

# Guidelines prescribed by general practitioners to patients with acute low back pain regarding 'return to work'

**Hough PA**, MOccTher (UFS)

Department of Occupational Therapy, University of the Free State

**Van Rooyen FC**, Department of Biostatistics, University of the Free State

With the following BOccTher students in the Department of Occupational Therapy, University of the Free State:

**Bredenkamp E, Brough K, Ferreira M, Myburgh H, Snyman C, Van Niekerk C**

**Correspondence to:** Mrs PA Hough, e-mail: gnatpae.MD@mail.uovs.ac.za

## Abstract

### Background

The traditional treatment protocol for acute low back pain (ALBP) primarily used by healthcare professionals has in the past decade been strict bed rest, corsets, traction and 'back schools'. However, current research has led to dramatic changes in the traditional treatment protocol. The literature suggests that the protocol should be replaced by parsimonious imaging, early return to normal activities and greater emphasis on exercise to prevent recurrences of ALBP and to treat chronic pain. The aim of this study was to investigate the guidelines prescribed by general practitioners (GPs) to patients with acute low back pain (ALBP) regarding 'return to work'.

### Methods

A systematic sample of 212 GPs, selected from a list supplied by the Health Professions Council of South Africa (HPCSA), was selected to complete questionnaires. The highest qualifications of the GPs were MBChB or MFamMed, and all of them practise in the Bloemfontein area.

### Results

Sixty-three respondents stated that 40% of ALBP patients returned for follow-up consultations. Of the 63 respondents, eight GPs had not consulted ALBP patients in the preceding two years, and thus were excluded from the final number of respondents. Bed rest is still prescribed by 67.27% of GPs and, although 47.27% of the GPs were aware of the change in protocol, only 9% prescribe 'return to work'. A total of 18.18% are aware of evidence-based guidelines and 10% of the GPs prescribe these. Among the guidelines defined by the GPs are lifestyle changes, rest and stabilisation. Only 18.18% of ALBP patients are referred to occupational therapy for treatment.

### Conclusion

Only 47.27% of the GPs knew about the new ALBP protocol, and even fewer had any knowledge of the content of the new protocol. Also, the guidelines prescribed by the GPs concerning 'return to work' were indefinite. The researchers hypothesised that the reasons for this were a lack of awareness of the change in the acute low back pain protocol suggested by the Agency for Healthcare Research and Quality, as well as a lack of knowledge of the evidence-based guidelines suggested for their profession.

**SA Fam Pract 2006;48(10):15**

## Introduction

The traditional treatment protocol for acute low back pain (ALBP) primarily used by healthcare professionals has in the past decade been strict bed rest, corsets, traction and 'back schools'.<sup>1</sup> However, current research has led to dramatic changes in the traditional treatment protocol.<sup>2</sup> The literature suggests that the protocol should be replaced by parsimonious imaging, early return to normal activities and greater emphasis on exercise to prevent recurrences of ALBP and to treat chronic pain.<sup>1,3</sup>

The US Agency for Health Care and Policy and Research (AHCPR) was the key initiative for developing new guidelines for the management of ALBP. In December 1994 a multidisciplinary panel of private sector clinicians, including primary care providers, researchers from the fields of biomechanical and spinal surgery and consumer representatives considered recommendations for standardised measures in clinical outcomes in patients with low back pain.<sup>4</sup> Significant contribution was also made by the Institute for Work and Health who has, since 1990, made it their mission to improve and promote the treatment of ALBP.<sup>5</sup> In addition, the Ten Commandments (return to work guidelines), a collaborative effort of many countries was released.<sup>6</sup> The recommendations by the British Advisory Group were reviewed and updated by the Royal College of General Practitioners.<sup>7</sup> All of the abovementioned tasks groups played an important role in a research process that led to the origin of the

most recent Guidelines on Acute Low Back Problems in Adults, which includes, amongst others, the proposed protocol of 'return to work'.

'Return to work' implies that all normal activities are resumed.<sup>8</sup> 'Return to work' is directly related to methods of work performance. Incorrect methods of work performance could lead to sustained and/or increased ALBP.<sup>9</sup> Therefore, it is imperative that guidelines are drawn up in accordance with pathophysiological principles that underlie correct methods of work performance.

The occupational therapy model of work analysis enables the therapist to operationalise the constructs involved in the work evaluation and treatment planning process in order to:

- determine the level of skill as required by the job;
- establish the compatibilities of the work requirements and the worker's capabilities; and
- obtain an ergonomic analysis of the worker's environment.

