



Pathfinder and face-to-face Manchester Triage System use by UK Ambulance Services.

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Why use MTS in UK Ambulance Services?

- Traditional response & convey methodology, but changing now - patient mix, national and local drivers.
- Increasing focus on “Safe Care Closer to Home” – secondary telephone triage and enhanced triage & assessment at scene are key.
- Paramedic Pathfinders, developed from MTS, can be applied by Paramedics and EMTs to support referral into alternatives to ED (Newton *et al.* 2013).
- Five UK Ambulance Services are already using MTS TTA – why not trial the face-to-face version too?

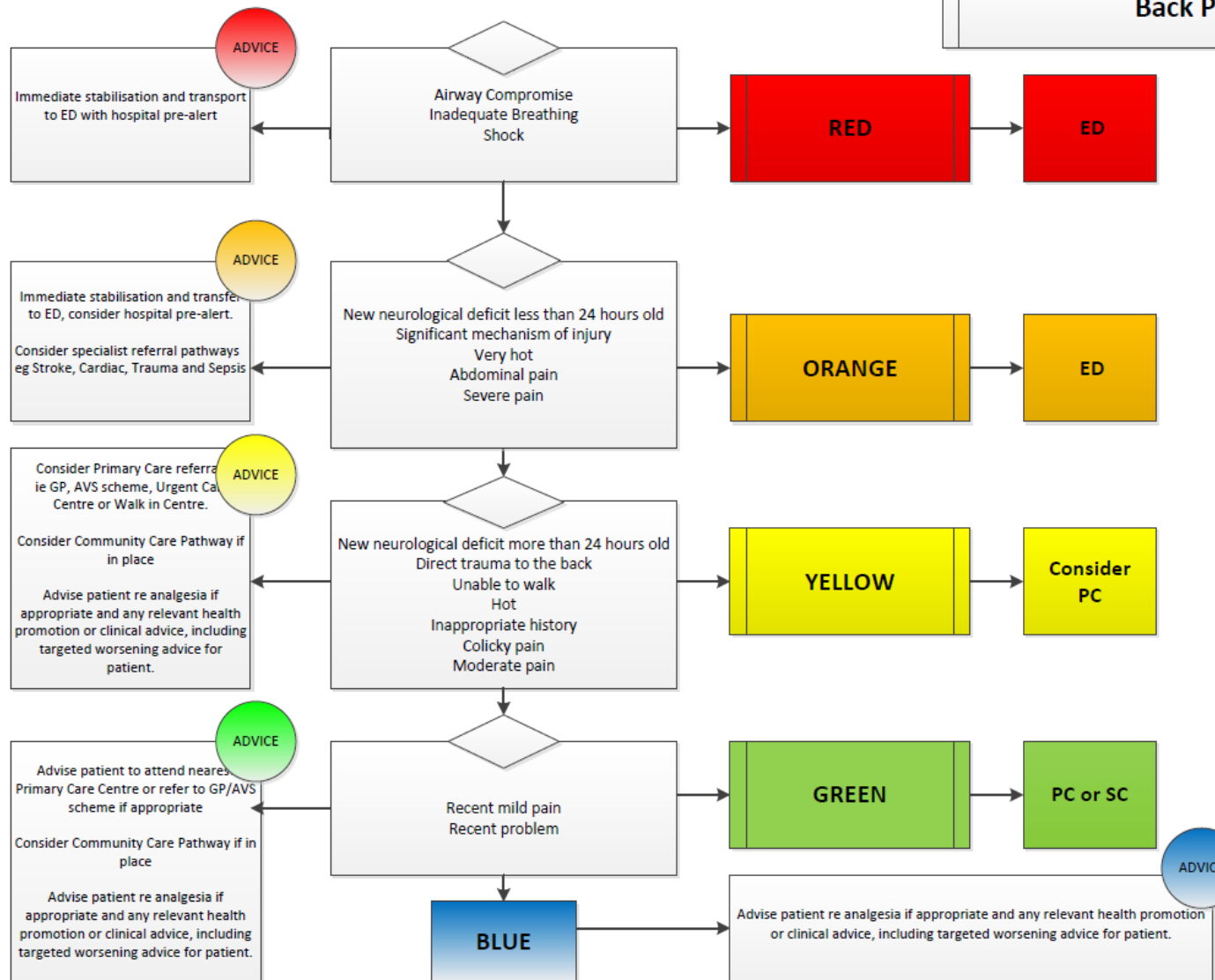


Method

- Seven pilot sites identified within one Regional Ambulance Service
- 15-month trial (3 month training period, 12 months data).
- 177 Paramedics trained to use MTS instead of PP
- Post training support via their clinical support functions
- PDF based version of MTS made available with dedicated PPM – this was loaded onto tablet devices with the option to individually printed.
- Data on MTS use collected by individual sites at the time of patient report form audit.



