ICM Curriculum:
Supporting Excellence

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Why a new curriculum?

- The General Medical Council (GMC) are updating all curricula
  - Excellence by Design: standards for postgraduate curricula
  - Generic Professional Capabilities (GPCs)
- 2010 curriculum due a review

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GPC/SCAR/Excellence by Design

- Framework for curriculum writing
- Generic Professional Capabilities
  - Doctors following CCT rarely appear before GMC due to competence
  - GPCs aimed at summarising our professional responsibilities
  - Need to be explicit within new curricula
  - Domain 12 in 2010 curriculum largely covered this
- This has been mirrored in the Undergraduate Curriculum

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What was wrong with the old curriculum??

- Not a lot - the overall outcomes of the curriculum remain fit for purpose
- Nothing to suggest that we are not training good intensivists
- A feeling that there was a lot of competencies and a degree of assessment fatigue on trainers and trainees

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What does the new curriculum look like?

- From the outside it will look quite similar
- Unchanged
  - **Content –**it has merely been restructured into an outcomes-based curriculum
  - 3 stages
  - Multiple recruitment entry points
  - FFICM in stage 2
  - Specials skills year
  - Dual counting with partner specialties
- Changed
  - Top cases gone
  - Outcomes rather than competencies
  - Formative assessments, to guide ES to make summative judgement

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Purpose Statement

- A new feature of the Excellence by Design Framework, we had to submit a proposal to the GMC's Curriculum Oversight Group to obtain approval to progress with the new ICM curriculum development. It explained:
  - Why we need the curriculum
  - What intensivists do
  - Why we can't be a credential
- Approved provisionally by the GMC on 08 January 2019
- The approved purpose statement forms the introduction of our new curriculum.
- **FINAL submission to GMC February 2020 -> full approval 04 November 2020**

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Outcomes v Competencies

- Outcomes describe what we do rather than breaking down what we do in to smaller parts

Can admit a patient to ICU

v

Can take a history, can examine, can make a diagnosis, can put in lines, can prescribe vasopressors etc et etc

- Called Capabilities in Practise (IMT), Learning Outcomes (RCPCH)
- HiLLOs for ICM (High Level Learning Outcomes)

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HiLLOs…..what are they?

- HiLLOs incorporate and replace what used to be the domains in the 2010 ICM curriculum
- Broad categories of what Intensive Care Medicine Doctors do
- Different levels of attainment at different stages
  - Some may not need expert level to be reached
  - In some expertise (or finished level required for intensive care practise) may develop earlier

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More detail……

- **Key Capabilities (4-10 per HiLLO) = competencies in 2010 ICM curriculum**
  - Lie below outcomes in the hierarchy
  - Allow granularity for trainers and trainees
  - Can allow more detailed description of what the outcome and how the trainee might demonstrate that the outcome has been met
  - Do not need to be evidenced individually
  - Not mandatory, merely examples of how the HiLLOs can be evidenced, not an exhaustive list
- **Competencies (variable number)**
  - Unchanged from CoBaTrICE, all of them are incorporated in the new curriculum model
  - Evidence base beyond really any other curriculum in terms of expert opinion on what an intensive care doctor does
  - **Crucially they do not need to be evidenced specifically**

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HiLLOs…..how were they developed?

- Broad themes of what we do devised
- Current ICM curriculum competencies were mapped and aligned to the new outcomes
- ‘Key Capabilities’ devised to summarise all of the 2010 ICM curriculum competencies
- Consultation with relevant partner colleges, specialists & specialist societies

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HiLLOs overview (1)

1. Professionalism
2. Patient Safety and QI
3. Research and data interpretation
4. Teaching and training
5. Resuscitation, stabilisation & transfer
6. Investigation and management of the critically ill
7. Perioperative medicine incl. pain relief

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HiLLOs overview (2)

8. Consequences of critical illness and end of life care
9. Leadership & management
10. Anaesthesia
11. Medicine (ward based care)
12. Neuro-intensive care
13. Paediatric Emergencies
14. Cardiothoracic ICM

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HiLLO 5 as an example (1)

- The HiLLO itself

5. Doctors specialising in Intensive Care Medicine can identify, resuscitate and stabilise a critically ill patient, as well as undertake their safe intra-hospital or inter-hospital transfer to an appropriately staffed and equipped facility.

