Manchester Triage System
A global solution

Jill Windle
Lecturer Practitioner in Emergency Nursing
Salford Royal Hospital, Manchester
University of Salford
This session will contain:

- Explanation
- Clarification
- Difference of opinion
- Points to make you think
- Ideas for the future
Reasons not to triage

- No queue!
- Minimum wait
- No risk
- Identifiable and consistent workload
- Enough clinicians to manage the patients at the point of entry
Reasons to triage

- Managing patient flow & assessing risk
- High patient attendance
- Staffing levels sub-optimal
- Signposting to most appropriate care
History of MTS

- 1997 - a publication
- 1998 - national solution
- 1999 - international solution
- 2000 - 82% UK ED use MTS
- 2006 – 2nd Edition
- 2011 – international gold standard for triage
History

- Common nomenclature
- Common definitions
- Common methodology
- Robust audit
<table>
<thead>
<tr>
<th>Number</th>
<th>Colour</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Red</td>
<td>Immediate</td>
</tr>
<tr>
<td>Second</td>
<td>Orange</td>
<td>Very urgent</td>
</tr>
<tr>
<td>Third</td>
<td>Yellow</td>
<td>Urgent</td>
</tr>
<tr>
<td>Fourth</td>
<td>Green</td>
<td>Standard</td>
</tr>
<tr>
<td>Fifth</td>
<td>Blue</td>
<td>Non-urgent</td>
</tr>
</tbody>
</table>
Definitive management: Time to be seen

- First
- Second
- Third
- Fourth
- Fifth

0 min
10 min
60 min
120 min
240 min
MTS - Algorithms

- Presentations (50)
- Discriminators (195)
- Reductionist methodology
International activity (2nd Eds)

- Austria
- Brazil
- Finland
- Germany
- Holland
- Mexico
- Norway
- Portugal
- Spain
- Sweden
Portuguese standards

- MOU – Minister for health
- Central control of MTS
  - Training
  - Monthly audit
  - Quality Assurance
Defining Triage

- Triage is a process NOT an outcome
- To sort, to direct - requires clinical judgement
- To rapidly assess a patient and assign a priority based on clinical need (MTS 2006)
- ED Triage deals with undifferentiated / undiagnosed patients
- A pit-stop **NOT** an MOT! Ideal triage time per patient less than 2 min
A professional triage event

- A systematic process
- Facilitated by patient presentation algorithms
- Uses a series of general and specific discriminators to guide decision-making
- Excellent clinical risk management tool
- Can be performed rapidly and confidently to reach appropriate priority

- Manchester Triage Group trained everyone initially but......
  - Many courses
  - Labour intensive
  - Diluted message
  - Little control by the group
Centralised training

Training the trainers
  2 trainers per ED
  One day course
  Training materials standardised

Commitment to update & audit

Register of trainers

Departments registered as training centres
Principles of MTS

- Designed to reduce unwarranted variations in the triage process
- Audit provides quality management process
- Triage is a fundamental cornerstone of clinical risk management
Purpose of robust audit

- Continuous assessment of accuracy ensuring triage decisions are safe and reproducible
- To audit quality of decision making against the MTS standard
- To highlight good practice & address poor performance
Audit criteria

- Correct use of presentational flow chart
- Specific discriminators
- Pain score recorded
- Correct category assigned (based on pt. Presentation & discriminator)
- Appropriate free text
- Correct use of computerised systems
- Re-triage as appropriate
Getting started

- Initial period of supervised practice
- Assessed in action using the audit criteria
- Once competent independent triage begins
- Short sharp episodes of experience!!
- 20 consecutive triage events submitted for independent audit of practice
Audit

- Audit of 2987 patient records over two separate weeks in March and May 2012
- Data scrutinised to reveal:
  - Patterns of patient presentations
  - Triage nurse accuracy of decision making
  - Application of PCC referral protocol
  - Number of referrals to PCC on protocol and variances off protocol
Audit results

March 2012
- 1579 patient records
- Triage accuracy 96.7%
- Accuracy and senior band not related
- Referral rate to PCC 10.5%
- Non-traumatic limb & eye problems routinely sent off protocol

May 2012
- 1409 patient records
- Triage accuracy 98.9%
- Referral rate to PCC 12.3%
- Reduction in missed patients to PCC
- Protocol updated to include new presentations
Electronic v paper system

Computerised versus Manual systems

Accuracy (%) vs Study ID
Value added triage

- Pain assessment & analgesia at entry
- Radiology request
- Fast track referral / admission
- Streaming to most appropriate part of service
Emergency Nurse Practitioners

- Defined patient presentations
- Assessment, treatment and diagnostic ability
- Academic qualifications
- Non-medical prescribing
- High levels of responsibility
- Choice for patients
What else can MTS do?

