

From Audience to Stage:

Story of Transformational Change Starring IH Pharmacists

Applicant: Richard Slavik, on behalf of all IH Clinical Pharmacists



Goal 3

Increase the extent to which hospital and related healthcare setting pharmacists actively apply evidence-based methods to the improvement of medication therapy.

Background

In 2008 CSHP launched Vision 2015 and IH Pharmacy launched several continuous professional development (CPD) initiatives to improve the knowledge, skills, ability, competence, and confidence of clinical pharmacists to resolve drug therapy problems (DTPs), increase the application of evidence-based therapies, and improve the quality of patient care.

Disease State Education Modules

To promote clinical pharmacist CPD for priority diseases, disease state education modules (DSEMs) were delivered from 2009 to present. Module content was based on current clinical practice guidelines and best available evidence (objective 3.1). The following diseases have been covered: heart failure (HF); pneumonia; chronic obstructive pulmonary disease (COPD); ischemic heart disease (IHD), diabetes mellitus (DM); urinary tract infection (UTI); gastroesophageal reflux disease (GERD)/peptic ulcer disease (PUD); atrial fibrillation (AF); and chronic kidney disease (CKD). A list of key pharmacist interventions (DSEM KPI) or evidence-based interventions proven to reduce mortality, morbidity or health care utilization were also developed to guide pharmacists' interventions (objectives 3.3 to 3.9). Clinical decision-support tools such as pre-printed orders (PPOs) were developed to help promote evidence-based drug therapy (objective 3.2). DSEMs improved pharmacist self-reported knowledge, skills, ability, competence, confidence to resolve DTPs.

Behavioral Change Interventions

Proven bundled multifaceted behavioral change strategies shown to improve professional practice were implemented for HF (HF-KT study), UTI and pneumonia (PIAS-KT study) to improve pharmacists' therapeutic knowledge, and optimize the application of evidence-based drug therapy for patients.

Clinical Performance Measurement

A The Drug Therapy Problem (DTP) Tracker was implemented in 2009. A DTP is any DTP resolved by a pharmacist. A DSEM DTP is any DTP resolved for a DSEM disease. A DSEM KPI is a resolved DTP that is an evidence-based intervention proven to improve outcomes.

ACT I

The **AIMS study**¹ showed that 4-week DSEMs for clinical pharmacist CPD improved the proportion of pharmacist-resolved DTPs for these diseases (DSEM DTP), and evidence-based key pharmacist interventions proven to improve outcomes for patients with these diseases (DSEM KPI). The proportion of total DSEM DTP/total DTP increased from 27.9% to 30.2% (relative risk increase [RRI] 8.3%, $p < 0.05$). The proportion of DSEM KPI/total DTP increased from 21.7% to 24.4% (RRI 12.3%, $p < 0.05$).

ACT II

The **HF-KT study**² showed that a 6-week behavioral change intervention improved pharmacists' therapeutic knowledge and improved the quality of care for patients with HF. Knowledge translation quiz scores increased from 16.8/20 (84%) to 18.9/20 (95%), $p < 0.05$. The proportion of pharmacist-resolved HF DTP/DSEM DTP increased from 9.6% to 15.3% (RRI 59.7%, $p < 0.05$). The proportion of pharmacist-resolved HF KPI/DSEM KPI increased from 4.4% to 9.7% (RRI 119.1%, $p < 0.05$).

ACT III

The **PIAS-KT study**³ showed that a 6-week behavioral change intervention improved pharmacists' therapeutic knowledge and improved the quality of care for patients with UTI and pneumonia. Knowledge translation quiz scores significantly increased from 11.4/20 (57%) to 14.8/20 (74%), $p < 0.05$. The proportion of pharmacist-resolved UTI and pneumonia DTP/DSEM DTP increased from 17.8% to 27.2% (RRI 52.8%, $p < 0.05$). The proportion of pharmacist-resolved UTI and pneumonia KPI/DSEM KPI increased from 12.2% to 18.2% (RRI 49.9%, $p < 0.05$).

ACT IV

The **RES-DTP study**⁴ showed that pharmacy practice residents resolved 1201 total DTPs: 523 (44%) DSEM-DTP and 484 (40%) DSEM-KPI; accounting for 1201/17,197 (7.0%) of all pharmacist-resolved DTPs, 523/6,114 (8.6%) of all DSEM-DTP, and 484/4018 (12.0%) of all DSEM-KPI.

And the show continues...over 120,000 DTPs resolved since 2009!

