# CLOSED CERTIFICATION GUIDELINES FOR GENERAL PRACTITIONERS

An Roinn Gnóthaí Fostaíochta
agus Coimirce Sóisialaí
Department of Employment Affairs
and Social Protection

Author: Dr Clement Leech, FFOM RCPI, FAADEP.
Chief Medical Officer.

Contributors:
Dr Kathy Kernan, MRC Psych, (Mental Health).
Mr Devesh Singh, FRCSI, FRCS (Edin), (Surgical).
Dr Teck Leong Tai, MB, LFOM, MRCPI (Medical).
Dr Anthony Power, MB, Professional Development Manager.

January 2019

Medical Review & Assessment Section
Elizabeth O Farrell House
19 –28 North Cumberland Street
Dublin 1

# Table of contents

## Contents

# 1. Introduction

Acute common health problems have the potential to progress to a state of chronic disability and dependence on long-term illness benefits. This continues in spite of huge increases in health budgets.

The number of people on long-term illness/disability schemes in Ireland has increased from circa 100,000 to 150,000 over the past 10 years, and the cost has increased from 700 million euro to 1.8 billion euro.

Expenditure on total short-term and long-term illness and disability payments has increased from 1.1 billion euro to 2.7 billion euro in the period 2001 to 2011, while the numbers in receipt of these payments has increased from 173,000 to 242,200 over the same period. Illness Benefit showed similar trends with expenditure increasing from 330 million euro to 876 million euro and the number of recipients growing from 51,000 to 73,000. (Appendix 1)

**'Closed Certification'** refers to the concept of having evidence-based, defined periods of recovery for common medical conditions, and common surgical procedures.

**There is a wealth of evidence to show that employment is good for one's mental and physical health and wellbeing and conversely, that unemployment is damaging to one's mental and physical health and wellbeing.** [1]

Claimants who move off benefits and (re)-enter the workforce generally experience improvements in income, socio-economic status, mental and general health and wellbeing. [1]

**The longer a patient is off work the lower their chances of ever returning to work.**

**Early intervention in the acute stage is crucial,** to achieve better health outcomes which should result in lower levels of absenteeism, increased productivity and less dependence on long-term illness benefits.

**General Practitioners have a crucial role to play in this regard.**

It is important, in the patient's interest, to consider whether certification and advice to stay off work is the most appropriate way to manage a patient's care. Prolonged absence from work may cause deterioration in a patient's condition. For most common health conditions, such as back pain and mild to moderate anxiety and depression, advice to stay at work, or return to work early, is recommended for a better clinical outcome.

***The complexities and challenges that GPs face with certification deserve understanding and consideration***. [2]

Closed certification guidelines for general practitioners should serve as an evidence-based assessment tool and resource, to assist GPs in the appropriate certification of patients **resulting in better health outcomes for their patients**.

The employee with the health problem, the general practitioner, the employer, the taxpayer and society in general should all be beneficiaries.

This booklet contains a list of guidelines for general practitioners regarding the expected duration of absence from work for a variety of acute common health problems and recovery periods from common uncomplicated surgical procedures. The guidelines cover c. 80% of all new claims and outcomes have been closely monitored in a research project. The aim of this project was to determine if the use of the guidelines would lead to a significant reduction in the progression of acute common health conditions to a state of chronic disability and dependence on long-term illness benefits, with resultant better health outcomes for patients.

For long-term serious and/or life threatening illness, it should be noted that certifiers' discretion should prevail. For the majority of less common conditions the DEASP database can be made available for reference.

The guidelines are intended to provide general practitioners with an **evidence-based tool to achieve better health outcomes for their patients.** They have been compiled for use in an Irish context with regard to evidence-based protocols on various health problems, which were developed by DEASP, and also with reference to the *Official Disability Guidelines 2013,* [3] to *The Medical Disability Advisor: Workplace Guidelines for Disability Duration*,[4] and to *The Renaissance Project*.[5]

**The Renaissance Project** won the award for **Best Patient / Public Education Project** at the **Irish Healthcare Awards, 2005.** This project proved that early intervention in patients with lower back pain resulted in a significant reduction in the progression to chronic disability and dependence on long term illness benefits.

For further information see :

*www.welfare.ie/en/downloads/renaissance.pdf*

Where co-morbidities exist, the duration for the most severe component condition should apply.

The ***Official Disability Guidelines (ODG) 2013*** [3] links together four U.S. government databases to provide length of disability experience.

1. **ICD-9-CM**. The International Classification of Diseases, 9th Revision, Clinical Modification.
2. **CDC-NCHS-NHIS.** The National Health Interview Survey (NHIS) is conducted annually by the National Centre for Health Statistics (NCHS) of the Centres for Disease Control and Prevention (CDC).
3. **OSHA-BLS-OID**. The Bureau of Labour Statistics reports annually on Occupational Injuries and Diseases (OID) from forms submitted by employers to the Occupational Safety and Health Administration (OSHA).
4. **HCUP**. The Healthcare Cost and Utilisation Project (HCUP) is a family of healthcare databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ) to create a national resource of patient-level care in the United States. HCUP includes the largest collection of longitudinal medical care data in the United States.

The ODG Guidelines are meant to be used to identify cases that are out of the norm, where questions may be asked, such as what makes them different.

The Author is a member of the Editorial Advisory Board of ODG.

These guidelines are based on “raw data” i.e. on actual experience, not “expert” opinion.

Although referred to during research, it was considered more appropriate to base the DEASP Guidelines primarily on the Medical Disability Advisor –Workplace Guidelines for Disability Duration, with some modifications for use in an Irish context, and the Renaissance Project.

***The Medical Disability Advisor: Workplace Guidelines for Disability Duration*** [4] are informed by statistical data but are also based on clinical judgement and clinical experience. It is the double input of statistical data and medical experience that allows for the protective "blinds" that may be described as the modified –Delphi approach.

In this respect, *The Medical Disability Guidelines* follow the principles of evidence-based medicine: they result from clinical judgement and clinical experience informed by statistical data, to provide a baseline that is both humane and rigorous. [4]

**Irish Context**

An expert medical group, consisting of an Occupational Physician, a Psychiatrist, and a Physician with special interest in Rheumatology, a Surgeon and a former General Practitioner, was set up. This group, by consensus clinical judgement and clinical experience, amended the durations, in some instances, generally by extending them, to make them more applicable to an Irish context.

**DEASP Evidence-based Medical Protocols**

Evidence-based Medical Protocols were developed following a review of accepted standard medical references and research of current literature. These protocols form a comprehensive knowledge base of up-to-date evidence-based research. The protocol documents are structured in the following manner:

- Overview and definition
- Epidemiology
- Aetiology
- Diagnosis
- Differential diagnosis and comorbidity
- Treatment

- Prognosis
- Guidelines for information gathering at the in-person assessment
- Analysis of effect on functional ability

The protocol documents were subjected to a rigorous internal review led by the Department's Chief Medical Officer (CMO) and an external expert review panel: Prof. Sir Mansel Aylward CB, Institute of Primary Care and Public Health, Cardiff School of Medicine and Prof. Bob Lewin, Cardiac Rehabilitation, Health Sciences, University of York.

