An audit of the Outcome of Physiotherapy Intervention for Outpatients with cervical spine pain and dysfunction

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Contents

Ackn	owledgements	3
List o	of Tables	6
List o	of Appendices	8
Intro	duction	9
	ground to the Audit table for the cervical spine audit	10 12
The A	Audit	14
	Audit topic	14
	Audit locations	14
	Audit team	14 14
	Audit venues	14
	Type of audit Sample size	15
	Sampling	15
	Audit tool	15
Expla	nation of the tool	16
	Unit location of outpatient physiotherapy department	16
	Occupation	16
	Episode	16 16
	Acute or chronic General diagnosis/aetiology	16
	Specific diagnosis	16
	Body site codes	16
	Origin of referred symptoms	16
	Symptomatic level	16
	Laterality of symptoms	16
	Waiting times-	16
	Weighting of psychosocial and physical factors affecting the	. 16
	physiotherapy process	· 16
	Other conditions Functional, physical and subjective outcomes	17
•	Outcome of referral	17
	Treatment details	17
	Total effort scores	17
	Goal achievement at discharge	17
	Other factors influencing outcome	17
	Number of treatments	17
	Physiotherapy grade	17 17
	Patient perceived pain, function and ability to work	18
	Referral source Improvement of quality of life	18
	Data entry	18
Audit	results	19
	Management of audit data	19
	Analysis of data	19
Resu		19
	Audit population Patients distribution by unit location	19
	Patiente dietrinution av unit location	

	Age groups of patients referred with cervical spine dystunction	19
	Gender	20 20
	Age group and gender	20
	Occupation	20
	Occupation by physiotherapy location	20
	Nature of recurrency	20
	Chronicity of the problem	21
	General diagnostic aetiology	21
	Specific diagnosis	21
	Physiotherapy diagnosis	21
	Body site affectation	21
	Tissue origin of symptoms	21
	Laterality of symptoms	22
	Symptomatic levels Waiting time in weeks from consultation with GP to referral to	
	physiotherapy	22
	Waiting time in weeks from referral by GP to commencement of	~~
	physiotherapy	22
	Psychosocial and physical factors impacting on therapy	22
	Frequency of outcome of referral	22
	Other factors influencing outcome	23
	Use of treatment modalities	23
	Treatment modality by hospital location	23
	Modality preference by grade of physiotherapist	23
	Total effort scores	23
	Number of treatments	23
	Frequency of referral by grade of physiotherapist	24
	Referral source	24
	Functional assessment	24
	Patient perceived pain	24
	Functional ability	25
	Change in functional ability by grade of physiotherapist	25
	Change in patient perceived functional ability by hospital location	25
	Ability to work	26
	Improvement in quality of life	26
	Goal achievement	26
.		27
	nts with trauma as their specific diagnosis	2.1
Facto	rs influencing the outcome of whiplash patients treatments	27
Spon	dylotic patients	27
∆chi o	vement of standards	28
ACINE	All referrals	28
	Patients discharged normally	28
	Tationts disonarged normally	
Comn	nents from Trusts on the Audit Tool and the Audit Process	29
Future	e directions	29
Comn	nentary/Recommendations	30
Refere	ences	32
Tables	s ·	
A	disea	

List of Tables

1a	Frequency of referrals to each physiotherapy unit - All referrals
1b	Frequency of referrals to each physiotherapy unit - Patients discharged normally
2a	Frequency of referrals by age group - All referrals
2b	Frequency of referrals by age group - Patients discharged normally
3a	Frequency of referrals by gender - All referrals
3b	Frequency of referrals by gender - Patients discharged normally
4a	Frequency of referrals by gender and age group - All referrals
4b	Frequency of referrals by gender and age group - Patients discharged normally
5a	Frequency of referrals by occupation - All referrals
5b	Frequency of referrals by occupation - Patients discharged normally
6a	Frequency of referrals by occupation and physiotherapy location - All referrals
6b	Frequency of referrals by occupation and physiotherapy location - Patients discharged normally
7a .	Frequency of referrals by episode group - All referrals
7b	Frequency of referrals by episode group - Patients discharged normally
8a	Frequency of referrals by chronicity - All referrals
8b	Frequency of referrals by chronicity - Patients discharged normally
9a	Frequency of referrals by general diagnostic aetiology - All referrals
9b	Frequency of referrals by general diagnostic aetiology - Patients discharged normally
10a	Frequency of referrals by specific diagnosis - All referrals
10b	Frequency of referrals by specific diagnosis - Patients discharged normally
11a (1)	Frequency of referrals by body site (1) - All referrals
11b (1)	Frequency of referrals by body site (1) - Patients discharged normally
11a (2)	Frequency of referrals by body site (2) - All referrals
11b (2)	Frequency of referrals by body site (2) - Patients discharged normally
11a (3)	Frequency of referrals by body site (3) - All referrals
11b (3)	Frequency of referrals by body site (3) - Patients discharged normally
11a (4)	Frequency of referrals by body site (4) - All referrals
11b (4)	Frequency of referrals by body site (4) - Patients discharged normally
12a	Frequency of referrals by origin - All referrals
12b	Frequency of referrals by origin - Patients discharged normally
13a	Frequency of referrals by laterality - All referrals
13b	Frequency of referrals by laterality - Patients discharged normally
14a (1)	Frequency of referrals by level (1) - All referrals
14b (1)	Frequency of referrals by level (1) - Patients discharged normally
14a (2)	Frequency of referrals by level (2) - All referrals
14b (2)	Frequency of referrals by level (2) - Patients discharged normally
14a (3)	Frequency of referrals by level (3) - All referrals
14b (3)	Frequency of referrals by level (3) - Patients discharged normally
15a	Frequency of wait in weeks from consultation with GP to referral to physiotherapy - All referrals
15b	Frequency of wait in weeks from consultation with GP to referral to physiotherapy - Patients
	discharged normally
16a	Length of wait in weeks from referral to commencement of physiotherapy - All referrals
16b	Length of wait in weeks from referral to commencement of physiotherapy - Patients
	discharged normally
17a	Length of wait from referral to commencement of physiotherapy - All referrals
17b	Length of wait from referral to commencement of physiotherapy - Patients discharged normally
18a	(1-3) Weighting of Psychosocial and Physical Factors - All referrals
18a	(4-5) Weighting of Psychosocial and Physical Factors - All referrals
18b	(1-3) Weighting of Psychosocial and Physical Factors - Patients discharged normally
18b	(4-5) Weighting of Psychosocial and Physical Factors - Patients discharged normally
19	Frequency of outcome of referral - All referrals
20	Frequency of other factors influencing outcome - All referrals
21	Frequency of use of treatment modalities 1st choice - All referrals
22	Frequency of use of additional treatment modalities 2nd choice - All referrals
23a	Frequency of use of additional treatment modalities 3rd choice - All referrals
23b .	Frequency of use of additional treatment modalities 4th choice - All referrals
24	Frequency of total effort scores in bands - All referrals
25a	Frequency of number of treatments received - All referrals
	•

25b	Frequency of number of treatments received - Patients discharged normally
25c	Frequency of number of treatments - All referrals
26	Frequency of referral by grade of physiotherapist (1st PT) - All referrals
27	Frequency of referral by grade of physiotherapist (2nd PT) - All referrals
28	Frequency of number of physiotherapists involved in treatment - All referrals
29	Frequency of referral source - All referrals
30	Frequency of initial assessment of functional ability - All referrals
31	Frequency of assessment of expected functional outcome - All referrals
32	Frequency of actual functional outcome - All referrals
33a	Frequency of patient perceived pain prior to physiotherapy - All referrals
33b	Frequency of patient perceived pain prior to physiotherapy - Patients discharged normally
34a	Frequency of patient perceived pain after physiotherapy - All referrals
34b	Frequency of patient perceived pain after physiotherapy - Patients discharged normally
35a	Frequency of change in pain level after physiotherapy - All referrals
35b	Frequency of change in pain level after physiotherapy - Patients discharged normally
36a	Frequency of patient perceived functional ability prior to physiotherapy - All referrals
36b	Frequency of patient perceived functional ability prior to physiotherapy - Patients discharged
300	normally
37a	Frequency of patient perceived functional ability after physiotherapy - All referrals
37b	Frequency of patient perceived functional ability after physiotherapy - Patients discharged
	normally
38a	Frequency of patient perceived change in functional ability - All referrals
38b	Frequency of patient perceived change in functional ability - Patients discharged normally
39	Grade of physiotherapist by patient perceived change in functional ability
40	Increase in functional ability by location
41	Change in patient perceived functional ability by location
42a	Frequency of patient perceived ability to work prior to physiotherapy - All referrals
42b	Frequency of patient perceived ability to work prior to physiotherapy - Patients discharged
	normally
43a	Frequency of patient perceived ability to work after physiotherapy - All referrals
43b	Frequency of patient perceived ability to work after physiotherapy - Patients discharged
	normally
44	Occupation of patients with missing data - All referrals
45a	Improvement in quality of life. How many gave a negative response - All referrals
45b	Improvement in quality of life. How many gave a negative response - Patients discharged normally
46a	Improvement (in 10% bands) for those who gave a positive response - All referrals
46b	Improvement (in 10% bands) for those who gave a positive response - Patients discharged
	normally
47a	Goal achievement - All referrals
47b	Goal achievement - Patients discharged normally
47c	Goal achievement by number of treatments
47d	Length of wait from referral to commencement of physiotherapy by goal achievement
48	Frequency of referrals by specific diagnosis - Traumatic patients
49	Frequency of number of treatments - Traumatic patients
50	Frequency of number of treatments - Patients with whiplash
51	Frequency of referrals by episode group - Patients with whiplash
52	Frequency of number of treatments v episode group - Patients with whiplash
53	Frequency of other factors influencing outcomes - Patients with whiplash
54	Frequency of number of treatments - Patients with spondylosis
55	Frequency of actual functional outcome - Patients with spondylosis

List of Appendices

Appendix 1	Original tool discharge summary sheet
Appendix 2	Low back pain discharge summary sheet and codings
Appendix 3	South Thames audit of the outcome of physiotherapy intervention for outpatients with cervical spine pain and dysfunction
Appendix 4	Physiotherapists Diagnosis Statements
Appendix 5	Treatment Modality Combinations

The Report

Introduction

Clinical audit since the publication, in 1989, of the NHS circular (GEN29) has had an unprecedently high profile in the Health Service which has been endorsed by the Government, as well as all health profession associations. The Department of Health's definition of clinical audit (DOH 89) serves as a useful statement on which to base audit activity and has served as an underlying ethos on which to base this current report.

"Clinical audit is the systematic critical analysis of the quality of clinical care including the procedure used for diagnosis and treatment, the use of resources and the resulting outcome and quality of life for the patient/client." (DOH 89)

With the publication of the Government White Paper, 'The NHS modern and dependable' (1997), issues of accountability and clinical governance are now in the forefront of practice. With the Government's directive that proper systems and processes are set in place to ensure continuous improvement in clinical standards, backed by the new statutory duty for quality in NHS trusts.

Physiotherapy is a relatively young profession and has gathered momentum in recent years in terms of research activity and in the measurement of clinical effectiveness. As with other professions engaged in healthcare, physiotherapists pursue activities within a variety of specialities. For physiotherapists, one of the core areas of specialism is the management of musculoskeletal dysfunction, most commonly dealt with in out patient physiotherapy departments within the NHS Hospital Trusts, but also in the private sector, in private hospitals and in private practices.

In the full report, 'The Development of the Mid Kent and University of Brighton Outcome Measurement Tool for Physiotherapy Out Patient Services' (Moore 1996), cervical spine dysfunction was present in 17% of the total patient population undergoing physiotherapy treatment during the one year pilot period described in the full report. Cervical spine dysfunction therefore was chosen as the topic for the second audit in the series, stimulated by the original outcome report (Moore 1996).

The cervical spine with its anatomical biomechanical and pathological complexity presents a considerable challenge to the physiotherapists. Symptomology ranging from cervical headaches, symptoms of sympathetic irritation as well as joint stiffness, muscle weakness, muscle imbalance and importantly pain, are manifested by the cervical pathologies which affect the cervical spine. These in themselves, range from rheumatoid arthritis, congenital abnormalities, arthrosis, trigger points, neuralgia, cervical spondylosis, post traumatic pain and facet impingement (Bogduk 1994). There are also many symptoms associated with cervical headaches alone. These can be considered as nausea, vomiting, phono/photophobia, dizziness, tinnitus, throat symptoms, hearing deficits, blurred vision, eyelid oedema, tearing and redness of the eye (Jull 1994). Additionally there are cranial symptoms which may arise after cervical injury or secondary to upper cervical arthrosis. These include sub-occipital neck and yoke area pains, unilaterally or bilaterally, with bouts of frontal headache which may be periodic and transient or remain as a dull and background ache, facial and anthro-lateral throat pain, patches of subjective facial numbness, otalgia, retro-orbital pain, sometimes paratheseae in the eye, subjective laryngeal disturbances with compulsive clearing of the throat, upper pectoral and axillary pain, feelings of instability and disequilibrium with sometimes a tendency to list to one side, disturbances of hearing and/or vision, depression with feelings of fatigue and a belief in personal neurosis, irritability, insomnia and light headedness.

Together, this series of symptoms can create a maze which a physiotherapist needs to confidently negotiate to enable them to respond to the patients identified problems with accurate, efficient and appropriate treatment. It has been in the spirit of the quest for improvement in quality of care that this audit has been carried out.

Background to the Audit

In 1995, East Kent Health Authority funded the first year of a 3 year project to develop models of care from the assessment of appropriate physiotherapy treatment methods in relation to clinical outcome. Physiotherapists across South East Kent collaborated to develop clinical guidelines in 5 areas of physiotherapy: outpatients, care of the elderly, orthopaedics, respiratory care and neurology.

The project floundered after the first year due to lack of funds. From 1993, Mid Kent Healthcare Trust funded consultant support from the University of Brighton, Department of Occupational Therapy and Physiotherapy, now the School of Healthcare Professions to establish a tool to measure the effects of physiotherapy intervention in the general outpatient setting and to gather data on current practice. An outcome measurement tool was developed in liaison with patients and staff by the consultant and was piloted over a 15 month period in 3 outpatient physiotherapy departments within Mid Kent Healthcare Trust. The outcome measurement tool together with a full report of its development was published by the University of Brighton in collaboration with Mid Kent Healthcare Trust (Moore 1996), and the measurement tool was integrated into the day to day practice of physiotherapists working in outpatient departments throughout Mid Kent Healthcare Trust and has also been adapted for use in other areas of physiotherapy practice within the Trust. The tool has been adopted by other physiotherapy departments throughout the Country, either in its entirety or in a modified form. In essence, the original tool consisted of a data sheet (discharge summary sheet) consisting of 31 items requiring a response from the physiotherapist (see appendix 1) together with a codings list.

In the published report (Moore 1996), low back pain was identified as the most common reason for patient referral to the outpatient department in the Mid Kent Healthcare Trust. Therefore low back pain was chosen as a topic for further audit work and a programme entitled 'An audit of physiotherapy intervention for outpatients with low back pain against preset clinical standards' was designed.

The notion of an audit of low back pain was discussed in the autumn of 1996 within the Mid Kent Healthcare Trust. At this stage, it was intended that 7 physiotherapy outpatient departments across the South Thames region would take part using the Mid Kent and University of Brighton's outcome measurement tool which could be audited against East Kent's clinical standards.

The Director of Physiotherapy at Kent and Canterbury Hospital and the then Physiotherapy Manager from Mid Kent Healthcare Trust were identified as joint clinical leaders for the low back pain audit project.

In November 1996, a bid for funding for the project was submitted to the clinical audit programme management group, South Thames region and funding was approved and confirmed in December 1996. In mid December 1996, the first planning meeting of the low back pain audit group met. The group included:

Janet Fry - Director of Physiotherapy Services, Kent and Canterbury Hospital and joint clinical leader Carol Groom - Physiotherapy Manager, Mid Kent Healthcare Trust and joint clinical leader

Jane Woodward - Audit Manager, Audit Department, Mid Kent Healthcare Trust

Professor Ann Moore - Consultant to the project from the University of Brighton's School of
Healthcare Professions

Dr Jean Richards – West Kent Public Health Department was appointed by the South Thames Audit Committee to monitor the project's progress.

As previously stated the initial plan was to use 7 physiotherapy departments in the South Thames region in the audit programme. In the event, 10 trusts entered the audit and contributed data to the overall audit process. The participating units for the low back pain audit were:

Dartford and Gravesham Hospital
Frimley Park Hospital
Kent and Canterbury Hospital
Mid Kent Healthcare Trust
Queen Elizabeth the Queen Mother Hospital
Richmond Rehabilitation Unit
St Georges' Hospital
Thames Link
William Harvey Hospital
Worthing Hospital

At the first meeting of the audit management group, the audit topic was refined. Participant roles were clarified. A plan for the audit was established, and a list of units that would be asked to participate was drawn up. Procedures for the analysis of results were also established.

In February 1997, a further meeting of the audit group took place to define the audit topic, agree standards to be audited against and discuss the relevance and make minor modifications to the original outcome measurement tool for the low back pain audit. The meeting was also used to establish the population size for the audit. It was anticipated that 200 patients from each unit would be included in the audit, giving a proposed total audit population of 2000 subjects from 10 sites.

In May 1997, workshops took place within the participating units to explain the audit process, the outcome measurement and the project as a whole.

Feedback from the workshops provided valuable information, which contributed to the final codings, used in the discharge summary sheets for audit purposes (see appendix 2).

In July and August of 1997, each unit trialled the discharge summary sheet and returned the pilot data to Mid Kent Healthcare Trust for inputting in order for any discrepancies in data to be identified and for further support to be provided if necessary to the participating units. At this stage, 80 data sets were analysed for conformity.

The main audit commenced in September 1997 following a variable response by units to the pilot audit work.

By the end of November 1997, less than 10% of the anticipated number of discharge summary sheets had been received. However, further data was received in January bringing the total number of data sets to, at that stage, 335.

In February 1998, a meeting was held with the project management group, and representatives from each of the participating units. By this stage, 414 data sets had been received. Some content issues were identified in relation to the discharge summary sheets and some areas, in particular, were identified which would need consideration for any further work. Units were urged this time, to speed up the rate of data collection and the speed of return of completed data sheets.

Constraints and problems affecting the audit activities within the trusts were identified by representatives from each of the trusts units:

- 1. Some discharge summary sheets that had been completed by 2 trusts had not been received centrally. The reason for this was uncertain.
- 2. Units required clearer instructions with regard to cut off and response dates.
- 3. Turnover of staff and staff rotations presented difficulties with consistency of audit form completion and return.
- 4. Patients treated in General Practices had not been included by some units due to the time constraints. Therapists based in General Practices found it hard to justify the extra time required to complete the summary sheets to fundholders.

In some units, patients had been excluded from the audit if their therapist had left the unit before their treatment had been completed, despite another therapist taking the patient on to their list. It was agreed that the tool would be modified at a later stage to include information about the number of therapists who had been involved in the management of the patient.

Final data sheets were received for the low back pain audit at the end of February and the audit officer entered data and downloaded the data analysis according to the requirements discussed with the audit management group and the representatives of the unit.

The data was then handed to the University of Brighton consultant at the end of March 1998 for detailed professional analysis and report writing. The final report was published in early October 1998.

Whilst the writing of the low back pain report was underway, plans for a further audit programme were developed. In the published full report (Moore 1996), pain and dysfunction of cervical spine origin was found to be the second most common body site treated by physiotherapists in outpatients in Mid Kent Healthcare Trust, with 17% of the physiotherapy patient workload attributed to this body site. It was decided on discussion therefore that an audit of the physiotherapy intervention of cervical spine dysfunction be the next audit programme carried out, and a bid for funding was made to South Thames Clinical Audit programme once more. Confirmation of funding was received in October 1998 (Moore 1998).

In the early part of 1998, meetings had been set up to set and agree standards for the cervical spine audit programme. Also during the early part of 1998, it had been decided to modify the original outpatient physiotherapy outcome measurement tool, and that which had been used in the low back pain audit and make it more specific to spinal dysfunction. This was done by the consultant to the project under discussion with representatives from the 10 trusts. For the discharge summary sheet and the codings used for the cervical spine dysfunction audit, please see appendix 3.

Funding for the cervical spine audit, approved in October 1998, enabled the audit to be fully resourced. The resources required for the audit project were identified as follows:

- 1. Personnel with experience in the 2 base projects were to be used as they had depth of knowledge of the subject area. This decision was made in the light difficulties in recruiting a suitable researcher with necessary skills.
- 2. Clinical skills for time lost in providing workshops and on-going support by 2 physiotherapists from the 2 base sites.
- Clinical support for inputting data.
- 4. Audit expertise to monitor and provide final data for analysis.
- 5. University of Brighton consultant time to analysis and write the report.
- 6. Clinical leads from the 2 base sites.
- 7. Travel costs, stationery and photocopying.

Timetable for the cervical spine audit

Early April 1998 Project team meeting to define and agree programme

April – May 1998 Series of half-day workshops in participating departments.

June 1998 Commencement of a 2 week pilot of data collection.

July 1998 Checking of pilot data and revisiting of sites.

August – November 1998 Four month study on all sites.

Dec. 1998 – February 1999 Data entry and data downloading.

February – April 1999 Analysis of data and production of report.

June 1999 Final meeting of the project team to discuss the final report.

The Audit

Audit topic

Cervical spine pain and dysfunction.

Patients presenting with central cervical pain with or without referral of symptoms into the head, upper and lower extremities were included in the audit.

Audit locations

Sixteen NHS trusts in the South Thames region participated in the audit. They were:

Ashford and St Peters NHS Trust
Chichester Hospital
Dartford and Gravesham NHS Trust
Frimley Park Hospital
Hastings and Rother NHS Trust
Kent and Canterbury NHS Trust
Kent and Sussex NHS Trust
Mid Kent Healthcare Trust
Richmond, Twickenham and Roehampton NHS Trust
St Georges'
South Kent Hospitals NHS Trust
Thames Link
University Hospital, Lewisham
Woking Community NHS Trust
Worthing and Southlands NHS Trust

Audit Team

Ms Maria Yeomans - Programme Manager

Mrs Carol Groom - Clinical leader, Mid Kent Healthcare Trust

Mrs Jane Woodward - West Kent Health Authority

Professor Ann Moore – Academic and professional consultant to the team, University of Brighton

Ms Diane Collyer – Workshop facilitator, Mid Kent Healthcare Trust (latterly William Harvey Hospital)

Ms Ann Heywood - Administrative support, Mid Kent Healthcare Trust

Ms Kathleen Antony - Administrative support, Mid Kent Healthcare Trust

Mrs Jackie Langford - Assistant to Professor Ann Moore

Mr Alan Hough - Technical support to Professor Ann Moore

Audit venues

Physiotherapy outpatient departments within 15 trusts in the South Thames region took part in the audit.

The audit base for data collection was Maidstone Hospital (Mid Kent Healthcare Trust).

Type of audit

A number of elements of structure, processes and outcomes were audited in a prospective audit of cervical spine dysfunction management by physiotherapy services.

Sample size

The actual sample size was 674 patients. Eight of these were excluded from the final analysis as they had no information relating to the patients outcome recorded and were thus not valid to enter the study. A total of 464 were discharged normally, ie fully completed physiotherapy treatment.

Sampling

All patients suffering from cervical spine pain and dysfunction were admitted to the study by each participating physiotherapy department. All appropriate patients therefore had an equal chance of being admitted to the audit.

Audit tool

Following the incorporation of Mid Kent and University of Brighton's outcome tool into everyday practice in Mid Kent Healthcare Trust's physiotherapy department and the successful use of the tool in the 12 month pilot study, the measurement tool was considered to have face and content validity for the low back pain audit even though it was designed as a general tool for outpatient use, and not for specific use with low back pain sufferers. Since the original work had been carried out, funding had not been available to test the interand intra-reliability of the tool. However, for the low back pain audit, the original outcome measurement was adapted slightly in several ways.

An episode section was added to determine whether the patient was suffering from a first episode or a recurrent problem. The reason for referral section was removed as it was specific to local units' needs. The physiotherapist identification section was removed in order to maintain individual therapists' confidentiality. Some minor additions to section codings were made to treatment details, other factors, body codings and referral source to reflect some local units' needs.

The outcome measurement tool discharge summary sheet used for the low back pain audit is included in appendix 2. The tool consisted of 27 items to be completed by the physiotherapist in charge of the patient care in conjunction with the patient. It consisted of a summary sheet which detailed items for response and allowed the addition of coded responses. The remainder of the tool consisted of a criteria for coding used for completion of each item as appropriate.

For the cervical spine audit, it was decided that the original tool which had been designed to cover a multiplicity of patient conditions entering physiotherapy outpatient departments from hyperventilation syndrome to skin disorders and musculoskeletal syndromes should be refined to make it more specific for use with patients with spinal dysfunction. The following sections were added to the original tool. (See appendix 3)

- 1. A section for rating the condition as acute or chronic.
- 2. A general diagnosis/aetiology section was added with a section for specific diagnosis if it had been provided and a physiotherapy diagnosis statement was incorporated.
- 3. A section relating to the tissue origin of symptoms was added in addition to a section inviting therapists to comment on the symptomatic spinal level involved.
- 4. The weighting of psychosocial and physical factors section was changed in order for a possible 5 responses to be made.
- 5. A section was added to enable units to record how many therapists had been involved in the patients' treatment.
- 6. A section was added on improvement of quality of life rating.

When comments were invited from representatives from trusts on the new tool and how it had worked in practice, it was felt that the new tool had been easier to use than the first and was more clinically relevant and sensitive to needs. There was less ambiguity and generally the tool was found to be user friendly.

Explanation of the tool

Unit location of outpatient physiotherapy department – The unit locations of the participating outpatient physiotherapy departments were all randomly coded for inclusion into the audit. Unit location codings are not offered in this report for purposes of anonymity.

Occupation – Occupations were classified using a modified version of the employment department group, Office of Population, Census and Surveys: Structure and definition of major, minor and unit groups (COPCS 1990).

Episode – Episode was classified either as first episode or recurrent episode to give some idea of chronicity.

Acute or chronic – Acute was defined as less than 6 weeks duration and chronic as more than 6 weeks duration.

General diagnosis/aetiology – Responses in this section were classified according to the general nature of the problem necessitating treatment ranging from traumatic, degenerative, inflammatory, congenital, pathological, postural, aetiological origin, spontaneous onset or psychogenic cause.

Specific diagnosis – Specific diagnosis related to the nature of the problem being treated. eg. soft tissue injury, cervical rib, disc lesion etc. In addition, the physiotherapist could record their individual physiotherapy diagnosis in up to 62 characters. eg. they could state "facet joint impingement" if they believed this to be the problem.

Body site codes – Up to 4 body site codes could be recorded, specific codes were offered to reflect spinal areas and potential referral areas relating to the spine.

Origin of referred symptoms – This section enabled the physiotherapist to indicate whether they felt the problem was of neural or other origin.

Symptomatic level – Physiotherapists were given the opportunity to indicate a maximum of three symptomatic spinal levels found on palpation or to state that there were multiple segments involved.

Laterality of symptoms - Symptoms were recorded either as bilateral or unilateral.

Waiting times – Referral dates and dates of commencement of treatment were recorded for administration purposes, but also to calculate the length of patient wait from first contact with present problem with their GP/Consultant to time of referral to physiotherapy in weeks. Additionally, the length of wait was recorded for the time patients were required to wait in weeks, from referral date by their GP/Consultant to commencement of treatment within the physiotherapy service.

Weighting of psychosocial and physical factors affecting the physiotherapy process — This item was based on the Wirral formula (Ball et al 1993). Categorisation took place of the problem necessitating consultation, communication/sensory difficulties, mobility problems, other conditions and social circumstances, and these problems were each rated on a scale of 1-5. Scores range from1 = No difficulty to 5 = severe difficulty. When rating a problem, physiotherapists were asked to give an indication of the severity of the problem, ie in terms of the pathology and/or dysfunction.

For communication/sensory issues, the physiotherapist was asked to give an indication of the severity of the communication or sensory difficulties, eg. inability to communication, hearing impairment, co-existing central nervous problem or language problem. For mobility, the physiotherapist was asked to given an indication of any co-existing mobility problems, eg. problems with sitting, necessity for a walking aid for an allied or co-existing problem, and/or transportation difficulties. For social circumstances, the physiotherapist was asked to give an indication of the severity of any social circumstances which may have impacted on their

treatment strategy. These could include, for example, if a patient was a single parent, bereavement, financial problems or unemployment.

Other conditions – In this section, the physiotherapist could give an indication of the severity of other conditions which might impact on the management of the patient, eg. patient with a heart condition, respiratory condition and/or any other co-existing medical or orthopaedic problem.

Functional, physical and subjective outcomes – These items related to the initial assessment of functional, physical and subjective outcomes, the assessment of expected functional, physical and subjective outcomes and the actual functional, physical and subjective outcomes. The score was rated on a scale of 1-10 and related to severity, irritability and nature of the problem, range of motion, participation in work, leisure and social activities and reliance on drug therapy for pain relief.

Outcome of referral – Outcome of referral allowed the recording of, not only patients who were discharged normally (attended for physiotherapy treatment as prescribed by their physiotherapist and who were discharged from treatment by the physiotherapist), but also the incidence of non-attendance, transfers inside and outside the district and inappropriate referrals.

Treatment details – Physiotherapists could record up to 4 treatment modalities used in the management of the patient. It was understood that the treatment details would reflect the combined use of modalities in many cases and not necessarily simply a progression of treatment.

Total effort scores – The effort scores were based on those introduced by Ball et al (1993), and originally incorporated into the Wirral formula. An activity/treatment modality or administrative activity, eg. letter writing, was scored in terms of the time taken to carry out the task and the degree of effort required in achieving the task successfully. Class taking, for example, was scored according to the formula shown in appendix 3. Effort was graded on a scale of 1-10 taking into consideration the application of the task, physical and mental exertion required, strength required, concentration required, conviction and the motivation of others necessary to complete the task. Effort was recorded at the end of each contact period and the total effort score for the whole treatment period recorded on the discharge summary sheet.

Goal achievement at discharge – Goal achievement was assessed jointly by the therapist and the patient based on goals set at commencement of treatment. Six categories allowed the choice ranging between worse/no goals achieved to goals exceeded. Each category was given a series of descriptors in respect of range of movement, function, pain relief and the ability to work, and scored in terms of the number of treatments necessary to achieve that particular rating. Numbers of treatments were categorised as either 1-6 treatments, 7-12 treatments, 13-18 treatments or 19+ treatments. (See appendix 3 for details)

Other factors influencing outcome – Factors included in this item included anything which might have influenced the outcome of physiotherapy intervention which were beyond the therapists control eg. other medical interventions, lifestyle influences or ceasing to attend etc.

Number of treatments – The number of treatments were recorded in terms of the number of contacts made.

Physiotherapy grade – The grading of the physiotherapist carrying out the treatment was recorded. Where there was more than one physiotherapist involved in the treatment of the patient, up to three grades could be entered.

Patient perceived pain, function and ability to work – In each case, the patient was asked to indicate their level of pain, functional ability and ability to work before treatment commenced and when treatment was terminated. In order to improve the reliability of this outcome measure, it was important that all patients were asked the information in the same

way. The following statement was made by all therapists in respect of each patient that they assessed.

"In order to monitor the effectiveness of your treatment, it is important that we find out about your levels of pain, your level of functional ability and your ability to work at the present time. Please choose a number on the scale of 0-10 which indicates:

- 1) Your present level of pain when it is at its worse, where 0 = the least amount of pain you could envisage and 10 = the worst pain you could imagine.
- 2) Ability to work where 0 = complete absence of ability to work and 10 = working normally.
- 3) Functional ability where 0 = total absence of ability to carry out functional tasks at home, and in the social setting and 10 = maximum or normal ability to carry out functional tasks."

These questions were all asked again on completion of physiotherapy treatment.

Referral source - Please see appendix 3 for details.

Improvement of quality of life — It was felt that a section should be added on monitoring the patients' perceived improvement or otherwise in their quality of life. Patients were asked to determine their overall improvement or decrease in their quality of life following treatment taking all their personal factors and physical factors into consideration, eg. their pain levels, ability to work, their social life, their sexual activity and general participation in leisure and sporting activities. They were then asked to rate these on a scale of 0-100% in terms of improvement. If 0% was the least improvement they could achieve and 100% was the most they could expect to have achieved, where would they rate themselves on a scale of 0-100 at this time. Patients were allowed to respond with a negative figure if this was more appropriate.

Data entry

All data was entered directly form original discharge summary sheets by administrators at Mid Kent Healthcare Trust and was sampled for conformity by the audit consultant.

Audit results

Management of audit data

The data was analysed and downloaded in 3 ways.

Firstly, all data was described and/or tallied for each variable recorded on the discharge summary sheets.

Then cross tabulation was carried out between the variables, which had been suggested by unit representatives to be of particular interest to them.

Data in this report is presented in its complete form with missing data excluded. The actual numbers on which statistics are based are given in each section.

Finally it should be noted that detailed analysis of outcomes has been carried out, for some variables, only on those data sets of patients who were normally discharged, ie who completed physiotherapy treatment and were discharged by their physiotherapist in the normal way. A detailed breakdown of outcome of referral indicates why patients were not discharged normally and were therefore lost to the physiotherapy service.

Throughout the text, outpatient department unit locations are identified only by number (randomly allocated) to ensure anonymity.

Analysis of data

Data analysis was performed using Minitab, Excel and Epi 6 statistical packages.

Results

Audit population

The total number of patients referred with cervical dysfunction and included in the audit was 674. The number of patients who entered the audit and were discharged normally was 464.

Patients distribution by unit location

The numbers of patients entering the audit attributed to each physiotherapy unit location are shown in Table 1a.

Unit 4 made a nil return to the audit but were initially involved in the initial workshop training sessions.

Unit 6 returned the largest proportion of data sets (13.5%) closely followed by unit 14 (12%) and unit 8 (11.4%). Units 1 and 12 returned very small numbers of data sets for the audit.

The total numbers of patients discharged normally by each physiotherapy unit location, are shown in Table 1b, Unit 14 returned the largest frequency of patients discharged normally (14.2%) followed by unit 11 (12.5%) and unit 8 (12.1%).

Age groups of patients referred with cervical spine dysfunction

The age groups of all patients referred with cervical spinal dysfunction are shown in Table 2a. the most frequently referred age group was the 40-49 age group (22.5%) with a fairly symmetrical distribution throughout the age ranges 0-9 and 80-89.

Higher frequencies in the over 40's are indicative of normal degenerative changes (spondylosis) in the 40 –50 year olds and late arthrosis occurring the 50-60 year old age group.

The frequency of ages of those patients experiencing normal discharge are shown in Table 2b. Again, the 40-49 age group showed the greatest frequency of normal discharges, and the frequency of referrals by age group showed a similar pattern to that demonstrated by all referrals. The mean age of all patients referred was 49.5 years and the mean age of those normally discharged was 51.2 years.

Gender

Tables 3a and 3b show the frequency of referral by gender for all referrals and those discharged normally. In each case, there was a higher frequency of female patients than males.

Age group and gender

Table 4a shows the frequency of gender by age group for all referrals and Table 4b, the frequency of all those normally discharged.

The highest frequency for female patients in the all referral category was found in the 40-49 age group, and there was an equally large frequency in the 40-49 and 50-59 age groups for males. For those normally discharged, the largest group of females were again in the 40-49 age bracket, but the larger proportion of males were found in the older age groups (50-59, 60-69 and the 70-79 ranges).

Occupation

The frequencies of occupational groups for all those referred to physiotherapy for cervical spine pain and dysfunction are shown in Table 5a and for patients discharged normally in Table 5b.

In each case, the retired occupational group was by far the largest group represented with associate professional and clerical secretarial the next most highly represented groups.

Occupation by physiotherapy location

The occupations of patients by physiotherapy location for all those referred are shown in Table 6a, and for those discharged normally shown in Table 6b.

The distribution of occupations by location, largely reflected the same trends within the all referral group and those who were normally discharged.

Nature of recurrency

The frequency of referrals by episode for all referrals is shown in Table 7a, and for patients discharged normally in 7b.

In both cases, the slightly larger majority of patients were suffering their first episode. However, the frequency of recurrency is quite alarming, particularly in those who were normally discharged.

Chronicity of the problem

The frequency of referrals by chronicity for all referrals is shown in Table 8a, and for patients discharged normally in Table 8b.

Of concern was that of all referalls and those discharged normally, over 70% were in a state of chronicity. Perhaps giving some indication of the complexity of the problems being presented to physiotherapists in their clinics.

General diagnostic aetiology

The frequency of referrals by general diagnostic aetiology for all referrals is shown in Table 9a, and for those normally discharged in Table 9b.

The most frequently presented aetiological / diagnostic category was in each case, degenerative, which is consistent with the represented age groups. Traumatic aetiology was the second largest group presented.

Specific diagnosis

The frequency of referrals by specific diagnosis for all referrals is shown in Table 10a, and for those normally discharged in Table 10b.

In each case, spondylosis was the most common problem presenting followed by whiplash and joint dysfunction.

Physiotherapy diagnosis

Physiotherapists were able to incorporate their own physiotherapy diagnosis into the discharge summary sheet using a text field of up to 62 characters, and the results of this section are shown in appendix 4. Of note, is the diversity of descriptions applied to the presenting syndromes and detailed analysis showed that descriptions were often idiosyncratic to particular therapists. This must raise the question of quality in terms of communication between therapists. The obvious way forward would be a standardised glossary of terms and/or syndromes.

Body site affectation

The frequency of referral by primary body site for all referrals is shown in Table 11a (1), and for those discharged normally in Table 11b (1), indicating that cervical spine affectation with pain or symptoms referred to the shoulder was the most common primary body site, with central cervical spine symptoms the next most common site.

For all those referred 253 patients, and for those normally discharged 175 patients had a second problematic area. These are shown in Tables 11a (2) and 11b (2). In each case, the upper thoracic spine was the most commonly represented body site.

Sixty of all the patient referrals and 44 of the normally discharged patients had a third area involved. In both cases, the referral to the shoulder and secondly to the wrist were noted. See Table 11a (3) and Table 11b (3).

Sixteen of all referrals and 10 of those normally discharged exhibited a fourth body site involvement. In both cases, the highest representation was referral to the hand. See Table 11a (4) and Table 11b (4).

Tissue origin of symptoms

The frequency of tissue origin for all referrals and for patients discharged normally are shown in Tables 12a and 12b.

Nerve root origin was the most frequently cited problematic tissue in both groups.

Laterality of symptoms

The frequency of laterality of symptoms for all those referred and for those discharged normally are to be found in Tables 13a and 13b respectively.

Unilateral symptoms were the most frequently described in both situations.

Symptomatic levels

The most common response by therapists to primary spinal levels affected was multiple levels, which was consistent with the traumatic and degenerative changes noted. C5/6 and C6/7 were the most commonly identified individual segmental levels. The same distribution was noted in those patients who were discharged normally, as is shown in Tables 14a (1), and Table 14b (1).

Where more than 1 segmental level was identified, C6/7 and C7/T1 were the most common levels identified, (see Table 14a (2)), and where a third level was identified, C5/6, C6/7 and T1/2 were the most frequency cited symptomatic levels (see Table 14a (3)).

Waiting time in weeks from consultation with GP to referral to physiotherapy

The median waiting time for all referrals was 2.0 weeks (SIQR 4) and a mode waiting time of 0 weeks. 50% of patients were referred within 2 weeks and 80% were referred to physiotherapy within 11 weeks of consulting their GP. For details, see Table 15a,

For those normally discharged, the median waiting time was 2.0 weeks (SIQR 4) and a mode of 0. For details see Table 15b, which shows that 51.5% were referred within 2 weeks of consultation and 81.9% were referred within 11 weeks of consultation.

