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## Medication alliance: development and implementation of a mental health staff training program for the enhancement of patient medication adherence

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**Medication Alliance**  
***Development and implementation of a mental health  
staff training program for the enhancement of patient  
medication adherence.***

A thesis submitted in fulfilment of the requirements  
for the award of the degree

**DOCTOR OF PHILOSOPHY**

**From the University of Wollongong**

***by***

**Mitchell K. Byrne**  
**BA (Hons). M. App. Psych**

School of Psychology

2008

## **CERTIFICATION**

I, Mitchell K. Byrne, declare that this thesis, submitted in fulfilment of the requirements of the award of Doctor of Philosophy, in the School of Psychology, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. This document has not been submitted for qualifications at any other academic institution.

Mitchell K. Byrne

September 2008

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### **List of Papers Published from this Thesis:**

- Byrne, M.K., Deane, F.P., & Caputi, P. (*in press*). Mental health clinicians' beliefs about medicines, attitudes and expectations of improved medication adherence in patients. *Evaluation and the Health Professions*
- Byrne, M.K., Deane, F.D., & Coombs, T. (2005). Nurse's beliefs and knowledge about medications are associated with their difficulties using patient treatment adherence strategies. *Journal of Mental Health, 14*(5), 513-521
- Byrne, M.K., Deane, F.D., Lambert, G., & Coombs, T. (2004). Enhancing medication adherence: Clinician outcomes from the 'Medication Alliance' training program. *Australian & New Zealand Journal of Psychiatry, 38*, 246-253

## ABSTRACT

Patient nonadherence to prescribed medications remains a major hurdle in the effective delivery of health care services for people experiencing chronic illnesses. Nonadherence rates are particularly high among those with major mental health problems and account for a significant proportion of hospitalisations due to relapse in conditions previously well-managed by medications. Therefore, interventions to enhance the adherence of patients with mental health disorders should be an essential part of mental health services; however this is not always the case. This thesis involved a series of studies which investigated barriers to the implementation of adherence interventions, in particular, clinician skills, attitudes and knowledge, as well as describing a potential strategy to overcome these barriers.

The first study investigated the relationship between the beliefs and knowledge mental health nurses hold about medications and how this influences their self-reported use of strategies to enhance patient adherence to treatment. Participants comprised a convenience sample of 64 mental health nurses who completed questionnaires on their beliefs about medicines, their knowledge of neuroleptic medications and their self-reported difficulties in using commonly cited strategies for enhancing patient adherence. The results indicated that both poorer knowledge and more negative attitudes were associated with greater perceived difficulty in implementing standard adherence strategies.

The first study provided the impetus for a closer examination of specific clinician attitudes in relation to working with non-adherent patients and how such attitudes might influence clinician behaviour. Study 2 was a cross-sectional anonymous survey of 292 mental health clinicians and explored their attitudes about nonadherence in patients. Exploratory and confirmatory factor analysis of the attitudes items produced a 19 item, 5 factor scale: the Medication Alliance Beliefs Questionnaire (MABQ). The MABQ subscale 'Adequacy', (beliefs about the the sufficiency of the clinicians' own knowledge and skills in working with people who have nonadherence issues), was found to predict the extent to which mental health clinicians tried to enhance patient adherence.

The first two studies identified deficits in clinician skills, knowledge and attitudes as significant barriers to the implementation of adherence interventions. A clinician training program called “Medication Alliance” was then developed which specifically targeted skills, attitudes and knowledge relevant to the enhancement of patient medication adherence. Study 3 provided an initial evaluation of this training program in terms of the extent to which clinician participants showed improved skills, had enhanced knowledge and more positive attitudes toward working on adherence issues (using the MABQ). Participants were 23 experienced mental health workers who worked actively with non-adherent patients. The results indicated pre-post training improvements in all three domains (skills, knowledge and attitudes).

