

Advanced Assessment to Accelerate Diagnostic Skill Acquisition

National Institute of General Medical Sciences Award Number R41GM108104

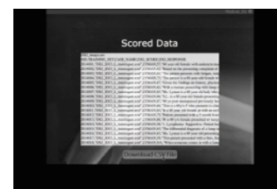
01 June 2014 to 31 May 2015

ACCOMPLISHMENTS

Automated scoring of DXJ essays was generated for two standardized patient cases used at SIUSOM. Results indicate that auto-generated scores can be reliable and accurate enough to augment human raters:

Case 1: Lymphoma	Correlation	Exact Agreement	Adjacent Agreement
Human to Human	.55	25%	49%
Automated Scoring to Human	.35	21%	65%
Case 2: Intimate partner violence, shoulder injury, depression			
Human to Human	.78	28%	65%
Automated Scoring to Human	.69	14%	61%

A prototype scoring system was built. Demonstration may be viewed at: <https://youtu.be/Pu2QpmCSbDc>.



INFORMATION DISSEMINATION

1. Cianciolo, AT & LaVoie, N (2015). *Toward making evidence-based decisions about diagnostic reasoning development*. Paper presented at the SIUSOM Symposium on Teaching & Learning, Springfield, IL, April 14, 2015.
2. Cianciolo, AT, LaVoie, N & Klamen, D. (2015). *Qualitative investigation of diagnostic reasoning deficits: An interactional approach*. Poster presented at the Joint CGEA CGSA COSR conference, Columbus, OH, April 9-12, 2015.
3. LaVoie, N & Cianciolo, AT. (2014). *Advanced assessment to accelerate diagnostic skill acquisition*. Invited presentation for the Academy for Scholarship in Education at Southern Illinois University School of Medicine, Springfield, IL, May 20, 2014.
4. LaVoie, N, Cianciolo, AT & Martin, J. (2015). *Automated assessment of diagnostic skill*. Poster presented at the Joint CGEA CGSA COSR conference, Columbus, OH, April 9-12, 2015.

FUTURE PLANS

If awarded a Phase II grant, we will conduct research to (1) refine the DXJ scoring rubric and improve human-to-human and automated scoring-to-human correspondence; (2) build and evaluate automated scoring based on the revised rubric for 5 new cases with common diagnoses; and (3) continue exploration of diagnostic strategy deficits to enhance tailored instruction and skill remediation.

Thank you for your support of this effort.



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