Waiting time in weeks from referral by GP to commencement of physiotherapy

The frequency of the length of wait in weeks from referral by the General Practitioner to commencement of physiotherapy for all referrals is shown in Table 16a. The figures show a median wait of 3.0 weeks (SIQR 3) and a mode score of 1 week and 42% of patients commenced physiotherapy treatment within 2 weeks. The figures for those discharged normally are shown in Table 16b where the median wait was 3.0 weeks (SIQR 3) and a mode wait of 1 week. 43.5% commenced physiotherapy within 2 weeks and 90.9% commenced physiotherapy within 11 weeks of being referred.

The frequency of banded length of wait from referral to commencement of physiotherapy for all patients referred and those discharged normally are shown in Tables 17a and 17b. The most commonly occurring length of wait in each case, was 0-2 weeks.

Psychosocial and physical factors impacting on therapy

The frequency of the severity of factors impacting on therapy, such as the problem itself, communication problems, mobility problems, social problems and other problems for all those referred for treatment are shown in Table 18a (1-5) and for those discharged normally in Table 18b (1-5).

As can be seen in both cases, the actual problem necessitating referral in the majority of cases (41.4%) was rated as moderate, although 24% of all referrals (20% of normal discharges) were rated as quite severe. Less than 12% had communication problems, around 24% had mobility problems, 37.6% of all referrals had social problems and 34.2% of all referrals had other problems. Only 34% of those discharged normally had social problems and 33.4% had other problems to deal with.

Frequency of outcome of referral

The frequency of outcome of referral is shown on Table 19 for all referrals. 70.9% of all patients were discharged normally following completion of physiotherapy treatment. 15% were lost to the service through non-attendance at some stage during their treatment period. There were only 7 inappropriate referrals, but 6.6% were referred back to their GP/Consultant presumably due to a worsening condition or one which was not responding to physiotherapy.

Other factors influencing outcome

Table 20 shows the frequency of other factors influencing the outcome of physiotherapy treatment for all referrals. There were no other factors in the largest proportion of patients but lifestyle influences were thought to have influenced the outcome in 11.6% patients, and interestingly 7.8% ceased to attend for treatment, having previously commenced treatment.

Use of treatment modalities

Therapists were encouraged to list up to 4 treatment modalities used with each patient. These modalities may have been applied in combination through a number of treatment sessions, and therefore do not necessarily reflect treatment progression.

Treatment choices are shown in Tables 21, 22, 23a and 23b. The most popular modalities utilised were the Maitland concept, mobilisations, active exercises, advice on self-management and education and advice.

The combination of treatment modalities for all referrals is given for information in appendix 5. Commonly, 4 modalities were utilised and these are shown in their entirety. SNAGS were used in 17.5% of cases, and traction in 16.5% of cases. 40.3% of patients received some form of electrotherapy. The most popular form of the electrotherapy modality was ultrasound. Only a small number of therapists appeared to use the McKenzie approach. Interestingly, all patients referred, who commenced treatment, received 3 modalities. A further 39.7% received a fourth modality.

Treatment modality by hospital location

In trusts 2, 3, 6, 13, 26 and 4 advice re self-help was the most popular modality chosen. Whilst in trusts 5, 7, 8, 9, 11, 12, 14 and 15 the Maitland concept was the most frequently used modality. In trust 16 active exercises was the most commonly used modality.

Modality preference by grade of physiotherapist

Junior physiotherapists preferred advice and self-care as a modality, followed closely by active exercises. Senior II staff preferred to use Maitland mobilisations followed by advice and self-care. The same preferences were shown by Senior I staff. Only 1 patient returned was treated by a student. Only 2 patients were seen by Superintendent I's. Acupuncture was the preferred modality of Superintendent II's but this was only shown in 7 patients. Maitland mobilisations was the most frequently chosen modality in Superintendent III's, but for Superintendent IV's advice and self-care was the most frequently chosen modality.

Total effort scores

The frequencies of total effort scores obtained for all referrals are shown in Table 24 for the whole cohort. There was a minimum score of 1 and a maximum of 126 with a mode of 24 and a median of 23 (SIQR 17) indicating reasonably low effort scores considering the potential complexity of many of the traumatic cervical spine lesions.

Number of treatments

The mean number of treatments received overall was 5.3 (SD 3.147) with a mode of 4. For the frequencies and number of treatments received for all referrals, see Table 25a and for those discharged normally see Table 25b.

Numbers of treatments banded in groups of 6 are shown in Table 25c.

Frequency of referral by grade of physiotherapist

Table 26 shows the distribution of numbers of patient treatments by grade of physiotherapist. Senior II's showed the highest contact frequency for all those referred and those discharged normally, with Superintendent III's and Superintendent IV's showing slightly higher numbers of normally discharged patients and Junior's slightly lower numbers.

In some instances patients were treated by more than 1 physiotherapist. The frequency of grade of the first physiotherapist to have contact with the patient is shown in Table 26, with Senior II grades taking the highest referral load in the first instance followed by Senior 1's.

When a second physiotherapist is used, Senior 1's are the most heavily utilised followed by Senior II's and superintendent III's in equal proportions (See Table 27).

Table 28 shows the frequency of number of physiotherapists involved in patient treatments. 90.2% of patients were treated by 1 sole physiotherapist, 8.1% by 2 physiotherapists and only 1.7% of all referrals were treated by 3 physiotherapists or more.

Referral source

The frequency of the referral source for all those referred is shown in Table 29, with General Practitioners showing themselves to be the most frequent referral sources of patients with cervical spine dysfunction (82.5%).

Functional assessment

For details of the functional assessment criteria, see appendix 3, items 20, 21 and 23 of the discharge summary sheet and relevant criteria.

On initial assessment of functional ability, patients scored a mode of 3.0 and a mean score of 5.38 (SD 2.040). For frequencies see Table 30.

At initial assessment, an assessment of expected of functional outcome was made, and frequencies of scores of expected functional outcome are to be found in Table 31, with a mode score of 9 and a mean of 8.3 (SD 1.5).

The actual functional outcome scores for all referrals are shown in Table 32. Again there was a mode score of 9 and a mean of 8.2 (SD 1.89) showing a strong relationship between the assessment of expected outcome and actual functional outcome.

Patient perceived pain

For all patients referred, and for those discharged normally, perceived pain at examination and on discharge were recorded using a digital analogue scale, ie 0 - 10. Scores are shown in Tables 33a and 33b for scores prior to treatment for all referrals and for those discharged normally and in Tables 34a and 34b for scores on completion/leaving physiotherapy.

For all patients referred, pain prior to commencement of treatment showed a median score of 6.0 (SIQR 1.5) and a mode score of 8. On completion of treatment, a median score of 2.0 (SIQR 1.5), with a mode score of 1 was obtained showing a profound decrease in pain levels for the whole cohort.

For those normally discharged, there was a median pain score of 6.0 (SIQR 1.5) prior to commencement of physiotherapy with a mode score of 8, and at discharge a mean score of 1 (SIQR 1.5) and a mode score of 1. Again showing a profound decrease in pain levels during the treatment time.

Frequencies of change in pain levels after physiotherapy for all patients referred and those discharged normally are shown in Tables 35a and 35b. For all normally discharged, the

range was from -6 to 10 with a median score of 3 (SIQR 1.5) and a mode score of 3. The minus figures indicating worsening pain levels in some patients.

Functional ability

For all those referred, functional ability scores prior to commencement of physiotherapy ranged from 0 to 10 with a median score of 7 (SIQR 1.5) and a mode score of 5, and following physiotherapy ranged from 0 to 10 with a median score of 9 (SIQR 1) and a mode score of 10.

The functional ability scores for all those referred for physiotherapy and those discharged normally prior to commencing physiotherapy are given in Tables 36a and 36b, and for scores on completion of physiotherapy or normal discharge in Tables 37a and 37b.

The functional ability scores indicated reasonably high levels of functional ability prior to commencement and a good restoration towards normal levels of functioning after physiotherapy intervention.

For all those normally discharged, scores before physiotherapy commenced ranged from 0 to 10 with a median score of 7 (SIQR 2) and a mode score of 5, and after physiotherapy scores ranged from 0 to 10 with a median score of 9 (SIQR 1) and a mode score of 10. Generally showing an increase in functional ability across the patient cohort during the intervention period.

The frequencies of change in functional ability for the whole cohort and for those discharged normally are shown in Tables 38a and 38b. Patient perceived change in functional ability levels for all those discharged range from –10 to 10 with a median score of 1 (SIQR 1.5) and a mode score of 0, indicating that some patients perceived a reduction in functional ability. For those discharged normally, the range was from –10 to 10 with a median score of 2.0 (SIQR 1.5) and a mode of 0.

Change in functional ability by grade of physiotherapist

For details of change in functional ability by grade of physiotherapist, see Table 39.

There was little difference in the proportion of patients achieving various levels of functional restoration in relation to the grade of therapist treating their condition. The nature of the patient problem, its chronicity and motivation patterns of the patient would all have contributed to recovery rates and levels of recovery. No conclusions could be drawn from the data. However, clustering of levels of increase in functional levels 2/3 occurred in Junior grades, Senior II and Senior I grades who treated the majority of patients.

Change in patient perceived functional ability by hospital location

For details of change in functional ability by hospital location, see Tables 40 and 41.

There was a clustering of functional scores 2/3 by physiotherapy location. Location 11 demonstrated consistently higher scores but this could be attributed to the nature of the patient population as well as other factors, such as therapist speciality, experience and motivation.

Trusts 14 and 9 showed the highest proportion of patients who had perceived worsened functional ability.

Trust 4 made no returns.

Trust 10 showed the highest proportion of patients who perceived no change.

Trust 1 showed the highest proportion of patients who perceived improvement in functional scores but only 3 patients details were returned.

All Trusts showed a larger proportion of patients with increased or improved functional improvement than those who felt worse or remained unchanged.

Ability to work

The frequencies of patients perceived abilities to work, prior to commencement of physiotherapy for all those referred and for those discharged normally are shown in Tables 42a and 42b.

Scores following physiotherapy are shown in Tables 43a and 43b.

For all referrals, scores for ability to work prior to commencing physiotherapy ranged from 0 to 10 with a median score of 7 (SIQR 2.5) and a mode score of 10. On leaving physiotherapy, scores ranged from 0 to 10 with a median score of 10 (SIQR 1) and a mode score of 10.

For those normally discharged, scores ranged before commencing physiotherapy from 0 to 10, a median score of 7 (SIQR 2) and a mode of 10 and following physiotherapy ranged 0 to 10 with a median score of 10 (SIQR 1) and a mode score of 10.

However, the scores for all those referred should be seen in the context of missing data re ability to work, where 42.6% were retired (See Table 44).

Improvement in quality of life

When making responses to the quality of life section, 5.2% of all those referred indicated that there had been a worsening of their quality of life. 94.8% noted an improvement in their quality of life. For details see Table 45a.

Of the normal discharges, 98.9% noted an improvement in their general quality of life. For details see Table 45b.

Scores for improvement in quality of life for all referrals are shown in Table 46a and for those discharged normally in Table 46b.

Noting in each case a generally high return of improvement in quality of life scores amongst the patient population.

Goal achievement

The frequencies of goal achievement for all referrals and for those discharged normally are shown in Tables 47a and 47b. The mode score for all referrals was 5 for both cohorts (goals fully achieved in 1-6 treatments). For those normally discharged, 69% significantly fully achieved or exceeded their set goals within 1-6 treatments. Less than 4% of all referrals did not achieve goals, were worse, or were inappropriate for treatment. Only 1.7% of those normally discharged failed to achieve goals. No one was worse after treatment. For details of goal achievement by numbers of treatments, see Table 47c.

For goal achievement by the number of weeks between referral to physiotherapy and commencement of physiotherapy, see Table 47d, showing that the largest number of those who fully achieved goals in 1-6 months waited the shortest time, 0-2 weeks.

Patients with trauma as their specific diagnosis

153 patients had trauma as their aetiology. The specific diagnoses for patients within this group are shown in Table 48. Of these, whiplash was the most common syndrome treated with 68.6% of the total being dedicated to whiplash injuries.

The number of treatments given to the traumatic cohort ranged from 1-19 with a median number of treatments of 5 (SIQR 2) and a mode number of treatments of 5. See Table 49 for details.

The total effort scores for patients with traumatic lesions ranged from 6 to 153 with a median effort score of 24 (SIQR 22) and a mode score of 12.

Patients suffering from whiplash syndrome had a range of 1-19 treatments. The median number of treatments of 5 (SIQR 2.25) and a mode number of treatments of 3. This was remarkable considering the complexity of so many whiplash syndromes (see Table 50).

78.3% of patients with whiplash syndrome were receiving treatment following their initial injury. 21.7% were being treated for recurrent symptoms (see Table 51).

Of the recently injured group of whiplash patients, the numbers of treatments ranged from 1-19 with a mode score of 3 (see Table 52).

Effort scores for the patients with whiplash syndrome ranged from 7 to 120 with a median effort score of 24.5 (SIQR 10) and a mode score of 12 indicating that physiotherapists found this group no more challenging than other traumatic patients.

Physiotherapists treating whiplash syndromes were in the main, Senior II's who treated over 50% of the cohort and Senior I's who treated over 25%.

Factors influencing the outcome of whiplash patients treatment

Factors influencing the outcome of whiplash patients treatment are shown in Table 53. Interestingly 14% chose to cease to attend, 46% had no other factors, and only 1% needed to change grade of physiotherapist.

Spondylotic patients

For patients with a diagnosis of spondylosis, the number of treatments ranged from 1-16 with a median number of treatments of 5 (SIQR 1.5) and a mode of 4 (see Table 54).

Over 50% of patients of patients with spondylosis scrored their actual functional outcome as being 8 or more on the 10 point scale (see Table 55).

The most common modalities used in the treatment of spondylosis were mobilisations (Maitland concept), advice and self-care, active exercises, education and advice

Achievement of standards

The standards set at the commencement of the audit were:

- Pain levels will be reduced by 4 or to 0, ie no pain at discharge, in 80% of patients.
- Functional ability will have increased by 2 or to full function at discharge in 95% of patients.
- 60% of patients will fully achieve or exceed their agreed goals within 6 treatments.

All referrals

Pain levels will be reduced by 4 or to 0, ie no pain at discharge, in 80% of the patient population

83.6% of all those referred had their pain reduced by 4 or to 0 at discharge. Therefore the standard was achieved.

Functional ability will have increased by 2 or to full function at discharge in 95% of the patient cohort.

82.5% of patients showed an increase of 2 in functional ability or full functional ability at discharge. Therefore the standard was not achieved.

60% of patients will fully achieve or exceed their agreed goals within 6 treatments

61% of patients fully achieved or exceeded their goals by discharge. However, only 48.3% achieved this within 6 treatments. Therefore the standard was not achieved.

Patients discharged normally

Pain levels will be reduced by 4 or to 0, ie no pain at discharge in 80% of patients.

69.7% of patients had their pain reduced by 4 or to 0 at discharge. Therefore the standard was not achieved.

Functional ability will have increased by 2 or to full function at discharge in 95% of the patient cohort.

86.4% of those normally discharged increased their functionally by 2 or reached full functional ability at discharge. Therefore the standard was not achieved.

60% of patients will fully achieve or exceed their agreed goals within 6 treatments.

72.7% of patients will fully achieve or exceed their agreed goals at discharge. In the normal population only 55.5% of patients achieved this within 6 treatments. Therefore the standard was not achieved.

Comments from Trusts on the Audit Tool and the Audit Process

Comments were invited from representatives of the participating trusts on the new tool and how it had worked in practice and also on the general process of the audit. These comments were made at a joint meeting held in February at the University of Brighton in 1999.

- 1. The second tool; the South Thames audit of physiotherapy intervention for spinal problems tool was easier to use than the original tool as it was found to be more clinically relevant and sensitive.
- 2. There was less ambiguity in the second tool than the first.
- 3. Section 19 this section proved to be difficult to use with patients who did not speak English. It was noted that it had been decided that an ethnicity box would not be included when designing the tool, which would have helped an interpretation of section 19.
- 4. The tool was generally found to be user friendly.
- 5. It was felt that 'patients perceived pain function and ability to work' section should be placed nearer the beginning of the audit form.
- 6. It was felt that the 'improvement in quality of life' section should be moved further towards the beginning of the summary sheet and it was also felt that the 'referral source' should be at the beginning of the summary sheet.
- 7. The end date for physiotherapy intervention should be moved to the end of the discharge summary sheet.
- 8. It was noted that the original tool had been designed to cover as many needs as possible from the perspective of administrators, clinicians, patients and managers. The second tool was found to be more clinically biased. Discussions took place as to whether more clinical standards should be developed as there is now a significant amount of information provided when using the current tool, which is not measured by any of the standards which have been set to date.
- 9. A number of areas were identified for further research throughout the meeting, one such area has been researched by a University of Brighton undergraduate student this year, which is an investigation into the 'Non-attendance' of patients referred to physiotherapy in two of the participating trusts.

General comments on the process related to the issues relating to tracking of forms. There seem to be in some instances, insufficient time for forms to be completed. This issue is currently being addressed at trust level. One trust felt that they had not completed enough forms by the due date and therefore fast-tracked patients with cervical spine dysfunction who were awaiting physiotherapy treatment in order to complete more audit forms by the due date. It was felt that this showed considerable commitment by the physiotherapy managers concerned.

Future directions

Several trusts have already utilised information from the low back pain audit and used them in their strategic planning. Several trusts are also considering using the recommendations and developing their own standards for future use.

Future work of the group will be to look to see how the audit can fit in to the continuous monitoring of competence and on standardising the basic levels of treatment that should be offered.

The project group is committed to staying together to allow recommendations to be actioned and to organise re-auditing when it is felt appropriate. Standards can now be re-written to an appropriate level. The project group, in the light of changes to the South Thames region, is now termed the Trans Regional Audit Forum group and may also be used in the future to raise research questions which could be addressed in multiple site research locations.

Commentary/Recommendations

- 1. The number of patient data sets returned by several trusts was disappointingly low. All trusts at the outset expressed enthusiasm for taking part in the audit. It was therefore surprising that such small returns were made by some. The reasons of this should be established. It may well relate to:
 - a. The management of the audit
 - b. Local staff issues
 - c. Staff training in the use of the tool
 - d. Perceived applicability and relevance of the tool to local practice
 - e. Patient throughput
 - f. Time needed to complete audit documentation
- 2. The highest age frequency of patients attending for treatment was found in the 40-49 age group indicative of a working age group. This group also showed the highest frequency of normal discharges. In view of the high proportion of non-attendees (see item 6), it would be important to ensure that the service caters for the needs of those in employment, who may well find difficulty in attending for appointments between 9 to 5. It is known that some departments already offer evening/early morning clinic appointments.
- 3. The highest frequency of recurrency of symptoms in patients was alarming. Recurrency however, may indicate patients who have suffered a recurring syndrome before seeking help from their GP or it may be that patients have had physiotherapy treatment before and that symptoms have recurred. Patients suffering cervical syndromes, and particularly those with traumatic aetiology may sometimes present with complex clinical manifestations involving sensory motor and sympathetic dysfunction, which may not always be apparent immediately after initial injury. It would be important therefore to ensure that all physiotherapy staff are acquainted with the rarer forms of clinical manifestations, eg. posterior cervical sympathetic syndrome, in order to comprehensively offer self-help and advice in the management and treatment of the presenting syndromes, to ensure that the recurring frequency is not due to ineffective physiotherapy management. It is also important and essential that patients with cervical spine symptoms are referred to physiotherapy as early as possible, and early referral by GP's is evident from the statistics given in the audit report. It may however, be a case for education of the potential patient population to recommend early consultation with their General Practitioner in respect of cervical spine orientated symptoms, in order to prevent or lower levels of chronicity exhibited within this cohort.
- 4. The diversity of physiotherapy diagnostic descriptions used by the participants in the audit was surprising. The descriptions often appeared idiosyncratic with particular therapists and with particular localities. This raises the question of ease of communication between physiotherapists, firstly in the same department but also within therapists between trusts and at a national and international level. This issue probably needs to be addressed urgently, at a local level initially, and possibly points to the need for a small working party to be set up, to establish a glossary of physiotherapy diagnostic terms, in an attempt to standardise terminology across the region. Actions should therefore be discussed by the audit team at its next meeting.
- 5. The waiting times for referral by General Practitioners to physiotherapists was low in the majority of cases, with a mode score of 0 and a median wait of 2 weeks, and patients waited, on average, only 3 weeks to see a physiotherapist, which was lower than expected. This may reflect the priority given, particularly to patients with

traumatic aetiology, although these figures were comparable to the waiting times seen in previous audit of low back pain.

- 6. Fifteen percent of patients were lost to the service through non-attendance of some kind. This figure is less than the percentage found in the previous audit of low back pain, however it is still high and obviously impacts on the effectiveness and efficiency of physiotherapy services. Trusts are encouraged to investigate locally, the reasons for non-attendance. Some pilot work has already been carried out by Wood & Moore (1999), and further trusts should consider instigating possible action plans to reduce non-attendance levels.
- 7. Consistency was shown in the choice of treatment modalities between physiotherapists and physiotherapy location. Some choices reflected obvious clinical speciality within the locality. The modality of preference by grade of physiotherapist was interesting in that Juniors tended to use more patient orientated modalities, ie advice and self-care, in preference to more passive modalities, eg. mobilisations. This may have reflected the type of patient allocated to junior staff. Perhaps the more complex cases being referred to more senior staff, or perhaps a shift in educational philosophy in institutes of higher education, or perhaps, even the reluctance of some junior staff to use other forms of treatment. This would be an interesting issue for local teams to look into.
- 8. The mode number of treatments of four appeared to show good efficiency of working within the service generally.
- 9. It was gratifying to note that expected function and actual functional outcome scores showed a strong relationship. Functional restoration scores generally improved, pain levels generally reduced and ability to work levels improved. There were however, some issues of data recording and the potential for inclusion of abhorrent data, with the 1-10 scores for functional ability, pain levels and ability to work. There appears to be examples in some returns where patient perceived scores of functional ability indicated a 10 point worsening of this ability. This may possibly have been the correct score but would have indicated a very unsatisfactory result for physiotherapy and it is more likely perhaps, that the scores were reversed. Comparable results were not evident in the ability to work scores. There is therefore an issue here for therapists who participated in the audit to ensure that their data entry is correct. Difficulties in interpretation of handwriting was noted in some instances, particularly in the physiotherapists diagnostic text field, where data inputters obviously had some difficulty in interpreting the correct terms.
- 10. Quality of life scores showed a minimal number of patients indicating a worsening of quality of life. This would equate with the 6.6% who were referred back to their GP or Consultant, and may also reflect worsening functional ability. Interestingly however, in the measurement of goal achievement, no patient was returned as being worse in this section.
- 11. Goal achievement generally was good with 69% signifying full achievement, or the exceeding of goals set within 1-6 treatments.
- 12. In terms of achievement of standards, the standards were not achieved in the patients who were normally discharged. Of note, is that 72% of patients were described as having a chronic problem, and it is therefore not surprising that standards were not achieved in this group. Additionally, there was little previous work available on which to base the standard setting, and it is therefore probable that the standards for this audit were set at too high a level. This audit data, however, now offers information on which to base more realistic standards for future audits.

References

Ball et al (1993) 'The Wirral formula: an effort and outcome measuring system for physiotherapists', abstract, *Physiotherapy*, 79(7)503

Bogduk N (1994) 'Cervical causes of headache and dizziness' in Boyling JD and Palastanga N, 'Grieves Modern Manual Therapy', 2nd Edition. Churchill Livingstone, Edinburgh

Department of Health (1989) Medical Audit, Working paper 6, HMSO London

Employment Department group. Office of Population, Census and Surveys 1990: Structure and definition of major, minor and unit groups, HMSO London

Juli G (1994) 'Cervical headache: A review' in Boyling JD and Palastanga N, Grieves Modern Manual Therapy', 2nd Edition. Churchill Livingstone, Edinburgh

Moore AP (1996) 'The development of the Mid Kent and Brighton Outcome Measurement Tool for Physiotherapy Services : A full report', University of Brighton. ISBN 1871966 54 X

Moore AP (1998) 'An audit of the outcome of physiotherapy intervention for outpatients with back pain against set clinical standards'.

NHS Circular (1989) (GEN) 29

NHS 1987 (CM3807) The New NHS: Modern Dependable. Stationery Office, HMSO London

Wood L, Moore AP (1999) 'Academic-clinical collaboration in pre research audit, research activity and implications for service delivery', Abstract submitted to the Chartered Society of Physiotherapy 1999 Annual Congress, Birmingham

Table 1a Frequency of referrals to each physiotherapy unit - All referrals

OPD location	Number	Percent
1	5	0.7%
2	42	6.2%
3	21	3.1%
5	18	2.7%
6	91	13.5%
7	34	5.0%
8	77	11.4%
9	40	5.9%
10	73	10.8%
11	74	11.0%
12	8	1.2%
13	28	4.2%
14	81	12.0%
15	24	3.6%
16	58	8.6%
Total	674	100.0%

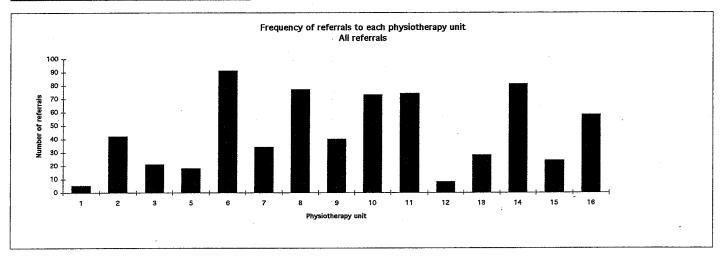


Table 1b Frequency of referrals to each physiotherapy unit - Patients discharged normally

OPD location	Number	Percent
1	3	0.6%
2	27	5.8%
3	10	2.2%
5	16	3.4%
6	48	10.3%
7	22	4.7%
8	56	12.1%
9	33	7.1%
10	47	10.1%
11	58	12.5%
12	4	0.9%
13	18	3.9%
14	66	14.2%
15	14	3.0%
16	42	9.1%
Total	464	100.0%

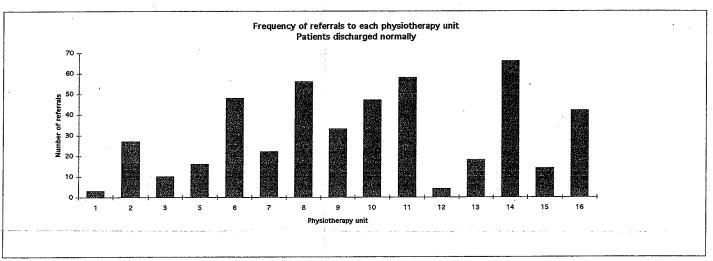


Table 2a Frequency of referrals by age group - All referrals

Age group	Number	Percent
0-9	9	1.4%
10-19	16	2.4%
20-29	54	8.2%
30-39	117	17.8%
40-49	148	22.5%
50-59	124	18.8%
60-69	97	14.7%
70-79	73	11.1%
80-89	21	3.2%
Total	659	100.0%

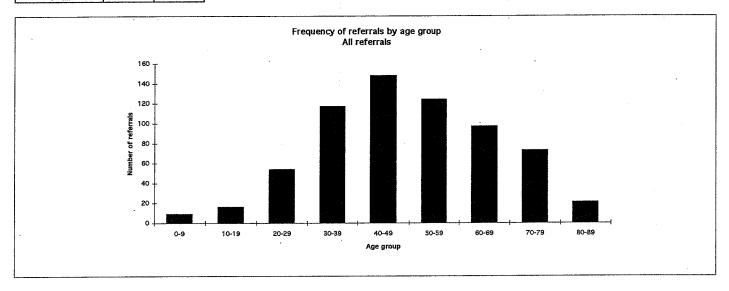


Table 2b Frequency of referrals by age group - Patients discharged normally

Age group	Number	Percent
0-9	2	0.4%
10-19	11	2.4%
20-29	36	7.8%
30-39	73	15.9%
40-49	98	21.3%
50-59	93	20.2%
60-69	72	15.7%
70-79	58	12.6%
80-89	17	3.7%
Total	460	100.0%

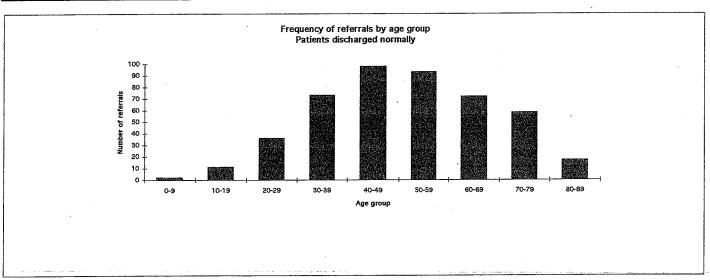


Table 3a Frequency of referrals by gender - All referrals

Gender	Number	Percent
FEMALE	421	63.6%
MALE	241	36.4%
Total	662	100.0%

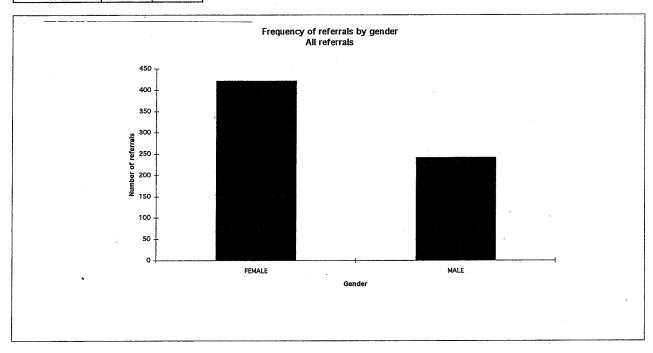


Table 3b Frequency of referrals by gender - Patients discharged normally

Gender	Number	Percent
FEMALE	291	63.1%
MALE	170	36.9%
Total	461	100.0%

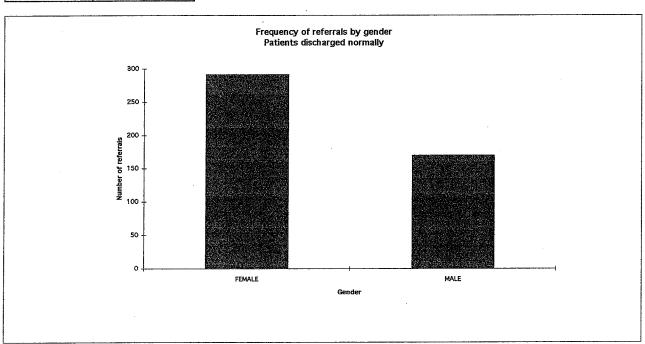


Table 4a Frequency of referrals by gender and age group - All referrals

Age group	Female	Male	Total
0-9	5	4	9
10-19	12	4	16
20-29	37	17	54
30-39	82	33	115
40-49	99	47	146
50-59	77	47	124
60-69	57	40	97
70-79	36	37	73
80-89	11	10	21
Total	416	239	655

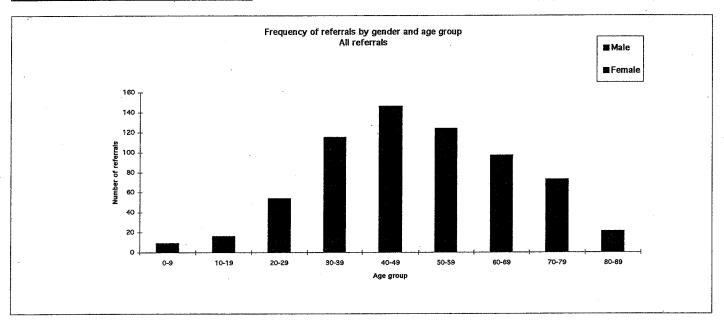


Table 4b Frequency of referrals by gender and age group - Patients discharged normally

Age group	Female	Male	Total
0-9	1	1	2
10-19	8	3	11
20-29	23	13	36
30-39	52	. 20	72
40-49	70	26	96
50-59	59	34	93
60-69	39	33	72
70-79	28	30	58
80-89	8	9	17
Total	288	169	457

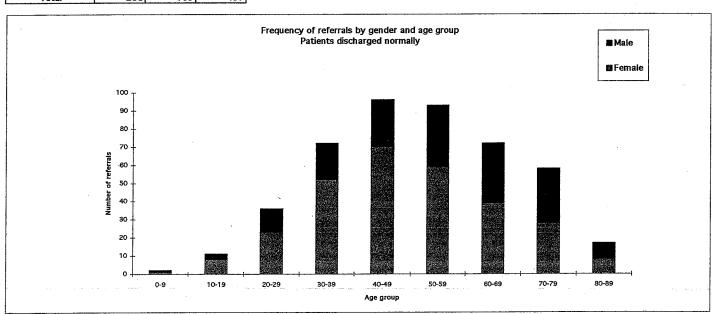


Table 5a Frequency of referrals by occupation - All referrals

Occupation	Number	Percent
Associate Professional	64	10.5%
Clerical/ Secretarial	74	12.2%
Craft & Related	39	6.4%
Houseperson> 2 years	61	10.0%
Manager/Administrator	34	5.6%
Other	42	6.9%
Plant/Machine Operator	19	3.1%
Professional	36	5.9%
Retired>2yrs	139	22.9%
Sales	27	4.4%
School Person	6	1.0%
Service	37	6.1%
Student HE/FE	7	1.2%
Unemployed >2 years	23	3.8%
Total	608	100.0%

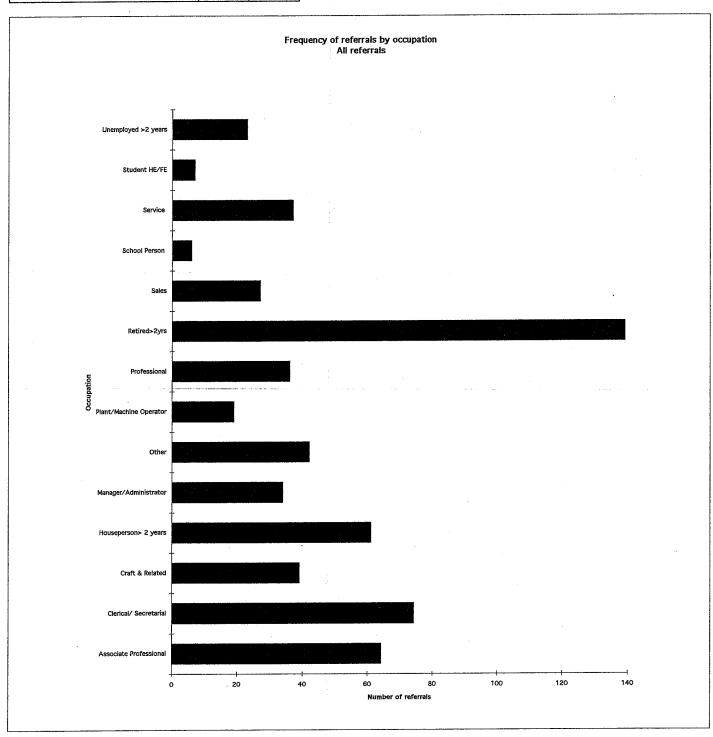


Table 5b Frequency of referrals by occupation - Patients discharged normally

Occupation	Number	Percent
Associate Professional	48	11.1%
Clerical/ Secretarial	57	13.2%
Craft & Related	20	4.6%
Houseperson> 2 years	41	9.5%
Manager/Administrator	25	5.8%
Other	31	7.2%
Plant/Machine Operator	15	3.5%
Professional	27	6.3%
Retired>2yrs	105	24.3%
Sales	16	3.7%
School Person	6	1.4%
Service	24	5.6%
Student HE/FE	4	0.9%
Unemployed >2 years	13	3.0%
Total	432	100.0%

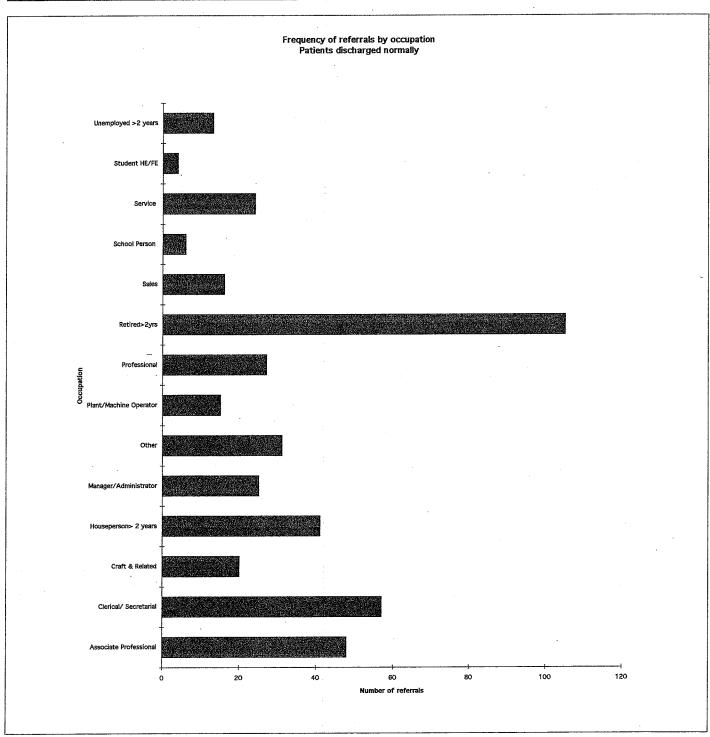


Table 6a Frequency of referrals by occupation and physiotherapy location - All referrals

OPD LOCATION 16 Total OCCUPATION Associate Professional Clerical/ Secretarial Craft & Related Houseperson> 2 years Manager/Administrator Other Plant/Machine Operator 8 Professional Retired>2yrs Sales School Person Service Student HE/FE Unemployed >2 years

Table 6b Frequency of referrals by occupation and physiotherapy location - Patients discharged normally

				OPD	LOCATIO	ON										
OCCUPATION	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	Total
Associate Professional	1	4	1	2	9	1	7	3	3	4	0	3	4	3	3	48
Clerical/ Secretarial	2	2	0	2	6	4	10	3	6	9	0	0	8	2	3	57
Craft & Related	o	0	0	1	2	2	3	1	2	4	0	1	3	0	1	20
Houseperson> 2 years	0	5	1	0	3	2	8	1	8	5	2	0	6	0	0	41
Manager/Administrator	0	1	0	0	4	. 1	4	2	2	2	0	1	6	0	2	25
Other	0	0	1	. 1	2	3	3	4	4	2	1	1	1	3	5	31
Plant/Machine Operator	0	3	0	. 0	3	0	0	0	. 3	. 3	. 0	0	2	_1	0	
Professional	0	1	2	0	4	0	3	2	3	3	0	2	6	0	1	27
Retired>2yrs	0	7	2	5	9	5	9	12	5	16	1	4	14	3	13	105
Sales	0	0	1	1	1	1	2	1	0	2	0	1	4	0	2	16
School Person	o	0	0	0	1	0	0	0	1	.0	0	이	2	0	. 2	6
Service	O	2	0	0	0	0	3	2	4	4	0	2	4	1	2	24
Student HE/FE	0	0	0	0	1	1	0	0	1	0	0	0	1	0	0	4
Unemployed >2 years	0	1	1	0	0	0	2	1	4	3	0	1	0	0	0	
Total	3	26	9	12	45	20	54	32	46	57	4	16	61	13	34	432

Table 7a Frequency of referrals by episode group - All referrals

Episode	Number	Percent		
1ST EPISODE	340	53.5%		
RECURRENT	296	46.5%		
Total	636	100.0%		

