

Examining social determinants of health in patient cases

– An insufficiency or missed opportunity?

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BACKGROUND

- Social determinants of health (SDOH) are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
- SDOH are the nonmedical factors that influence health outcomes. Shaped by structural inequities, they are major drivers of health(care) disparities.
- SDOH must therefore be considered as an integral part of patient care and healthcare delivery, and should be adequately reflected in pharmacy education, to enable pharmacists contribute to achieving health equity.

OBJECTIVES

- To assess the extent of the integration of *Social Determinants of Health* (SDOH) in patient cases used in the core PharmD curriculum in the 2019-2020 academic year at a Midwestern Pharmacy School; and
- To identify opportunities for further integration of SDOH in patient cases used in pharmacy education.

METHODS

- **Data Collection:** Cases extraction from Canvas, a Web-based learning management system, and student notes.
- **Inclusion criteria:** Case presented in class, assignment, or lab that asks questions, seeks information and/or prompts discussion around the patient's care.
- **Exclusion criteria:** Cases (i.) used in quizzes/exams; (ii.) from primary literature without discussion questions; (iii.) from elective courses; and (iv.) solely for calculations.
- **Data analysis:** Content analysis of the cases was conducted to determine inclusion of SDOH as outlined in the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) tool.

RESULTS

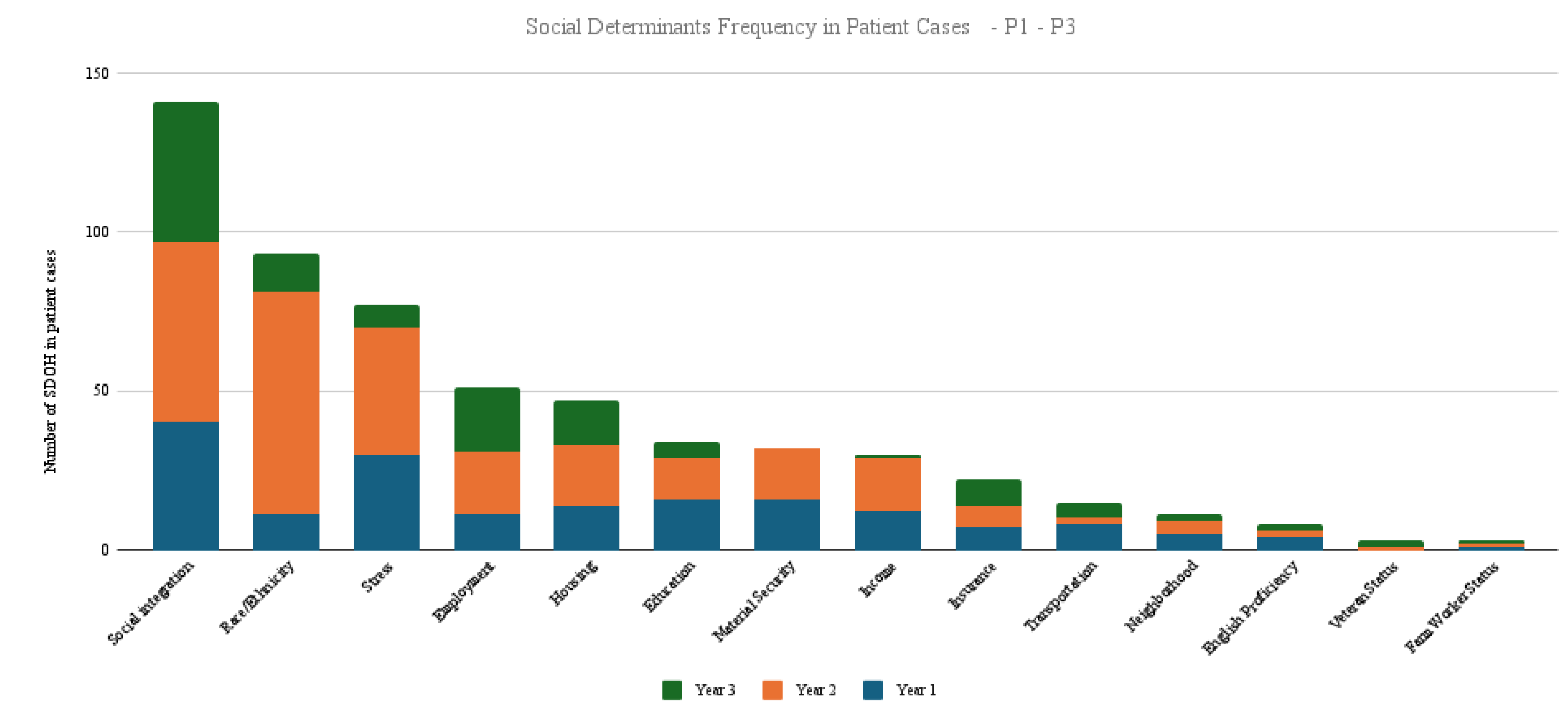
TABLE 1. SDOH mentioned in patient cases by year of training

