

# Early physiotherapy intervention in an Accident and Emergency Department reduces pain and improves satisfaction for patients with acute low back pain: a randomised trial

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**Question:** What is the effect of early physiotherapy intervention on pain and patient satisfaction in acute low back pain? **Design:** Randomised trial with concealed allocation, assessor blinding, and intention-to-treat analysis. **Participants:** 110 patients attending the Accident and Emergency Department of a local acute hospital. **Intervention:** The experimental group received early physiotherapy intervention which consisted of education, reassurance, pain management, mobility training, interferential therapy, walking training, and walking aids as indicated. The control group received only walking training and walking aids as indicated. All participants received conventional medical intervention and outpatient physiotherapy intervention. **Outcome measures:** Pain was measured using the Numeric Pain Rating Scale and satisfaction was measured using the Numeric Global Rating of Change Scale at baseline, discharge from the Accident and Emergency Department, admission to the Physiotherapy Outpatient Department, 1 month, 3 months, and 6 months. **Results:** Participants in the experimental group had 1.6 out of 10 points (97.5% CI 0.8 to 2.3) less pain than the control group on discharge from the Accident and Emergency Department and still had 0.9 points (97.5% CI 0.1 to 1.6) less pain on admission to the Physiotherapy Outpatient Department. Participants in the experimental group were 2.1 out of 20 points (97.5% CI 1.2 to 2.9) more satisfied than the control group on discharge from the Accident and Emergency Department. **Conclusion:** Early physiotherapy intervention was effective in reducing pain and increasing satisfaction for patients with acute low back pain in an Accident and Emergency Department but the effect tailed off. **Trial registration:** HKCTR-618. [Lau PM, Chow DH, Pope MH (2008) Early physiotherapy intervention in an Accident and Emergency Department reduces pain and improves satisfaction for patients with acute low back pain: a randomised trial. *Australian Journal of Physiotherapy* 54: 243–249]

**Key words:** Randomised controlled trial, Low back pain, Physical therapy (Specialty), Physical therapy (Modalities), Treatment outcome, Patient education as topic

## Introduction

Acute low back pain is a common complaint in Accident and Emergency Departments. While most acute attacks settle rapidly, residual symptoms and recurrences are common. It has been reported that the 18-month incidence of low back pain among Hong Kong middle-aged women is 12% (Yip and Ho 2001). Low back pain poses a high medical, economic, and social burden in terms of intervention, individual suffering, and work absenteeism (Quittan 2002). In Hong Kong, the total number of attendances at the Accident and Emergency Department of the Hospital Authority was more than 2.1 million in 2005–06 (Hong Kong Hospital Authority Annual Plan 2006–07). The Accident and Emergency Department operates on a triage system to determine priority of care, appropriate venue for intervention, and the initiation of immediate, life-saving care (Triage Guideline Accident and Emergency Department Hospital Authority 2005). Triage Category 1 patients are critical cases requiring immediate attention, while Triage Category 2 patients are emergency cases requiring attention within 15 minutes. Triage Category 3 patients are those suffering from a major condition with relatively stable vital signs who require intervention as early as possible, while Triage Category 4 patients are those suffering from an

acute but stable condition with stable vital signs who can afford to wait for some time without serious complication. Triage Category 5 patients are those patients suffering from a minor and stable condition who can wait for some time without deterioration.

Traditionally, patients seen in Accident and Emergency Department who needed physiotherapy services were referred to the Physiotherapy Department, which was separate from the Accident and Emergency Department. As Triage Category 3 and 4 cases contribute more than 85% of the total Accident and Emergency Department attendance (Hong Kong Hospital Authority Annual Plan 2006/07) and these patients can require hospital admission, an early physiotherapy intervention program in the Accident and Emergency Department for patients with musculoskeletal injuries (mainly Triage Category 3 and 4) was recently introduced in a local hospital. The aims of the program were to strengthen the gate-keeping function of the Accident and Emergency Department, improve the quality of patient care and outcome, alleviate pain, reduce avoidable hospital admissions, promote effective self-management of symptoms, as well as improve patient accessibility and enhance the smooth interface with the Physiotherapy Outpatient Department.

