Emotional health

THE CONSPIRACY OF SILENCE

among Medical Practitioners

A review of the literature for the

Royal Australian College of General Practitioners

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Contents

Statement of aims

As the front line of preventative healthcare, medical practitioners might be expected to be among the healthiest people in our community. However, while doctors may have better than average physical health, many doctors suffer from serious emotional ill-health which has a severe impact both on their own quality of life and, potentially, on the quality of service they offer their patients.

PART ONE of this review is intended to critically assess and summarise the evidence surrounding doctor's physical and emotional health. The review encompasses the occupational health risks and advantages associated with the medical profession. Evidence from overseas and within Australia is examined.

PART TWO of this review explores the factors thought to contribute to the emotional ill-health of medical practitioners. Previous studies have suggested that pre-existing personality traits, medical training and workplace practices all contribute to emotional illness in doctors. This section of the review critically assesses evidence for these influences in an effort to identify major contributory factors.

PART THREE reviews strategies employed overseas and within Australia to support and improve doctor emotional health. On the basis of these findings, options for supporting Australian medical practitioners is outlined.

THE CONSPIRACY OF SILENCE:
Emotional health among Medical Practitioners
Summary

PART ONE

- Physical Health

  - Lifestyle factors: Medical practitioners enjoy somewhat better health on average than the general population but these advantages are primarily due to their socio-economic status rather than their medical occupation, the exception being a lower risk of smoking-related illness.

  - Occupational risks: Medical practitioners face a slightly increased risk of injury, compared to the general population, probably due to workplace risks. Further research is required to assess the extent and preventability of these risk factors.

- Emotional Health

  - Work and social factors: Medical practitioners report high levels of dissatisfaction with work and there is evidence of high levels of burnout. Work-related stress may contribute to a high level of marital difficulties and divorce, particularly for female doctors.

  - Substance abuse: While alcoholism appears to have declined as a major problem for medical practitioners, drug abuse remains an important, although poorly reported and researched, area of concern for doctor health.

  - Psychiatric illness and suicide: There are reports of high levels of depression and psychiatric disturbance among medical practitioners. There is also compelling evidence of an increased suicide risk for all medical practitioners but particularly for female doctors.

- Access to medical treatment

  - Self-care: Working while ill is characteristic of self-employed professions but appears to be even more common among doctors than other occupations. Doctors tend not to seek independent medical advice for themselves, increasing the risks of ignoring ill-health, and are inclined to self-medicate increasing the risk of drug abuse. Generally doctors rate well on preventative health measures.

  - Family care: A large number of doctors treat their own family members. While there are few studies showing negative consequences in relation to children, high rates of spouse suicide (up to six times the expected rate) does raise concerns over doctors treating their own spouses, particularly in relation to diagnosis of psychiatric illness.

  - Patient care: Patient care, particularly in the area of mental health, may be compromised by emotional illness in medical practitioners.

PART TWO

- The origins of doctors' emotional ill-health

  - Personal characteristics: The personal characteristics associated with the choice of medicine as a career (such as being a workaholic, high level of empathy, desire for social standing) may also make doctors vulnerable to emotional ill-health in later life.

  - Medical training: Medical training appears to be a particularly stressful process, not just because of academic demands, but because of the lack of emphasis on interpersonal and communication. Poor interpersonal support may also fail to provide the necessary emotional skills for subsequent medical practice and self care.

  - Occupational stress: Doctors face an increased risk of emotional ill-health because of the intersection of three major risk factors. These risk factors include (1) stressors related to the health care profession (particularly direct patient care), (2) stressors related to self-employment, fee-for-service and/or high remuneration employment and (3) increased vulnerability to stress through personality traits and/or medical training.

PART THREE

- Improving GP emotional health

  - Recommendations: That the professional peer support group (PPSG) program be developed for Australian medical practitioners including:

    - A review of current medical education practices in relation to supporting and promoting emotional health among medical students, particularly female students
    - Support for areas of medicine with high vulnerability to emotional health issues, such as rural and/or solo general practice and psychiatry
    - Specific programs, such as doctor and spouse support networks, for family members
    - The establishment of a PPSG advisory and review body comprising stakeholders from the state and federal health authorities, the medical practitioner's board and the colleges associated with the relevant medical disciplines
    - A model of small professional peer support groups underpinned by a credible ethical framework, to be run by and across the medical profession, in association with the relevant professional bodies
    - A self-care workbook for doctors, based on overseas models and adapted for the Australian context
    - Ongoing training, support and evaluation for peer support group leaders
    - Promotion of peer support group membership
    - Promotion of doctors for doctors and doctors for doctors' families

PART ONE
How healthy are doctors?

As the frontline of community preventative health services, medical practitioners should be among the healthiest members of our community. Their knowledge of health issues is unrivalled and, with their inside knowledge of the health system, doctors should have unparalleled access to health services. Good health is also positively associated with economic and educational status, on both of which indices doctors score highly.

Physical health

Lifestyle factors

Overall mortality rates

Doctors exhibit good physical health on many measures. In the United Kingdom, standardised mortality rates have long been lower for doctors (83%), than for the general population (1978, cited in O'Hagan, 1998). These mortality patterns are also apparent in Australian doctors. A study of 1453 University of Melbourne medical graduates (1950-59) found low standardised mortality rates of 59% for males and 84% for females (Schlicht *et al.*, 1990). Some of this advantage might be due to socio-economic status, rather than to a medical occupation *per se*. United Kingdom studies have found similar or slightly higher standardised mortality rates for doctors compared to other "social class one" occupations (cited in Doll & Peto, 1977 and O'Hagan 1998). Balarajan (1989) found that doctors had significantly lower mortality rates than other social class one occupations.

