

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Centre for Clinical Practice

Review consultation document

Review of Clinical Guideline (CG76) - Medicines adherence- Involving patients in decisions about prescribed medicines and supporting adherence

1. Background information

Guideline issue date: 2009

Review date: 2011

National Collaborating Centre: Primary Care

2. Consideration of the evidence

Literature search

From a high-level randomised control trial (RCT) search, new evidence was identified related to the following clinical areas within the guideline:

- Correlation between increasing adherence and clinical benefit
- Main causes of non-adherence
- Interventions effective in increasing adherence

Through this stage of the process, a sufficient number of seven studies relevant to the above clinical areas were identified from the high level RCT to allow an assessment for a proposed review decision and are summarised in table 1 below.

No additional clinical area was identified from initial intelligence gathering, qualitative feedback from other NICE departments, and the views expressed

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by the Guideline Development Group that require further focused literature searches.

The results of the high level RCT search are summarized in table 1 below. All references identified through the high-level RCT search, initial intelligence gathering and the focused searches can be viewed in Appendix 1.

Table 1

Clinical area 1: Correlation between increasing adherence and clinical benefit.		
Clinical question	Summary of evidence	Relevance to guideline recommendations
<p>Q: How common is non-adherence? What is the correlation between increasing adherence and clinical benefit?</p> <p>Relevant section of guideline</p> <p>4 Interventions to increase shared decision-making about medicines</p> <p>Recommendations</p> <p>1.1.8</p>	<p>Through the high level RCT search one study relevant to the clinical question was identified.</p> <ul style="list-style-type: none"> • A study aimed to offer an indirect measure of patient welfare based on whether patients comply with the prescription they receive. They concluded that both the theoretical and empirical results suggest that, for comparable clinical efficacy and toxicity levels, a higher adherence level is associated with higher patient welfare, thus adding valuable information to conclusions drawn by a mere biostatistical analysis. Therefore, from the perspective of the patient, the adherence-enhancing drug must be favoured. <p>The evidence shown above has already been identified as one of the key factors for medicine adherence in the current guideline.</p>	<p>No new evidence was identified which would invalidate current guideline recommendations.</p>

Clinical area 2: Main causes of non-adherence.		
Clinical question	Summary of evidence	Relevance to guideline recommendations
<p>Q: What are the main causes of non-adherence? Is adherence worse in vulnerable groups, if so which ones?</p> <p>Relevant section of guideline</p> <p>4 Interventions to increase shared decision-making about medicines</p> <p>Recommendations</p> <p>1.1.1 to 1.1.18</p>	<p>Through the high level RCT search four studies relevant to the clinical question were identified.</p> <ul style="list-style-type: none"> • A study assessed agreement among patient self-reporting, pharmacy refill, and electronic adherence measures and compared the sensitivity and specificity of different cut-points for defining non-adherence. The authors concluded that all measures provided similar estimates of overall adherence, although refill and electronic measures were in highest agreement. In selection of a measure, practitioners should consider population and disease characteristics, since measurement agreement could be influenced by these and other factors. • A study investigated the relationship between five-factor model personality factors (Conscientiousness, Neuroticism, Agreeableness, Extraversion, and Openness) and medication non-adherence among 	<p>No new evidence was identified which would invalidate current guideline recommendations.</p>

	<p>older participants during a six-year randomized placebo-controlled trial (RCT). The authors concluded that Neuroticism was associated with medication non-adherence over 6 years of follow-up in a large sample of older RCT participants. Personality measurement in clinical and research settings might help to identify and guide interventions for older adults at risk for medication non-adherence.</p> <ul style="list-style-type: none">• A study evaluated the impact of interventions to improve medication adherence in people of culturally and linguistically diverse (CALD) backgrounds through a systematic review and meta-analysis. The authors concluded that relatively little high-quality work has been conducted on adherence-enhancing interventions for people of CALD backgrounds. Greater attention needs to be given to examining the needs of specific CALD population groups. Future researchers should consider rigorously testing interventions that take into account the enormous diversity and differences that exist within any particular CALD group.	
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	<ul style="list-style-type: none"> • A study looked at the existing reviews of adherence to interventions and identified the underlying theories for effective interventions. They concluded that there is a scarcity of comparative studies explicitly contrasting theoretical models or their components. The relative weight of these theories and the effective components in the interventions designed to improve adherence, need to be assessed in future studies. <p>In terms of factors causing non-adherence, several factors were identified such as population and disease characteristics, neuroticism, and people from different culturally and linguistically diverse (CALD) backgrounds but nothing new was identified that already hasn't been included in the guideline with recommendations already covering these areas.</p>	
Clinical area 3: Interventions effective in increasing adherence		
Summary of evidence	Relevance to guideline recommendations	
Q: Which interventions are effective in increasing adherence?	<p>Through the high level RCT search one study and one review relevant to the clinical question were identified.</p> <ul style="list-style-type: none"> • A study explored the range and nature of medication adherence 	No new evidence was identified which would invalidate current