To date there are no published studies investigating the clinical effect of early (within 24 hours post-injury) physiotherapy intervention for acute low back pain patients in an Accident and Emergency Department. Generalisation from the few studies on the effect of early physiotherapy intervention (Gatchel 2003, Jibuike 2003, Kempson 1996, Morris and Hawes 1996, Newton-John et al 2001, Richardson et al 2005, Smith et al 2002, Zigenfus et al 2000) is difficult because of differences in: the role of physiotherapists, the timing of service provision in Accident and Emergency Departments, and the healthcare system and its funding models across studies. There is a need to study the effect of early physiotherapy intervention for patients with acute low back pain in an Accident and Emergency Department. Therefore, the research questions for this study were:

1. Do patients attending an Accident and Emergency Department with acute low back pain who receive early physiotherapy intervention have less pain, and more satisfaction on discharge than those who receive no physiotherapy intervention?
2. Are any gains maintained short-term (at 1 month) and/or long-term (at 3 and 6 months)?

## Method

### Design

An assessor-blinded, randomised trial was undertaken (Figure 1). Participants were randomly assigned into either the experimental or the control group. Randomisation was generated from a random numbers table. A block size of 10 was used to ensure that comparison groups would be of approximately the same size and the allocation sequence was sealed in sequentially-numbered identical envelopes. The therapists responsible for screening the acute low back pain patients in the Accident and Emergency Department ensured that the envelopes were opened sequentially and that group allocation was only revealed to the treating therapists once recruitment and baseline data collection were completed. The experimental group received early physiotherapy intervention at the Accident and Emergency Department which consisted of education, reassurance, pain management, mobility training, interferential therapy, walking training, and walking aids as indicated. The control group received only walking training and walking aids as indicated. All participants received standard medical intervention of pain-relieving drugs prescribed by the medical officers in the Accident and Emergency Department. Participants were discharged home as soon as they were able to ambulate or else they were admitted to the Orthopaedic and Traumatology wards if severe pain and disability persisted after they had spent 24 hours at the Accident and Emergency Department. All participants were given an appointment to begin physiotherapy intervention in the Physiotherapy Outpatient Department within one week of discharge from the Accident and Emergency Department or the Orthopaedic and Traumatology wards.

Outcome measures were collected prior to physiotherapy intervention in the Accident and Emergency Department (T1), post-physiotherapy intervention at the Accident and Emergency Department and prior to discharge from the Accident and Emergency Department (T2), pre-physiotherapy intervention in Outpatient Department (T3), and at 1 month (T4), 3 months (T5), and 6 months (T6) post onset of acute low back pain. The 3-month and 6-month measures were conducted by telephone. Assessors were blinded to group allocation.

### Participants

Acute low back pain patients were recruited from the Accident and Emergency Department of a local acute hospital. Acute low back pain was screened by an experienced physiotherapist as pain onset in the lower back with or without referred leg pain within the preceding 24 hours before admission to Accident and Emergency Department. Patients were included if they were of age 18 years or above. They were excluded if they presented with red flags such as fracture, tumour, infection, or cauda equina syndrome. In addition, patients with a previous episode of acute low back pain within 6 months, osteoporosis, inflammatory arthritis, pregnancy, previous hip or back surgery, or systemic steroid therapy for longer than 12 weeks were excluded.

### Intervention

At the Accident and Emergency Department, participants in the experimental group were encouraged to stay as active as possible and to return early to normal activities, including work (van Tulder et al 2006). An education session together with a Back Care booklet was provided to all participants. It included information on: 1) conservative management of acute low back pain, 2) correct spinal posture during activities of daily living, 3) the harmful effect of prolonged bed rest, and 4) advice to stay active. Appropriate reassurance was also given to the participants to enhance their understanding of their condition. Participants were told that they had a benign illness that would most likely resolve within the next few weeks and that, even with the best therapy, they might have some degree of continued pain, and might have recurrent pain in the next 12 months. They were also reassured that their pain was being taken seriously. Practical advice on coping with pain at home was also incorporated so that patients were empowered with knowledge and skills in self-management, which in turn eased some of their anxiety and fear and made them more ready, both physically and psychologically, to be discharged home. Participants received mobility training in tasks such as rolling, sitting up from lying, and sitting to standing. Walking was practised and appropriate walking aids were prescribed so that patients could walk as far as they could tolerate in order that they remained upright, active, and as mobile as possible. During their 24 hours at the Accident and Emergency Department, they also received one or two 15-minute sessions of interferential therapy depending on their progress and response. An interferential machine was used to deliver a current which swept from 70 to 130 Hz with a pulse duration of 130µs and swing pattern of 6s. The four suction-type electrodes were placed around the painful low back region in a co-planar arrangement and the intensity of the stimulation was adjusted to just below the pain threshold (Low and Reed 2000).