Within the medical profession, general practitioners, particularly those in single practice, have the highest mortality rates and the lowest life expectancy of all doctors (Doll & Peto, 1977; Asp, 1979). Despite reports of other specialty-related mortality factors (such as cancer in radiologists and anaesthetists), few within-speciality factors have been clearly identified, possibly because of small sample sizes.

Causes of mortality

Notwithstanding the overall low standardised mortality rates reported for doctors, different diseases may affect doctors more or less than other members of the population and other members of their socio-economic group. In a thorough analysis of causes of death across a variety of health professionals, Balarajan (1989) found that UK doctors faced a lower risk of cancer, heart and lung disease, especially lung cancer, but had a higher risk of death through cirrhosis of the liver and suicide (see below).

Standardised mortality ratios (SMR) for male UK doctors (1979-83)		
Mortality causes	Social class I	Doctors
All cancers	76	66
Lung cancer	50	33
Ischaemic heart disease	81	70
Cerebrovascular disease	77	71
Bronchitis, emphysema and asthma	39	28
Cirrhosis of liver	104	177
Suicide	88	172
Overall SMR	75	69
	Source: Balarajan 1989	

These findings have been supported by Australian research. Schlicht *et al.* (1990) found that while cardiovascular disease and cancer were the most frequent causes of mortality among Victorian doctors, the standardised mortality ratios for mental disorders (including drug and alcohol dependence) and suicide were considerably higher than expected.

Some mortality factors appear to be associated with social class. Socio-economic gradients operate very clearly in relation to different cancers as a recent analysis of occupational cancer mortalities in South Australia (SADH, 2003) reveals. Medical practitioners suffer fewer of the cancers associated with low socio-economic status such as cancer of the stomach, buccal cavity and pharynx. These cancers are commonly associated with poor diet, excess tobacco and alcohol intake. However, along with many other high socio-economic occupations (such as white-collar workers and teachers), medical practitioners were more prone to colon cancer and melanomas. Colon cancer is associated with Western diets of high fat/low fibre while melanoma risk may be associated with acute sun exposure among indoor workers (as well as long-term exposure among outdoor workers) (SADH, 2003).

Smoking

One disease where the occupation of medicine delivers specific preventative benefits is lung cancer. Doctors have lower rates of lung cancer, which contribute substantially to their higher life expectancy. Balarajan (1989) reported that UK doctors had a standardised mortality rate of 33% from lung cancer, considerably lower than that for all social class one occupations (50%) and lower than other social class one health professionals such as pharmacists, opticians and dentists. Workplace practices may play a role in reducing smoking among many workers in the health industry. Only 8% of GPs (but 15% of secondary school teachers) smoked in a 1991 United Kingdom survey (Chambers & Belcher, 1993). Balarajan (1989) noted that low levels of lung cancer deaths across a range of UK health workers, irrespective of social class. Notably, orderlies in hospitals had a mortality risk of only 77% despite their social class IV risk of 130%. The pattern of declining cancer risk and smoking is also apparent within specialities of medical practice. The increased standardised mortality of solo general practitioners compared to other specialists reported by Doll and Peto (1977) in the UK was largely due to their increased likelihood of smoking. Mortality factors not associated with smoking were not significantly increased for this group.

Declines in smoking among doctors reflect both population wide trends and trends within the health industry. American studies have reported declines in smoking in the general population and among doctors of 40-60% since the 1960s, leading to reduced risks of smoking-related cancers, heart disease and stroke (cited in Center, 2003). Hay (1984) reported declines in smoking from 1976 to 1981 among New Zealand doctors (20% to 15%) and nurses (42.5% to 35%). However the reduction in smoking is much greater in some medical specialities (see below) than among other health professions or the general population.

Declining incidence of smoking among NZ medical specialties

□ 1976 ■ 1981
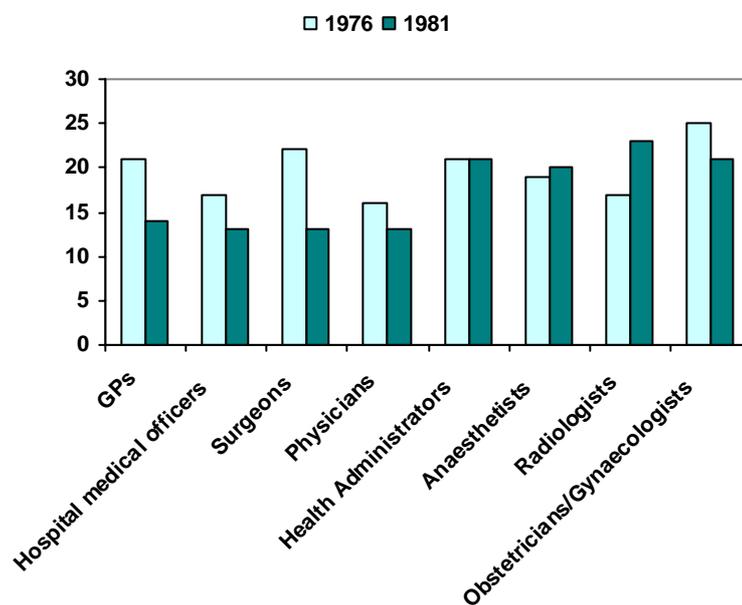
Source: Hay,1984

While smoking has declined in New Zealand over the last 30 years from 65% to 25% (in 1983) in the general population, this decline has been even greater among doctors, to 6.7% in 1999 (and the vast majority of these were occasional, not regular smokers, Richards, 1999). Similar statistics have been reported for GPs in Western Australia (5.9%, Nyman 1991) and Victoria (4%, McCall *et al.* 1999). Population-wide Australian smoking levels are around 24% (ABS, 2001).

