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| **Title** | **Acute & Emergency Paediatrics** |
| **Code** | **MDM158** |
| **Level** | 7 |
| **Credit rating** | 20 Credits |
| **Pre-requisites** | This module is aimed at paediatricians, nurses & allied health care professionals wishing to develop advanced level of clinical knowledge blended within the understanding of organisational/service delivery in acute & emergency paediatric care.  |
| **Type of module** | 5 days delivered over a week – Mo-Fri |
| **Aims** | This module aims to: * Develop a systematic understanding of the range of modifiable factors of why children die and how to reduce mortality in acute care.
* Deepen clinical knowledge and service models of paediatric emergencies.
* Enhance understanding of the role of holistic care and challenge current approaches.
* Cultivate an understanding of Patient Safety, Human Factors & Quality Improvement to enhance modern paediatric healthcare systems.

The module aims to cover the underpinning assessment & management of acute and emergency paediatric conditions, whilst also enhancing the awareness of how to modify the delivery of care to improve outcomes.  |
| **Learning outcomes/objectives** | Upon successful completion of the module, students should be able to:ILO1 Demonstrate a comprehensive knowledge of why children die in the UK.ILO2 Critically evaluate of the assessment and management of life-threatening emergencies.ILO3 Apply knowledge and skills to design an appropriate management plan for an acute paediatric issue.ILO4 Demonstrate a systematic understanding of different models of care in acute paediatrics.ILO5 Articulate the complex and unpredictable issues involved in the provision of Levels 1 & 2 Paediatric Critical Care. ILO6 Present in-depth working knowledge of the issues involved in patient safety and human factors. |
| **Content** | **Potentially Life-threatening Emergencies*** Respiratory failure – bronchiolitis, asthma
* Respiratory Support & Non Invasive Ventilation
* Circulatory Shock & designing workplace system to tackle shock
* Meningitis, Status Epilepticus & Traumatic Brain Injury – & creating patient information
* Designing Care Pathways for ‘High Dependency Care’

**Patient Safety & Human Factors*** Pros & Cons of models of patient harm analysis
* Different approaches to Patient Safety – relevance to paediatrics
* Introduction to Human Factors & examples of application in acute paediatric care

**Critical Care service organisation/design*** Current aspirations for UK Paediatric ‘High Dependency Care’
* Creating a service to deliver Non-Invasive Ventilation/Resp Support
* Quality Improvement Tools to design Care Pathway

**Acute & Emergency Paediatrics*** Why Children Die RCPCH 2014/17
* Common and uncommon medical presentations and controversies
* ‘New Models of Care’ and evaluation in the NHS
* Holistic care of children. Self-care.
* Safeguarding issues
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| **Teaching and learning strategies** | Teaching methods will encompass:* + Lectures
	+ Group Discussion
	+ Workshops
	+ Student presentations
	+ Individual project work
	+ Self-directed learning
	+ Reflection
	+ Role play and simulations
	+ Audio-visual and e-learning
	+ “TED” talks

