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# Emergency Medicine Programme

## Implementation Guide 5:

### Streaming in the ED

January 2013

# Patient Streaming



## **Definition:**

The separation of patients into groups undergoing similar processes or cycle times and processing the groups in parallel to increase the efficiency of the processes.<sup>1</sup>

Streaming may also be called segmentation.<sup>2</sup>

The separation of patients into Resus, Majors and Minors areas is not true streaming if resources (nurses and doctors) are shared between areas or processing occurs in series not in parallel.

# Why?



Without ED streaming during periods of high demand, patients with relatively low acuity and/or low complexity conditions may experience prolonged waits behind queues of patients needing higher acuity care.

ED patient **streaming reduces waiting times for all ED patients** without adversely affecting the care of more severely ill patients. <sup>3</sup>

Fast-track streaming of low-acuity patients enables an ED team to discharge patients who do not need admission while minimising avoidable delay, reducing ED occupancy and improving overall ED waiting times.

# How?



Most large EDs use a combination of streaming methods.

Each ED team should :

- decide which streaming strategies, if any, are most likely to be effective, deliverable and sustainable in their ED;
- identify the times when service demand indicates the need for streaming;<sup>1,2</sup>
- determine the resources needed for streaming, through reorganisation of existing resources or by providing justification for additional resources;
- monitor effectiveness to ensure streaming is providing high quality care and value.

# Options



Streaming options include:

- Fast-track of low acuity/low complexity care;
- Streaming/fast-track to ANP services;
- Streaming to Network Local Injury Units;
- Streaming to Multidisciplinary Team assessment;
- Streaming of Paediatric Emergency Medicine patients within the ED;
- Streaming to Deferred Care;
- Streaming to Condition-Specific Pathways of care.



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# *Fast-track* for Low Acuity/Low Complexity Care

# Fast-track for low acuity, low complexity care



- Describes streaming of low acuity/low complexity patients. *Many EDs have alternative terms for the same process.*
- Only required when demand justifies separate resourcing of this stream.<sup>2</sup> This is usually during peak attendance times.
- Analysis of attendance patterns will indicate when these peak attendances occur.
- Other factors to consider - (a) waiting times for patients discharged from ED & (b) periods when relatively high numbers of patients leave before completion of treatment
- The proportion of total ED attendance suitable for Fast-track will vary according to ED case-mix.
- Appropriate case selection essential for Fast-track to work effectively.
- Fast-track should be seen as a process not a place.

# Trial and Implementation of *Fast-track*



- If service analysis indicates that Fast-track is justified and can be resourced, it should be implemented for a test-period and the model refined through monitoring and evaluation of its impact.
- A Fast-track “champion” from among the ED Nursing or Medical team can play a key role in development.
- The ED and Emergency Care Network should have clear protocols and procedures for Fast-track. These should include:
  - Appropriate case-selection;
  - The hours of operation of the service;
  - Monitoring and evaluation;
  - Equipment check-lists for Fast-track.

# Fast-track teams



- Fast-track requires dedicated resources particularly experienced EM decision makers i.e. doctors and/or ANPs.
  - ANP-delivered Fast-track services for limb injuries are available in many EDs.
  - EM doctor-delivered Fast-track allows a broader spectrum of presentations to be assessed.
- Minimum staffing numbers required for doctor-delivered Fast-track are one Middle Grade or Consultant in EM supported by one staff nurse with cover for breaks. GPs with additional training in EM may be employed to provide Fast-track services.
- Fast-track teams should not have conflicting duties. Only exceptional clinical demand for higher acuity care should necessitate suspension of Fast-track where demand for the service exists.

# Fast-track: Optimising efficiency



## Clinician efficiency:

- Most doctors find that they are most efficient in the first few hours of Fast-track due to the pace of clinical decision making required. Fast-track sessions must be balanced with other clinical activity.
- Clinicians should have immediate access to decision support tools, computer terminals and a workspace for the completion of patient documentation.

## Infrastructure and equipment:

- To be most effective, Fast-track usually requires a minimum of two cubicles and a “results-waiting” area.
- Using two cubicles per clinician ensures that the next patient can be ready for assessment without delay.
- Proximity of cubicles to the waiting room and X-ray facilities is advantageous.
- Cubicles should have all the necessary procedure equipment close to hand. This may be stored on a moveable Fast-track trolley.

# Fast-track: Operational Issues



- Fast-track should start before a queue of appropriate patients develops.
- Staff allocation to Fast-track should be made in advance each day.
- Fast-track teams works better if the review of test results and the discharge of patients is prioritised avoiding the accumulation of large “batches” of cases waiting for review.
- The provision of Fast-track is always of secondary priority to the delivery of quality care to high complexity, high acuity patients. Fast-track teams must always be prepared to suspend Fast-track when directed by the ED Nurse Manager or Lead Consultant.

# Fast-track: Pitfalls to avoid



- Operational 'carve-out' can occur if resources are ring-fenced for Fast-track such that they cannot be re-directed easily to meet general ED demand e.g. if ANPs or GPs employed to undertake Fast-track do not have the skills required to manage other ED patients at periods of slack demand for Fast-track.<sup>1</sup> This may reduce the value of Fast-track.
- Although GPs with additional training in EM may provide fast-track services in EDs, it is important that patients with primary care type problems access care through their local GP services or on-call GP Co-operatives and do not perceive ED Fast-track as an alternative primary care service.
- Distortion of ED practice – an unbalanced focus on Fast-track and ED waiting times without due consideration of the care needs of patients with more complex presentations is likely to be detrimental to the overall quality of an ED service and patient outcomes.

# Evaluating *Fast-track*



There should be ongoing evaluation of Fast-track systems in each ED.

