Improving Patient Adherence to Treatment

GPCME 2012

Dr Kate Perry

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Personal background

- Health & clinical psychologist
- Research – University of Brighton & Sussex, UK
  - Focus on understanding health and illness related behaviours
  - Communication in the healthcare setting
- Clinical practice - ADHB
  - Adjustment and coping following head injury
  - Neuropsychological assessment and cognitive rehabilitation
- Commercial sector – Atlantis Healthcare
  - Working with healthcare providers, pharmaceutical industry and medical devise companies
    - Develop interventions to support patients with chronic disease to engage in recommended self management behaviours.

Proposed agenda

- General overview of adherence
  - History
  - Definitions
  - Measurement
  - Why it matters
- Predictors of medication non-adherence
  - Patient
  - Treatment
  - System
- Strategies to improve medication adherence

Adherence/compliance: Setting the scene

- Huge (overwhelming) amount of research literature dedicated to this area across healthcare settings
- Within the research literature the concept of compliance/adherence has been developed & refined over the last 50 years
- Significance of compliance/adherence increasingly gaining traction in healthcare practice & across healthcare disciplines
- The terms compliance & adherence are often used interchangeably
- BUT they are not synonymous terms…

Definitions

Compliance	Adherence
"The extent to which the patient's behaviour matches the healthcare professional's recommendations"	*"The extent to which the patient's behaviour matches agreed recommendations from the healthcare professional"*
• More traditional term	• Modern, current term
• References a more paternalistic consultation style	• References a more patient-centred consultation style
• Conceptualises the patient as passively following orders	• Conceptualises the patient as an active participant in their healthcare
• Implies lack of patient involvement	• Emphasises the need for collaboration & agreement
• Failure to adhere rests with the patient	• Failure to adhere rests with patient and prescriber

Adherence to … any health related behaviour

- Adherence to medication
  - Oral medicines
  - Injections
  - Infusions
- Executing lifestyle change
  - Diet
  - Exercise
  - Smoking cessation
- Appointment
  - Missed appointments
  - Punctuality
- Completing ‘homework’ tasks
  - Physiotherapy exercises
  - CBT activities

Non-adherence to medicine

- Three components
  - Failure to fill the script
    - Primary non-adherence/medication nonfulfillment
    - 16% of patients fail to fill a new prescription (Systematic review of 79 studies; Gadkari & McHorney, 2010)
  - Failure to take medicine correctly
    - Right dose, at the right time, in the right way
  - Failure to take medicine for the full course
    - Medication non-persistence
    - 50% of patients who fill a new prescription stop taking medication after one year (Cochrane Review; Haynes et al., 2002)

Measuring adherence

Direct measures	Indirect measures
Direct observation	Patient self report – questionnaires & diaries
Electronic and mechanical measures	Healthcare professional or other report
Pill counts	Measures of treatment outcome
• Objective	• Subjective
• Reliable	• Unreliable
• Less common	• More common
• Resource heavy	• Resource light
• Use in clinical trials	• Use in clinical practice

Why does non-adherence matter? Current Healthcare Context

- Increasing prevalence of chronic illnesses that require long term treatments
  - Emphasis on the patient to self-manage
- Patients likely to self-managing multiple long-term conditions
  - E.g., average US citizen fills 9 prescriptions/year
- Dealing with an aging population
  - E.g., average US citizen > 65 years fills 20 prescriptions/year

Why does non-adherence matter? Non-adherence is common

- Non-adherence rates for long term therapies for chronic conditions averages 50% (Haynes et al., 2002)
  - Across conditions, treatments & healthcare settings
- 24.8% (1 in 4) of all patients non-adherent (DiMatteo, 2004)
- WHO describes medicines non-adherence as a “global epidemic”
  - Transcends geographical & political boundaries
  - Demographically agnostic

Common … but with wide variability

- Across & within behaviours
  - Different samples
  - Differing definitions
  - Differing measurement strategies

- Across & within patients
  - E.g., Tom adherent to Losec and David is not
  - E.g., Tom adherent to Losec and non-adherent to Lipitor