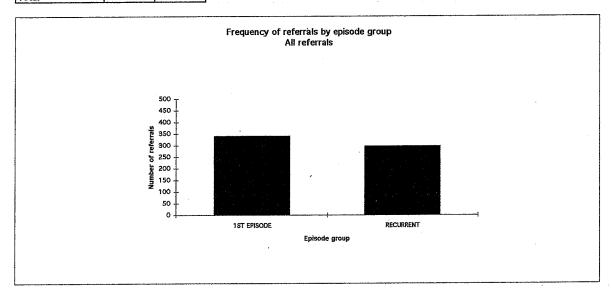


Table 7b Frequency of referrals by episode group - Patients discharged normally

Episode	Number	Percent
1 ST EPISODE	239	52.2%
RECURRENT	216	47.5%
Total	455	100.0%

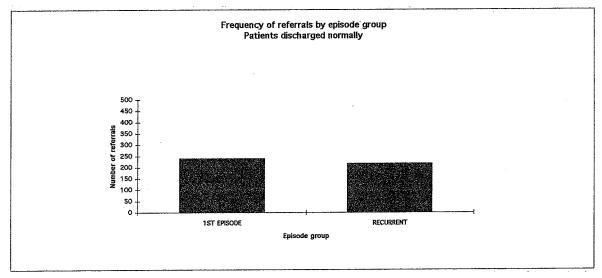


Table 8a Frequency of referrals by chronicity - All referrals

Chronicity	Number	Percent
Acute	177	27.7%
Chronic	461	72.3%
Total	638	100.0%

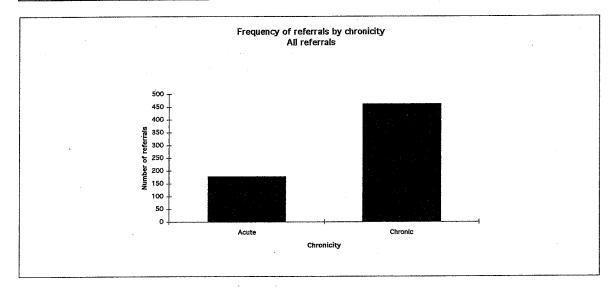


Table 8b Frequency of referrals by chronicity - Patients discharged normally

Chronicity	Number	Percent
Acute	125	27.5%
Chronic	330	72.5%
Total	455	100.0%

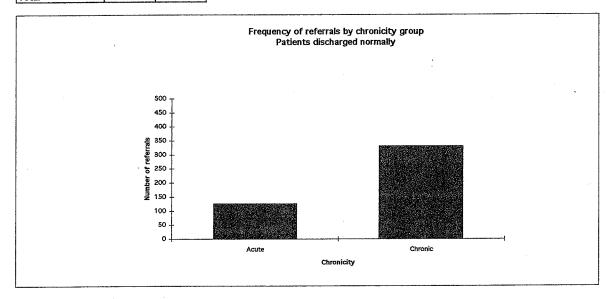


Table 9a Frequency of referrals by general diagnostic aetiology - All referrals

General diagnosis aetiology	Number	Percent
CONGENITAL	3	0.5%
DEGENERATIVE	273	42.1%
INFLAMMATORY	36	5.5%
PATHOLOGICAL	9	1.4%
POSTURAL	104	16.0%
PSYCHOGENIC	1	0.2%
SPONTANEOUS ONSET	69	10.6%
TRAUMATIC	154	23.7%
Total	649	100.0%

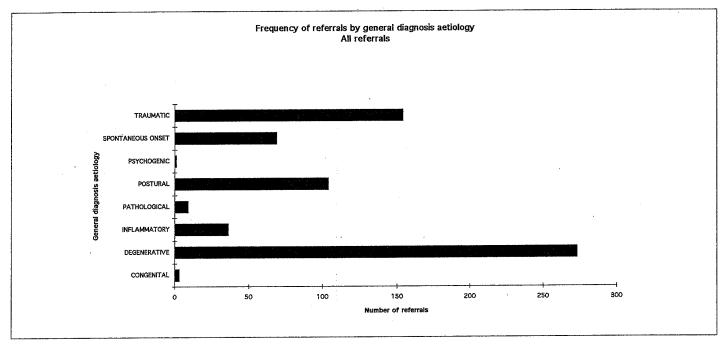


Table 9b Frequency of referrals by general diagnosis aetiology - Patients discharged normally

General diagnosis aetiology	Number	Percent
CONGENITAL	1	0.2%
DEGENERATIVE	213	45,9%
INFLAMMATORY	21	4.5%
PATHOLOGICAL	4	0.9%
POSTURAL	72	15.5%
SPONTANEOUS ONSET	46	9.9%
TRAUMATIC	107	23.1%
Total	464	100.0%

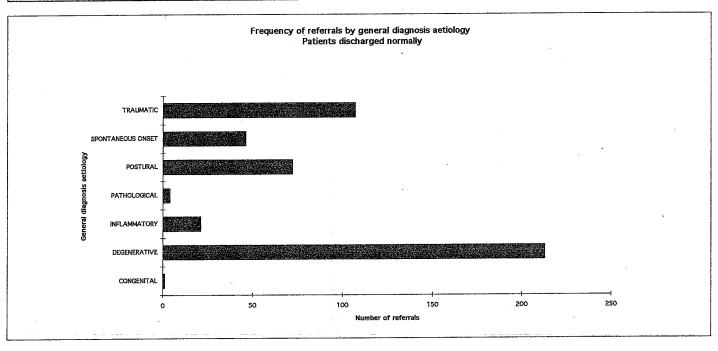


Table 10a Frequency of referrals by specific diagnosis - All referrals

Specific diagnosis	Number	Percent
ACUTE TORTICOLLIS	17	2.6%
ARTHROSIS	14	2.2%
BONY INJURY	4	0.6%
CERVICAL RIB	3	0,5%
DISC LESION	8	1.2%
DISC LESION AND NEURO	16	2.5%
INSTABILITY	4	0.6%
JOINT DYSFUNCTION PAIN	98	15.1%
JOINT INJURY	3	0.5%
KYPHOLORDOSIS	3	0.5%
KYPHOSIS	6	0.9%
MUSCLE DYSFUNCTION PAIN	57	8.8%
NERVE IMPINGEMENT	50	7.7%
NERVE INJURY	2	0.3%
NEURODYNAMIC PROBLEM	17	2.6%
OSTEOPOROSIS	2	0.3%
OTHER TRAUMA	8	1.2%
RHEUMATOID ARTHRITIS	14	2.2%
SCOLIOSIS	1	0.2%
SOFT TISSUE, JOINT & BONE	9	1.4%
SOFT TISSUE INJURY	12	1.9%
SPONDYLOSIS & ARTHROSIS	64	9.9%
SPONDYLOLITHESIS	1	0.2%
SPONDYLOSIS	124	19.2%
WHIPLASH	110	17.0%
·	647	100.0%

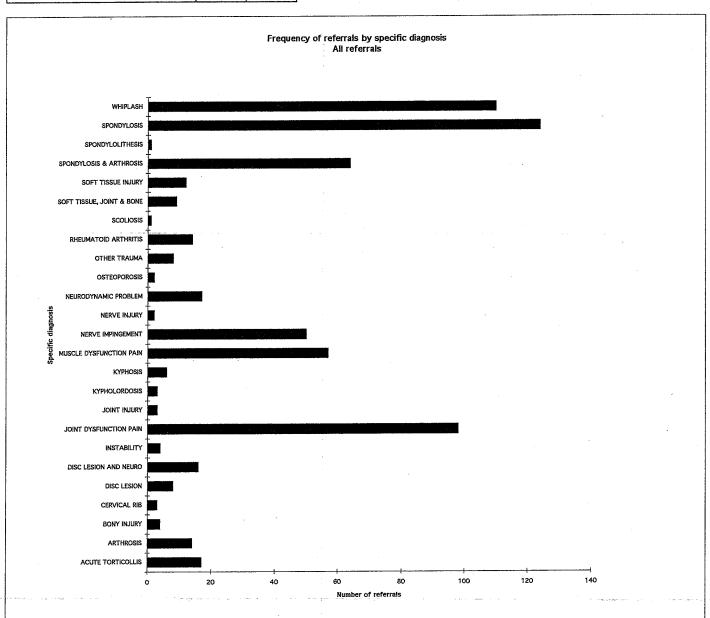


Table 10b Frequency of referrals by specific diagnosis -Patients discharged normally

Specific diagnosis	Number	Percent
ACUTE TORTICOLLIS	14	3.0%
ARTHROSIS	11	2.4%
BONY INJURY	3	0.6%
CERVICAL RIB	1	0.2%
DISC LESION	5	1.1%
DISC LESION AND NEURO	13	2.8%
INSTABILITY	3	0.6%
JOINT DYSFUNCTION PAIN	71	15.3%
JOINT INJURY	2	0.4%
KYPHOLORDOSIS	1	0.2%
KYPHOSIS	3	0.6%
MUSCLE DYSFUNCTION PAIN	44	9.5%
NERVE IMPINGEMENT	34	7.3%
NEURODYNAMIC PROBLEM	13	2.8%
OSTEOPOROSIS	2	0.4%
OTHER TRAUMA	4	0.9%
RHEUMATOID ARTHRITIS	8	1.7%
SCOLIOSIS	1	0.2%
SOFT TISSUE, JOINT & BONE	3	1.1%
SOFT TISSUE INJURY	12	2.6%
SPONDYLOSIS & ARTHROSIS	45	9.7%
SPONDYLOLITHESIS	1	0.2%
SPONDYLOSIS	92	19.9%
WHIPLASH	75	16.2%
Total	463	100.0%

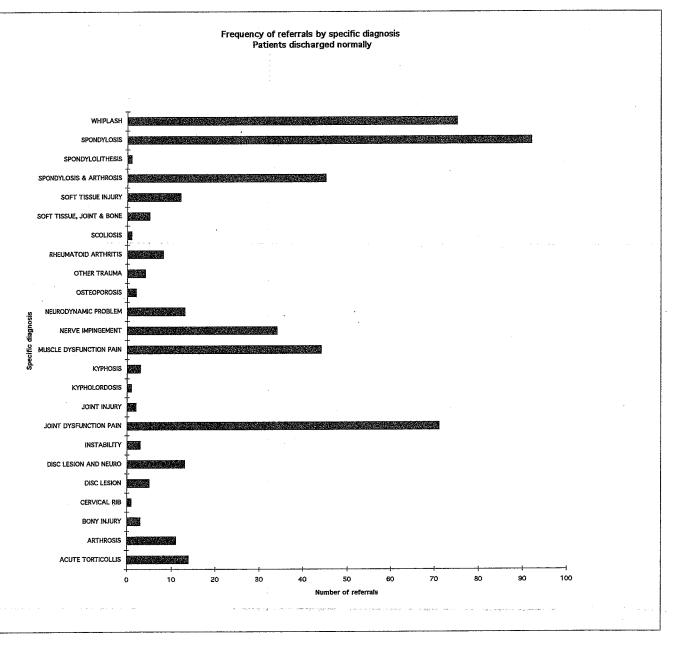


Table 11a(1) Frequency of referrals by body site (1) - All referrals

Body site	Number	Percent
CERV. SPINE + REF. ELBOW	24	3.7%
CERV. SPINE + REF. HAND	124	19.2%
CERV. SPINE + REF. HEAD	31	4.8%
CERV. SPINE + REF. SHOULDER	214	33.1%
CERV. SPINE + REF. WRIST	25	3.9%
CERVICAL SPINE	137	21.2%
OCCIPITAL	40	6.2%
OCCIPITO-FRONTAL	9	1.4%
PARIETAL	. 4	0.6%
TEMPORAL	10	1.5%
UPPER THOR. + REF. THORAX	4	0.6%
UPPER THOR. + REF.UPPER LIMB	12.	1.9%
UPPER THORACIC	13	2.0%
Total	647	100.0%

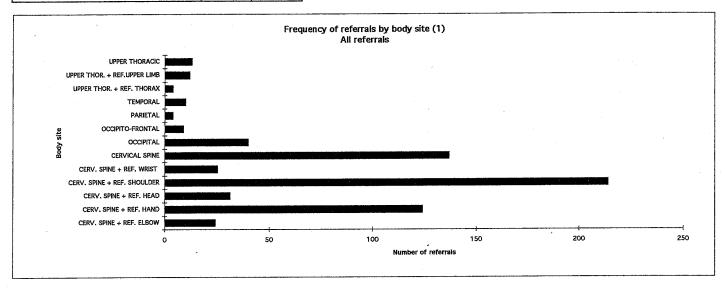


Table11b(1) Frequency of referrals by body site (1) - Patients discharged normally

Body site	Number	Percent
CERV. SPINE + REF. ELBOW	13	2.8%
CERV. SPINE + REF. HAND	87	18.9%
CERV. SPINE + REF. HEAD	24	5.2%
CERV. SPINE + REF. SHOULDER	160	34.7%
CERV. SPINE + REF. WRIST	17	3.7%
CERVICAL SPINE	101	21.9%
OCCIPITAL.	29	6.3%
OCCIPITO-FRONTAL	6	1.3%
PARIETAL	3	0.7%
TEMPORAL.	8	1.7%
UPPER THOR. + REF.UPPER LIMB	7	1.5%
UPPER THORACIC	6	1.3%
THORACIC + REFERRAL	6	1.8%
Total	461	100.0%

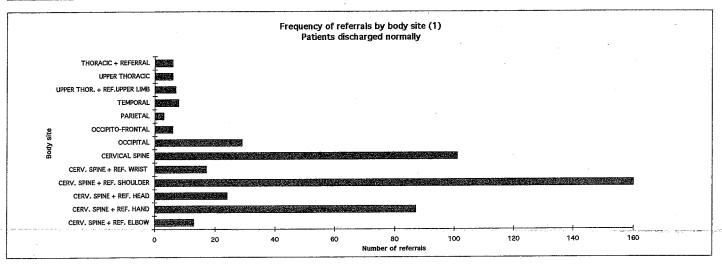


Table 11a(2) Frequency of referrals by body site (2) - All referrals

Body site	Number	Percent
CERV. SPINE + REF. ELBOW	15	5.9%
CERV. SPINE + REF. HAND	24	9.5%
CERV. SPINE + REF. HEAD	26	10.3%
CERV. SPINE + REF. SHOULDER	27	10.7%
CERV. SPINE + REF. WRIST	9	3.6%
CERVICAL SPINE	23	9.1%
LUM, SPINE + REF. BUTTOCK	2	0.8%
LUM. SPINE + REF. FOOT	1	0.4%
LUM, SPINE + REF. THIGH	3	1.2%
LUMBAR SPINE	5	2.0%
MANDIBULAR	1	0.4%
OCCIPITAL	15	5.9%
OCCIPITO-FRONTAL	12	4.7%
PARIETAL	5	2.0%
TEMPORAL	14	5.5%
UPPER THOR. + REF. THORAX	7	2.8%
UPPER THOR. + REF.UPPER LIMB	13	5.1%
UPPER THORACIC	51	20.2%
Total	253	100.0%

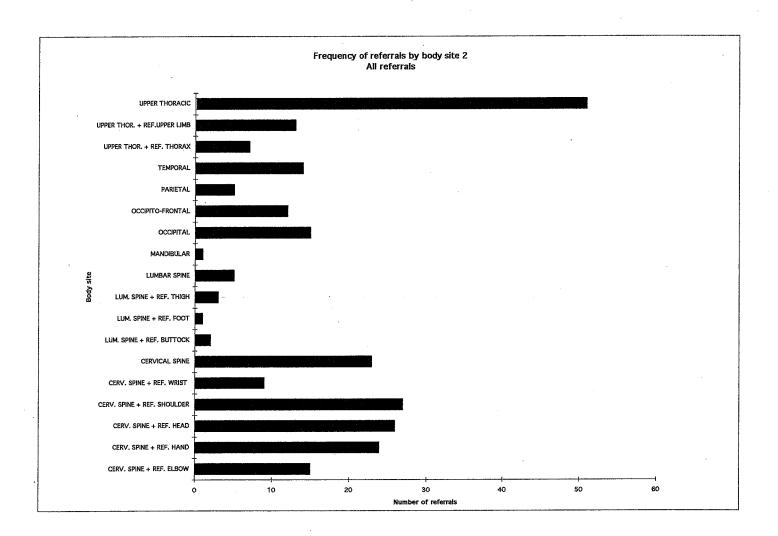


Table 11b(2) Frequency of referrals by body site (2) - Patients discharged normally

Body site	Number	Percent
CERV. SPINE + REF. ELBOW	11	6.3%
CERV. SPINE + REF. HAND	14	8.0%
CERV. SPINE + REF. HEAD	20	11.4%
CERV. SPINE + REF. SHOULDER	. 20	11.4%
CERV. SPINE + REF. WRIST	7	4.0%
CERVICAL SPINE	15	8.6%
LUM, SPINE + REF. THIGH	1	0.6%
LUMBAR SPINE	4	2.3%
MANDIBULAR	1	0.6%
OCCIPITAL	9	5.1%
OCCIPITO-FRONTAL	9	5.1%
PARIETAL	2	1.1%
TEMPORAL.	13	7.4%
UPPER THOR. + REF. THORAX	6	3.4%
UPPER THOR. + REF.UPPER LIMB	. 8	4.6%
UPPER THORACIC	35	20.0%
Total	175	100.0%

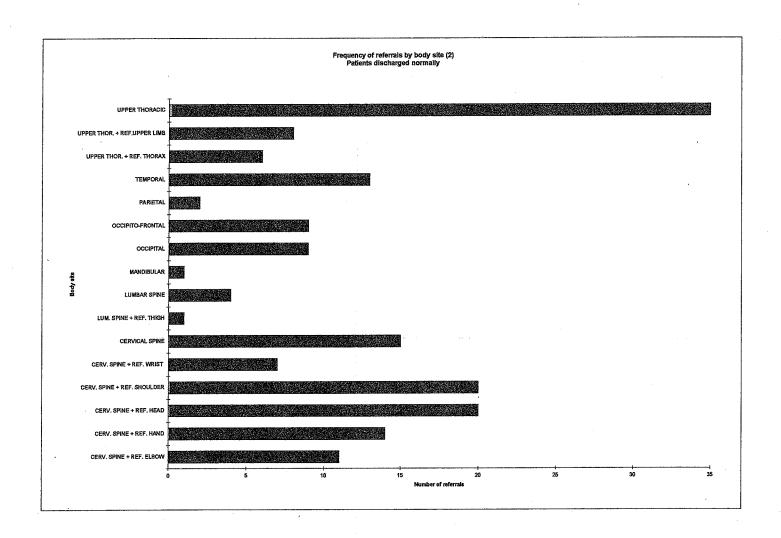


Table 11a(3) Frequency of referrals by body site (3) - All referrals

Body site	Number	Percent
CERV. SPINE + REF. ELBOW	4	6.7%
CERV. SPINE + REF. HAND	5	8.3%
CERV. SPINE + REF. SHOULDER	9	15.0%
CERV. SPINE + REF. WRIST	9	15.0%
CERVICAL SPINE	3	5.0%
LUM. SPINE + REF. BUTTOCK	2	3.3%
LUM. SPINE + REF. FOOT	3	5.0%
LUM. SPINE + REF. KNEE	1	1.7%
LUMBAR SPINE	5	8.3%
OCCIPITAL	3	5.0%
OCCIPITO-FRONTAL	2	3.3%
TEMPORAL	5	8.3%
UPPER THOR. + REF. THORAX	3	5.0%
UPPER THORACIC	6	10.0%
Total	60	100.0%

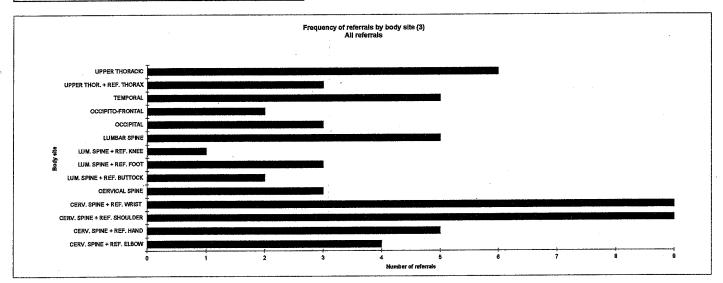


Table 11b(3) Frequency of referrals by bodysite (3) - Patients discharged normally

Body site	Number	Percent
CERV. SPINE + REF. ELBOW	4	9.1%
CERV. SPINE + REF. HAND	4	9.1%
CERV. SPINE + REF. SHOULDER	8	18.2%
CERV. SPINE + REF. WRIST	6	13.6%
CERVICAL SPINE	2	4.5%
LUM. SPINE + REF. FOOT	2	4.5%
LUM. SPINE + REF. KNEE	1	2.3%
LUMBAR SPINE	5	11.4%
OCCIPITAL	2	4.5%
OCCIPITO-FRONTAL	1	2.3%
TEMPORAL	3	6.8%
UPPER THOR. + REF. THORAX	1	2.3%
UPPER THORACIC	5	11.4%
Total	44	100.0%

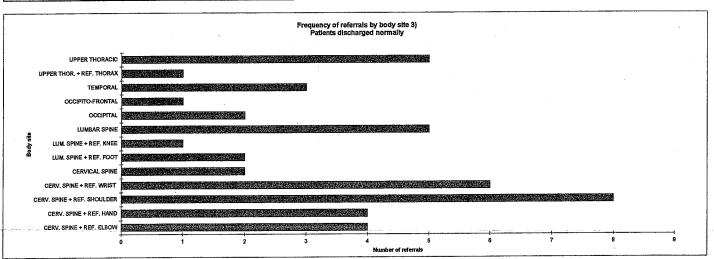


Table 11a(4) Frequency of referrals by body site (4) - All referrals

Body site	Number	Percent
CERV. SPINE + REF. HAND	7	43.8%
CERV. SPINE + REF. SHOULDER	4	25.0%
CERVICAL SPINE	2	12.5%
LUM. SPINE + REF. BUTTOCK	1	6.3%
LUMBAR SPINE	1	6.3%
UPPER THOR. + REF. THORAX	1	6.3%
Total	16	100.0%

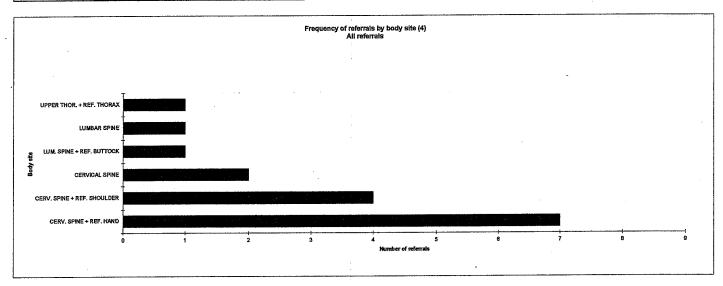


Table 11b(4) Frequency of referrals by body site (4) - Patients discharged normally

Body site	Number	Percent
CERV. SPINE + REF. HAND	4	40.0%
CERV. SPINE + REF. SHOULDER	3	30.0%
CERVICAL SPINE	1	10.0%
LUM. SPINE + REF. BUTTOCK	1	10.09
UPPER THOR. + REF. THORAX	1	10.09
Total	10	100.09

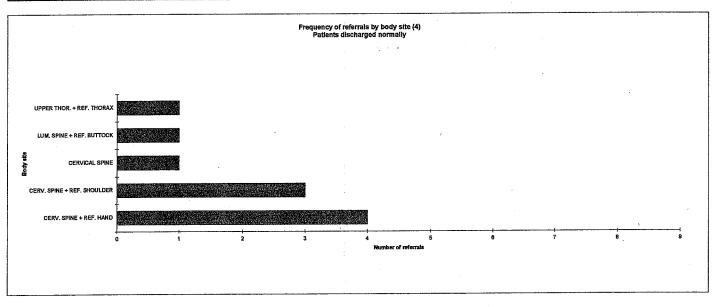


Table 12a Frequency of referrals by origin - All referrals

Origin	Number	Percent
NERVE ROOT	345	60.1%
SPINAL CORD	12	2.1%
OTHER	217	37.8%
Total	357	62,2%

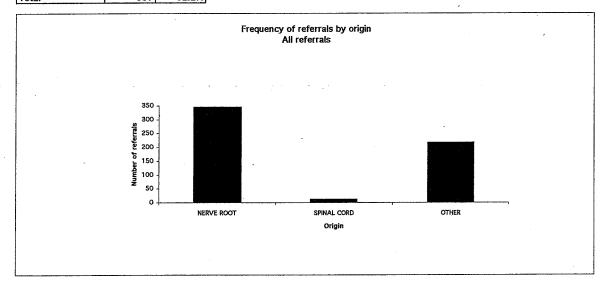


Table 12b Frequency of referrals by origin - Patients discharged normally

Origin	Number	percent
NERVE ROOT	232	- 57%
SPINAL CORD	8	2.0%
OTHER ORIGIN	166	40.9%
Total	240	59.1%

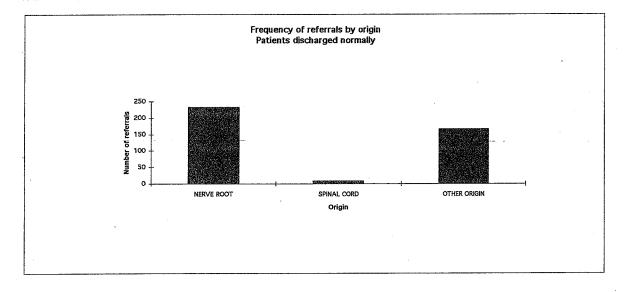


Table 13a Frequency of referrals by laterality - All referrals

Laterality	Number	Percent
BILATERAL	275	43.9%
UNILATERAL	351	56.1%
Total	626	100.0%

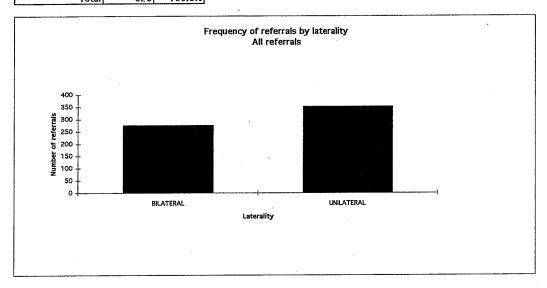


Table 13b Frequency of referrals by laterality - Patients discharged normally

Laterality	Number	Percent
BILATERAL	181	40.5%
UNILATERAL	266	59.5%
Total	447	100.0%

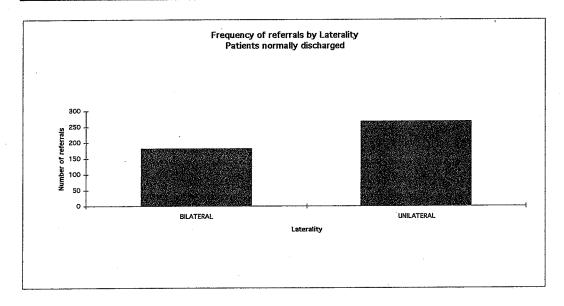


Table 14a(1) Frequency of referrals by level (1) - All referrals

Level	Number	Percent
CO-C1	30	4.7%
C1-C2	29	4.6%
C2-C3	42	6.6%
C3-C4	48	7.6%
C4-C5	69	10.9%
C5-C6	97	15.3%
C6-C7	93	14.6%
C7-T1	59	9.3%
T1-T2	7	1.1%
T2-T3	4	0.6%
T3-T4	4	0.6%
T4-T5	3	0.5%
T5-T6	2	0.3%
T6-T7	3	0.5%
T7-T8	1	0.2%
L2-L3	1	0.2%
MULTIPLE	143	22.5%
Total	491	100.0%

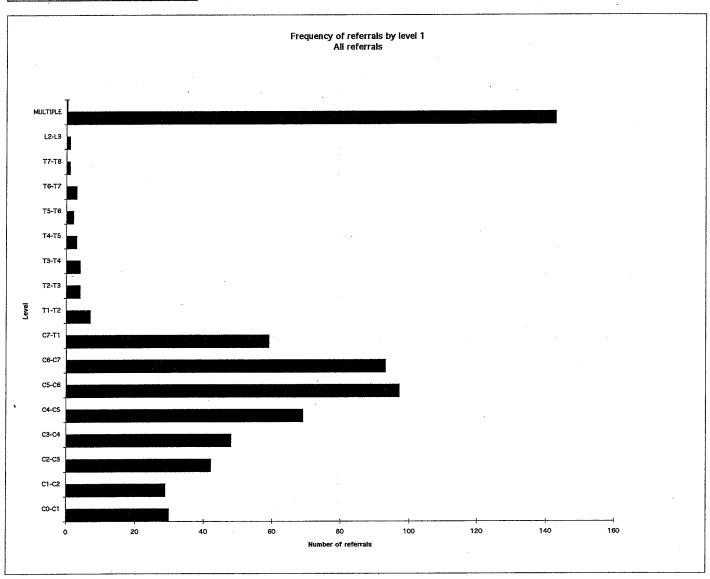


Table 14b(1) Frequency of referrals by level (1) - Patients discharged normally

Level	Number	percent
C0-C1	23	5.1%
C1-C2	25	5.5%
C2-C3	33	7.3%
C3-C4	36	7.9%
C4-C5	51	11.2%
C5-C6	68	14.9%
C6-C7	71	15.6%
C7-T1	. 45	9.9%
T1-T2	5	1.1%
T2-T3	3	0.7%
T4-T5	1	0.2%
T5-T6	2	0.4%
T6-T7	3	0.7%
L2-L3	1	0.2%
MULTIPLE	88	19,3%
Total	366	80.5%

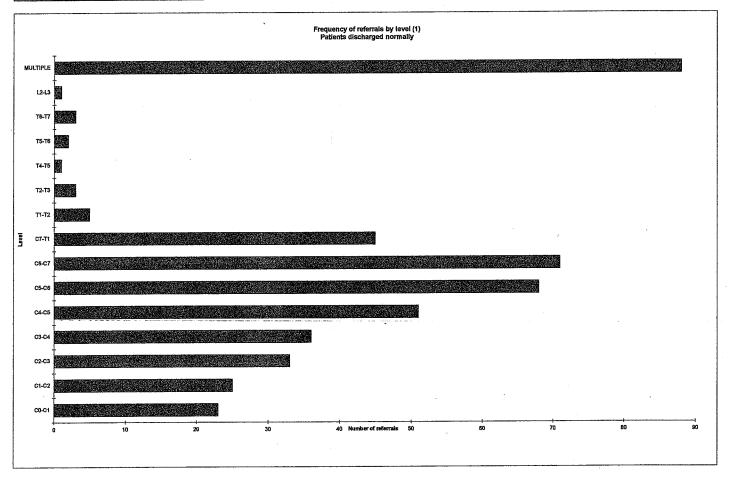


Table 14a(2) Frequency of referrals by level (2) - All referrals

Level	Number	Percent
CO-C1	2	0.6%
C1-C2	24	7.5%
C2-C3	15	4.7%
C3-C4	28	8.7%
C4-C5	30	9.3%
C5-C6	46	14.3%
C6-C7	63	19.6%
C7-T1	59	18.3%
T1-T2	20	6.2%
T2-T3	9	2.8%
T3-T4	6	1.9%
T4-T5	5	1.6%
T5-T6	3	0.9%
T6-T7	3	0.9%
T7-T8	1	0.3%
T8-T9	1	0.3%
L2-L3	1	0.3%
MULTIPLE	6	1.9%
Total	315	100.0%

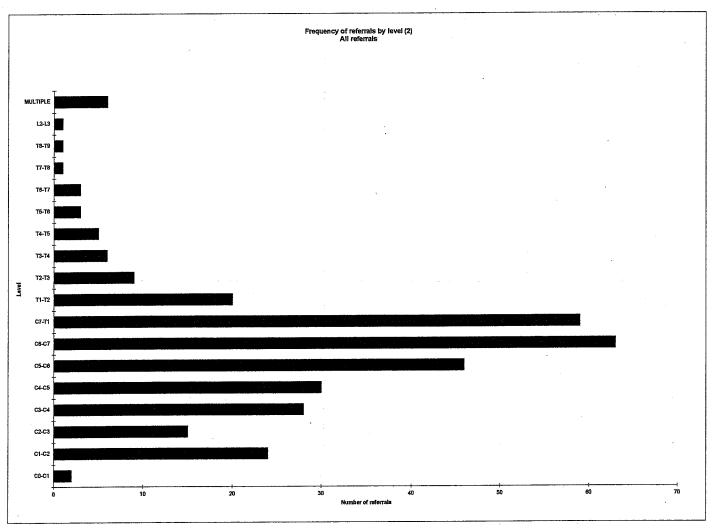


Table 14b(2) Frequency of referrals by level (2) - Patients discharged normally

Level	Number	Percent
C0-C1	1	0.4%
C1-C2	16	6.8%
C2-C3	13	5.5%
C3-C4	18	7.6%
C4-C5	21	8.9%
C5-C6	33	13.9%
C6-C7	49	20.7%
C7-T1	44	18.6%
T1-T2	16	6.8%
T2-T3	6	2.5%
T3-T4	6	2.5%
T4-T5	4	1.7%
T5-T6	2	0.8%
T6-T7	. 2	0.8%
T7-T8	1	0.4%
MULTIPLE	5	2.1%
Total	237	100.0%

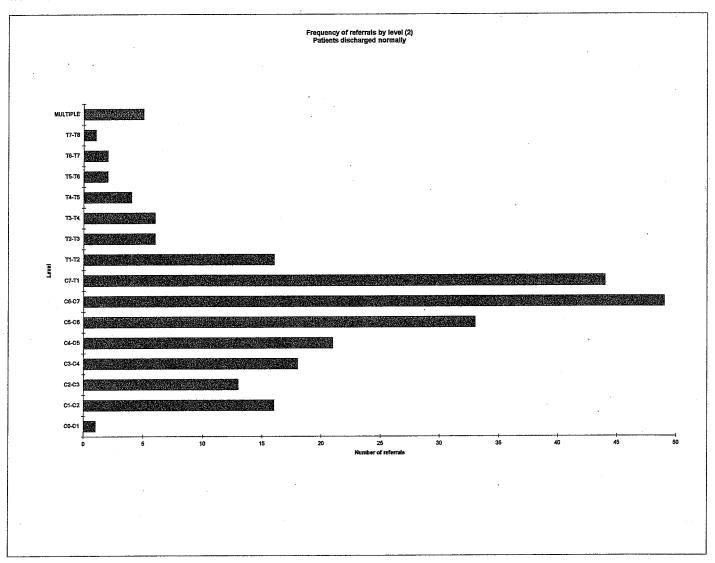


Table 14a(3) Frequency of referrals by level (3) - All referrals

Level	Number	Percent
C0-C1	4	2.0%
C1-C2	11	5.5%
C2-C3	4	2.0%
C3-C4	17	8.5%
C4-C5	20	10.1%
C5-C6	35	17.6%
C6-C7	30	15.1%
C7-T1	1	0.5%
T1-T2	28	14.1%
T2-T3	14	7.0%
T3-T4	13	6.5%
T4-T5	8	4.0%
T5-T6	3	1.5%
T6-T7	2	1.0%
T7-T8	3	1.5%
T8-T9	1	0.5%
T9-T10	2	1.0%
L4-L5	1	0.5%
MULTIPLE	2	1.0%
Total	196	100.0%

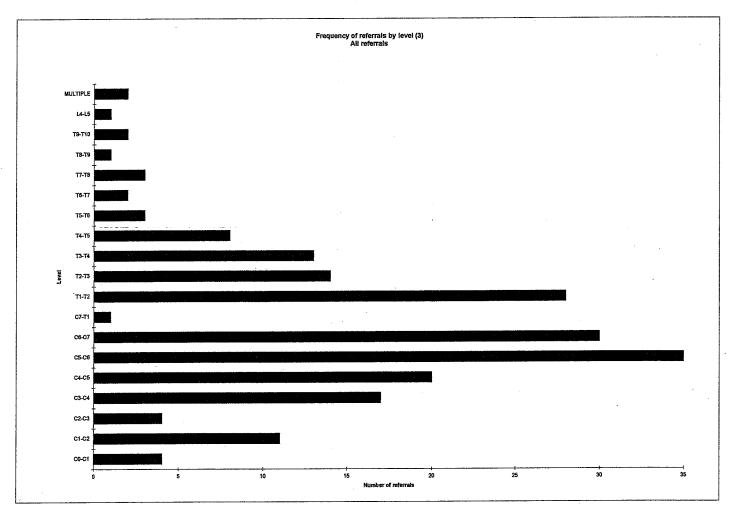


Table 14b(3) Frequency of referrals by level (3) - Patients discharged normally

Level	Number	Percent
C1-C2	2	1.4%
C2-C3	10	6.8%
C3-C4	4	2.7%
C4-C5	10	6.8%
C5-C6	14	9.6%
C6-C7	28	19.2%
C7-T1	24	16.4%
T1-T2	18	12.3%
T2-T3	11	7.5%
T3-T4	9	6.2%
T4-T5	6	4.1%
T5-T6	2	1.4%
T6-T7	1	0.7%
T7-T8	3	2.1%
T9-T10	1	0.7%
L4-L5	1	0.7%
MULTIPLE	2	1.4%
Total	146	100.0%

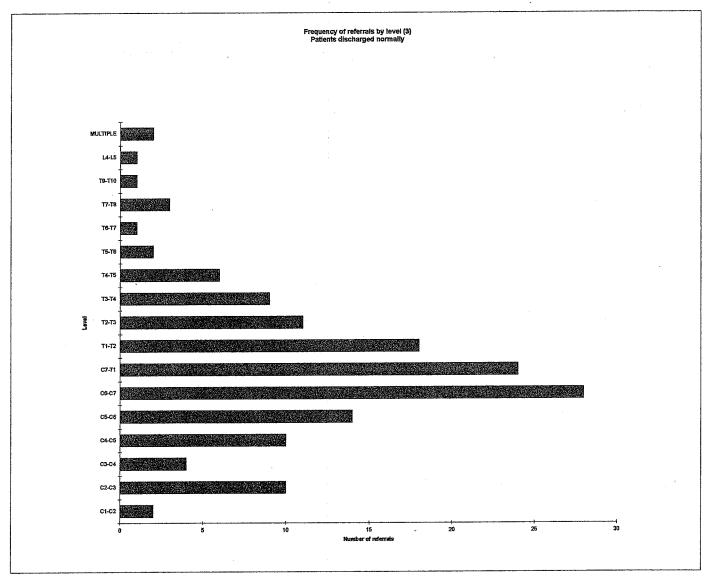


Table 15a Frequency of wait in weeks from consultation with GP to referral to physiotherapy - All referrals

Length of wait	Number	Percent
	163	27.8%
	88	15.0%
	45	7.7%
	29	4.9%
	40	6.8%
	17	2.9%
	19	3.2%
7	11	1.9%
	1	5,3%
9	5	0.9%
10		2.7%
11	1	0.9%
12	1	2.9%
13	1	0.5%
` 14	4	1.0%
13	3	0.5%
16	1 :	0.7%
17	7 2	0.3%
18	1	0.3%
. 20	7	1.2%
21	1	0.2%
22	2 2	0.3%
23	2	0.3%
24	1 8	1.4%
25	6	1.0%
26	4	0.7%
28	2	0.3%
30	5	0.9%
31	1	0.2%
32	2	0.3%
3.5	2	0.3%
36	1	0.2%
44	1	0.2%
45	1	0.2%
50	4	0.7%
52	10	1.7%
60	2	0.3%
61	1	0.2%
70	1	0.2%
72	1	0.2%
75	1	0.2%
. 78	2	0.3%
83	1	0.2%
100	1 1	- 0.7%
104	1 1	0.5%
156	1 1	0.3%
365	1 1	0.2%
420	1 1	0.2%
520		0.2%
Total	586	100.0%