Success is measured from the patient's perspective. Criteria to be examined include:

- The effect on patient experience;
- The effect on overall ED waiting times;
- The cost-effectiveness of the service;
- Audit of clinical outcomes for Fast-track patients;
- Impact, if any, on higher acuity patient streams;
- Potential to expand the scope and to improve the quality and efficiency of the Fast-track stream.

Management tools such as process mapping and standardisation may assist in improving the efficiency of Fast-track pathways of care.

# Streaming to ANP Care



- ANPs provide Fast-track services for limb injuries are available in many EDs.
- ANPs manage patients for complete episodes of care from initial assessment to discharge.
- ANP staffing levels should match patterns of service demand for streaming.
- ANPs should monitor the effectiveness of the ANP care stream and engage in ongoing clinical audit and quality improvement.
- Expanding the scope of ANP practice will increase the range of patient presentations and volume of work that can be managed through an ANP stream.

# Streaming to Network Local Injury Units



- Emergency Care Network EDs with linked Local Injury Units (LIUs) should have protocols in place to re-direct appropriate patient groups from the ED to the LIU if more convenient for the patient, e.g. if the LIU is closer to the patient's home or waiting times to be seen are shorter in the LIU.
- Shared clinical guidelines, protocols and imaging links will ensure that patients receive equitable standards of care irrespective of where they attend within the Network.
- Patients initially assessed in an ED may be referred to a linked LIU for scheduled clinical review (when required) if this is more convenient for the patient.



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# Streaming to Multidisciplinary Team Assessment

# Streaming to Multi-Disciplinary Team Assessment



- Protocols should enable Triage or Rapid Assessment and Treatment (RAT) nurses to identify and refer patients who require Medical Social Worker, Physiotherapy or Occupational Therapy assessment in the ED so these can be progressed in parallel with ED clinician assessment.
- Multidisciplinary assessment of older patients with complex needs may be time consuming and involve multiple contacts between care givers in the ED, primary care and the community. It is more likely to be successful if undertaken within core working hours (09.00 to 17.00hrs), so direct referral from Triage or RAT should occur whenever clinically appropriate.
- Multi-disciplinary team Therapists and Medical Social Workers collaborate to provide a comprehensive assessment of a patient's care needs informing decision making regarding suitability for discharge. This may enable more timely referral of patients identified as needing admission and can also start the process of discharge planning for these patients.

# Paediatric Streaming in ED



EDs with sufficient volumes of Paediatric Attendances may justify the resourcing of a dedicated Paediatric Emergency Medicine stream within the ED.

All children who attend EDs should be audio-visually separated from other patients.

The EMP Report 2012 provides standards for the provision of Child and Family Friendly Care in the ED.

EM and Paediatric Specialty Teams can work collaboratively to provide high quality care for children in EDs.

# Streaming to Deferred Care



Not every patient who presents to an ED requires emergency treatment at that time.

Senior clinicians working at Rapid Assessment and Treatment (RAT) may identify patients who can be recommended to re-attend the ED in a scheduled manner at a time when it is less busy or to attend an alternative service (e.g. community dressing clinic, Dentist, pharmacy, Primary Care).

Protocols have been developed to support this practice but senior clinician input is essential because of the potential patient safety risks involved.

Patient understanding of the service may be a barrier to implementation.

# Streaming to Condition-Specific Pathways of Care



## **Red Flag/Time–Critical Pathways:**

Patients may be identified at Triage or RAT to have “Red Flag” conditions e.g. Acute Coronary Syndrome, Stroke suitable for reperfusion therapy etc. These patients must be directed to time-critical pathways of care.

## **Lower Acuity Condition-Specific Pathways:**

Many EDs have developed protocols and clinical pathways for lower acuity presentations to:

- provide evidence based, efficient and cost-effective patient care;
- reduce waiting time for clinical investigation;
- enhance patient safety;
- expedite admission;
- stream appropriate patients into ambulatory pathways of care, avoiding unnecessary hospital admission.

# Condition-Specific Pathways of Care



Examples of Condition-specific pathways of care in the ED include:

- Chest pain assessment (improves patient safety and quality of care, reduces duration of hospital admission)
- Rapid Assessment of Patients with Suspected Fractured Neck of Femur (Rapid assessment and admission to minimise complications)
- Ambulatory Pathways for suspected Deep Venous Thrombosis (Appropriate use of clinical investigation and Ambulatory Care)

EMP clinical guidelines will be hosted on the EMP website as a resource for ED teams developing pathways and protocols. The EMP will facilitate pathway development collaboration between ED teams.

# Summary



- Streaming is an evidenced based strategy to improve ED throughput.
- Streaming of low acuity, low complexity patients to Fast-track systems can reduce overall ED waiting times.
- Fast-track systems need to be appropriately structured, resourced, monitored and evaluated.
- Patient streaming to evidence-based pathways of care is recommended.
- Further research is needed on ED streaming in Ireland.

# References



1. Higginson I et al. Demand and capacity planning in the emergency department: how to do it. Emerg Med J 2010
2. Jody Crane, Chuck Noon. The Definitive Guide to Emergency Department Operational Improvement 2011. Productivity Press, Taylor & Francis Group. New York NY 10017.
3. Cooke M, Fisher J, Dale J et al. Reducing Attendances and Waits in Emergency Departments A systematic review of present innovations Report to the National Coordinating Centre for NHS Service Delivery and Organisation R & D (NCCSDO). January 2004. Available at: <http://www.sdo.nihr.ac.uk/files/project/29-final-report.pdf> Accessed 16th January 2010

Further supporting material is available in the EMP Report 2012.