Tendency for non-adherence to be underestimated

- Not disclosed by patients without prompting
- When asked patients are subject to social desirability & recall biases
- HCPs do not typically inquire
  - Time constraints
  - Other priorities
  - HCPs assume their patients are adherent
    - 74%-89% of HCPs believed that the majority of their patients were adherent (McHorney, 2009)
    - HCPs can not predict adherence any more efficiently than if they were guessing (Turner & Hecht, 2001)

Why does non-adherence matter? Non-adherence is costly

- Poor adherence in can result in
  - Medication wastage
  - Compromised treatment outcomes
    - Loss of health gain
    - Progression of disease
    - Development of complications
  - Increased healthcare utilisation
  - Increased time & resource commitment

- Negative impact on
  - Patient
  - Healthcare system
  - Society

- **ESTIMATED COST = NZ$ 550-722million per year** (Eagle et al., 2005)

"Increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments"

Haynes, R. B. (2001). Cochrane Database of Systematic Reviews

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What are the predictors of non-adherence?

- In order to offer effective adherence interventions we first need to identify the predictors of non-adherence

- Predictors of non-adherence comprise factors relating to:
  - Patient
  - Treatment
  - System
    - Social
    - Healthcare

At the PATIENT level

- Most of the research has been focused on patient factors associated with non-adherence

- Socio-demographic factors
  - Age & gender
    - Average correlation zero (DiMatteo, 2004)
  - Education & income
    - Average correlation less than 0.1 (DiMatteo, 2004)
  - Personality traits
    - Limited evidence for a 'non-adherent personality type' (Hevey, 2007)
    - Patients are 'differentially adherent' (McHorney & Gadraki, 2012)

PATIENT reasons for non-adherence are multiple

I'm too busy to collect the prescription

The medication makes me feel nauseous

Drugs are unnatural

I don't understand how the treatment works

I don't need medication; I just need to reduce my stress

It is hard for me to remember every day

I don't understand the instructions

I can't get to the pharmacy

But I don't have any symptoms, and I don't feel sick

It's a hassle to take every day

I don't like the taste of the medication

I can't afford the treatment

I disagree with my diagnosis

I have too many other things to worry about

I don't want to be reliant or addicted

It's not that serious

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Making sense of these reasons

- Unintentional “accidental” non-adherence (~40%)
  - Practical problems that prevent the patient from taking their medicine
    - Limited in ability
    - Limited in resources

- Intentional “deliberate” non-adherence (~60%)
  - Patient makes a conscious decision not to take medication
    - Beliefs about illness
      - Timeline
      - Symptoms
      - Consequence
      - Cause
    - Beliefs about medication
      - Medication concerns
      - Lack o f perceived necessity

- Some overlap between these categories

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Consistent predictors at the PATIENT level

- Patient beliefs about their condition
  - How long will it last?
  - What are the symptoms?
  - How serious is it?
  - What caused it?
- Beliefs about medication
  - Concerns about medication
  - Perceived need for medication
- The presence of depression is also a relevant factor
    - Characteristic symptoms
      - Lack of motivation, generalised apathy
      - Cognitive difficulties e.g., planning, executing, remembering

Consistent predictors at the TREATMENT level

- Complexity of treatment
  - The more complex the treatment, the less likely the patient will adhere
  - Level of complexity will depend on patient's ability
    - Cognitive
    - Dexterity

- Intrusiveness of treatment
  - The more intrusive the treatment, the less likely the patient will adhere
  - Need to consider in relation to patient's day to day life

- Duration of treatment
  - The longer the treatment duration, the less likely the patient will adhere
  - Adherence reduces over treatment period

Consistent predictors at the SYSTEM level

- Social support
  - Higher levels of perceived social support associated with higher levels of adherence (DiMatteo, 2004)
    - Friends & family
    - NGOs

- Healthcare professional-patient relationship
  - 19% higher risk of non-adherence among HCPs who communicate poorly than among those who communicate well (Meta-analysis of 127 studies; Haskard Zolnierek & DiMatteo, 2009)
  - Training in communication skills results in significant improvements in adherence (patient adherence 1.62 x higher when HCP receives training)

Predictors of non-adherence

Weak evidence	Moderate evidence	Strong evidence
Age	Complexity of regimen	Concerns about treatment
Gender	Patient ability	Cost of treatment
Education	Depression	Perceived necessity
Income	Social support	Perceived efficacy
Personality	HCP relationship	Beliefs about illness

Adherence Interventions: What works?

