

Systematic review to determine which validated measurement tools can be used to assess risk of problematic analgesic use in patients with chronic pain

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Introduction

Chronic pain lasting more than three months is a common problem, affecting approximately one fifth of the population in Europe.¹

Opioids can be an effective treatment when other strategies have been unsuccessful, but in some patients may lead to problem use.² This is also a risk for some other drugs commonly prescribed for neuropathic pain, notably gabapentin and pregabalin,^{3,4} as well as amitriptyline and other tricyclic antidepressants.⁵

The use of a tool to accurately predict which patients are more at risk of analgesic abuse would help to inform safe and effective prescribing for patients with chronic pain.

Aim

This review aimed to evaluate the use of validated measurement tools to assess risk of analgesic misuse, or associated aberrant drug related behaviours, either prior to, or during, analgesic therapy with prescribed opioids, gabapentinoids or tricyclic antidepressants for chronic pain.

Method

Selected databases (Embase, Medline, Cochrane library/CENTRAL, PsycINFO, PubMed, CINAHL) were systematically searched for studies, using predetermined inclusion and exclusion criteria.

Inclusion Criteria:

- ✓ **Population:** Adults (18 and over) with a diagnosis of chronic pain (pain persisting for more than 3 months), where analgesic medication is prescribed or under consideration
- ✓ **Type of Studies:** Systematic reviews of controlled trials and prospective observational studies; controlled trials comparing use of a validated assessment tool with no tool (or with another tool), or open label extensions; prospective observational studies evaluating the use of a validated assessment tool; studies using an accepted method of assessing misuse of prescribed analgesics (clinical interview, structured interview, questionnaires, prescription drug monitoring, drug screening). Studies describing the initial derivation of tools and preliminary validation were also included
- ✓ **Outcome Measures:** Prediction of prescribed analgesic misuse (defined as taking more than the quantity prescribed; more frequent requests for prescriptions; or taking analgesics when not required for pain relief)
- ✓ **Years:** 1990-December 2015
- ✓ **Publication Status:** Published in a peer reviewed journal

Exclusion Criteria:

- ✗ Studies including patients with acute or cancer pain
- ✗ Studies using tools to predict misuse of non-prescribed substances
- ✗ Non English language studies
- ✗ Editorials, commentaries, narrative reviews, conference proceedings, meeting abstracts.

Two independent reviewers (RL & DM) reviewed all the resulting abstracts to select eligible articles. Differences were discussed with an experienced third party (LC). Both reviewers then reviewed full copies of all eligible articles, and extracted data in accordance with the pre-specified data items. The reviewers also assessed risk of bias for included studies using the Cochrane "Risk of Bias" criteria⁶ and quality using SIGN methodology⁷.

Meta-analysis was considered but not undertaken given the heterogeneity in definitions and methods across selected studies.

Results and Discussion

Searches of all databases yielded 1844 abstracts and 30 studies were selected for full text review. Four additional studies were added for full review, after review of bibliographies.

No studies were identified that described or evaluated tools that screened for, or predicted, problematic use of either gabapentinoids or tricyclic antidepressants.

Most of the tools identified were derived from reviews of the literature, and choice of tool may depend on the population being screened, and resources available.

Tools Predicting Aberrant Behaviours

ORT (Opioid Risk Tool)	Webster et al, 2005
PMQ (Pain Medication Questionnaire)	Adams et al, 2004
Prescription Opioid Therapy Questionnaire (POTQ)	Michna et al, 2004
SOAPP (Screener and Opioid Assessment for Patients with Pain, Version 1.0)	Butler et al, 2004.
SOAPP-R (Revised Screener and Opioid Assessment for Patients with Pain)	Butler et al, 2008
STAR (Screening Tool for Addiction Risk)	Friedman et al, 2003
BRI (Brief Risk Interview)	Jones et al, 2013
BRQ (Brief Risk Questionnaire)	Jones et al, 2015

Tools Screening for Aberrant Behaviours

COMM (Current Opioid Misuse Measure)	Butler et al, 2007
POMI (Prescription Opioid Misuse Index)	Knisely et al, 2008

Tools for Predicting and Screening for Aberrant Behaviours

PDUQ (Prescription Drug Use Questionnaire)	Compton et al, 1998
OCC (Opioid Compliance Checklist)	Jamison et al, 2014

Documentation / Monitoring Tools

PADT (Pain Assessment and Documentation Tool)	Passik et al, 2004
ABC (Addiction Behaviours Checklist)	Wu et al, 2006

Of the tools identified, the following are represented by the best evidence:

Prediction of Aberrant Behaviours

- Pain Medication Questionnaire (PMQ)⁸
- Screener and Opioid Assessment for Patients with Pain, Revised (SOAPP-R)^{9,10,11}

Screening for Current Aberrant Behaviours

- Current Opioid Misuse Measure (COMM)^{12,13}
- Opioid Compliance Checklist (OCC)^{14,15}

Conclusions

Further studies are required to test these tools in other populations and in different countries, to establish utility, and to consider adapting or extending their use to other prescribed analgesic drugs. Given the recent increase in gabapentinoid misuse, development of specific measures to assess this risk will be of importance in the future, and will require validation in populations across both primary and secondary care.

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