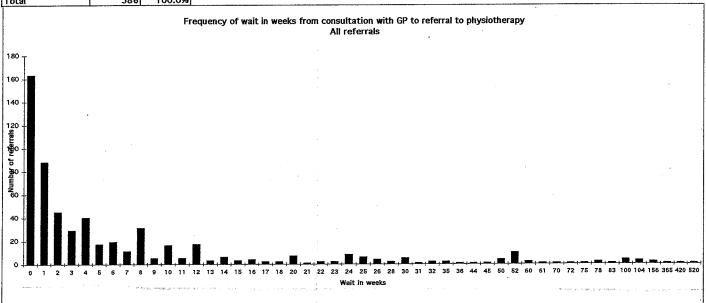


Table 15b Frequency of wait in weeks from consultation with GP to referral to physiotherapy Patients discharged normally

I		Alexandr	Dorgo-t
Length of wait		Number	Percent
	0	125	29.4%
	1	62	14.6%
	2	32	7.5%
	3	23	5.4%
	4	31	7.3%
	5	15	3.5%
	6	12	2.8%
	7	, 7	1.6%
	8	21	4.9%
,	9	4	0.9%
	10	13	3.1%
	11	3	0.7%
	12	11	2.6%
	13	2	0.5%
	14	6	1.4%
	15	2	0.5%
	16	1	0.2%
	17	2	0.5%
	20	4	0.9%
	22	2	0.5%
	23	1	0.2%
	24	4	0.9%
	25	4	0.9%
	28	2	0.5%
	30	3	0.7%
	31	1	0.2%
	32	1	0.2%
	35	2	0.5%
	36	1	0.2%
	44	1	0.2%
	45	1	0.2%
	50	3	0.7%
	52	10	2,4%
	60	1	0.2%
	61	1	0.2%
	72	1	0.2%
	78	1	0.2%
	100	3	0.7%
	104	3	0.7%
	156	1	0.2%
	420	1	0.2%
	520	1	0.2%
Total		425	100.0%

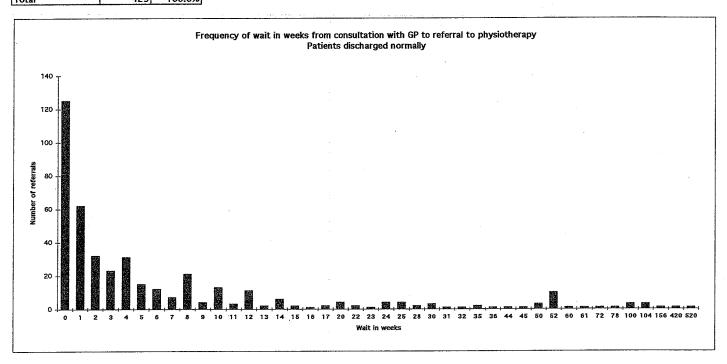


Table 16a Length of wait in weeks from referral to commencement of physiotherapy - All referrals

Length of wait	Number	Percent
0	. 55	8.6%
1	112	17.4%
2	103	16.0%
3	55	8.6%
4	64	10.0%
5	47	7.3%
6	40	6.2%
7	28	4.4%
8	27	4.2%
9	13	2.0%
10	19	3.0%
11	19	3.0%
12	12	1.9%
13	13	2.0%
14	3	0.5%
15	3	0.5%
16	5	0.8%
18	1	0.2%
20	5	0.8%
21	1	0.2%
22	2	0.3%
23	2	0.3%
24	3	0.5%
25	2	0.3%
27	1	0.2%
29	1	0.2%
30	2	0.3%
32	2	0.3%
34	1	0.2%
40	1	0.2%
	642	100.0%

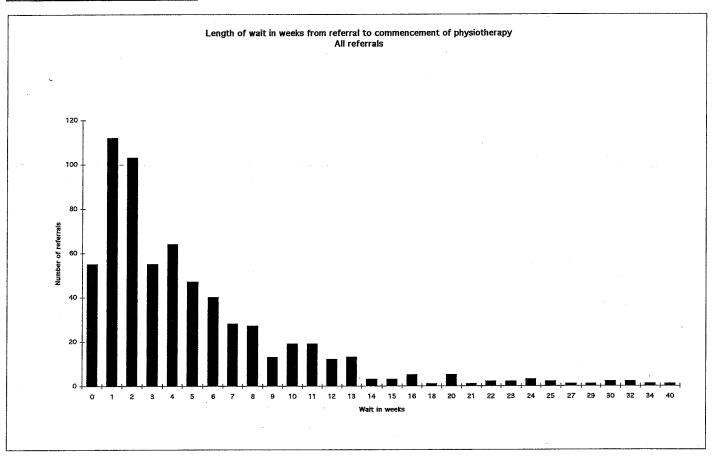


Table 16b Length of wait in weeks from referral to commencement of physiotherapy Patients discharged normally

Length of wait	Number	Percent
0	37	8.2%
1	85	18.8%
1 2	74	16.4%
3	36	8.0%
4	38	8.4%
5	35	7.8%
6	33	7.3%
7	17	3.8%
8	19	4.2%
9	7	1.6%
· -	1	3.1%
10	14	
11	15	3.3%
12	8	1.8%
13	9	2.0%
14	3	0.7%
15	3	0.7%
16	4	0.9%
18	1	0.2%
20	5	1.1%
22	1	0.2%
23	2	0.4%
24	2	0.4%
25	2 2	0.4%
40	7	0.2%
Total	451	100.0%

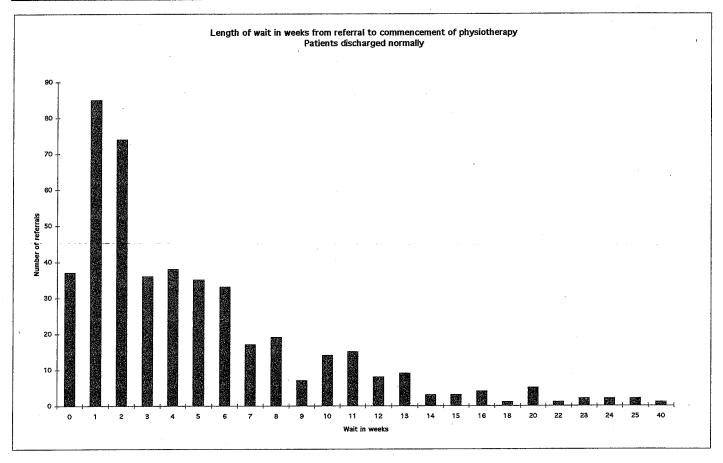


Table 17a Length of wait from referral to commencement of physiotherapy - All referrals

Wait in weeks	Number	Percent
0 to 2	270	42.1%
3 to 5	166	25.9%
6 to 8	95	14.8%
9 to 11	51	7.9%
12 to 14	28	4.4%
15 to 17	8	1.2%
18 to 20	6	0.9%
21 to 23	5	0.8%
24 to 26	5	0.8%
27 to 29	2	0.3%
30 to 32	4	0.6%
33 to 35	1	0.2%
39 to 41	1	0.2%
Total	642	100.0%

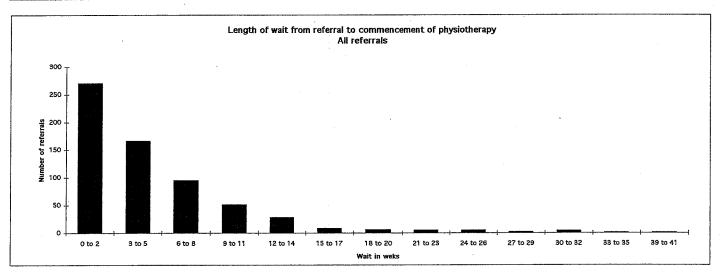


Table 17b Length of wait from referral to commencement of physiotherapy - Patients discharged normally

Wait in weeks	Number	Percent
0 to 2	196	43.5%
3 to 5	109	24.2%
6 to 8	69	15.3%
9 to 11	36	8.0%
12 to 14	20	4.4%
15 to 17	7	1.6%
18 to 20	6	1.3%
21 to 23	3	0.7%
24 to 26	4	0.9%
39 to 41	1	0.2%
Total	451	100.0%

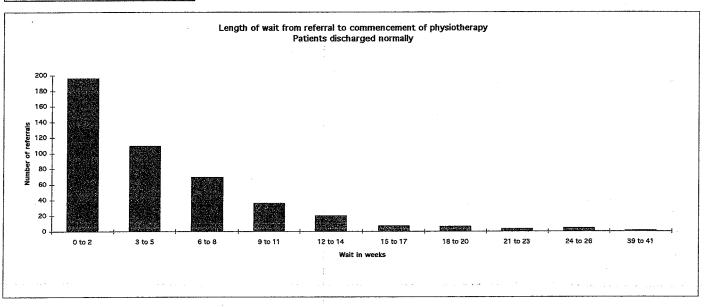
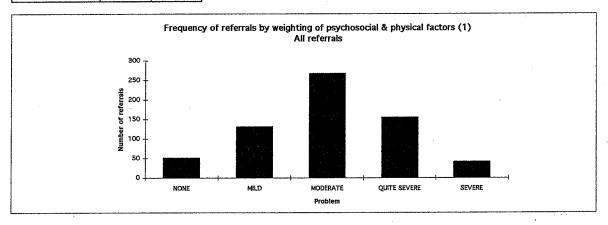
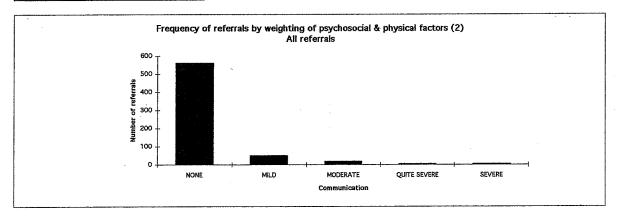


Table 18a 1-3 Weighting of Psychosocial & Physical Factors - All referrals

1		
Problem	Number	Percent
NONE	51	7.9%
MILD	131	20.3%
MODERATE	267	41.4%
QUITE SEVERE	155	24.0%
SEVERE	41	6.4%
Total	645	100.0%



2		
Communication	Number	Percent
NONE .	560	88,1%
MILD	50	7.9%
MODERATE	17	2.7%
QUITE SEVERE	4	0.6%
SEVERE	5	0.8%
Total	636	100.0%



3		
Mobility	Number	Percent
NONE	483	75.9%
MILD	91	14.3%
MODERATE	46	7.2%
QUITE SEVERE	13	2.0%
SEVERE	3	0.5%
Total	636	100.0%

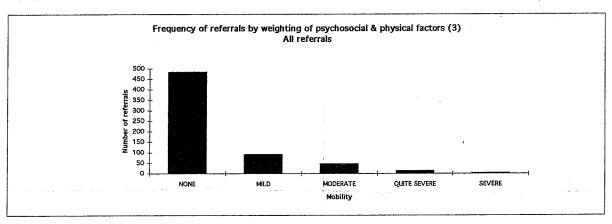
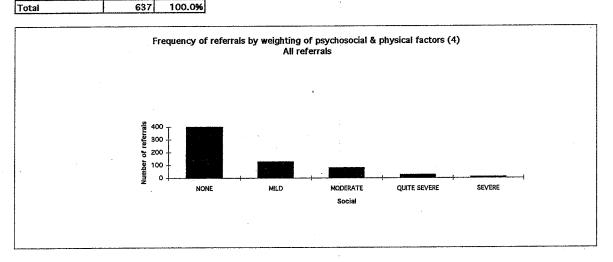


Table 18a 4-5 Weighting of Psychosocial & Physical Factors - All referrals

4		
Social	Number	Percent
NONE	397	62.3%
MILD	127	19.9%
MODERATE	79	12.4%
QUITE SEVERE	25	3.9%
SEVERE	9	1.4%
		100.000



5		
Other	Number	Percent
NONE	414	65.7%
MILD	99	15.7%
MODERATE	62	9.8%
QUITE SEVERE	44	7.0%
SEVERE	11	1.7%
Total	630	100.0%

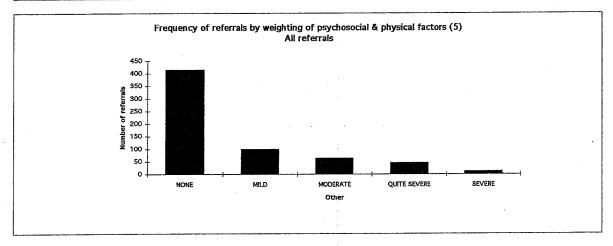
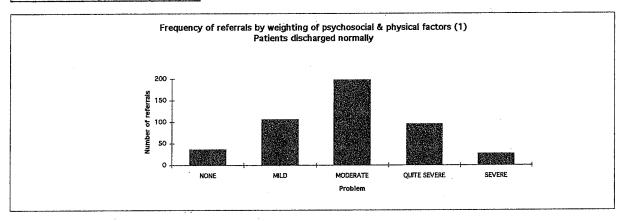
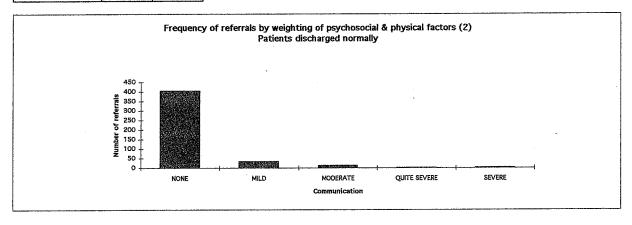


Table 18b 1-3 Weighting of Psychosocial & Physical Factors - Patients discharged normally

. 1		
Problem	Number	Percent
NONE	36	7.8%
MILD	105	22.9%
MODERATE	197	42.9%
QUITE SEVERE	95	20.7%
SEVERE	26	5.7%
Total	459	100.0%



2		
Communication	Number	Percent
NONE	404	89.0%
MILD	33	7.3%
MODERATE	12	2.6%
QUITE SEVERE	2	0.4%
SEVERE	3	0.7%
Total	454	100.0%



3		
Mobility	Number	Percent
NONE	354	77.8%
MILD	67	14.7%
MODERATE	25	5.5%
QUITE SEVERE	9	2.0%
Total	455	100.0%

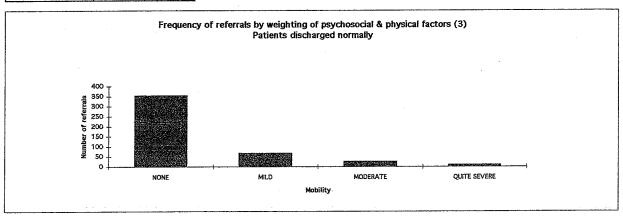
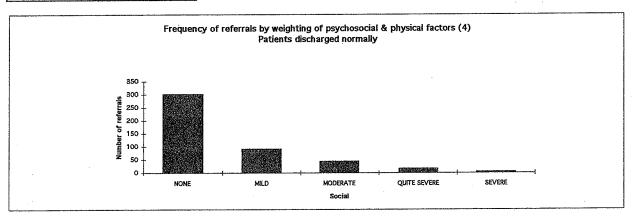


Table 18b 4-5 Weighting of Psychosocial & Physical Factors - Patients discharged normally

4		
Social	Number	Percent
NONE	301	66.0%
MILD	91	20.0%
MODERATE	44	9.6%
QUITE SEVERE	16	3.5%
SEVERE	4	0.9%
Total	456	100.0%



5		
Other	Number	Percent
NONE	299	66.6%
MILD	79	17.6%
MODERATE	40	8.9%
QUITE SEVERE	26	5.8%
SEVERE	5	1.1%
Total	449	100.0%

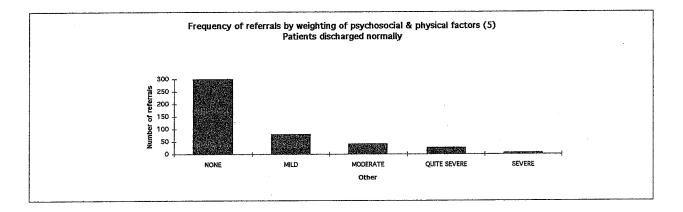


Table 19 Frequency of outcome of referral - All referrals

Referral outcome	Number -	Percent
ASSESSMENT COMPLETED R/V ARR.	12	1.8%
ASSESSMENT COMPLETED NO PT	4	0.6%
DNA	36	5.5%
DISCHARGED NORMALLY	464	70.9%
INAPPROPRIATE REFERRAL	7	1.1%
INTERRUPTED (FTA)	44	6.7%
INTERRUPTED (UTA)	8	2.8%
OTHER	2	0.3%
PATIENT NON COMPLIANT	1	0.2%
PT NOT EFFECTIVE	17	2.6%
REFERRED BACK TO GP/CONS	43	6.6%
TREATMENT NOT COMMENCED	3	0.5%
TRANSFER OUTSIDE	3	0.5%
Total	644	100.0%

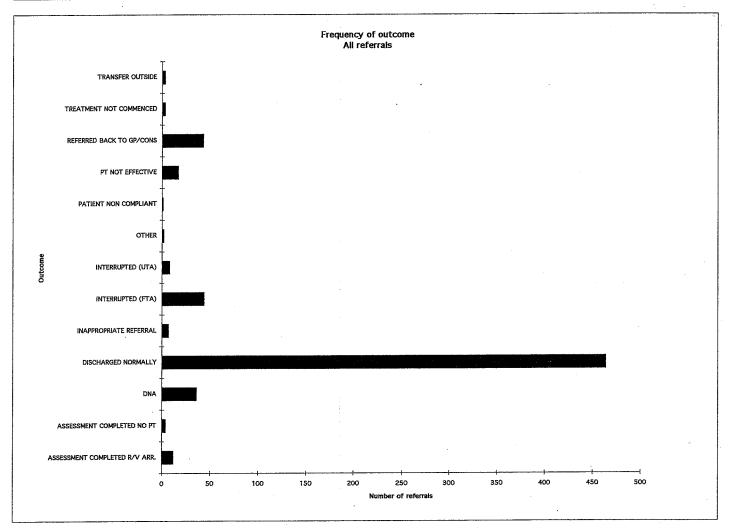


Table 20 Frequency of other factors influencing outcome - All referrals

Other factors	Number	Percent
CEASED TO ATTEND	45	7:8%
CHANGED GRADE THERAPIST	5	0.9%
EDUCATION / ADVICE ONLY	4	0.7%
EXACERBATION OF CONDITION	12	2.1%
GENERAL STATE	57	9.9%
INAPPROPRIATE REFERRAL	2	0.3%
LIFESTYLE INFLUENCES	67	11.6%
NO OTHER FACTORS	281	48.7%
OTHER MEDICAL CONDITIONS	48	8.3%
OTHER MEDICAL INTERVENTIONS	13	2.3%
PAIN FREE FIRST VISIT	3	0.5%
REFERRAL TO CONS OR GP	20	3.5%
TEAMWORK	1	0.2%
TIME,PROG,NO T'MENT	16	2.8%
TRANSFER TO OTHER HOSPITAL	1	0.2%
TRANSPORT DIFFICULTIES	2	0.3%
Total	577	100%

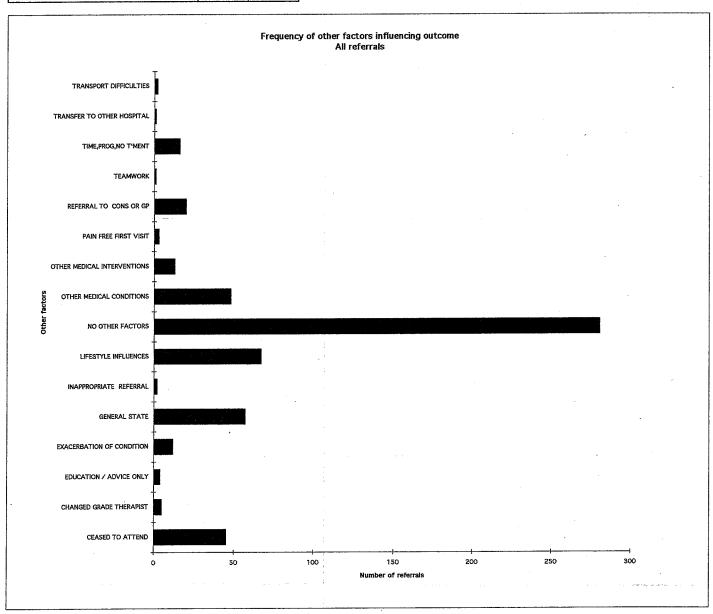


Table 21 Frequency of use of treatment modalities 1st choice - All referrals

TREATMENT 1ST	Number	Percent
ACTIVE EXERCISES	82	12.9%
ACUPUNCTURE	5	0.8%
ADVICE ON SELF- MANAGEMENT	139	21.9%
AROMATHERAPY	2	0.3%
COMBINED MOVEMENTS	1.	0.2%
CYRIAX MANIPULATIONS	8	1.3%
EDUCATION & ADVICE	30	4.7%
ICE	2	0.3%
INTERFERENTIAL	16	2.5%
LASER	1	0.2%
LOCAL HEAT (IR PP)	10	1.6%
MANIPULATION GRADE 5	3	0.5%
MASSAGE	5	0.8%
MCKENZIE APPROACH	28	4.4%
MAITLAND MOBILISATION	167	26.3%
NEURODYNAMIC FACILITATION	10	1.6%
PNF	2	0.3%
PASSIVE EXERCISES	3	0.5%
RE-EDUCATION OF MUSCLE IMBALANCE	4	0.6%
SWD	22	3.5%
SNAGS	13	2.1%
SOFT TISSUE STRETCHES	4	0.6%
TENS	9	1.4%
TRACTION	27	4.3%
TRIGGER POINT RELEASE	7	1.1%
ULTRASOUND	34	5.4%
Total	634	100.0%

Table 22 Frequency of use of additional treatment modalities 2nd choice - All referrals

TREATMENT 2ND	Number	Percent
ACTIVE EXERCISES	140	23.7%
ACUPUNCTURE	4	0.7%
ADVICE ON SELF-MANAGEMENT	28	4.7%
COMBINED MOVEMENTS	1	0.2%
CYRIAX MANIPULATIONS	4	0.7%
EDUCATION & ADVICE	40	6.8%
FRICTIONS	3	0.5%
ICE	2	0.3%
INTERFERENTIAL	16	2.7%
LASER	2	0.3%
LOCAL HEAT (IR PP)	11	1.9%
MANIPULATION GRADE 5	2	0.3%
MASSAGE	9	1.5%
MCKENZIE APPROACH	18	3.1%
MAITLAND MOBILISATION	109	18.5%
NEURODYNAMIC FACILITATION	15	2.5%
PASSIVE EXERCISES	10	1.7%
RE-EDUCATION OF MUSCLE IMBALANCE	14	2.4%
SWD	17	2.9%
SNAGS	31	5.3%
SOFT TISSUE STRETCHES	16	2.7%
STRAPPING	2	0.3%
TENS	11	1.9%
TRACTION	34	5.8%
TRIGGER POINT RELEASE	20	3.4%
ULTRASOUND	31	5.3%
Total	590	100.0%

Table 23a Frequency of use of additional treatment modalities 3rd choice - All referrals

TREATMENT 3RD	Number	Percent
ACTIVE EXERCISES	79	16.4%
ACUPUNCTURE	6	1.2%
ADVICE ON SELF-MANAGEMENT	16	3.3%
APPLIANCE FITTING	1	0.2%
COMBINED MOVEMENTS	3	0.6%
CYRIAX MANIPULATIONS	4	0.8%
EDUCATION & ADVICE	76	15.8%
FRICTIONS	1	0.2%
HYDROTHERAPY	1	0.2%
HYPERVENTILATION	1	0.2%
INTERFERENTIAL	7	1.5%
LOCAL HEAT (IR PP)	5	1.0%
MANIPULATION GRADE 5	5	1.0%
MASSAGE	8	1.7%
MCKENZIE APPROACH	11	2.3%
MAITLAND MOBILISATION	71	14.8%
NEURODYNAMIC FACILITATION	11	2.3%
PNF	1	0.2%
PASSIVE EXERCISE	9	1.9%
RE-EDUCATION OF MUSCLE IMBALANCE	16	3.3%
REIKI	1	0.2%
SWD	6	1.2%
SNAGS	40	8.3%
SOFT TISSUE STRETCHES	18	3.7%
STRAPPING	4	0.8%
TENS	4	0.8%
TRACTION	31	6.4%
TRIGGER POINT RELEASE	15	3.1%
ULTRASOUND	30	6.2%
Total	481	100.0%

Table 23b Frequency of use of additional treatment modalities 4th choice - All referrals

TREATMENT 3RD	Number	Percent
ACTIVE EXERCISES	40	15.1%
ACUPUNCTURE	3	1.1%
ADVICE ON SELF-MANAGEMENT	16	6.0%
APPLIANCE FITTING	2	0.8%
COMBINED MOVEMENTS	1	0.4%
CYRIAX MANIPULATIONS	1	0.4%
EDUCATION & ADVICE	61	23.0%
INTERFERENTIAL	6	2.3%
LOCAL HEAT (IR PP)	3	1.1%
MANIPULATION GRADE 5	3	1.1%
MASSAGE	5	1.9%
MCKENZIE APPROACH	3	1.1%
MAITLAND MOBILISATION	34	12.8%
NEURODYNAMIC FACILITATION	4	1.5%
PASSIVE EXERCISE	6	2.3%
RE-EDUCATION OF MUSCLE IMBALANCE	3	1.1%
SWD	4	1.5%
SNAGS	23	8.7%
SOFT TISSUE STRETCHES	10	3.8%
STRAPPING	4	1.5%
TENS	1	0.4%
TRACTION	11	4.2%
TRIGGER POINT RELEASE	. 10	3.8%
ULTRASOUND	11	4.2%
Total	265	100.0%

Table 24 Frequency of total effort scores in bands - All referrals

Effort band	Number	Percent
0 TO 9	47	7.4%
10 TO 19	201	31.9%
20 TO 29	189	30.0%
30 TO 39	106	16.8%
40 TO 49	44	7.0%
50 TO 59	20	3.2%
60 TO 69	10	1.6%
70 TO 79	6	0.3%
80 TO 89	2	0.3%
90 TO 99	2	0.3%
100 TO 109	2	0.3%
120 TO 129	2	0.3%
Total	631	100.0%

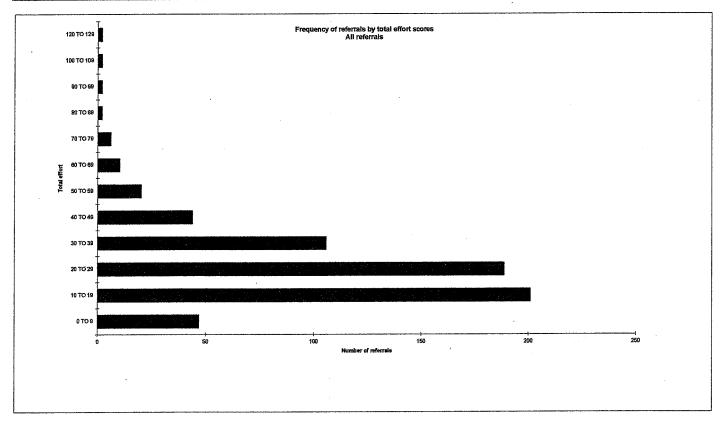


Table 25a Frequency of number of treatments received - All referrals

Number of treatm.	Number	Percent
0	5	0.8%
1	34	5.3%
2	62	9.7%
3	80	12.6%
4	109	17.1%
5	99	15.5%
6	80	12.6%
7	57	8.9%
8	24	3.8%
9	27	4.2%
10	10	1.6%
11	17	2.7%
12	12	1.9%
13	6	0.9%
14	2	0.3%
15	6	0.9%
16	3	0.5%
17	1	0.2%
18	1	0.2%
19	1	0.2%
22	1	0.2%
Total	637	100.0%

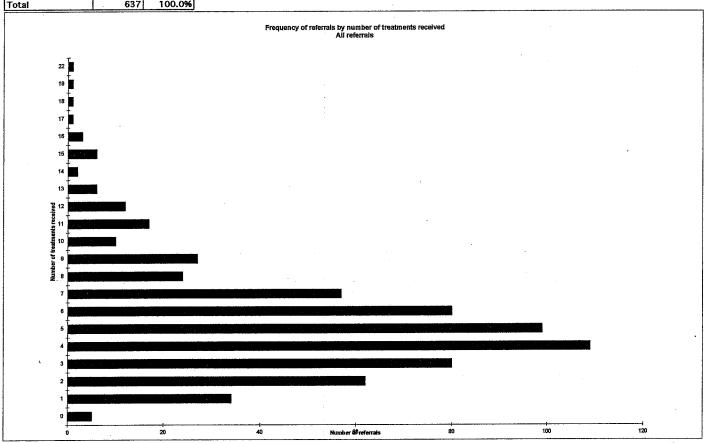


Table 25b Frequency of number of treatments received - Patients discharged normally

Number of treatm.	Number	Percent
1	7	1.5%
2	34	7.4%
3	59	12.8%
4	90	19.5%
5	84	18.2%
6	65	14.1%
7	42	9.1%
8	17	3.7%
9	23	5.0%
10	6	1.3%
11	14	3.0%
12	9	2.0%
13	4	0.9%
14	2	0.4%
15	. 1	0.2%
16	1	0.2%
17	7	0.2%
18	1	0.2%
22	1	0.2%
Total	461	100.0%

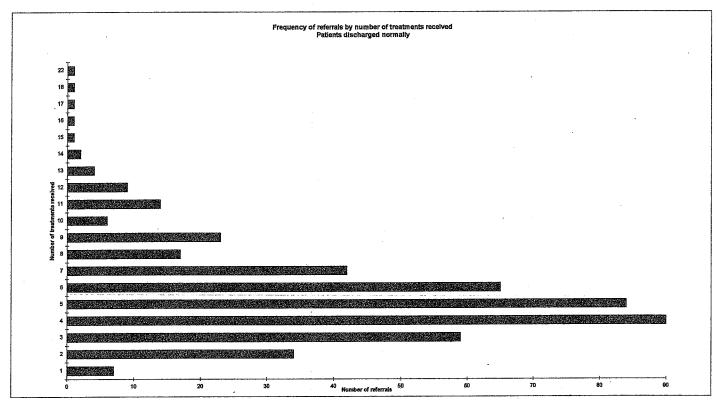


Table 25c Frequency of number of treatments - All referrals

Number of treatm.	Number	Percent
1 to 6	464	73.4%
7 to 12	147	23.3%
13 to 18	19	3.0%
19+	2	0.3%
Total	632	100.0%

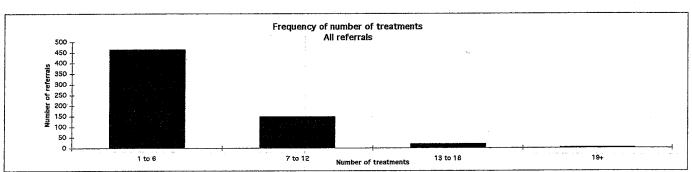


Table 26 Frequency of referral by grade of physiotherapist (1st PT) - All referrals

Physiograde (1)	Number	Percent
JUNIOR	67	10.2%
SENIOR I	230	35.2%
SENIOR II	289	44.2%
STUDENT	1	0.2%
SUPERINTENDENT I	2	0.3%
SUPERINTENDENT II	8	1.2%
SUPERINTENDENT III	48	7.3%
SUPERINTENDENT IV	9	1.4%
Total	654	100.0%

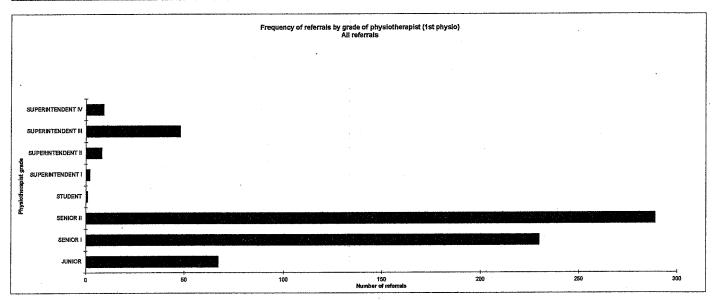


Table 27 Frequency of referral by grade of physiotherapist (2nd PT) - All referrals

Physiograde (2)	Number	Percent
JUNIOR	2	9.5%
SENIOR I	8	38.1%
SENIOR II	4	19.0%
STUDENT	1	4.8%
SUPERINTENDENT II	2	9.5%
SUPERINTENDENT III	4	19.0%
Total	21	100.0%

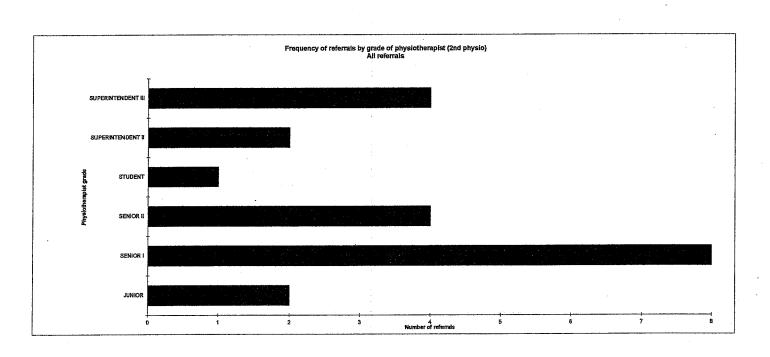


Table 28 Frequency of number of physiotherapists involved in treatment - All referrals

Number of therapists	Number	Percent
0	1	0.2%
1	577	90.2%
2	52	8.1%
3	8	1.3%
4	1	0.2%
5	1	0.2%
Total	640	100.0%

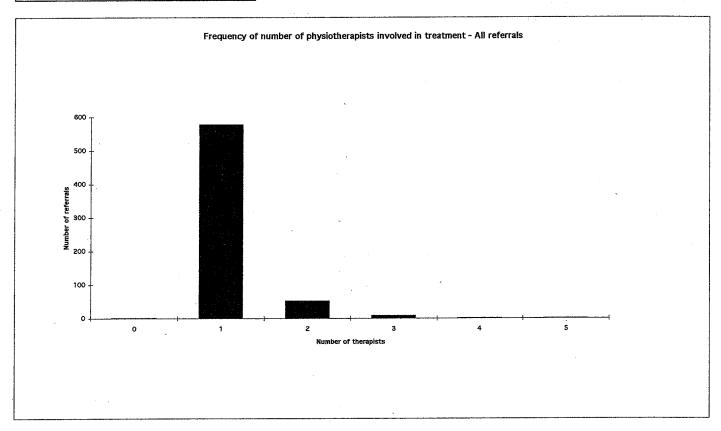


Table 29 Frequency of referral source - All referrals

Source	Number	Percent
CONSULTANT	85	13.1%
GENERAL PRACTITIONER	534	82.5%
ORTHOPAEDIC PRACTITIONER	12	1.99
OTHER	16	2.5%
Total	647	100.09

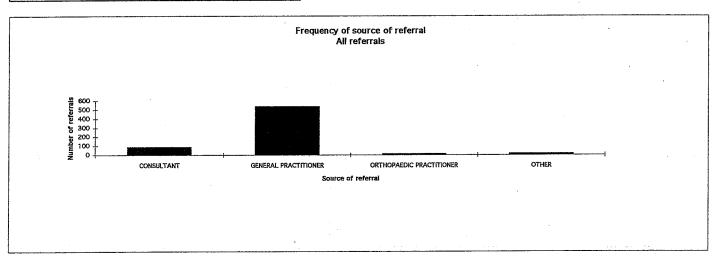


Table 30 Frequency of initial assessment of functional ability - All referrals

Functional Ab.	Number	Percent
1	5	0.8%
2	36	5.6%
3	118	18.2%
4	75	11.6%
5	95	14.7%
6	111	17.1%
7	84	13.0%
. 8	91	14.0%
. 9	28	4.3%
10	5	0.8%
Total	648	100.0%

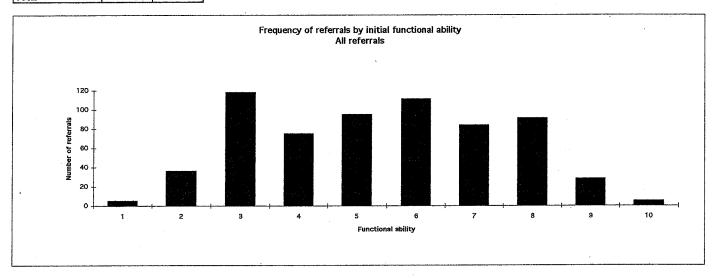


Table 31 Frequency of assessment of expected functional outcome - All referrals

outcome	Number	Percent
0	1	0.2%
1	1	0.2%
2	2	0.3%
3	2	0.3%
4	10	1.6%
5	26	4.0%
6	35	5.4%
7	70	10.9%
8	141	21.9%
8.5	1	0.2%
9	221	34.3%
9.5	2	0.3%
10	132	20.5%
Total	644	100.0%

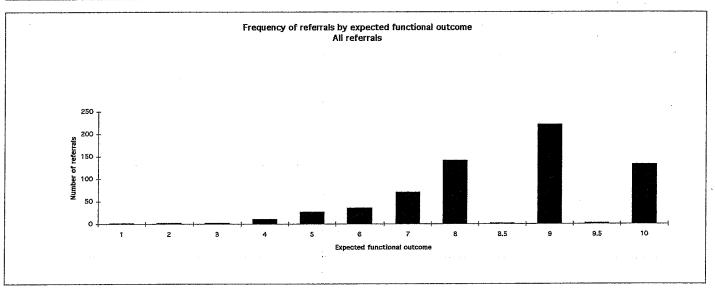


Table 32 Frequency of actual functional outcome - All referrals

Outcome	Number	Percent
0	1	0.2%
1	2	0.3%
2	4	0.7%
3	14	2.4%
4	15	2.6%
5	34	5.8%
6	24	4.1%
6.5	1	0,2%
7	54	9.2%
7.5	1	0.2%
8	102	17.3%
8.5	1	0.2%
9	194	33.0%
9.5	1	0.2%
10	140	23.8%
Total	588	100.0%

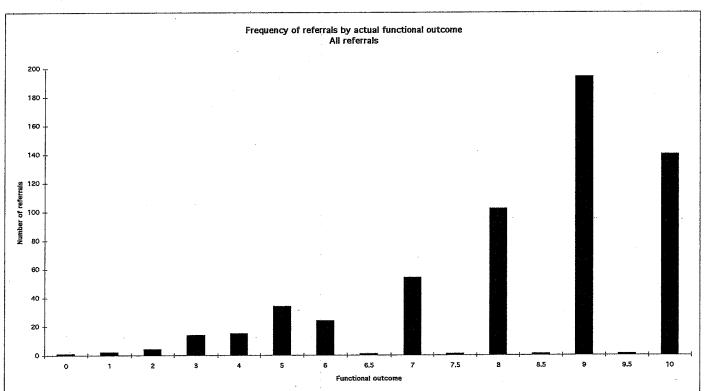


Table 33a Frequency of patient perceived pain prior to physiotherapy - All referrals

Pain score	Number	Percent
0	4	0.6%
1	13	2.0%
2	29	4.6%
3	32	5.0%
4	66	10.4%
5	115	18.1%
6	69	10.8%
7	89	14.0%
8	133	20.9%
9	43	6.8%
10	44	6.9%
Total	637	100.0%

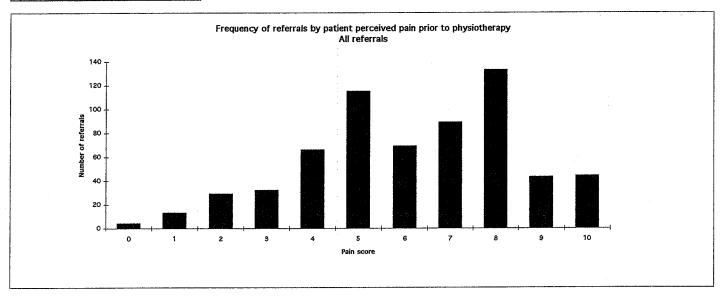


Table 33b Frequency of patient perceived pain prior to physiotherapy - Patients discharged normally

