The Evaluation of Inter-Rater Reliability in a Pharmacy Clinical Activity Tracking Tool

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Background

- Lower Mainland Pharmacy Services (LMPS) piloted a pharmacy clinical activity tracker (pCAT) in November 2014, used by an estimated 438 pharmacists at 31 sites.
- The pCAT incorporated Clinical Pharmacy Key Performance Indicators (cpKPI)[1], developed by the Canadian cpKPI National Collaborative Working Group.
- An educational package with definitions of cpKPIs, examples, and frequently asked questions, an online orientation video, and on-site visits were provided to train pharmacists on the use of the pCAT.
- The main activities tracked are listed in Table 1.

Objectives

- To assess whether a sample of pharmacists who utilized the pCAT could correctly identify recordable clinical activities.

Methods

- Following the pCAT pilot, an online measure of agreement assessment (MoAA) survey was distributed to assess LMPS pharmacists' understanding of recordable cpKPIs.
- The MoAA contained 17 mock clinical scenarios, based on frequently asked questions investigators received during the pilot.
- For each scenario respondents were asked to indicate: the "correct" corresponding cpKPI from the multiple choice list of 17 cpKPIs, or to select that the scenario was "not a recordable activity" on the pCAT.
- Each scenario had one "correct" answer. Investigators defined the category to have good agreement if ≥2/3 (66%) of respondents chose the correct answer for the scenario.
- Respondents were asked to identify their area of practice, and the pCAT educational material they reviewed.
- The proportion of correct responses was determined for each clinical scenario, as well as the most common incorrect responses.
- The total number of correct responses from all respondents for all questions was determined.

| Clinical Pharmacy Key Performance Indicator	Correct Response (%)	Most Common Incorrect Response (%)
Medication Reconciliation (Med Rec) at time of		
Admission	79.7	N/A
Transfer	94.5	N/A
Discharge	97.3	N/A
Activities		
Pharmaceutical Care Planning	83.8	N/A
Interprofessional Team Rounds	94.4	N/A
Med Education During Care	86.5	N/A
Med Education at Discharge	91.9	N/A
Non-Formulary Related	93.2	N/A
Drug Therapy Problem (DTP) Intervention		
Antimicrobial Stewardship (AMS)	82.6	N/A
	47.8	General/Other DTP (40.3)
Mental Health Related	70.4	N/A
Complex/High Risk Patient	52.2	General/Other DTP (36.2)
IV/PO Stepdown	Not Assessed	
General/Other	57.5	Admission Med Rec (28.8)
Scenarios describing activities not intended to be recorded as cpKPIs	69.9	N/A
	77.8	N/A
	42.5	Education During Care (50.7)
	13.5	Discharge Med Rec (64.9)

