Occupational HEALTH SOUTHERN AFRICA

Official Journal of the SA Society of Occupational Health Nurses (SASOHN) and the SA Society of Occupational Medicine (SASOM)

In this issue:

Vol 2 No 3 May/June 1996

OCSA

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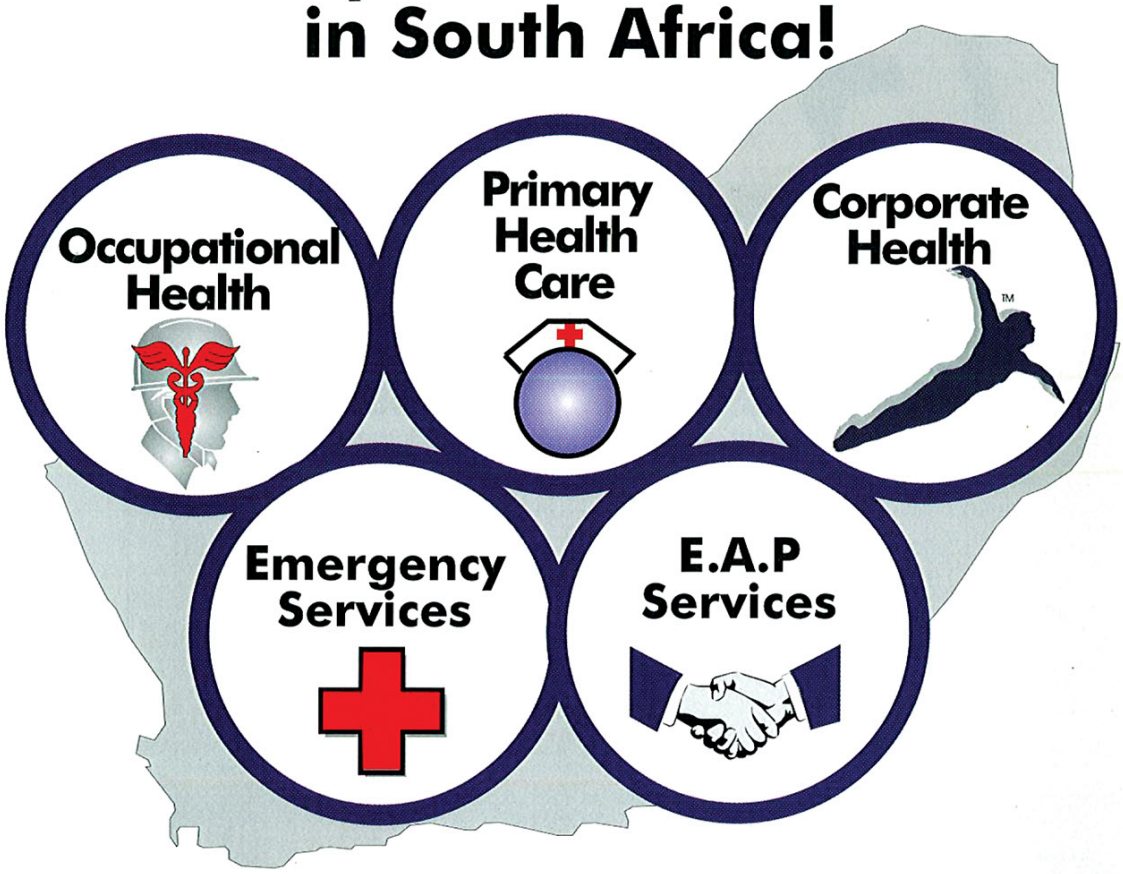

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Occupational HEALTH
SOUTHERN AFRICA

CONTENTS

Vol 2 No 3 May/June 1996

This journal focuses on Occupational Health, Medicine, Hygiene and Safety, Primary Health Care at the workplace, Environmental Health, and other employee health benefits

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Editorial

Taking into account the dichotomy in the negotiation forums between Labour and Business, a further dilemma that is taking place is the question of disability management . Van Niftrik outlines this strongly and he points to mechanisms in which process can be facilitated. While this may appear to be a singular mechanism to resolve issues, it is imperative to identify problems that are recurring and also the confusion that lies between medical conditions, the degree of disability as identified, and the recognition of the ethical and confidential problems outlined. Opportunities to seek financial reward for disability need to be audited and brought into focus. On the other hand, compromised and often severely disadvantaged communities that have been the bulk of the workforce in South Africa in the past, have been neglected and invariably denied corrective financial support structures. The fact that the medical profession is drawn into the socio-political area with all its sensitivities and often difficult assessments, makes the problem even more complicated.

Bryant asks what the true costs of health care are to business and focuses on efficient health care management systems. Again this is creating a dilemma, as efficiency in terms of health care management and the costs involved are not always necessarily in tandem. Problems become increasingly focused in trying to rationalise health care services to facilitate reduction in expenditures. It is well known that South Africa cannot afford the health care service that is offered by the private sector. Companies who make significant contributions towards the health care costs of their workers have to a large extent found that the auditing of such facilities and the services offered are often clouded by perceived benefits in terms of increased productivity, and the socio-political dynamics that are currently notable within the compromised communities in South Africa today. There is no doubt that companies contribute towards efficient structures and auditing procedures, and can to a large extent be far more astute in their control. With regard to the development of the National Health Services, these efficient controls may to some extent not be guaranteed.

Strydom again identifies specific case studies which allow for sensitivities and conflict, and the bargaining process becomes even more difficult when assessments require more appropriate methodologies to create the determinants in which such disability can be identified.

Metz's recognition of a correction formula for haematological reference values for biological monitoring of employees exposed to inorganic lead in South Africa is well received. We hope that readers will take cognisance of the technical quality of his argument. It is the support of continuing improvement of the papers presented that will facilitate and encourage the Journal's validity, and its rightful place in the field of Occupational Health for all workers in the Southern African region.

Finally the world-wide awareness of the increasing number of allergens and allergic manifestations occurring in South Africa has lead to a Conference being organised by ALLSA for October 1996 to be held in Durban. We hope readers will take note of the opportunity to share in the value of this conference, and in particular that the conference has extended a full session for Occupational Health Issues as well.

Chris van Selm
Editor

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ADLINES

IEA '97

International Ergonomics Association 13th Triennial Congress "From Experience to Innovation"

29 June - 4 July 1997 Tampere, Finland

The theme of the congress "From Symposia and sessions dedicated to specific topics will be a feature of the IEA '97 Congress. They will provide an opportunity to explore, in-depth, a specific area of application or research. The programme committee invites all of you interested in organising symposia or sessions to send your suggestions to the Chair of Programme committee, Dr Pentti Seppälä, Finnish Institute of Occupational Health, Topeliuksenkatu 41 a A, FIN-00250 Helsinki, Finland. Deadline for abstracts is 30 September 1996.

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SASOHN News

SASOHN

Professional Societies

Gauteng	Mpumalanga	Kwa-zulu Natal	Eastern Cape	Western Cape	Free State
Pretoria	Mpumalanga	Port Natal	Eastern Cape	Western Cape	Goldfields
Gauteng Central		Northern Natal	Border		
Vaal Region					
West Rand					
NW Province Discussion Group					

South African Society of Occupational Health Nurses organogram

SASOHN Secretariat

Please note that from 1 April 1996 SASOHN will be making use of the SASOM Secretariat service. For any information please contact **Dehlia Müller on (012) 664-1460**

SASOHN salary survey

A salary for occupational health nurses has been undertaken for SASOHN by FSA-Contact (Pty) Ltd. For any further information please contact **Louwna Pretorius on (012) 21-7736**

Healthcare SHE System

Nell Browne; Glen de Villiers Hospital manager, Empangeni Clinic; and Susan Le Roux, safety specialist Afrox Healthcare

Healthcare is a SHE (safety, health and environment) system designed to assist healthcare providers to create and sustain a safe and healthy working environment for the healthcare sector. It also addresses the problems of environmental measures needed to maximize the utilization of natural resources and minimize waste generation and pollution.

To date there has been limited attention paid to staff safety and occupational health in hospitals. Historically there is a culture of service to patients and effort is directed towards providing medical care despite the circumstances which may vary from appalling in emergency conditions e.g. war, flood, to barely acceptable in undeveloped areas or absolute luxury at considerable cost at the other end of the continuum.

Although some hospitals have initiated safety programmes, there is a deficit of skilled safety professionals working in the health services.

Afrox may be considered a leader in this field and in cooperation with Nosa have developed and implemented a SHE system in several of their hospitals.

There are several benefits to be derived from implementing the SHE system in the hospital situation. These benefits will affect all people from hospital administrators, medical professions and support services and subsequently the person requiring medical care.

For further information contact:
Nosa Health Services
Tel (012) 21-7736
Fax: (012) 325-6056

MSDS soon to be available from NOSA

General Manager Roland von Gogh

From June 1996 Nosa will be able to offer customers the complete range of material safety data sheets (MSDS) for hazardous chemicals, as part of its association with the ILO-CIS as an accredited Collaboration Centre.

According to Roland von Gogh, of NOSA, the company is at present putting the infrastructure in place to allow for the smooth distribution of the documentation, which will cover over 90 000 hazardous chemicals.

The MSDS will be downloaded directly from CD-ROM supplied by the ILO-CIS. Should you require, the data sheets can be supplied in either print-out form or on one of the two popular computer disk formats.

The next step will be to make the information available to customers via the internet and on CD-ROM.

If there are any changes to the information, an update service will ensure that registered customers receive the relevant information. Updated information will be issued to Nosa by ILO-CIS on a three monthly basis.

The pricing structure will vary according to individual customer requirements and you are invited to contact Nosa to discuss your needs.

Should you require more information, please contact Karin Fourie on tel: (012) 21-7736

Occupational Hygiene Services

Occupational Hygiene Services was formed last year by the CSIR to integrate and focus the wide range of multidisciplinary skills and knowledge that exists in this area, and thus provide industry with easy access to this unique source of expertise.

