# Paediatric Early Warning Scores (PEWS)

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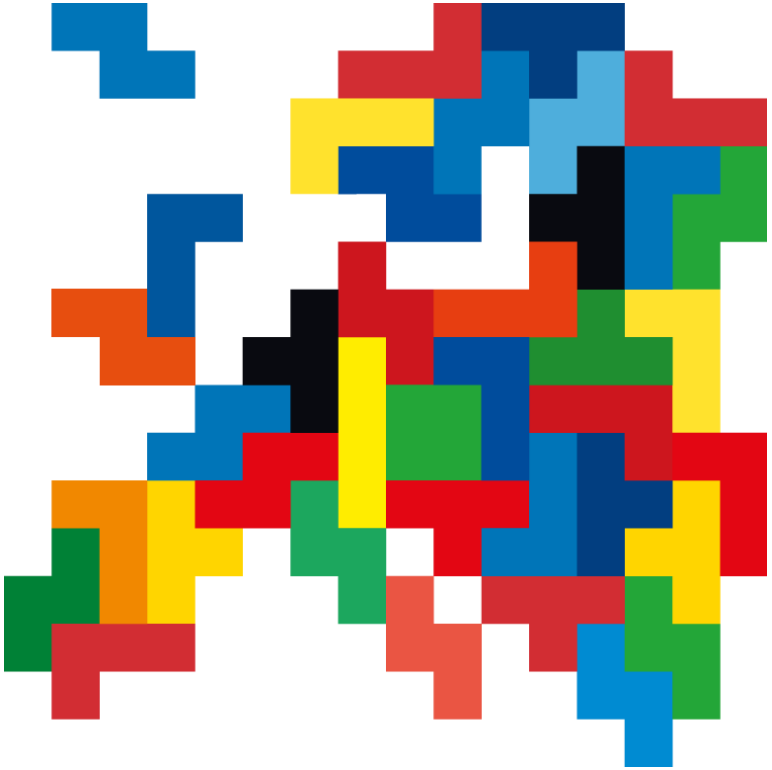

# WELCOME

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# Introductions

- Lynne Caley
- Lorraine Major
- The site

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# Agenda for the webinar

- PaSQ and PEWS
- Background and context of PEWS work in the UK
- NHSI work on PEWS
- Other activity and future plans in the UK
- Example -  PEWS at HHFT
- Q&A

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# Outcomes

By the end of the webinar you should:

- Understand the relevance of PEWS for managing the deteriorating child patient
- Understand the relationships within the PEWS approach - observation charts; communication via an escalation model; monitoring & audit of the process; training and support
- Recognise the importance of taking a systematic approach to the development of a PEWS methodology
- Have an appreciation of the requirement for training and routine audit of the system
- Judge how charts can be used in your HCO

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# PaSQ and PEWS

- Joint action over 2.5 yrs involving all member states
- http://www.pasq.eu/
- Focus on implementation of  safe clinical practices
- Hand hygiene; surgical checklists; medicines reconciliation ------
- PEWS

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# What is PEWS?

*Failure to recognise deterioration and take appropriate action is a cause of avoidable harm in children. Through the use of simple systematic measurement and analysis of routine observations, deterioration can be detected and an early warning system can trigger an appropriate and timely intervention thus avoiding further deterioration, intensive intervention, and harm.*

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# Purpose / Rationale for PEWS

- To provide a validated, easy to use, practical, generic tool to monitor and to prevent avoidable deterioration in sick children
- To provide age-appropriate values to enable the effective monitoring of the sick child
- To enable staff to communicate information about the sick child appropriately and to respond effectively

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# Background / context in the UK

- In 2005 Akre et al reviewed PEWS charts - their capacity to provide early warning of the onset of sentinel events.

*"PEWS can potentially provide a forewarning time >11 hours, alerting the team to adapt the care plan and possibly averting an RRT "*

- Currently at least 17 different PEWS charts in use in England

- Vary in the range of observations, in the normal values and trigger thresholds, the scoring system and the extent to which they are combined with a communication tool to support escalation of concerns

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# Early Warning Systems

Roland et al BMJ August 2013 *"Use of PEWS in Great Britain – has there been a change of practice in the last 17 yrs?"*

- Pre-defined alert criteria within obs. charts which trigger additional nursing / medical involvement
- Increase in use of PEWS charts in the UK over the last decade
- Specialist centres (90%) - DGHs (83%) – almost 20% have no PEWS or RRT present
- RRT – 52% specialist centres; 10% DGHs
- Variability of criteria - 47 mentioned -–- usually respiratory and heart rate but range of others
- many unvalidated systems

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# Also -----

- Australia – Horswill et al – 25 hospitals – adult charts – heuristic analysis –

- Found 1,189 usability errors
  - Layout
  - Recording of vital signs
  - Integration of track and trigger systems
  - Language and labelling

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# Communication

- Escalation plan – criteria for activation – when / how / who to activate
- SBAR – standardised communication tool (Situation; Background; Assessment; Recommendation)
- RRT - enhanced critical care skills – available in addition to usual nursing / medical teams
- If absent - who / how – senior nurse / consultant?

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# Audit

- Measuring effectiveness of PEWS approach
- Baseline – level / degree of harm present before PEWS
- Process  - compliance – correct charts; complete; accurate predictor of escalation need
- Outcomes – how many escalations in any period
- Feedback to staff

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# Training

- All staff should:
  - Have reached standard of making observations – RCN published standards
  - http://www.rcn.org.uk/
  - Be aware of significance and necessity to observe and record accurately
  - Know when and how to escalate
  - Be kept informed about audit results

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# Issues in UK

- Variability of observation and escalation criteria
- Availability and membership of RRTs
- Compliance
- False negatives / false positive – delays or overtreatment

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# NHSI and PEWS

- In 2009 – NHSI – interest from 30 HCOs wishing to develop their systems to detect and manage the deteriorating child

- Several stages
  - Series of meetings to share current examples – commitment to improve using structured methodology - PDSA
  - Heuristic analysis – agreement on principles - charts; escalation policy; training and audit
  - Adapt and adopt – measure progress – SHARE!
  - Follow-up meetings to review progress – some drop out

HHFT – one of the early adopters – good example of what can be achieved

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# Other activity / future plans

- NHSI closed 2012 – materials available via NHS IQ
- Pilot sites gather data and disseminate
- GOSH; BCH; Alder Hey
- Research – NIHR; UCL Partners; The Health Foundation
- PaSQ – collaboration and development

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