A comprehensive list of 27 evidence based protocols are listed in table 1 below.

Detailed Medical Protocols (including references) are available on the DEASP website: **http://www.welfare.ie/en/Pages/Medical-Review-and-Assessment.aspx**

The **'Closed Certification Guidelines for GPs'** Research Project was approved by the **Quality in Practice and Standards in Ethics Committees of the ICGP** and the Project won the award for **'Best Education Project- GP/Pharmacy'** at the **Irish Healthcare Awards 2014.**

## Table 1 – List of Protocols

| |
|---|
| **Mental Health** |
| Depression, anxiety, stress and PTSD |
| Intellectual disabilities |
| Substance and drug dependency |
| Alcohol dependency |
| Eating disorders |
| **Nervous System** |
| Epilepsy |
| Headaches |
| Migraine |
| **Respiratory System** |
| Asthma |
| COPD |
| **Cardiovascular System** |
| Ischaemic heart disease, cardiac failure |
| Hypertension |
| **General Alimentary System** |
| **Musculoskeletal System** |
| Renaissance- Back |
| Renaissance –Neck and shoulder |
| Rheumatoid Arthritis |
| Osteoarthritis-Upper limbs |
| Osteoarthritis-Lower limbs |
| **Endocrine System** |
| Thyroid |
| Diabetes |
| **Genitourinary System** |
| **Obstetrics and Gynaecology** |
| **ENT System** |
| **Dermatology** |
| Eczema, psoriasis |
| Dermatitis |
| **Miscellaneous** |
| Chronic Fatigue |
| Chronic pain |
| Fibromyalgia |

# IMPORTANT

**The Guidelines are designed to be used as an evidence-based assessment tool to assist certifiers to appropriately manage patients with acute common health problems, to prevent progression to chronic disability, and achieve better health outcomes.**

**These Guidelines are not prescriptive. There will be, undoubtedly, individual variations. Some patients will recover and be able to return to work before the recommended period has expired, others later.**

**Ultimately, the clinical judgement of the General Practitioner should prevail.**

**However, should the opinion of the GP differ from that of the patient, the GP could confidentially seek the independent opinion of a DEASP Medical Assessor (MA) and continue to issue certificates in the interim. Should the patient's opinion differ with that of the MA, she/he would be entitled to appeal and get the opinion of a second MA.**

**MAs will use the same guidelines but, nevertheless, form an opinion on a case by case basis. Should the patient disagree with the opinions of both MAs, she/he could appeal the decision to the independent Appeals Office.**

**Decisions of the Appeals Office are final and conclusive. However, in any particular case a judicial review may be sought or a case may be appealable to the High Court on a point of law.**

# 2. Work categories

The *Dictionary of Occupational Titles (DOT)* [6] categorises work by physical demand characteristics as per the following table:

## Table 2 – Physical Demand Characteristics of Work

| Physical Demand Level | Occasional (0 – 33% of workday) | Frequent (34 – 66% of workday) | Constant (67 – 100% of workday) | Typical Energy Required (Metabolic Equivalents) |
|---|---|---|---|---|
| Light | 20-35 lb | 10-20 lb | 5 lb | 2.2 – 4.5 |
| Moderate | 50 – 75 lb | 20 – 35 lb | 10 – 15 lb | 4.6 – 7.0 |
| Heavy | 100 lb + | 50 lb + | 20 lb + | 7.5 + |

Depending on the outcome of the examination, the length of time off work is influenced by the nature, or Category, of the job of the patient; Light, Moderate or Heavy category work.

In the case of Mental Health, the estimation is based on the severity of the illness: Mild, Moderate, Severe or Profound.

Below is a sample of different categories of work. (This list is a guide, and is by no means exhaustive).

**The Irish Context**

In Department of Employment Affairs and Social Protection, our work categories are further subdivided into Light/ Skilled; Light/Semi-skilled; Light/Lesser skilled. A similar principle applies across the Medium and Heavy Work categories.

| WORK CATEGORIES | |
|---|---|
| **EFFORT/SKILL** | **EXAMPLES OF WORK IN EACH CATEGORY** |
| **Light/Skilled** | **Professional, Managers, Academics, Supervisors.** |
| **Light/Semi-skilled** | **Office Workers (e.g., Typist, Receptionist, Telephonist), Sales Persons. Taxi Drivers, Couriers.** |
| **Light/Lesser-skilled** | **Shop Assistants, Caretakers, Security Officers.** |
| **Moderate/Skilled** | **Tradespersons (e.g., Fitter, Electrician, Plumber, Printer, Hairdresser), Health Care Worker (eg. Nurse, Physiotherapist).** |
| **Moderate/Semi-skilled** | **Factory Workers, Machine Drivers (e.g., Forklift), Cleaners, Waiter/Waitress, Postal Workers, Child Care Workers.** |
| **Moderate/Lesser-skilled** | **Domestic Attendants, Kitchen Workers.** |
| **Heavy/Skilled** | **Tradespersons (e.g., Bricklayer, Carpenter, Machinist, Panel Beater, Baker, Cook, Butcher), Transport Driver (HGV/PCV).** |
| **Heavy/Semi-skilled** | **Nursing Assistant, Industrial Cleaners.** |
| **Heavy/Lesser-skilled** | **General Operatives (e.g., Construction, Farm Workers), Refuse Collectors.** |

# 3. Acute Common Medical Conditions

## 3.1 Acute Respiratory and Gastrointestinal Conditions. [7 - 26]

Upper respiratory infection (URI) is the most common acute illness and includes acute nasopharyngitis, acute bronchitis, acute sinusitis, pharyngitis and influenza. The vast majority of URIs are mild, self-diagnosed and self-treated at home.

Acute nasopharyngitis is a self-limited syndrome caused by viral infection of the upper respiratory tract mucosa.

Many patients will have recovered sufficiently to return to work without the need for DEASP certification.

Hence, 0-1 week is the recommended period of certified absence from work.

Asthma is a very common respiratory condition, the prevalence of which has risen exponentially over the past 40 years, and is estimated to be increasing globally at a rate of 50% per decade. [7]

| GUIDELINES TO CLOSED CERTIFICATION IN ACUTE RESPIRATORY AND GASTROINTESTINAL CONDITIONS. (*References: 7 - 26*) | | | | | |
|---|---|---|---|---|---|
| | **WORK CATEGORY (WEEKS)** | | | **ICD-10** | **ICPC-2** |
| | **LIGHT** | **MODERATE** | **HEAVY** | | |
| **Acute Nasopharyngitis** | **0-1** | **0-1** | **0-1** | **J00** | **R80** |
| **Sinusitis/Laryngitis/Tonsillitis** | **0-1** | **0-1** | **0-1** | **J01 – J04.0** | **R75/76/77** |
| **Acute URTI** | **0-1** | **0-1** | **0-1** | **J00 – J06** | **R74** |
| **Hay Fever** | **0-1** | **0-1** | **0-1** | **J30.1** | **R97** |
| **Otitis Media** | **0-1** | **0-1** | **0-1** | **H66.9** | **H71** |
| **Acute LRTI** | **1 – 2** | **1 – 2** | **1 – 2** | **J20/J40** | **R78/R81** |
| **Asthma (acute exacerbation)** | **0 – 1** | **0 – 1** | **0-1** | **J45** | **R96** |
| **Gastroenteritis** | **1** | **1** | **1** | **K52** | **D73** |

Many acute respiratory and gastrointestinal conditions are mild and resolve within a few days, either spontaneously or with appropriate treatment.