- Best delivered via healthcare professionals, face to face
  - Personalised approach
  - Establish rapport
- Not a one-size-fits all approach
  - Tailored to the individual patient
- Multifaceted
  - Tackle patient/treatment/system
  - Tackle unintentional and intentional reasons
- Delivered over the long term
  - Addressed regularly & consistently in clinical practice
- Employ multiple strategies
  - Educational/Informational – provision of clear information
  - Behaviour – reinforcement & rewards
  - Psychological – working with & addressing beliefs

What's the guidance in Primary Care?

- New Zealand Guideline Group
  - No guidelines specifically relating to medication adherence
  - Primary Care Handbook 2012
  - Health Literacy & Medication Safety
    - Mention of the Medications Use Review (MUR)

- UK National Institute of Clinical Excellence (NICE)
  - Medicines adherence: Involving patients in decisions about prescribed medicines and supporting adherence

Using your consultation to address each level

- At the patient level
  - Address practical barriers
  - Elicit patients beliefs about illness and treatment
    - Ask questions:
      - Tell me what you know about your illness?
      - It's natural to have concerns about treatment, what are your concerns?
      - Is this treatment important to you? Why or why not?

- At the treatment level
  - Can the regimen be simplified?
  - Discuss how the treatment can be integrated into the patient's day to day life

- At the system level
  - Build collaborative relationships
  - Engage with those around the patient

British Journal of Health Psychology (2011)

The British Psychological Society

www.wileyonlinelibrary.com

A text message programme designed to modify patients' illness and treatment beliefs improves self-reported adherence to asthma preventer medication

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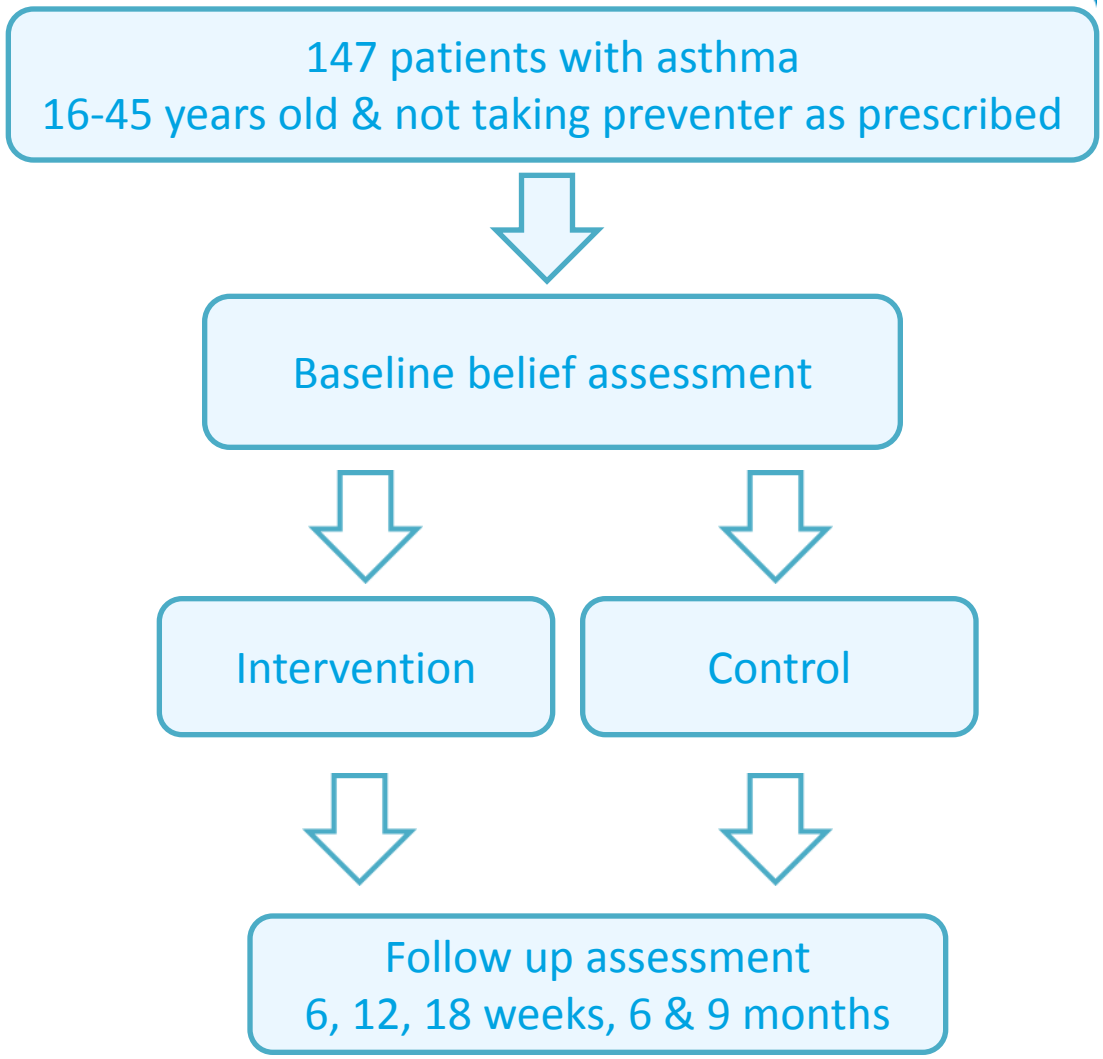
Aim & methodology