At the Accident and Emergency Department, participants in the control group received conventional intervention, ie, walking training, and prescription of walking aids as indicated.

On discharge from the Accident and Emergency Department, participants in both groups received standard physiotherapy intervention in the physiotherapy Outpatient Department twice a week; the total number of intervention sessions depended on their progress and response. During the first appointment in the physiotherapy Outpatient Department (T3), a full physical examination was performed by an experienced physiotherapist. The physiotherapy intervention included education, reassurance, pain management, and

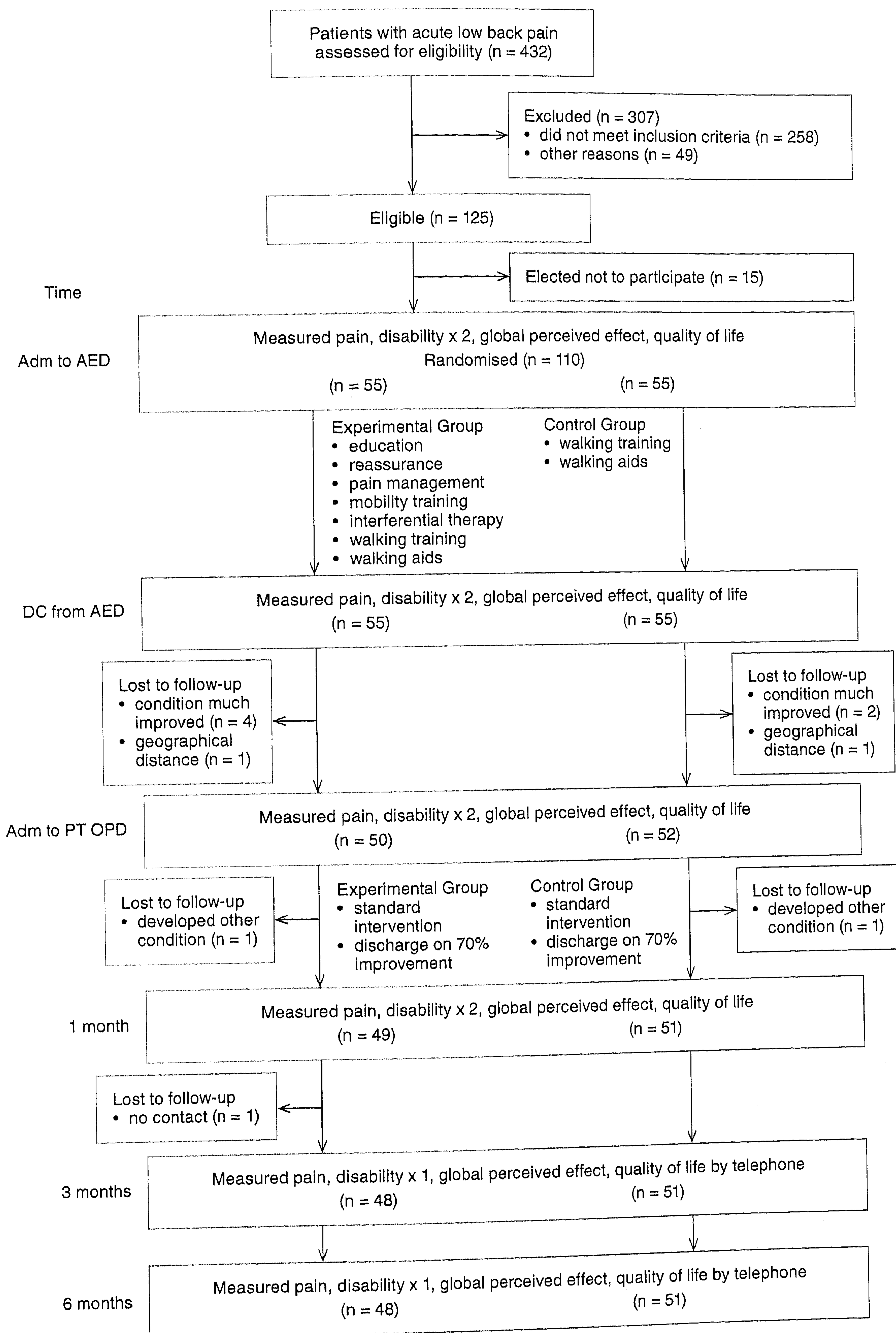


Figure 1. Design and flow of participants through the trial. Adm = admission, DC = discharge, AED = Accident and Emergency Department, PT OPD = Physiotherapy Outpatient Department

interferential therapy, according to the findings of the physical examination. Participants were discharged from the Physiotherapy Outpatient Department when they demonstrated a 70% reduction in pain or disability.