Exercise

In general, doctors seem to take less exercise than either the general population or fellow professionals. Evidence of good physical exercise and diet among doctors is less clear. Chambers & Belcher (1993) study of United Kingdom GPs found that only 9% took regular exercise (more than 13 times/month) compared to 17% of secondary school teachers. A survey of New Zealand GPs (IMS) found that half exercised three times a week and a further third exercised once or twice a week. It is difficult to determine the beneficial effect of such exercise however, without knowing exactly what

THE CONSPIRACY OF SILENCE

such activity entails. According to another survey of New Zealand GPs 54.9% of female doctors and 16.7% of male doctors received inadequate exercise (Richards, 1999). McCall *et al.* (1999) reports that 55% of Victorian GPs had a low level of exercise compared to 38% for the general population. Similarly Nyman (1991) found that 56.8% of Western Australian GPs did not exercise regularly.

Diet

While anecdotal evidence suggests that doctors have good diets, there is little comparative evidence in relation to other high socio-economic occupations. Richards (1999) reported that about one third of 311 New Zealand GPs surveyed had a low-salt diet, with similar proportions keeping to either a low fat and/or a low cholesterol diet. A low calorie diet was followed by only 12.9% of respondents. Among Victorian GPs, McCall *et al.* (1999) found that only 7% followed a weight loss diet, but 35% followed a reduced fat diet.

Chambers & Belcher (1993) reported very similar numbers of overweight GPs compared to secondary school teachers under the age of 40 (around 30%), however fewer GPs were overweight between 40-49 (35%) than teachers (49%) and trend which continued in the over 50s (50% compared to 56%). Overall body mass indices for general practitioners were significantly lower than those for both teachers and the general population.

In New Zealand, Richards found that only 15.8% GPs were overweight, which is very similar to Nyman's (1991) study of Western Australian GPs in which 16% were over the ideal weight. These figures compare very favourably with the Australian average of 48% overweight or obese (ABS, 2001). Nyman found that more than half (55.7%) of those GPs who had checked their cholesterol had levels lower than 5.6mmol.

Nyman also surveyed the incidence of ongoing medical problems among GPs as detailed below.

Ongoing medical problems in general practitioners		
	N	%
Cardiovascular	7	3.8
Respiratory	19	10.2
Musculoskeletal	17	9.2
Psychological	6	3.2
Other	11	6.0
None at all	125	67.6

Source: Nyman 1991

Summary: Medical practitioners enjoy somewhat better health on average than the general population but these advantages are primarily due to their socio-economic status rather than their medical occupation, the exception being a lower risk of smoking-related illness.

Occupational risks

Injury

Medical practitioners have a slightly elevated risk of death by injury, estimated at 180% in the UK (Register General, 1978). In the US, the risk of accidental death has been estimated at 128% for white male physicians compared to their counterparts in the general population (Frank and Dingle, 1999, cited in Center, 2003). Mortality rates due to poisoning are also higher in medical practitioners (Register General, 1978). It is possible that some deaths classified as "accidental" may be suicides (Davis, 1998).

Like all health care workers, doctors face increased exposure to infectious diseases such as influenza, tuberculosis, hepatitis B and C and HIV. Balanced against this exposure, is an increased awareness of infection control procedures (Meech, 1998).

Tuberculosis

Although tuberculosis was a relatively common infection among health care workers in the past, it is currently rare among doctors. However, a study of Auckland medical students who had not been immunised and who did not test positive to tuberculosis at the beginning of their internship found that by their fifth year 23% (5/22) tested positive. These findings indicated that the interns had been exposed to tuberculosis and had a 10% lifetime risk of the disease reactivating, although this risk may be reduced to 1-2% by a course of Isoniazid prophylaxis (Meech, 1998).

HIV, Hepatitis B and C

Diseases with blood-borne transmission are of the most concern to doctors, since infection may occur through accidental injury, particularly needlestick injuries (Watson, 2004). Hepatitis B and C, and HIV may be transmitted through needlestick injury although the risk of hepatitis B is much greater than either of the other two conditions. The risk of disease transmission following a contaminated needlestick injury has been estimated at between 5-40% for hepatitis B (Meech, 1998), due to the high level of virus particles carried in the blood. McCall *et al.* (1999) found that only 64% of Victorian GPs had had a post vaccination test for hepatitis B, despite a high rate (almost 50%) of recent needlestick injury. Only 79.5% of Western Australian GPs were immunised against hepatitis B (Nyman, 1991).

The risk of disease transmission for hepatitis C is much lower (2.7%) while the risk of HIV following a contaminated needlestick injury is very low (0.36%) due to the small percentage of HIV carriers with free virus particles (usually in low concentrations) in their blood (Meech, 1998). Worldwide, there have been relatively few documented cases of HIV infection in health workers from needlestick injuries (64 by 1994, Meech, 1998) and mortality rates for doctors from HIV/AIDS are lower (83%) than for the general population (Frank & Dingle, 1999).

Summary: Medical practitioners face a slightly increased risk of injury compared to the general population, probably due to workplace risks. Further research is required to assess the extent and preventability of these risk factors.

Medical practice is widely recognised as an occupation with high workplace expectations and responsibilities. Client demands are commonly high and the consequences of mistakes are severe. The profession is, however, seen as well-recompensed and should be highly trained to deal with these stresses. In practice, however, it seems that many medical practitioners do not cope with the stresses of their work and an increasing body of evidence suggests that the consequences of work-related stresses may be placing medical practitioners, their families and, possibly, their patients at risk.