As this service division approaches the end of its first year of operation, they would like to express their appreciation to industry for the tremendous support they have received.

A conference on "Clean air and environment: Responsible employment and technology" is to be held at Aventura "Badplaas" Mpumalanga, from 20 - 22 November 1996.
Enquiries:
Melanie Campbell or
Katrin Thiessen
Tel: (011) 442-6111
Fax: (011) 442-5927

12th International symposium

The 12th international symposium: Epidemiology in Occupational Health (ISEOH) will be held in Harare, Zimbabwe from 16 -19 September 1997.

The theme "Risk reduction in the workplace" indicates the commitment to practical application of epidemiological knowledge. The aim is to bring together people working in occupational epidemiology globally and to discuss methodological issues and practical applications of their research.
Enquiries:
Mrs M Mashingaidze, Att: ISEOH
National Social Security Authority
Box CY 1387, Causeway, Harare,
Zimbabwe
Tel: 263-4-728 931/722 047-9
Fax: 263-4-796-320

ILO-CIS and NOSA collaborate

The Occupational Health and Safety Information Service of the International Labour Organisation (ILO-CIS) has begun supplying Nosa with a range of technical information and fact sheets.

A selection of these sheets will be available from your regional offices from mid May. This follows the announcement that Nosa is now an ILO-CIS collaboration centre.

Each sheet covers the main health and safety points realting to each topic.

The information is provided in easy to read point form in 13 categories, which include abrasive wheels, materials handling, and welding.

Within each category there are between 10 and 15 separate subjects. For example in the welding category the specific subjects include gas welding and cutting, cylinder storage, handling, set-up and leaking apparatus.

These sheets can be used for reference, training, job safety analysis, performance standard evaluation and as annexures to written safe work procedures.

Prices are as follows (excluding VAT and postage):
- Full set of sheets in a file which contains 15 books (1 book per subject category) will sell for R150 per book
- Individual category books are priced at R12 each

For further technical information please contact Karin Fourie on (012) 324 5225.

The National Drug Policy for South Africa and implications for Occupational Health Clinics

Mr B Pharasi Chief director; registration regulation and procurement

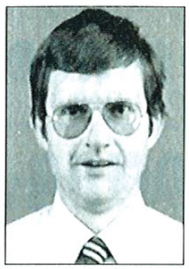
The goal of the National Drug Policy which was recently launched is to ensure an adequate and reliable supply of safe, cost-effective drugs of acceptable quality to all citizens in this country and the national use of drugs.

Objectives include:

- To ensure and promote good dispensing and prescribing practices
- To lower the costs of drugs in both the private and public sectors

Registration/Licensing of Practitioners and Premises

Only practitioners who are registered with relevant councils and premises that are registered and/or licensed in terms of the Medicines and Related Substances Control Act (No. 101 of 1965) may supply and dispense drugs. Medical practitioners and nurses will not be permitted to dispense drugs, except



Dr Jim Murphy

where separate pharmaceutical services are not available. In such instances where dispensing by doctors or nurses has to take place, such persons must be in possession of a dispensing licence issued by the Medicines Control Council.

Special concessions will be granted to certain categories of providers such as Occupational Health Services. Proven competency of such people to dispense drugs will be by virtue of the successful completion of a suitable training programme. All licences will be reviewed and renewed annually. Inspection functions will be delegated to the provinces.

General

A systemic and comprehensive programme of continuing education will be developed to ensure that all health personnel involved in diagnosis, prescribing and dispensing of drugs receive adequate training.

Prescriptions in both the private and public sectors will be written using the approvedgeneric name, e.g. Cotrimoxazole, rather than Baetrim, Mezenol, Purbac, Septran, etc.

Regular updated standard protocols for treatment of common conditions with essential drugs will be produced by the Department of Health.

Liaison with the Department of Health

Sisters Mead and Hoggins, representing SASOHN, and Drs Baker and Murphy, representing SASOM, were well received by Mr Pharasi, Chief Director in the Department of Health, on 14 March 1996.

Further meetings are planned between SASOHN, SASOM and Mr Pharasi and other senior staff in the department to clarify a number of points, such as:

- Criteria for issuing of permits/licences
- Ways to ensure that applications for permits/licences are processed timeously
- Packing/repacking of medicine

Jim Murphy will be the contact person between the Department of Health and SASOM on Primary Health Care matters and the concessions (permits) for Occupational Health Services. He can be contacted at

tel: (011) 801-2434
fax: (011) 444-3643

Stop Press

The Essential Drug List and Therapeutic Protocols have just been published. Copies have been sent to public sector facilities and will be available for the private sector once more copies are printed.

Haematological reference values for biological monitoring of employees exposed to inorganic lead in South Africa

JT Mets

Abstract

As a physiological adaptation to reduced environmental oxygen tension, people living and working at high altitude, defined as more than 1500 metres above sea level, tend to show higher haematocrit (Hct)(packed cell volume) and haemoglobin (Hb) values than those at sea level.

The South African Lead Regulations (8.(2) (d)), (Machinery and Occupational Safety Act of 1993) prescribe a correction of lead in blood concentration for haematocrit value under defined circumstances but not how this should be done.

This paper proposes, using available data originating from South Africa, a correction formula for men and for women for statutory or clinical usage.

The formula (reference value for haematocrit (p.c.v.), specified for gender, divided by the observed haematocrit value and then multiplied by the observed lead in blood concentration) should be incorporated in a Code of Practice or Guideline for occupational medicine practitioners charged with medical surveillance of employees who are occupationally exposed to lead.

Introduction

In South Africa people who live and work at high altitudes above sea level, such as in Gauteng , will generally have higher haematocrit(Hct) and haemoglobin(Hb) levels than their counterparts at sea level.

This is a natural physiological adaptation to the lower oxygen tension which prevails at high altitudes. The International Airport of Johannesburg in Gauteng Province is situated at 1694 metres above sea level (Private communication , Weather Bureau), most of the industrial area there at 1500 m or higher altitude. Williams and Schneider [1] state in their textbook on haematology that the major adaptive adjustment in humans to living at high altitudes is a normocytic, normochromic erythrocytosis with an increase in absolute reticulocyte count , and thus an increased blood volume, primarily by expansion of the red cell mass. They do not specify quantitative data regarding expected values for haematocrit (packed cell volume or volume packed red blood cells) or haemoglobin at high altitude but do give "normal values" in chapter 2 of their book.

Biological monitoring and medical surveillance

In South Africa Lead Regulations were promulgated on 22 March 1991 (Government Gazette vol.309, no 13082) under the then Machinery and Occupational Safety Act of 1983 which are still valid under the present Occupational Health and Safety Act (No 85 of 1993). Proposals for amendment of these Regulations are at present under consideration by the Department of Labour.

It is generally accepted that, apart from lead which is stored in bone and soft tissues, between 90 and 95 % of absorbed inorganic lead is distributed through the human body bound by erythrocytes, the other fraction as lead compounds by plasma constituents.

Under the section on "Biological monitoring and medical surveillance" of the Lead Regulations (Section 8 (2) (d)) provisions are made for "correcting a repeat test of blood lead concentration for haematocrit value". However these Regulations do not indicate how such a correction should be

Dr J T Mets M.D.
Cape Town

Drs. du Buisson & Partners Vennote

PATOLOË/PATHOLOGISTS

HEALTH AND SAFETY IN BRAZING

Brazing is firmly established throughout the world as a reliable, simple and safe method of joining metal components. However, as brazing operations entail the raising of components to elevated temperatures, and the use of alloys and fluxes that contain volatile constituents, regard must be paid to the safety precautions at the brazing work bench.

General precautions

Overheating is bad brazing practice and is likely to result in poor joints and increased evolution of fumes. Metal and metal oxide fumes are irritating and can be harmful to health. Cadmium oxide fumes are particularly poisonous.

Potential health and safety problems in brazing

May arise in the following areas:

- Metal and metal oxide fumes from the brazing alloys
- Fumes from heating the flux
- Fumes from brazing torches
- Equipment used to effect the brazed joint.

Occupational hazards

Cadmium oxide fumes will always be evolved to some extent during brazing with alloys from silver-copper-cadmium range. The level present in the workplace must always be as low as practical.

Short exposure to high levels of cadmium-oxide fumes can lead to pulmonary oedema and may be fatal. There is a symptomless latent period and any person thought to have been overexposed to cadmium-oxide fumes should be kept under observation for 48 hours. Recent research has shown that up to 2% of the cadmium content of a brazing alloy may be volatilised during use.
The likelihood of any problems occurring under normal brazing conditions is very limited and are normally the result of poor brazing practice.
These conditions would include severe overheating of the molten alloy using an intense heat source.
If cadmium containing alloys are felt likely to cause a potential health hazard then consideration should be given to the use of cadmium free alloys.
If brazing is to be carried out where ventilation is poor, such as an enclosed pipe, joint or any similar situation, then brazing of any kind, or welding, must be carried out with the operator using breathing equipment, in conformance to factory regulations for working in confined spaces.

Atmospheric sampling

There is an increasing number of companies specializing in environmental monitoring who can undertake the necessary testing. Where local exhaust ventilation is installed, regular checks on air flows and capture velocities should be made.

made. It may be assumed that a "designated occupational health officer", as defined in the Act, would use some standard reference value for haematocrit to apply such a correction. Paragraph (d) regulates the blood lead concentration (repeated and corrected for haematocrit value) at which an employee must be certified as unfit to work in an area which exposes him to lead as 80 microgram per 100 ml (80µg/100 ml = 3,9µmol/L). A proposal to reduce this statutory level to 70 (in S I Units 3,4µmol/L) is under consideration.

The blood lead concentration values stipulated in paragraphs 8 (2) and (3) apply to men and also to women who are "not capable of procreation".

However, section 8 (4) regulates the blood lead concentration at which a woman employee capable of procreation should be suspended from work exposing her to lead as "exceeding 40µg/100 ml" (i), and that at which she may be permitted to return to work which will expose her to lead as "less than 35µg/100 ml (ii)". No correction for haematocrit value is prescribed here.