32 **Acute Musculoskeletal Conditions (Back and Neck Pain)** [27-36]

In the case of non-specific or Simple Back Pain (SLBP), advice to continue ordinary activities of daily living as normally as possible despite the pain can give equivalent or faster symptomatic recovery from the acute symptoms, and leads to shorter periods of work loss and fewer recurrences than the "traditional" medical treatment (advice to rest and "let pain be your guide" for return to normal activity).

Most patients with SLBP are able to continue working or return to work within a few days or weeks, even if they still have some residual or recurrent symptoms, and they do not need to wait until they are completely pain free. [1]

The ***European COST Action B13 Guidelines*** [27] for the management of acute non-specific Low Back Pain in Primary Care recommends the use of the Diagnostic Triage to identify Simple Low Back Pain to determine its best management. [27]

**Diagnostic Triage**

- Simple Low Back Pain
- Nerve Root Pain.
- Potential Serious Spinal Pathology, e.g. tumour, infection.
- Inflammatory Disorders, e.g. Ankylosing Spondylitis, Arthritis

***The DEASP diagnostic triage and other assessment tools shown below are solely for informational purposes.***

**RENAISSANCE BACK DIAGNOSTIC TRIAGE (This may also be applied to neck pain)**

**1.6 MUSCULOSKELETAL SYSTEM**

**An Roinn Coimirce Sóisialaí**

**1.6.4 RENAISSANCE - BACK**

**Department of Social Protection**

**MUSCULO-SKELETAL BACK DIAGNOSTIC TRIAGE**

| **1. SIMPLE LOW BACK PAIN** | **YES** | **NO** |
|---|---|---|
| 20 - 50 years | ☐ | ☐ |
| L/S region, buttocks and thighs | ☐ | ☐ |
| Mechanical in nature | ☐ | ☐ |
| Patient well | ☐ | ☐ |

| **2. NERVE ROOT PAIN** | **YES** | **NO** |
|---|---|---|
| Unilateral leg pain, worse than lower back pain | ☐ | ☐ |
| Radiates generally to foot or toes | ☐ | ☐ |
| Numbness & paraesthesia in same direction | ☐ | ☐ |
| Nerve irritation signs - SLR restricted | ☐ | ☐ |
| Nerve compression signs - motor, sensory or reflex changes | ☐ | ☐ |

| **3. POTENTIAL SERIOUS SPINAL PATHOLOGY** | **YES** | **NO** |
|---|---|---|
| Age: onset under 20 years or over 50 years | ☐ | ☐ |
| Violent trauma reletive to age, e.g., fall from a height in young patient, or heavy lift from older person with osteoporosis, could indicate fractures | ☐ | ☐ |
| Constant, progressive, non-mechanical pain | ☐ | ☐ |
| Thoracic pain | ☐ | ☐ |
| Past history - Carcinoma, Immune Suppression (from use of steroids, or HIV) | ☐ | ☐ |
| Systemically unwell, weight loss, infection | ☐ | ☐ |
| Persisting, severe restriction of lumbar flexion | ☐ | ☐ |
| Widespread neurological signs and symptoms | ☐ | ☐ |
| Structural deformity | ☐ | ☐ |

| **3.1 INFLAMMATORY DISORDERS (ANKYLOSING SPONDYLITIS & RELATED DISORDERS)** | **YES** | **NO** |
|---|---|---|
| Marked morning stiffness | ☐ | ☐ |
| Persisting limitation of spinal movements | ☐ | ☐ |
| Peripheral joint involvement | ☐ | ☐ |
| Iritis, skin rashes (psoriasis), colitis, urethral discharge | ☐ | ☐ |
| Family history | ☐ | ☐ |

| **3.2 CAUDA EQUINA SYNDROME** | **YES** | **NO** |
|---|---|---|
| Difficulty with micturition | ☐ | ☐ |
| Sphincter disturbance | ☐ | ☐ |
| Gait disturbance | ☐ | ☐ |
| Saddle anaesthesia (perineal area). | ☐ | ☐ |

| GUIDELINES TO CLOSED CERTIFICATION IN BACK CONDITIONS<br><br>*(References: 27 – 36)*<br><br>**May also be applied to Neck Pain** | | | | | |
|---|---|---|---|---|---|
| | **WORK CATEGORY (WEEKS)** | | | **ICD-10** | **ICPC-2** |
| | **LIGHT** | **MODERATE** | **HEAVY** | | |
| **PAIN** | | | | | |
| **Simple Low Back Pain** | **1** | **2** | **4** | **M54.5** | **L02/L03** |
| **Nerve Root Pain** | **4** | **8** | **16** | **M54.3** | **L86** |
| **DISCECTOMY** | | | | | |
| **Cervical** | **8** | **12** | **16** | | |
| **Thoracic** | **9** | **13** | **18** | | |
| **Lumbar** | **6** | **12** | **16** | | |
| **DISC FUSION** | | | | | |
| **Cervical** | **8** | **12** | **16** | | |
| **Thoracic** | **12** | **16** | **Certifier's discretion** | | |
| **Lumbar** | **12** | **16** | **Certifier's discretion** | | |
| **POTENTIALLY SERIOUS SPINAL PATHOLOGY** | **Certifier's discretion** | | | | |

33

## Acute Mental Health Conditions. [37 -58]

Acute common mental health conditions, such as mild to moderate anxiety and depression, are increasingly progressing to a state of chronic disability and absence from work. The World Health Organisation projected that, by 2020, depression would be the second leading cause of disability and disease burden in the developed world, with the age group of adults 15-44 already having reached that level. [37] However, recent studies suggest that this ranking may well rise even sooner, with depressive illness soon becoming the highest cause of disability worldwide. [38]

**There is a wealth of evidence to show that employment is good for one's mental and physical health and wellbeing** and that unemployment is damaging to one's mental and physical health and wellbeing. Patients who move off benefits and (re)-enter the workforce generally experience improvements in income, socio-economic status, mental and physical wellbeing.

In general, provided care is taken to make work safe and satisfactory, employment can promote health and wellbeing, and the benefits outweigh any 'risks' of work and the adverse effects of (long-term) unemployment or sickness absence. [1]

**The longer a patient is off work, the lower their chances of ever returning to work.**

**Early intervention and support are crucial** in enabling a patient with common mental health conditions to remain in work or return to work early.

The recommended approach to assessing a patient's functional ability is to ask them to describe their average day. This will allow an evaluation of the nature and severity of their disability in relation to simple tasks in terms of comprehension, learning, concentration, memory and motivation. It will also provide an indication of any need for guidance, prompting or supervision.