Work and social factors

Job satisfaction

Numerous surveys have identified a high level of work dissatisfaction among doctors. Schattner and Coman (1998) found that 53% of Australian general practitioners had considered leaving general practice because of work stress. A 1994 study (cited in O'Hagan, 1998) reported that 21% of GPs had frequently considered changing their jobs and 25% had considered the option sometimes. Dissatisfaction may be even greater in rural practices where there are fewer professional and personal support services. 36% of New Zealand rural GPs in the midlands reported burnout in relation to their work (Jenkins 1998) as did many British GPs (Kirwan, 1995). Although many professional careers may be stressful, medical practice, and general practice in particular, appears to exert particularly high pressures on its practitioners. Although a UK study found high levels of anxiety in three health professional groups—senior hospital medical staff, GPs and hospital managers—GPs were the most likely to be depressed and have suicidal thoughts (Caplan, 1994).

Personal relationships

The high work load and on-call nature of the medical profession may place pressure on personal relationships, particularly spouses and offspring. The "essential" nature of general practice and high level of responsibility provides little room for personal relationships to take priority over work. Nonetheless, Nyman (1991) reported that over 80% of Western Australian GPs felt supported by their spouses. The consequences of failing to provide medical services may be severe, resulting in considerable pressure on medical service providers. Such pressures are exacerbated in rural practices where alternative and supporting services may not be available and where locums are difficult, or expensive, to obtain (Scott *et al*. 1998). Rural GP families may also face social pressures from their role in the community than urban doctor's families escape, not least of which may be isolation from their own extended family. One study identified proximity to a spouse's mother as a key criteria in retaining rural GP services.

Impacts on family members

Medicine has commonly been seen as a "two-person" career, requiring a significant contribution of the non-medical spouse to the doctor's career (Durham, 1998). Traditionally, this supporting role has fallen to a wife, although not always happily. Doctors' spouses commonly report feeling

neglected (Walton 1989; Miles *et al.*, 1975). Pullen *et al.* (1995) reported that up to 19% of NSW GPs were currently experiencing marital stress because of their work. A survey of UK general practitioners found that 21% were experiencing marital difficulty (cited in O'Hagan, 1996). Divorce rates among doctors are high, often higher than expected population norms. Vaillant (1972) reported that while 20% of a small group of physicians in a longitudinal study divorced, only 14% of a matched control group had divorced. In addition, ratings of dissatisfaction with marriage were higher among physicians (47%) than controls (32%).

The personal marital compromises required by a traditional medical career have given rise to even greater stress with changing societal expectations, including the increasing proportion of female doctors and the increasing likelihood of doctors (both male and female) marrying fellow professionals. Female doctors are less likely to marry, more likely to divorce and are less likely have children than their male counterparts (Lorber & Ecker, 1983; Durham, 1998). Female doctors were also more likely (23%) to experience role conflict than male doctors (11%) (Durham, 1998).

Female doctors are more likely (41-52%) to marry into the medical profession than their male counterparts (18%), although it unclear as to whether this would increase marital stress (by combining two highly demanding careers) or reduce it (through increased acceptance and understanding of career demands).

As in most other professions, female doctors are more likely to work in part-time, relief or assisting positions which better suit family commitments than male doctors (Durham, 1998). Similarly, Lorber and Ecker (1986) found that the while the majority of male physicians occupied more highly paid "fee for service" practices, the majority of female physicians were employed by salary. As has been widely reported for many professions, fewer women physicians (20.6%) attained a high level of professional standing than their male classmates (23.7%) with more women achieving low levels of professional attainment (41.25) than males (37.8%) (Lorber & Ecker, 1986).

Summary: Medical practitioners report high levels of dissatisfaction with work and there is anecdotal evidence of high levels of burnout. Work-related stress may contribute to a high level of marital difficulties and divorce, particularly for female doctors.

Substance abuse

Alcohol use

Traditionally doctors have a reputation for high alcohol consumption (Murray, 1976), which was supported by increased death rates from cirrhosis among UK doctors up until the 1980s. Murray (1976) reported that the standardised mortality rates of doctors in England and Wales has increased from 114% in 1911 to 350% in 1961. Cirrhosis levels have fallen in doctors since 1972 (Robinson, 1998) with Balarajan (1989) reporting stable levels between 1970/72 and 1979/83 of 177%. In 1985-94, mortality risk from liver disease among white US male physicians was lower (80%) than that for the general white male US population (Frank and Dingle, 1999 cited in Center, 2003, but see British Medical Association 1995 report suggesting a sevenfold increased risk in liver disease among doctors). Cirrhosis of the liver is common across all social gradients, however, it may be particularly prevalent in many health professions. Balarajan (1989) found high standardised mortality ratios for liver cirrhosis across all health professions studied, with the exception of ambulancemen (see below).

Standardised mortality ratios for cirrhosis among male health workers		
	SMR	Deaths
Social class I	*104*	*194*
Doctors	177	26
Dentists	165	6
Pharmacists	254	11
Opticians	-	0
Social class II	*115*	*998*
Nurses	121	12
Radiographers	-	0
Physiotherapists	193	1
Chiropodists	106	1
Social class IV	*107*	*747*
Porters	232	19
Ambulancemen	22	1
Orderlies	162	6
		Source: Balarajan, 1989

Murray (1976) reported that Scottish doctors were 2.7 times more likely to be admitted for alcoholism than other members of similar socio-economic occupations. A Finnish study found that 24% of male and 3% of female doctors drank heavily (more than 200g/week, Juntunen *et al.*, 1988). Heavy drinking was particularly frequent among radiologists and less prevalent among ophthalmologists (see below). These figures are reported to be much greater than the general Finnish population (Juntunen *et al.*, 1988). A range of poor mental health indicators, such as career disappointment, immersion in work, stress, burn-out, suicidal thoughts and use of benzodiazepines, were associated with heavy drinking (Juntunen 1988). The association between drinking and drug use lead Vaillant (1972) to classify either heavy drinking or frequent use of sleeping pills, amphetamines or tranquillisers as "high drug use". 36% of physicians in Vaillant's study were high drug users, compared to only 22% of matched controls.