Pain score	Number	Percent
0	1	0.2%
1	11	2.4%
2	23	5.0%
3	28	6.1%
4	49	10.7%
5	82	17.9%
6	55	12.0%
7	61	13.3%
8	91	19.8%
9	27	5.9%
10	31	6.8%
Total	459	100.0%

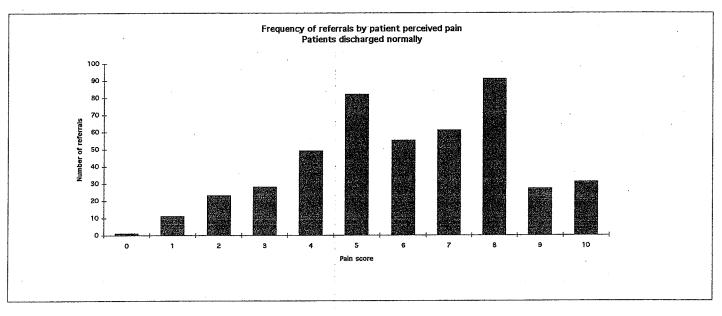


Table 34a Frequency of patient perceived pain after physiotherapy - All referrals

Pain score	Number	Percent
0	127	22.3%
1	130	22.8%
2	93	16.3%
3	56	9.8%
4	46	8.1%
5	38	6.7%
6	19	3.3%
7	18	3.2%
8	23	4.0%
9	10	1.8%
10	10	1.8%
Total	570	100.0%

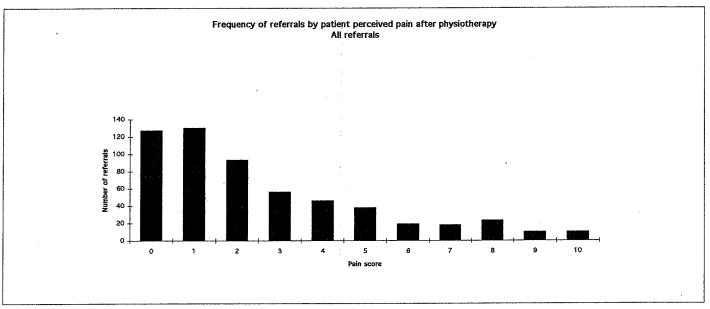


Table 34b Frequency of patient perceived pain after physiotherapy - Patients discharged normally

Pain score	Number	Percent
0	117	25.5%
1	118	25.8%
2	81	17.7%
3	48	10.5%
4	35	7.6%
5	23	5.0%
6	9	2.0%
7	7	1.5%
8	7	1.5%
9	7	1.5%
10	6	1.3%
Total	458	100.0%

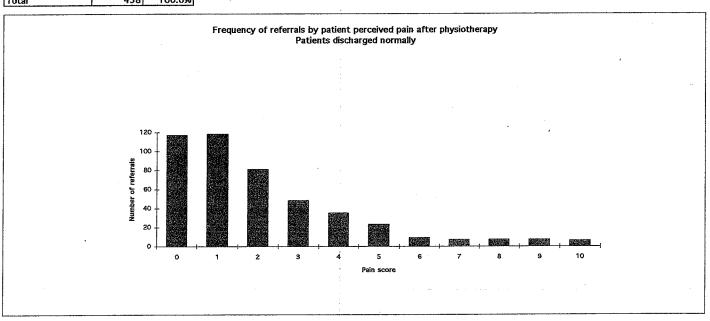


Table 35a Frequency of change in pain level after physiotherapy - All referrals

Pain score	Number	Percent
-6	1	0.2%
-5	4	0.7%
-4	1	0.2%
-3	1	0,2%
-2	1:	0.2%
-1	8	1.4%
o	65	11.4%
1	60	10.6%
2	66	11.6%
3	82	14.4%
4	75	13.2%
5	66	11.6%
6	50	8.8%
7	39	6.9%
8	31	5.5%
9	11	1.9%
10	7	1.2%
Total	568	100,0%

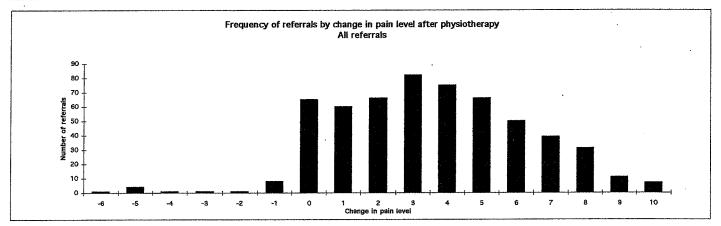


Table 35b Frequency of change in pain level after physiotherapy - Patients discharged normally

Pain score	Number Percent	
-6	1	0.2%
-5	4	0.9%
-4	1	0.2%
-3	1	0.2%
-2	1	0.2%
-1	7	1,5%
0	19	4.2%
1	45	9.9%
2	52	11.4%
3	70	15.4%
4	68	14.9%
5	59	12.9%
6	45	9.9%
7	37	8.1%
8	28	6.1%
9	11	2.4%
10	7	1.5%
Total	456	100.0%

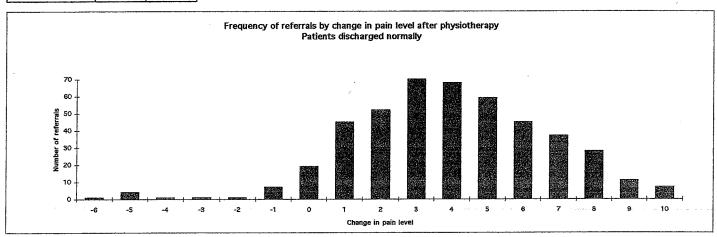


Table 36a Frequency of patient perceived functional ability prior to physiotherapy - All referrals

Function	Number	Percent
0	14	2.2%
1	5	0.8%
2	31	4.9%
3	33	5.2%
4	42	6.6%
5	100	15.8%
6	75	11.8%
7	82	12.9%
8	100	15.8%
9	70	11.0%
10	82	12.9%
Total	634	100.0%

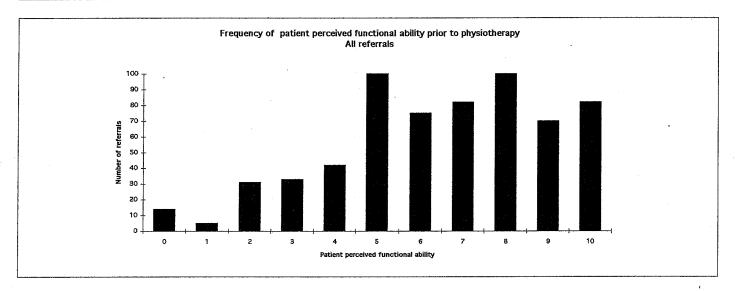


Table 36b Frequency of patient perceived functional ability prior to physiotherapy - Patients discharged normally

Function Numbe		Percent	
0	7	1.5%	
1	5	1.1%	
2 .	21	4,6%	
3	23	5.0%	
4	31	6.8%	
5	71	15.6%	
6	51	11.2%	
7	64	14.0%	
8	67	14.7%	
9	52	11.4%	
10	64	14.0%	
Total	456	100.0%	

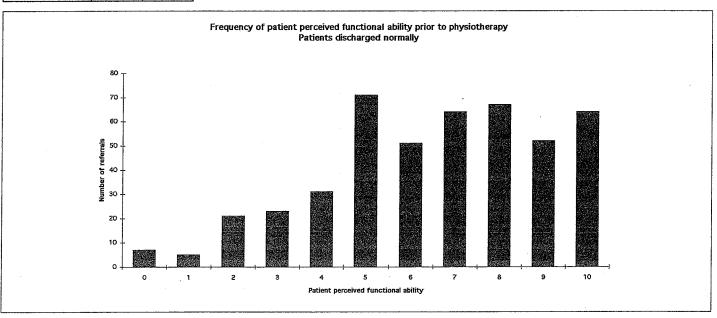


Table 37a Frequency of patient perceived functional ability after physiotherapy - All referrals

Function	Number	Percent
0	19	3.4%
1	12	2.1%
2	16	2.8%
3	10	1.8%
4	. 7	1.2%
5	22	3,9%
6	20	3.5%
7	31	5.5%
8	77	13.6%
9	105	18.6%
10	247	43.6%
Total	566	100.0%

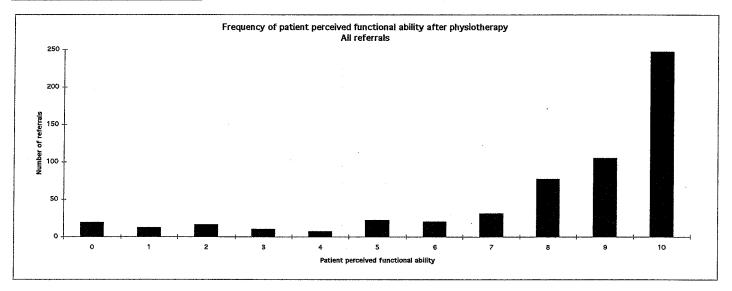


Table 37b Frequency of patient perceived functional ability after physiotherapy - Patients discharged normally

Function	Number Percent	
0	13	2.9%
1	12	2.6%
2	11	2.4%
3	7	1.5%
4	3	0.7%
5	10	2.2%
6	13	2.9%
7	18	3.9%
8	59	12.9%
9	85	18.6%
10	225	49.3%
Total	456	100.0%

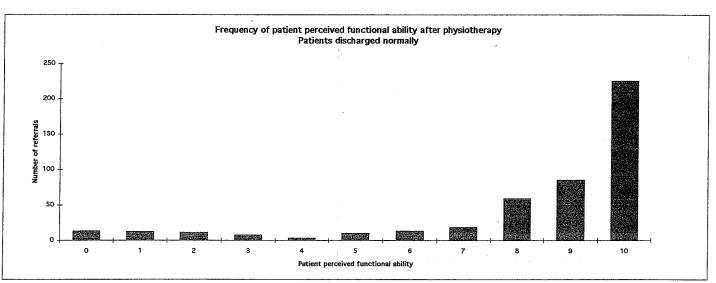


Table 38a Frequency of patient perceived change in functional ability- All referrals

Pain change	Number	Percent
-10	1	0.002
-8	5	0.009
-7	2	0.004
-6	1	0.2%
-5	6	1.1%
-4	9	1.6%
-3	6	1.1%
-2	11	2.0%
-1	8	1.4%
0	142	25.2%
1	100	17.7%
2	93	16.5%
3	69	12.2%
4	32	5.7%
5	41	7.3%
6	14	2.5%
7	13	2.3%
8	7	1.2%
9	1	0.2%
10	3	0.5%
Total	564	100.0%

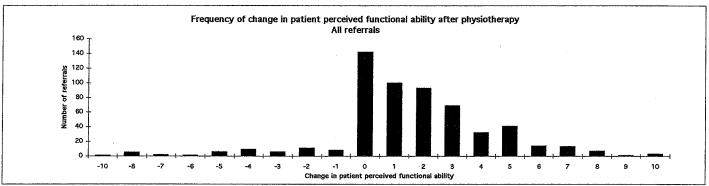


Table 38b Frequency of patient perceived change in functional ability - Patients discharged normally

Pain change	Number	Percent	
-10	1	0.002	
-8	3	0.007	
-7	1	0.002	
-6	1	0.2%	
-5	5	1.1%	
-4	9	2.0%	
-3	6	1.3%	
-2	10	2.2%	
-1	7	1.5%	
0	95	20.9%	
1	77	17.0%	
2	78	17.2%	
3	59	13.0%	
4	29	6.4%	
5	37	8.1%	
6	14	3.1%	
7	12	2.6%	
8	7	1.5%	
9	1	0.2%	
10	2	0.4%	
Total	454	100.0%	

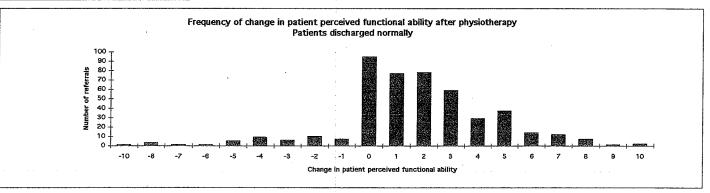


Table 39 Grade of physiotherapist by patient perceived change in functional ability

Increase in functional score Physiotherapist Grade Total JUNIOR SENIOR 1 SENIOR 2 STUDENT O SUPERINTENDENT I SUPERINTENDENT II SUPERINTENDENT III SUPERINTENDENT IV Total

Table 40 Increase in functional ability by location

Increase in functional ability OPD location 1.5 Total O O Total

Table 41 Change in patient perceived functional ability by location

OPD location	worse	same	Improved	Total
1	0	0	3	3
2	2	7	18	27
3	1	2	7	10
5	3	1	12	16
6	4	8	36	48
7	1	6	15	22
8	4	8	44	56
9	5	7	21	33
10	1	14	32	47
11	5	10	40	55
12	1	1	2	4
13	1	2	11	14
14	11	12	43	66
15	1	4	9	14
16	3	13	24	40
Total	43	95	317	455

Table 42a Frequency of patient perceived ability to work prior to physiotherapy - All referrals

Ability to work	Number	Percent
0	64	12.6%
1	7	1.4%
2	22	4.3%
3	16	3.1%
4	26	5.1%
5	63	12.4%
6	44	8.6%
7	47	9.2%
8	73	14.3%
9	52	10.2%
10	95	18.7%
Total	509	100.0%

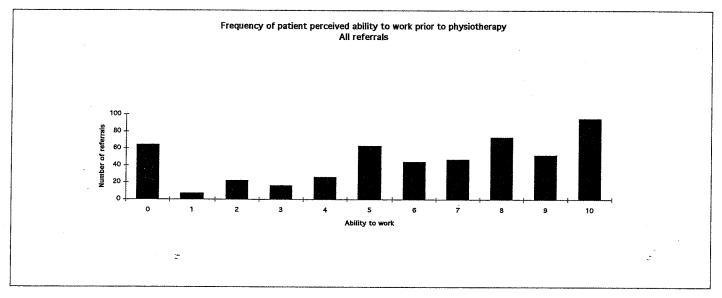


Table 42b Frequency of patient perceived ability to work prior to physiotherapy - Patients discharged normally

Ability to work	Number	Percent
0	39	10.9%
1	6	1.7%
2	11	3.1%
3 '	14	3.9%
4	16	4.5%
5	46	12.8%
6	31	8.7%
7	37	10.3%
8	54	15.1%
9 .	35	9.8%
10	69	19.3%
Tot	al 358	100.0%

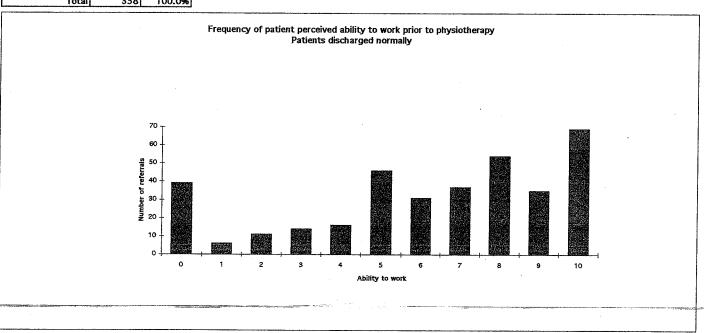


Table 43a Frequency of patient perceived ability to work after physiotherapy - All referrals

Ability to work	Number	Percent
0	23	5.0%
1	10	2.2%
2	16	3.5%
3	8	1.8%
4	7	1.5%
5	15	3.3%
6	9	2.0%
7	16	3.5%
8	43	9.4%
9	73	16.0%
10	236	51.8%
Total	456	100.0%

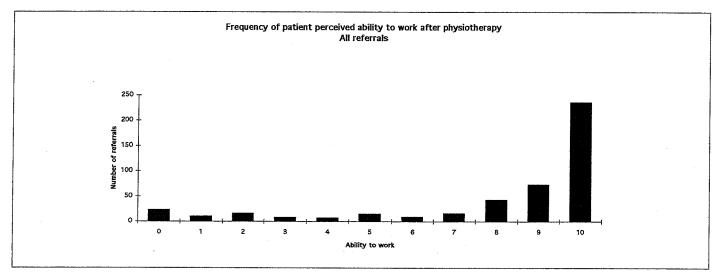


Table 43b Frequency of patient perceived ability to work after physiotherapy - Patients discharged normally

Ability to work	Number	Percent
0	1.4	3.9%
1	9	2.5%
2	9	2.5%
3	4	1.1%
4	1	0.3%
5	7	1.9%
6 .	5	1.4%
7	11	3.0%
8	31	8.6%
9	58	16.0%
10	213	58.8%
Total	362	100.0%

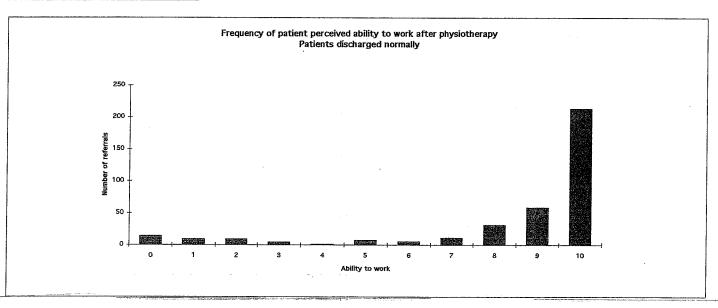


Table 44 Occupation of patients with missing data - All referrals

OCCUPATION	Number	Percent
Associate Professional	1:	2 6.6%
Clerical/ Secretarial	1	6 3,3%
Craft & Related	1	6.0%
Houseperson> 2 years	3	1 16.9%
Manager/Administrator	(3.3%
Other		7 3.8%
Plant/Machine Operator	,	2.2%
Professional	1 :	1.6%
Retired>2yrs	78	42.6%
Sales	!	2.7%
School Person] 1	0.5%
Service	!	2.7%
Student HE/FE		1.6%
Unemployed >2 years	11	6.0%
Total	183	100.0%

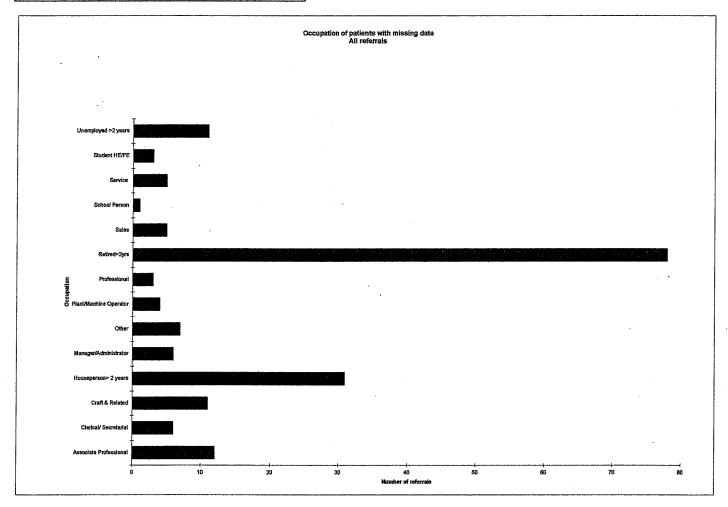


Table45a Improvement in quality of life. How many gave a negative response - All referrals

Negative	Number	Percent		
Yes	29	5.2%		
No	533	94.8%		
Total	562	100.0%		

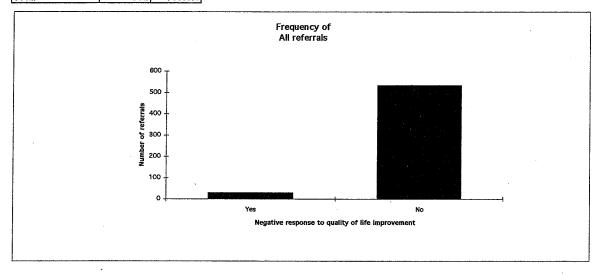


Table 45b Improvement in quality of life. How many gave a negative response - Patients discharged normally

Negative	Number	Percent
Yes	5	1.1%
No	440	98.9%
Total	445	100.0%

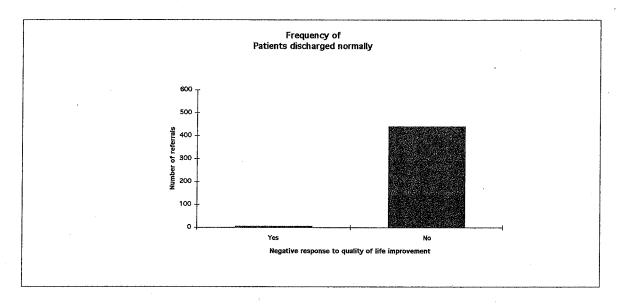


Table 46a Improvement (in 10% bands) for those who gave a positive response- All referrals

Quality	Number	Percent
0 to 9	12	2.3%
10 to 19	19	3.6%
20 to 29	23	4.4%
30 to 39	13	2.5%
40 to 49	10	1.9%
50 to 59	43	8.2%
60 to 69	41	7.8%
70 to 79	53	10.1%
80 to 89	93	17.7%
90 to 99	133	25.4%
100 to 109	84	16.0%
Total	524	100.0%

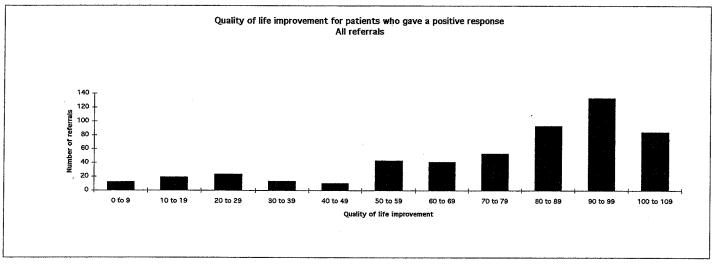


Table 46b Improvement (in 10% bands) for those who gave a positive response- Patients discharged normally

Quality	Number	Percent
0 to 9	4	0.9%
10 to 19	9	2.1%
20 to 29	14	3.2%
30 to 39	9	2.1%
40 to 49	7	1.6%
50 to 59	34	7.8%
60 to 69	28	6.4%
70 to 79	44	10.1%
80 to 89	87	19.9%
90 to 99	124	28.4%
100 to 109	77	17.6%
Total	437	100.0%

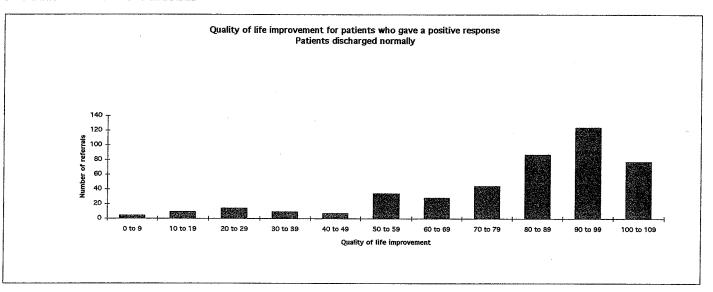


Table 47a Goal achievement -All referrals

Goal achievement	Number	Percent
1	58	10.0%
2	8	1,4%
3	4	0.7%
5	212	36.4%
6	69	11.9%
7	4	0.7%
8	1	0.2%
9	79	13.6%
10	28	4.8%
11	6	1.0%
13	35	6.0%
14	22	3.8%
15	6	1.0%
16	1	0.2%
17	27	4.6%
18	12	2.1%
19	1	0.2%
20	1	0.2%
21	6	1.0%
22	2	0.3%
Total	582	100.1%

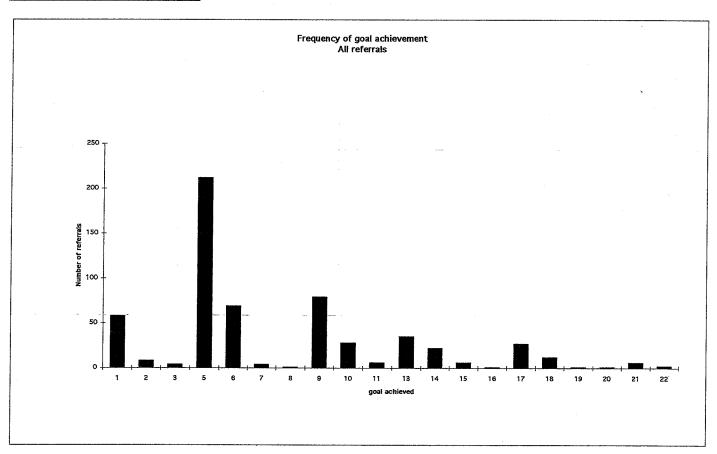


Table 47b Goal achievement - Patients discharged normally

Goal achievement	Number	Percent
1	53	11.6%
2	8	1.8%
3	2	0.4%
5	200	44.0%
6	63	13.8%
7	4	0.9%
8	1	0.2%
9	61	13.4%
10	25	5.5%
11	3	0.7%
13	16	3.5%
14	8	1.8%
15	2	0.4%
16	1	0.2%
17	2	0.4%
18	5	1.1%
20	1	0.2%
Total	455	100.0%

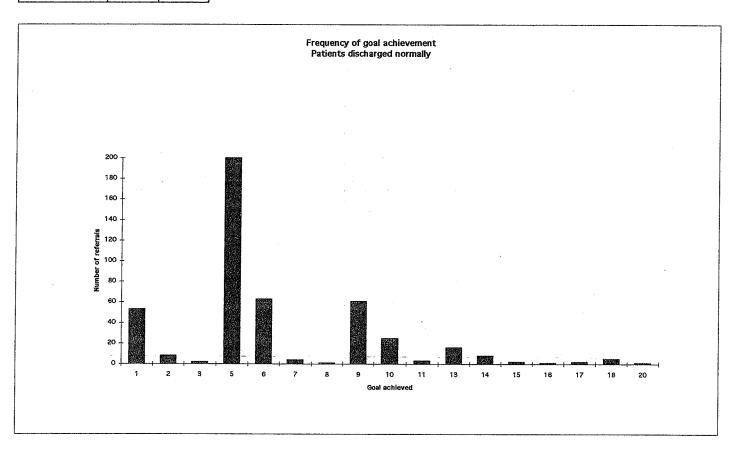


Table 47c Goal achievement by number of treatments

Treatments Goal Achievement 1 to 6 7 to 12 13 to 18 19+ Total Excluded 27.0 Excluded 65.0 Excluded 67.0 Total

NB Exclusion = wrongly entered data

Table 47d Length of wait from referral to commencement of physiotherapy by goal achievement

							G		ievemer								
Wait in weeks	1.0	2.0	3.0	5,0	6.0	7.0	8.0	9.0	10.0	11.0	13.0	14.0	15.0	17.0	18,0	20.0	Total
0 to 2	22	1	1	88	32	3	0	24	8	2	4	3	2	0	2	0	192
3 to 5	9	4	0	52	12	1	1	12	5	0	5	1	0	1	1	1	105
6 to 8	13	2	1	23	7	0	0	15	2	0	5	0	0	0	1	0	69
9 to 11	5	0	0	18	4	0	0	2	3	0	1	3	0	0	0	0	36
12 to 14	2	0	0	9	2	0	0	4	1	0	0	1	0	0	1	0	20
15 to 17	0	0	0	3	2	O	0	0	2	0	0	0	0	0	0	0	7
18 to 20	0	1	0	2	1	0	0	1	0	0	0	0	0	1	0	0	6
21 to 23	0	0	0	1	1	0	0	0	1	0	0	. 0	0	0	0	0	3
24 to 26	0	0	0	1	0	0	0	0	2	0	1	O	0	0	0	0	4
39 to 41	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	51	8	2	197	62	4	1	58	24	2	16	8	2	2	5	1	443

Table 48 Frequency of referrals by specific diagnosis -Traumatic patients

Specific diagnosis	Number	Percent
ACUTE TORTICOLLIS	2	1.3%
BONY INJURY	3	2.0%
DISC LESION	1	0.7%
DISC LESION AND NEURO	1	0.7%
JOINT DYSFUNCTION PAIN	4	2.6%
JOINT INJURY	2	1.3%
MUSCLE DYSFUNCTION PAIN	6	3.9%
NERVE IMPINGEMENT	2	1.3%
NEURODYNAMIC PROBLEM	3	2.0%
OTHER TRAUMA	5	3.3%
SOFT TISSUE, JOINT & BONE	7	4.6%
SOFT TISSUE INJURY	8	5.2%
SPONDYLOSIS & ARTHROSIS	1	0.7%
SPONDYLOSIS	3	2.0%
WHIPLASH	105	68.6%
Total	153	100.0%

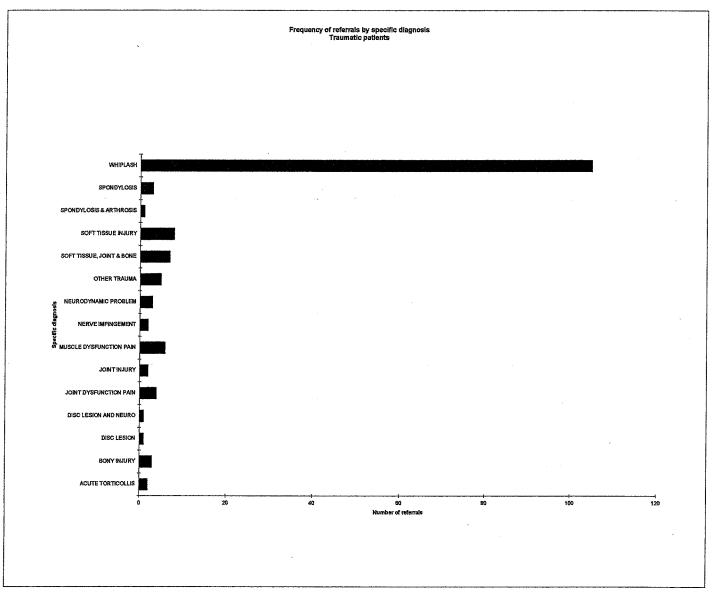


Table 49 Frequency of number of treatments - Traumatic patients

Number treat.	Number	Percent
1	9	6.0%
2	10	6.7%
3	20	13.1%
4	22	14.7%
5	26	17.3%
6	16	10.7%
7	10	6.7%
8	9	6.0%
9	7	4.7%
10	4	2.7%
11	3	2.0%
12	4	2.7%
13	4	2.7%
15	2	1.3%
16	1	0.7%
17	1	0.7%
18	1	0.7%
19	1	0.7%
Total	150	100.0%

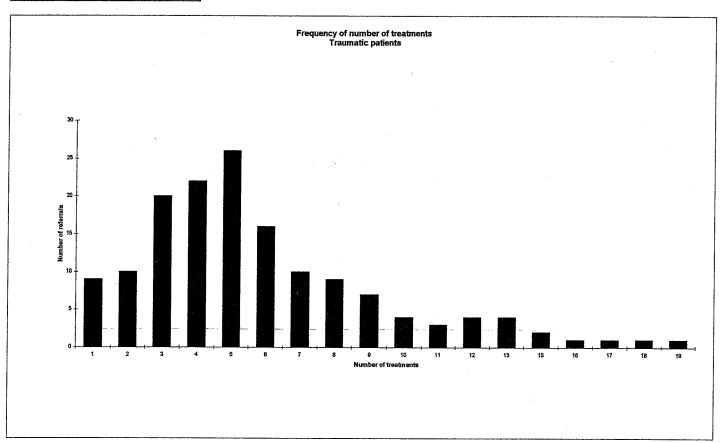


Table 50 Frequency of number of treatments - Patients with whiplash

Number treat.	Number	Percent
7	6	5.6%
2	6	5,6%
3	18	16.7%
4	15	13.9%
5	15	13.9%
6	14	13.0%
7	7	6.5%
8	7	6.5%
9	4	3.7%
1.0	3	2.8%
11	. 3	2.8%
12	4	3.7%
13	3	2.8%
16	1	0.9%
18	1	0.9%
19	1	0.9%
Total	108	100.0%

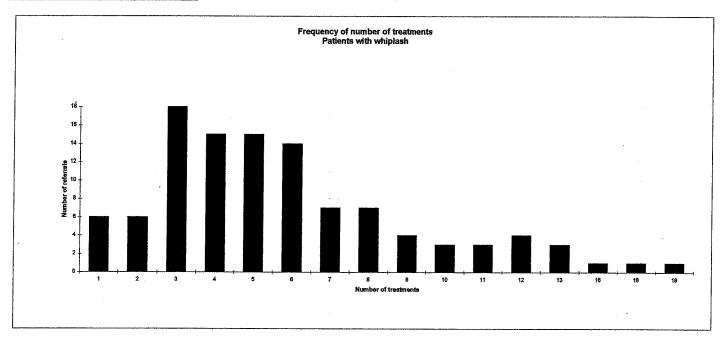


Table 51 Frequency of referrals by episode group - Patients with whiplash

Episode	Number	Percent
1ST EPISODE	83	78.3%
RECURRENT	23	21.7%
Total	106	100.0%

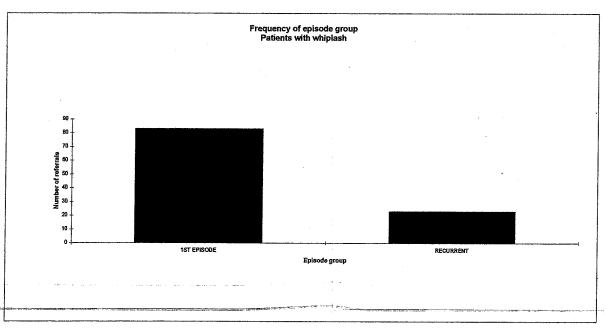


Table 52 Frequency of number of treatments v episode group - Patients with whiplash

Number treat.	1st episode	Recurrent	Total
1	2	2	4
2	5	1	6
3	14	3	17
4	13	2	15
5	12	2	14
6	10	4	14
7	4	3	7
8	6	1	7
9	2	. 2	4
10	3	0	3
11	1	2	3
12	4	0	4
13	3	o	3
16	1	0	1
18	1	o	1
19	1	0	1
Total	82	22	104

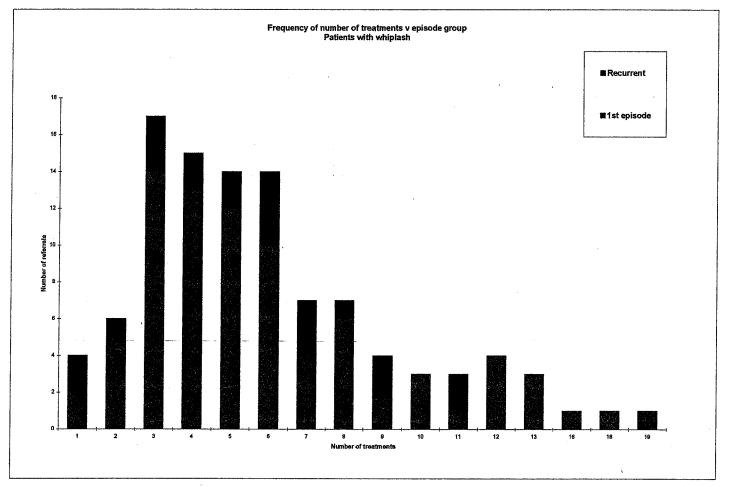


Table 53 Frequency of other factors influencing outcomes - Patients with whiplash

Other factors	Number	Percent
CASED TO ATTEND	14	14.0%
CHANGED GRADE PT	1	1.0%
EXACERBATION	1	1.0%
GENERAL STATE	17	17.0%
LIFESTYLE INFLUEN.	11	11.0%
NO OTHER FACTORS	46	46.0%
OTHER MED.COND.	3	3.0%
OTHER MED.INTERV.	3	3.0%
REFERRAL TO CON/GP	1	1.0%
TIME,PROG,NO TREAT.	3	3.0%
Total	100	100.0%

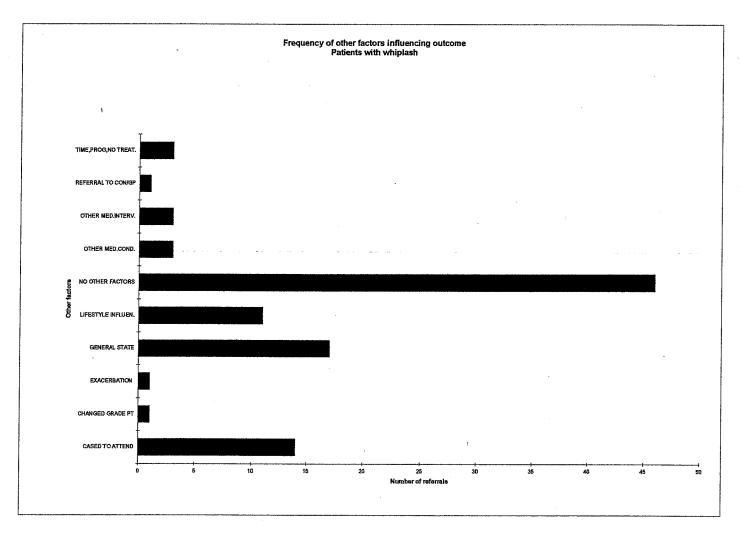


Table 54 Frequency of number of treatments - Patients with spondylosis

Number treat.	Number	Percent
1	4	3.3%
2	11	9.1%
3	13	10.7%
4	24	19.8%
5	24	19.8%
6	14	11.6%
7	18	14.9%
8	4	3.3%
9	5	4.1%
11	2	1.7%
15	1	0.8%
16	1	0.8%
Total	121	100.0%

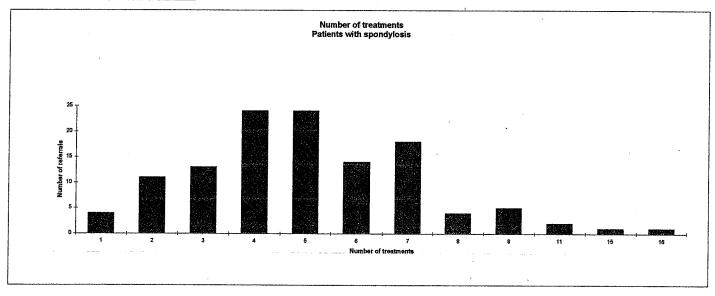
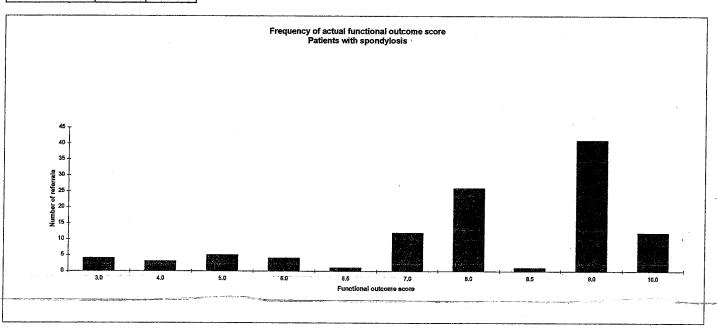


Table 55 Frequency of actual functional outcome - Patients with spondylosis

Actual funct.	Number	Percent
3.0	4	3.7%
4.0	3	2.8%
5.0	5	4.6%
6.0	4	3.7%
6.5	1	0.9%
7.0	12	11.0%
8.0	26	23.9%
8.5	1	0.9%
9.0	41	37.6%
10.0	12	11.0%
Total	109	100.0%



Physiotherapy OPD Mid Kent Healthcare Trust Discharge Summary Sheet

1.	1. Unit Location of O.P.D. SURNAME	
2.		
3 .		
٠.	Tadish tashmisation to	•
4.	1. Date of Birth 5. Age	6. Gender
7.	7. Primary Diagnosis (I.T.C.D.)	
8.	Secondary Diagnosis (Physiotherapy)	
9.	. Tertiary Diagnosis	
10.	0. Body Site 1. 2. 3. 4.	
11.	Laterality of Symptoms 12. Date of Referral	
13.	3. Date of Commencement	
14.	1. Length of Wait from 1st GP contact to Referral (in Weeks)	
	5. Length of Wait from Referral to Commencement of PT (in weeks)	
16.	. Reason for Referral	
17.	. Weighting of Psycho-social and Physical Factors	
18.	Initial Assessment of Functional Ability	•
19.	. Assessment of Expected Functional Outcome	
20.	. Actual Functional Outcome Score	
21.	. Date PT terminated	
22.	. Outcome of Referral	
23.	Treatment Details	
24.	Total Effort Score	
25.	Goal Achievement at Discharge	
26.	Other Factors Influencing Outcome	30. Patient Perceived
27.		Pain Function to Work
28.	Physiotherapist	
		At initial examination
9.	Grade	At completion of treatment

1. Unit location of O.P.D. Hospital Pat ID
2. Occupation 3. Study ID No 4. Date of Birth
5. Gender 6. Episode
7. Secondary diagnosis (Physiotherapy)
8. Body site 1 2 3 4
9. Laterality of symptoms 10. Date of referral
11. Date of commencement
12. Length of wait from 1st GP contact to referral (in weeks)
13 Length of wait from referral to commencement of PT (in weeks)
14. Weighting of Psycho-social and physical factors
15. Initial assessment of Functional Ability
16. Assessment of Expected Functional Outcome
17. Actual functional Outcome Score
18. Date PT terminated
19. Outcome of referral
20. Treatment details 21. Total Effort Score
22. Goal achievement at discharge
23. Other Factors influencing outcome
24. Number of treatments 25. Grade of Physiotherapist
26. Patient perceived
Initial examination .
Pain Function Ability to work
At completion of treatment
Pain Function Ability to work
27. Referral source

CODINGS FOR DISCHARGE SUMMARY SHEETS

1. Unit/Location of O.P.D.

1 6 2 7 3 8 4 9 5 10

2. Occupation

Professional

2 Employer/Manager

3 Intermediate & junior non manual

Skilled Manual & own account non professional

Semi skilled manual and personal service

Unskilled manual
Unemployed (more than 2 years)
Retired (if more than 2 years)
Housewife /husband if more than 2 years)

10 School person

Student 11

NB Use categories 1 - 6 if employment ceased for less than 2 years for reasons stated in 7 - 9.