## MENTAL HEALTH ASSESSMENT

**1.1 MENTAL HEALTH ASSESSMENT**

**1.1.1 DEPRESSION/ANXIETY/STRESS/PTSD**

**An Roinn Coimirce Sóisialaí**
**Department of Social Protection**

| **NORMAL** | **YES** | **NO** |
|---|---|---|
| Capable of usual ADLs | ☐ | ☐ |
| Continues usual interests & hobbies | ☐ | ☐ |
| Maintains social contacts with family and/or friends | ☐ | ☐ |
| Can travel alone on public transport | ☐ | ☐ |
| Absence of biological symptoms | ☐ | ☐ |

| **MILD** | **YES** | **NO** |
|---|---|---|
| Reduced interest in work & hobbies | ☐ | ☐ |
| Reduced social contact with family and/or friends | ☐ | ☐ |
| Poor sleep or concentration | ☐ | ☐ |
| Short-term (isolated/intermittent) anxiety or stress reaction | ☐ | ☐ |
| Copes well with attending assessment | ☐ | ☐ |
| Receiving anxiolytic and/or anti-depressant treatment | ☐ | ☐ |

| **MODERATE** | **YES** | **NO** |
|---|---|---|
| Downcast gaze and poor eye contact | ☐ | ☐ |
| Avoidant/irritable/hyper-vigilant behaviour | ☐ | ☐ |
| Additional mental health problem(s) | ☐ | ☐ |
| Occasional suicidal ideation | ☐ | ☐ |
| Persistent PTSD symptoms years after stressor | ☐ | ☐ |
| Receiving anxiolytic and/or anti-depressant treatment | ☐ | ☐ |
| Attending Psychiatric OPD | ☐ | ☐ |
| Death of partner or 1 degree relative in last 6 months | ☐ | ☐ |

| **SEVERE** | **YES** | **NO** |
|---|---|---|
| Attending Psychiatric Day Hospital | ☐ | ☐ |
| Recurrent Depressive episodes | ☐ | ☐ |
| Socially isolated with significant lifestyle restrictions | ☐ | ☐ |
| Unkempt appearance | ☐ | ☐ |
| Poverty of Speech | ☐ | ☐ |
| Tachycardia | ☐ | ☐ |
| Relies on family/friends to accompany them outside home | ☐ | ☐ |
| Receiving Lithium/Psychotropics or multiple drug therapy | ☐ | ☐ |
| Frequent suicidal ideation and/or suicidal action in past 12 months | ☐ | ☐ |

| **PROFOUND** | **YES** | **NO** |
|---|---|---|
| Incapable of independent living | ☐ | ☐ |
| Attempted suicide in past 6 months | ☐ | ☐ |
| Persistent suicidal ideation | ☐ | ☐ |
| Recurrent Psychiatric admission in past 12 months | ☐ | ☐ |
| Treated with ECT in past 12 months | ☐ | ☐ |
| Confined to home | ☐ | ☐ |
| Frequent home visits from GP/Psychiatrist/Psychiatric Nurse | ☐ | ☐ |

| GUIDELINES TO CLOSED CERTIFICATION IN MENTAL HEALTH<br><br>*(References: 37 – 58)* | | | | | | |
|---|---|---|---|---|---|---|
| | **MILD** | **MODERATE** | **SEVERE** | **PROFOUND** | **ICD-10** | **ICPC-2** |
| **AFFECTIVE DISORDERS** | | | | | | |
| **Depressive episode, Single** | **2** | **8** | **16** | **20** | **F32** | **P76** |
| **Depressive episode, Recurrent** | **2** | **10** | **20** | **24** | **F33** | **P76** |
| **Bipolar Affective Disorder** | **6** | **16** | **24** | **28** | **F31** | |
| **Schizoaffective Disorder** | **Certifier's Discretion** | | | | **F25** | |
| **Schizophrenia** | **Certifier's Discretion** | | | | **F20** | **P72** |
| **ANXIETY DISORDERS** | | | | | | |
| **Panic Disorder** | **2** | **8** | **12** | **16** | **F41.0** | **P74** |
| **Panic Disorder, with Agoraphobia** | **2** | **8** | **16** | **20** | **F40.0** | |
| **Social Phobia** | **2** | **8** | **12** | **14** | **F40.1** | **P79** |
| **Specific Phobia** | **2** | **4** | **8** | **10** | **F40.2** | **P79** |
| **PTSD** | **6** | **12** | **18** | **20** | **F43.1** | **P82** |
| **OCD** | **4** | **8** | **12** | **16** | **F42** | **P79** |
| **Eating Disorders** | **4** | **12** | **24** | **28** | **F50** | **P86** |
| **SUBSTANCE ABUSE** | | | | | | |
| **Alcohol/Drugs** | **2** | **12** | **18** | **Discretion** | **F10-F19** | **P15/16/ 18/19** |

34 **Common Circulatory Conditions.** [59 - 77]

The death rate for coronary heart disease has fallen in Ireland in the last two decades, in common with other industrialised societies. This is mainly due to improvements in both primary and secondary treatments (for example, cholesterol and blood pressure management, and improved care following myocardial infarction), and changes in lifestyle (for example a reduction in smoking). Ischaemic heart disease does not usually affect the individual's ability to undertake occupational activities. Failure to return to work following an episode of ischaemic heart disease, or a delay in returning, is associated with a poorer outcome and reduced quality of life. [59, 60] There is no evidence to state that the more severe the ischaemia, or damage post myocardial infarction, the more likely it is that an individual will not return to work. [59, 60]

Evidence suggests that the greater impacts on the individual's ability to return to work are reinforcement of positive psychological and social factors, accompanied by early discharge, followed by prompt rehabilitation.[59, 60] An individual may have many perceptions about their ability to return to work - for example it is common to believe that occupations which have physical activities or jobs of certain natures will not be available to an individual with ischaemic heart disease. This is, almost always, not the case. Occupations which do not have physical activity have been shown to carry almost twice the risk of developing cardiovascular disease [60] and only a very small number of occupations absolutely preclude individuals with heart disease.[60] Whilst it is not possible to continue an occupation as a deep sea diver for example, it is possible to continue to fly as a professional pilot subject to a medical examination.[60] In commenting on patients' misconceptions, Professor Bob Lewin (in a chapter on psychological factors in cardiac rehabilitation) has stated that: "Lengthy periods of work avoidance make anxiety worse, and work is often an important source of self-validation and social support" [61].

| GUIDELINES TO CLOSED CERTIFICATION IN UNCOMPLICATED CIRCULATORY CONDITIONS<br>*(References: 59 - 77)* | | | | | |
|---|---|---|---|---|---|
| | **WORK CATEGORY (Weeks)** | | | **ICD-10** | **ICPC-2** |
| | **LIGHT** | **MODERATE** | **HEAVY** | | |
| **Angina Pectoris, medical treatment effective** | **4** | **8** | **12** | **I20** | **K74** |
| **Angina Pectoris, percutaneous coronary intervention effective** | **2** | **3** | **4** | **I20** | |
| **Myocardial Infarction*** | **Discretionary** | **Discretionary** | **Discretionary** | **I21** | **K75** |
| **Hypertension**** | | | | **I10/I15** | **K86** |
| **Heart Valve, Replacement** | **8** | **12** | **Discretionary** | | |
| **Coronary Artery Bypass Graft (CABG)** | **12** | **16** | **20** | **I20** | |
| **Varicose Veins, Surgical Treatment** | **3** | **4** | **7** | **I83** | **K95** |

* The degree of myocardial infarction varies from one individual to another and its recovery depends on the patient's pre-morbid condition and response to treatment.