Back Pain (9)



Relevant Clinical Questions

Home Page

UCD/EOC Numbers

A	B-C	D-E
F-G	H	I-L
M-O	P	R
S	T-U	V-Z

Consider sepsis pathway and upgrade to a 20 minute response where patients have a combination of 2 or more symptoms including high temperature, known or likely immunosuppression, increased heart rate, increased respiratory rate and confusion, together with signs of infection.

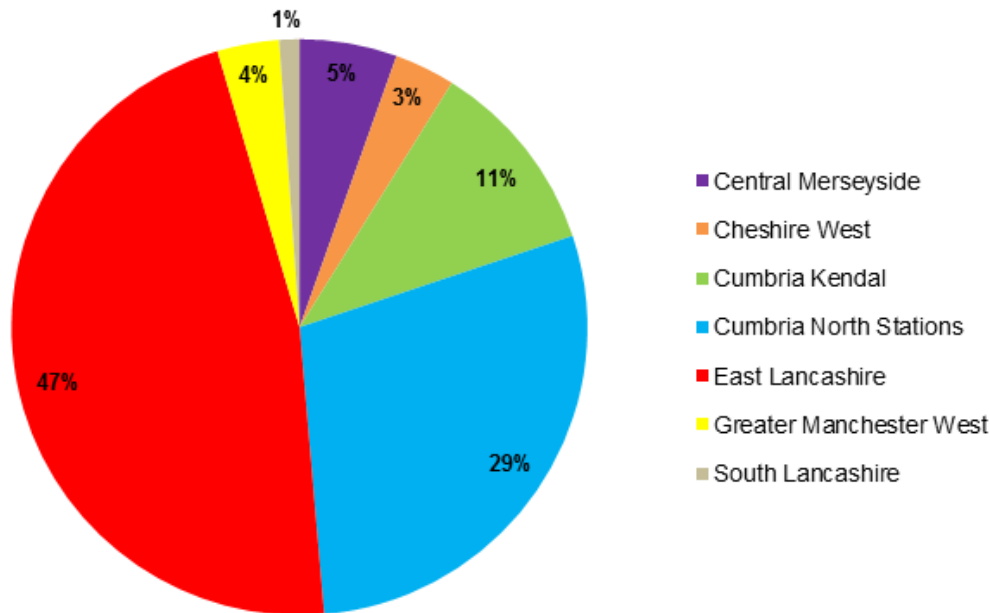
*Where a patient is positive for new neurological deficit with onset of less than 24 hours, however symptoms are distal to an injury and not an immediate life/limb threat, then MTS outcome is still FTF Now but the patient may be managed with the PPM outcome of FTF Soon



Emergency Triage



Results



- 8609 unique patient records available for analysis, of which 7990 (93%) were populated sufficiently to support analysis.
- Records from urban sites was significantly lower (9%; n=715) than semi-rural (51%; n=4098) and rural sites (40%; n=3177)
- Two complaint investigations where MTS was used.



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Results

MTS Chart	Grand Total	Total as %
Unwell Adult	1160	73%
Falls	866	
Chest Pain	764	
Shortness of Breath (Adult)	739	
Abdominal Pain (Adult)	661	
Limb Problems	448	
Collapsed Adult	435	
Head Injury	303	
Back Pain	261	
Fits	221	
Overdose & Poisoning	189	16%
Mental Illness	171	
Headache	170	
Apparently Drunk	136	
Diarrhoea & Vomiting	133	
Unwell Child	130	
Palpitations	108	
Diabetes	107	
Facial Problems	87	
Wounds	76	

- 89% of patient records analysed were within 20 MTS presentation charts.
- The least used MTS charts included *Unwell Newborn, Abscesses & local infections, Limping Child, Crying Baby* and *Testicular Pain*.
- 294 pre-alerts – 73% are with the top 10 MTS charts.