The blood lead concentration levels under these subregulations (4) (i) and (ii) are markedly lower than under the preceeding ones and are aimed at protecting any potential offspring in the womb. Not allowing correction for high haematocrit or haemoglobin levels does in fact enhance the protective effect of these subregulations. These clauses apply only to women, who, by virtue of their gender, are also reported to be more sensitive to the toxic effects of lead on haem synthesis than men .[2,3]

International haematological reference values

In 1982 the Center for Disease Control (CDC) in Atlanta, Georgia, (publication 00-2629 Dept HEW, USA) suggested as normal reference values for adult men an average value of 42% for haematocrit and of 13,94 (14) g/100 ml for haemoglobin. These values have been used widely but have been criticised as not being appropriate throughout the world in view of ethnic and socio-economic differences.

Following present usage in occupational health practice in South Africa and in the Lead Regulations, haematocrit, haemoglobin and lead in blood concentrations (Pb -B) will be expressed not in S I Units but as respectively percentage, gram per 100 ml and microgram (µg) per 100 ml.

As early as 1966, Williams[4] suggested to use as standard reference values for the purpose of correcting blood lead levels a haematocrit level of 46 % (derived from Documenta Geigy; 1964) and a haemoglobin level of 14,6 g/100 ml (derived from the Ministry of Labour in the UK; 1964).

Williams proposed calculating a "standardised comparable lead in blood value" by using a correction factor approximately equal to the reciprocal of the observed haemoglobin value. He regarded it as sufficiently accurate for clinical work to divide an observed lead in blood concentration value by the haemoglobin value expressed as a percentage of the normal. Converted to present day terminology his formula to calculate the "corrected lead in blood concentration" would read :

$$\frac{\text{Observed Hct}}{46} \text{ or } \frac{\text{Observed Hb}}{14{,}6} \text{ times Observed Pb-B}$$

The following discussion will include haemoglobin value as this may be just as pertinent as haematocrit value when contemplating biological monitoring procedures for workers exposed to lead.

The Geigy Scientific Tables of 1984, (no 3)[5], contain a section on "normal" values for blood cells and erythrocyte indices, which are very similar to those used for the compilation of Table I.

The data for the first group (I[6]) relate to "apparently healthy white and black subjects" in the USA derived from Miale[6]. It is explicitly stated that the values apply to adults living at altitudes less than 1000 m above sea level, that there is evidence that some normal values for whites and blacks differ, that Hb, Hct, MCV and MCH

Table I: International reference values for Haematocrit and Haemoglobin (derived from the literature[6,7])

Group		Haematocrit % mean (95% range)	Haemoglobin g/100ml mean(95 % range)
I[6]	Men	47 (39 - 55)	15,1 (13,9-16,3)
	Women	42 (36 - 48)	13,5 (12 - 15)
II[7]	Males	44 (40,5-47,5)	14,9 (13,7-16,2)
	Females	40 (36,9-43,1)	13,4 (12,3-14,5)
Average value of means		43,3 %	14,2 g/100ml

values are generally higher in smokers and that different reference values should be used for males and females .
The second group of values (II [7]) is derived from Kelly and Munan [7] and reflects the values found in a what the authors called a " non selected " reference population in Europe.

South African haematological data

For the purpose of screening, but even more so for evaluating individual cases, it would be better and more appropriate to use reference values derived from the South African population, if these are available, and then also to take gender into account.

Tikly M *et al* [8] published "normal haematological reference values in the adult black population of the Witwatersrand" which are reflected in Table II A .

The Witwatersrand is an area in Gauteng Province which, according to these authors, is situated more than 1700 metres above sea level so that their data would be of use as reference values for the worker population in that province. Unfortunately no such data were found to be available for other ethnic population groups living at high altitude in South Africa.

However, from 1985 to 1989 a research project was undertaken to survey biological monitoring practices for employees exposed to lead which included a population of lead workers, also consisting of Black men, at an altitude above 1700 m.

The cumulative distribution of haematocrit values (n = 1062) for these men was as follows :

6 %	exceeded a Hct value of		50 %
17 %	"	"	48 %
32 %	"	"	46 %
50 %	"	"	45 %
77 %	"	"	42 %
86 %	"	"	40 %

The average haematocrit value for this exposed employee population was Hct = 45%, the same value as shown in Table II A for unexposed Black adults at high altitude. The data confirm the theoretical expectation that, at this altitude, haematocrit values tend to be higher than at sea level.

In 147 cases (14 %) test results were lower than 40 % and in 9 (0,8 %) lower than 36 % . These low haematocrit values must be regarded as abnormal (95 % reference level 39 - 51 %) and likely to be due to prolonged exposure to lead.

Table II A: Haematological reference data for individuals living at high altitude in South Africa

Observed at high altitude on the Witwatersrand (1 760m above sea level)[8]

Black Adults (n = 99 men - 100 women)				Altitude ratio/100
	Sex	Mean	95% Reference range	High-av / Sea-av
RBC	M	5,23	4,43 - 6,03	111
(* 10^{12})	F	4,60	4,07 - 5,13	110
Hb	M	15,8	13,8 - 17,9	109
(g/100 ml)	F	14	12,4 - 15,5	112
Hct	M	45%	39 - 51 %	107
%	F	40%	36 - 45 %	108

However, only 5 specimens out of 1206 (0,4 %) showed Pb-B levels exceeding 100 (but not 120) µg/100ml and 12 others (1 %) exceeded 80 (but not 100 µg/100 ml).

It was not apparent from these confidential and anonymous survey data whether the individuals who had shown high blood lead concentrations were the same as those who showed low haematocrit values. By personal communication it was ascertained that all the employees who had shown such elevated blood lead concentrations had been removed from exposure and placed under medical surveillance.

A low haematocrit value is of course a non specific and late indicator for lead poisoning. Such a decreased haematocrit value in a lead worker at high altitude would influence the calculated corrected value in that it would result in a higher corrected lead in blood concentration (Pb-B) than if his observed haematocrit value were normal. This would have to be taken into account by "designated occupational health officers" in charge of observing the Lead Regulations .

Other haematological data regarding populations living at sea level in Durban and East London (both also for Black populations), were derived from a publication by Morris and Dickson[9]. Those for Cape Town (for Black, Coloured and White populations) were obtained by personal communication from Donald Alexander, Haematology Department, Groote Schuur Hospital Haematology Department, Cape Town.

The "altitude ratio/100" (High-av/Sea-av) in the last column of Table II A was calculated from the average value for RBC count, haemoglobin and haematocrit for Black adults living at high altitude (Table IIA) and for their counterparts at sea level.

Males - Ratio for Hb 109 : 100, for Hct 107 : 100
Females - Ratio for Hb 112 : 100, for Hct 108 : 100

These ratios reflect the effect of physiological adaptation mechanisms and are only presented to illustrate the difference in haematological index values which may be expected to exist between individuals or groups living and working at high altitude (defined as higher than 1500 m above sea level), compared with those living at sea level. Although it is likely that a similar degree of difference of these index values exists between individuals or groups of other ethnic origin living at the two different altitudes it is not purported that the ratios calculated for the Black population group have quantitative validity for other groups.

There were no data available to show a stepwise or gradual increase of haematocrit, RBC count and haemoglobin values in populations at heights between sea level and high altitude as defined above. On theoretical grounds it would be expected that physiological adaptation to decreasing levels of environmental oxygen tension would be a gradual process and that any increase in haematocrit value with increasing altitude would also be gradual.

As it is the individual haematocrit (or haemoglobin) value which would be used for a correction calculation of blood lead concentration the lack of such data does not detract from the validity of the proposed formula.

Table II B shows "averaged values" calculated from the available data for three population groups living in Cape Town and for Black populations in East London and Durban, all at sea level. The "Overall average values" in the last column are presented as suitable for use as reference values for the general worker population in South Africa.

Discussion

While there are marked differences in the averaged values for men and women, those between ethnic groups, especially when rounded off to the nearest decimal, are minimal. The reported results were derived from "ethnic" groups which are not necessarily homogeneous or strictly comparable with each other either.

Table IIB: Calculated reference values for haematocrit and haemoglobin at sea level in South Africa

Hb (g/100ml)	Black	M	14,5	Overall average Hb
		F	12,5	Average Hb
	Col	M	14,4	Males 14,4
		F	12,3	
	White	M	14,4	Females 12,5
		F	12,7	
Hct %	Black	M	42%	Overall average Hct
		F	37%	
	Col.	M	43%	Males 43%
		F	38%	
	White	M	43%	Females 38%
		F	38%	

Therefore it is suggested that, for practical purposes, e.g. when correcting Pb-B values for the haematocrit value under the Lead Regulations or for the practice of clinical medicine also for haemoglobin, the overall average values shown in Table II B may be used, taking gender only into account.

The "correction formula" would then read:

$$\frac{43}{\text{Observed Hct}} \times 14{,}4 \quad \text{or} \quad \frac{38}{\text{Observed Hb}} \times 12{,}5$$

(Men) (Women) times observed Pb-B

Under the present Lead Regulations, correcting a Pb-B level of for example 86 µg/100ml in a man whose haematocrit level is found to be 51 %, using the suggested "overall average value" of 43 % as reference value, would result in a "corrected Pb-B value" of 43/51 times 86 = 72,5 µg/100ml. This would imply that he would not have to be removed from exposure unless other parameters of lead absorption would indicate the need for this.

If the same man would have a Pb-B level of 96 µg/100 ml the corrected value would be just 81 (80,94) and he would, under the present regulations, have to be removed from exposure.

However, from a medical and patho-physiological viewpoint it would be wise to investigate other indicators for excessive lead absorption in any employee who shows a Pb-B in excess of 70 µg/100 ml, even as uncorrected value at high altitude, or at sea level.[10]

The 1982 CDC reference values for haematocrit (42 %) as well as for haemoglobin (13,94 g/L), not specified for gender, are lower than the average value of means of Hct and Hb values given in Table I. For the purpose of this comparison gender was

therefore also ignored when calculating the average value of the means.

