

# Mapping The Research Concerning Training of Pharmacists to Integrate Shared Drug-Therapy Decision Making Into Practice: A Scoping Review

Andrew Braun, BSc(Pharm), BSc; Nicole Bruchet, BSc, BSc(Pharm), ACPR, PharmD; Sean Gorman, BSc(Pharm), ACPR, PharmD

## Background & Rationale

- Shared drug-therapy decision making (SdtDM) represents the incorporation of the patient as part of the care team, providing insight into preferences, values and perspectives on drug therapy as an extension of informed consent
- The philosophical underpinnings of shared decision making have coalesced into trainable, multidisciplinary skillsets of significant investigation; however, there is notable divergence with respect to how SdtDM is incorporated into practice, and the body of evidence regarding pharmacist training is uncharted

## Objectives

### Primary:

1. Characterize and map the research that has been conducted on training pharmacy students, pharmacy residents and pharmacists to incorporate SdtDM

### Secondary:

1. Characterize and map the research that has been conducted on training medical students, residents or licensed physicians to incorporate SdtDM
2. Describe the impact of training to incorporate SdtDM on shared decision making skills in learners and health care professionals and any impact on patient outcomes

## Methods

### Design:

- Scoping review per Arksey & O'Malley, JBI and PRISMA-ScR
- Protocol registered 02 FEB 2021 on OSF.io

### Study Identification:

- Embase, MEDLINE, CINAHL from inception to 02 FEB 2021
- Reference searching of included studies
- Grey literature search per CADTH guidelines

### Search Strategy:

- Constructed in consultation with UBC librarian
- Simplified:* [[Decision Making, Shared OR Patient Participation] AND [education, pharmacy OR education, pharmacy, graduate OR pharmacy residencies OR students, pharmacy OR pharmacy AND (student\* OR residen\*)]] AND [[education, {other HCPs} OR {HCPs}] AND (medical or {other HCPs}) AND (medical or {other HCPs}) AND (student\* OR residen\*)]

### Selection of Studies:

- Title and abstract references were compiled using Covidence and screened in duplicate by AB (100%) and NB (10%) using Cohen's kappa index to ensure inter-rater reliability (k = 0.6). Screening was then narrowed to exclude other health care professionals. Fulltext screening proceeded similarly (k = 0.66)

### Inclusion Criteria:

- Qualitative and quantitative studies that examine SdtDM instructional or training programs or outcomes of training programs