The evaluation model (see Figure 1) follows an analysis of the occupational factors in the workplace. The returning worker's capabilities and limitations are determined through the systematic documentation of the identified risk factors of the job that relate to low back pain. The mechanical stress factors are documented and described in terms of the duration and magnitude of stress, as quantified with reference to the anatomical location of specific movements required by the work. Production information is documented regard-

ing the quantity and quality of work expected per time limit. Workstation design and work equipment, including anthropometrical dimensions, are also indicated. Environmental risk factors of the work relating to posture are identified, such as repetitions, frequency and sustained exertions with respect to regional spinal alignment during the execution of identified task/s.

The evaluation model's assessment techniques include standardised and non-standardised tests, work simulation, test placement and a psychological and motivational assessment.

It is, however, uncertain if, and what guidelines with respect to work performance are being prescribed by healthcare professionals. The literature provides the healthcare professional with ample evidence-based guidelines with reference to work performance.<sup>9,10</sup>

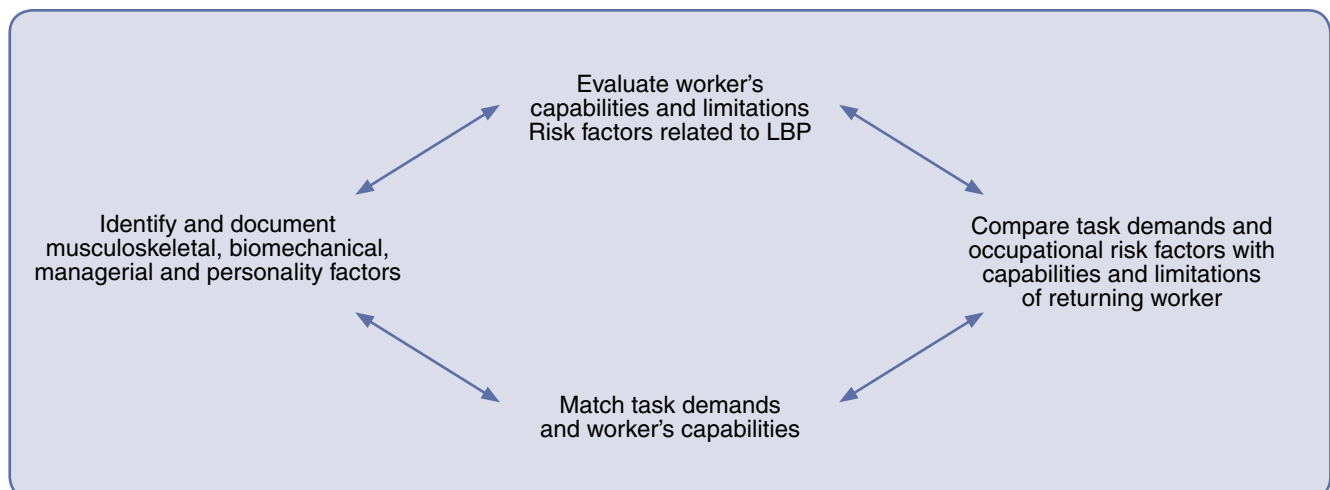
The specific objectives of this study were to determine the knowledge of the general practitioner (GP) regarding the change in the ALBP treatment protocol and the specific guidelines prescribed in accordance with this. The aim of this study was to investigate the guidelines that GPs provide according to the new protocol for 'return to work'.

## Methodology

The aim of this study was to describe the guidelines prescribed by GP's to patients with ALBP. A quantitative descriptive study was used for the research design. It was therefore also an observational study.

A systematic sample of 212 GPs, selected from a list supplied by the Health Professions Council of South Africa

Figure 1: Evaluation model



(HPCSA), was selected to complete the questionnaires. The highest qualification of these GPs was an MBChB or MFamMed, and all of the doctors practised in the Bloemfontein area.

The data for this study were obtained by means of a non-standardised questionnaire, drafted by the researchers in accordance with the literature and completed by the respondents.

Ethics approval and permission were obtained from the relevant Ethics Com-

mittee prior to commencing with the study. Informed consent to participate was obtained from all the participants.

In order to maximise the response, the questionnaires were personally delivered to each GP, and the questionnaires were collected after two days as arranged in advance with the doctors. Continuous personal follow-ups were initiated to obtain the questionnaires from those GPs who did not respond within the required time.

Descriptive statistics were calculated, namely frequencies and percentages for the categorical data and medians and percentiles for the continuous data.