Thus , for haematocrit the CDC value is 42% as against 43,25% , for haemoglobin 13,94 as against 14,23 g/100ml.

Using these CDC reference values for correction of lead in blood concentration for haematocrit at high altitude would result in a lower corrected value of lead in blood concentration. However, not taking into account the gender of an employee would tend to afford less protection to female employees whose haematocrit value is generally lower than that for males[2].

Conclusion

It is suggested that a Guideline on Biological Monitoring under the Lead Regulations be developed by or on behalf of the Department of Labour (as in the United Kingdom where a Code of Practice is published by the Health and Safety Executive). Such a guideline or code of practice should also lay down how correction of blood lead concentration for haematocrit value should be performed.

It is proposed that for South Africa the reference values and the correction formula given above should be adopted, viz a reference value of 43% for haematocrit and of 14,4 g/100 ml for haemoglobin for adult male employees, respectively 38 % and 12,5 g/100 ml for adult females.

The proposed reference values are more appropriate but would, being lower, not provide better protection than the CDC ones (which ignore gender) with regard to health preservation.

In any employee who is occupationally exposed to lead at high altitude, defined as higher than 1500 m above sea level, a haematocrit value of 40 % or lower (for women 36 % or lower) should be viewed in a serious light, especially if a decrease has been observed over time. Under such circumstances this might be a late, serious sign of lead poisoning and would require careful specific investigations.

For occupationally exposed lead workers at sea level the warning levels for haematocrit would be in the order of 36% for men and 32 % for women .

Acknowledgements

The financial support of the Department of Labour for undertaking the survey referred to is acknowledged with thanks , while the professional and collegial contribution made by Dr Barney de Villiers of Stellenbosch University has been invaluable and is highly appreciated.

Editor's note

The haematological data from which the reference values in Table IIB were calculated have been omitted from this article (Reference 8, 9 and personal communication) but are available from the Production Editor on request.

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Disability management in South Africa

J van Niftrik

Abstract

An overview of current disability management in South Africa is presented and compared with the international experience. The issue is further focused on some areas specific to South Africa and historical problems are discussed. A solution, in the form of a Medical Assessors Consortium is presented. This Consortium has already been established by the Employee Benefits Division of one South African life assurer.

The modus operandi and protocols of the Consortium are presented and discussed.

Introduction

As has been the case in the rest of the world, South Africa has experienced an unprecedented rise in the incidence of disability among its working population. And, as has been the case abroad, South African life assurers have suffered the sting of an unforeseen increment in disability claims. Indeed, whereas during the period 1992 to 1994 death claims rose by a not unexpected 84%, compensation on successful disability claims rose by an alarming 176%[1]. While some of this increase may be attributed to an increase in group benefit business, the larger proportion is undoubtedly a consequence of poor risk management coupled to a heightening of awareness in the public of the monetary rewards inherent in disability benefits. This has been particularly evident in South African group schemes where employees have increasingly demanded their rights within a labour system which has, historically, tended to ignore the plight of the impaired worker.

Not surprisingly, the assurance industry has been tardy in its reaction to the worrying increase in losses through disability. This has not been so much the fault of actuaries as the pressure of market forces which dictate sales targets in favour of stringent underwriting requirements and stricter claims assessment.

Historically, and a scant five years ago, workers were roughly divided into those with a secure employment future, and those whose employment was very much a month-to-month affair which depended almost wholly on their ability to work and on the whim of the employer. Those whose jobs were secure - many even protected by Government decree - could afford the luxury of a mediocre work ethic while remaining in employment until retirement age and a guaranteed pension. Their opposite number, however, were measured by their muscle and their on-the-job productivity. They anguished under the knowledge that if they became impaired or disabled the employer could easily replace them from an endless source of supply: the seemingly inexhaustible mass of unemployed workers who were younger and, hopefully, healthier.

That situation has changed dramatically. Not because the previously disadvantaged worker now has the right to disability compensation, but very largely due to the fact that the previously protected employee finds himself severely threatened: his indolent career-path to comfortable retirement is in serious doubt. It is he who recognises the urgent need to escape from the workplace with a pocketful of money.

Thus does the South African disability assurance industry now suffer the added burden of an unexpected socio-political upheaval.

Trends in the disabled South African worker

It comes as no surprise, then, that workers intending to escape the new employment dispensation will follow a pattern of disablement most likely to lead to a successful claim. However, unlike the pattern that is followed by most of the working world, South African disability shows a marked variance. Globally, the foremost conditions likely to result in a successful disability claim are spinal and musculoskeletal conditions, accounting for 19% and 15% respectively.[2] This is mirrored in the sub-continent, especially amongst mostly white South African workers in whom 21.7% of disability claims were due to musculoskeletal conditions.[3,4,5]

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In contrast, the second most common disabling condition in South Africa is mental/psychiatric (23.7%), while mental illness accounts for only 8% of claims elsewhere and in the U.S.A.[2,3,4] This marked discrepancy may well reflect the stresses endured by working populations during the current socio-political changes, but malingering and confused psychiatric diagnostic parameters cannot be discounted.

What is apparent is that spinal, musculoskeletal and psychiatric conditions are clearly more important causes of disability than any other conditions (Figure 1). An obvious reason for this may lie in the earlier diagnosis and better treatment of conditions other than skeletal and psychiatric disorders. More likely, though, is that the latter are characterised by two relatively unquantifiable symptoms: pain and cognitive function. Moreover, pain and cognition are entirely subjective and easily exaggerated, even counterfeited. This despite advanced technologies in the field of objective measurement: it is virtually impossible to disprove a claim in a worker who persistently alleges and acts out symptoms of this nature. Aggravating this is the well-documented observation that chronic pain, especially back pain, is frequently complicated by an overlay of a variety of psychopathologies - foremost amongst them being depression.

Arguably the most potent driving force in disability trends lies in the diagnostic - perhaps misdiagnostic - powers of the medical profession.[6] And driving this from the rear is the might of pharmaceutical marketing. Too often, diagnoses become flavour-of-the-month items in the case-sheet of doctors directly as a result of drug manufacturers. Diagnosticians of all disciplines are urged to recognise depression, post traumatic stress disorders (PTSD) and such like. Sales representatives urge doctors to impress upon their patients the debilitating effects of these psychopathologies and to press upon them prescriptions for the latest designer-drug. Once a doctor, more particularly a specialist, has diagnosed the condition, it becomes exceedingly difficult to dissuade the claimant of its disabling sequelae. Worse, if the diagnosis is indeed valid, the patient is declared totally and permanently disabled while the medication is all too often either inappropriate, inadequate or has not been taken sufficiently long enough to effect any sort of return to normalcy. As will be noted later, the Psychiatric Association of South Africa is, through the offices of Life Assurance, addressing this problem.

More dangerous, both in terms of claims losses as well as in respect of medical reputation, is the tendency doctors have of making snap diagnoses, frequently pronouncing a diagnosis without adequate scientific evidence. A case in point is epilepsy and its protean manifestations.

Doctors, especially in outlying practices, are far too quick to label a worker as an epileptic based on purely anecdotal evidence. Once labelled and knowing full well that epilepsy is a valid disability, the worker will cling tenaciously to his disorder. The diagnosing doctor abets this with the contention that epilepsy can be present in the face of a normal standard EEG.

An added cause for concern in epileptiform conditions is the rise in the incidence of temporal lobe epilepsy (TLE) as the basis for a disability claim. Indeed, TLE is currently threatening to become a leading item flavouring the disability mix. Difficult to demonstrate technologically, far too much reliance is placed on subjective symptomatology. What is, of course required but seldom done, is a full neurological work-up together with a 4 to 12 hour EEG and, if necessary, concomitant scanning technology.

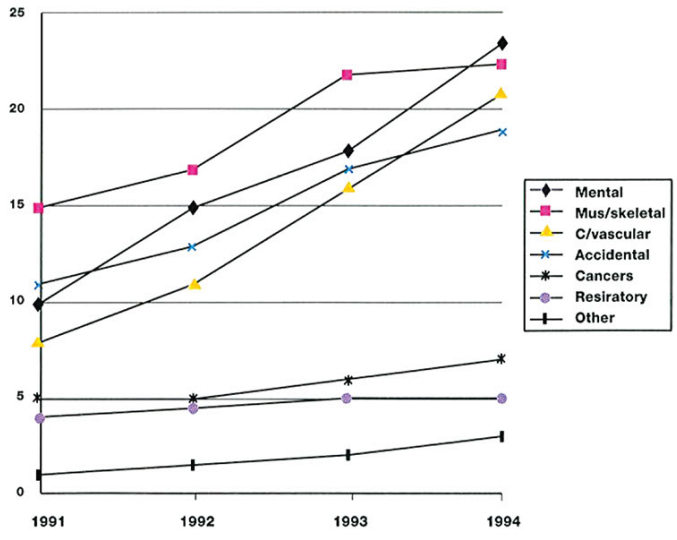

Figure 1: Percentage claims by cause of disability

Until assessors demand higher diagnostic standards before considering a claim, this type of medical mediocrity is likely to persist - and losses will continue to be incurred.

Influencing factors in South African disability

Aside from the negative influences pertinent to psychiatric and musculoskeletal conditions, the two major contributors are the compassionate physician and the uncompassionate employer. All too often the family physician finds it in his heart to sympathise with his patient, while the employer finds that his bottom line profits are best served through a disability claim and access to an abundance of healthy unemployed people crowding outside the factory gates rather than the more costly retrenchment route.

The winds of socio-political change which have swept South Africa since 1991 have had a cataclysmic effect on disability claims control. State and parastatal organisations, notably the police, military and transport services, are undergoing massive changes. White employees have suddenly found themselves on the less comfortable side of affirmative action. These men and women have also found that a lucrative way out of their predicament is to make a bid for a permanent and total disability claim.