Learning will be supported further by the use of prepared notes, selected reading and all usual visual aids. Students will be expected to support their learning by the use and critical appraisal of primary sources of information such as peer-reviewed research articles and appropriate websites. Tutorial staff will outline key sources of information during their individual contact sessions.Appropriate Course materials will be made available on ‘Studentcentral’: <http://studentcentral.brighton.ac.uk>  |
| **Learning support** | **ESSENTIAL READING****Why Children Die?**Royal College of Paediatrics and Child Health [Internet]. Why children die: death in infants, children and young people in the UK. May 2014 [accessed 06 March 2018]. Available from: http://www.rcpch.ac.uk/improving-child-health/child-mortality/child-mortality**Bronchiolitis**Marlais M, Evans J, Abrahamson E. Clinical predictors of admission in infants with acute bronchiolitis. Arch Dis Child 2011;96:648-652. doi:10.1136/adc.2010.201079 Saha A, Vamvakiti E, M Linney. Use of Nasal CPAP in Infants with Bronchiolitis in the South of England: A Multicentre, Prospective, Observational Study (Poster at RCPCH 2013) Arch Dis Child 2013;98:Suppl 1 A62 doi:10.1136/archdischild-2013-304107.144Gangadhara M, Ali T. High flow nasal prong therapy for infants <24 months of age with bronchiolitis: experiences from a tertiary paediatric intensive care unit. Arch Dis Child 2014;99:Suppl 1 A188-A189. doi:10.1136/archdischild-2014-306237.435Milési C, Pierre AF, Deho A et al. Intensive Care Med. 2018 Nov;44(11):1870-1878. Epub 2018 Oct 21.A multicenter randomized controlled trial of a 3-L/kg/min versus 2-L/kg/min high-flow nasal cannula flow rate in young infants with severe viral bronchiolitis (TRAMONTANE 2). doi: 10.1007/s00134-018-5343-1.<https://dontforgetthebubbles.com/high-flow-controversy-return-ticket-paris/> **Asthma** Hassan T, Gandhi A. 417 Evidence Review; what is the Best Second Line Treatment for Acute Severe Asthma in Children? Salbutamol, Aminophylline or Magnesium Sulphate. Archives of Disease in Childhood 2012;97:A123. doi:10.1136/archdischild-2012-302724.0417Vance G, Lloyd K, Scadding G, et al. The ‘unified airway’: the RCPCH care pathway for children with asthma and/or rhinitis. Archives of Disease in Childhood 2011;96:i10-i14. doi:10.1136/i10dc.2011.213462Powell C, Maskell G, Marks M, South M, Robertson C, LENNEY W. Successful implementation of spacer treatment guideline for acute asthma. Archives of Disease in Childhood. 2001;84(2):142-146. doi:10.1136/adc.84.2.142.P. Andrzejowski, W.Carroll Salbutamol in paediatrics: Pharmacology, prescribing and controversies. January 2016. DOI: 10.1136/archdischild-2014-307285  **Respiratory Support** KL Fedor. Noninvasive Respiratory Support in Infants and Children - Respiratory Care Journal 2017 rc.rcjournal.com/content/respcare/62/6/699.full.pdf **Septic & Toxic Shock**Dellinger RP, Levy MM, Rhodes A, et al: Surviving Sepsis Campaign: International guidelines for management of severe sepsis and septic shock: 2012. Crit Care Med. 2013; 41:580-637 (Available under MDM158 module area on StudentCentral)Adalat S, Dawson T, Hackett SJ, et al. Toxic shock syndrome surveillance in UK children. Archives of Disease in Childhood 2014;99:1078-1082. doi:10.1136/archdischild-2013-304741 Southampton & Oxford PICU guidelines for septic shock. Guidelines for the retrieval and management of severe sepsis and septic shock in infants and children. [no date]. Available on StudentCentral.Great Ormond Street Hospital for Children NHS Trust. PICU clinical guideline on SIRS, sepsis & MODS (multi-organ dysfunction syndrome). 2005 (updated 2007 and 2011). Available on StudentCentral.**Epilepsy**RCPCH Child Health Reviews – UK Clinical Outcome Review Programme. The care of children and young people with prolonged seizures. In The Coordinating epilepsy care: a UK-wide review of healthcare in cases of mortality and prolonged seizures in children and young people with epilepsies. pp58-72. [Internet] September 2013. Accessed 6 March 2018. Available from: <https://www.rcpch.ac.uk/system/files/protected/page/CHRUK_Module%20B%20low%20res_0.pdf> **High Dependency Care (Paediatric Critical Care Levels 1 & 2)**Paediatric Critical Care Level 2 Service Specifications.2013. Available on StudentCentral.RCPCH High Dependency Care for Children: Time to move on appendices & for details of Level 1 Paediatric Critical Care (pages 55-58 – medical workforce). [Internet] June 2017. Accessed 6 March 2018. Available at: http://www.rcpch.ac.uk/high-dependency-care**Human