**Results**

Out of a total of 105 questionnaires that were distributed, 63 (60%) were received back from the various GPs. Eight of the 63 respondents had not consulted ALBP patients within the preceding two years and were thus excluded from the study group. The study was therefore based on the results of the remaining 55 respondents.

The participants were aged between 24 and 72 years, with a median age of 38.3 years (SD=10.6 years). Thirty-one of the participants were male (n=55). On average they had 12.3 years of work experience as a GP (SD=10.1 years), and 7% of the participants had the postgraduate qualification MFamMed.

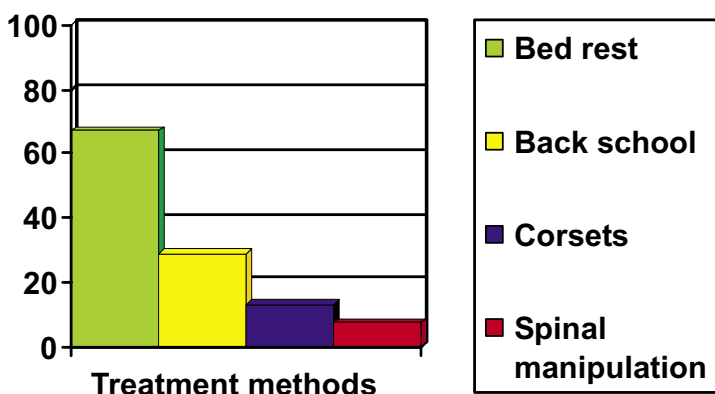
Of all the acute low back patients seen by the participants, an average of 40% of the patients that had been treated returned for follow-up consultations due to continued pain. According to the statistics, 52.73% of the GPs were not aware of the changes in the ALBP treatment protocol that had been made during the past decade.

As shown in Figure 2, bed rest is still prescribed by 67.27% of the GPs. Back schools, corsets and spinal manipulation also constitute a significant percentage of the treatment methods currently in use.

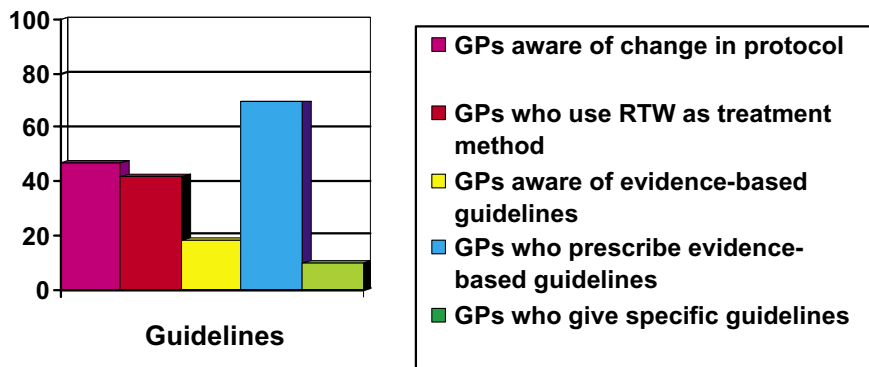
As indicated in Figure 3, of the total of 55 participants included in the study, 47.27% of the GPs were aware of the change in the protocol, and 41.82% of the GPs used 'return to work' as a treatment method as described in the new ALBP protocol. A total of 18.18% of the GPs responded that they were aware of evidence-based guidelines for activity performance, and 10% prescribed evidence-based guidelines for work performance.

The aim of this study was to investigate the guidelines provided by GPs to ALBP patients regarding 'return to work' and the importance of these guidelines for work performance. Of the respondents, 69.57% stated that they prescribed guidelines regarding methods of work performance, but only 10% of the respondents were able to define and operationalise these guidelines.

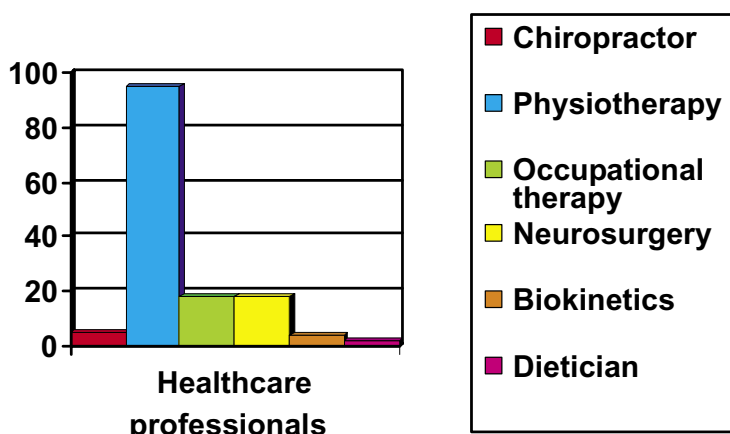
**Figure 2:** Currently used treatment methods by GPs (percentage) according to the ALBP protocol



**Figure 3:** The guidelines provided by GPs.



**Figure 4:** Referrals made by GPs (percentage) to healthcare professionals.



This result leads to the assumption that there might be a lack of knowledge among GPs when providing patients with specific information for methods of work performance.