3. Study ID No.

4. Date of Birth

Gender 5.

Female Male

6. **Episode**

1st episode 2 recurrent

7. Secondary Diagnosis

10 Respiratory 20 Neurological 21 UMN 22 LMN 30 Surgical 31 Pre Op Post Ôp 32 40 Medical 50

Neuro Musculo Skeletal

51 Traumatic

```
52
               Degenerative
               Inflammatory
53
54
               Pathological
               Postural
55
56
               R.S.I.
               Obstetrics & Gynaecology
60
               Stress Incontinence
61
62
               Unstable Bladder
70
               Dermatological
80
               Oedema -
90
              Stress
```

8. Body Site Codes (use more than 1 code if appropriate)

Head Neck Neck + Referral Thoracic Thoracic + Referral Lumbar Lumbar + Referral	01 02 03 04 05 06 07
Sacroiliac Shoulder	08 0 9
Shoulder Girdle	10
Upper Arm	11
Elbow	12
Forearm	13
Wrist	14
Hand	15
Finger	16
Thumb	17
Hip	18
Thigh	19
Knee	20
Lower Leg	21
Ankle	22
Foot	23
Chest	24
Abdomen	25 26
Upper Limb	26 27
Lower Limb	28
Whole Body Multiple Regions	20 29
Skin	30
Nerve	31
TMJ	32
Face	33
Pelvic Floor	34
Bladder	35
Ribs	36
Coccyx	37
Other	38
Lumbar + Neuro signs	39

(ie dermatomal and/or myotomal and/or reflex loss)

9. Laterality of Symptoms

Unilateral	==	1
Bilateral	=	2

11.	Date of commencement								
12.	Length of wait from 1st GP contact to referral (in weeks)								
13.	Length of wait from referral to commencement of PT (in weeks)								
14.	Weighting of Psycho-social and physical factors								
			1	2	3	4	5		
				Mild	Moderate	Quite Severe	Severe	TOTAL	
1. Pr	oblem								
2 Co	ommunic /Sens								
3. M	lobility								
						· ·			
4. Other Conditions									
			r	· · · - · ·			1		
5. Social Circumstances									
Categories 2 - 5 should all have a direct impact on ease or difficulty of Physiotherapy treatment TOTAL MAXIMUM POSSIBLE TOTAL SCORE = 25 MINIMUM POSSIBLE TOTAL SCORE = 0									
Items	15, 16 an	ıd 17 or	the Sum	mary Sheet:	Functional, Pl	nysical and	Subjective C	Outcomes	
Scores should be completed by the Therapist and also by the patient for the initial assessment of functional ability, the expected functional outcome and the actual functional outcome.									
	10 = Normal lifestyle, fully independent, able to work, no pain or disability, participate fully in sporting activities. Joint range equivalent to 90/100% of available active physiological movement. Normal healthy individual.								
9.5							ŧ		
	Independent, able to work but some slight discomfort or dysfunction. Not able to carry out competitive sport but is able to attend and participate in training sessions. 80/90% of normal active physiological movement range is available.								
8.5									
- Address of the sec	8 = Independent to a large degree without walking aids. Able to return to non manual work but only to modified manual work. Very modified sports training is accomplished. Some aspects of ADL slightly restricted. Some								

physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	7.5							
Unable to work due to moderate pain levels and disability. Marked functional limitation in one limb or region. 50% - 60% of normal active physiological range of movement is available. 5.5 Able to carry out most ADL but needs occasional help. Dependent upon aids for mobility walks unsupervised. Unable to work. Moderate limitation of joint range with 40% - 50% the normal active physiological range of movement available. Moderate pain levels v some postures and/or at rest. Independent for some ADL but needs some help either by one professional or by one lay person for one or more activities. Walks with an aid and standby supervision. Severe limitation of joint range between 30% to 40% of normal active range of movement is available. High levels of pain on movement. Ferforms minimal ADL with help. Needs moderate physical help with walking and transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movem available. Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. Date PT terminated Outcome of Referral	7 =	return to non manual work part time but no marked functional limitation. 60% - 70% of movement is available in one or more li	ot to manual work. Son of normal active physi	ne general ological range				
limitation in one limb or region. 50% - 60% of normal active physiological range of movement is available. 5.5 Able to carry out most ADL but needs occasional help. Dependent upon aids for mobility walks unsupervised. Unable to work. Moderate limitation of joint range with 40% - 50% the normal active physiological range of movement available. Moderate pain levels v some postures and/or at rest. 4.5 Independent for some ADL but needs some help either by one professional or by one lay person for one or more activities. Walks with an aid and standby supervision. Severe limitation of joint range between 30% to 40% of normal active range of movement is available. High levels of pain on movement. 3.5 Performs minimal ADL with help. Needs moderate physical help with walking and transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movem available. 2.5 Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	6.5							
Able to carry out most ADL but needs occasional help. Dependent upon aids for mobility walks unsupervised. Unable to work. Moderate limitation of joint range with 40% - 50% the normal active physiological range of movement available. Moderate pain levels v some postures and/or at rest. 4.5 4 = Independent for some ADL but needs some help either by one professional or by one lay person for one or more activities. Walks with an aid and standby supervision. Severe limitation of joint range between 30% to 40% of normal active range of movement is available. High levels of pain on movement. 3.5 3 = Performs minimal ADL with help. Needs moderate physical help with walking and transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movem available. 2.5 2 = Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	6 =	limitation in one limb or region. 50% - 60						
walks unsupervised. Unable to work. Moderate limitation of joint range with 40% - 50% the normal active physiological range of movement available. Moderate pain levels v some postures and/or at rest. 4.5 4 = Independent for some ADL but needs some help either by one professional or by one lay person for one or more activities. Walks with an aid and standby supervision. Severe limitation of joint range between 30% to 40% of normal active range of movement is available. High levels of pain on movement. 3.5 3 = Performs minimal ADL with help. Needs moderate physical help with walking and transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movem available. 2.5 2 = Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	5.5							
Independent for some ADL but needs some help either by one professional or by one lay person for one or more activities. Walks with an aid and standby supervision. Severe limitation of joint range between 30% to 40% of normal active range of movement is available. High levels of pain on movement. 3.5 3 = Performs minimal ADL with help. Needs moderate physical help with walking and transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movem available. 2.5 2 = Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	5 =	walks unsupervised. Unable to work. Mo the normal active physiological range of	derate limitation of join	nt range with 40% - 50%	of			
person for one or more activities. Walks with an aid and standby supervision. Severe limitation of joint range between 30% to 40% of normal active range of movement is available. High levels of pain on movement. 3.5 3 = Performs minimal ADL with help. Needs moderate physical help with walking and transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movem available. 2.5 2 = Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	4.5							
3.5 Performs minimal ADL with help. Needs moderate physical help with walking and transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movema vailable. 2.5 Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	4 =	person for one or more activities. Walks with an aid and standby supervision. Severe limitation of joint range between 30% to 40% of normal active range of movement is						
transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movema vailable. 2.5 2 = Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	3.5							
Dependent on help for most ADL due to mental or physical disabilities. e.g. following multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	3 =	transferring. i.e. uses a walking aid and one helper. Has severe pain at rest worse with movement. Active range of movement is limited to 20% to 30% of normal range of movement.						
multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range physiological movement is limited to zero or has less than 20% of range available. 1.5 1 = Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated Outcome of Referral	2.5							
Totally dependent, helpless, unable to perform any ADL, e.g. Unconscious. Date PT terminated , Outcome of Referral	2 =	multiple injuries. Unable to walk or needs maximal help i.e. two helpers. Active range of						
Date PT terminated Outcome of Referral	1.5							
Outcome of Referral	1 · =	Totally dependent, helpless, unable to per-	form any ADL, e.g. Uno	onscious.				
	Date PT ter	minated	; · · ·		,			
I	Outcome of	Referral		•				
Treatment not commenced (department informed) 02 Treatment not commenced (department not informed)	Treatment r	not commenced (department informed) not commenced (department not informed)						
Treatment interrupted (F.T.A)	Treatment	interrupted (F.T.A)						
Department not informed 04 Treatment interrupted (U.T.A.) Department informed (Includes self discharges) 05 Transferred within district 06	Treatment Departmen	interrupted (U.T.A.) t informed (Includes self discharges)	05					

mild pain present for periods during the day. Joint range restricted to between 70% and 80% of normal available range.

07

18.

19.

Transferred outside district

	Assessment completed no Physiotherapy required Assessment completed. Advice re self care given	08		
	Review arranged	09		
	Treatment completed. Regular discharge	10		
	Died	11		
	Referred back to GP/Consultant	12		
	Patient non compliant	13		
	•	14		
	Physiotherapy not effective Other	14		
	Officer			
	•			
	m	15	-	
20.	Treatment Details			
	Advice re self management or advice to carer	01		
	Interferential	02		
	S.W.D.	03		
	TENs	04		
	Ultrasound	05		
	Local heat (I.R. packs pad)	06		•
	Active exercises	0 7		
	Passive exercises	08		
	Traction	09		
	Mobilisations/manipulation	10		
	Reflexology	11		
	Aromatherapy	12		•
				•
	Ice	13		
	Hydrotherapy	1 <u>4</u>		
	Wax	15		
	Faradism	16		
	Massage	17		•
	Frictions	18		
•	C.T. Massage	19		
	Strapping	20		
,	Education	21		
	Appliance fitting	22		-
	Ultra voilet	23		
	Laser	- 24		
	P.N.F.	25		
	Electro diagnosis	26		
	Facilitatory/re-education techniques	27		
	Gait re-education	28		
	Re-Education of Muscle Imbalance	29		
	Neuro dynamic facilitation	30		
	Active exercises and advice	31		
	Mobilisations and active exercises			
		32		
	Frictions and Ultrasound and S.W.D.	33		
	Mobilisations, active exercises and advice	34		
	Mobilisations, traction and active exercises	35		
	Mobilisations and advice	36		
	Mobilisations, passive exercises and S.W.D.	37	,	
	Mobilisations, Ultrasound, S.W.D. and advice	38		
	S.W.D., active exercises, passive exercises and			•
	mobilisations	39		
	Active and passive exercises and advice	40		
	Mobilisations, S.W.D. and education	41	AF7	T
	Re-education of muscle, active exercises,		47	Trigger pt release
	mobilisations and advice	42	40	soft tissue stretches
	Active exercises, education and advice	43	48	Back School
	Mobilisations, advice and Ultrasound	45 44	49	Back rehab class
	S.W.D., active exercises and advice	45		
		417 1 4		
V/6	Acupuncture :	46		

21. Total Effort Score (O.P.D. only)

Activity	Approx Time Taken	Score
Patient Interview no treatment, short letter	5 mins ·	1
US/IR/SWD/Laser Traction/TNS/Trophic Stimulation/Mobilisations/ Exercises/Thoraktin/Normal Administration /Wax	10 mins	2
Acupuncture/IF/Mobilisations Traction	15 mins	3
Mobilisations/UVR Education/Advice	15 mins	4
Mobilisations/simple peripheral joint examination & assessment	20 mins	5
Moderately complex peripheral joint examination & assessment	20 mins	6
Complex peripheral joint examination & assessment	30 mins	7
Simple neck/back/shoulder examination & assessment. Basic neurological treatment e.g. Brachial Plexus, lesion, facial palsy	30 mins	8
Moderately complex back/neck.shoulder examination & assessment Complex Brachial plexus lesion	45 mins	9
Complex back.neck/Shoulder/neurological examination	60 mins	10

1 extra point for each extra member of staff involved in the treatment

1 extra point for each extra modality e.g. simple mobilisations

+ U.S + exercises = 4

Classes

60 min class

12) then divide by the number of patients

90 min class

18)

If more than one Physiotherapist involved then double class score i.e. 2 Physiotherapists doing 1 hour class with 12 patients each patient scores 2.

Effort is a mixture of:-

Knowledge application

Skill application

Vigour

Time expended

Self motivation

Physical and mental exertion

Strength

Concentration

Conviction

Motivation of others

Effort is graded 1 - 10 and is recorded at the end of each contact with the service as the clinical records are updated. Total effort score for whole treatment period is recorded on discharge sheet.

22. <u>Goal Achievement at Discharge</u> (in terms of patient and therapist goal achievement)

Note: goals should include pain, range of movement, function, patient's interpretation of subjective perceived improvement and the ability to work.

a	Goals exceeded	٦	1-5	Treatments	1
		-	6 - 10	Treatments	2
		-	11 - 15	Treatments	3
		l_	16 +	Treatments	4

When the goal/outcomes expected at the initial assessment have been surpassed by the actual achievements attained by the patient, i.e.symptom free, increased range of movement compared to other limb before incident, function better than before. Able to work fully.

b	Goals fully	1-	1-5	Treatments	5	
	achieved	i-	6 - 10	Treatments	6	
		-	11 - 15	Treatments	7	
		I_	16 +	Treatments	8	

All goals/outcomes achieved to 100%. i.e. symptom free, full range of movement, no pain, function as before incident. 100% perceived improvement. If during assessment it is clear that advice only is needed or that the aim of intervention was to assess mobility and this is achieved then the goal is fully achieved. A non physiotherapy goal may be set e.g. to involve other agencies, if this is done then the goals are fully achieved. Also, if goal was to achieve 80% recovery at discharge, for the patient to achieve 100% recovery with appropriate home management strategy, then goals have been fully achieved.

c	Goals significantly	,-	1-5	Treatments	9
	achieved	-	6 - 10	Treatments	10
	•	-	11 - 15	Treatments	11
		L	16+	Treatments	12

When 50% or more of the agreed goals are achieved or the patient is half way to the expected outcome, i.e. there may be a 50% improvement in subjective and objective findings, one or more problems still present but are resolving slowly but majority of problems have already been resolved. Patient able to work in a restricted or modified way.

pals partially hieved	[-	1 - 5 6 - 10 11 - 15 16 +	Treatments Treatments Treatments Treatments	13 14 15 16	

Less than 50% of the goals set are achieved, there is minimal improvement of subjective and/or objective findings based on the initial assessment, some problems still outstanding, some initial improvement which has failed to continue. Patient unable to work but will manage some domestic tasks and contemplate return to work in a highly modified way.

e	Goals not achieved	-	1 - 5 6 - 10 11 - 15 16 +	Treatments Treatments Treatments Treatments	17 18 19	
		'-	16 +	Treatments	20	

No change in the objective or subjective finding, inappropriate goals set and were not a measure of true potential, or when goals were not met due to influences outside the therapists control the reasons for this should be linked with the other factors and stated in the patient's notes. In all circumstances the signs and symptoms for this group of patients functions will have remained static. Patient unable to contemplate work.

f Other i.e. worse	,-	1-5	Treatments	21	
poor referral	-	6 - 10	Treatments	22	
additional problems	-	11 - 15	Treatments	23	
etc	1_	16+	Treatments	24	

Any eventualities not covered in the above sections use 'other factors' as a linkage and state what other factors were involved in the patient's notes. In this circumstance there may have been increase in local pain, decreased range of movement, increased local swelling, the development of referred pain and/or decreased function. Reduced and/or inability to work. In the assessment of goals between the therapist and the patient a linear visual analogue could be used using the 10 cm line, 0 - 10 for pain, range of movement, function, subjective improvement and the ability to work.

23. Other Factors Influencing Outcome in terms of rate/nature of recovery

- 1. Pain free at first visit.
- 2. Inappropriate referral.
- Re-referred to consultant or GP
- 4. Other medical intervention, e.g. drugs, injection, osteopath, chiropracter, homeopath, collar, corset, surgery, etc.
- 5. General state, e.g. compensation case, stress levels, level of intelligence, attitude of patient, motivation, social circumstances, understanding of condition, smoking, drinking, etc.
- 6. Lifestyle influences, e.g. job, home circumstances, age, sport, etc.
- 7. Other medical conditions, e.g., cardiac.
- 8. Time, natural progression of condition, lack of treatment, e.g. patient moves from the area or is unwilling to attend for treatment.
- 9. Ceased to attend.
- 10. Requires educational advice only.
- 11. Teamwork.
- 12. Transfer to another hospital.
- 13. RIP.
- 14. No other factors.
- 15. Exacerbation of condition

24. Number of Treatments

25. Physiotherapist Grade

- 1. = Junior
- 2. = Senior 2
- 3. = Senior 1
- 4. = Superintendent IV
- 5. = Superintendent III
- 6. = Superintendent Π
- 7. = Superintendent I
- 8. = Student

26. Patient Perceived Pain, Function and Ability to Work

Instructions to therapists on the completion of patient perceived pain levels, functional ability and ability to work.

The patient is asked to indicate their level of pain, functional ability and ability to work before treatment commences and when treatment is terminated. In order for this outcome measure to be reliable it is important that all patients are asked for information in the <u>same</u> way. The following statement should be made by all therapists in respect of each patient that they assess:-

"In order to monitor the effectiveness of your treatment, it is important that we find out about your levels of pain, your functional ability and your ability to work at the present time. Please choose a number on the scale of 0 to 10 which indicates:-

- 1. Your present level of pain when it is at its worst where 0 = the least amount of pain you could envisage and 10 = the worst pain that you could imagine.
- 2. Ability to work where 0 = complete absence of ability to work and 10 = working normally.
- 3. Functional ability where 0 = total absence of ability to carry out functional tasks at home and in the social setting and 10 = maximum or normal ability to carry out functional tasks."

The questions are asked again on completion of physiotherapy treatment.

27. Referral Source

- 1 = General Practitioner
- 2 = Consultant
- 3 = Orthopaedic Practitioner
- 4 = Other

Audit of the Outcome of Physiotherapy Intervention for Outpatients with cervical spine pain and dysfunction

1. Unit location of O.P.D. Hospital Pat ID 2. Occupation 3. Study ID No 4. Date of Birth
5. Gender 6. Episode 7. Acute/Chronic
8. General Diagnosis / Aetiology 9. Specific Diagnosis
10. Physiotherapy diagnosis statement
11. Body site 1.
13. Level 14. Laterality of symptoms 15. Date of referral
16. Date of commencement
17. Length of wait from 1st GP contact to referral this episode (in weeks)
18 Length of wait from referral to commencement of PT (in weeks)
19. Weighting of Psycho-social and physical factors a. The problem
b. Communication c. Mobility d. Social e. Other conditions
20. Initial assessment of Functional Ability
21. Assessment of Expected Functional Outcome 22. Actual functional Outcome Score
23. Date PT terminated 24. Outcome of referral
25. Treatment details 26. Total Effort Score
27. Goal achievement at discharge 28. Other Factors influencing outcome
29. Number of treatments 30. Grade of Physiotherapist(s)
31. How many therapists involved in treatment to date
32. Patient perceived
At Initial examination Pain Function Ability to work
At completion of treatment Pain Function Ability to work
33. Referral source 34 Improvement in quality of life

CODINGS FOR DISCHARGE SUMMARY SHEETS

1.	Unit/Location of O.P.D.						
	1 2 3 4 5	6 7 8					
	4	9 10					
	5	10					
2.	Occupation						
	1 = 2 = 3 = =	Managers and Administrators (inc. officers in UK armed forces, senior police officers, senior prison officers, senior fire service officers) Professional Occupations (inc. Judges, teachers, psychologists, librarians) Associate Professional and Technical Occupations (inc. nurses, authors, physiotherapists, computer programmers, professional athletes, actors)					
	4 = 5 = 6 = 7 = 7	Clerical and Secretarial Occupations Craft and Related Occupations (inc. builders, butchers, mechanics) Personal and Protective Service Occupations (inc. armed forces, police, fire and prison officers, waiters, hairdressers, assistant nurses, dental nurses) Sales Occupations (inc. floral arrangers, buyers)					
	8 = 9 = 10 = 11 =	Plant and Machine Operatives (inc. bus conductors, taxi drivers) Unemployed (more than 2 years) Retired (more than 2 years) Housewife/husband (if more than 2 years)					
	12 = 13 = 14 =	School person, Junior/Secondary school Student HE/FE other Other Occupations (inc. farm workers, postal workers, window cleaners)					
	NB Use categ	gories 1-8 or 14 if employment ceased for less than 2 years for reasons stated in 9-					
11.	_						
3.	Study ID No	o.					
4.	Date of Birtl	h					
5.	Gender						
	1 = =	Female Male					
6.	Episode						
		st episode ecurrent					
7.	Acute or chr	onic					
	1 = A 2 = C	Acute less than 6 weeks duration Chronic more than 6 weeks duration					
8.	General Dia	agnosis/aetiology					
	01 = 02 = 03 = 04 = 05 = 06 = 07 = 08 =	Traumatic Degenerative Inflammatory Congenital Pathological Postural Spontaneous onset Psychogenic (Mallingering, compensationitis, hysteria)					

9. Specific Diagnosis

01	=	Whiplash
02	· =	Direct soft tissue injury
03	*****	Direct joint injury
04	=	Direct bony injury eg fracture
05		Direct injury to nerve
06	=	Direct soft tissue, joint and bony injury
0 <i>7</i>	-	Other trauma
08	=	Spondylosis
09	=	Arthrosis
10	-	Spondylosis and arthrosis
11	=	Rheumatoid arthritis
$\bar{1}\bar{2}$	==	Cervical rib
$\tilde{1}\bar{3}$	=	Spondylolisthesis
$\overline{14}$	=	Congenital torticollis
15	=	Osteoporosis
16	=	Osteomyelitis
$\bar{17}$	=	Osteochondritis
18	=	Acute torticollis
19	=	Lordosis
20	=	Kyphosis
21	===	Kyphosis Scoliosis
22	2002	Kypholordosis
23	===	Muscular dysfunction/pain
24	=	Nerve impingement
25	=	Joint dysfunction/pain
26	=	Disc lesion
27	=	Disc lesion with neural impingement
28	=	Instability
29		Neurodyńamic problems
		•

10. You have 62 characters in order to record your individual physiotherapy diagnosis. Please complete if possible. eg. facet joint impingement

11. Body Site Codes (use more than 1 code if appropriate)

Occipital	01
Temporal	02
Parietal	03
Maxillary	04
Mandibular	05
Occipito Frontal	06
Cervical spine	0 <i>7</i>
Cervical spine + referral to shoulder	08
Cervical spine + referral to elbow	09
Cervical spine + referral to wrist	10
Cervical spine + referral to hand	11
Cervical spine + referral to head and/or face	12
Upper thoracic	13
Upper thoracic + referral to upper limb(s)	14
Upper thoracic + referral to mid and lower thorax	15
Lumbar spine	16
Lumbar spine + referral to buttock	17
Lumbar spine + referral to mid thigh	18
Lumbar spine + referral to knee	19
Lumbar spine + referral to mid calf	20
Lumbar spine + referral to heel	21
Lumbar spine + referral to foot and toes	22

12. Origin of referred symptoms

1	=	Neural origin - Nerve root/peripheral in origin
2	=	Neural origin - Spinal cord/cauda Equina
3	=	Other origin

13. Symptomatic Level (State up to 3 or state 27 = Mulitple)

```
1
2
3
4
5
6
7
8
9
10
                 =
                 =
                 =
                 ==
                 ==
                =
                 =
                 =
                                 T7 - T8
T8 - T9
T9 - T10
                = = =
                                 T10 - T11
T11 - T12
                =
                                L1 - L2
L2 - L3
                =
                                 L4 - L5
L5 - S1
                                 Sacroiliac joint
Multiple
                =
```

14. Laterality of Symptoms

```
Unilateral = 1
Bilateral = 2
```

- 15. Date of referral for treatment
- 16. Date of commencement of treatment
- 17. Length of wait from 1st GP contact to referral for this episode (in weeks)
- 18. Length of wait from referral to commencement of PT (in weeks)

- Psycho-social and physical factors. Please rate on the scale below as an ongoing 19. assessment any factors which may have or had an effect on physiotherapy management and/or patient recovery.
 - None 1 2 3 4
 - Mild
 - Moderate =
 - Quite severe
 - Severe

Problem 19a.

Please give an indication of the severity of the problem ie in terms of pathology and/or dysfunction.

19b. Communication/sensory

Please give an indication of the severity of communication or sensory difficulties eg. inability to communicate, hearing impairment, co existing central nervous system problem or language problems.

19c. Mobility

Please give an indication of severity of any co-existing mobility problems eg. difficulties with sitting, necessity for a walking aid for an allied or co-existing problem, transportation difficulties.

19d. Social circumstances

Please give an indication of severity of any social circumstances which may impact on treatment strategy. These could include single parent, bereavement, financial problems, unemployment etc.

Other conditions 19e.

Please give an indication of severity of other conditions which might impact on the management of this patient eg. patient with a heart condition, respiratory condition and any other coexisting medical or orthopaedic condition.

Items 20,21 and 22 on the Summary Sheet: Functional, Physical and Subjective Outcomes

Scores should be completed by the Therapist in conjunction with the patient for the initial assessment of functional ability, the expected functional outcome and the actual functional outcome.

No central spinal pain, no referral of symptoms, no functional restriction, no 10 working restriction, no sin factors present (ie severity, irritability in nature) patient able to participate in all sport, leisure and social activities taking no medication. Patients expected range of movement = 100% in all ranges Very low severity and irritability, symptoms occurring very infrequently. Able to work fully and carry out leisure, sports and social activities with only a minimal restriction from time to time. 90% range of motion available in 9 one or more ranges. 100% ranges of motion available in all other ranges. Has no need to resort to simple analgesia. Low severity, irritability and nature factors, sleep unaffected. Infrequent 8 symptoms, working full time. Some aspects of work slightly modified, some minimal restriction of social, leisure and sports activities from time to time. 80% range of movement in one or two physiological ranges. All others 100%. Needs analgesia and anti-inflammatories minimally from time to time when symptoms present. Moderately low sin factors, working full time in a modified way. Sleeps well 7 in the main. Symptoms felt occasionally. Leisure, sport and social activities unaffected in the main. 70% range of motion available in one physiological range of motion. All others 100%. Some analgesia necessary when symptoms at their worst. Moderate to mild severity and irritability. Symptoms felt regularly. Working almost full time in a modified way. Leisure and social activities affected 6 occasionally. Contemplating returning to sport. 60% range of motion available in one or two ranges of motion. All others 100%. More than occassional use of analgesia. Moderate severity and irritability in nature. Moderate symptoms felt 5 intermittently, almost daily. Some sleep loss occasionally. Working part time in a modified way. No sport activities. Leisure and social activities possible if careful. Able to 60% Parally living activities unaided. One range of motion reduced to 50%. Regular use of analgesia. Moderate sin factors. Sleep disturbed once or twice a-week. Moderate 4 symptoms daily, pain moderately intense. Working on a very part time basis. Pain local and/or referred. Participating in leisure and social activities at a restricted level. The majority of functional tasks provoke symptoms. Less than 40% range of motion in one physiological range of movement. Analgesia used most days. Moderately high sin factors. Local and/or referral of pain. Intermittent severe and intense pain but felt regularly throughout the day. Unable to work due to symptoms. Sleep disturbed. Performing some functional tasks with 3 some restriction. No sporting activities possible. Leisure activities somewhat curtailed. Under 30% range of movement available in one or more ranges. Analgesia taken regularly throughout the day. High sin factors. Severe and intense pain almost constant. Local and/or referral. Sleep disturbed every night. Performs minimal functional tasks at 2 home. Leisure and social activities curtailed by symptoms by a large degree. No sporting activity possible. Range of movement reduced to 20% or less in

one range of motion. Heavy reliance on analgesia.

drug therapy for minimal pain relief.

Very high sin factors. Severe and intense pain felt constantly. Unable to

sleep, work or participate in leisure and social activities in any form. Range of movement less than 20% in one or more direction. Completely reliant on

1

`;

Outcome of Referral 24.

Inappropriate referral Treatment not commenced (department informed)	01 02
Treatment not commenced (department not informed)	02
(D.N.A.)	03
Treatment interrupted (F.T.A)	
Department not informed	04
Treatment interrupted (U.T.A.)	0.1
Department informed (Includes self discharges)	05
Transferred within district	06
Transferred outside district	07
Assessment completed no Physiotherapy required	08
Assessment completed. Advice re self care given	• •
Review arranged	09
Treatment completed. Regular discharge	10
Died	11
Referred back to GP/Consultant	12
Patient non compliant	13
Physiotherapy not effective	14
Other	15
Treatment Details	

25.

Advice re self management or advice to carer	01
Interferential	02
S.W.D.	03
TENs	04
Ultrasound	05
Local heat (I.R. packs pad)	06
Active exercises '	0 <i>7</i>
Passive exercises	08
Traction	09
Mobilisations (Maitland concept)	10
Manipulation grade 5 (Maitland concept)	11
McKenzie approach	12
Combined movements (Edwards)	13
SNAGS	14
Cyriax Manipulation	15
Reflexology	16
Aromatherapy	17
Ice	18
Hydrotherapy	19
Massage	20
Frictions	21
C.T. Massage	22
Strapping	23
Appliance fitting eg. cervical collar/lumbar support	24
Laser	24 25
P.N.F.	26
Re-Education of Muscle Imbalance	$\overline{27}$
Neuro dynamic facilitation	28
Acupuncture	29
Trigger point release	30
Soft tissue stretches	31
Back school	32
Back rehabilitation class	33
Education + advice	34
Injection Therapy	35

Advice refers to simple instructions eg. sleeping postures, advice about pillows, advice about sitting and working postures.

Education in this context means giving the patient formal instruction into the anatomy, pathology of the region together with the underlying principles involved in management which may occur on an individual or group basis.

26.. Total Effort Score (O.P.D. only)

Activity	Approx Time Taken	Score
Patient Interview no treatment, short letter	5 mins	1
US/IR/SWD/Laser Traction/TNS/Trophic Stimulation/Mobilisations/ Exercises/Thorodology	10 mins	2
Administration /Wax	10 mms	
Acupuncture/IF/Mobilisations Traction	15 mins	3
Mobilisations/UVR Education/Advice	15 mins	4
Mobilisations/simple peripheral joint examination & assessment	20 mins	5
Moderately complex peripheral joint examination & assessment	20 mins	6
Complex peripheral joint examination & assessment	30 mins	7
Simple neck/back/shoulder examination & assessment. Basic neurological treatment e.g. Brachial Plexus, lesion, facial palsy	30 mins	8
Moderately complex back/neck.shoulder examination & assessment Complex Brachial plexus lesion	45 mins	9
Complex back.neck/Shoulder/neurological examination	60 mins	10

 $\boldsymbol{1}$ extra point for each extra member of staff involved in the treatment

 $1\ extra$ point for each extra modality e.g. simple mobilisations $+\ U.S + exercises = 4$

Classes

12) then divide by the number of patients 18) 60 min class 90 min class

If more than one Physiotherapist involved then double class score i.e. 2 Physiotherapists doing 1 hour class with 12 patients each patient scores 2.

Effort is a mixture of:-

Skill application Time expended Physical and mental exertion Knowledge application Vigour Self motivation Concentration Motivation of others Strength Conviction

Effort is graded 1 - 10 and is recorded at the end of each contact with the service as the clinical records are updated. Total effort score for whole treatment period is recorded on discharge sheet.

27. Goal Achievement at Discharge (in terms of patient and therapist goal achievement) Note: goals should include pain, range of movement, function, patient's interpretation of subjective perceived improvement and the ability to work.

a	Goals exceeded	-	1 - 6	Treatments	1
		-	7 - 12	Treatments	2
		_	13 - 18	Treatments	3
		-	19+	Treatments	4

When the goal/outcomes expected at the initial assessment have been surpassed by the actual achievements attained by the patient, ie. symptom free, increased range of movement compared to other limb before incident, function better than before. Able to work fully.

b	Goals fully	-	1 - 6	Treatments	5
	achieved	-	7 - 12	Treatments	6
		-	13 - 18	Treatments	7
		-	19+	Treatments	8

All goals/outcomes achieved to 100% i.e. symptom free, full range movement, no pain, function as before incident. 100% perceived improvement. If during assessment it is clear that advice only is needed or that the aim of intervention was to assess mobility and this is achieved then the goal is fully achieved. A non physiotherapy goal may be set e.g. to involve other agencies, if this is done then the goals are fully achieved. Also, if goal was to achieve 80% recovery at discharge, for the patient to achieve 100% recovery with appropriate home management strategy, then goals have been fully achieved.

C	Goals	-	1 - 6	Treatments	9
	significantly	_	7 - 12	Treatments	10
	achieved	_	13 - 18	Treatments	11
		_	19+	Treatments	12

When 50% or more of the agreed goals are achieved or the patient is half way to the expected outcome, i.e. there may be a 50% improvement in subjective and objective findings, one or more problems still present but are resolving slowly but majority of problems have already been resolved. Patient able to work in a restricted or modified way.

d	Goals partially	-	1 - 6	Treatments	13
	achievêd	-	7 - 12	Treatments	14
		-	13 - 18	Treatments	15
		-	19+	Treatments	16

Less than 50% of the goals set are achieved, there is minimal improvement of subjective and/or objective findings based on the initial assessment, some problems still outstanding, some initial improvement which has failed to continue. Patient unable to work but will manage some domestic tasks and contemplate return to work in a highly modified way.

e	Goals not	_	1-6	Treatments	17
0.	achieved	_	$\bar{7} - 12$	Treatments	18
		-	13 - 18	Treatments	19
		_	19+	Treatments	20

No change in the objective or subjective findings, inappropriate goals set and were not a measure of true potential, or when goals were not met due to influences outside the therapists control the reasons for this should be linked with the other factors and stated in the patient's notes. In all circumstances the signs and symptoms for this group of patients functions will have remained static. Patient unable to contemplate work.

f	Other ie. worse	-	1 - 6	Treatments	21
	poor referral	-	7 - 12	Treatments	22
	additional	-	13 - 18	Treatments	23
	problems etc	-	19+	Treatments	24

Any eventualities not covered in the above sections use 'other factors' as a linkage and state what other factors were involved in the patients's notes. In this circumstance there may have been increase in local pain, decreased range of movement, the development of referred pain and/or decreased function. Reduced and/or inability to work. In the assessment of goals between the therapist and the patient a linear visual analogue could be used using the 10cm line, 0-10 for pain, rnage of movement, function, subjective improvement and the ability to work.

Other Factors Influencing Outcome in terms of rate/nature of recovery 28

- Pain free at first visit.
- 2. 3. Inappropriate referral.
- Re-referred to consultant or GP
- Other medical intervention, e.g. drugs, injection, osteopath, chiropractor, homeopath, 4. collar, corset, surgery, etc.
- General state, e.g. compensation case, stress levels, level of intelligence, attitude of patient, motivation, social circumstances, understanding of condition, smoking, 5. drinking, etc.
- Lifestyle influences, e.g. job, home circumstances, age, sport, etc.
- Other medical conditions, e.g., cardiac.
- Time, natural progression of condition, lack of treatment, e.g. patient moves from the area or is unwilling to attend for treatment.
- Ceased to attend.
- 10. Requires educational advice only.
- Teamwork. 11.
- 12. 13. Transfer to another hospital.
- RIP.
- 14. No other factors.
- 15. Exacerbation of condition
- Transport difficulties 16. 17.
- Parking difficulties
- Access to treatment area difficulties
- Change in grade of therapist

Number of treatments 29.

30. Physiotherapist Grade

- **Tunior**
- Senior 2
- Senior 1
- 4. 5. Superintendent IV =
- Superintendent III =
- 6. 7. 8. Superintendent II
- Superintendent I
- Student

There may be more than one physiotherapist involved in the treatment of this patient, please indicate all grades giving treatment in the boxes provided. Please list grades in order of input.

Please state how many therapists in total were involved in the treatment of this patient. 31.

Patient Perceived Pain, Function and Ability to Work 32.

Instructions to therapists on the completion of patient perceived pain levels, functional ability and ability to work.

The patient is asked to indicate their level of pain, functional ability and ability to work before treatment commences and when treatment is terminated. In order for this outcome measure to be reliable it is important that all patients are asked for information in the same way. The following statement should be made by all therapists in respect of each patient that they assess:-

"In order to monitor the effectiveness of your treatment, it is important that we find out about your levels of pain, your functional ability and your ability to work at the present time. Please choose a number on the scale of 0 to 10 which indicates:-

- Your present level of pain when it is at its worst where 0 = the least amount of pain you could envisage and 10 = the worst pain that you could imagine. 1.
- Ability to work where 0 = complete absence of ability to work and 10 = working normally.2.
- and in the social setting and 10 = maximum or normal ability to carry out functional tasks." 3. Functional ability where 0 = total absence of ability to carry out functional tasks at home

The questions are asked again on completion of physiotherapy treatment.

33. Referral Source

- General Practitioner
- Consultant
- 234 Orthopaedic Practitioner
- Other

Improvement in Quality of Life 34.

Please ask the patient to determine the overall improvement/decrease in their quality of life following treatment taking all their personal factors and physical factors into consideration. eg. pain levels, ability to work, their social life, their sexual activity and general participation in leisure and sporting activities. Ask them to rate it on a 0-100% scale in terms of improvement. If 0% was the least improvement they could achieve and 100% was the most they could expect to have achieved, where would they rate themselves on a scale of 0-100 at this time.

The question to be asked should be:

Using a scale of 0 -100 with 0 being no improvement, minus numbers (such as -10 etc) getting worse and positive numbers being an improvement (100 being the best you could have achieved), could you tell me how you would rate your improvement or decrease in quality of life now compared to when you first started coming for treatment. Take into account, how much pain you have, your ability to work, your social life, sporting activities and your sex life (if appropriate).

Asking the question in a standardised way will increase the validity and reliability of responses.