Alcohol consumption among medical specialties in Finland	
	% drinking ≥200g/week
Anaesthesiology	21
Internal medicine	28
Surgery, neurosurgery	25
Gynaecology and obstetrics	21
Paediatrics	25
Psychiatry	25
Otorhinolaryngology	18
Ophthalmology	7
Primary health care	26
Radiology	37
Other specialities	25
General practice	19
	Source: Juntunen et al., 1988

Many studies report that doctors are currently less likely to drink large amounts of alcohol than other occupations. In 1983, only 9% of UK GPs reported a high alcohol intake (of more than 21 units per week) compared to 15% of secondary school teachers (Chambers & Belcher, 1993). A 1994 New Zealand survey found only 1% of GPs had a high alcohol intake (of 21 units/week for males and 14 units/week for females). Richards (1999) study of New Zealand GPs found a heavy drinking rate (more than 3 units/day) in only 8% of respondents. Pullen *et al.* (1995) reported a 3% incidence of alcohol problems among NSW doctors. Only 6% of Western Australian GPs surveyed by Nyman (1991) admitted to drinking more than 3 standard drinks daily, with 28% of GPs not drinking alcohol at all.

Drug misuse

Drug misuse is difficult to assess, particularly among doctors where misuse may result in serious professional and social penalties. Not surprisingly, there estimates of drug misuse among GPs vary considerably from 0.5% up to 10% (Robinson, 1998). Serry *et al.* (1991) compiled 0.5% of cases from medical registration data among Victorian doctors. Pullen *et al.* (1995) reported a 1% incidence of drug abuse among NSW doctors.

In an early study, Vaillant *et al.* (1970) found that while US doctors were no more likely to use alcohol or cigarettes than a matched control group, they were far more likely to have used tranquillisers, sedatives and stimulants. Twenty-two percent of the 45 doctors studied used amphetamines, 27% used tranquillisers and 67% used sedatives compared to 4%, 15% and 35% respectively for controls. Physicians used these drugs more regularly, usually self-prescribing for depression, to stay awake or for other psychological problems (Vaillant *et al.*, 1970). Brook *et al.* (1991) reports that only 50% of physicians with a drug abuse problem sought treatment, and then only because it was associated with a medical problem.

Summary: While alcoholism appears to have declined as a major problem for medical practitioners, drug abuse remains an important, although poorly reported and researched, area of concern for doctor health.

Psychiatric illness and suicide

Drug and alcohol use are problematic on their own but their impact is dramatically compounded in association with psychiatric illness. Unfortunately, abundant evidence supports a strong relationship between substance abuse, mental illness and self-harm, and doctors do not appear to differ from the general population in this association (Jurd, 2004). Vaillant *et al.* (1970) found that 40% of all men (both physicians and matched controls) with the poorest psychological scores were also classified as having the heaviest use of drugs or alcohol. By contrast only 13% of those with the highest psychological rating were classified as heavy drug users or drinkers.

Psychiatric disturbance

Some studies have found lifetime prevalence rates of clinical depression roughly the same in medical practitioners as in the general population (12.8% for males, and 19.5% for females cited in Center, 2003). Miller (1997) reports that up to 6-10% of US physicians suffer from a major psychiatric disorder such as schizophrenia, depression, bipolar condition or personality disorders. However, levels of sub-clinical psychiatric disturbance may be higher.

Maslach's work in the 1970-80s provides a useful theoretical background to the nature of stress and burnout and its prevalence in the health professions. Burn-out tends to be work-specific (rather than a generalised psychological depression which occurs independent of work factors) and is commonly characterised by emotional exhaustion, depersonalisation of others and a lack of personal accomplishment. Caring professions with a high emotional workload appear to be particularly vulnerable to burn-out and a number of studies have used the Maslach inventory to measure levels among doctors. Original studies of North American general practitioners found high burnout levels which have since been exceeded by studies of UK general practitioners (Kirwan & Armstrong, 1995). A New Zealand survey using the Maslach Burnout scale found that 25-30% of general practitioners were suffering from emotional exhaustion, 30-36% reported symptoms of depersonalisation while only 16-19% reported a sense of personal accomplishment from their work (Jenkins, 1998).

In assessing their own levels of clinical depression in relation to work, 2% of Australian GPs reported that they often felt clinically depressed and 12% sometimes (Pullen, 1995 cited in O'Hagan, 1998). In Nyman (1991), 50.2% of Western Australian GPs agreed that they were psychologically distressed, although three quarters of these felt their distress was mild.

Schattner & Coman (1998) reported that 12.8% of Australian metropolitan GPs had severe psychiatric disturbance (General Health Questionnaire Scores of 8 or more), indicative of clinical depression, anxiety or other psychiatric conditions. More than 30% reported significant levels of disturbance (GHQ scores of 4 or more). Very similar levels have been reported for New Zealand GPs with 9.9% scoring over 8 on the GHQ and 31.4% scoring over 3 (Dowell, 2000). Dowell (2000) reports that these levels of high psychiatric disturbance are three times the rate for the general population.