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HiLLO 5 as an example (2)

- Key Capabilities

KEY CAPABILITIES	They will:
	• Identify an acutely ill patient or one at risk of significant deterioration by taking account of their medical history, clinical examination, vital signs and available investigations • Integrate clinical findings with timely and appropriate investigations to form a differential diagnosis and an initial treatment plan • Administer intravenous fluids and inotropic drugs as clinically indicated utilising central venous access where required and monitoring the effectiveness of these treatments with invasive monitoring techniques • Stabilise and initiate an initial treatment plan for a critically ill acute surgical, acute medical or peripartum patient including those with sepsis or post-trauma and institute timely antimicrobial therapy • Provide definitive airway management and initiate and maintain advanced respiratory support • Undertake the transport of mechanically ventilated critically ill patients outside the Intensive Care Unit when required • Communicate effectively and in a timely manner, with fellow members of the multi-disciplinary team including those from other specialties and make an accurate, legible and contemporaneous entry in the patient's medical record • Where escalation of care is required, be able to arrange this and provide a succinct structured handover to clinical colleagues • Recognise when a patient has the potential to deteriorate or requires future treatment escalation and be able to provide explicit instructions regarding an ongoing treatment plan and contact details should a further review be required • Have the ability to communicate with a patient's family, in terms they can understand, the patient's clinical condition, current and likely future treatment options and where possible, an indicative prognosis in an empathetic and understanding manner • Be mindful at all times that whilst assessing and treating patients they must maintain optimum safety for their patients by recognising any limitations of their current clinical environment, the available equipment and personnel and employing best practice guidelines where these exist.

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HiLLO 5 as an example (3)

- GPC mapping
- Assessment tools eg **Evidence to inform decision** – a list of tools trainees can use to evidence attainment of the HiLLO (non-exhaustive list)

GPC Domains	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	➢ ACAT ➢ CBD ➢ Mini-CEX ➢ DOPS ➢ Portfolio evidence of logbook of procedures ➢ Attendance at transfer courses ➢ FFICM examinations ➢ ES Report ➢ Simulation

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Assessment Strategy

- Supervised Learning Events (SLEs)
  - Similar to what trainers do now
  - Formative in nature to guide progression. Educational Supervisor will form a summative judgement based on the formative evidence presented.
- MSF
- Educational Supervisor sign-off of outcome progression

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E-portfolio

- Move to the Life-long Learning Platform (LLP) at implementation.
- Will be updated to allow assessments to be tagged to outcomes rather than competencies

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SLEs v WBPAs

- Formative learning events rather than "Assessments"
  - Never were designed as summative
- Summation of evidence produced will allow the Educational Supervisor (ES) to determine if the level of outcome has been met

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Capability Levels

- Will look just like before, the only change being the word ‘competency’ has been replaced by ‘capability’.

Level	Task orientated capability	Knowledge orientated capability	Patient management capability
1	Performs task under direct supervision.	Very limited knowledge; requires considerable guidance to solve a problem within the area.	Can take history, examine and arrange investigations for straight forward case (limited differential diagnosis). Can initiate emergency management and continue a management plan, recognising acute divergences from the plan. Will need help to deal with these.
2	Performs task in straightforward circumstances, requires help for more difficult situations. Understands indications and complications of task.	Sound basic knowledge; requires some guidance to solve a problem within the area. Will have knowledge of appropriate guidelines and protocols.	Can take history, examine and arrange investigations in a more complicated case. Can initiate emergency management. In a straightforward case, can plan management and manage any divergences in short term. Will need help with more complicated cases.
3	Performs task in most circumstances, will need some guidance in complex situations. Can manage most complications, has a good understanding of contraindications and alternatives.	Advanced knowledge and understanding; only requires occasional advice and assistance to solve a problem. Will be able to assess evidence critically.	Can take history, examine and arrange investigations in a more complex case in a focused manner. Can initiate emergency management. In a most cases, can plan management and manage any divergences. May need specialist help for some cases.
4	Independent (consultant) practice.	Expert level of knowledge.	Specialist.

Table 1 Capability level descriptors with construct-aligned anchors

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Summative Educational Supervisor

- Probably the biggest change
- ES to sign off HiLLO(s)
  - Not too dissimilar to signing off individual competencies
  - Will feel like a more global judgement