<p>(content of interventions, how delivered and who delivers them)</p> <p>Relevant section of guideline</p> <p>8.4 Which interventions are effective in increasing adherence?</p> <p>Recommendations</p> <p>1.2.4 to 1.2.10</p>	<p>interventions tested with older adults. They concluded that gaps were noted in addressing memory aids and self-monitoring strategies; further development of interventions addressing medication and administration factors influencing adherence are also needed. Identified interventions are geared toward self-medicating patients and fail to address caregivers administering medications. Finally, interventions do little to address variations in patterns of adherence among older adults.</p> <ul style="list-style-type: none"> • A review updated another review summarizing the results of randomized controlled trials (RCTs) of interventions to help patients follow prescriptions for medications for medical problems, including mental disorders but not addictions. The authors concluded that for short-term treatments several quite simple interventions increased adherence and improved patient outcomes, but the effects were inconsistent from study to study with less than half of studies showing benefits. Current methods of improving adherence for chronic health problems are mostly complex and not very effective, so that the full benefits of treatment cannot be realized. High priority should be given 	<p>guideline recommendations.</p>
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	<p>to fundamental and applied research concerning innovations to assist patients to follow medication prescriptions for long-term medical disorders</p> <p>No new intervention was identified to reduce non-adherence from the studies identified.</p>	
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Few ongoing clinical trials (publication dates unknown) were identified focusing on a new method (MD. 2) of monitoring medicine adherence and comparing telemonitoring versus usual care.

No evidence was identified that was relevant to research recommendations in the original guideline.

In conclusion, no identified new evidence contradicts current guideline recommendations.

Guideline Development Group and National Collaborating Centre perspective

A questionnaire was distributed to GDG members and the National Collaborating Centre to consult them on the need for an update of the guideline. Five responses were received with respondents highlighting that there is no new evidence suggesting that current practice as recommended in the guideline may not be best practice.

Ongoing research relevant to the guideline was highlighted by GDG members including two systematic reviews:

- Crockett et al, (2011) Impact on decisions to start or continue medicines of providing information to patients about possible benefits and/or harms: A systematic review and meta-analysis.
- Another review which is in the process of being updated is O'Connor et al, (2009) Decision aids for people facing health treatment or screening decisions. *Cochrane Database of Systematic Reviews*.

All the respondents felt that there is insufficient variation in current practice supported by adequate evidence at this time to warrant an update of the current guideline.

Implementation and post publication feedback

In total 38 enquiries were received from post-publication feedback, most of which were routine. Most enquiries related to implementation and audit of the guideline, or information about legal liability of the guideline.

No issues were identified by the implementation team.

No new evidence was identified through post publication enquiries or implementation feedback that would indicate a need to update the guideline.

Relationship to other NICE guidance

None.

Anti-discrimination and equalities considerations

No evidence was identified to indicate that the guideline scope does not comply with anti-discrimination and equalities legislation. The original scope contains recommendations for medicine adherence for all adults.

Conclusion

Through the process no additional areas were identified which were not covered in the original guideline scope or would indicate a significant change in clinical practice. There are no factors described above which would invalidate or change the direction of current guideline recommendations. The medicine adherence guideline should not be updated at this time.

3. Review recommendation

The guideline should not be updated at this time.

The guideline will be reviewed again according to current processes.

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18.07.11

Appendix I

Hansen, RA, Kim, MM, Song, L, Tu, W, Wu, J, Murray, MD Comparison of methods to assess medication adherence and classify nonadherence. *Annals of Pharmacotherapy* 2009; **43**: 413-22.

Haynes, RB, Ackloo, E, Sahota, N, McDonald, HP, Yao, X Interventions for enhancing medication adherence. *Cochrane database of systematic reviews (Online)* 2008; CD000011.

Jerant, A, Chapman, B, Duberstein, P, Robbins, J, Franks, P Personality and medication non-adherence among older adults enrolled in a six-year trial. *British Journal of Health Psychology* 2011; **16**: 1-69.

Lamiraud, K, Geoffard, P-Y Therapeutic non-adherence: A rational behaviour revealing patient preferences? *Health Economics* 2007; **16**: 1185-204.

Manias, E, Williams, A Medication adherence in people of culturally and linguistically diverse backgrounds: a meta-analysis. *Annals of Pharmacotherapy* 2010; **44**: 964-82.

Ruppar, TM, Conn, VS, Russell, CL Medication adherence interventions for older adults: literature review. *Research and theory for nursing practice* 2008; **22**: 114-47.

van, DS, Sluijs, E, van, DL, de, RD, Heerdink, R, Bensing, J Patient adherence to medical treatment: a review of reviews. *BMC Health Services Research* 2007; **7**.