HEALTH SYSTEMS SCIENCE & LEARNING HEALTH SYSTEMS IN HEALTH PROFESSIONALS' EDUCATION: WHAT IS THE CURRENT STATE?

Nadia Zamri [1], Jeemin Song [1], Jaeeun Pae [1], Tian Jin [1], Sze Wai Ip [1], Sathana Dushyanthen [2], Kayley Lyons [2]

Monash University, School of Pharmacy; University of Melbourne, Centre for Digital Transformation of Health.

INTRODUCTION

- Analysing data is crucial to close clinical practice gaps [1,2]. The learning health systems (LHS) and health systems science (HSS) may be a solution to navigating data using cycles of study, feedback, and practice change.
- However, there are limited studies that outline curriculum and evaluate outcomes of teaching HSS & LHS concepts in health professionals' education.

- **AIM:** To characterise and evaluate the integration of health systems science and learning health systems in health professionals' education.
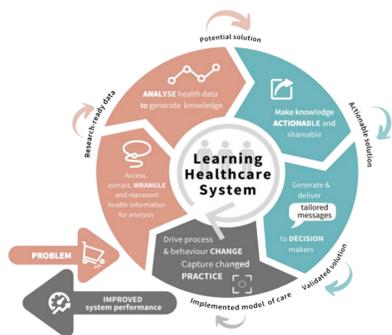

Figure 1 : Cyclical nature of learning health systems [3]

METHODS

- We performed a scoping review of LHS & HSS programs globally.
- Databases used: ProQuest, Cinahl, OVID, and Scopus.
- A standardised data extraction tool was used through Covidence.
- Articles were classified minor, moderate or major categories, depending on the extent HSS & LHS concepts were mentioned.
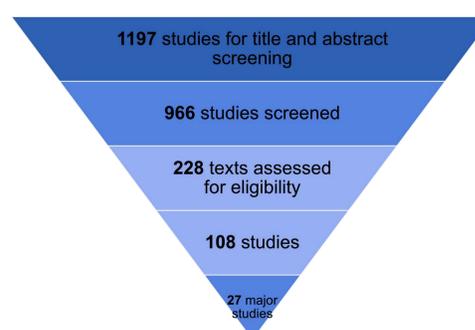

Figure 2 : Process of screening

Classified and analysed in the categories below:	
Use of LHS/HSS framework	• Minor • Moderate • Major
Characteristics of Study	• Country • Population of the study • Type of study • Number of population • Journal/source • Type of article • Time period of study
Content of articles	• Type of educational programs • Early results • Future recommendations

Table 1 : Classification of articles

RESULTS

- 108 studies were included: 27 major, 57 moderate and 24 minimal articles.
- In total, the study found 34 editorials, 27 education evaluations, 16 qualitative researches, 16 case studies, 6 quantitative researches and 9 studies classified as other.
- 40.7% of the major articles mentioned that the addition of LHS and HSS improved knowledge and perspectives.
- 25.9% of the major articles mentioned enhancement in motivation and confidence as its benefits.
- 3.7% of major articles showed optimisation of data management as its advantage.
- The six main domains of HSS (22.2%) were mostly used in teaching content while experiential learning (25.9%) was the most common curriculum form.
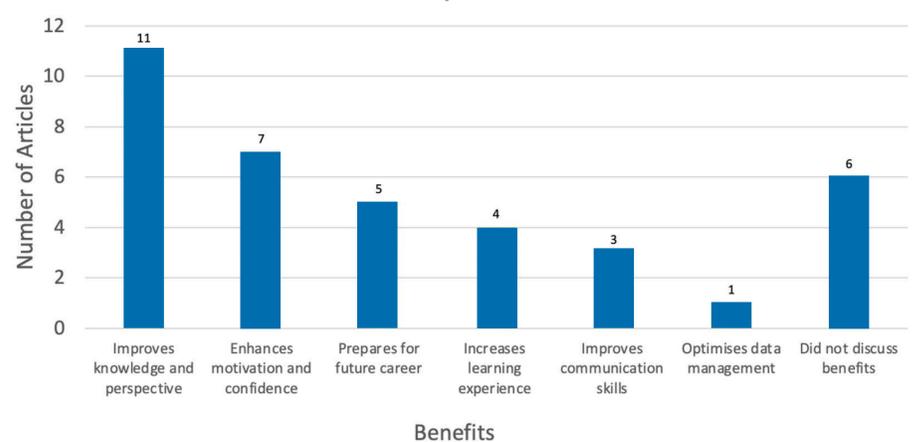

Figure 3 : Number of articles elucidating the benefits of integrating LHS and HSS into health professionals' education.

DISCUSSION & CONCLUSION

- LHS and HSS are emerging fields within healthcare.
- Variability in benefits may be due to the differences of education systems.
- More research needed to further evaluate and measure the impact of these two systems in healthcare.
- Our study provides evidence to support the incorporation of LHS/HSS into education and cumulated all known data as of date concerning LHS/HSS in health professionals' education.
- However, our study results cannot be generalised due to large number of articles based in the US involving medical students and the lack of standardised measure of the effectiveness of incorporating LHS/HSS curriculum.

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