

## **Abstract**

### ***Using an On-line Decision Support System to Facilitate the Diagnostic Reasoning of Family Nurse Practitioner Students and Graduates***

This study examined whether DXplain, an on-line computer-based decision support system, improved the quality of diagnostic reasoning of nurse practitioner students during their first year and at end-of-program. It also examined the impact of laboratory test information on the quality of diagnostic reasoning. Ten students were provided with two cases. They were then asked to provide four diagnoses for each case: a) before using the DSS and before knowing laboratory test findings, b) after using the DSS but before knowing the laboratory test findings, c) after reviewing the laboratory test findings, and d) after using DSS with the laboratory test findings. The results demonstrated that DXplain significantly improved the quality of the diagnostic sets, and that this improvement could largely be attributed to diagnostic quality before knowing the laboratory test findings. The results are discussed in terms of their implications for clinical education of nurse practitioner students.

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