Economic downturn has been an influencing factor in disability experience throughout the world. Examples abound in every country which has been in and out of financial depression. South Africa is no exception, especially in the past decade. More importantly to this country, however, has been the decline in specific industries. Mining will, in all probability, continue to decline and while it has not yet hit middle-management and above, a rise in disabled white collar workers in this sector can be expected. The security business and its peripheral infrastructures and suppliers is now believed to account for some three million employed people and is already showing a worrying trend. While currently burgeoning, a decline can be expected to start at the millennium as claims based on PTSD rise steadily amongst security workers. Urgent attention to early intervention and rehabilitation techniques will certainly minimise losses before the claims deluge sets in.[7]

Finally, an influencing factor which has been inadequately addressed in the South African disability arena is the impaired medical practitioner. In this context, the impairment manifests itself either as a colluding party or as inadequately qualified in the discipline of disability assessment.

Collusion, often unwitting, is rife in the South African profession. Aside from an understandable compassion, doctors have little respect for assurance companies. Not surprisingly, this is entirely the fault of the assurers and their brokers. Both are guilty of an overall image of slick salesmanship and an adversarial ambience cultivated in the garnering of medical disability evidence. This antipathy toward the assurer often justifies the doctor's tendency to collude with the claimant in substantiating a disability.

Sloppy diagnostic labelling and improper medical evidence is a far more difficult influence to shift. Once a doctor has made a pronouncement (often unwillingly) and committed it to written evidence for presentation to an assurer, he finds it very difficult to amend his opinion. Because of the adversarial nature already alluded to, doctors seldom find it an easy matter to back down on an opinion.

For one thing, by passing a medical opinion substantiating a disability, the doctor has entered into an undertaking with the patient. The result is that second medical opinions are sought by the broker or assurer. The inevitable outcome is wholly unnecessary conflict and rancour and should be strenuously avoided.

What is absolutely clear, however, is that a major contributor to disability assurance losses is the absence of insurance medicine as a discipline in medical school curriculae. And the immediate answer to this lies in postgraduate education, a solution already adopted by one life assurer.

Evidence and confidentiality

A continuing source of irritation, harassment, conflict and often threats of litigation is the thorny issue of confidentiality of evidence. Despite a May 1996 directive from the Life Offices Association reinforcing confidentiality of medical information, intermediaries persist in the belief that they have a role to play in the gathering, scrutiny and passing of opinion on medical evidence. While the intermediary plays a vital role in the management of the disability claims process, the bottom line remains the legal contract between the assured and the assurer. Also to be borne in mind is the contract between the assurer and the medical professional in those instances where the latter has been requested by the assurer to examine a claimant on behalf of the assurance company.

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To tamper with these contracts merely serves to create confusion and disappointment. Where an assurer is considered to be at fault, it is the duty of the intermediary to safeguard his client's overall interests, but only once the assurer has given a decision on a claim. And then without demanding sight of information confidential to the assurer.

The rationale behind the aforesaid is simple. It enshrines the rights of both the claimant and the medical professional. If confidentiality prevails, the claimant is free to divulge whatever he or she feels pertinent to the disability or impairment. An example here might be employer harassment of one sort or another; unfair labour practices; HIV positivity or intimacies involving spouses and family members - all of which are highly confidential and need utmost protection from exposure to third parties.

With regard to confidentiality and the medical professional, a doctor can only provide his unbiased opinions if he is assured that his clinical findings and observations will not become a nidus for intra-professional contest, litigation or harassment by the dissatisfied claimant, intermediaries, union officials, employers or legal representatives. The process of legal discovery and a duly constituted court of law provide the only appropriate setting for debate on the merits or demerits of medical evidence.

Naysayers to confidentiality will argue that transparency is a paramount requirement, especially in the light of envisaged principles contained in the yet to be tested New Constitution. Firstly, the Constitution is yet to be formulated; secondly, counter to popular perception, confidentiality does not conflict with transparency - they are two distinct notions which are mutually exclusive. But, most importantly, neither is aimed at obscurantism nor concealment. Finally, doctors are still required to adhere to the Rulings of the S.A. Medical & Dental Council and are strongly advised to remain cognisant of documented case law.

Allegations have been made that certain legal representatives and broker agents will deflect cases from medical professionals who are too stringent in their clinical assessments or who will not divulge their findings. Organisations such as the Association of Insurance Medical Officers of South Africa and the Life Offices Association should be informed when such practices are suspected. Guilty intermediaries can be banned from practicing their profession.

Fraud, malingering and disability

In any process where monetary gain is involved it is inevitable that that process will be polluted by a variety of fraudulent practices. Disability claims are no exception. Statistics on the incidence of fraud in South Africa are difficult to obtain, but are probably equivalent to the American experience. What is self-evident from Figures 2 to 4 is that not only is fraud on the increase, but that disability claims fraud ranks second only to automobile insurance fraud.[8] Since assurers have become more vigilant, are utilising sophisticated detection devices and turning increasingly to the services of special investigative units (SIAs) it is, of course, impossible to measure real increases in fraud. Suffice to say that fraudulent claims consume one in every $10 in US healthcare and that disability fraud accounts for 5% to 10% of all disability claims.[9]

What is clear in the South African context is that it was only until very recently, less than five years ago, that disability assessors focused more sharply on fraud and malingering. Prior to that time disability assessment relied heavily on the honesty of the claimant and superficial medical evidence. Arguably the stronger driving force in lenient claims admission was market forces, especially in group disability schemes. The notion amongst assurers was that increasing sales would outweigh a poor claims experience.

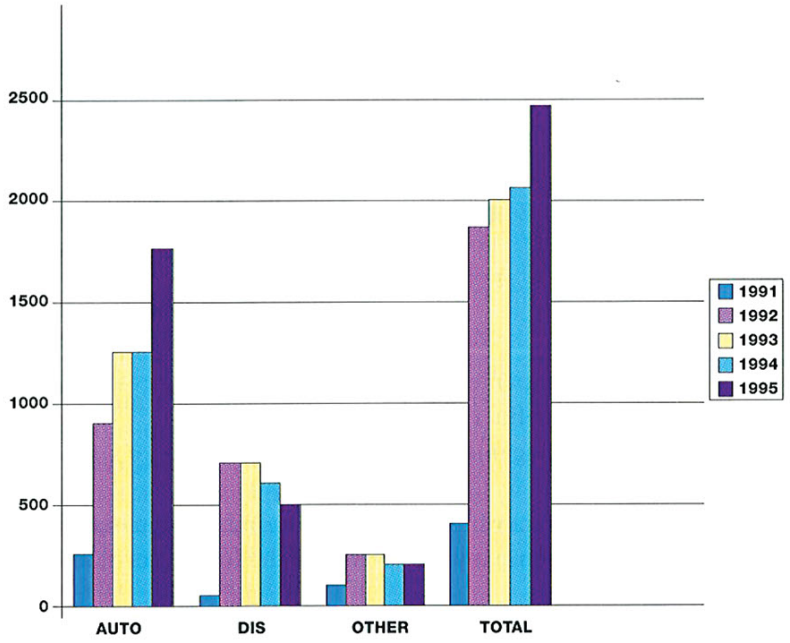

Figure 2: Fraud investigation by type of insurance IFB mass 1996[8]

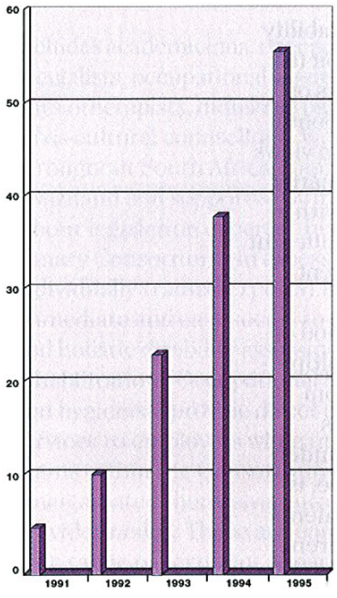

Figure 3: Fraud convictions by year

It was when the economy and the change in the political climate threw up an inordinate increase in claims applications that assurers improved their risk management techniques. And it is at the claims end of risk management that the greatest investment has been made and will certainly continue to be made for some time to come.

Pioneering work has already been done by one large Employee Benefits assurer by investing in medical education. By training independent doctors of all disciplines, the science of disability assessment is being established as a recognised medical skill.

Further investment is being made in support (by means of case referrals) of academic units which specialise in the use of state-of-the-art technology aimed at quantifying functional ability and rooting out faked symptomatology.[10,11] These methods are all aimed at removing as much subjective observation from the equation as possible, thus achieving fair and equitable decision-making parameters.

The Special Investigative Unit (SIU) is playing a greater role in South Africa. Ranging from direct observation through conventional detection techniques to telephonic and videographic surveillance, SIUs in South Africa are rapidly attaining the standards, integrity and sophistication of their American counterparts. Vital to this method of assessment is that the SIU, like the medical professional, remains independent of the assurer, the assured and the intermediary; and that evidence culled by the SIU is obtained ethically, is uncontaminated by invasion of privacy and that it will stand up to scrutiny in a court of law.

New perspective in South African disability assessment

The South African legal system, as in English Law, is an adversarial one: controversy is necessary in order for matters to be resolved. In this process the medical assessor finds himself embroiled in adversarial interchange: all too frequently the medical professional finds himself bowing to pressure from the lawyer in attempts to discredit the medical judgements of his colleagues.[12] Of greater concern has been the growing tendency of brokers to act out this role.

The aforegoing truism has resulted in an unhealthy relationship between assurers and the medical profession, to the extent that many leading specialists refuse to provide their services in disability assessment.[12]

Conflict over clinical findings, and harassment by lawyers and brokers do not constitute part of a doctor's career satisfaction and, if allowed to continue, will eventuate in a situation where assurers (and claimants) will have to rely on doctors with low scruples or those who have little interest and even less expertise in disability assessment.