### Outcome measures

Two primary outcomes, one at the impairment level and one of global perceived effect reflecting patient satisfaction, were collected. The Numeric Pain Rating Scale was used to monitor pain intensity. It is an 11-point scale ranging from 0 (no pain) to 10 (pain as bad as it could be) and has been shown to have good reliability (Stratford and Spadoni 2001). The Numeric Global Rating of Change Scale is a valid and responsive measure of the patient's global perceived effect of intervention (Ostelo and Vet 2005). It is a 21-point scale with extreme values of -10 (worst change in condition) to +10 (best change of condition) with 0 representing no change in condition.

Secondary outcomes were measures of activity limitations (Roland-Morris Disability Questionnaire and Back Performance Scale) and participant restrictions (Short Form Health Survey 12, version 2s SF-12). The Roland-Morris Disability Questionnaire is a 24-item self-report questionnaire, aiming to measure the disability of people with low back pain (Roland and Morris 1983). An item will be scored 1 if endorsed by the patient, and 0 if left blank. Thus, a patient's score will range from 0 (no disability) to 24 (severe disability). To adapt to the local population, the Hong Kong Chinese version Roland-Morris Disability Questionnaire was used (Tsang 2004). The Back Performance Scale is an objective back-specific performance measure of activity limitation in patients administered by an observer. The scale consists of 5 tests (Sock Test, Pick-up Test, Roll-up Test, Fingertip-to-Floor Test, and Lift Test) each scored on a 4-point ordinal scale (0 to 3) according to observed physical performance. The tests reflect sagittal-plane mobility to obtain a performance measure of mobility-related activities (Strand et al 2002). The summed score ranges from 0 (no activity limitation) to 15 (major activity limitation). The SF-12 is a questionnaire measuring health-related quality of life. It consists of 12 items which can be completed in less than two minutes (Ware et al 1996). Two summary scores, the Physical Component Summary and the Mental Component Summary, were extracted. To adapt to the local population, the Hong Kong Chinese version SF-12v2 was used (Lam et al 2005).

### Data analysis

A pilot study of 16 participants was carried out based on the inclusion and exclusion criteria. Thirteen participants turned up for Physiotherapy Outpatient Department intervention. Three participants (19%) did not turn up (experimental group = 2, control group = 1). The reasons for not turning up to the Physiotherapy Outpatient Department were: almost complete recovery ( $n = 1$ ), good improvement, living alone, and reluctance to come to Physiotherapy Outpatient Department ( $n = 1$ ), and geographic hindrance ( $n = 1$ ). The mean reduction in the Numeric Pain Rating Scale for the experimental group was 1.8 (SD 1.2) and for the control group was 0.8 (SD 1.0). With a power of 80% and  $\alpha$  at 0.05, the estimated sample size to detect a between-group difference of 2.0 was 110.

Repeated measures analysis of variance (ANOVA) was used to detect between-group differences in the change from baseline across all follow-ups for both the primary

and secondary outcomes. Analysis was also conducted separately for the 5 follow-ups if the interaction was significant at any time. Between-group differences are presented as mean differences. Taking the Bonferroni correction into consideration, 97.5% CI were calculated ( $\alpha = 0.025$ ). In the present study, analysis was by intention-to-treat in that all randomised participants with follow-up data available were analysed. No attempt was made to impute values of missing data.

## Results

### Flow of participants, therapists and centres through the trial

Four hundred and thirty-two acute low back pain patients with or without referred leg pain who attended the Accident and Emergency Department of a local acute hospital were screened for eligibility to participate in the study. One hundred and ten acute low back pain patients with or without referred leg pain were recruited from November 2006 to May 2007; 55 were randomly assigned to the experimental group and 55 to the control group (Figure 1). Sixty-one percent were female with a mean age of 50 ranging from 19 to 88 years old. On admission at the Accident and Emergency Department, 96% were classified as urgent (Triage Category 3 = 27%) or semi-urgent (Triage Category 4 = 69%). The characteristics of the participants and therapists are summarised in Table 1. All participants were discharged home directly from the Accident and Emergency Department except for three participants in the experimental group who were admitted to the Orthopaedic and Traumatology wards. After reviewing their medical records, there were no red flags or other serious medical conditions. Furthermore, all three participants were referred for intervention at the Physiotherapy Outpatient Department on discharge. Thus, they were included in the follow-up analyses. Eleven participants did not turn up for continuing intervention at the Physiotherapy Outpatient Department or lost contact. The final sample for analysis at 6 months was 48 in the experimental group and 51 in the control group giving a follow-up rate of 90% (Figure 1).