Generally, failure to return to work following an episode of ischaemic heart disease, or a delay in returning, is associated with a poorer outcome and reduced quality of life. [60]

** Benign Hypertension, of itself, is not a disabling condition.[62, 63, 64] If the hypertension is adequately treated with no end organ damage, it is not an impediment to work.

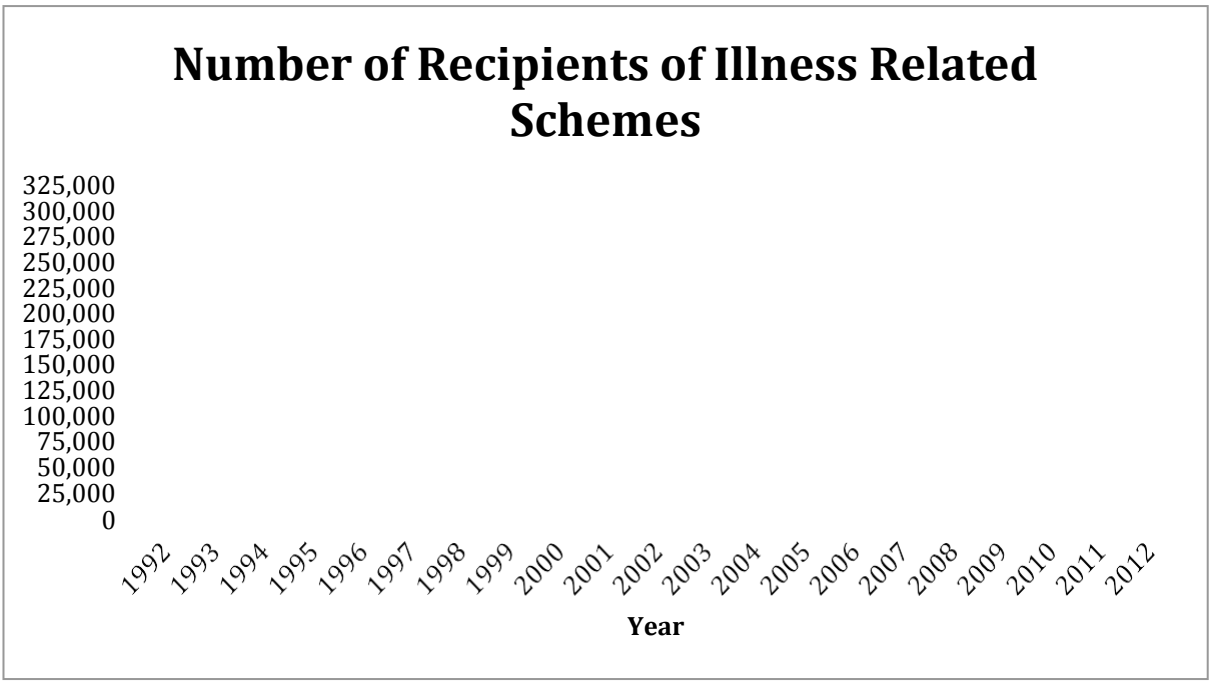
35 **Recovery from Common Surgical Procedures.** [78 - 100]

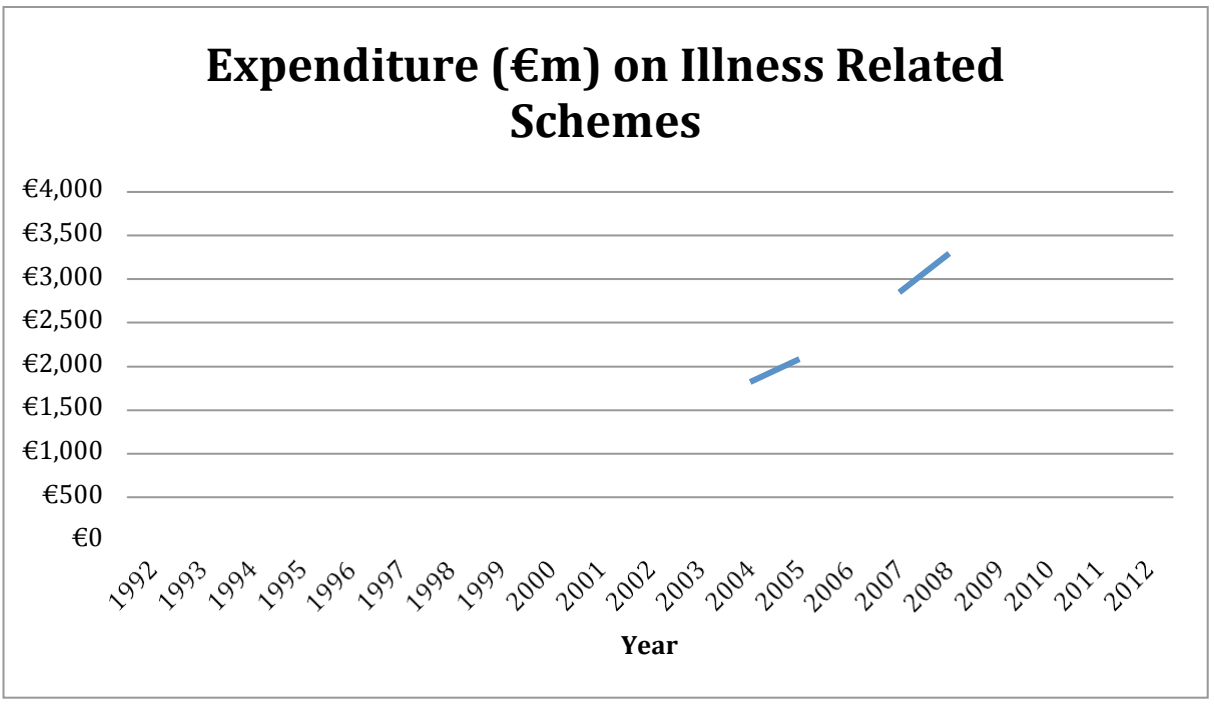
| **GUIDELINES TO CLOSED CERTIFICATION IN UNCOMPLICATED SURGICAL CASES** *(References: 78 – 100)* | | | | | |
|---|---|---|---|---|---|
| | **WORK CATEGORY (WEEKS)** | | | **ICD-10** | **ICPC-2** |
| | **LIGHT** | **MODERATE** | **HEAVY** | | |
| **ABDOMINAL** | | | | | |
| **Appendicectomy** | **1** | **2** | **4** | **Z90.4** | **D88** |
| **Cholecystectomy (laparoscopic)** | **2** | **3** | **4** | **Z90.4** | **D98** |
| **Hysterectomy** | **5** | **8** | **10** | **Z90.7** | |
| **Inguinal Hernia** | **3** | **6** | **10** | **K40** | **D89** |
| **MUSCULOSKELETAL** | | | | | |
| **Carpal Tunnel Release** | **3** | **4** | **8** | **G56.0** | **N93** |
| **Colles' Fracture** | **6** | **10** | **13** | **S52.5** | **L72** |
| **Total Knee Replacement** | **6** | **16** | **Discretionary** | **Z96.6** | |
| **Total Hip Replacement** | **10** | **20** | **Discretionary** | **Z96.6** | |
| **Knee Repair - Open** | **10** | **15** | **20** | | |
| **Knee Repair - Arthroscopy** | **6** | **8** | **12** | | |

# 4. Appendix

## 4.1 Illness related Schemes

In addition to numbers and costs related to people on short and long-term illness benefits, the graphs include those in receipt of Disability Allowance, Domiciliary Care Allowance and Carers Allowance.



