A Virtual Interactive Case System Innovation to Support Pharmacist Prescribing for Minor Ailments

Presented by: Song Min Lee

Project Team: Certina Ho; Stephanie Lau; Wuqi Lin; Joo-Young Lee; Christy Mak; Shreeya Thakrar; Nashita Tabassum; Peter Zhang; Annie Yao; Christina Truong; Fabian Cretu; Maaria Arif; Song Min Lee; Amy Botross; Gordon Tait

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Certina Ho[1,2]; Stephanie Lau[1]; Wuqi Lin[1]; Joo-Young Lee[1,2]; Christy Mak[1]; Shreeya Thakrar[1]; Nashita Tabassum[1]; Peter Zhang[1]; Annie Yao[1]; Christina Truong[1,2]; Fabian Cretu[1]; Maaria Arif[1,2]; Song Min Lee[1]; Amy Botross[1]; Gordon Tait[3]

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Background

❖ Virtual interactive cases (VICs) have been used as an educational resource for differential diagnosis training in medical students, but they have not been explored in pharmacist prescribing for minor ailments (PPMA).

Objective

❖ We aimed to share our experience and lessons learned in the development of 3 PPMA VICs.

Methods

❖ We created 3 PPMA VICs (allergic rhinitis, conjunctivitis, and cold sores) as a pilot project (https://pie.med.utoronto.ca/vic/demo/pharmacycases/minor_ailment_cases_2021.htm) (Figures 1-3)

❖ Our case development process included iterative case writing, reviewing, and transcribing to the VIC online environment.

❖ We recognized the benefits and challenges when attempting to fully utilize the built-in functionalities of the VIC online platform.

Figure 1: Pharmacist Prescribing for Minor Ailments (PPMA) VIC Module 1
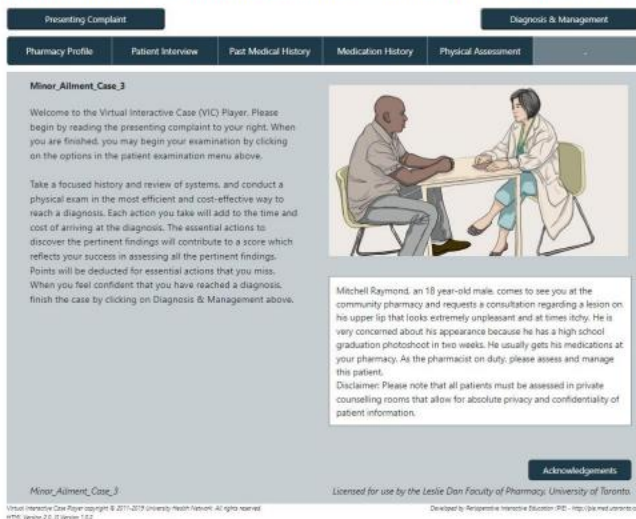https://pie.med.utoronto.ca/vic/demo/pharmacycases/Minor_Ailment_Case_1/index.html

Figure 2: Pharmacist Prescribing for Minor Ailments (PPMA) VIC Module 2
https://pie.med.utoronto.ca/vic/demo/pharmacycases/Minor_Ailment_Case_2/index.html

Figure 3: Pharmacist Prescribing for Minor Ailments (PPMA) VIC Module 3
https://pie.med.utoronto.ca/vic/demo/pharmacycases/Minor_Ailment_Case_3/index.html

Results

What We Learned When Creating or Preparing

❖ **Patient Assessment Components:** We had to embed approximately 10% relevant or essential questions that a VIC user should ask to rule in or rule out a differential diagnosis.

❖ **Diagnosis Statements:** We need to include one correct and 6-10 incorrect diagnosis statements to challenge the user on differential diagnosis of each minor ailment.

❖ **Management Options:** The VIC user should be presented with only 30% appropriate interventions, including pharmacologic and self-care options, for the management of each minor ailment.

❖ **VIC Final Debriefing:** A VIC user would be able to solve the case scenario with the correct minor ailment diagnosis if **all** statements and questions were inspected during patient assessment, but **costs** and **time** associated with irrelevant actions taken would be reflected in the VIC final debriefing, implying that such clinical encounter was not practically and logistically feasible or affordable in a real pharmacy practice setting.

Conclusion

❖ Pharmacists are not traditionally trained in performing differential diagnosis. Creating the extra irrelevant patient assessment components, the incorrect diagnosis statements, and inappropriate management options was quite challenging.