Table 1: MoAA Survey Results; n = 74
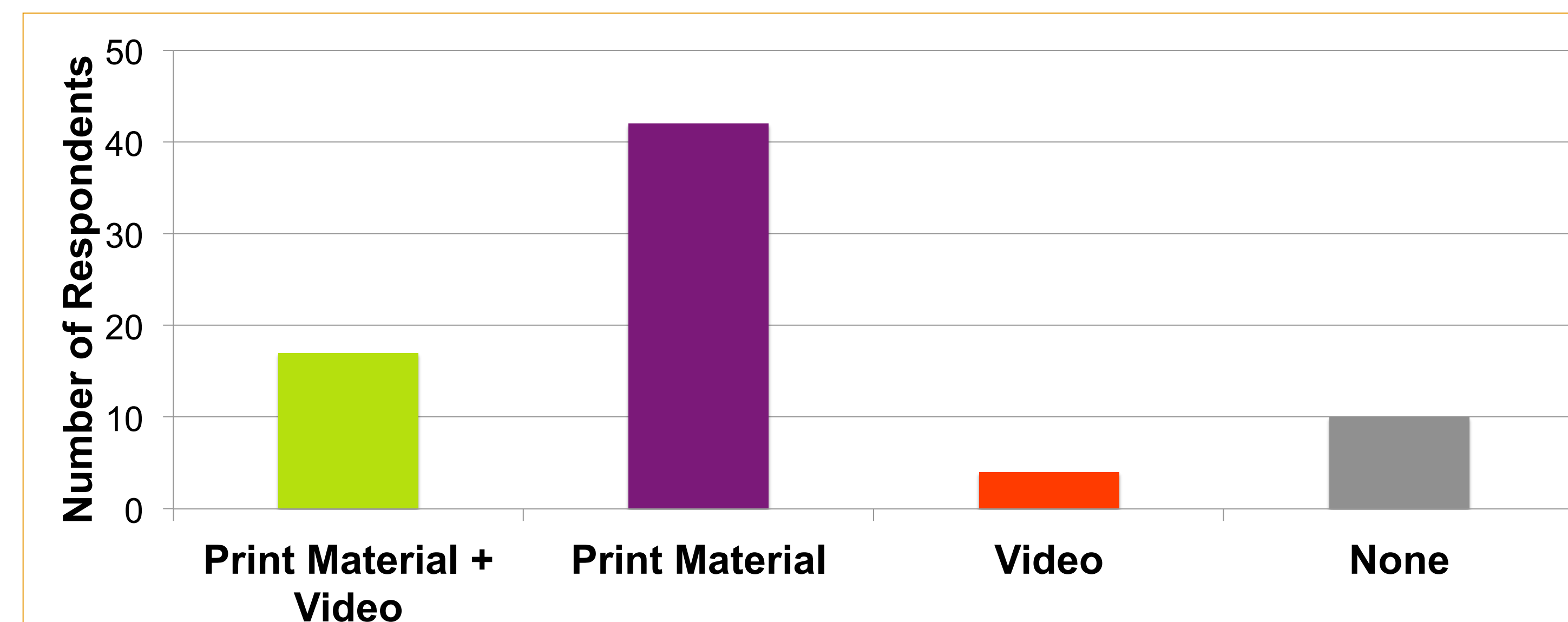
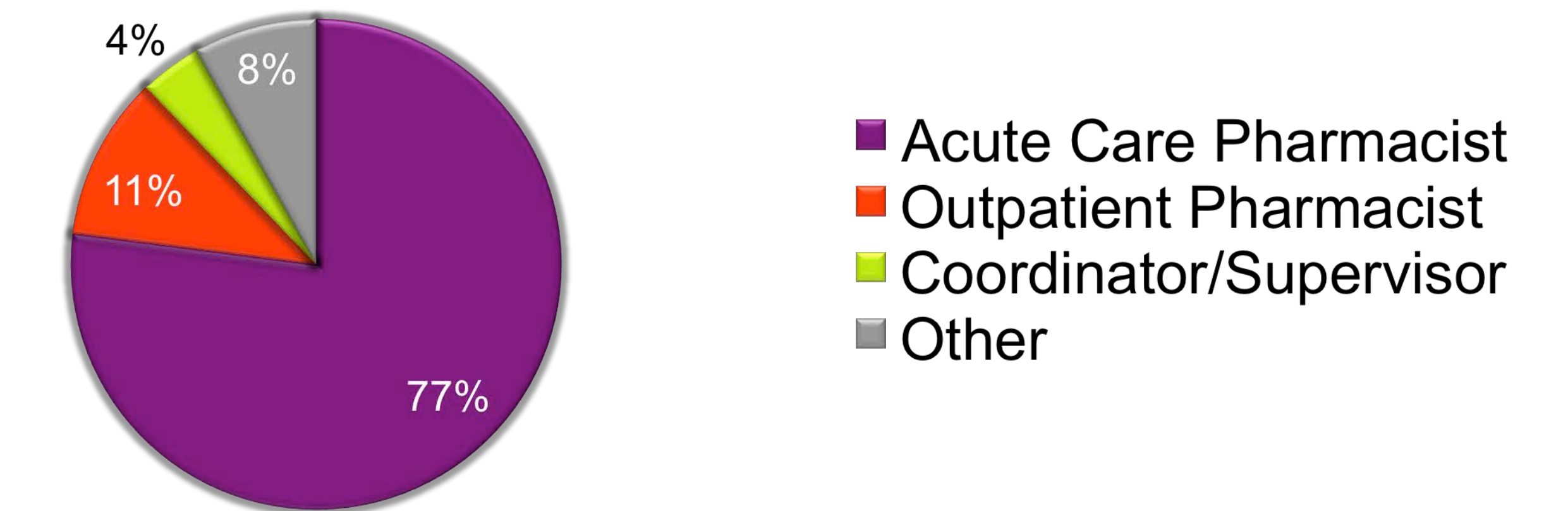**Figure 1: Respondents Use of Educational Material; n = 74**

Figure 2: Respondent Demographic Data; n = 74

Results

- A convenience sample of 74 pharmacists, the majority of whom work in acute care areas, completed the MoAA survey (Figure 2).
- The majority of respondents reported reviewing provided pCAT print educational material (Figure 1).
- Of the seventeen (17) scenarios in the MoAA survey:
  - 12/17 (70.6%) were identified correctly by >2/3 of respondents.
  - Incorrect answers illustrated the following areas of confusion:
    - AMS DTP Intervention, Complex/High Risk DTP Intervention and Admission Med Rec scenarios were mistaken for General/Other DTP Intervention activities.
    - Two (2) scenarios describing "not recordable activities" were mistaken for Education During Care or Discharge Med Rec activities.
- 895 of 1229 (72.8%) responses provided the intended "correct" cpKPI from the 17 options listed.

Limitations

- Small sample size.
- Limited number of scenarios tested.
- MoAA survey scenarios may not be reflective of real-life clinical practice.

Conclusions

- The majority of the clinical scenarios were correctly identified by the majority of respondents.
- Further clarification and education around the LMPS cpKPIs intended to be recorded on the pCAT, and activities that should not, may enhance accurate collection of clinical metrics in future trials.

Reference: 1. Fernandes O, Gorman SK, Slavik RS, Semchuk WM, Shalansky S, Bussières J-P, Doucette D, Bannerman H, Lo J, Shukla S, Chan W, Benninger N, MacKinnon NJ, Bell CM, Slobodan J, Lyder C, Zed PJ, Toombs K. Development of clinical pharmacy key performance indicators for hospital pharmacists using a modified Delphi approach. Ann Pharmcother 2015; 1060028015577445, first published on March 16, 2015.