# 5. References:


1. Waddell G, Burton AK. Is Work Good for Your Health and Wellbeing? London: The Stationery Office, 2006.

2. Foley M, Thorley K, Denny M. The sick note: A qualitative study of sickness certification in general practice in Ireland. *Eur J Gen Pract* 2012 Jun;**18(**2):92-9.

3. Denniston PL, Kennedy CW Jr, eds. *Official Disability Guidelines 2013*. 18th edn. Encinitas CA: Work Loss Data institute, 2012.

4. Reed P, ed. *The Medical Disability Advisor: Workplace Guidelines for Disability Duration*. 6th edn. Westminster, CO: Reed Group Ltd, 2009.

5. Leech C. The Renaissance Project. Dublin: Government Publications, 2004.

6. U.S. Department of Labor: Employment and Training Administration. Dictionary of occupational titles. 4th rev edn. Chicago:VGM Career Books, 1991.

7. Braman SS. The Global burden of asthma. *Chest* 2006 Jul;**130**(Suppl 1):4S-12S.

8. Derlet RW, *et al*. Influenza. eMedicine. *Medscape Reference* 19 Apr 2013. http://emedicine.medscape.com/article/219557-overview (retrieved 22 Apr 2013).

9. National Foundation for Infectious Diseases. Facts about influenza for adults. *MedImmune* 2012. http://www.nfid.org/idinfo/influenza/flu-facts.pdf (retrieved 4 Apr 2013).

10. Orlandi RR. Sinusitis. In: Rakel R, ed. *Conn's Current Therapy* 2007. 59th edn. Philadelphia: Saunders, 2007.

11. Brook I, Cunha BA, *et al.* Acute sinusitis. eMedicine. *Medscape Reference* 11 Mar 2013. http://emedicine.com/med/topic2555.htm (retrieved 20 Mar 2013).

12. Mayo Clinic Staff. Laryngitis. *Mayo Foundation for Medical Education and Research* 2011. http://www.mayoclinic.com/health/laryngitis/DS00366 (retrieved 28 Jun 2011).

13. Lauro J, Barton ED. Tonsillitis. *eMedicineHealth*. http://www.emedicinehealth.com/tonsillitis/article_em.htm (retrieved 29 Jun 2012).

14. Shah UK, Myers AD, *et al*. Tonsillitis and peritonsillar abscess. eMedicine. *Medscape Reference* 21 Jun 2012. http://emedicine.medscape.com/article/871977-overview (retrieved 26 Jun 2012).

15. Meneghetti A, Mosenifar Z, *et al*. Upper respiratory tract infection differential diagnoses. *Medscape Reference* 15 Oct 2012. http://emedicine.medscape.com/article/302460-differential (retrieved 19 Oct 2012).

16. Sheikh J, Najib U, Kaliner MA, *et al.* Allergic rhinitis. *Medscape Reference* 1 Apr 2013. http://emedicine.medscape.com/article/134825-overview (retrieved 19 Apr 2013).

*17.* Natal BL, Chao JH, Dyne PL, *et al*. Emergent management of acute otitis media. *Medscape Reference.* 29 Jul 2011. http://emedicine.medscape.com/article/764006-overview (retrieved 2 Apr 2013).

18. Donaldson JD, Myers AD, *et al*. Acute otitis media. *Medscape Reference.* 11 Mar 2013. http://emedicine.medscape.com/article/859316-overview (retrieved 3 Apr 2013).

19. Niederman M. Review of treatment guidelines for community-acquired pneumonia. *American Journal of Medicine Supplements* 2004;**117**(3A):51S-57S.

20. Knutson D, Braun C. Diagnosis and management of acute bronchitis. *Am Fam Physician* 2002 May;**65**(10):2039-2044.

21. Morris MJ, Mosenifar Z *et al*. Asthma. *Medscape* 15 Feb 2013. http://emedicine.medscape.com/article/296301-overview (retrieved 6 Mar 2013).

22. National Heart, Lung, and Blood Institute. What is asthma? NIH Publication No. 11-2749 2011 Jan. http://www.nhlbi.nih.gov/health/health-topics/topics/asthma/ (retrieved 28 May 2012).

23. National Digestive Diseases Information Clearinghouse. Diarrhea. National Institute of Diabetes and Digestive and Kidney Diseases. 24 Sep 2012. http://digestive.niddk.nih.gov/ddiseases/pubs/diarrhea/ (retrieved 28 Sep 2012).

24. Centers for Disease Control and Prevention. Escherichia coli. U.S. Department of Health and Human Services. http://www.cdc.gov/ecoli/ (retrieved 13 Jan 2012).

25. Feldman M, Friedman LS, Sleisenger MH, eds. *Gastrointestinal and Liver Disease*. 7th edn. 2 vols. Philadelphia: WB Saunders, 2002.

26. Klochko A, Wallace MR, Cunha BA, *et al*. Salmonellosis. *Medscape* 6 Sep 2011. http://emedicine.com/med/topic2058.htm (retrieved 2 Apr 2012).

*27.* Aebi M. COST Action B13: European guidelines for the management of low back pain. *Euro Spine J,* 2006*;***15**(Suppl 2).

28. Carey TS, Garrett J, McLaughlin C, *et al*. The outcomes and costs of care for acute low back pain among patients seen by primary care practitioners, chiropractors, and orthopedic surgeons. The North Carolina Back Pain Project. *N Engl J Med* 1995 Oct;**333**(14):913-917.

*29.* Carragee E, Alamin T, Cheng I *et al*. Does minor trauma cause serious low back pain illness? *Spine* 2006 Dec;**31**(25):2942-2949.

30. Carragee E, Alamin T, Cheng I, *et al*. Are first-time episodes of serious LBP associated with new MRI findings? *Spine* 2006;**6**(6):624-635.

31. Loisel P, Abenhaim L, Durand P, *et al*. A population-based, randomized clinical trial on back pain management. *Spine* 1997;**22**(24):2911-2918.

32. Gibson JN, Waddell G. Surgery for degenerative lumbar spondylosis. *Cochrane Database*. System Review 3 2005 Oct 19(4):CD001352. PMID:16235281.

33. Danielson JM, Johnsen R, Kibsgaard SK, Hellevik E. Early aggressive exercise for postoperative rehabilitation after discectomy. *Spine* 2000;**25**(8):1015-1020. PMID: 10767815.