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ARCP Decision Aid

Target capability levels for the ICM HiLLOs in each stage of training

HiLLO Number	High-Level Learning Outcomes (HiLLOs) - Intensive Care Medicine	Expected capability level by end of:		
		Stage 1	Stage 2	Stage 3
1	The doctor will be able to function successfully within NHS organisational and management systems whilst adhering to the appropriate legal and ethical framework.	2	3	4
2	The doctor will be focused on patient safety and will deliver effective quality improvement, whilst practising within established legal and ethical frameworks.	2	4	4
3	An Intensive Care Medicine specialist will know how to undertake medical research including the ethical considerations, methodology and how to manage and interpret data appropriately.	2	3	4
4	To ensure development of the future medical workforce, a doctor working as a specialist in Intensive Care Medicine will be an effective clinical teacher and will be able to provide educational and clinical supervision.	2	3	4
5	Doctors specialising in Intensive Care Medicine can identify, resuscitate and stabilise a critically ill patient, as well as undertake their safe intra-hospital or inter-hospital transfer to an appropriately staffed and equipped facility.	2	3	4
6	Intensive Care Medicine specialists will have the knowledge and skills to initiate, request and interpret appropriate investigations and advanced monitoring techniques, to aid the diagnosis and management of patients with organ systems failure. They will be able to provide and manage the subsequent advanced organ system support therapies. This will include both pharmacological and mechanical interventions.	2	3	4
7	Specialists in Intensive Care Medicine can provide pre-operative resuscitation and optimisation of patients, deliver post-operative clinical care including optimising their physiological status, provide advanced organ system support and manage their pain relief.	2	3	4
8	Doctors specialising in Intensive Care Medicine will understand and manage the physical and psychosocial consequences of critical illness for patients and their families, including providing pain relief, treating delirium and arranging ongoing care and rehabilitation. They will also manage the withholding or withdrawal of life-sustaining treatment, discussing end of life care with patients and their families and facilitating organ donation where appropriate.	2	3	4
9	Intensive Care Medicine specialists will have the skillset and competence to lead and manage a critical care service, including the multidisciplinary clinical team and providing contemporaneous care to a number of critically ill patients.	2	3	4
10	Intensive Care Medicine specialists will have developed the necessary skills of induction of anaesthesia, airway control, care of the unconscious patient and understanding of surgery and its physiological impact on the patient.	2	3	3
11	In order to manage acutely ill patients outside the Intensive Care Unit, an Intensive Care Medicine specialist will have the diagnostic, investigational and patient management skills required to care for ward-based patients whose condition commonly requires admission to the intensive care unit.	3	3	3
12	Doctors specialising in Intensive Care Medicine understand the special needs of, and are competent to manage patients with neurological diseases, both medical and those requiring surgery, which will include the management of raised intracranial pressure, central nervous system infections and neuromuscular disorders.	1	3	3
13	A specialist in adult Intensive Care Medicine is competent to recognise, provide initial stabilisation and manage common paediatric emergencies until expert advice or specialist assistance is available. They are familiar with legislation regarding safeguarding children in the context of Intensive Care Medicine practice.	1	3	3
14	Intensive Care Medicine specialists recognise the special needs of, and are competent to provide the perioperative care to patients who have undergone cardiothoracic surgery, including providing pain relief and advanced organ system support utilising specialised techniques available to support the cardiovascular system.	1	3	3

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Progression Points within the curriculum

- Key progression points
- End of Stage 1
  - HiLLO sign off
- End of Stage 2
  - HiLLO sign off
  - FFICM Exam
- End of Stage 3
  - HiLLO sign off

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Dissemination and implementation

- Aim for go live on **04 August 2021**
- Multi-pronged:
  - Secretariat correspondence to key educators, and via trainee rep network
  - FICM website
  - Webinar
  - TLAM – 30 March 2021
  - TAQ virtual attendance at regional STC meetings

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What about trainees on the 2010 curriculum?

- Specific and time-limited transition period – the plan is for all Stage 1 and Stage 2 trainees to move to the new curriculum on **04 August 2021.**
- For those ICM trainees that will be in or entering Stage 3 training on 04 August 2021, so as not to disrupt the final year of training, any ICM Stage 3 trainees that are due to CCT by the end of August 2022 will be given a choice to either:
  - move to the new curriculum (and therefore the new ICM ePortfolio on the Lifelong Learning Platform) OR
  - stay on the existing curriculum and continue using the existing NES ICM ePortfolio to record their training.

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Dual training

- Discussions are still taking place
  - Provisional approval from partner colleges
- Likely to look similar in many ways – 5 possible partner specialties
- Will be developed when all of the specialty curricula have been approved by the GMC.

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Summary points

- New outcomes based curriculum approved by GMC.
- Implementation date: **04 August 2021.**
- Less burdensome for evidence gathering.
- Supervised Learning Events (SLEs) to help drive (formative) learning.
- SLEs and MSF inform whether HiLLO achieved.
- Overall clinical judgement by ES required as to whether HiLLOs (outcomes) met.
  - Will need to seek triangulating information
- Mindset change needed – trainer and trainee engagement

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Any questions?

Please send us any concerns or comments you may have via: contact@ficm.ac.uk