To increase adherence to asthma preventer medication via the modification of patient beliefs about asthma and preventer medication



Intervention

- 18-week text messaging programme:
  - 3 x 6 weeks at declining frequency

- Content of text messages
  - Dependent on baseline assessment
  - Tailored to the patient's beliefs
  - Designed to promote illness and medication beliefs that are associated with higher rates of adherence to asthma preventative medication

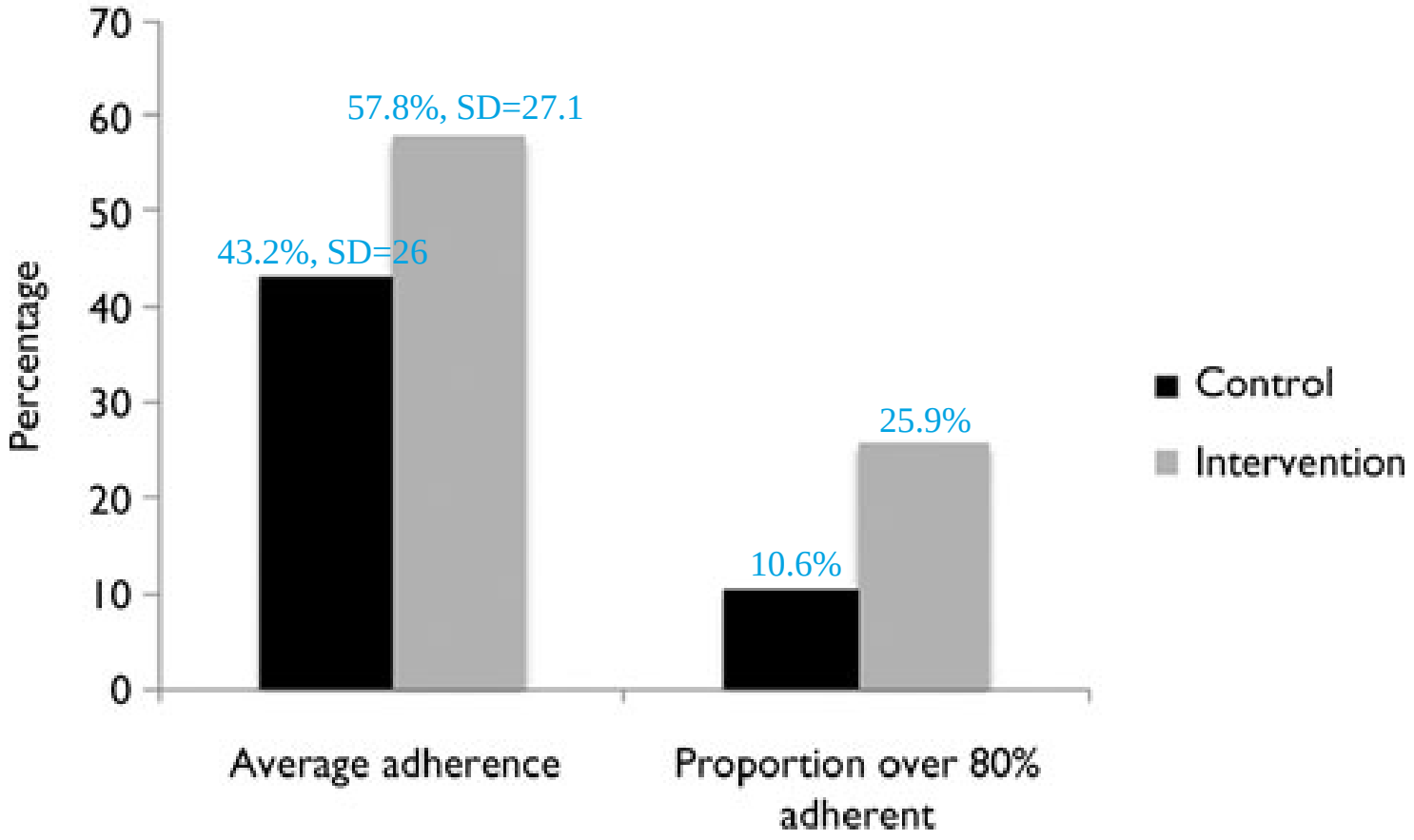
Text message examples

- Acute or episodic Timeline
  - *"your symptoms may come & go but your asthma is always there"*
- Low Cure/Control
  - *"take your preventer every day to control your asthma before it controls you"*
- Low Necessity
  - *"taking your preventer every day protects you from asthma symptoms"*
- High Concerns
  - *"your preventer medication is not addictive"*

Results – Illness & medication beliefs