Four physiotherapists with a mean of 13 years (SD 3.9) work experience provided the intervention. They all had postgraduate qualifications and were experienced in treating low back pain patients. All of them had been involved in research before and had received on-the-job training in the Accident and Emergency Department at the time of implementation of the early physiotherapy service in this local acute hospital in 2003. All therapists provided interventions to both experimental and control participants and so the expertise and qualifications of the therapists delivering the interventions were similar for each group.

Only one centre, a local acute hospital, was involved in the study. Daily attendance at the Accident and Emergency Department of this hospital is about 500 people (Hong Kong Hospital Authority Statistical Report (2006-07)). The early physiotherapy service was launched in 2003 providing intervention for musculoskeletal conditions in the fracture clinic, observation ward, emergency ward, and walk-in clinic/consultation room of the Accident and Emergency Department. The early physiotherapy service will be extended to cover other medical conditions in the coming years.

**Table 1.** Characteristics of participants and therapists.

Characteristic	Included participants (n = 110)		Lost to follow-up (n = 11)	
	Exp (n = 55)	Con (n = 55)	Exp (n = 7)	Con (n = 4)
<b>Participants</b>				
Age (yr), mean (SD)	52 (18)	49 (15)	53 (25)	46 (18)
Gender, n males (%)	21 (38)	22 (40)	1 (14)	2 (50)
Occupation category*, n (%)				
Sedentary	10 (8)	12 (22)	1 (14)	0 (0)
Light	21 (38)	17 (31)	4 (57)	2 (50)
Medium	12 (24)	11 (20)	2 (29)	0 (0)
Heavy	1 (2)	1 (2)	0 (0)	0 (0)
Very heavy	3 (6)	1 (2)	0 (0)	0 (0)
Other	8 (15)	13 (24)	0 (0)	2 (50)
Pre-morbid ambulatory status, n (%)				
Walk unaided	54 (98)	52 (95)	7 (100)	4 (100)
Walk with stick	1 (2)	3 (6)	0 (0)	0 (0)
Triage category in AED, n (%)				
Urgent (Category 3)	18 (33)	12 (22)	1 (14)	2 (50)
Semi-urgent (Category 4)	35 (64)	41 (75)	5 (71)	2 (50)
Non-urgent (Category 5)	2 (4)	2 (4)	1 (14)	0 (0)
Pain referred to the leg, n (%)	18 (33)	11 (20)	3 (43)	0 (0)
Work-related injuries, n (%)	7 (13)	6 (11)	1 (14)	1 (25)
Medication at AED (Intramuscular), n (%)	53 (96)	54 (98)	7 (100)	4 (100)
<b>Therapists</b>				
Participants treated in AED, n (%)				
1	15 (27)	13 (24)	4 (57)	0 (0)
2	13 (24)	14 (26)	1 (14)	0 (0)
3	14 (26)	13 (24)	1 (14)	2 (50)
4	13 (24)	15 (27)	1 (14)	2 (50)

Exp= experimental group, Con= control group, AED = Accident and Emergency Department. \*= classifications from the National Occupational Classification Career Handbook from the USA Department of Labor's Dictionary of Occupational Titles

### Compliance with trial method

After discharge from the Accident and Emergency Department, the experimental group began to receive intervention at the Physiotherapy Outpatient Department within four days (SD 2) while the control group started within three days (SD 2). Three participants in the control group later lost to follow-up started intervention within two days. At the Physiotherapy Outpatient Department, the experimental group received a mean of eight sessions (SD 5) while the control group received seven sessions (SD 4). The three participants later lost to follow-up received six sessions.