Factors**Carthey J et al. Patient Safety First.The ‘How to Guide’ for implementing human factors in healthcare. [Internet] May 2010. Accessed 6 March 2018. http://www.improvementacademy.org/documents/Projects/human\_factors/Human-Factors-How-to-Guide-v1.2.pdfMcCrae, C. Early warnings, weak signals and learning from healthcare disasters. BMJ Quality & Safety Online First. [Internet] 5 March 2014 Accessed 6 March 2018. Available at: http://qualitysafety.bmj.com/content/early/2014/03/05/bmjqs-2013-002685.citation-tools **Patient Safety**Vincent, Charles. The Essentials of Patient Safety. [Internet] August 2011. Accessed 6 March 2018. Available at: https://chfg.org/wp-content/uploads/2012/03/Vincent-Essentials-of-Patient-Safety-2012.pdf **Care Pathway**Great Ormond Street Hospital for Children. How to produce and evaluate an integrated care pathway (ICP): information for staff. August 2010. Available on StudentCentral.**QI Tools**Institute for Healthcare Improvement. Quality Improvement Essentials Toolkit. [no date]. Available on StudentCentral. **Compassion**Cole-King, A, Gilbert, P. Compassionate care: the theory and the reality. Journal on Holistic Healthcare. [Internet]. Dec 2011. [Accessed 6 March 2018]; Volume 8 Issue 3 Available from: https://www.researchgate.net/publication/285810818\_Compassionate\_care\_the\_theory\_and\_reality**Safeguarding**RCPCH. Child Protection Evidence. Section on Bruises and Fractures. Available at: https://www.rcpch.ac.uk/improving-child-health/child-protection/child-protection-evidence/child-protection-evidence**Children’s Services Models and Standards**Kossarova, L, Devakumar, D, Edwards, N. Nuffield Trust Briefing -The future of child health services: new models of care. Feb 2016. [Internet] Accessed 6 March 2018. Available at: https://www.nuffieldtrust.org.uk/files/2017-01/future-of-child-health-services-web-final.pdf Healthy London Partnership’s Children and Young People’s Programme. London acute care standards for children and young people: Driving consistency in outcomes across the capital. May 2016. [Internet] Accessed 6 March 2018. Available at: https://www.myhealth.london.nhs.uk/system/files/HLPCYP\_Acute%20Standards%2025%20May%202016.pdf NHS Northern England Clinical Senate. Paediatric model of care in Northumbria Specialist Emergency Care Hospital. 8 Dec 2014. [Internet] Accessed 6 March 2018. Available at: http://www.nesenate.nhs.uk/wp-content/uploads/2014/04/2015-02-23-Final-NSECH-SSPAU-Report.pdfDESIRABLE READING**High Dependency Care (Paediatric Critical Care Levels 1 & 2)**RCPCH High Dependency Care for Children: Time to move on appendices (pages 59-72 – A framework of competence for a Special Study Module in Paediatric Critical Care. <http://www.rcpch.ac.uk/high-dependency-care>  |
| **Assessment tasks** | Essay –Two cases drawn from module content; one will focus on clinical management of an acute paediatric issue whilst the second will include a discussion on organisation & provision of services within an acute paediatric condition. (2,500 words)(75% weighting) Video presentation – 10-minute video describing an advancement in acute paediatrics in the last 5 years that has changed your practice. (25% weighting) |
| **Brief description of module content and/or aims (maximum 80 words)** | The module will equip you with an advanced level of clinical knowledge blended within the organisational/service delivery context of acute paediatric care. It aims to:• Encourage you to consider and apply multi-professional working• Deliver a blend of clinical material with that of service delivery• Include elements of child safety in the context of Acute & Emergency Paediatric Care |
| **Area examination board to which module relates** | IPGM – Area Examination Board |
| **Module team/authors/coordinator** | Module Lead : Dr Eleanor Glenday, Consultant PaediatricianPersonal Tutor : Dr Kamal Patel, Consultant Paediatrician |
| **Semester offered, where appropriate** | Three |
| **Site where delivered** | BSMS, Falmer |
| **Date of approval of this version** | March 2016 |
| **Field for which module is acceptable and status in that field** |  Paediatrics, Nursing, Allied Health Professionals |
| **Course(s) for which module is acceptable and status in that course** | PGCert or PGDip or MSc Paediatrics & Child Health Programme Compulsory module |
| **School home** | IPGM |
| **External examiner** | Dr Jonathan Round, PICU Consultant, Head of London(South) School of Paediatrics, Director of Medical Education St George’s University Hospitals NHS Trust  |