Despite high levels of depression being reported, many studies fail to compare their results with appropriate control populations. The high, and increasing, incidence of depression in the general population, makes interpretation of many figures in the literature on GPs and other doctors difficult. However, in a study of female doctors in the US, Welner (1979) found that were diagnosed with a primary mood disorder, compared to non-medical professional women whose rate of diagnosis was 32%. Caplan (1994) compared stress levels among three groups of UK health service professionals—hospital consultants, general practitioners and senior health service managers. While all three occupational groups scored highly on stress scores for the general health questionnaire, more general practitioners (27%) and consultants (19%) than managers (6%) had high anxiety and depression scores. In contrast, Chambers & Belcher (1993) found that only 13% of UK GPs reported troublesome levels of depression, compared to 23% of secondary school teachers with very similar levels of "excessive anxiety" between the two occupations (31% and 37%.

Suicide risk

The heightened levels of suicide risk among medical practitioners are both striking and disturbing. 1978 mortality figures from the UK indicate a 335% increased risk of death by suicide for doctors compared to the general population (cited in Davis, 1998). Balarajan (1989) reported a standardised mortality ratio of 172% for suicide among UK doctors – almost twice that for the general population while other social class one occupations have a suicide ratio of only 88%. Balarajan did, however, note a 33% drop in doctor suicides between 1970/72 and 1979/83 and also reported high suicide ratios for all other health-related occupations except ambulancemen and opticians (see below). The heightened suicide risk for doctors has been confirmed in American and Australian studies. For example, in New South Wales rates of 19.1 suicides per 100,000 deaths have been reported for GPs compared to a population average of 12 suicides per 100,000.

Standardised mortality ratios for suicide in male UK health workers		
	SMR	*Deaths recorded*
Social class I	*88*	*447*
Doctors	172	64
Dentists	222	20
Pharmacists	242	22
Opticians	83	3
Social class II	*82*	*1721*
Nurses	201	59
Radiographers	261	3
Chiropodists	179	3
Social class IV	*116*	*1796*
Porters	184	30
Ambulancemen	77	9
Orderlies	144	11

Source: Balarajan, 1989

There is a strong gender effect associated with suicide risk. While male doctors have been reported as being twice as likely to suicide as any other member of the UK population (Balarajan, 1989), a study from Canada found

that female doctors are six times more likely to suicide than other women (Safinosky, 1980). In the US, female doctors are four times more likely to suicide than other women of the same age and race (Pitts *et al.,* 1979). Similarly, among Australian doctors, the risk of suicide has been found to be slightly elevated for males but considerably higher for females. Suicide accounted for three of the eleven deaths in a cohort of 174 female medical graduates from Victoria. Rates for deaths due to violence and mental disorder were also slightly higher (Schlicht *et al.*, 1990).

The factors contributing to suicide are varied and complex, but more than 90% of people who suicide suffer from mental disorders (commonly depression) and substance misuse (particularly alcohol). A Finnish study of seven physician suicides found that all had a mood disorder and five also had a disabling physical disorder. None received adequate treatment for their condition (Lindeman, 1998 cited in Center 2003).

Given the strong association between depression and suicide, it is surprising that there isn't equally strong evidence for depression in doctors. Measurement of depression, however, is influenced by emotional openness. For example women are more inclined to report emotional difficulties than men, although this does not necessarily translate into poorer emotional resilience. Unwillingness to acknowledge emotional distress may disguise some of the psychiatric problems underlying the suicide levels.

Alternatively, it is possible that doctors are simply more successful at suicide, rather than being more suicidal *per se*. Rather than providing improved health outcomes, in the case of suicide, doctor's enhanced medical knowledge (and access to medicines and equipment) works against them—only pharmacists have higher success rates (cited in O'Hagan, 1998). Certainly, drug overdose is a more means of suicide among doctors than methods not associated with medical practice (such as guns, Pitts *et al.* 1979). Females are also more likely than men to use drug overdose to suicide (Pitts *et al.* 1979).

Summary: There are reports of high levels of depression and psychiatric disturbance among medical practitioners. There is also compelling evidence of an increased suicide risk for all medical practitioners but particularly for female doctors.

Despite their generally good physical health doctors, like everyone else, do fall ill. How they react to these illnesses, how they seek treatment and how they are treated, may be quite different from that of their own patients.

Doctors as patients

The 3P (primary, preventative, patient-centred) and 3C (continuing, comprehensive, in the community) model of general practice, espoused by Monash University Department of Community Medicine (Victoria) seems to be substituted, when it comes to doctors' own health with the 3D (delusional, denial and delay) and 4S approach (self-investigation, self-diagnosis, self-treatment and self-referral).

Source: Rogers 1998

Self-care

Soldiering on

Anecdotal evidence suggests that medical practitioners are likely to over-work, continue working while ill and deny or minimise the symptoms and consequences of their illness. Chambers & Belcher (1993) found that 75% of general practitioners took no sick leave compared to 41% of secondary school teachers, however this may reflect different work practices among self-employed *versus* salaried professionals. McKevitt *et al.* (1997) compared rates of sick leave and working while ill among general practitioners, hospital doctors and company "fee-earners" in the UK. Despite similar health levels between the three groups, doctors, and particularly general practitioners took the least sick leave (see below)

Days of sick leave taken by doctors and company fee-earners
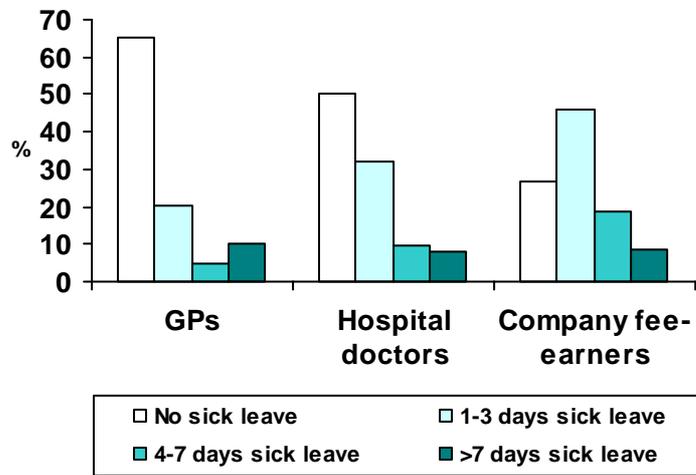
Source: McKevitt et al. 1997