### Effect of intervention

Group data for all outcomes are presented in Table 2 while individual data are presented in Table 3 (see eAddenda for Table 3). Participants in the experimental group had 1.6 out of 10 points (97.5% CI 0.8 to 2.3) less pain than the control group on discharge from the Accident and Emergency Department and still had 0.9 points (97.5% CI 0.1 to 1.6) less pain on admission to the Physiotherapy Outpatient Department but this difference had disappeared by 1 month. Participants in the experimental group were 2.1 out of 20 points (97.5% CI 1.2 to 2.9) more satisfied

than the control group on discharge from the Accident and Emergency Department but this difference had disappeared by admission to the Physiotherapy Outpatient Department. There was no between-group difference for any other outcome at any time.

### Discussion

This randomised trial showed that early physiotherapy intervention for patients presenting to an Accident and Emergency Department with acute low back pain led to improved outcomes in pain and global perceived effect of intervention, at least in the acute phase. A number of reviews have concluded that evidence for the use of physical interventions in acute low back pain is negative, or at best, weak (van Tulder et al 2006), which differs from our findings. The effect of the intervention on pain in the present study was -1.6 out of 10 points which is large (Cohen 1988), with an expert panel reporting that a decrease of 2 points or more on the Numeric Pain Rating Scale is associated with a clinically-significant improvement in pain (Ostelo et al 2008). The patients who received early physiotherapy intervention in the Accident and Emergency Department were also more satisfied with their outcome. These observations had tailed off by the

**Table 2.** Mean (SD) of all outcomes for each group and mean (97.5% CI) difference between groups for all outcomes.

Outcome	Groups																
	T1		T2		T3		T4		T5		T6		T7		T8		
	Exp	Con	Exp	Con	Exp	Con	Exp	Con	Exp	Con	Exp	Con	Exp	Con	Exp	Con	
NPRS (0 to 10)	7.8 (1.5)	7.6 (1.5)	5.6 (1.8)	7.2 (1.6)	5.4 (1.8)	6.3 (1.5)	2.8 (1.7)	3.2 (2.1)	2.3 (2.3)	2.3 (2.1)	1.6 (2.1)	1.6 (1.5)	1.6 (1.5)	1.6 (1.5)	-0.4 (-1.3 to 0.5)	-0.4 (-1.3 to 0.5)	-0.0 (-0.9 to 0.8)
NGRCS (-10 to 10)			2.9 (1.9)	0.8 (1.8)	4.2 (1.9)	3.4 (2.0)	7.2 (1.6)	7.1 (1.8)	7.5 (2.0)	7.1 (2.3)	8.3 (2.0)	8.3 (1.8)	8.3 (1.8)	8.3 (1.8)	0.1 (-0.7 to 0.9)	0.1 (-0.7 to 0.9)	0.5 (-0.9 to 1.4)
RMDQ (0 to 24)	15.8 (5.0)	15.2 (5.3)	14.3 (5.5)	14.6 (5.4)	11.3 (4.6)	12.5 (5.7)	5.8 (4.8)	6.4 (5.1)	3.3 (3.5)	3.8 (4.2)	2.7 (3.8)	2.8 (3.2)	2.8 (3.2)	2.8 (3.2)	-0.6 (-2.9 to 1.7)	-0.6 (-2.9 to 1.7)	-0.5 (-1.7 to 1.5)
BPS (0 to 15)	12.9 (2.0)	12.5 (2.4)	11.8 (2.4)	12.4 (2.4)	9.8 (3.3)	9.8 (2.6)	5.1 (3.0)	5.1 (2.6)							0.0 (-1.3 to 1.4)	0.0 (-1.3 to 1.4)	
SF-12v2 PCS (0 to 100)	36 (9)	37 (9)	37 (9)	39 (9)	34 (8)	36 (8)	40 (9)	42 (8)	46 (10)	47 (9)	45 (11)	46 (8)	46 (8)	46 (8)	-1 (-5 to 2)	-1 (-5 to 2)	-1 (-5 to 4)
SF-12v12 MCS (0 to 100)	51 (13)	46 (9)	50 (12)	45 (8)	45 (12)	44 (10)	46 (11)	46 (9)	51 (9)	50 (9)	54 (8)	53 (7)	53 (7)	53 (7)	1 (-4 to 6)	1 (-4 to 6)	1 (-3 to 4)