The guidelines defined by this 10% of GPs are lifestyle changes, exercise, decreased weight on the neck and/or postural changes, adaptations to home and work environments, maximal productivity, physiotherapy, anti-inflammatory drugs, rest and stabilisation.

As seen in Figure 4, only 18.18% of ALBP patients were referred to occupational therapy for treatment, including work evaluation and modification.

### Discussion

This paper documents how the general practitioners in the Bloemfontein area report to implement the guidelines on 'return to work' prescribed to patients with acute low back pain.

The study has some limitations. The response rate was influenced by the fact that the list obtained from the HPCSA was outdated. This resulted in unnecessary work, as many of the GPs were either overseas, retired, deceased or had moved to a different location. Other variables that influenced the level of response were maternity leave, study leave, transferred to other practices, or participants not being available due to professional duties. The questionnaire itself lacks reliability, as it is not a standardised questionnaire. This variable did not have a significant influence on the study, as a theoretical base was used as a guideline when drawing up the questionnaire as well as the pilot study.

The answers in the questionnaire are of self-reported behaviour. Although the general practitioners were assured of anonymity and asked about their routine management practices, the answers may reflect a more idealised version of what actually takes place. In addition, the responding physicians may have a greater interest in back problems than the non-responders. The regional nature of the survey may limit its generalisability. Our sample population was not queried as to the specific training they had regarding the proposed guidelines on acute low back problems in adults. It also was not queried whether the GPs had any prior exposure to the theoretical

and practical models of occupational therapy regarding work evaluation and work modification.

On the basis of the statistics it can be assumed that the regime prescribed by the old ALBP treatment protocol is still being included in treatment, since 52.73% of the GPs were not aware of the change in ALBP treatment protocol during the past decade. This result correlates with research findings that indicate that the management of acute low back pain in the primary care setting does not conform to the published guidelines.<sup>11</sup>

The results of this study indicate that a substantial portion of the participants (67.27%) still prescribed bed rest for ALBP. According to the literature, prolonged bed rest is ineffective for back care, as it fails to address the basic functional deficit of the ALBP patient and can result in further back pain.<sup>12</sup> Back schools, corsets and spinal manipulation also make out a significant percentage of the treatment methods currently in use, even though these form part of the old low back pain treatment protocol.<sup>13</sup>

There was insufficient knowledge regarding the new 'return to work' component of the ALBP protocol, as is evident from the referral rate (10%) for work evaluation and modification. The new protocol of 'return to work' has been discussed, according to the literature, as a means to send patients back to work and normal activity before they reach the chronic phase of ALBP.<sup>1</sup> It is imperative that guidelines for 'returning to work' be addressed in accordance with the correct pathokinesiological principles as scientifically grounded in the science of ergonomics. Specific guidelines for the performance of activities therefore are needed to enable ALBP patients to optimally continue with their activities by modifying their work environment, as well as by implementing methods to execute tasks in a manner that protects their joints.<sup>10</sup> This will lead to optimal functioning in the workplace, with minimal stress on the lower back, resulting in the further prevention of ALBP, and these methods can also be carried through to the other activities of daily living.<sup>10</sup> This approach corresponds to the World Health Organisation's policy

that emphasises prevention rather than cure.<sup>14</sup>

Although some of these guidelines, such as postural changes, adaptations to home and work environments, and exercise, comply to a certain extent with the evidence-based guidelines, they still lack specificity with respect to the specific method of work performance. Little et al. highlighted one of the fundamental problems of the guidelines in general, namely that of generalisability.<sup>15</sup> It therefore is crucial to perform an activity analysis in order to prescribe specific work modifications for individuals.