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All members of the community struggle, at times, to access appropriate health care services, particularly in relation to mental health. Despite their privileged position within the health sector, doctors may find it harder, rather than easier, to access these services for themselves. Alibowe (1983 cited in O'Hagan, 1998) argued that the medical profession generally lacks interest in the health of its own profession and that unlike other occupations, doctors face barriers to obtaining the same level of service for themselves which they provide to others.

Thomson *et al.* (2001) compiled a report on GP attitudes to their own health and medical treatment from a focus group. The GPs reported both practical and psychological reasons for denying illness. Work practices, such as self-employment, lack of sickness insurance, absence of locums and/or unwillingness to increase partners' workloads, all lead GPs to work through illness. Psychologically GPs report pressure to appear healthy for their patients, a strong sense of duty to their patients, difficulty in acknowledging illness and embarrassment at seeking independent medical advice (findings supported by McKevitt *et al.* 1997 and Rogers 1998). Thomson *et al.* (2001) summarised the consequences of these factors into an "informal shadow contract" by which many GPs feel bound.

I undertake to protect my partners from the consequences of my being ill. These include having to cover for me and paying locums. I will protect my partners by working through any illness up to the point where I am unable to walk. If I have to take time off, I will return at the earliest possible opportunity. I expect my partners to do the same and reserve the right to make them feel uncomfortable if they violate this contract.

In order to keep to the contract I will act on the assumption that all my partners are healthy enough to work at all times. This may mean that from time to time it is appropriate to ignore evidence of their physical and mental distress and to disregard threats to their wellbeing. I will also expect my partners not to remind me of my own distress when I am working while sick.

Source: Thompson et al. 2001

Self-diagnosis

The aphorism "Doctor, heal thyself" appears to be all too closely followed by many members of the medical professional, despite serious doubts about the effectiveness of such behaviour. Australian and New Zealand studies repeatedly suggest that fewer than one quarter of general practitioners seek professional medical advice on their own health.

O'Hagan (1998) cites a New Zealand survey in which GPs were asked how they seek treatment when they are ill. Half replied that they would treat themselves, 22% would ask a colleague, 9% were unsure and only 19% would seek treatment from another GP as a general patient would. Although Richards (1999) found that 71.3% of New Zealand GPs claimed to have their own doctor, only 10.9% went to them for routine check-ups.

A Victorian study round that 57% of general practitioners did not have their own GPs with 13% nominating themselves and 31% nominating a professional partner (McCall *et al.* 1999). In Western Australia, only 24.3% of GPs reported having their own personal GP (Nyman, 1991). A Central Highland study (2000) found that while 58.7% of respondents reported having their own GP, 42.7% of these were either family members or practice colleagues. A large study of NSW physicians revealed that most did not have their own GP, most had self-prescribed medication, despite the fact that 26% had a medical condition requiring consultation (Pullen, 1993).

Doctors report feeling inhibited about consulting a general practitioner about their medical problems (Pullen, 1993). Their access to independent objective medical opinion is compromised by their own medical training. The use of practice colleagues for medical services is also thought to result in reduced recognition of illness. McKevitt *et al.* (1997) reported two cases in a UK study where informal consultations resulted in illness in a doctor being neither diagnosed nor correctly treated. Nyman (1991) identified a number of barriers to doctors seeking medical advice from other doctors, particularly a reluctance to trouble other doctors, feelings of professional inadequacy and concerns that doctors make poor patients or are poorly treated as patients. The doctors in McKevitt *et al.* (1997) reiterate these concerns, with some reporting covert pressure from colleagues to return to work early and lack of guidance on appropriate levels of sick leave.

In an extreme case with near disastrous results, Miller (1997) cites a case of a surgeon attempting to self-perform a haemorrhoidectomy. Most self-treatment has less dramatic consequences, but nonetheless may present serious health risks to medical practitioners. Pullen (1993) reported that nearly one-quarter of NSW GPs surveyed would not seek independent treatment for alcohol, drug abuse or excessive tiredness. Nearly half (45%) would not seek outside help for insomnia or sexual difficulty.

Self-medication

An obvious consequence of this tendency to self-diagnose is the tendency to self-medicate. Chambers & Belcher (1993) found that 83% of medications taken by UK GPs were self-prescribed, including 92% of hypnotics and 54% of anti-depressants. Ready access to these medications may affect usage patterns. While antibiotics and tranquillisers were more frequently used by secondary school teachers, hypnotics and peptic ulcer healing drugs were more frequently used by general practitioners. Use of all drugs except antibiotics increased with age. Similarly Richards (1999) found that almost half of New Zealand GPs studied had self-prescribed oral medication for themselves in the last year. Most commonly these prescriptions were for antibiotics, anti-inflammatories and contraceptives, however a number of doctors had self-prescribed benzodiazepines. Pullen *et al.* (1995) found that 76% of NSW GPs had self prescribed antibiotics, 45% non-narcotic analgesics, 35% non-steroidal anti-inflammatory drugs (NSAIDs) and 2% narcotics.

