



PROPOSED

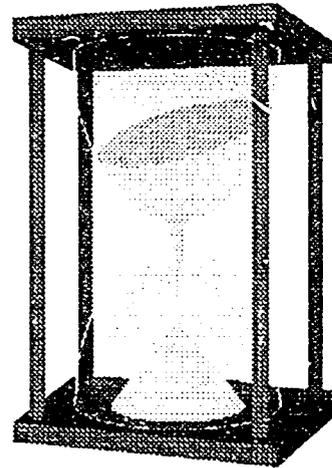
Install the system to monitor the number of calls getting through for better utilization of resources and proper planning.

BENEFIT	Statistics will allow to monitor all calls. This will allow to properly plan and use resources.	COST	8 weeks to identify the hard- and software and to install equipment.	DIFFICULTY	The installation would require budget allocations.
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SUGGESTION: 18 - MONITOR AVERAGE WAITING TIME GETTING THROUGH.

CURRENTLY

No monitoring of the average waiting is done. It does not allow to get relevant statistics and make right conclusions.



PROPOSED

Install the system to get the time to get through to define the plan of action to improve the response time.

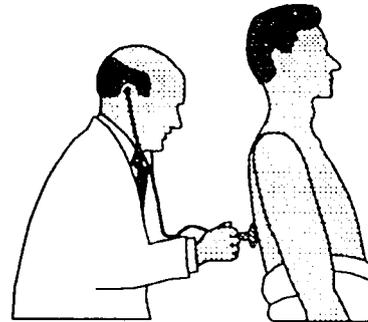
BENEFIT	Statistics will allow to monitor the time and to define the ways to improve response time.	COST	8 weeks to identify the hard- and software and to install equipment.	DIFFICULTY	The installation would require budget allocations.
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SUGGESTION: 19 - DEVELOP AND INTRODUCE COMMON MEDICAL STANDARDS FOR MAS

CURRENTLY

No common and necessary standards are in place.

Every review of the patient's treatment is based on the personal point of view.



PROPOSED

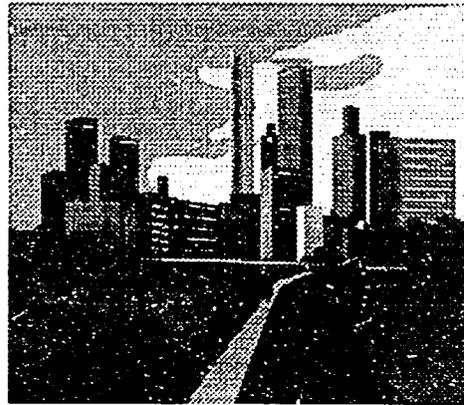
Develop new standards and train all doctors and paramedics to use them.

BENEFIT	With standards implemented doctors and paramedics will have proper guidelines to treat a patient.	COST	15 weeks to design and write new treatment standards	DIFFICULTY	Constantly changing environment.
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SUGGESTION: 20 - ELIMINATE THE DUPLICATION OF SERVICE AREAS BY STATION 1, 7 AND 14 .

CURRENTLY

The three stations cover by its' services the same region which leads to the confusion and the conflict of interest.



PROPOSED

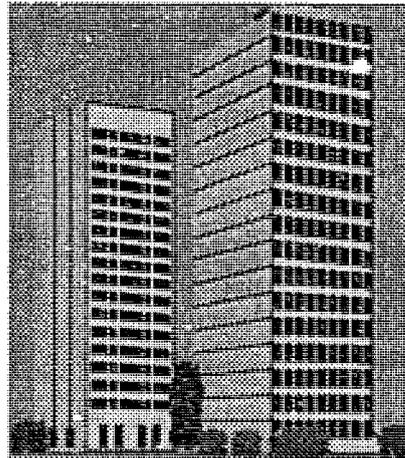
Define clearly the service areas for the three stations

BENEFIT	Confusion will be erased, duplication eliminated, staff morale will be improved.	COST	3 weeks to determine the precise borders and estimate staffing levels on stations.	DIFFICULTY	The division will require intensive co-operation between the above stations and Central Service.
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SUGGESTION: 21 - ELIMINATE THE DUPLICATION OF SERVICE AREAS BY STATION 37 AND 16.

CURRENTLY

The two stations cover by its' services the same region which leads to the confusion and the conflict of interest.



PROPOSED

Define clearly the service areas for the three stations

BENEFIT	Confusion will be erased, duplication eliminated, staff morale will be improved.	COST	3 weeks to determine the precise borders and estimate staffing levels on stations.	DIFFICULTY	The division will require intensive co-operation between the above stations and Central Service.
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SUGGESTION: 22 - INTRODUCE A MORE STRINGENT DRUG CONTROLLING SYSTEM.

CURRENTLY
 There is no standard to use medicines to treat a patient. Norms are not updated and no system is in place to track the drug from warehouse to patient .



PROPOSED
 Set up clear standards for using drug while treating patient.