The literature states that an activity/work analysis is a key aspect in occupational therapy. It assists the therapist in carefully identifying the skills required for a prescribed activity, as well as a thorough understanding of the activity.<sup>16</sup> Lamport and Coffey also state that an activity analysis ensures a scientific knowledge base for the instruction of the activity through directions, simplification and adaptations.<sup>16</sup>

The following statement can consequently be made: patients with acute low back pain do not receive specific guidelines from their general practitioners with respect to the correct method of activity performance. In congruence with the literature and with a specific reference to ergonomics, as well as in accordance with the Agency for Healthcare Research and Quality literature on the subject of low back pain, a 40% follow-up consultation rate can be expected.

### Conclusion

The researchers conclude that very few GPs know of the new ALBP treatment protocol and even fewer use it for treatment of ALBP. The guidelines prescribed by general practitioners to patients with ALBP regarding return to work are insufficient and lack specificity.

There are well-established clinical guidelines for the management of low back pain, but these provide limited guidance on the occupational aspects of performing activities in the work-place. Occupational Therapy specialises in the art and science of activity as a construct of occupational performance. A significant contribution can therefore be made with refer-

ence to the 'return to work' component of the guidelines for the management of ALBP.

### Recommendations

The researchers propose that the new ALBP protocol be reintroduced to healthcare professionals in a standard and practical format. Referral to occupational therapy can be beneficial to ALBP patients so that specific guidelines for work modification are prescribed when patients are advised to 'return to work'. The value of occupational therapy in the evaluation and treatment of ALBP should be emphasised.

The authors suggest that a follow-up investigation be conducted into the ALBP protocols of the healthcare professionals, i.e. nursing, physiotherapy and biokinetics, with reference to the available guidelines. It is further suggested that follow-up research be conducted by the above healthcare professionals with the aim of defining critical aspects as they relate to each discipline, and to draw up an intervention protocol that addresses aspects of 'return to work'.

Further studies may benefit from including qualitative methods for collecting data, where issues regarding knowledge of and attitudes to 'return

to work' can be explored in depth.

**Acknowledgements:** The authors wish to thank the doctors who participated in the study and Ms L van der Westhuizen, who helped to finalise the article.

### References

1. Deyo RA. Acute low back pain: a new paradigm for management. *BMJ* 1996;313:1343-4.
2. Abenhaim L. The role of activity in the therapeutic management of back pain. *Spine* 2000;25(4):1s-33s.
3. Maher CG. Effective physical treatment for chronic low back pain. *Orthop Clin North Am* 2004;35(1):57-64.
4. Bigos SJ, Bowyer OR, Braen GR, et al. Acute low back problems in adults: clinical practice guideline. No. 14. Rockville, Md: US Dept of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research; December 1994. Publication 95-0642.
5. Medline. Assessment and management of acute low back pain. 1999. <http://www.aafp.org/afp/991115ap/2299.htm> (Accessed 3/03/2005).
6. Rheumatology. Back pain. 2002. <http://rheumatology.oupjournals.org/> (Accessed 3/03/2005).
7. Espalda. A low back pain evidence review. 1996. <http://www.espalda.org/english/creddivu.asp> (Accessed 3/03/2005).
8. Staal JB, Hlobil H, van Tulder MW, et al. Occupational health guidelines for the management of low back pain: an international comparison. *Occup Environ Med* 2003;60(9):618-26.
9. Trombly CA, Radomski MV. Occupational therapy for physical dysfunction. 5th ed. New York: Lippencott Williams & Wilkins; 2002.
10. Frank JW, Kerr MS, Brooker A, De Maio SE. Disability resulting from occupational low back pain. *Spine* 1996;21(24):2908-17.
11. Urzelai VG, Elua LP, Lopez de Munain J. Routine primary care management of acute low back pain: adherence to clinical guidelines. *Eur Spine J* 2003;12: 589-94.
12. White AH, Anderson R. Conservative care of low back pain. London: Williams & Wilkins; 1991.
13. Jousset N, Fanello S, Bontoux L, et al. Effects of functional restoration versus 3 hours per week physical therapy: a randomized controlled study. *Spine* 2004;29(5):487-93.
14. DuToit S. Gemeenskaps Arbeidsterapie, ABT & ABP 408. Departement Arbeidsterapie UV, Bloemfontein; 2005.
15. Little P, Smith L, Cantrell T, Chapman J, Langridge J, Pickering R. General practitioners' management of acute low back pain: a survey of reported practice compared with clinical guidelines. *Br Med J* 1996;312:485-8.
16. Lamport NK, Coffey MS. Activity analysis. Indiana: Slack International Book Distributors; 1989.
17. Waddell G, Burton AK. Occupational health guidelines for the management of low back pain at work: evidence review. *Occup. Med.* 2001; 51(2): 124-35.