	Year 1 [P1]	Year 2 [P2]	Year 3 [P3]
Courses with SDOH in patient cases	6 (of 15 offered)	9 (of 14 offered)	11 (of 13 offered)
No. of patient cases extracted	85	250	207
No. of patient cases with SDOH	67 (78.8)	94 (37.6)	66 (31.9%)
Median no. of SDOH per case	2	1	0
Course with most patient cases with SDOH	Applied Pharm Care [39]	Integrated Endocrinology [23]	Integrated Oncology [32]

TABLE 2. – Opportunities for consideration of SDOH in Patient Care

Select SDOH	Excerpts from Patient Cases	Course
Employment [Social Integration, Insurance]	"Single mother. Accounting clerk, recently unemployed (company downsized) 1 month ago"	Pharmacotherapy of Neurologic and Psych Disorders [P3]
Housing [Social Integration, Employment]	"LS says she has missed work occasionally due to being tired, and 'nods off' occasionally while at home. --- moved into her mother's apartment temporarily."	Pharmacy Outcomes [P3]
Social Integration [Stress]	"MW mentioned at this visit that his preferred gender identity is male, different than assigned sex at birth which is female... He is just beginning to tell his family."	Cardiovascular Pharmacotherapy [P2]
Insurance [Stress, Employment]	"VS has always been concerned about the cost of her medication therapy. Her insurance has been very unstable throughout her life and is constantly changing. She worries that someday she will go to the pharmacy and not be able to pay for her medications."	Foundations of Pharmaceutical Care [P1]
Material Security [Housing, Social Integration, Employment, Insurance]	"He keeps his pill bottles on the dresser in his bedroom... 'eating out' more with friends and notes he wants to 'enjoy retirement' right now . . . He is willing to consider injectable medication if it is covered by his insurance and won't interfere with his weekend camping trips he takes frequently during the summer."	Diabetes and Metabolic Syndrome [P2]
Food Security [Employment, Stress]	"Works as a long distance truck driver for a major shipping company. He struggles with eating a healthy diet but has been taking fresh fruits and vegetables along with him in his cooler. Tries to avoid fried food."	Pharmaceutical Skills Lab III [P2]

Figure 1. – No. of Cases with SDOH by year of training



KEY FINDINGS

- Proportionally, patient cases were less likely to include SDOH with increasing level of training; while more courses included cases with SDOH with increasing level of training.
- Patient cases in pharmacotherapy courses featured fewer SDOH comparatively, and even when included, were often not considered in developing treatment plans.
- SDOH critical to health (e.g. *neighborhood, farm worker status*) and key drivers of inequity in healthcare access (e.g. *income, insurance, transportation, English proficiency*) received the least mention in patient cases.

RECOMMENDATIONS

- **Intentional integration of SDOH in patient cases**
 - Using pedagogical models that adopt a holistic approach to teaching complex multi-faceted content [e.g. *Whole-task Learning*].
 - Using longitudinal cases. Purposefully layering (and/or stripping) cases of SDOH to demonstrate importance in optimizing care, and to build structural competence.
- **Inter-disciplinary effort.** Collaborative case development and co-teaching by clinical and social science faculty.