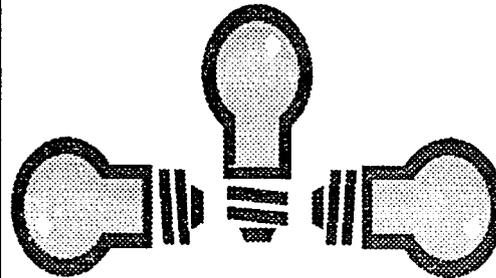
BENEFIT	Usage of drug will be controlled, this will allow to plan and monitor more effectively.	COST	5 weeks to develop criteria to use medicines to treat specified illness.	DIFFICULTY	Standard need to be agreed by everybody in a short time.
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SUGGESTION: 23 - INTRODUCE A SYSTEM OF LIGHTS FOR THE DISPATCHING SYSTEM TO MONITOR WORKLOAD AND AVAILABLE RESOURCES .

CURRENTLY

The dispatchers are not aware of resources available from other local stations.

The call can be outstanding while somebody has a car.



PROPOSED

Green light would indicate available ambulances, blue light would indicate no availability and red light would indicate no availability and outstanding call

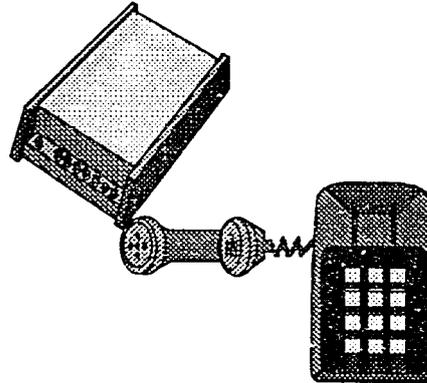
BENEFIT	The resources will be utilized more effectively.	COST	5 weeks to develop and install the light system	DIFFICULTY	The system will require good co-ordination between dispatchers and will require financial allocation (though not big)
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SUGGESTION: 24 - THE RADIO SYSTEM SHOULD BE RELOCATED TO C&C CENTER.

CURRENTLY

The radio system now is separate from C&C center which makes communication control rather difficult.

Messages are being taken from crews and are being delivered to C&C and local stations dispatchers



PROPOSED

The relocated radio will be used to deliver a message directly to dispatchers without going to a radio room.

BENEFIT	The message will go directly to the dispatcher and crew will have a clear plan of action.	COST	2 weeks to analyze the proposed relocation and develop procedures	DIFFICULTY	It can be difficult to provide immediate access to dispatcher for all crews.
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SUGGESTION: 25 - UPDATE AND DEVELOP NEW NEW JOB DEFINITIONS

CURRENTLY

No updated job definition since 1989:
 no description for specialized teams;
 no PC technology;
 no regional director job definition.



PROPOSED

New job definitions will reflect changed responsibilities and new structure of the MAS.
 More emphasis will be made on using new technology.

BENEFIT	People will have clearly defined responsibilities. The duplication of some positions will be eliminated.	COST	9 weeks to design and write new job descriptions	DIFFICULTY	Constantly changing environment. Reluctance of personnel to take responsibility.
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SUGGESTIONS FOR DISPOSABLE EQUIPMENT

	IMPROVEMENTS				Cost Each
	Cost Savings	Patient care	Crew Safety	Ease of operation	
Use intravenous cannulae instead of multiple needles	✓	✓	✓	✓	\$1.7
Introduce disposable alcohol wipes	✓			✓	\$0.7
Introduce disposable sharps receptacles			✓	✓	\$1.5
Replace glass bottles of intravenous fluids with plastic contained fluids	✓			✓	\$2

SUGGESTIONS FOR PURCHASE OF LOW-COST EQUIPMENT

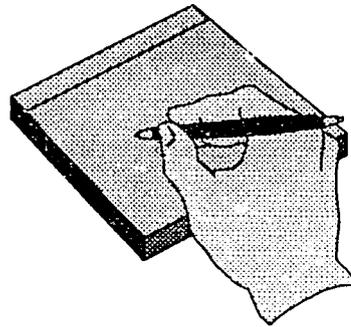
	Patient care	Crew Safety	Ease of operation	Cost
Lightweight collapsible patient carry chairs	✓	✓	✓	\$150
Lightweight response bags		✓	✓	\$30
Portable suction equipment	✓		✓	\$150
Blankets/sheets	✓			\$15
High visibility tabards		✓		\$15

SUGGESTION: 30 - REDESIGN CALL LOGGING FORM

CURRENTLY

The form does not serve as a proper tool assisting an operator to get accurate information and to make primary diagnosis.

The form is easy to loose and hard to process.



PROPOSED

Introduce new design for call logging card to assist operators to receive and report calls properly.

BENEFIT	<ul style="list-style-type: none"> · Less confusion for addresses and diagnosis as the form is larger and uses tick boxes. · Prompts operator to ask leading questions · 	COST	Design and printing of new forms. Need for training on the benefits of the new form and how to use it.	DIFFICULTY	Operators unhappy with the new form.
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SUGGESTION: 39 - DEVELOP AND INTRODUCE NEW HIRING AND FIRING PROCEDURES

CURRENTLY

MAS has outdated labor procedures making it difficult to employ, motivate and dismiss workforce.



PROPOSED

Update and change existing labor procedures to reflect new challenges before Ambulance Service.

People will care more about their job performance and discipline.

BENEFIT	New procedures will make emphasis on having flexible , motivated and skillful workhorse.	COST	3 weeks to develop new procedures.	DIFFICULTY	Major problem here is improvement from the Moscow government.
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