It cannot be sufficiently stressed that medical disability assessment is a unique science within the discipline of medicine. This is further emphasised by the increasing complexities of society. Mention has already been made of the difficulties presented by psychiatric impairment. It is therefore clear that medical disabilities, or impairments, require the expertise of specialists across the spectrum of medical science - including occupational therapists, physiotherapists and medico-legal experts.

It should constantly be borne in mind that assurers seek equitable and scientifically excellent assessments in order to make fair, just and appropriate decisions. Contrary to public belief, the assurer is not bent on the repudiation of claims - to do so would simply increase premium rates and the consequent loss of business. The assurer seeks rather to pay all disability claims provided they are medically valid and conform to the rules and definitions contained in the policy contract.

To achieve this, the only solution is the garnering of objective and independent evidence through a multidisciplinary approach provided by medical specialists in the disability arena. Logically this should and has been initiated by the assurance industry.

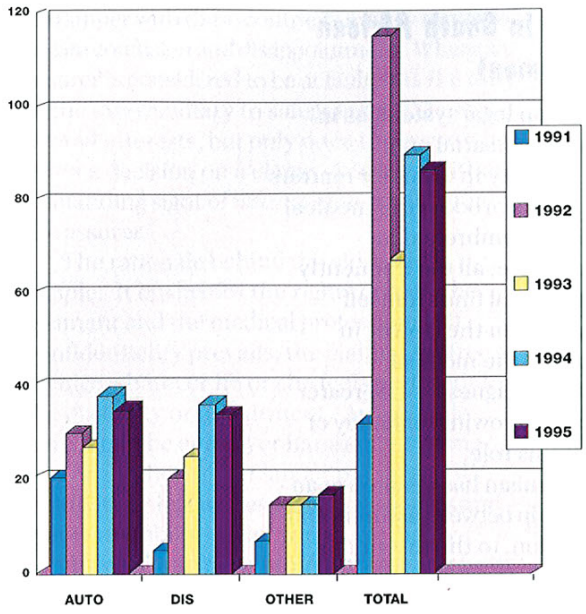

Figure 4: Fraud cases referred for prosecution IFB mass 1996[8]

Poor medical assessments of the past have been entirely the fault of the assurer. The assurer, in the belief that the completion of lengthy forms will expedite evidence, assumes that by seeking answers to specific questions he will be in a position to make an equitable decision on the future of the claimant. Forms do not reflect motivational nuances observed by the doctor; they give little or no insight into the psychosocial dynamic, the language barriers and other important subtleties required for an holistic approach. Questionnaires which invite the doctor to quantify function are fraught with danger since they revert to subjective observations made by different doctors working in different clinical paradigms. To ask a doctor to measure grip strength clinically and to expect that measurement to be the same as that of his colleagues is laughable. Clearly a sophisticated, universally calibrated instrument will provide a more accurate answer. The same applies to degrees of range of movement in limbs. Forms thus clearly expose the doctor to committing medical inaccuracies, ambiguous answers and ill-informed opinions.

Doctors dedicated to excellence are notoriously averse to the completion of forms. They feel constrained by the rigidity (and often, ambiguity) of questions asked; or, the busy doctor all too frequently utilises the pre-printed format to conceal a hasty and cursory examination. Forms certainly inhibit the doctor's freedom to express all-important nuances and peripheral observations.

Finally, formatted disability assessment reports inhibit the vital cultural perspectives of disability assessment in South African workers. Western views of disability cannot summarily be applied to a culture with a different view of life, a different value system, and a different perception of illness.[13]

The alternative method of assessment is that of multiple - two or more - reports from different medical sources.

The problem here, under current assessor practice, is that the medical assessments have been done by different doctors with disparate agendas and working out of divergent paradigms. By the very nature of this approach, the medical evidence is usually elicited at times far removed from each other. Apart from the inconvenience of the claimant having to be recalled at the whim of the assurer, months may elapse between assessments. The claimant's condition may change dramatically during these time-lags - once again creating conflict and confusion, as well as delaying the decision and prolonging monetary hardship for the claimant.

To decide the validity of disability on reports from a variety of doctors written at different times, under different circumstances and for different purposes on behalf of different parties is unscientific and unjust.

A solution to South African disability assessment

Taking all the forces of disability assessment into consideration, the sound assessment and subsequent management of disability is clearly bolstered by five basic principles:

- Early diagnosis and consensus assessment
- Early intervention
- Motivational counselling
- Rapid rehabilitation
- Stringent follow-up protocols

All of these principles rest on the sound foundation of a highly integrated nationally networked team which passes opinion by a process of multidisciplinary consensus.

To this end, one assurer has instituted a network of trained personnel drawn from all disciplines of medical science. Apart from all the clinical disciplines, the network

includes academicians, occupational health specialists, occupational assessors, physiotherapists, industrial psychologists and cross-cultural counsellors. Working in teams throughout South Africa, Namibia and Swaziland and supported by medico-legal and labour legislation experts, this multidisciplinary Consortium (in excess of 270 individually trained experts) is able to provide immediate and easy access to comprehensive and holistic disability assessment and rehabilitation. Occupational health specialists and hygienists provide direct consultative services to employers while in some instances, teams within the Consortium have amalgamated themselves into sharply focused provider nodes. These are equipped with a wide range of pertinent apparatus and are able to provide a comprehensive one-stop all-embracing assessment and consultative service.

The Psychiatric Association of South Africa has already addressed problems peculiar to psychiatric disabilities. Through the offices of the assurance industry, the Association has held consensus meetings to hammer out disability assessment guidelines for its members. As of this writing, a similar process is being instituted amongst orthopaedic specialists. In the near future other disciplines will be incorporated into the process.

An important element of the Consortium is that the members are independent. They have the discretion to refer cases among themselves, then conferring on their findings before submitting an all-embracing disability report together with suggested long-term management protocols. Moreover, the Consortium is not bound by contract to provide its services to any specific assurer. This means that, in the fullness of time, a uniformly high standard of independent disability assessment will be available to the entire life assurance industry and its clients.

From all of this (and the writing of others[12]) it has become clear that doctors need to maintain their integrity and professional independence in passing evidence on an individual's ability to contribute to society, its work ethic and its economy. What doctors must understand is the principle of legal and ethical contract. When a doctor is requested to assess a disability he enters into a legal and ethical contract with the requesting agent - the assurer. Essential to that contract is rigid confidentiality and fearless reportage of clinical findings.

In conclusion, accurate and fair disability assessment will only be achieved if properly trained doctors work as a multidisciplinary team which confers amongst itself before passing its judgement on to the assurer for a final decision.

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Health Care - what is the true cost to business?

Richard Bryant

Since the mid-80's, there has been a world-wide trend to concentrate on the expense side of doing business with the aim of becoming more efficient - and hence profitable. Measures such as Quality Improvement, Zero-Based Budgeting and Process Re-engineering have become virtually second nature in most companies with constant pressure on line-management to question all expenditure.

One key aspect which has not received similar attention, in South Africa in particular, is the total cost of health care to a company. The 1995 Health Benefits Survey undertaken by Old Mutual shows that few companies have any real idea of the total cost of health care to the company.

Although about half of the respondents indicated they had some form of health policy, the focus tended to be on occupational health. In general, there was a lack of clarity about what should be included in a corporate health policy, and how this should be managed within the company.

Health care costs paid by a company

Typically, the direct health-related costs for a company include the following:

- 50% of medical aid contributions
- Contributions for disability insurance and personal accident cover
- Contributions in respect of the Compensation for Occupational Injuries and Diseases Act
- On-site clinics, set up mainly for the purpose of occupational health
- Employee assistance programmes
- Pre-employment medicals
- Executive health programmes, usually requiring routine medical check-ups

However, a number of more indirect or hidden costs also emerge such as

- Sick-leave benefits
- Poor ergonomics, resulting in reduced productivity
- Non-productive time spent by management and on the shop floor in dealing with problems, either with medical aid or issues relating to safety in the workplace

Once the total of all these costs has been established, there is no doubt that health represents one of the largest costs of doing business, possibly second only to the direct cost of salaries and wages.

Up to now however, companies have not realised the full impact of these costs, and the potential savings that can be achieved by managing them appropriately. This is mainly due to the fact that the responsibility for health care expenditure is spread across a number of budgets and authorities. For example, Medical Aid contributions are treated as part of the departmental salary budget, whereas disability contributions are often handled in the Human Resources budgets. Expenses for Occupational Health are often treated as a totally separate entity under a chief medical officer.

A new focus on health care costs

There are a number of events emerging however, that are likely to change the focus, and cause companies to look at health care expenditure more holistically.

- The report "Towards A National Health System for South Africa" of the Committee of Inquiry into National Health Insurance has made a strong recommendation that all full-time employees will be expected to have mandatory cover including at least hospital care in the public sector. For many companies, this could result in significant additional costs
- The report also recommends that all pensioners be guaranteed membership of medical schemes after retirement
- A recent opinion issued by the S.A. Institute of Chartered Accountants implies that the cost of providing post-retirement health benefits needs to be regarded as a cost of doing business. The value of these post-retirement benefits then needs to be reflected as a liability on the company's balance sheet. The figures emerging are astronomical and in many cases, are significantly altering the condition of the company's balance sheet.

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Old Mutual
Employee Benefits
Cape Town

Implications for Occupational Health

What this all means is that companies are likely to start placing high focus on health care at a senior management level. Occupational Health is likely to receive a higher level of attention, possibly under the jurisdiction of the Financial Director or a separate health care authority reporting jointly to Human Resources and Finance. The role of on-site clinics in reducing overall health care expenditure is likely to cause the priority of these clinics to change in many instances towards primary health care, rather than primarily being set up for the purposes of Occupational Health.