34. Furman MB, Tekmyster G, Simon J, *et al*. Cervical disc disease. eMedicine. *Medscape Reference* 4 Dec 2012. http://emedicine.com/pmr/topic25.htm (retrieved 15 December 2012).

35. Emery SE. Cervical spondylotic myelopathy: diagnosis and treatment. *J Am Acad of Orthop Surg* 2001 Nov;**9**(6):376-388.

36. Fouyas IP, Statham PF, Sandercock PA. Cochrane review on the role of surgery in cervical spondylotic radiculomyelopathy. *Spine* 2002;**27**(7):736-747.

37. Andrews G, Sanderson K, Slade T, Issakidis C. Why does the burden of disease persist? Relating the burden of anxiety and depression to effectiveness of treatment. *Bulletin of the World Health Organisation* 2000;**78**(4):446-454.

*38.* Rost K. Disability from depression: the public health challenge to primary care. *Nord J Psychiatry* 2009;**63**(1):17-21.

39. Frances A, ed. *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR).* 4th ed. Washington, DC: American Psychiatric Association, 2000.

40. Weissman MM, Bland RC, Canino GJ, *et al*. Cross-national epidemiology of major depression and bipolar disorder. *JAMA* 1996 Jul;**276**(4):293-299.

41. Hensley PL, Clayton PJ. Bereavement-related depression. *Psychiatric Times* 2008;**25**(8).

42. Keck PE, McElroy SL, Arnold LM. Bipolar disorder. *Med Clin North Am* 2001;**85**(3):645-661.

43. Rivas-Vasquez RA, Johnson SL, Rey GJ, *et al*. Current treatments for bipolar disorder: a review and update for psychologists. *Professional Psychology: Research and Practice* 2002 Apr;**33**(2):212-223.

44. Thase ME, Bhargava M, Sachs GS. Treatment of bipolar depression: current status, continued challenges, and the STEP-BD approach. *Psychiatr Clin North Am* 2003 Jun;**26**(2):495-518.

45. Brannon GE, Bienenfeld D, Talavera F. Schizoaffective disorder. *Medscape Reference* 16 Feb 2012. http://emedicine.medscape.com/article/294763-overview (retrieved 15 Mar 2013).

46. Memon MA, Larson MF, *et al*. Brief psychotic disorder. *Medscape Reference* 17 Jan 2012. http://emedicine.medscape.com/article/294416-overview (retrieved 27 Jun 2012).

47. Larzelere MM, Wiseman P. Anxiety, depression, and insomnia. *Prim Care* 2002;**29**(2):339-360.

48. Zamorski MA, Albucher RC. What to do when SSRIs fail: eight strategies for optimizing treatment of panic disorder. *Am Fam Physician* 2002 Oct;**66**(8):1477-1484.

49. Bernstein BE, Dunayevich E, *et al*. Social phobia. *Medscape Reference* 15 Feb 2013. http://emedicine.medscape.com/article/290854-overview (retrieved 1 Mar 2013).

50. Gore AT, Lucas JZ, Ahmed I, *et al*. Posttraumatic stress disorder. *Medscape Reference* 1 Apr 2013. http://emedicine.medscape.com/article/288154-overview (retrieved 3 Apr 2013).

51. Pease M, Stöppler MC. Post-traumatic stress disorder (PTSD). *eMedicineHealth* 1 Apr 2013. http://www.emedicinehealth.com/post-traumatic_stress_disorder_ptsd/page13_em.htm (retrieved 3 Apr 2013).

52. Mental Health America. Obsessive-compulsive disorder (OCD). 2013. http://www.mentalhealthamerica.net/go/ocd (retrieved 1 Mar 2013).

53. Mayo Clinic Staff. Obsessive-compulsive disorder (OCD). *Mayo Foundation for Medical Education and Research* 15 Dec 2010. http://www.mayoclinic.com/invoke/cfm?id=DS00189 (retrieved 10 Feb 2011).

54. Greist JH, Jefferson JW. Obsessive-compulsive disorder. In: Beers MH, ed. *The Merck Manual of Medical Information*: *Second Home Edition*. Whitehouse Station, NJ: Merck Research Laboratories, 2003:611-612.

55. Brotman AW. Eating disorders. In: Jacobson JL, Jacobson AM, eds. *Psychiatric Secrets*. 2nd edn. Philadelphia: Hanley & Belfus, 2001.

56. Thompson W, Lande RG, *et al*. Alcoholism. *Medscape Reference* 11 Jan 2012. http://emedicine.medscape.com/article/285913-overview (retrieved 3 Feb 2012).

*57.* Sola CL, Chopra A, Rastogi A, *et al*. Sedative, Hypnotic, anxiolytic use disorders. *Medscape Reference* 27 Jun 2011. http://emedicine.medscape.com/article/290585-overview (retrieved 9 Sep 2011).

58. Reckitt Benckiser Pharmaceuticals. Opioid dependence: the facts. 2013. http://www.suboxone.com/patients/opioiddependence.

59. Benowitz NL. Cardiotoxicity in the workplace. *Occup Med* 1992;**7:**465-478

60. British Heart Foundation. Factfile – *Returning to work after a Heart Attack*. 2005 Jul. http://www.bhf.org.uk/search/results.aspx?m=simple&q=benowitz&subcon=BHF_main_site (retrieved October 2009).

61. Lewin B. Psychological factors in cardiac rehabilitation. In: Jones DA, West RR. *Cardiac Rehabilitation*. London: BMA, 1995.

62. High Blood Pressure, Benign. *MDGuidelines* 2012. http://www.mdguidelines.com/high-blood-pressure-benign (retrieved 1 Feb 2013).

63. National High Blood Pressure Education Program. *The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure*. U.S. Department of Health and Human Services. U.S. National Institutes of Health, 2003. http://www.nhlbi.nih.gov/guidelines/hypertension/express.pdf.

64. Madhur MS, Riaz K, Dreisbach AB, Harrison DG, *et al*. Hypertension. *Medscape Reference* 22 Apr 2012. http://emedicine.medscape.com/article/241381-overview (retrieved 22 Apr 2013).

65. Victor RG. Arterial Hypertension. In: Goldman L, Ausiello DA, *et al*, eds. *Cecil Medicine*. 23rd ed. Philadelphia: Saunders Elsevier, 2007:430-439.

66. Jones DA, West RR. Psychological rehabilitation after myocardial infarction: multicentre randomised control trial. *BMJ* 1996;**313**:1517.

67. Soejima Y, Steptoe A, Nozoe S, Tei C. Psychosocial and clinical factors predicting resumption of work following acute myocardial infarction in Japanese men. *Int J Cardiol* 1999 Dec;**72**(1):39-47.

68. National Institute for Health and Care Excellence (NICE). Acute coronary syndromes: the management of unstable angina and non-ST-segment elevation myocardial infarction. *Royal College of Physicians* Jul 2009. http://www.nice.org.uk/guidance/index.jsp?action=download&o=44755 (retrieved 15 Oct 2009).