64

WHIPLASH

REC **STATEMENT** CERVICAL SPONDYLOSIS 2 NECK PAIN AND HEADACHE DUE TO ARTHRITIS C1 T1 3 MUSCULAR TIGHTNESS AND PAIN IN CERVICAL SPINE C2 C4 FACET PROBLEMS 4 ADVERSE NEURAL TENSION 1 MEDIAN NERVE 5 **CERVICAL SPONDYLOSIS** PAINFUL R SHOULDER REFERRED FROM CX FACET JOINTS C4 C5 6 PINS AND NEEDLES IN 1 HAND, PAIN IN 1 ARM, REFERRED CX FACET JOINT 7 8 FACET JOINT C4, CAME ON AFTER LIFTING 9 PAIN IN NECK, BOTH SHOULDERS, BOTH ELBOWS, WRIST, FINGERS, WEAK MUSCLES 10 POSTURAL ORIGIN UPPER CERVICAL SPINE DYSFUNCTION 11 12 EXACERBATION SPONDYLOSIS LOCAL C5 6 DYSFUNCTION NERVE ROOT 13 PSYCHOSOCIAL CERVICAL SPINE PAIN CERVICAL SPINE SPONDYLOSIS NON SPECIFIC LEVEL 14 DEGENERATION CERVICAL SPINE 1 FACET JOINT DYSFUNCTION ESP C6/7 15 WHIPLASH INJURY WITH ACUTE MUSCULAR SPASMS, PAIN STIFF SPINE 16 WHIPLASH INJURY ON A CHRONIC NECK CONDITION 17 WHIPLASH INJURY EXACERBATING EXISTING DEGENERATIVE NECK PAIN 18 19 MUSCLE PAIN, STIFFNESS IN TRAPEZIUS, PAINFUL SPINOUS PROCESS UPPER CERVICAL REGION 20 POSITIONAL CHANGES LEADING TO ARTHOGENIC CHANGES 21 22 V.B.I. POSSIBILITY OR T.I.A. 23 RESID NPD IN 1 ULTP WITH TIME TRIGGER POINT IN UPPER TRAPEZIUS BILATERALLY 24 **DEGENERATIVE SPONDYLOSIS** C5 AND 6 NERVE IMPINGEMENT 25 26 MUSCLE STRAIN FACET JOINT IMPINGEMENT DUE TO SLEEPING POSTURE 27 CERVICO GENIC HEADACHES 28 29 30 DEGENERATIVE CERVICAL CHANGES WITH FACET DYSFUNCTION 31 32 33 34 35 CERVICO THORACIC HYPOMOBILITY 36 37 **NEURODYNAMIC PROBLEMS** 38 GENERALISED JOINT STIFFNESS CX - UPPER SPINE MULTILEVER MUSCLE WEAKNESS 39 WIDESPREAD DEGENERATIVE CHANGES 40 OA WITH ACUTE DEGENERATIVE CHANGES IN CERVICAL SPINE CREPITUS, NO HISTORY TRAUMA **DISC PROLAPSE C5** 41 **NEURODYNAMIC PROBLEM** 42 43 DEGENERATIVE CERVICAL SPINE WITH NERVE ROOT IMPINGEMENT 44 45 POSTURALLY RELATED DEGENERATIVE CERVICAL SPINE 46 47 NERVE ROOT IMPINGEMENT C4 C5 48 49 DEGENERATIVE DISC DISEASE 50 51 CERVICAL SPONDYLOSIS WITH T4 SYNDROME/ADVERSE NEURODYNAMIC PROBLEM WHIPLASH 52 53 JOINT DYSFUNCTION 54 55 DERANGEMENT OF CERVICAL VERTEBRA 56 CERVICAL SPONDYLOSIS AND ACROMIAL BONY SPUR **DEGENERATIVE SPONDYLOSIS** 57 POOR POSTURE AND MUSCLE SPASM 58 59 **TORTICOLLIS** 60 POSTURE AND SPONDYLOSIS NERVE IMPINGEMENT 61 TRAUMA WHIPLASH SOFT TISSUE DYSFUNCTION 62 2ND DEGREE SOFT TISSUE DYSFUNCTION 63

```
65
66
      CERVICAL DERANGEMENT
67
68
69
      SPONDYLOSIS WITH INSTABILITY AND SOME NEUROPATHODYNAMIC SIGNS
70
71
      POSTURE INDUCED PAIN
72
      ACUTE FACET
      GENERALISED OA WITH CERVICAL SPINE AND GLENOHUMERAL JOINT PROBLEMS
73
      BILATERAL SH. ADHESIVE CAPSULITIS
74
      UPPER THORACIC ZYGOPOHYSEAL JOINT IRRITATION WITH REST, CERVICAL SPINE
75
      CERVICO THORACIC JUNCTION HYPERMOBILITY
76
      CHRONIC MUSCLE TENSION
77
78
      MUSCULAR TENSION CAUSING ANY SYMPTOMS
79
ጸበ
      UPPER THORACIC SPINE DYSFUNCTION
      LOWER CERVICAL SPINE EXTENSION DYSFUNCTION
81
      DEGENERATIVE CERVICAL SPINE
82
      RESOLVING MUSCULAR FACET JOINT DYSFUNCTION
83
      MODERATE CERVICAL SPONDYLOSIS - POOR POSTURE
84
      CERVICAL DISC LESION
85
      MID THORACIC AND CERVICOTHORACIC STIFFNESS
86
87
      OA CERVICAL SPINE
88
89
      OA CERVICAL SPINE
      STIFFNESS IN CERVICAL SPINE, 2 DEGREE DEGENERATIVE CHANGES AND POOR POSTURE
90
      POOR CERVICAL SPINE/THORACIC SPINE/JUNCTION POSTURE, FACET JOINT DEGENERATION
91
92
      IMPINGEMENT ANY PROBLEM
93
94
     PATIENT FELL OVER AND JARRED HER NECK WHICH HAS PRECIPITATED SPONDYLOSIS
95
     WHIPLASH
96
97
      CERVICAL SPONDYLOSIS WITH FACET JOINT IMPINGEMENT OF NERVE
     FACET JOINT IMPINGEMENT
98
99
100
101
     JOINT DYSFUNCTION
102
103
     OA C7 T1 VERTEBRAE
     DISCECTOMY 1 YEAR AGO. CERVICAL SPINE C7/T1
104
105
     SOFT TISSUE AND FACET JONIT INVOLVEMENT
106
107
     PAIN AND STIFFNESS IN LOW CERVICAL SPINE REFN IN 1RFT ARM
108
109
     REFERRED PAIN FROM C7 FACET JOINT
     CERVICAL FACET JOINT DYSFUNCTION FOLLOWING WHIPLASH 1 YEAR AGO
110
     FACET JOINT DYSFUNCTION
111
     TRAUMATIC WHIPLASH NOW CAUSING ANY
112
     FACET JOINT DYSFUNCTION
113
     CX DYSFUNCTION WITH ASSOCIATED ACTIVE TRIGGER POINTS DUE TO POOR POSTURE
114
     1973, FELL ON NECK FROM HEIGHT. 1994, REAR SHUNT RTA DEGENERATION
115
     CERVICAL SPONDYLOSIS
116
     ROM WITH ASSOCIATED TRIGGER POINTS
117
118
     CHRONIC NECK PAIN
     DEFINITE SIGNS NERVE ROOT IMPINGEMENT, VERY STIFF CERVICAL DORSAL SPINE
119
     VERY STIFF C7 AND D1 AS A RESULT OF DEGENERATIVE CHANGE
120
121
     WHIPLASH
122
123
     1ST CERVICAL SPINE WHIPLASH INJURY RTA
124
     MUSCULAR SPASM CERVICAL SPINE EARLY OA
     WHIPLASH RTA EXACERBATING CHRONIC PROBLEM
125
126
     FACET JOINT IMPINGEMENT
     EXACERBATION OF PAIN CAUSED BY POOR POSTURE AND WORK
127
     OSTEOPOROSIS, OSTEOARTHRITIS DISC DEGENERATION POLYMYALGIA
128
     STIFE SORE CS AND UPPER THR END OF RANGE OF MOTION ON PALPATION
129
130
     POOR POSTURE AND NERVE IMPINGEMENT
131
     FACET JOINT DYSFUNCTION WITH NEURODYNAMIC ELEMENT
```

```
132
      POOR POSTURE, LONG TERM DYSFUNCTION AND IMPINGEMENT
133
      DEGENERATIVE SPONDYLOSIS
134
      HEADACHES FROM CERVICAL SPONDYLOSIS
135
136
      DEGENERATIVE SPONDYLOSIS AND POOR POSTURE
137
      NECK PAIN AND STIFFNESS DUE TO OA
138
      CERVICAL SPONDYLOSIS REFERRAL PAIN 1 SIDE OF HEAD AND FACE. PINS AND NEEDLES
139
140
      CHRONIC WHIPLASH WITH NEURAL TENSION
141
142
      DEGENERATIVE CERVICAL SPINE WITH REFERRED PAIN
143
144
      CERVICAL SPONDYLOSIS WITH VERTEBRAL ARTERY INVOLVEMENT
145
146
147
148
149
      CERVICAL ARTHRITIS
150
151
152
      C1/2 FACET JOINT DYSFUNCTION
153
      RESTRICTED JOINT MOVEMENT C2/3 SEGMENT
154
      CERVICAL SPINE SPONDYLOSIS AND ARTHROSIS
155
      MUSCULAR DYSFUNCTION OF SCALENES CAUSING NECK AND SHOULDER PAIN
      STIFFNESS UPPER THORACIC SPINE AND ANY
156
157
      MID C SPINE ARTICULAR AND SOFT TISSUE PROBLEM
158
      PARESTHESIA BOTH HANDS AND SLIGHT NECK PAIN DUE TO OA CX
      ACUTE NECK PAIN WITH MUSCULAR SPASM PAIN ON PALPATION, CERVICAL SPINE
159
      C3/C4 FACET JOINT DYSFUNCTION
160
161
     UNDERLYING DEGENERATION
162
     WHIPLASH INJURY
     TRAUMATIC INDUCED FACET JOINT DYSFUNCTION
163
164
     GENERAL DYSFUNCTION
165
     EXACERBATION RA
166
     WHIPLASH WITH NERVE ROOT IRRITATION
167
168
     CERVICAL SPONDYLOSIS WITH POSTURAL DYSFUNCTION
169
     STIFFNESS FOLLOWING IMPACT INJURY TO HEAD C4/5
170
     C5/6 DYSFUNCTION
     ACUTE C5/6 NERVE ROOT IMPINGEMENT SECONDARY TO DEGENERATIVE PROBLEMS
171
172
     ACUTE C5/6 NERVE ROOT IMPINGEMENT SECONDARY TO DEGENERATIVE POSTURE
173
     CHRONIC POSTURAL DYSFUNCTION CX
     POSTURAL PAIN AND INFLAMMATORY COMPONENT
174
     ONGOING POOR POSTURE
175
     FACET JOINTS IMPINGEMENT
176
     C/SPINE SPONDYLOSIS CAUSING HEADACHES
177
178
     WHIPLASH WITH NERVAL IRRITATION
179
     WHIPLASH WITH NERVE ROOT IRRITATION
180
     C5/6 JOINT DYSFUNCTION AND SCIATIC REFERRAL
181
     NERVE ROOT ENTRAPMENT C6/7
     C5/6 HYPERMOBILITY WITH STIFF CT JUNCTION
182
183
     STIFF CT JUNCTION WTH HYPERMOBILITY AT C5/6
184
     CERVICAL SPONDYLOSIS
     (1) ROTATION DYSFUNCTION PAIN L SHOULDER
185
186
     PREVIOUS TRAUMA EXACERBATED BY RECENT INCREASED ACTIVITY
187
188
     RTA CAUSING C4/5 SUBLUXATION WITH FRACTURE
189
     FACET JOINT IMPINGEMENT AND STENOSIS
190
191
     NECK PAIN WITH ACUTE MUSCULAR SPASMS RADIATING TO SHOULDERS
192
     CERVICAL SPONDYLOSIS
     DISC DEGENERATION AND OSTEOPHYTES
193
     RHEUMATOID ARTHRITIS
194
     RECURRENT DISC PROBLEMS RELEVANT TO WORK
195
196
197
```

198

FACET JOINT PROBLEM OA C/SP

```
199
      WHIPLASH CERVICAL THORACIC JUNCTION STIFFNESS
200
201
      C6 DYSFUNCTION/VERTIGO
202
      ADVERSE NEURAL DYNAMICS
203
      OVERUSE C/SPINE, UNDERUSE THORACIC SPINE
204
205
206
207
      OCCIPITAL HEADACHES FROM C1/2
208
209
      CERVICAL THORACIC STIFFNESS AND PAIN
210
      PAGETS DISEASE
      OA AT C5/6, C6/7
211
212
      SOFT TISSUE DYSFUNCTION
      SUB OCCIPITAL SP AND UPPER TSP - POOR POSTURE CONTRIBUTING CON
213
      MARKED CERVICAL UPPER DORSAL STIFFNESS DUE TO SOFT TISSUE SHORTENING
214
      WHIPLASH 17 YEARS AGO - WEAR AND TEAR PROBLEMS
215
216
      CERVICAL SPINE
      SOFT TISSUE TRAUMA NERVE IMPINGEMENT
217
218
      SOFT TISSUE TRAUMA
      FACET JOINT LOCK BUT ALSO REFERRED PAIN FROM TRIGGER POINTS
219
220
      T4/5 COSTOVERTEBRAL JOINT INFLAMMATION
221
222
      ACUTE ON PRE EXISTING WHIPLASH
223
224
      MID CERVICAL JOINT STIFFNESS/DYSFUNCTION
225
      UPPER CERVICAL DYSFUNCTION
226
      C/T FACET JOINT DYSFUNCTION
227
      SCALENE MUSCLE SPRAIN
228
      TRAUMA FACET JOINT IRRITATION AND NERVE ROOT SIGN
229
      C8/T JOINT DYSFUNCTION
230
      C6/7 FACET JOINT ARTHROSIS AND NERVE ROOT IRRITATION
231
      DEGENERATIVE UPPER CERVICAL SPINE
232
      FACET JOINT IMPINGEMENT
233
     ARTHROSIS WITH BILATERAL REFERRAL OF PAIN ACROSS SHOULDERS
     ACHE IN 1 TRAPEZIUS WITH MOVEMENT TORTICOLLIS
234
     R ARM WEAKNESS DUE TO JOINT SPACES C5/6/7 POSTERIOR OSTEOPHYTES
235
     LONG STANDING CERVICAL SPONDYLOSIS CAUSING FACET JOINT IMPINGEMENT
236
     MECHANICAL NECK PAIN RELATED TO OLD INJURY AND POOR POSTURE
237
238
     WHIPLASH INJURY
     RECURRENT ATTACK OF ACUTE PAIN, L TRAPEZIUS WORK RELATED
239 ---
     DYSFUNCTION CERVICAL THORACIC JUNCTION POSTURE
240
     SPONDYLOSIS EXACERBATED BY POSTURE AT WORK
241
242
     DEGENERATIVE FACET PAIN
     CERVICAL SPONDYLOSIS X RAY REVEALED RUDIMENTARY CERVICAL RIB
243
244
     PREVIOUS CERVICAL SPONDYLOSIS
245
246
     FELL OFF BATH EDGE, HIT HEAD ON TAPS
247
     WHIPLASH AND EXACERBATION OF OLD BACK PROBLEM
248
     TORTICOLLIS
249
250
     DEQUERVAINES WITH A NEURODYNAMIC SPINAL COMPONENT
     POST WHIPLASH CHRONIC STIFFNESS DUE TO POOR POSTURE
251
252
     POSTURAL HYPOMOBILITY
253
254
     7 MONTHS POST WHIPLASH WITH T6 L FACET JOINT STIFFNESS
255
     R C4/5 FACET JOINT DYSFUNCTION
256
     DEGENERATIVE FACET UPPER CERVICAL
257
258
     SOFT TISSUE WHIPLASH INJURY
259
     CERVICAL SPONDYLOSIS
260
     SOFT TISSUE MAINLY/WHIPLASH INJURY
261
     MARKED LOSS OF MOBILITY ON ROTATION WITH CONSIDERABLE SOFT TISSUE
262
     SPONDYLOSIS
263 ADVERSE NEURAL TENSION
     CERVICAL SPONDYLOSIS NO C/SPINE PAIN, BUT PINS AND NEEDLES
264
```

