

COMPARISON OF COMPUTERIZED ALGORITHM SOURCE “MEDAL” AND TEXT-BASED SOURCE IN USING ALGORITHMS

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Purpose: To compare the efficiency in clinical scenarios of a computerized algorithm source “MedAL” (www.medal.org, a source with more than 3,500 algorithms) and a text-based source “Trauma Manual” (2nd Ed., Lippincott Williams & Wilkins). **Methods:** Seven students used both algorithm sources in two scenarios in a randomized sequence. Efficiency was measured by the times to locate and calculate the correct algorithm and the number of instructor interventions. The usability was compared with a 7 point Likert scale of 13 items and an open ended set of written and verbal questions. **Results:** Results are shown in the table. The qualitative assessment showed a highly acceptance of the computerized algorithm. The slow calculation speed for Medal was related to item wording and other correctable interface design issues. **Conclusions:** User performance and feedback can be used to enhance interface design for algorithm access and will guide future delivery on hand-held devices.

Items	Scenario	MedAL (mean)	Book (mean)	P-value
Find Time (sec)	child	29	109	*0.006
	adult	25	59	0.060
Calculation Time (sec)	child	151	143	0.848
	adult	249	136	*0.029
Instructor Intervention	child	0.71	1.00	0.628
	adult	0.86	0.86	0.780
Usability Score		75	57	0.250