- Face to Face
- Streaming
- Telephone Triage
- Non-Professional
The Manchester Triage System: Beyond prioritisation

Signposting to various clinicians e.g. Emergency Nurse Practitioner

Streaming to various services e.g. Primary Care, Pharmacy, Dentist
Triage

- A clinical risk management process

Streaming

- A clinical management process

Priority

Disposition
Streaming with MTS

- Presentation Priority Matrix
- 50 presentations - 5 priorities
- 250 dispositions
- Local mapping / application
Presentation Priority Matrix

A disposal model
Identifies specific routes of care for patients
Effective means of ‘signposting patients’
Add routes to matrix, existing and developing dispositions, e.g. pharmacy, OOH service
Making the most of the PPM

- Triage is a dynamic process
- Why not use MTS to signpost patients to right clinician, right place at the right time
- Not necessarily the ED
- Presentation Priority Matrix (PPM) offers creative solutions
Stakeholder work

- ED Consultants
- Senior ED Nurses
- Primary Care Nurses
- GPs
- Primary Care Physician
- Emergency Care Practitioners (ECP)

Identify local stakeholders
Map each p-p complex to a disposition
<table>
<thead>
<tr>
<th>Condition</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain in adults</td>
<td>R</td>
<td>Ma</td>
<td>Ma&lt;sup&gt;P&lt;/sup&gt;</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>Abscesses and local Infections</td>
<td>R</td>
<td>Ma</td>
<td>Mi</td>
<td>PC</td>
<td>PC</td>
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<tr>
<td>Allergy</td>
<td>R</td>
<td>R</td>
<td>Ma&lt;sup&gt;P&lt;/sup&gt;</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>Asthma</td>
<td>R</td>
<td>R</td>
<td>Ma</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>Back pain</td>
<td>R</td>
<td>Ma</td>
<td>Mi&lt;sup&gt;P&lt;/sup&gt;</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>Bites and stings</td>
<td>R</td>
<td>R</td>
<td>Mi&lt;sup&gt;P&lt;/sup&gt;</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>Chest pain</td>
<td>R</td>
<td>R</td>
<td>Ma</td>
<td>Mi</td>
<td>PC</td>
</tr>
<tr>
<td>Collapsed adult</td>
<td>R</td>
<td>R</td>
<td>Ma</td>
<td>Mi</td>
<td>PC</td>
</tr>
<tr>
<td>Dental problems</td>
<td>R</td>
<td>Ma</td>
<td>Mi</td>
<td>Dent</td>
<td>Dent</td>
</tr>
<tr>
<td>Diabetes</td>
<td>R</td>
<td>R/Ma</td>
<td>Ma</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>Diarrhoea and vomiting</td>
<td>R</td>
<td>R</td>
<td>Ma&lt;sup&gt;P&lt;/sup&gt;</td>
<td>PC</td>
<td>SC</td>
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<tr>
<td>Ear problems</td>
<td>R</td>
<td>Ma</td>
<td>Ma&lt;sup&gt;P&lt;/sup&gt;</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>Eye problems</td>
<td>R</td>
<td>Ma</td>
<td>Mi/Eye</td>
<td>Mi</td>
<td>PC</td>
</tr>
</tbody>
</table>
Collaboration

- Consensus reached
- First working protocol produced – not only streamed patients to Primary Care Centre (PCC) but also within ED and the Trust
- Triage nurses apply protocol to redirect appropriate patients to PCC / GP
- Various revisions to reflect service use
Commonly GP Streamed presentations

<table>
<thead>
<tr>
<th>Presenting complaint</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain in adults</td>
<td>576</td>
<td>8.6%</td>
</tr>
<tr>
<td>Abscess &amp; local infections</td>
<td>296</td>
<td>4.4%</td>
</tr>
<tr>
<td>Limb problems (A traumatic)</td>
<td>1145</td>
<td>17.2%</td>
</tr>
<tr>
<td>Rashes</td>
<td>331</td>
<td>5.0%</td>
</tr>
<tr>
<td>Sore throat</td>
<td>235</td>
<td>3.5%</td>
</tr>
<tr>
<td>Totals</td>
<td>2583</td>
<td>38.7%</td>
</tr>
</tbody>
</table>
Telephone Triage (1999)

- Now
- Soon
- Later
- Advice
**Telephone charts**

- Matching format
- Same principles
  - Face to face now
  - Face to face soon
  - Face to face later
  - Advice

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**Bites and Stings**

- Airway Compromise
  - Oedema of the tongue
  - Facial Oedema
  - Inadequate breathing
  - Acutely short of breath
  - New wheeze

- Uncontrollable major haemorrhage
  - Continue to press over the bleeding part
  - Do not release the pressure

- Uncontrollable minor haemorrhage
  - Continue to press over the bleeding part
  - Do not release the pressure

- Widespread rash or blistering
  - Try not to scratch the affected area
  - Take an antihistamine tablet now (not to drive if sedating)

- If locally red and hot
  1. Apply a cool cloth or ice wrapped in a cloth for 5 min at a time
  2. Keep the affected part raised
  3. See your local chemist about taking antihistamines
  4. Your symptoms should settle within 48 h
  5. If things are getting worse or the area appears infected (red lines tracking up from the bite)
  6. Make an appointment to see your GP

- Check you are covered for tetanus

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Manchester Triage Group
Telephone Triage

- Used by Ambulance Service
- Urgent care desk
- Prioritisation of despatch of help
- Advice until help arrives
Sustained practice

- Effective triage
  - Accurate
  - Right patient directed to right clinician in the right place
- Patients streamed to dispositions in & out of the ED
- Continued safe decisions
- Sharing best practice of MTS spanning both acute & primary care presentations
Future of MTS

- 2013 – 3rd Edition publication
- 2013 – Azores TTA pilot
- 2013 – Mexico
- Launch of website
  www.triagenet.net
- Benchmarking audit
- 2014 – Italy joins the International Reference Group
Thank you