Shaded areas are primary outcomes. Exp = experimental group, Con = control group. NPRS = Numeric Pain Rating Scale, NGRCS = Numeric Global Rating of Change Scale, RMDQ = Roland-Morris Disability Questionnaire, BPS = Back Performance Scale, SF-12v2 PCS = Short-Form-12v2 Physical Component Summary, SF-12v2 MCS = Short-Form-12v2 Mental Component Summary. T1 = Prior to physiotherapy intervention in the Accident and Emergency Department, T2 = Discharge from Accident and Emergency Department, T3 = Admission to Physiotherapy Outpatient Department, T4 = Month 1, T5 = Month 3, T6 = Month 6

follow-up implementation of physiotherapy intervention in the Outpatient Department. It is not surprising that there were no between-group differences at 6 months since it has been reported that almost 70% of low back pain patients are no longer disabled at 1-month and 3- to 6-months post onset of symptoms (Pulliam et al 2003). Although there was no impact in the long term, early physiotherapy intervention does play a significant role in the management of acute low back pain. It eases the suffering of patients in the very acute stage, provides timely and appropriate advice, empowers the patient with better self-management skills, and leads to better self-perception of the overall condition.

Physiotherapists have the potential to shift the model of care for patients with low back pain from a narrow biomedical approach to a broad approach that incorporates psychosocial factors (Hay et al 2005). Physiotherapists have an especially important role in the care of the injured because their objective is to restore function when the patient has not only been disabled by injury but may be further handicapped by fear of pain, fear of doing further damage, or sometimes by less worthy motives connected to compensation of one sort or another (Jibuike et al 2003). It is in attending to these matters of personal detail that a physiotherapist can contribute to overcoming what may be serious shortcomings in an Accident and Emergency Department. This study highlights the advantage of experienced physiotherapists extending the parameters of their traditional role to encompass some of the tasks previously undertaken by junior doctors. A physiotherapy practitioner working with an extended role is a valuable addition to an Accident and Emergency Department and performs at least as well as the average Accident and Emergency Department doctor in the management of low back pain. The perceived quality of care is likely to be improved by including an experienced physiotherapist with post graduate qualifications within an acute low back pain service.

Beside physical intervention, the physiotherapist provided advice on staying active, adequate information, reassurance, and practical advice. This requires good communication with the patient, which generally has a significant influence on patient satisfaction, self-care, and compliance with advice and intervention. It is important to identify patients' thoughts, feelings, and expectations regarding their prognosis, causes of pain, and interventions necessary to get better and return to work quickly, and to encourage patients to increase their physical activities progressively right from the start (Ley 1998). The degree to which patients understand their disease and the intervention prescribed can affect their ability to adhere to exercise prescription (Pulliam 2003). Patients do not always fail to adhere because they disregard intervention advice. At times, they may simply not understand what they have been told. In this regard, provision of knowledge and information to patients may have considerable effect on their adherence to prescribed interventions.

As the present study involved unequal amounts of intervention, the patients receiving the experimental intervention may have experienced more 'demand' to report success. Intervention provided in the present study was not individually tailored but given as a 'package' to allow standardisation. The design did not isolate the magnitude of the effect of individual modalities, but the effectiveness of early physiotherapy intervention in an Accident and Emergency Department for patients with acute low back pain was demonstrated.

The introduction of this early physiotherapy intervention in an Accident and Emergency Department for Triage Category 3 and 4 patients was a novel service in Hong Kong. This pioneer collaborative project between the Physiotherapy Department and the Accident and Emergency Department may serve as a model for other disciplines or other hospitals with Accident and Emergency Departments. This study provides the scientific evidence needed to promote the program. In the present study, we demonstrated that patients with acute low back pain, with or without referred leg pain, who received early physiotherapy intervention including education, reassurance, pain management, mobility training, interferential therapy, walking training, and walking aids as indicated, by physiotherapists qualified and experienced in treating low back pain, at the Accident and Emergency Department in a local acute hospital, reported a statistically significant reduction in pain and increase in satisfaction with intervention compared with those who received only walking training and walking aids as indicated. However, these observations had largely tailed off by time of admission to the Physiotherapy Outpatient Department.

**Footnotes:** <sup>a</sup>Physiomed 32-VAC, Physiomed Elektromedizin AG, Germany.

**eAddenda:** Table 3 available at [AJP.physiotherapy.asn.au](http://AJP.physiotherapy.asn.au)

**Ethics:** The Research Ethics Committee (Kowloon Central/Kowloon East Clusters) the Hong Kong Hospital Authority, and of The Hong Kong Polytechnic University approved this study. Informed consent was gained from all participants before data collection began.

**Competing interests:** None declared.

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