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Results - PPM

PPM (Suggested)	Red	Orange	Yellow	Green	Blue	Grand Total	Grand Total as %
Emergency Dental Centre or Service	0	0	4	2	0	6	0.1%
Emergency Department	270	2715	835	60	1	3881	48.6%
Emergency Eye Centre or Service	0	0	2	0	0	2	0.0%
Maternity	0	15	20	7	0	42	0.5%
Minor Injuries Unit / Walk-in-Centre	0	0	31	143	0	174	2.2%
Primary Care	0	2	1104	1818	31	2955	37.0%
Psychiatric Assessment	0	0	71	18	2	91	1.1%
Self-care advice only	0	0	6	195	560	761	9.5%
Urgent Care Centre	0	1	35	42	0	78	1.0%
Grand Total	270	2733	2108	2285	594	7990	

PPM (Actual)	Red	Orange	Yellow	Green	Blue	Grand Total	Grand Total as %
Emergency Dental Centre or Service	0	0	2	1	0	3	0.04%
Emergency Department	264	2605	1130	335	19	4353	54.5%
Emergency Eye Centre or Service	0	0	0	0	0	0	0.0%
Maternity	0	13	15	13	0	41	0.5%
Minor Injuries Unit / Walk-in-Centre	0	1	5	29	0	35	0.4%
Primary Care	4	75	659	1123	119	1980	24.8%
Psychiatric Assessment	0	3	22	5	0	30	0.4%
Self-care advice only	2	32	79	463	445	1021	12.8%
Urgent Care Centre	0	4	196	316	11	527	6.6%
Grand Total	270	2733	2108	2285	594	7990	



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Results – MTS vs PP

Patient category by triage tool	Central Merseyside	Cheshire West	Greater Manchester West	Cumbria Kendal	Cumbria North	East Lancashire	South Lancashire
MTS Red & Orange	204	107	30	423	854	1351	34
Pathfinder Red	49243	35707	35314	16810	17181	26559	23177
MTS Yellow & Green	201	149	195	425	1234	2138	51
Pathfinder Amber	16678	16322	19372	8109	8275	9308	11308
MTS Blue	32	16	53	30	211	247	5
Pathfinder Blue	5434	5497	4469	3738	2679	2923	3352
PP Exclusions & MT	38127	35831	37984	21324	22783	34615	29513
Grand Total MTS	437	272	278	878	2299	3736	90
Grand Total PP	109482	93357	97139	49981	50918	73405	67350
MTS data return as a % of PP data	0.4%	0.3%	0.3%	1.8%	4.5%	5.1%	0.1%

Patient category by triage tool	Central Merseyside	Cheshire West	Greater Manchester West	Cumbria Kendal	Cumbria North	East Lancashire	South Lancashire
MTS Red & Orange	46.7%	39.3%	10.8%	48.2%	37.1%	36.2%	37.8%
Pathfinder Red	45.0%	38.2%	36.4%	33.6%	33.7%	36.2%	34.4%
MTS Yellow & Green	46.0%	54.8%	70.1%	48.4%	53.7%	57.2%	56.7%
Pathfinder Amber	15.2%	17.5%	19.9%	16.2%	16.3%	12.7%	16.8%
MTS Blue	7.3%	5.9%	19.1%	3.4%	9.2%	6.6%	5.6%
Pathfinder Blue	5.0%	5.9%	4.6%	7.5%	5.3%	4.0%	5.0%
Pathfinder Exclusions & Major Trauma	34.8%	38.4%	39.1%	42.7%	44.7%	47.2%	43.8%



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Discussion

- MTS can be safely applied by Paramedics across a range of geographical locations and within the locally available healthcare pathways within this Ambulance Service.
- Twenty MTS charts accounted for 89% of all patient records – are all MTS charts truly needed by Paramedics?
- Difference between “Suggested” and “Actual” PPM outcomes appears to be influenced by the availability of pathways of care and their willingness to accept referrals.
- The absence of exclusions within MTS appears to offer greater opportunities for clinically appropriate referral of patients whom would normally be conveyed to hospital where PP is used.



Limitations

- Relatively small sample of staff (n=177) trained in MTS.
- MTS data returned was <6% of patient records at each site
- Anecdotes around selective application of MTS flagged by sites i.e. only applied to patients who would “most benefit”
- Activity levels, time available for audit and local management support appear to have influenced the level of data return at each site.
- Only 11% of data from urban sites - 51% of the data from semi-rural sites and 38% from rural sites.
- Lack of qualitative review to date.



Next Steps.....



Emergency Triage

News

New ambulance service standards announced

13 July 2017

Urgent and emergency care



NHS England has today (Thursday, 13 July) announced a new set of performance targets for the ambulance service which will apply to all 999 calls for the first time.

- National response targets to apply to every single 999 patient for the first time
- Faster treatment for those needing it to save 250 lives a year
- An end to “hidden waits” for millions of patients
- Up to 750,000 more calls a year to get an immediate response
- New standards to drive improved care for stroke and heart attack
- World’s largest clinical ambulance trial updates decades-old system

ARP 2.3 Response Standards

Category	Mean	90 th Percentile
Life threatening Category 1	7 minutes	15 minutes
Emergency Category 2	18 minutes	40 minutes
Urgent Category 3	-	120 minutes
Less Urgent Category 4	-	180 minutes





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Pathfinder