SPONDYLOSIS AND MYOFASCIAL PAIN

```
266
      SPONDYLOSIS C SPINE
267
      DYSFUNCTION JOINT AND MUSCULAR
268
      MUSCLE SPASM/SPONTANEOUS TORTICOLLIS
269
      NERVE IMPINGEMENT FROM LOWER CERVICAL SPINE
270
      L SIDE FACET IMPINGEMENT
271
272
      NPD SIGNS SECONDARY TO DEGENERATIVE CHANGES IN C SPINE
      CERVICAL SPINE EXT ROTATION DYSFUNCTION
273
274
275
276
      UPPER TRAPEZIUS DYSFUNCTION
      EXACERBATION AT CERVICAL SPONDYLOSIS
277
      LOWER CERVICAL FACET AND CERVICO
278
      MID THORACIC DYSFUNCTION WITH ASSOCIATED MUSCULAR TIGHTNESS
279
280
      TIGHT UPPER TRAPEZIUS WITH TRIGGER POINTS AND C6 T1 FACET DYS
281
282
      NERVE ROOT ENTRAPMENT
      DEGENERATIVE CHANGES IN CERVICAL SPINE
283
284
      TIGHT UPPER TRAPEZIUS FROM POOR POSTURE
285
286
287
      ARTHRITIS AND OSTEOPHYTES IN CS DECREASE MOVEMENT TIGHT MUSCULATURE
288
      WHIPLASH
289
      COMPRESSION FLEXION STRAIN
290
      RESIDUAL DULL ACHE IN UPPER CERVICAL SPINE
291
      C6 NERVE ROOT IRRITATION WITH UNDERLYING DEGENERATION
      OA DEGENERATIVE CHANGES R UPPER CS JOINT DESTRUCTION
292
293
      R SIDED LIGAMENTOUS TIGHTNESS
294
      CERVICAL SPONDYLOSIS
295
      SOFT TISSUE INJURY DUE TO FALL
296
      WHIPLASH
      CERVICAL SPONDYLOSIS
297
298
     WHIPLASH
299
     WHIPLASH
300
     CERVICAL SPONDYLOSIS
301
302
     CERVICAL SPONDYLOSIS
303
     WHIPLASH
     ACUTE WHIPLASH
304
305
     OA CERVICAL SPINE
     LOW CERVICAL PAIN WITH PINS AND NEEDLES IN BOTH ARMS
306
307
     CERVICAL SPONDYLOSIS
308
     ACUTE TORTICOLLIS
309
     PAIN DUE TO DEGENERATIVE CHANGES IN THE NECK
310
     PAINFUL MIDDLE TRAPEZIUS
311
     ACUTE WHIPLASH
312
     SPASM IN THE L STERNOCLEIDOMASTOID MUSCLE
313
     IRRITATION C7C2 AND 3 FACET JOINTS
314
     CERVICAL SPONDYLOSIS
315
     CERVICAL SPONDYLOSIS
316
     FACET JOINT IMPINGEMENT
317
     ACUTE TORTICOLLIS
     T1/1 SCOLIOSIS, WHIPLASH INJURY 7 YEARS AGO C/SPINE
318
     FACET JOINT IMPINGEMENT
319
     MUSCLE SPASM
320
321
     CHANGE OF BED TO HARD - PAIN SINCE
322
     NEURO PROBLEM SECONDARY TO OLD WHIPLASH, SOME DISCOGENIC RESTRICTION
323
324
325
     POSTUREAL EXACERBATION OF C5 TRAUMATIC INFLAMMATION
326
     POOR SCAPULAR STABILITY SECONDARY TO MUSCLE IMBALANCE EXACERBATED BY WORK
327
     DERANGEMENT 5
     CERVICAL SPINE DERANGEMENT 3
328
     SOFT TISSUE DYSFUNCTION NECK AND SHOULDER
329
    CERVICAL SPINE DERANGEMENT 3
330
331
     FACET JOINT C5/6
332
```

```
333
 334
      FACET JOINT DYSFUNCTION
 335
336
      HYPOMOBILE C T FUNCTION
337
      WHIPLASH INJURY
338
      FACET JOINT IMPINGEMENT
339
      ROTATOR CUFF IMPINGEMENT 1 DEG ACUTE LOWER C/SPINE NERVE ROOT R IRRITATION
340
      POSITIONAL VERTIGO
341
342
343
      THORACIC NERVE IMPINGEMENT
344
      DEGENERATIVE C/SPINE AGGRIVATED BY POOR POSTURE
345
      CHRONIC CHANGES WITH TRAPEZIUS TRIGGER JOINT
346
      CHRONIC WHIPLASH WITH NEURAL TENSION
347
      CERVICAL OSTEOARTHRITIS
348
      SUPRASPIRATUS TENDINITIS TRIGGER POINTS
349
350
351
352
353
354
355
356
357
358
359
      MYOFACIAL PAIN TRAPEZIUS, SOME C4/5 JOINT DYSFUNCTION
360
      POST TRAUMATIC DYSFUNCTION
361
362
      SLE SOFT TISSUE DYSFUNCTION
363
      CERVICAL SPONDYLOSIS
364
      C6/C7 DISCOGENIC AND NERVE ROOT IMPINGEMENT
365
      POSTURAL DYSFUNCTION MUSCLE IMBALANCE POKING CHIN POSTURE
366
      JOINT DYSFUNCTION CAUSED BY LONG TERM POSTURAL PROBLEMS
367
      EARLY RESISTANCE / STIFFNESS CX LOWER AND UPPER THORACIC SPINE
368
      POSTURAL NECK PAIN
      FACET JOINT IMPINGEMENT
369
370
      DERANGEMENT CERVICAL SPINE
371
      WHIPLASH / DEGENERATIVE CERVICAL SPINE
372
      SPONDYLOSIS CERVICAL SPINE OA SHOULDER
373
      CX SPONDYLOSIS
374
      SPONDYLOSIS WITH NERVE IMPINGEMENT
375
      SYRRINGOMYELIA OP SINCE ORIGINAL REFERRAL
376
     VERY STIFF NECK COAD
377
     MECHANICAL NECK PAIN WITH NERVE IMPINGEMENT
378
     NEURODYNAMIC PROBLEMS SECONDARY TO POOR POSTURE
379
380
     POSSIBLE SPINAL STENOSIS
381
     PID SECONDARY TO POSTURAL CHANGES WITH ADVANCING PREGNANCY
382
     RIGHT COMPRESSION PATTERN PATHONEURODYNAMIC (POSTURAL)
383
384
     FACET JOINT IMPINGEMENT ACUTE
     NERVE ROOT ENTRAPMENT DUE TO KYPHOSIS AND POOR POSTURE
385
386
     FACET JOINT IMPINGEMENT
     ONGOING UPPER THORACIC PAIN WITH SUPERIMPOSED LOWER C/SPINE PID
387
     MECHANICAL NECK PAIN WITH NERVE IMPINGEMENT
388
389
     WHIPLASH TYPE NECK STRAIN SECONDARY TO LIFTING ACCIDENT
390
     LEFT SIDED COMPRESSION PATTERN WITH PND - PATHONEURODYNAMICS
391
     ANNULAR DISC BULGE
392
     OA NECK AND POSTURAL PROBLEMS
393
     FACET LESION / POSTURAL SYNDROME AND ANY
394
     POSTERIOR INTERVERTEBRAL DISC BULGE C/SPINE
395
     REFERRAL NERVE ROOT PAIN LEFT SHOULDER
396
     CERVICAL SPONDYLOSIS
397
     ACUTE C7 NERVE IMPINGEMENT
398
     NERVE ROOT IRRITATION DUE TO POOR POSTURE
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ACUTE INJURY 11MONTHS AGO - SOFT TISSUE SHORTENING JOINT DYSFUNCTION

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400
      SEVERAL INJURIES RELATING IN NECK PAIN FOR 6 YEARS, TRAUMA WEAR AND TEAR
401
402
403
404
405
      C/T JUNCTION HYPO AND T4 SYNDROME
406
      25 PLUS 29
      FACET JOINT DYSFUNCTION PLUS DISC DEGENERATION
407
408
      C/SPINE SPONDYLOSIS C5 - T1
      POSTURAL PROBLEM, STIFFNESS UPPER C/SPINE AND C/T AND T/SPINE
409
410
      C/SPINE SPONDYLOSIS WITH SORE ARTHROSIS
411
      FACET JOINT LOCKING
412
      NEUROGENIC WRIST/ELBOW PAIN
413
      POSTURAL RELATED C/SPINE PAIN AND ARM PAIN
414
      SPONDYLOTIC CHANGES IN C4 TO C7 AND DISC SPACE NARROWING
415
      CERVICAL SPINE FACET JOINT STIFFNESS C1 FACET JOINT STIFFNESS
416
417
      T4 SYNDROME
418
      HYPERMOBILE LOW C/SPINE
419
      6/7 FACET JOINT IRRITATION
420
      C/SPINE SPONDYLOSIS
421
      POSTURAL NECK PAIN
      RECURRENT TORTICOLLIS C3/4 FACET JOINT RESIDUAL STIFFNESS
422
423
      WEIGHT AND MUSCLE IMBALANCE
      DEGENERATIVE CERVICAL SPINE LEADING TO HEADACHES
424
425
      VERY POOR POSTURE LEADING TO DEGENERATIVE CHANGES
      FACET JOINT POOR POSTURE
426
427
      KYPHOTIC THORACIC SPINE PREVIOUS WHIPLASH X 2
428
     PROTRACTED CERVICAL SPINE
429
     RESOLVING DISC LESION AND NEURAL IMPINGEMENT
430
     CERVICAL SPONDYLOSIS PLUS VISUAL PROBLEMS AND DIZZINESS, LIGHT HEADED
431
     TENDER C34 SPASM POST CERVICAL MUSCLES
432
     WHIPLASH 11 MONTHS AGO
433
     ACUTE TORTICOLLIS
434
     POSTURAL NATURE - UPPER CERVICAL PAIN HEADACHES
435
     WHIPLASH, NEUROLOGICAL SYMPTOMS IN ARM OF PERIPHERAL ORIGIN
436
     RESOLVING AT TIME OF ASSESSMENT
437
     POSTURE RELATED C5/6 JOINT PAIN WITH DOWAGERS AND UPPER CERVICAL STIFFNESS
438
     SOMATIC NECK PAIN FROM MID C SPINE AND STIFFNESS BELOW
     C2 FACET JOINT DYSFUNCTION AND FIRST UB STIFFNESS
439
     DEGENERATIVE CERVICAL / THORACIC SPINE KYPHOSIS WITH FACET JOINT DYSFUNCTION
440
441
     CERVICAL SPONDYLOSIS
442
     DEGENERATIVE C5-7
     DEGENERATIVE CERVICAL SPINE GREATEST C7 JOINT
443
444
     DEGENERATIVE CERVICAL SPINE WITH ASSOCIATED
445
     POSTURAL RELATED C/SPINE PAIN AND TEMPORAL HEADACHES
446
     WHIPLASH INJURY AGGRAVATED BY POOR POSTURE
447
     POSTURAL KYPHOSIS C3/4 REFERRED PAIN AND CERVICAL THORACIC STIFFNESS
448
     C8 NERVE IRRITATION WITH G/H SIGNS
     DEGENERATIVE CHANGES IN C/SPINE AGGRAVATED BY POSTURE
449
     CHRONIC RECURRENT C6 NERVE ROOT IMPINGEMENT
450
     UNKNOWN CAUSE FOR MUSCULAR SPASM
451
     HEAD/NECK INJURY 25 YEARS AGO - STIFF SINCE
452
     C3, C7 NERVE ROOT SYMPTOMS DUE TO CERVICAL RIB
453
454
455
     NERVE IMPINGEMENT
456
     CERVICAL SPONDYLOSIS 45 YEARS, TWO OPS TO FUSE CERVICAL VERTEBRA
457
     TRAPEZIUS SPASM LEADING TO NECK STIFFNESS
458
459
     LOCKED FACET JOINT
460
     CERVICAL SPONDYLOSIS WITH CERVICAL KYPHOSIS
461
462
     CERVICAL SPONDYLOSIS
463
     NECK DYSFUNCTION WITH NEURAL INVOLVEMENT
464
     SOFT TISSUE DAMAGE AND HEADACHES POST RTA
465
     SPONDYLOSIS POSTURAL DOWGERS HUMP
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467
468
      POKING CHIN POSTURE WITH OA CHANGES - MYOFACIAL WITH REF HEAD
469
      CERVICAL FACET JOINT DYSFUNCTION
470
      WHIPLASH INJURY NEVER RESOLVED
471
      DEGENERATIVE CERVICAL SPINE, CERVICAL SPONDYLOSIS
472
473
      WHIPLASH SOFT TISSUE INJURY
474
      HYPERVENTILATOR - ACCESSORY WORK - ACTIVE TRIGGER POINTS
475
      4 MONTHS OLD WHIPLASH
476
      PAINFUL STIFF NECK FOLLOWING FALL
477
      CERVICAL SPONDYLOSIS WITH MILD OSTEOPHYTE FORMATION C6/7
478
      PAINFUL C/SPINE WITH RESTRICTED MOVEMENT
      WHIPLASH RADIATING ACROSS LS NECK SHOULDERS AND FINGERS
479
480
      ACUTELY PAINFUL C/SPINE WITH CONSTANT HEADACHES
      CERVICAL AND THORACIC STIFFNESS
481
482
      NEURAL TENSION CERVICAL SPINE
483
      FACET JOINT IMPINGEMENT
484
      CERVICAL SPONDYLOSIS
485
      CERVICAL SPONDYLOSIS WITH LEFT FROZEN SHOULDER
486
      CHRONIC SOFT TISSUE AND JOINT DYSFUNCTION
487
      SPONDYLOSIS, ANY MYOFACIAL PAIN
488
489
      POSTURAL INSUFFICIENCY
490
      POSTURAL CHANGES LEADING TO OTHER CHANGES
      STIFFNESS AND PAIN ON PALPATION FOR T2-6, C2-3, POSS NEURODYNAMICS
491
492
      POOR MUSCLE BALANCE, POOR POSTURE
493
      SIDE FLEXION INJURY AND POOR POSTURE
494
      INCREASED MUSCLE TENSION POSTURAL SYNDROME
495
      RESIDUAL HYPOMOBILITY FOR WHIPLASH
496
      PAIN IN LARM AND ANTERIOR POSITION OF SHOULDER
497
      C/SPINE NERVE IMPINGEMENT, C5 WITH NO NECK INVOLVEMENT
498
      HAS RECURRENT TORTICOLLIS
499
      HYPOMOBILITY OF LOWER C/SPINE WITH POSTURAL COMPONENTS
500
      JOINT DYSFUNCTION
501
      WHIPLASH
      DEGENERATIVE / POSTERIOR CERVICAL FACET JOINT DYSFUNCTION
502
503
      NERVE ROOT IRRITATION
      LOCKED FACET JOINT / DISCOGENIC
504
      C4/5 FACET DYSFUNCTION CAUSING NERVE ROOT IRRITATION
505
      C3 SPINE WHIPLASH AND SOFT TISSUE STRAIN L SP
506
      EARLY DEGENERATIVE CHANGES POOR POSTURE CAUSING NECK PAIN
507 --
508
509
510
      DEGENERATIVE MID CX
511
      ACUTE WHIPLASH
512
      NERVE ROOT IRRITATION SETTING
513
      DEGENERATIVE C/SPINE
514
     POSTURAL NERVE ROOT ISCHAEMIA
515
      C4/5 NERVE ROOT COMPRESSION
      C6 NERVE ROOT IRRITATION
516
     UPPER LIMB PROBLEM SECONDARY AUTONOMIC DYSFUNCTION DELAYED ONSET 1 YEAR
517
      1 CERVICAL ROOT IMPINGEMENT
518
519
     POSTURAL PAIN DUE TO WORK POSITION
520
521
     POSTURAL
522
     PROBLEM NOT AMENABLE TO PT
523
524
     RECURRENT PERCARDITIS
525
     HAD FALL, SHOULDER PAIN AND WHIPLASH
526
     RTA 75 NECK INJURIES
527
     INERMITTENT TORTICOLLIS DUE TO C7/T1 FACET DYSFUNCTION
528
     WHIPLASH 10 MONTHS AGO, PAINFUL NECK FACET JOINTS C5/T1 TIGHT
529
530
531-
     LOWER CERVICAL SPINE/SOFT TISSUE INJURY
532
     DYSFUNCTION T1/T4
533
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534
535
      WHIPLASH JUNE 1998
536
      DEGENERATIVE CHANGES CERVICAL SPINE
537
      WATER SKIING ACCIDENT, WHIPLASH TYPE INJURY AUGUST 98
      ACUTE TORTICOLLIS L SIDE FLEXION R ROOT
538
539
      DEGENERATIVE CHANGES
540
      NERVE ROOT IRRITATION
541
      ARTHRITIC JOINT WITH NERVE IRRITATION
      GENERAL 4TH THORACIC DEGENERATION
542
543
      MILD OA
544
      SPONDYLOSIS 4/5/6
545
      SHOULDER DYSFUNCTION ALSO
546
      C6/7 DISC LESION
547
      MINOR REAR IMPACT, WHIPLASH
      CHRONIC NECK PAIN AND STIFFNESS
548
      NERVE ROOT IRRITATION
549
550
      DEGENERATIVE CERVICAL SPINE AND ADAPTIVE SHORTENING MUSCLES
551
552
      POSTURAL AND NEURAL IMPINGEMENT
553
      DYSFUNCTION AND ANT UPPER UNITS
554
      INFLAMMATORY CONDITION AND POOR POSTURE
      CERVICAL SPINE SPONDYLOSIS AND BILATERAL HAND SYMPTOMS, NEUROLOGICAL
555
      WHIPLASH
556
      A/C JOINT INJURY
557
      WHIPLASH AND PREVIOUS TREATMENT ANOTHER HOSPITAL
558
      RA NECK WITH STRESS INDUCED HEADACHES
559
      POSTURAL INSUFFICIENCY
560
      MUSCLE SPASM THORACIC REGION
561
562
      WHIPLASH
      SOFT TISSUE SHORTENING, SOME SPASM WITH SIGNS FO POST DEGENERATION
563
      WHIPLASH HAS CERVICAL RIBS C5/6 FUSION REFERRED TO HEAD HAND
564
565
      CERVICAL SPINE DISC LESION
566
      TRIGGER PAIR MM SPASM
567
      WHIPLASH DUE TO RTA
568
569
      MUSCLE SPASM INDUCING JOINT IMMOBILITY
570
      TRAUMA TO UPPER FIBRES TRAPEZIUS
571
      TORTICOLLIS C5/6 FACET
      ACUTE TORTICOLLIS
572
      DEGENERATIVE JOINT DYSFUNCTION, CERVICOTHORACIC
573
574
575
     CERVICAL SPONDYLOSIS
576
     POSTURAL DYSFUNCTION WITH NERVE ROOT IRRITATION
577
      CERVICAL SPONDYLOSIS WITH FACET JOINT DYSFUNCTION
578
579
      OA NECK ANY
     JOINT DYSFUNCTION ANY
580
     WHIPLASH 7 MONTHS OVER LONG TERM SPONDYLOSIS
581
582
     WHIPLASH SOFT TISSUE
     VERTIGO ASSOCIATED WITH SPONDYLOSIS AND ARTHRITIS
583
     FACET JOINT PROBLEM WITH SPASM
584
585
     WHIPLASH INJURY
     DISC WITH NERVE IMPINGEMENT
586
     C3/4 FACET JOINT PROBLEM
587
     UPPER THORACIC STIFFNESS HYPERMOBILE LOWER C/SPINE
588
     FACET JOINT IMPINGEMENT
589
     FACET JOINT IMPINGEMENT
590
     SEVERE KYPHOSIS FROM OSTEOPOROSIS
591
     FACET JOINT STRAIN WITH SHORTENING
592
     POOR POSTURE WITH IMBALANCE AND TRAPEZIUS PAIN
593
     WHIPLASH ON TOP OF CERVICAL SPONDYLOSIS
594
     SECONDARY TENNIS ELBOW DUE TO PRIMARY CERVICAL THORACIC HYPOMOBILITY
595
596
597
598
     C5/6 EXTENSION DYSFUNCTION
599
600
     CHRONIC WHIPLASH COMPLICATED BY ODL C4 FACET FRACTURE
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601
      RADICAL NERVE PATHODYNAMICS
602
      CERVICOGENIC HEADACHES
603
      POSTURAL C/SPINE PAIN, JOINT DYSFUNCTION, MUSCLE IMBALANCE
604
605
606
      ONE YEAR HISTORY INCREASING TORTICOLLIS
607
      C7/T1 NERVE ROOT LIMITATION, POSTURAL DEGENERATION
      C5 NEURAL IRRITATION DUE TO STRAIN AGGRAVATED BY POSTURE DEGENERATIVE CHANGES
608
      C3/4 FACET JOINT DYSFUNCTION
609
      GENERALISED C/SPINE DYSFUNCTION, NO SPECIFIC LEVEL
610
      CHRONIC NERVE IRRITATION - POOR POSTURE
611
      CERVICAL SPONDYLOSIS ACUTE EPISODE FALL
612
613
      C7 DISC WITH NEURAL IRRITATION
      THORACIC KYPHOSIS LUMBER CORDOSIS DYSFUNCTION
614
615
      SOFT TISSUE DYSFUNCTION RIGHT SHOULDER
616
      CERVICAL SPONDYLOSIS AND NEURAL INVOLVEMENT
      ALIGNMENT OF C/SPINE POST TRAUMATIC RECURRENT NECK PAIN
617
      STIFFNESS OF CERVICAL SPINE POST WHIPLASH
618
      JOINT DYSFUNCTION LOWER CERVICAL REGION
619
      CERVICAL JOINT AND SOFT TISSUE DYSFUNCTION
620
      C/SPINE DYSFUNCTION
621
      SCOLIOSIS OF T/S AND L/S POSTURAL DYSFUNCTION
622
623
624
625
626
      CERVICAL SPINE DERANGEMENT
627
      CERVICAL SPINE AND GLENOHUMERAL JOINT DYSFUNCTION WITH NERVE ROOT PAIN
628
629
      CERVICAL SPINE DERANGEMENT
630
631
      CERVICAL SPINE MULTIDIRECTIONAL DYSFUNCTION
632
      POSTURAL DYSFUNCTION
633
634
      DEGENERATIVE HYPERMOBILE CERVICAL FACET JOINT
635
636
637
      DEGENERATIVE CHANGES AND ROM
638
639
640
641 -
     WHIPLASH AND NEURAL IMPINGEMENT
642
      RTA SIDEWAYS IMPACT, WHIPLASH
643
      DEGENERATIVE C/SPINE
644
      INTERMITTANT L SIDED NECK PAIN RADIATING TO HEAD
645
      FELL ONTO BACK OF HEAD
      WHIPLASH MARCH 98, NO PHYSIO, ACCIDENT WHICH JARRED SPINE 1/12
646
      RTA MARCH 98
647
      RESOLVING C/SPINE DYSFUNCTION WITH NERVE IMPINGEMENT
648
      FACET JOINT AGGRAVATED BY POSTURE AND NEURAL
649
      POSTURAL DYSFUNCTION PLUS WEAR AND TEAR
650
      MULTIPLE JOINT RESISTENCE AND TENSION AND HYPERVENTILATING
651
      FACET JOINT DYSFUNCTION C5 C6 AND RESISTENCE C2 HEADACHES
652
      BILATERAL FROZEN SHOULDER AND CERVICAL PAIN
653
     DYSFUNCTION OF UPPER C/SPINE AND C5/6 DISC LESION
654
655
     C8/T NERVE ROOT
656
     CERVICAL NERVE ROOT COMPRESSION
     CERVICAL SPONDYLOSIS
657
     LEVATOR SCAPULAE PAIN
658
     CERVICAL SPINE AND BRACHIAL PLEXUS TRAUMA
659
     UNDERLYING WHIPLASH INJURY, EPISODE OF JOINT INFLAMMATION
660
661
     HYPEREXTENDED CERVICAL SPINE, POOR SLEEPING POSTURE, COPD
662
663
     #C7 FACET JOINT
664
     CERVICAL SPONDYLOSIS WITH NERVE ROOT IMPINGEMENT
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668 POSTURAL PAIN

669 IMPINGEMENT DUE TO POOR POSTURE

670 C6 NERVE ROOT SIGNS, SYMPTOMS SECONDARY TO DEGENERATION BUT OLD

Combin	Combination of treatment modalities for those having 3 or 4 modalities	hose having 3 or 4 modalities	
CASE	TREATMENT 1	TREATMENT 2	TREATMENT 3
	CYRIAX MANIPS	INTERFERENTIAL	S.W.D.
7	TRACTION	S.W.D.	SNAGS
m	S.W.D.	CYRIAX MANIPS	MOBILISATIONS MAITLAND
τυ	CYRIAX MANIPS	MOBILISATIONS MAITLAND	INTERFERENTIAL
9	S.W.D.	MOBILISATIONS MAITLAND	CYRIAX MANIPS
2	TRACTION	S.W.D.	MOBILISATIONS MAITLAND
O	MOBILISATIONS MAITLAND	ACTIVE EXERCISES	ULTRASOUND
=	ADVICE SEL MAN/CARER	ACŢIVE EXERCISES	MOBILISATIONS MAITLAND
12	ADVICE SEL MAN/CARER	TEN'S	SNAGS
<u>6</u>	ACTIVE EXERCISES	PASSIVE EXERCISES	MOBILISATIONS MAITLAND
15	MOBILISATIONS MAITLAND	TRACTION	EDUCATION AND ADVICE
16	S.W.D.	ULTRASOUND	CYRIAX MANIPS
17	MOBILISATIONS MAITLAND	S.W.D.	ADVICE SEL MAN/CARER
8	ACTIVE EXERCISES	MOBILISATIONS MAITLAND	SNAGS
19	TRACTION	S.W.D.	MOBILISATIONS MAITLAND
50	INTERFERENTIAL	S.W.D.	SNAGS
21	ADVICE SEL MAN/CARER	ACTIVE EXERCISES	MOBILISATIONS MAITLAND
23	TRACTION	ACUPUNCTURE	NEURODYNAMIC FACILITIES
24	ADVICE SEL MAN/CARER	INTERFERENTIAL	ACTIVE EXERCISES
52	TRACTION	ADVICE SEL MAN/CARER	INTERFERENTIAL
70	ADVICE SEL MAN/CARER	ULTRASOUND	ACTIVE EXERCISES
78	ADVICE SEL MAN/CARER	ACTIVE EXERCISES	MOBILISATIONS MAITLAND
30	ACTIVE EXERCISES	MOBILISATIONS MAITLAND	EDUCATION AND ADVICE
34	ADVICE SEL MAN/CARER	TEN'S	MCKENZIE APPROACH
32	MOBILISATIONS MAITLAND	ACTIVE EXERCISES	PASSIVE EXERCISES
36	MOBILISATIONS MAITLAND	SOFT TISSUE STRETCHES	ACTIVE EXERCISES
37	MOBILISATIONS MAITLAND	COMBINED MOVEMENTS	NEURODYNAMIC FACILITIES
38	ADVICE SEL MAN/CARER	ACTIVE EXERCISES	RE-EDUCATION OF MUSCLE
4	ULTRASOUND	MOBILISATIONS MAITLAND	ACTIVE EXERCISES
45	ACTIVE EXERCISES	TRACTION	NEURODYNAMIC FACILITIES
43	MOBILISATIONS MAITLAND	RE-EDUCATION OF MUSCLES	EDUCATION AND ADVICE
44	MOBILISATIONS MAITLAND	ULTRASOUND	ACTIVE EXERCISES
45	ULTRASOUND	ACTIVE EXERCISES	MOBILISATIONS MAITLAND
46	MOBILISATIONS MAITLAND	NEURODYNAMIC FACILITIES	EDUCATION AND ADVICE
47	MOBILISATIONS MAITLAND	ACTIVE EXERCISES	STRAPPING
84	TENS	MOBILISATIONS MAITLAND	SNAGS
94 6	ADVICE SEL MAN/CARER	ACTIVE EXERCISES	TRACTION
2	ADVICE SEL MAN/CARER	ACTIVE EXERCISES	TRACTION

TREATMENT 4 Appendix 5

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ACTIVE EXERCISES

SNAGS	EDUCATION AND ADVICE	MCKENZIE APPROACH

SNAGS

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MOBILISATIONS MAITLAND	
NAGS	ULTRASOUND
MOBILISATIONS MAITLAND	SNAGS
JEURODYNAMIC FACILITIES	MOBILISATIONS MAITLAND
CTIVE EXERCISES	TRACTION
NTERFERENTIAL TERFERENTIAL	ACTIVE EXERCISES
CTIVE EXERCISES	
MOBILISATIONS MAITLAND	EDUCATION AND ADVICE
DUCATION AND ADVICE	
ACKENZIE APPROACH	MOBILISATIONS MAITLAND
ASSIVE EXERCISES	
CTIVE EXERCISES	ADVICE SEL MAN/CARER
JEURODYNAMIC FACILITIES	
RE-EDUCATION OF MUSCLES	EDUCATION AND ADVICE
CTIVE EXERCISES	
IEURODYNAMIC FACILITIES	
DUCATION AND ADVICE	ACTIVE EXERCISES
CTIVE EXERCISES	
10BILISATIONS MAITLAND	
EDUCATION AND ADVICE	ACTIVE EXERCISES
TRAPPING	EDUCATION AND ADVICE

ACTIVE EXERCISES	ADVICE SEL MAN/CARER EDUCATION AND ADVICE ACTIVE EXERCISES S.W.D. S.W.D.	ACTIVE EXERCISES INTERFERENTIAL	NEURODYNAMIC FACILITIES TRIGGER POINT RELEASE ADVICE SEL MAN/CARER	ADVICE SEL MAN/CARER ULTRASOUND ACTIVE EXERCISES INTERFERENTIAL MOBILISATIONS MAITLAND EDUCATION AND ADVICE
INTERFERENTIAL TRACTION TRACTION ACTIVE EXERCISES TRACTION EDUCATION AND ADVICE MASSAGE ACTIVE EXERCISES	ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES ULTRASOUND INTERFERENTIAL ACTIVE EXERCISES MOBILISATIONS MAITLAND	TRACTION SNAGS MOBILISATIONS MAITLAND EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND	MASSAGE SOFT TISSUE STRETCHES TRACTION MOBILISATIONS MAITLAND FRICTIONS ULTRASOUND MASSAGE TRACTION	ULTRASOUND NEURODYNAMIC FACILITIES NEURODYNAMIC FACILITIES MOBILISATIONS MAITLAND TEN'S S.W.D. EDUCATION AND ADVICE EDUCATION AND ADVICE ULTRASOUND TRIGGER POINT RELEASE
TRACTION ACTIVE EXERCISES SNAGS EDUCATION AND ADVICE INTERFERENTIAL ACTIVE EXERCISES MOBILISATIONS MAITLAND	MODILISATIONS MAITLAND ULTRASOUND EDUCATION AND ADVICE SOFT TISSUE STRETCHES LOCAL HEAT (IR PP) ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND ACTIVE EXERCISES	INTERFERENTIAL TRACTION ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES TRIGGER POINT RELEASE ULTRASOUND	ULTRASOUND MOBILISATIONS MAITLAND ACTIVE EXERCISES ACTIVE EXERCISES SNAGS NEURODYNAMIC FACILITIES SNAGS MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND	ACTIVE EXERCISES MOBILISATIONS MAITLAND SNAGS TRACTION CYRIAX MANIPS INTERFERENTIAL MOBILISATIONS MAITLAND SNAGS SNAGS MCKENZIE APPROACH
ACTIVE EXERCISES INTERFERENTIAL ACTIVE EXERCISES TRACTION ULTRASOUND INTERFERENTIAL ULTRASOUND SNAGS	MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND AROMATHERAPY P.N.F. ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER ULTRASOUND	ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND ULTRASOUND MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER	MOBILISATIONS MAITLAND ACTIVE EXERCISES ADVICE SEL MAN/CARER SOFT TISSUE STRETCHES TEN'S MOBILISATIONS MAITLAND ULTRASOUND ULTRASOUND ACTIVE EXERCISES	MOBILISATIONS MAITLAND TRACTION MOBILISATIONS MAITLAND CYRIAX MANIPS NEURODYNAMIC FACILITIES MOBILISATIONS MAITLAND ACTIVE EXERCISES MCKENZIE APPROACH EDUCATION AND ADVICE ACTIVE EXERCISES
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EDUCATION AND ADVICE ACTIVE EXERCISES MOBILISATIONS MAITLAND	ACTIVE EXERCISES SOFT TISSUE STRETCHES	RE-EDUCATION OF MUSCLES		NEURODYNAMIC FACILITIES	PASSIVE EXERCISES MOBILISATIONS MAITLAND SNAGS	EDUCATION AND ADVICE MASSAGE	SNAGS	MOBILISATIONS MAITLAND STRAPPING EDUCATION AND ADVICE	TRIGGER POINT RELEASE	MOBILISATIONS MAITLAND	ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER	SNAGS MOBILISATIONS MAITLAND
TRIGGER POINT RELEASE ACTIVE EXERCISES MANIPULATION GRADE 5 ADVICE SEL MANICARER ACTIVE EXERCISES	MOBILISATIONS MAITLAND ACTIVE EXERCISES ACTIVE EXERCISES	COMBINED MOVEMENTS ADVICE SEL MAN/CARER	INTERFERENTIAL SNAGS MOBILISATIONS MAITLAND	ADVICE SEL MAN/CARER ULTRASOUND ACTIVE EXERCISES EDUCATION AND ADVICE	ACTIVE EXERCISES ACTIVE EXERCISES MOBILISATIONS MAITLAND	MASSAGE ACTIVE EXERCISES COMBINED MOVEMENTS	ACTIVE EXERCISES HYPERVENTILATION EDUCATION AND ADVICE	SNAGS MOBILISATIONS MAITLAND SOFT TISSUE STRETCHES	EDUCATION AND ADVICE RE-EDUCATION OF MUSCLES ACTIVE EXERCISES SNAGS	TRACTION EDUCATION AND ADVICE	SNAGS SNAGS EDUCATION AND ADVICE	ACTIVE EXERCISES MOBILISATIONS MAITLAND TRACTION
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MOBILISATIONS MAITLAND MASSAGE SOFT TISSUE STRETCHES RE-EDUCATION OF MUSCLES ADVICE SEL MAN/CARER	S.W.D. MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER	MOBILISATIONS MAITLAND TRACTION TEN'S	TRACTION INTERFERENTIAL TRACTION	ACTIVE EXERCISES PASSIVE EXERCISES MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER	ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER TEN'S	TRACTION ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER	TRIGGER POINT RELEASE P.N.F. MOBILISATIONS MAITLAND	ADVICE SEL MAN/CARER CYRIAX MANIPS MOBILISATIONS MAITLAND ACTIVE EXEDCISES	MOBILISATIONS MAITLAND INTERFERENTIAL ADVICE SEL MAN/CARER	ACTIVE EXERCISES MOBILISATIONS MAITLAND	ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES MORI! ISATIONS MAIT! AND	ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER
122 122 123 123 123	127 128	131 132 135	136 137 138	140 141 143 140	145 146 147	149 151	154 155 156	15) 159 160	168	169	1/1 2 173 174	175

PASSIVE EXERCISES ACTIVE EXERCISES STRAPPING EDUCATION AND ADVICE	S.W.D. TRACTION INTERFERENTIAL	EDUCATION AND ADVICE TRACTION ACTIVE EXERCISES	EDUCATION AND ADVICE ACTIVE EXERCISES MCKENZIE APPROACH EDUCATION AND ADVICE ACTIVE EXERCISES MANIPULATION GRADE 5	ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER STRAPPING MOBILISATIONS MAITLAND EDUCATION AND ADVICE MOBILISATIONS MAITLAND	MOBILISATIONS MAITLAND
EDUCATION AND ADVICE ACTIVE EXERCISES MOBILISATIONS MAITLAND SNAGS EDUCATION AND ADVICE ULTRASOUND EDUCATION AND ADVICE ULTRASOUND EDUCATION AND ADVICE TO ACTION	TRACTION SNAGS EDUCATION AND ADVICE STRAPPING EDUCATION AND ADVICE TRIGGER POINT RELEASE MASSAGE	ACTIVE EXERCISES PASSIVE EXERCISES TRACTION SNAGS ACTIVE EXERCISES	SNAGS MANIPULATION GRADE 5 EDUCATION AND ADVICE EDUCATION AND ADVICE SOFT TISSUE STRETCHES EDUCATION AND ADVICE SOFT TISSUE STRETCHES	ACTIVE EXERCISES ACTIVE EXERCISES MOBILISATIONS MAITLAND EDUCATION AND ADVICE SNAGS MOBILISATIONS MAITLAND PASSIVE EXERCISES SNAGS	EDUCATION AND ADVICE SNAGS EDUCATION AND ADVICE ADVICE SEL MAN/CARER
MOBILISATIONS MAITLAND EDUCATION AND ADVICE TEN'S MOBILISATIONS MAITLAND SNAGS NEURODYNAMIC FACILITIES SNAGS NEURODYNAMIC FACILITIES SNAGS	MOBILISATIONS MAITLAND ACTIVE EXERCISES ADVICE SEL MAN/CARER ULTRASOUND TRACTION MOBILISATIONS MAITLAND S.W.D.	MOBILISATIONS MAITLAND ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES ADVICE SEL MAN/CARER	MCKENZIE APPROACH MOBILISATIONS MAITLAND ACTIVE EXERCISES SOFT TISSUE STRETCHES TRIGGER POINT RELEASE TRIGGER POINT RELEASE TRIGGER POINT RELEASE MORI ISATIONS MATT AND	RE-EDUCATION OF MUSCLES TRACTION MOBILISATIONS MAITLAND ACTIVE EXERCISES ACTIVE EXERCISES ULTRASOUND TRACTION SNAGS	ACTIVE EXERCISES S.W.D. ULTRASOUND RE-EDUCATION OF MUSCLES
ULTRASOUND MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER ACTIVE EXERCISES MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MCKENZIE APPROACH ADVICE SEL MAN/CARER S.W.D.	ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER S.W.D. ADVICE SEL MAN/CARER ACTIVE EXERCISES TEN'S MOBILISATIONS MAITLAND	NEURODYNAMIC FACILITIES ADVICE SEL MAN/CARER MASSAGE ADVICE SEL MAN/CARER TRIGGER POINT RELEASE	LOCAL HEAT (IR PP) SOFT TISSUE STRETCHES INTERFERENTIAL TRIGGER POINT RELEASE MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND RE-EDUCATION OF MISCIES	MOBILISATIONS MAITLAND ACTIVE EXERCISES ULTRASOUND ADVICE SEL MAN/CARER SNAGS ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER MOBILISATIONS MAITI AND	MANIPULATION GRADE 5 TRACTION MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND
180 181 182 183 187 187 189	198 198 198 198 198 198	202 203 207 209 212	213 215 215 217 218 220	221 222 223 225 226 227 230 231	232 235 236 237

PASSIVE EXERCISES	TRACTION	MASSAGE MOBILISATIONS MAITLAND EDUCATION AND ADVICE ACTIVE EXERCISES ACTIVE EXERCISES	EDUCATION AND ADVICE EDUCATION AND ADVICE	MANIPULATION GRADE 5	TRIGGER POINT RELEASE APPLIANCE ACTIVE EXERCISES	MANIPULATION GRADE 5 MOBILISATIONS MAITLAND EDUCATION AND ADVICE	EDUCATION AND ADVICE EDUCATION AND ADVICE ADVICE SEL MAN/CARER
ACTIVE EXERCISES ADVICE SEL MAN/CARER ACTIVE EXERCISES ACTIVE EXERCISES TRACTION EDUCATION AND ADVICE EDUCATION AND ADVICE TEN'S	PASSIVE EXERCISES MCKENZIE APPROACH PASSIVE EXERCISES	ACTIVE EXERCISES ACTIVE EXERCISES MANIPULATION GRADE 5 SOFT TISSUE STRETCHES ADVICE SEL MAN/CARER ACTIVE EXERCISES	MOBILISATIONS MAITLAND EDUCATION AND ADVICE ACTIVE EXERCISES EDUCATION AND ADVICE	ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES SOFT TISSUE STRETCHES MCKENZIE APPROACH	ACTIVE EXERCISES TRIGGER POINT RELEASE ULTRASOUND MOBILISATIONS MAITLAND TRIGGER POINT REI FASE	NEURODYNAMIC FACILITIES ACTIVE EXERCISES SOFT TISSUE STRETCHES MOBILISATIONS MAITLAND	SOFT TISSUE STRETCHES TRIGGER POINT RELEASE ULTRASOUND CYRIAX MANIPS SNAGS S.W.D. ACTIVE EXERCISES
ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND ULTRASOUND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND S.W.D. MOBILISATIONS MAITLAND ACTIVE EXERSISES	EDUCATION AND ADVICE ACTIVE EXERCISES ACTIVE EXERCISES	ULTRASOUND MOBILISATIONS MAITLAND SNAGS EDUCATION AND ADVICE ULTRASOUND	ACTIVE EXERCISES SNAGS ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND	ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND EDUCATION AND ADVICE TRIGGER POINT RELEASE ULTRASOUND	ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND TRACTION S.W.D. MOBILISATIONS MAITLAND	TRACTION INTERFERENTIAL LOCAL HEAT (IR PP) ACTIVE EXERCISES	MASSAGE ACTIVE EXERCISES ACTIVE EXERCISES S.W.D. MCKENZIE APPROACH MOBILISATIONS MAITLAND ULTRASOUND
MOBILISATIONS MAITLAND ULTRASOUND EDUCATION AND ADVICE MOBILISATIONS MAITLAND EDUCATION AND ADVICE ACTIVE EXERCISES MCKENZIE APPROACH ADVICE SEL MAN/CARER	ACTIVE EXERCISES ULTRASOUND ADVICE SEL MAN/CARER	ADVICE SEL MAN/CARER ACTIVE EXERCISES MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND	ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND INTERFERENTIAL NEURODYNAMIC FACILITIES	TRIGGER POINT RELEASE MASSAGE SNAGS NEURODYNAMIC FACILITIES ADVICE SEL MAN/CARER	MOBILISATIONS MAITLAND TRACTION MOBILISATIONS MAITLAND ULTRASOUND ACTIVE EXERCISES	MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER ULTRASOUND	MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND ACTIVE EXERCISES ULTRASOUND ADVICE SEL MAN/CARER
238 240 241 243 245 246	247 248 249	250 251 252 253 254	255 256 257 258 259	260 261 262 263 264	266 267 268 270 274	278 279 281 282	283 284 287 289 289 290

NEURODYNAMIC FACILITIES SNAGS SNAGS SOFT TISSUE STRETCHES EDUCATION AND ADVICE ULTRASOUND ACTIVE EXERCISES ULTRASOUND SOFT TISSUE STRETCHES ULTRASOUND	ACTIVE EXERCISES EDUCATION AND ADVICE MOBILISATIONS MAITLAND ACTIVE EXERCISES EDUCATION AND ADVICE ULTRASOUND ACTIVE EXERCISES INTERFERENTIAL EDUCATION AND ADVICE SNAGS	ACTIVE EXERCISES ACUPUNCTURE TRIGGER POINT RELEASE EDUCATION AND ADVICE SNAGS ADVICE SEL MAN/CARER EDUCATION AND ADVICE SNAGS LOCAL HEAT (IR PP) EDUCATION AND ADVICE	ACTIVE EXERCISES EDUCATION AND ADVICE
MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER SOFT TISSUE STRETCHES MCKENZIE APPROACH MOBILISATIONS MAITLAND ACTIVE EXERCISES SNAGS MCKENZIE APPROACH ACKENZIE APPROACH ACKENZIE APPROACH ACTIVE EXERCISES EDUCATION AND ADVICE	EDUCATION AND ADVICE EDUCATION AND ADVICE SOFT TISSUE STRETCHES ACTIVE EXERCISES EDUCATION AND ADVICE SOFT TISSUE STRETCHES TRACTION ULTRASOUND MOBILISATIONS MAITLAND ACTIVE EXERCISES MOBILISATIONS MAITLAND S.W.D.	MOBILISATIONS MAITLAND TRIGGER POINT RELEASE ACTIVE EXERCISES RE-EDUCATION OF MUSCLES RE-EDUCATION OF MUSCLES ACTIVE EXERCISES MOBILISATIONS MAITLAND EDUCATION AND ADVICE RE-EDUCATION OF MUSCLES MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND EDUCATION AND ADVICE SNAGS ULTRASOUND RE-EDUCATION OF MUSCLES	PASSIVE EXERCISES ULTRASOUND
TRACTION ACTIVE EXERCISES MOBILISATIONS MAITLAND EDUCATION AND ADVICE ACTIVE EXERCISES ICE TRACTION ULTRASOUND LOCAL HEAT (IR PP) SNAGS ACTIVE EXERCISES ACTIVE EXERCISES	MOBILISATIONS MATLAND ACTIVE EXERCISES EDUCATION AND ADVICE MOBILISATIONS MAITLAND ICE SOFT TISSUE STRETCHES MOBILISATIONS MAITLAND S.W.D. EDUCATION AND ADVICE MOBILISATIONS MAITLAND ACTIVE EXERCISES ULTRASOUND	STRAPPING ACUPUNCTURE MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ACUPUNCTURE RE-EDUCATION OF MUSCLES ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES ACTIVE EXERCISES SNAGS ACTIVE EXERCISES SNAGS ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES	TRACTION MOBILISATIONS MAITLAND
ACTIVE EXERCISES TRACTION ACTIVE EXERCISES ACTIVE EXERCISES ULTRASOUND S.W.D. MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER S.W.D. MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND	S.W.D. S.W.D. ACTIVE EXERCISES ICE MCKENZIE APPROACH ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND S.W.D. ADVICE SEL MAN/CARER S.W.D. MOBILISATIONS MAITLAND S.W.D. MOBILISATIONS MAITLAND	EDUCATION AND ADVICE NEURODYNAMIC FACILITIES TRACTION ADVICE SEL MAN/CARER LOCAL HEAT (IR PP) MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND	ADVICE SEL MAN/CARER ACTIVE EXERCISES
291 292 293 294 295 296 298 300 301	303 304 307 312 313 313 314 318 318	320 323 323 324 337 337 338 338 338 338 338	343

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NEURODYNAMIC FACILITIES	ACTIVE EXERCISES COMBINED MOVEMENTS SNAGS ACTIVE EXERCISES SOFT TISSUE STRETCHES EDUCATION AND ADVICE ACTIVE EXERCISES TRIGGER POINT RELEASE	ADVICE SEL MAN/CARER EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND ACTIVE EXERCISES	ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES	TRIGGER POINT RELEASE MOBILISATIONS MAITLAND SNAGS ACTIVE EXERCISES
ULTRASOUND MASSAGE PASSIVE EXERCISES MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND	MOBILISATIONS MAITLAND ACTIVE EXERCISES MCKENZIE APPROACH ADVICE SEL MAN/CARER TRIGGER POINT RELEASE ULTRASOUND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND	REIKI RE-EDUCATION OF MUSCLES EDUCATION AND ADVICE TRACTION TRIGGER POINT RELEASE MOBILISATIONS MAITLAND ACTIVE EXERCISES MCKENZIE APPROACH SNAGS	EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND TEN'S EDUCATION AND ADVICE ULTRASOUND SNAGS	SNAGS SNAGS SNAGS SOFT TISSUE STRETCHES TRACTION TRACTION MOBILISATIONS MAITLAND EDUCATION AND ADVICE RE-EDUCATION AND ADVICE RE-EDUCATION AND ADVICE
MOBILISATIONS MAITLAND ACTIVE EXERCISES ACTIVE EXERCISES TRACTION ACTIVE EXERCISES	ULTRASOUND TRIGGER POINT RELEASE ACTIVE EXERCISES TRIGGER POINT RELEASE ACTIVE EXERCISES LOCAL HEAT (IR PP) TRIGGER POINT RELEASE ACTIVE EXERCISES	EDUCATION AND ADVICE SOFT TISSUE STRETCHES TRACTION ACTIVE EXERCISES MOBILISATIONS MAITLAND TRACTION EDUCATION AND ADVICE ACTIVE EXERCISES ACTIVE EXERCISES	ULTRASOUND INTERFERENTIAL EDUCATION AND ADVICE INTERFERENTIAL ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES	MCKENZIE APPROACH MANIPULATION GRADE 5 TRACTION MOBILISATIONS MAITLAND PASSIVE EXERCISES PASSIVE EXERCISES MANIPULATION GRADE 5 MOBILISATIONS MAITLAND SNAGS MOBILISATIONS MAITLAND
ACTIVE EXERCISES ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER ACTIVE EXERCISES ULTRASOUND ACTIVE EXERCISES	ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND LOCAL HEAT (IR PP) ACTIVE EXERCISES MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER	MCKENZIE APPROACH MOBILISATIONS MAITLAND MCKENZIE APPROACH MOBILISATIONS MAITLAND TRACTION ACTIVE EXERCISES MOBILISATIONS MAITLAND ULTRASOUND ADVICE SEL MAN/CARER SNAGS	INTERFERENTIAL MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER EDUCATION AND ADVICE ADVICE SEL MAN/CARER EDUCATION AND ADVICE ADVICE SEL MAN/CARER INTERFERENTIAI	AROMATHERAPY MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER ACTIVE EXERCISES ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES
346 347 348 349 353 354	358 359 360 361 362 363 367	368 369 371 372 372 374 377	384 385 386 393 395 395	398 399 400 404 405 405 407 408

RE-EDUCATION OF MUSCLES ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER	ACTIVE EXERCISES TRIGGER POINT RELEASE RE-EDUCATION OF MUSCLES EDUCATION AND ADVICE	EDUCATION AND ADVICE MOBILISATIONS MAITLAND EDUCATION AND ADVICE MASSAGE SOFT TISSUE STRETCHES ULTRASOUND	EDUCATION AND ADVICE EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND ACTIVE EXERCISES	ACTIVE EXERCISES EDUCATION AND ADVICE EDUCATION AND ADVICE SOFT TISSUE STRETCHES
EDUCATION AND ADVICE EDUCATION AND ADVICE ACTIVE EXERCISES SOFT TISSUE STRETCHES ACTIVE EXERCISES RE-EDUCATION OF MUSCLES EDUCATION AND ADVICE EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND	EDUCATION AND ADVICE RE-EDUCATION OF MUSCLES EDUCATION AND ADVICE MOBILISATIONS MAITLAND ACTIVE EXERCISES TRACTION	MOBILISATIONS MAITLAND TRACTION MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND EDUCATION AND ADVICE ACTIVE EXERCISES	SNAGS ACTIVE EXERCISES COMBINED MOVEMENTS SNAGS ACTIVE EXERCISES TRACTION ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES	SNAGS SNAGS ACTIVE EXERCISES EDUCATION AND ADVICE MOBILISATIONS MAITLAND SOFT TISSUE STRETCHES MCKENZIE APPROACH RE-EDUCATION OF MUSCLES MOBILISATIONS MAITLAND ACTIVE EXERCISES
ACTIVE EXERCISES ACTIVE EXERCISES SOFT TISSUE STRETCHES ACTIVE EXERCISES SNAGS ACTIVE EXERCISES	RE-EDUCATION OF MUSCLES MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ACTIVE EXERCISES TRACTION RE-EDUCATION OF MUSCLES	PASSIVE EXERCISES ULTRASOUND SOFT TISSUE STRETCHES ADVICE SEL MAN/CARER TRACTION MOBILISATIONS MAITLAND CYRIAX MANIPS	TRIGGER POINT RELEASE EDUCATION AND ADVICE ACTIVE EXERCISES MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER ACTIVE EXERCISES EDUCATION AND ADVICE TRACTION MOBILISATIONS MAITLAND	MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER SNAGS ACTIVE EXERCISES MOBILISATIONS MAITLAND LASER MOBILISATIONS MAITLAND ACTIVE EXERCISES MCKENZIE APPROACH
MOBILISATIONS MAITLAND SNAGS MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER EDUCATION AND ADVICE	MOBILISATIONS MAITLAND EDUCATION AND ADVICE ACTIVE EXERCISES ADVICE SEL MAN/CARER EDUCATION AND ADVICE ACTIVE EXERCISES	ACTIVE EXERCISES ADVICE SEL MAN/CARER ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES TRACTION	MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ACTIVE EXERCISES MOBILISATIONS MAITLAND EDUCATION AND ADVICE SNAGS EDUCATION AND ADVICE ADVICE SEI MANICABER	ACTIVE EXERCISES MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER EDUCATION AND ADVICE ADVICE SEL MAN/CARER ULTRASOUND ACTIVE EXERCISES S.W.D. MOBILISATIONS MAITLAND
409 410 411 413 415 419 420 420	422 423 424 425 427 428	429 431 433 434 435 436	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	447 448 450 451 458 459 460

EDUCATION AND ADVICE MOBILISATIONS MAITLAND EDUCATION AND ADVICE ACTIVE EXERCISES	SOFT TISSUE STRETCHES EDUCATION AND ADVICE EDUCATION AND ADVICE	EDUCATION AND ADVICE EDUCATION AND ADVICE EDUCATION AND ADVICE SOFT TISSUE STRETCHES INTERFERENTIAL SNAGS	SOFT TISSUE STRETCHES STRAPPING MOBILISATIONS MAITLAND ACUPUNCTURE MOBILISATIONS MAITLAND SNAGS TRACTION PASSIVE EXERCISES SOFT TISSUE STRETCHES	TRACTION SNAGS -LOCAL HEAT (IR PP) MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND
LOCAL HEAT (IR PP) NEURODYNAMIC FACILITIES MOBILISATIONS MAITLAND SOFT TISSUE STRETCHES PASSIVE EXERCISES SNAGS MOBILISATIONS MAITLAND EDUCATION AND ADVICE	TRIGGER POINT RELEASE TRIGGER POINT RELEASE SOFT TISSUE STRETCHES EDUCATION AND ADVICE MOBILISATIONS MAITLAND	ACTIVE EXERCISES MCKENZIE APPROACH MCKENZIE APPROACH EDUCATION AND ADVICE TRIGGER POINT RELEASE SNAGS TRACTION MANIPULATION GRADE 5	SNAGS SNAGS SNAGS SNAGS TRACTION MOBILISATIONS MAITLAND LOCAL HEAT (IR PP) MOBILISATIONS MAITLAND LOCAL HEAT (IR PP) INTERFERENTIAL CYRIAX MANIPS	TRACTION MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ACTIVE EXERCISES EDUCATION AND ADVICE ULTRASOUND ACTIVE EXERCISES TRACTION ACTIVE EXERCISES TRACTION ACTIVE EXERCISES
ADVICE SEL MAN/CARER STRAPPING MCKENZIE APPROACH TRIGGER POINT RELEASE ACTIVE EXERCISES ACTIVE EXERCISES TRIGGER POINT RELEASE ACTIVE EXERCISES	ACTIVE EXERCISES MOBILISATIONS MAITLAND TRIGGER POINT RELEASE ACTIVE EXERCISES MCKENZIE APPROACH	MCKENZIE APPROACH ACTIVE EXERCISES LOCAL HEAT (IR PP) SNAGS SNAGS EDUCATION AND ADVICE PASSIVE EXERCISES SOFT TISSUE STRETCHES	MOBILISATIONS MAITLAND ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES TEN'S TEN'S LOCAL HEAT (IR PP) TEN'S FRICTIONS ACTIVE EXERCISES	TEN'S TEN'S ACTIVE EXERCISES EDUCATION AND ADVICE ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER
MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND TEN'S MOBILISATIONS MAITLAND LOCAL HEAT (IR PP) LOCAL HEAT (IR PP) EDUCATION AND ADVICE SNAGS	LOCAL HEAT (IR PP) ACTIVE EXERCISES MOBILISATIONS MAITLAND ULTRASOUND EDUCATION AND ADVICE	LOCAL HEAT (IR PP) ULTRASOUND INTERFERENTIAL MCKENZIE APPROACH MOBILISATIONS MAITLAND SOFT TISSUE STRETCHES ACTIVE EXERCISES TRIGGER POINT RELEASE	ACTIVE EXERCISES ADVICE SEL MAN/CARER TEN'S ADVICE SEL MAN/CARER INTERFERENTIAI	ACTIVE EXERCISES ADVICE SEL MAN/CARER EDUCATION AND ADVICE MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND ACTIVE EXERCISES ADVICE SEL MAN/CARER
462 463 464 465 467 470 470	473 474 475 476 477	478 479 480 481 484 485	488 490 492 494 495 496 497	500 501 502 503 504 505 505 509 511

SNAGS EDUCATION AND ADVICE	EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND	LOCAL HEAT (IR PP) ULTRASOUND TRACTION EDUCATION AND ADVICE ADVICE SEL MAN/CARER	TRIGGER POINT RELEASE EDUCATION AND ADVICE TRACTION	SNAGS EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND	MASSAGE EDUCATION AND ADVICE PASSIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES ULTRASOUND
LOCAL HEAT (IR PP) MOBILISATIONS MAITLAND ACTIVE EXERCISES EDUCATION AND ADVICE EDUCATION AND ADVICE MOBILISATIONS MAITLAND STRAPPING ULTRASOUND	EDUCATION AND ADVICE ULTRASOUND APPLIANCE FITTING TRIGGER POINT RELEASE ACTIVE EXERCISES ACTIVE EXERCISES	EDUCATION AND ADVICE ULTRASOUND EDUCATION AND ADVICE INTERFERENTIAL SNAGS SOFT TISSUE STRETCHES	ACUPUNCTURE TRACTION ACUPUNCTURE ACUPUNCTURE TEN'S RE-EDUCATION OF MUSCLES LOCAL HEAT (IR PP)	MANIPULATION GRADE 5 MOBILISATIONS MAITLAND TRACTION MASSAGE MASSAGE	ULTRASOUND ADVICE SEL MAN/CARER EDUCATION AND ADVICE TRACTION MOBILISATIONS MAITLAND ULTRASOUND MOBILISATIONS MAITLAND
SNAGS ACTIVE EXERCISES PASSIVE EXERCISES NEURODYNAMIC FACILITIES NEURODYNAMIC FACILITIES TRACTION MASSAGE RE-EDUCATION OF MUSCLES	MASSAGE ACTIVE EXERCISES MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER EDUCATION AND ADVICE ULTRASOUND MOBILISATIONS MAITLAND	MASSAGE INTERFERENTIAL RE-EDUCATION OF MUSCLES ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND CYRIAX MANIPS	MECRENZIE AFPROACH NEURODYNAMIC FACILITIES EDUCATION AND ADVICE ACTIVE EXERCISES MOBILISATIONS MAITLAND ACTIVE EXERCISES TEN'S TRIGGER POINT RELEASE	MOBILISATIONS MAITLAND SNAGS LOCAL HEAT (IR PP) TRACTION ACTIVE EXERCISES TRACTION	ACTIVE EXERCISES FRICTIONS TRIGGER POINT RELEASE LOCAL HEAT (IR PP) S.W.D. S.W.D.
MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND PASSIVE EXERCISES ACTIVE EXERCISES MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND	TRACTION MOBILISATIONS MAITLAND ACTIVE EXERCISES ULTRASOUND SNAGS ADVICE SEL MAN/CARER EDUCATION AND ADVICE	MOBILISATIONS MAITLAND RE-EDUCATION OF MUSCLES MOBILISATIONS MAITLAND ACTIVE EXERCISES S.W.D. MCKENZIE APPROACH FDI ICATION AND ADVICE	MOBILISATIONS MAITLAND INTERFERENTIAL ADVICE SEL MAN/CARER ACTIVE EXERCISES ULTRASOUND ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND	MASSAGE TRACTION ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER S.W.D. ADVICE SEL MAN/CARER	ADVICE SEL MAN/CARER ULTRASOUND MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER EDUCATION AND ADVICE ADVICE SEL MAN/CARER ADVICE SEL MAN/CARER
512 513 515 516 518 520 524	526 527 530 531 532 534	539 545 546 547 549 551	553 554 555 556 556 557 567	563 564 565 566 567 568	569 570 571 572 573 574 575

INTERFERENTIAL MOBILISATIONS MAITLAND ULTRASOUND	EDUCATION AND ADVICE MASSAGE SNAGS ADVICE SEL MAN/CARER	ACTIVE EXERCISES ACUPUNCTURE TRIGGER POINT RELEASE EDUCATION AND ADVICE	EDUCATION AND ADVICE MOBILISATIONS MAITLAND EDUCATION AND ADVICE APPLIANCE FITTING MOBILISATIONS MAITLAND	EDUCATION AND ADVICE MOBILISATIONS MAITLAND TRACTION	EDUCATION AND ADVICE MOBILISATIONS MAITLAND MOBILISATIONS MAITLAND MCKENZIE APPROACH
NEURODYNAMIC FACILITIES ACTIVE EXERCISES SNAGS EDUCATION AND ADVICE TRIGGER POINT RELEASE ULTRASOUND EDUCATION AND ADVICE ACTIVE EXERCISES EDUCATION AND ADVICE	RE-EDUCATION OF MUSCLES MOBILISATIONS MAITLAND NEURODYNAMIC FACILITIES ACTIVE EXERCISES ULTRASOUND ACTIVE EXERCISES ACTIVE EXERCISES	SOFT TISSUE STRETCHES MOBILISATIONS MAITLAND SNAGS STRAPPING ACTIVE EXERCISES SNAGS ACTIVE EXERCISES	SNAGS EDUCATION AND ADVICE S.W.D. MOBILISATIONS MAITLAND EDUCATION AND ADVICE PASSIVE EXERCISES ADVICE SEL MAN/CARER	ACTIVE EXERCISES EDUCATION AND ADVICE TRACTION ACUPUNCTURE ACUPUNCTURE	NEURODYNAMIC FACILITIES RE-EDUCATION OF MUSCLES NEURODYNAMIC FACILITIES TRACTION ADVICE SEL MAN/CARER MOBILISATIONS MAITLAND EDUCATION AND ADVICE
MOBILISATIONS MAITLAND ULTRASOUND TRACTION PASSIVE EXERCISES MASSAGE TRIGGER POINT RELEASE SOFT TISSUE STRETCHES MASSAGE TRIGGER POINT RELEASE	MOBILISATIONS MAITLAND TEN'S RE-EDUCATION OF MUSCLES TRACTION ACTIVE EXERCISES RE-EDUCATION OF MUSCLES MOBILISATIONS MAITLAND	NEURODYNAMIC FACILITIES ACTIVE EXERCISES MOBILISATIONS MAITLAND ULTRASOUND SOFT TISSUE STRETCHES TRACTION EDUCATION AND ADVICE	MOBILISATIONS MAITLAND ADVICE SEL MAN/CARER SOFT TISSUE STRETCHES ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES ACTIVE EXERCISES	SNAGS MOBILISATIONS MAITLAND ACTIVE EXERCISES ACTIVE EXERCISES NEURODYNAMIC FACILITIES	SNAGS MOBILISATIONS MAITLAND SOFT TISSUE STRETCHES ACTIVE EXERCISES ACTIVE EXERCISES ULTRASOUND S.W.D.
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PASSIVE EXERCISES SNAGS TRIGGER POINT RELEASE	MOBILISATIONS MAITLAND ACTIVE EXERCISES S.W.D. SNAGS TRACTION
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