Virtual Patient Simulation Improves Clinical Decision-Making in Managing Type 2 Diabetes

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BACKGROUND

This study was conducted to determine if an online, virtual patient simulation (VPS) based continuing medical education (CME) intervention that engages clinicians in an authentic, practical learning experience could improve performance of diabetologists/endocrinologists (D/Es) and primary care physicians (PCPs) in the management of type 2 diabetes (T2D) and sleep problems.

METHODS

The case-based CME VPS intervention comprised one patient presenting at 2 different time points, allowing learners to order lab tests, make diagnoses, and prescribe treatments supported by an extensive database of diagnostic and treatment possibilities in a manner matching the scope and depth of actual practice (Figure 1). Learner clinical decisions, entered using open field entries, were analyzed using a sophisticated decision engine if an online, virtual patient simulation (VPS)-based continuing medical education intervention comprised one patient presenting at 2 different time points, allowing learners to order lab tests, make diagnoses, and prescribe treatments supported by an extensive database of diagnostic and treatment possibilities in a manner matching the scope and depth of actual practice (Figure 1). Learner clinical decisions, entered using open field entries, were analyzed using a sophisticated decision engine if an online, virtual patient simulation (VPS)-based continuing medical education intervention comprised one patient presenting at 2 different time points, allowing learners to order lab tests, make diagnoses, and prescribe treatments supported by an extensive database of diagnostic and treatment possibilities in a manner matching the scope and depth of actual practice (Figure 1). Learner clinical decisions, entered using open field entries, were analyzed using a sophisticated decision engine if an online, virtual patient simulation (VPS)-based continuing medical education intervention comprised one patient presenting at 2 different time points, allowing learners to order lab tests, make diagnoses, and prescribe treatments supported by an extensive database of diagnostic and treatment possibilities in a manner matching the scope and depth of actual practice (Figure 1). Learner clinical decisions, entered using open field entries, were analyzed using a sophisticated decision engine if an online, virtual patient simulation (VPS)-based continuing medical education intervention comprised one patient presenting at 2 different time points, allowing learners to order lab tests, make diagnoses, and prescribe treatments supported by an extensive database of diagnostic and treatment possibilities in a manner matching the scope and depth of actual practice (Figure 1). Learner clinical decisions, entered using open field entries, were analyzed using a sophisticated decision engine. This study was conducted to determine if an online, virtual patient simulation (VPS) based continuing medical education (CME) intervention that engages clinicians in an authentic, practical learning experience could improve performance of diabetologists/endocrinologists (D/Es) and primary care physicians (PCPs) in the management of type 2 diabetes (T2D) and sleep problems.

RESULTS

Aggregate Improvement in Clinical Decision Making

Overall, significant improvements were demonstrated after participation in this educational intervention by both PCPs and D/Es related to comprehensive management of patients with T2D.

Patient Simulation Cases

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CONCLUSIONS

This study demonstrates that VPS that immerses and engages the clinical learners in an authentic and practical learning experience can improve evidence-based clinical decisions related to the management of T2D and sleep problems.

Persistent educational gaps were uncovered related to:
- Diagnosis of insomnia
- Treatment of insomnia
- Classification on T2D as uncontrolled
- Individualization of T2D treatment

SOURCE OF SUPPORT

The CME activity was supported by an independent educational grant from Merck.

NOTES:

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