❖ VICs are not meant for educating nor training PPMA.

❖ VIC is a safe and user-friendly platform to support and challenge pharmacist knowledge and skills in performing differential diagnosis and providing minor ailment prescribing service in the community.

References (Selected)

Virtual Interactive Case System. (2013) Available at: http://pie.med.utoronto.ca/vic/

Douglass, MA, Casale, JP, Skirvin, JA, & DiVall, MV. (2013). A virtual patient software program to improve pharmacy student learning in a comprehensive disease management course. *Am J Pharm Educ*, 77(8), 172.

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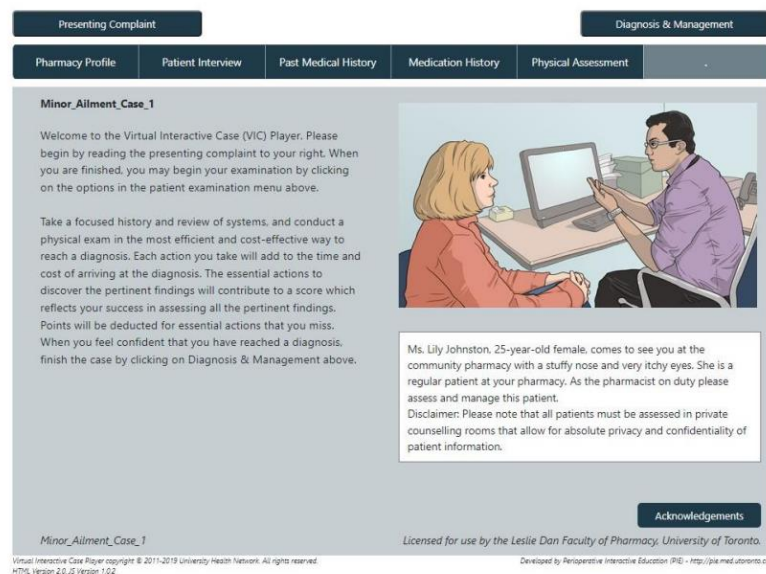
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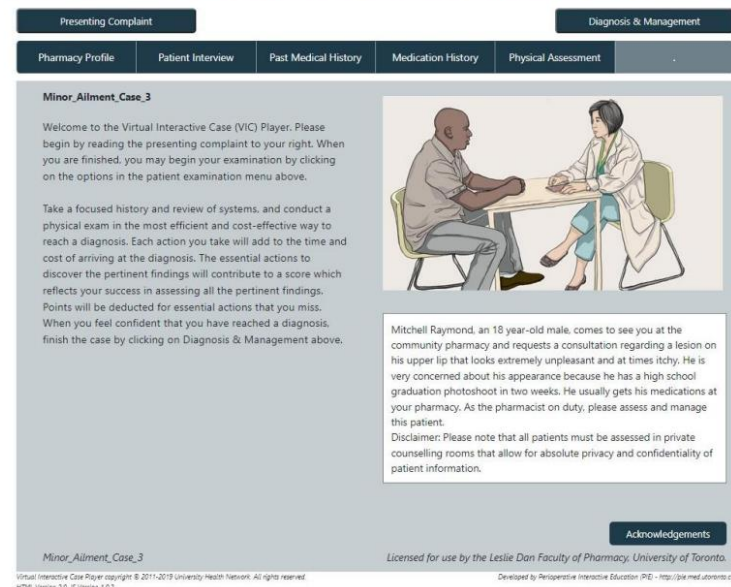https://pie.med.utoronto.ca/vic/demo/pharmacycases/Minor_Ailment_Case_1/index.html

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Link to Minor Ailment Prescribing VICs:
https://pie.med.utoronto.ca/vic/demo/pharmacycases/minor_ailment_cases_2021.htm

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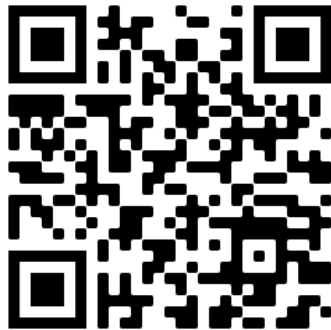[3]Toronto General Hospital, University Health Network

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Minor Ailment Prescribing VICs Evaluation Survey:
https://forms.gle/sgeu6q4dSAXov8um8

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