

# Development of the ACTNOW Referral Tool: Flagging patients who need Pharmacy Outpatient Services

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## Background:

Hospital admissions secondary to medication misadventure is recognised as a major public health issue<sup>1</sup>. With no formalised processes of identifying patients that are at an increased risk of medication mismanagement it is difficult to ensure that the required support services are available to those who are at a high risk of being re-admitted to hospital. If it were possible to identify this cohort *before* discharge, our Hospital and Health services could potentially implement targeted pharmacy outpatient services that focus on the improvement of post-discharge communication to primary healthcare providers. This could potentially reduce the risk of unplanned hospital admissions, and streamline the transitional care process. Alternatively, the same method could be used by the primary care physicians themselves to prompt medication reviews and community pharmacy support to avoid Hospital admissions entirely.

To date there are no validated tools available that can predict an individual patient's risk of hospital admission or re-admission due to a medication misadventure. The aim of this study is to refine and validate the ACTNOW referral tool developed by the RBWH High Risk discharge Pharmacy Service to use as a referral prompt.

**Aim:** To develop a tool to refer patients for post discharge pharmacy outpatient review who are at an increased risk at the point of discharge of re-admission due to medication misadventure.

## Method:

The ACTNOW tool was formulated based on several similar resources, including:

- the LACE Index Scoring Tool
- Monash Health criteria for outreach services
- HMR Consumer Identification
- an Adelaide Risk Stratification Instrument used for Hospital initiated HMRs
- a non-endorsed PREVENT tool from The North West London Hospitals NHS Trust.

The tool was analysed within an outpatient clinic over 4 months by scoring new patients reviewed by the pharmacist. A new criterion was added, or scores were increased when a patient was deemed to have received benefit from a Pharmacy review (using defined criteria) but did not meet the referral cut-off of 10. Alternatively, criteria scores were lowered when patients who scored more than 10 were not considered to have benefited from a Pharmacy Review.

Fig 1.0 Benefit from Pharmacy Review = >2 Categories met

CATEGORIES
Pharmacy related intervention made
Adherence counselled/medication counselled
Unidentified Side Effect/Adverse Drug Reaction reported
Noted Major changes to Medicine Regimen since DC

## Results:

68 new patients were scored using the ACTNOW tool. In 83.8% of cases the ACTNOW tool referred appropriately, and showed that patient who scored >10 would have benefited from a review and patients who scored <10 would not have benefited from a pharmacy review

TOTAL ACTNOW Trialled	68	Note
>10 SCORE + Benefit from Pharmacy Review	43	43/46 Benefit from review
<10 SCORE + No Benefit from Pharmacy Review	14	14/15 No Benefit from review
<10 SCORE + Possible Benefit from Pharmacy Review (only 1 category met)	7	Should be picked up by "Worried" Score
<10 SCORE + Benefit from Pharmacy Review	3	
>10 SCORE + No Benefit from Pharmacy Review	1	

## Conclusion:

Whilst on face validity the ACTNOW tool appears to identify high risk patients who would benefit from a pharmacy review post discharge, further analysis is required to have the tool refined and formally validated.

A research group has been established to guide a research higher degree in order to review and validate the ACTNOW referral tool. This includes representation from RBWH internal medicine and pharmacy teams, TPCH pharmacy, Redcliffe pharmacy and the University of Queensland. The formal validation process is planned to commence in 2018.

References 1) Roughead L, Gilbert A. Medication misadventure. Aust Pharm 2002; 21: 90-4.

## Referral Tool: High Risk Discharge Pharmacy Follow up ACT NOW Index Scoring Tool – Risk of Medication Misadventure on Discharge

### A

Adherence Ability/Age	Score
Poor Understanding	+4
Limited Support	+4
Suspicion of Non-Adherence	+5
Recurrent Re-Admissions	+4
Over 65 years	+2
Over 75 years	+4

### C

Changes to Existing Medications/ New Medications	Score
New Medication (excluding temporary medications)	+3 (for each medication) +4 (for each PINCHA medication and sedating medications)
>2 changes	+4
Ceased Medications	+1 (for each medication)

PINCHA = Potassium, Insulin, Narcotics, Cytotoxics, Heparins/Anticoagulants, Antibiotics  
SEDATING MEDICATIONS = Benzodiazepines, Antidepressants, Antipsychotics

### T

Therapeutic Drug Monitoring Requirements  
YES = +6

### N

Number of Medications	Score
>6 medications	+4
>3 dosing times a day	+3

### O

Ongoing Medication Issues	Score
Dose Administration Aid Follow up	+6
Potential changes in Regimen post Discharge	+4
Unstable Renal or Liver Function	+6
No Pharmacist Review during Admission	+6
Pregnant or Breastfeeding	+4

### W

Worried?? (= automatic referral)  
If the Medical Team or the Clinical Pharmacist have a general sense of concern for the Patient's capabilities or the complexity of the Discharge Medication Regimen then a HRD referral should be made, regardless of the other scoring criteria.

# SCORE

**Score >10 = Referral to HRD Pharmacist on Discharge**