69. Alaeddini J, Shirani J, *et al*. Angina Pectoris. *Medscape Reference* 12 Aug. 2009. http://emedicine.medscape.com/article/150215-overview (retrieved 2 Oct. 2009).

70. Ferri FF. Angina Pectoris. In: Ferri FF. *Practical Guide to the Care of the Medical Patient*. 7th edn. Philadelphia:Mosby/Elsevier, 2007:ch 3.

71. Popma JJ, Bhatt DL. Percutaneous coronary intervention. In: Bonow RO, Mann DL, Zipes DP, Libby P, eds. *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine.* 8th edn. Philadelphia: Elsevier Saunders, 2007:1270-1300.

72. Teirstein PS. Percutaneous coronary interventions. In: Goldman L, Ausiello DA, eds. *Cecil Medicine*. 23rd ed. Philadelphia: Elsevier Saunders, 2007:518-522

73. Zafari AM, Reddy SV, Jeroudi AM, Garas, SM, *et al*. Myocardial infarction. *Medscape Reference*. 17 Apr 2013. http://emedicine.medscape.com/article/155919-overview (retrieved 13 Apr 2013).

74. American Heart Association. Arrhythmia. *American Heart Association*, 2013. http://www.heart.org/HEARTORG/Conditions/Arrhythmia/Arrhythmia_UCM_002013_SubHomePage.jsp (retrieved 1 Mar 2013).

75. Braunwald E, Zipes DP, Libby P, eds. *Heart Disease: A Textbook of Cardiovascular Medicine*. 6th ed. Philadelphia: WB Saunders, 2001.

76. Riaz K, Ahmed A, *et al*. Hypertensive heart disease. *Medscape Reference* 9 Jan 2012. http://emedicine.medscape.com/article/162449-overview (retrieved 10 Jul 2012).

77. Gopaldas RR, Chu D, Bakaeen FG. Acquired heart disease: coronary insufficiency. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, eds. *Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice*. 19th edn. Philadelphia: Elsevier Saunders, 2009:1650-1678

78. Hällberg V, Palomäki A, Kataja M, Tarrka M. Return to work after coronary artery bypass surgery. A 10-year follow-up study. *Scand Cardiovasc J* 2009;**43**(5):277-284.

79. Schreiber D. Deep venous thrombosis and thrombophlebitis. *Medscape Reference* 5 Aug. 2009. http://emedicine.medscape.com/article/758140-overview (retrieved 28 Sep. 2009).

80. Rosh AJ. Superficial thrombophlebitis. *Medscape Reference* 11 Aug. 2009. http://emedicine.medscape.com/article/760563-overview (retrieved 28 Sep 2009).

81. Darwood RJ, Walker N, Bracey M, *et al*. Return to work, driving and other activities after varicose vein surgery is very variable and is influenced little by advice from specialists.. *Eur J Vasc Endovasc Surg* 2009:**38**(2):213-219.

82. Brar R, Nordon IM, Hinchliffe RJ, *et al*. Surgical management of varicose veins: meta-analysis. *Vascular* 2010;**18**(4):205-220.

83. Ranawat CS, Ranawat AS, Mehta A. Total knee arthroplasty rehabilitation protocol: what makes the difference? *J Arthroplasty* 2003 Apr;1**8**(3 Suppl 1):27-30.

84. Roos EM. Effectiveness and practice variation of rehabilitation after joint replacement. *Curr Opin in Rheumatol* 2003 Mar;**15**(2):160-162. PMID: 12598806.

85. Fitzgerald JD, Orav EJ, Lee TH, *et al*. Patient quality of life during the 12 months following joint replacement surgery. *Arthritis Rheum* 2004 Feb;**51**(1):100-109.

86. Boyd KT, Myers PT. Meniscus preservation; rationale, repair technique and results. *Knee* 2003;**10**(1): 1-11.

87. Lento P, Akuthota V. Meniscal injuries. In: Frontera WR, Silver JK, Rizzo TD, eds. *Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation*. 2nd edn. Philadelphia: Saunders Elsevier, 2008:359-366.

88. Phillips BB. Arthroscopy of the lower extremity. In: Canale ST, Beaty JH. *Campbell's Operative Orthopaedics*. Vol III. 11th edn. Philadelphia: Mosby Elsevier, 2007;Part XIV:chapter 48.

89. Braddom RL, *et al*, eds. *Physical Medicine and Rehabilitation*. 3rd edn. Philadelphia: WB Saunders, 2006.

90. Ekeh AP, Wozniak CJ, Monson B, *et al*. Laparoscopy in the contemporary management of acute appendicitis. *Am J Surg* 2007 Mar;**193**(3):310-313.

91. Naqesh-Bandi HA, Gok MA, Smith J. Cholecystectomy mortality: a single centre experience. *The Society for Surgery of the Alimentary Tract* 2007. http://www.ssat.com/cgi-bin/abstracts/07ddw/SSAT-DDW07-Poster-57.cgi (retrieved 27 Feb. 2009).

92. McLauchlan GJ, Macintyre IM. Return to work after laparoscopic cholecystectomy. *Br J Surg* 1995 Feb;**82**(2):239–241.

93. McLauchlan GJ, Macintyre IM. Return to work after laparoscopic cholecystectomy. *Br J Surg* 1995 Feb;**82**(2):239–241. Comment in *Br J Surg* 1995;**82**(6):852.

94. Lenihan JP Jr, Kovanda C, Cammarano C. Comparison of laparoscopic-assisted vaginal hysterectomy with traditional hysterectomy for cost-effectiveness to employers. *Am J of Obstet Gynecol* 2004 Jun;**190**(6):1714-1720. [With discussion 1720-1722].

95. Douek M, Smith G, Oshowo A, *et al*. Prospective randomised controlled trial of laparoscopic versus open inguinal hernia mesh repair: five-year follow-up. *BMJ* 2003;326 doi: http://dx.doi.org/10.1136/bmj.326.7397.1012 (Published online:10 May 2003).

96. Bay-Nielsen M, Perkins FM, Kehlet H. Pain and functional impairment 1 year after inguinal herniorrhaphy: a nationwide questionnaire study. *Ann Surg* 2001 Jan;**233**(1):1-7. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1421158/ (retrieved 1 Dec 2012).

97. Gerritsen AA, de Vet HC, Scholten RJ, *et al*. Splinting vs surgery in the treatment of carpal tunnel syndrome: a randomized controlled trial. *JAMA* 2002 Sep;**288**(10):1245-1251.

98. Amadio PC. Carpal Tunnel Syndrome: Surgeon's Management. In: Skirven TM, Osterman AL, Fedorczyk JM, Amadio PC, eds. *Rehabilitation of the Hand and Upper Extremity*. 6th edn. Philadelphia: Elsevier Mosby, 2002:657-665.

99. de Dios RR, Chew FS, Craig WD, *et al*. Distal radial fracture imaging. *Medscape Reference* 12 Apr 2011. http://emedicine.medscape.com/article/398406-overview (retrieved 10 Nov 2011).

100. Wakefield AE, McQueen MM. The role of physiotherapy and clinical predictors of outcome after fracture of the distal radius. *J Bone Joint Surg Br* 2000;**82**(7): 972-976.