The first three studies identified the barriers to the implementation of adherence interventions, (clinician skills, knowledge and attitudes), and demonstrated that the Medication Alliance training program could improve these three clinician domains. Study 4 sought to determine whether Medication Alliance could be implemented in practice by clinicians and whether this resulted in improvements in patient adherence and reductions in levels of mental ill-health. A total of 46 clinicians participated in an ‘implementation trial’ of Medication Alliance, with 51 patients providing clinical data. Data was collected at baseline, 6 months following clinician training and then again at 12 months post training. As with Study 3, improvements in clinician knowledge, attitudes and skills coincided with training. In an extension of these findings, most of these improvements were maintained over a 12 month period. It was also shown that clinicians’ ratings of patients’ adherence and their rating of therapeutic alliance also increased over the 12 month period. Patients demonstrated improved insight into the need for treatment and reduced psychopathology. Overall, the results of Studies 1 through 4 indicated that clinician’s attitudes are an important consideration in implementing adherence strategies and that these attitudes can be successfully improved as a result of training. Further, preliminary research suggests that clinicians can learn, sustain and implement skills to facilitate medication adherence in their patients. Finally, these training effects appear to be associated with improvements in adherence and mental health in patients.

Although results from these implementation studies are encouraging, there is a need for a randomised clinical trial of Medication Alliance training compared to treatment as usual or a viable comparison intervention.

## ACKNOWLEDGEMENTS

It is with the greatest pleasure that I write this section of my thesis, the last to be written, the first to appear and the only part where I don't have to justify an assertion with a reference or citation. Given that there are no hard rules, let me break with convention and acknowledge the most important person first (rather than last): my beautiful and loving wife Cinzia Gagliardi. Cinzia has always believed in me and encouraged me. Whenever I have had a success, Cinzia has genuinely been proud of me and never has my success caused her to feel any less adequate. Rather, the better I am the stronger she feels as my partner. Cinzia is a remarkably talented woman in her own right and doesn't need me to realise her own worth. That my achievements are shared by her, and with her, is a testament to her love and support. I would have finished this thesis without Cinzia in my life, but I would never have felt as proud had she not been there.

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Medication Alliance, and thus this thesis, has become a research program and has drawn upon the talents of numerous people in various aspects of its development. Very early on, Professors Richard Gray and Kevin Gournay generously gave their time and experience to help me develop an understanding of the principles of medication adherence and interventions to enhance patient adherence to treatment. From that firm foundation the Medication Alliance program grew and I thank them for their collegiality.

Tim Coombs was another ‘early player’ whose preliminary work with Frank Deane established the impetus for this research and who collaborated on the development of the first draft of the Medication Alliance program. Tim was one of the original trainers, travelling around Australia delivering Medication Alliance training with me, and I benefited from his observations over a glass or two of red wine.

Another ‘early player’ was Gordon Lambert. Gordon has contributed to the entire Medication Alliance program, both material included in this thesis and other research that has arisen from it. Gordon brought a wealth of ‘real life’ practice experience to the program however his most valuable contribution was his affable nature and his ability to connect with clinicians in the field. It was because of Gordon that I was able to recruit as many persons to the study that I did – no mean task when services were being restructured just as our main study was to begin. It was always comforting to have Gordon around and indeed, besides myself, Gordon was the only other person present at all Medication Alliance training workshops associated with this thesis. More importantly, when Tim Coombs moved on to other projects, Gordon was always there to continue the tradition of program refinement over a glass of red!

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I want to go on and thank lots of other people, however the more that I thank, the more I remember who helped me across this odyssey. My fear of offending others by not acknowledging them is somewhat assuaged by the knowledge that most will never read this thesis! However, you know who you are and I say thank you to you all. On a final note, I wish to mention two other people. First, Professor Patrick Heaven – my “boss” at the University of Wollongong. I have worked as a fulltime academic while completing this thesis and during my Ph.D. candidature I have had to deal with multiple life traumas that distracted me from the thesis and my duties. Patrick has been supportive and given me enough room to manoeuvre so that I could survive these events and complete this thesis. Patrick, your generosity did not go unnoticed.

Lastly, to my mum, I say this: you wanted me to finish this thesis before you died. Well here it is – now read it! (Oh, and thanks too for your unfailing faith in me – love you mum).

**This thesis is dedicated to the memory of my brother:**

**Stuart Edward Byrne**

**(24/06/1954 – 18/08/2008)**

*“Keep a watch also on the faults of the patients, which often make them lie about the taking of things prescribed”* – Hippocrates of Cos, circa 400BC