### Exclusion Criteria:

- Studies that solely report on decision aids or patient training

### Extraction:

- Performed in duplicate by AB (100%) and NB (10%) into Excel table

Figure 1. PRISMA-ScR Flow Diagram

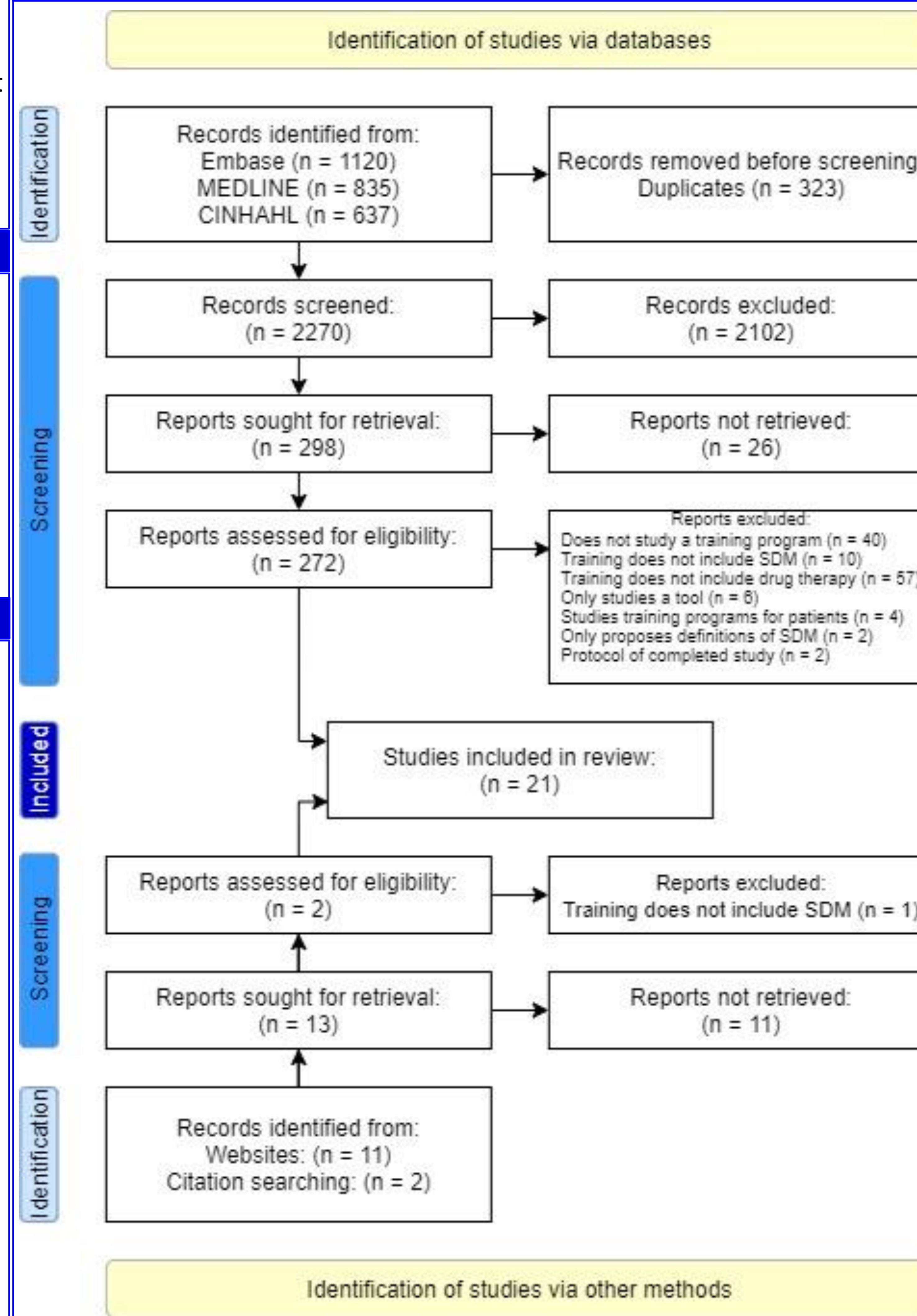


Table 1. Characteristics of Studies on Training Pharmacy Learners

Population	Studies (n=21)	Setting	Study Designs	Types of Training	Length	Shared Drug Therapy Decisions
Pharmacy Students	1	Community	- Practice observation	- Workshop	NR	1. New/refill requests 2. Non-prescription products 3. Disease management discussions
Pharmacists	2+	Psychiatry* (n=1)	- Controlled before/after - Cochrane review	- Workshop - Self study	NR	1. Medication initiation, switching or deprescribing 2. Risk reduction

\*As part of interprofessional teams only, specific SdtDM training interventions and outcomes not reported  
†One or more studies contained more than one population group

Table 2. Characteristics of Studies on Training Medical Learners

Population	Studies (n=21)	Setting	Study Designs	Types of Training	Length	Shared Drug Therapy Decisions
Medical Students	3	Unspecified	- Controlled before/after - Cochrane review	- Self study - Lecture - Online program - Role play	3-9 hrs	1. Medication adherence 2. Initiation of antihypertensives, statins 3. Managing ADRs
Medical Residents	8†	Internal Medicine (n=4)	- RCT - Controlled before/after - Cochrane review	- Online program - Workshop - Lecture - Self study - Standardized patient interaction - Role play	1-4 hrs	1. Opioid optimization/pain medication negotiation 2. Antidepressant switching or optimization 3. Initiation of antihypertensives, statins, anticoagulants, contraceptives 4. Starting antibiotics for aRTI* 5. Goals of care for chemotherapy
Physicians	9†	Primary Care (n=5)	- Cluster RCT - Group RCT - Controlled before/after - Systematic review - Cochrane review	- Evaluation of patient interaction - Self study - Workshop - Role play - Lecture	2-18 hrs	1. NSAID risk communication 2. Initiation of antihypertensives 3. Participation in hypertension therapy 4. Smoking cessation 5. Starting antibiotics for aRTI** 7. Medication adherence

\*\*Acute respiratory infection

†One or more studies contained more than one population group

Table 3. Shared Decision Making Concepts Taught

Shared Decision Making Concepts Taught As Part of Training
Define SdtDM
Develop partnership with patient
Establish patient preferences for information and decision-making role
Determine patient ideas, concerns, expectations and values
Identify choices for therapy
Evaluate evidence, risks
Present options/evidence to patient, check understanding
Negotiate decision
Review plan/arrange for follow-up

\*Thematically, concepts of SdtDM were fairly homogenous across all studies

Table 4. Shared Decision Making Skills and Patient Outcomes

Impact of Training on Shared Decision Making Skills and Patient Outcomes
Improvement in learner SdtDM competency/knowledge/awareness/confidence/use of SDM concepts
No statistically significant differences in patient care outcomes such as BP, HR, CV risk, smoking status, depression severity, medication adherence or quality of life
Heterogenous outcome measurement methods
No difference in consultation length using SdtDM process
"It is uncertain whether any interventions for increasing the use of SDM by healthcare professionals (ie those targeting solely patients or healthcare professionals or both) as measured by observers or reported by patients are effective because the certainty of the evidence is very low." (Legare 2018, Cochrane Review)

\*Thematically, study outcomes of SdtDM were extremely heterogenous across all studies

## Limitations

- Search may not have captured all literature, including all grey literature
- Variability: study screening, data extraction not completed in 100% duplicate

## Conclusions

This scoping review found that there is limited research to inform best practices in training students, residents and pharmacists on how to incorporate SdtDM into practice. SdtDM concepts taught as part of training seem to be well established, but the impact on skills and patient outcomes appears to be variable. Future research should focus designing a SdtDM program for pharmacists and learners and assessing its impact on skill development and patient outcomes.