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Professional disability management

Grietjie Strydom

The inability of an employee to perform his duties due to illness or injury has become a contentious issue during the past five years. Employers expect a certain level of performance from employees and the workplace is structured to accommodate the required number of employees only, with no spare capacity. Employers have no desire to accommodate workers who can only perform 80% of their duties adequately, they need 100%. To alleviate this situation, most Employers have used the insured disability benefit structures to get rid of employees who do not perform adequately. However, the definition of what constitutes a disability in terms of the insured policy conditions is very strict and mostly these employees do not qualify for disability benefits.

Employers have abdicated their responsibility with regard to disability to the Insurance Companies and to the Trustees of various retirement funds. If an employee could no longer perform his duties adequately, the Employer would submit a disability claim through the fund and expect the fund or the Insurance Company to make a decision. In the meantime, the Employer would replace the employee with someone else, though mostly continuing to pay the claimant's salary. The Employer would not, as a routine, look at adapting the work situation or finding an alternative position for the employee before having an answer from the Insurance Company. This would, in some cases, result in an employee that was off work for months or even years before the final conclusion would be reached that he is, in fact not eligible for disability benefits as described in the conditions of the fund.

The new Labour Relations Act has set out the Employer's responsibility where an employee can no longer adequately perform his/her duties. The responsibility of the Employer is to investigate each case of inability to work due to illness or injury and afford the employee representation in this investigation.

Due to the different expectations of Employers on employment standards and the definition of disability in the conditions of the disability benefits offered through the various retirement funds, it is clear that, although an employee would sometimes be considered incapable of performing his duties adequately, he would often not qualify for benefits.

The onus is now on the Employer to investigate the inability to work before submitting a disability claim through the fund.

It is quite clear that Employers would need some professional help in order to investigate the inability to work and the possibility of adapting the work situation, realignment into another occupation or rehabilitation of the employee. The Employer can either employ professional people full-time to do the investigation of inability to work, or alternatively, make use of a professional, unbiased sickness and disability management service

The main problems with regard to disability are the following:

Insurance Companies

1. Discrepancies in Claims Assessment

It is extremely difficult to assess disability claims and no standards or criteria for assessment exist within Insurance Companies. Insurance Companies often request information from doctors in order to determine the validity of a claim. Doctors are often requested to give their opinion with regard to a claimant's ability to work or ability to perform another occupation. Doctors are generally not trained in assessment of disability and they focus more on diagnosis than on the effect that the medical condition has on the functional capacity of the claimant. Doctors do not usually have a good knowledge of the **work** requirements of the individual. Job descriptions are usually very vague and generic. Basic requirements of the occupation are often not known, such as - does the claimant have to walk, stoop, kneel, crouch, bend, stand, carry, lift, etc.

2. Incorrect Application of Exclusion Clauses

Many Insurance Companies have lost focus of the intentions of exclusion clauses and apply them at random in order to curtail claims costs. The following cases are examples of this nature:

Case 1: A 32 year old black male admitted to Johannesburg General Hospital comatose, with a severe head injury caused by an assault with an axe to the back of the head. The casualty doctor writes in the hospital notes that the patient smells of alcohol. The Insurance Company repudiates the claim due to the application of an exclusion clause that reads "no benefits in respect of alcoholism".

Dr Grietjie Strydom
Alexander Forbes, Johannesburg

Case 2: A 49 year old black male joins a provident fund in 1993. In 1994, he claims temporary disability benefits on the grounds of tuberculosis. The doctor's report states that "this man has *probably* had tuberculosis since 1989". The Insurance Company repudiates the claim on the basis of a pre-existing condition. The claimant was never told he has tuberculosis, nor has he ever received treatment for tuberculosis.

Both of these cases were provident fund cases and the Trustees of these funds had no medical knowledge or knowledge of the correct application of exclusion clauses to challenge the decisions of the Insurance Companies involved.

3. Business Decisions by Insurance Companies

Insurance Companies sometimes make business decisions when assessing a disability claim.

A decision to pay a disability claim is often made on one of the following bases:

a) They do not want to lose the business;

b) The claimant is influential (Manager or a Trustee of the fund);

c) The claimant threatens legal action;

d) The fund has not had many claims and therefore the Insurance Company succumbs to pressure to pay.

4. Emphasis on Discretionary Clauses

The word "discretion" appears, on average, four or five times in every insurance policy contract. In their decision making, Insurance Companies lay great emphasis on the fact that the decision to grant disability benefits is in their sole discretion. Insurance Companies often overrule the decision of the doctor from whom they have requested an opinion on the claimant's disability.

5. Use of Insurance Companies' Own/ Contracted Doctors

Insurance Companies often request that a claimant see their company doctor or a doctor "contracted" to them. This in itself leads to many problems.

The Insurance Company would request that a claimant see their doctor for an examination after the claimant had submitted reports on his condition from a specialist in a particular field. Their doctor would mostly not be a specialist in that particular field and he would overrule the opinion of the claimant's specialist.

Example: A claimant with macular degeneration submitted reports from two ophthalmologists stating his uncorrected and corrected vision. Legally, this claimant was considered blind. He was requested to undergo an examination by the Insurance Company's own doctor.

The Insurance Company doctor was not an ophthalmologist and did not have the specialised equipment to test vision. The Insurance Company doctor ruled that the claimant was "grossly exaggerating his disability".

The Insurance Company repudiated the claim for disability benefits on the basis of their doctor's evaluation.

6. Use of Insurance Investigators

Some Insurance Companies make use of investigators, such as Biokineticians to visit claimants and evaluate their disabilities.

Example: A 53 year old livestock buyer that had a triple coronary bypass procedure in 1991, who currently complains of dysrhythmia, angina and shortness of breath. He has a left ventricular ejection fraction of 35%. Numerous specialist reports were submitted. The Insurance Company sent a Biokinetician to evaluate the claimant's disability and the claim for disability for his **own** occupation was repudiated. The Biokinetician had not examined the claimant, or put him through any tests to evaluate his physical capacity. The claimant would obviously perceive this as being unfair, as the Biokinetician did not examine him, is not a medical person and is employed by the Insurance Company.

7. Refusal to Release Medical Information

After the repudiation of a disability claim, a claimant would sometimes enter into an appeal and demand to know the reasons for repudiation. Some Insurance Companies refuse to release medical information, even with the written request from the claimant. The reasons for refusal are:

a) The medical evidence was requested and paid for by the Insurance Company and therefore they believe that it belongs to them.

b) The Insurance Company has a "contract" with the doctor that does the medical evaluation and they promise that they will not release the medical evidence to anyone.

It is clear that there is no transparency from the Insurance Company's side if they are refusing to release medical evidence. Any claimant should have the right to view the evidence that the Insurance Company used in order to repudiate his claim. Although the medical evidence may belong to the Insurance Company, a claimant should have the right to see it, as it pertains to himself and his future.

Employers

1. Late Submission Of Claims

The timely reporting of claims is vital to the management of a disability case. Prompt reporting of claims directly reduces handling costs and the likelihood of litigation. Early knowledge of the claim event improves intervention, rehabilitation and return to work. Early reporting helps to improve the insurer's ability to assess the cost of disability coverage.

If claims are submitted outside the notification period as determined by the policy conditions, many insurers would repudiate such claims.

If the reason for late submission is on the part of the Employer, the Employer could be held liable for payment of the disability claim.

2. Lack of Knowledge of Policy Conditions

Many Employers have little or no knowledge of the benefit structure that the disability benefit offers. They do not understand the strict definition of disability, and believe that the insurer should pay once the Employer has "boarded" the claimant.

This causes severe hardship for the claimant if his disability benefit is then repudiated.

3. Tendency to Get Rid of Bad Employees via Disability

Employers have used and abused disability benefit structures to get rid of poor performers. This has had a detrimental effect on disability costs and has also scarred the relationship between Employers and Insurance Companies.

4. Cost of Disability Benefits

The cost of disability to the Employer is spiralling out of control and stringent management measures are needed to control this. There are a multitude of factors that cause this increase in costs, most of which are mentioned in this article.

5. Absence of Company Policy On Sickness And Disability

Most Employers do not have set company procedures for dealing with sickness and disability and cases are handled in a random fashion. This could lead to discrepancies in the handling of disability claims.

All companies need a set procedure to follow in cases of sickness or disability in order to ensure a consistent and reasonable approach regardless of gender or seniority in the company.

In order to solve the problems with regard to disability claims, the following is needed:

A fair, unbiased, professional and objective claims management service that is neither linked to the Insurance Company nor to the Employer.

The disability management service should focus on the following aspects:

1. The company's disability benefit structure provided by the Employer via the Retirement Funds or Disability Benefit Funds must be examined in order to provide appropriate, affordable benefits that are compatible with the new Labour Relations Act.
2. The benefits and rules of the policy must be communicated to the members of the fund and education should be provided to all Human Resource and Personnel Managers.
3. Each Employer should have a structured company policy on sickness and disability that is used in all cases. Every disability claim must be managed in the same way by the company.
4. Each disability claim must be assessed by an outside professional disability management service, in order to provide an unbiased opinion.
5. Each disability claim must be assessed according to the same standard and the result should always be reasonable and consistent.
6. Disability claims should be re-evaluated regularly and the claimant should be informed and kept up-to-date on his disability status. Regular contact with his doctors is required.
7. Rehabilitation and re-alignment of disability claimants should start as soon as possible and not after the claim has been paid for an extended period. The advice on rehabilitation or re-alignment must be given to the Employer by the disability management service.
8. The Employer must be advised with regard to pre-placement medicals and occupational health issues.
9. The Employer should regularly be informed of the trends in disability claims within the company with full statistical analysis done annually.
10. Education and motivation of company management must continuously be given by the disability management service on disability claims in order to make sure that all claims are managed correctly.
11. Only genuine disability claims must be granted disability benefits.

Assessment of disability

In order for a genuinely objective assessment of disability to be achieved, it is necessary to establish clearly defined criteria for assessment.

