

Delivery of AIM in a Resource Poor Setting

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Context

- The Gulu-Man Link is a collaboration between University Hospital South Manchester Academy, UK (UHSM), Gulu Regional Referral Hospital (GRRH) and The Faculty of Medicine (FoM), Gulu University, Uganda.
- Faculty teaching on the AIM course were drawn from UHSM and GRR; third-year medical students from FoM were course candidates.

Problem:

Prior to establishing the Link, healthcare staff and students in Gulu received no systematic teaching in acute illness management. Audits have revealed monitoring of vital signs was haphazard. Anecdotally, acutely ill patients did not receive timely care.

Intervention:

AIM (Greater Manchester Critical Care Network) is a one-day programme, which imparts a robust, inter-professional approach to the acutely ill adult. Course materials include: lectures, workshops, scenarios, multiple choice question (MCQ) exam, practical assessment and feedback. It is taught widely throughout the UK. Minor modifications were made to make the course material relevant to the local setting.

Study design:

Quantitative assessment of knowledge and skill acquisition; subjective evaluation of course content and candidate beliefs.

Strategy for change:

AIM has previously been delivered to fifth-year medical students and nursing staff. The course will continue to be delivered to healthcare staff and students bi-annually, in partnership with a growing Ugandan faculty.

Measurement of improvement:

- We collected data from a cohort of third-year medical students.
- Candidates took pre- and post-course MCQ tests. Differences between test scores were taken as a marker of knowledge acquisition; significance was calculated using a two-sided Wilcoxon Signed Ranks test. Skill development was examined via a low-fidelity clinical scenario simulation using a structured pass-fail mark-scheme.
- The paper-based, anonymised feedback form was modified to solicit candidate perception of course content and, using the theory of planned behaviour, the likelihood that teaching would impact on practice. Sections included:
 - Content and teaching graded 1-5 (poor to excellent)
 - Statements exploring attitudes, subjective norms, and perceived behavioural controls, graded 1-5 (strongly disagree to strongly agree)
 - Free text comments, assessed for commonly occurring themes.

Effects of changes:

- 35 students sat the course. The pre-course test was undertaken by 34 candidates; five left early; therefore, only 30 candidates completed the post-course questionnaire, MCQ and practical assessment.
- MCQ scores were not normally distributed. The median pre- and post-course score was 72% and 96%, respectively, signifying a 24% increase ($p < 0.001$). All students who sat the practical assessment passed.
- Teaching and course content received average scores of 4.7 and 4.8, respectively. Candidates wrote the course was relevant to clinical practice, required few additions and scenario teaching was particularly useful, in free text sections.
- Candidates strongly agreed that the approach is well structured, enables prioritisation and focuses initial management; they disagreed that it is inflexible and time consuming. Candidates strongly agreed that senior doctors, nurses, student nurses and fellow colleagues consider the course as important. Candidates agreed they had sufficient autonomy to use the protocol in clinical practice, but expressed neutral opinions regarding availability of equipment for an AIM approach.

Acute Illness Management Course (AIM®) Post-Course Questionnaire

Date:

Please tick the health professional group that you belong to: (Please tick)

- Physiotherapy Student Nurse
 Physiotherapist Medical Student
 Nursing Student Doctor
 Other.....

Years qualified or Year of study

- (Please tick)
 0 - 2 years Year 1
 3 - 5 years Year 2
 6 - 10 years Year 3
 11 - 20 years Year 4
 20 years + Year 5

Please indicate the area which area you are currently placed: (Please tick)

- Acute Care (Emergency Department, Theatre, Medical Wards, Surgical Wards)
 Non Acute Areas (Out Patients Department)
 Education (In Training/Pre-registration)

Do you feel that you have gained the appropriate knowledge to manage patients with acute illness following the AIM® Course? (Please tick the appropriate box)

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Do you feel that having attended the AIM® course you have gained confidence in managing acutely ill patients in your clinical area?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

How useful was the course manual?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Using the AIM® protocol (ABCDE assessment):

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Is too time consuming	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Is well structured	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Enables me to prioritise my work	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Focuses initial management	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Is too inflexible	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Regarding the AIM® protocol (ABCDE assessment):

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Senior doctors see this as important	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Senior nurses see this as important	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Fellow colleagues see this as important	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Nursing students see this as important	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Medical students see this as important	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Please complete the boxes by scoring each section 1 - 5, where 1 is poor and 5 is excellent.

	Course Content (1-5)	Quality of Teaching (1-5)	Additional comments
Introduction: Setting the scene			
Lecture: Recognition, assessment and management of the acutely ill adult patient			
Workshop: Assessing and managing shortness of breath			
Workshop: Assessing and managing cardiovascular problems			
Workshop: Assessing and managing oliguria			
Workshop: Assessing and managing altered LOC			
Lecture/Workshop: Assessing and managing pain			
Workshop: Charts			
Scenario Demo by faculty			
Practice Scenarios			

Was there anything not included that you think would have been useful?

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What was the best part of the course?

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If you saw 10 sick patients, how many would you assess using an ABCDE approach?

1 2 3 4 5 6 7 8 9 10

Regarding using the AIM® protocol (ABCDE assessment) in practice:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am confident I can identify and assess acutely ill patients	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I am confident I can manage acutely ill patients	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I have all the equipment I need	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I have the freedom to use this intervention	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
The decision is beyond my control	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Please add any additional comments that have not been reflected in the questions above:

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Lessons learnt:

Applying the theory of planned intention, these results suggest candidates are likely to implement the teaching in clinical practice improving overall quality of care at GRRH. In future, we intend to assess the actual change in clinical behaviours as a result of teaching.

Message for others:

A course developed in Britain to improve management of acutely ill patients has been successfully delivered in a resource poor setting, with minimal alteration. Following the course, candidates demonstrate improved knowledge, skill and confidence alongside beliefs that indicate the teaching will be applied clinically. Through commitment to this endeavour, we hope to develop a critical mass of healthcare workers who will implement and utilise the AIM approach to acutely ill patients.

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