Perceptions	Control (*N* = 46) Baseline mean (*SD*)	Control (*N* = 46) 18-week mean (*SD*)	Control (*N* = 46) Adjusted difference	Intervention (*N* = 57) Baseline mean (*SD*)	Intervention (*N* = 57) 18-week mean (*SD*)	Intervention (*N* = 57) Adjusted difference	*p*
Asthma perceptions – (BIPQ)							
Consequences	4.50 (2.16)	3.96 (2.04)	−.46	4.07 (2.10)	3.88 (2.11)	−.26	.51
Identity	4.87 (2.12)	4.17 (2.31)	−.57	4.43 (2.13)	3.86 (2.03)	−.64	.88
Timeline	8.17 (2.11)	7.83 (2.73)	−.43	8.46 (2.22)	9.09 (1.81)	.70	.006
Concern	5.17 (2.59)	4.37 (2.62)	−.63	4.46 (2.53)	4.26 (2.20)	−.34	.48
Personal control	6.41 (2.05)	6.96 (2.21)	.38	6.79 (1.96)	8.02 (1.56)	1.36	.009
Coherence	6.70 (2.27)	7.35 (2.16)	.65	6.70 (2.30)	7.46 (2.21)	.71	.83
Treatment control	7.15 (2.14)	7.26 (2.20)	.13	7.07 (2.59)	7.84 (1.80)	.75	.08
Emotional representation	3.30 (2.36)	2.37 (2.20)	−.98	3.43 (2.51)	2.49 (2.31)	−.86	.77
Medication Beliefs							
Preventer concern	3.37 (3.25)	2.52 (2.76)	−.77	3.12 (2.77)	1.75 (1.91)	−1.48	.10
Preventer necessity	5.83 (2.71)	5.11 (2.88)	−.80	6.18 (3.16)	6.52 (2.98)	.46	.01

Results – Percentage adherent



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