1. The assessment must be done by an outside professional assessor who is not linked to the Insurance Company or to the Employer. The assessor should have no vested interest in the outcome of the claim.
2. The medical information that is called for must focus on the functional capacity/incapacity of the individual, and not on the diagnosis of the condition or whether the doctor believes that the claimant can or cannot work.
3. The analysis of the duties that the claimant is expected to perform should be collected from the Employer by an outside professional assessor and not by the Insurance Company. The work analysis must focus on the actual physical and mental requirements of the occupation.
4. In order to determine if it would be reasonable to expect a claimant to re-align into another occupation, the following criteria should be used in every case:

a) Age: The age of a person is vital when analysing whether it is reasonable to expect him to perform another occupation. It would, for example, be reasonable to expect a 32 year old to re-align into another occupation, whereas it would not be considered reasonable to expect it of a 62 year old.

b) Background: An individual's ability to re-align into another occupation is strongly dependent on his background. Background consists of five factors, namely qualifications, education, training, experience and ability. For example, it would be far more reasonable to expect of an individual with a Matric and a four year degree to re-align into another occupation, than it would be for a manual labourer who cannot read and write, has never been to school, cannot speak English or Afrikaans and has only ever done manual labour to re-align into another occupation.

c) Disability for own occupation: The claimant's level of disability for his own occupation (see points 2 and 3 above). The functional abilities and inabilities of the claimant should be evaluated against what is required of him in his occupation.

d) The mental capacity or incapacity: The mental ability of a claimant is important when evaluating whether you could reasonably expect the individual to realign into another occupation. For example, if a financial director of a company is diagnosed with early Alzheimer's Disease, it would be considered unreasonable to expect him to be re-aligned into another position as a clerk (although mentally he probably would be able to do it for a period of time).

All four of these criteria (a to d) should be considered together and used to determine whether a claimant could reasonably be expected to perform or to re-align into another occupation.

Compliance with TB medication

Zodwa Mokoena,

Abstract

Poor compliance which may lead to drug resistance in the treatment of tuberculosis, is all too common. Drugs to treat the mycobacterium are available, the disease is easily diagnosed and yet, in certain areas, it continues to escalate. Some of the causes of poor compliance following personal observation are outlined.

Some of the reasons for poor compliance are:

• **Lack of facilities.** There are not enough clinics, especially in the rural areas. There is no reason why other care givers (e.g. Mpilo's trained by the Rural Foundation) could not also administer the medication.

• **Lack of medication**. It is not uncommon, again in rural areas, for medication to run out. A patient who is sickly may have to walk a long distance to a clinic, only to find there is no medication. It is unlikely he or she will return within a reasonable period.

• **Distance.** Patients often have to travel long distances to get to a clinic and there may be little transport available in these areas.

• **Clinic times.** Most clinics are open between 08:00 and 16:00. Perhaps the times could be extended, so that patients could fetch medication before they go to work or even afterwards. In this way, they will not lose time off work and hence wages.

• **Comprehensive clinics**. In the past, TB patients were treated at local authority clinics whilst they had to visit a hospital or other clinic for something simple like a dressing. A single facility needs to provide services for all ailments. This is the intention of the new Department of Health, but needs to be implemented as soon as possible.

• **Attitude of care givers**. Care givers are often not well disposed towards both their work and their clients. If a patient is a few minutes late, he is turned away and has to come back the next day. As care givers, we need to be more tolerant and make a small sacrifice of our time.

• **Lack of treatment cards.** A standard treatment card is required that a patient can keep with him. It can be used for any chronic illness whether it be TB, diabetes or hypertension and is useful if the patient presents to different clinics. Often there is poor follow-up when a worker goes home to a rural area and runs out of medication.

There are also other aspects that are important in the control and treatment of TB and should be mentioned:

• **Supervision of treatment at work.** The work site is the ideal place to supervise treatment where there is a medical service on site. Workers who do not fetch their medication are easily identified and can be fetched from the department in which they work. They can also take their medication daily in front of the medical staff and thus total compliance can be achieved.

There is also generally good communication between the occupational health nurse and the local authority nurse who will drop off the TB medication each month and advise when the patient is due for follow-up, X-ray, etc.

However, a recent trend has emerged in that some Union representatives advise the employees to go directly to the local clinic as they know the patient will be paid for the day he misses work. This is counter-productive and there is then no check that compliance is being achieved. Also the occupational health nurse will often educate and counsel the employee and this Union trend needs to be reversed.

• **Community care givers.** Communities should have some responsibility for the health of their members and people should be asked to volunteer for training in health matters. For TB to be reduced, each member of the community needs to be educated on signs and symptoms of the disease, where to go for help and the importance of compliance until such time as the patient is discharged from the clinic.

• **Proper nutrition.** This can be assisted by having vegatable plots in our yards and community gardens in the rural areas. Clinics should take the lead in growing vegetable plots in the clinic grounds and educating the patients about the nutritional value of vegetables and how to grow them.

The control of TB remains a huge challenge especially with the rapid development in South Africa of the HIV virus. An important part of this challenge is to ensure that we pay attention to detail and address some of the problem areas outlined. Most of these do not require high-tech equipment or resources, but a commitment to doing one's job properly.

Zodwa Mokoena,
Occupational Health Nurse, Springs and SANTA volunteer.

Permanent disability assessment in occupational diseases

B Rautenbach

The assessment of permanent disability is an important subject because of the administrative, financial and social consequences of decisions relating to workers who are injured and disabled in the workplace. Permanent disability in terms of the Act, is an anatomical or functional loss due to a work related accident or occupational disease. It is expressed as a percentage of the whole person and not of the injured limb or anatomical area.

Under the law it also expressed as the disability of the worker in the open labour market and not for a specific job or profession. Certain disabilities have a fixed percentage of disablement as laid down in the second schedule of the Compensation for Occupational Injuries and Diseases Act (COIDA), and therefore assessments of these disabilities do not present a problem. However, the majority of permanent disabilities are not covered by the second schedule, and certain guidelines exist for their assessment. These assessments are always done by medical officers on the staff of the COIDA Office, and are regarded as reasonable and in keeping with the first schedule of the Act.

Because of the complexity of the subject, the role of the treating physician is very important. Only a physician can carry out an authoritative medical evaluation that can be used to assess an individual's permanent disability. This evaluation, which forms part of the final medical report, is normally done when the patient's condition has stabilised. Where a residual disability of a permanent nature remains, it must be recorded. A condition is regarded as permanent when it is apparent that there is no reasonable likelihood that further material change will occur, despite medical treatment and the lapse of a reasonable period for restoration of function.

The doctor should under no circumstances disclose his estimate of a worker's permanent disability to him. Any departure from this rule is unhelpful and leads to endless problems.

As previously mentioned, permanent disability is mostly awarded for functional and/or anatomical loss. Pulmonary diseases and noise induced hearing loss account for the vast majority of scheduled occupational diseases that result in functional loss.

Dr B Rautenbach
Office of the compensation commissioner, Pretoria

Occupational deafness

Deafness in one or two ears is the only prescribed permanent disability in the second schedule of the Act pertaining to scheduled occupational diseases.

The "three average formula", previously used and adapted to determine permanent disability for various degrees of hearing loss, was a mathematical minefield, and gross discrepancies were achieved in assessing various disabilities with the same binaural hearing impairment. The "four average formula" is now in use, and only slight modification was needed to comply with the second schedule, that is, seven percent for one deaf ear and fifty percent for two deaf ears.

Table I: Pulmonary disability criteria and scores

FEV1	Score	Medication	Score
>80% of predicted	0	nil	0
71 to 80% of predicted	1	one or more drugs	1
56 to 70% of predicted	2	systemic steroids	4
40 to 55% of predicted	3		
<40% of predicted	4		

Pulmonary disability

In the instance of pulmonary diseases, two criteria are used to determine permanent disability, namely FEV1 and the necessity to use drugs to maintain pulmonary function. In cases of occupational asthma, the FEV1 should be done at least 12 hours after the last use of a bronchodilator, and three weeks after removal from the putative inducing agent.

Table II: Percentage permanent disability

Total	P.D.%
6 to 8	100
5	80
4	60
3	45
2	35
1	25
0	15

A "score" is assigned to both functional loss and medication as shown in Table I.

The percentage permanent disability in occupational asthma is then assessed as shown in Table II.

In other cases of pulmonary disease, a score of one is assigned fifteen percent permanent disability, and the other scores are adjusted accordingly.

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The Ethnicare mobile dental clinic can provide the whole spectrum of dental treatment on site. The clinic's equipment matches the best found in stationary surgeries and ranges from panelipse x-rays, to amalgamators and autoclave sterilisers.

Payment is organised in one of two ways. Where employees have medical aid they are billed at medical aid rates. If employees do not have medical aid they are billed on a preferential tariff.

Early results suggest that the Ethnicare concept will quickly change the image of South African dentistry in the workplace. Everyone comes out a winner. Employees have dental service at their doorstep. Employers notice huge savings in man hours plus improvement in worker morale as a result of managerial thoughtfulness.

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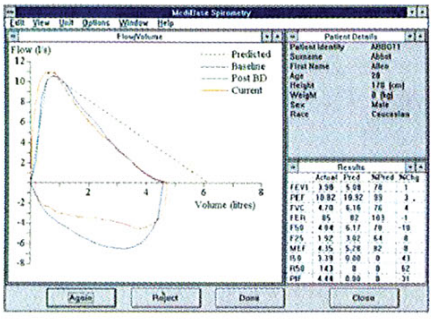

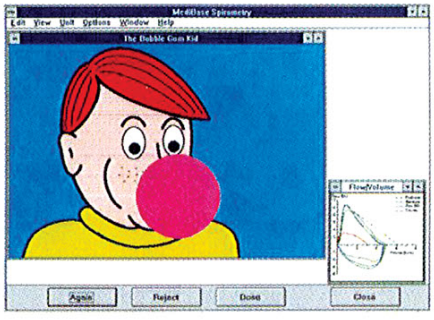

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