



## Royal Irish Academy Grants Report

Title:	Dr
First Name:	Cathal
Surname:	Cadogan
Discipline:	Sciences
Year of Award:	2018
Project Title	Assessment of the complexity of interventions to improve appropriate polypharmacy in older people

### 1. Research background:

I am a Lecturer in Pharmacy Practice in the RCSI School of Pharmacy.

My research interests focus on the development, evaluation and implementation of theory-based interventions to ensure safe and effective medicine use.

I am currently involved in a number of research programs looking at the broad areas of: prescribing of appropriate polypharmacy for older people; medication adherence in older people; prescribing of benzodiazepines and Z-drugs in primary care; pharmacist-led interventions for patients with asthma or COPD.

### 2. Please outline the findings of your research and/or milestones achieved (did you achieve the primary objectives - if not, what did you learn from the process)?

This study provides the first detailed assessment of the complexity of interventions aimed at improving appropriate polypharmacy in older people using the intervention Complexity Assessment Tool for Systematic Reviews (iCAT\_SR). Previous iterations of the Cochrane review have categorised the interventions as multifaceted (comprising two or more components) or unifaceted. However, these broad terms did not capture the range of intervention complexity.

Application of the iCAT\_SR, coupled with the post-hoc subgroup analyses, enabled the dimensions of complexity to be considered in greater detail at both individual study level and across different settings. Further work is needed to determine if application of the iCAT\_SR can help to interpret whether varying levels of complexity impact on intervention effectiveness. We had considered the application of a scoring system to the iCAT\_SR assessments as part of this work. However, we were unable to establish a firm evidence base on which to base a scoring system. Rather than assigning arbitrary values to describe intervention complexity, we looked instead to rank interventions according to their assessment categories (i.e. high/moderate/low level complexity ratings).