In a breakdown of the frequency of self-medication among different drug types in a Western Australian sample of 185 GPs, Nyman identified hypnotics and anti-depressants as the only drugs self-medicated on a daily, weekly or monthly basis but by very few GPs (6 and 5 GPs respectively). Hypnotics were more commonly self-medicated a few times a year (by 23.2% of GPs) as were analgesics (by 35.7%) and antibiotics (by 76.2%). Tranquillisers were self-prescribed up to a few times a year by nine GPs. Similar proportions were self-prescribed by Victorian GPs, with antibiotics being most commonly self-prescribed (by 90% of GPs) followed by H2 antagonists (30%), sleeping pills (30%) with a very small proportion self-prescribing opiate painkillers (6%) or anti-depressants (3%) (McCall *et al.* 1999).

Preventative health measures

Despite the importance of spreading preventative health messages, there is evidence that doctors may be less than perfect at adhering to the advice they give to their patients (Kay et al. 2004). Only 77% of WA GPs had checked their blood pressure in the last year and 78% had measured their cholesterol (Nyman, 1991). In the last 10 years, 89.2% had received a tetanus booster and 49.7% had received a polio booster. Only 79.5% of GPs had been immunised against hepatitis B (Nyman, 1991). McCall *et al.* (1999) reported that 93% of Victorian GPs had had their blood pressure checked and 64% had checked their cholesterol in the last three years.

Among New Zealand GPs, Richards (1999) found that within the last five years only 50% of female doctors had had a breast examination, 16.7% had a mammogram while 72.5% had had a cervical smear within the last three years. Similar figures were found for Victorian female GPs with 73% having had a cervical smear within the last two years, while 47% of women

over 50 had had a mammogram in the last two years (McCall *et al.* 1999). Among male NZ doctors, only 17.2% had had a prostate examination. Across both sexes, rates of screening tests in the past five years were 81.3% for blood pressure, 66.8% for cholesterol, 21.2% for rectal examination, 5.5% for occult blood test and 2.9% for bone density (Richards, 1999). The importance of these tests for particular individuals may depend upon age and other risk factors, however, compliance rates for tests recommended for standard screening of the general population (breast and cervical screening for women, prostate examination for men and blood pressure and cholesterol screening for both sexes) are certainly lower that might be expected although probably substantially higher than compliance levels in the general population.

Summary: Working while ill is characteristic of self-employed professions but appears to be even more common among doctors than other occupations. Doctors tend not to seek independent medical advice for themselves increasing the risks of ignoring ill-health, and are inclined to self-medicate increasing the risk of drug abuse. Generally doctors rate well on preventative health measures.

Care for others

Physical health of family members

Underplaying ill-health may also flow on to family members where doctors treat and medicate their own families. Although Richards (1999) found that 71% of GPs had their own doctor, only 66.9% reported that their spouse had their own doctor. Despite this lower figure (suggesting that rates of spouse-treatment are slightly higher than rates of self-treatment) doctors' partners were more likely to have routine check-ups (22.5%) than they were themselves (10.9%). Nyman's survey of Western Australian GPs reported similarly high levels of family treatment. 46.5% of respondents nominated themselves as the primary source of treatment for family members, compared to 24.9% who nominated another GP.

In preventative health areas GPs rate well in treating for their children. Richards (1999) found that NZ general practitioners achieved a fairly high standard of immunisation for their children, with 93.9% of GPs reporting that all their children were immunised for diphtheria and tetanus down to a low of 41.2% haemophilus influenzae type b. This compares favourably to population levels of childhood immunisation.

Comparison of immunisation rates of children in the general population (Australia) and children of GPs (NZ)			
	Australian childhood immunisation rates		Immunisation of all GPs' children (NZ)
	1 year	*6 years*	
Diphtheria/Tetanus	88.5%	45.2%	93.9%
Pertussis	86.2%	17.2%	91.0%
Polio	86.3%	60.2%	93.0%
Measles	86.8%	91.7%	84.7%
Mumps	86.0%	88.4%	76.4%
Rubella	81.4%	62.8%	76.9%
Hib	62.3%	26.6%	41.2%
Source: ABS, 1996 and Richards 1999			

Emotional health of family members

Psychiatrists report that a high proportion of their patients are doctor's wives and children. For example, Miles *et al.* (1975) report that doctor's wives present for psychiatric treatment in disproportionately high numbers and that the majority of these patients are seeking assistance for marital difficulties resulting from "a dependent, histrionic wife and an emotionally detached husband". Miles *et al.* (1975) noted the lengths to which these patients would go to elicit a reaction from their partners, while their partners, whilst respected and competent doctors, almost universally sought to "minimize the problem, to seek a solution for the wife's condition in medication and physical treatment methods and to avoid any psychotherapeutic approach which might involve him." Just as doctors may be vulnerable to emotional disturbance themselves through a combination of pre-exisiting personality traits and current practices, doctor's spouses may be vulnerable to emotional disturbance from a similar combination. As part of their self-appointed "caring" occupation, doctors

may either seek, or be sought by, dependent partners. However the workload and emotional burden of medical practice may not allow the level of emotional commitment required for a healthy relationship, let alone the amount required for a more dependent relationship. Such difficulties may also flow on to the next generation with Walton reporting that doctors' children have a significantly higher level of psychiatric breakdown that the children of other professionals (Walton, 1989).

While recent validated figures on the mental health of doctor's families are difficult to obtain and are rarely compared with figures from other occupational categories, there does appear to be compelling anecdotal evidence for psychiatric damage associated with a "medical marriage" (Myers, 2004). Doctors' spouses are 4.5 times more likely to suicide than the general population and 5 times more likely to do so than the spouses of other professionals (Sakinofsky, 1980; Walton 1989) providing a disturbing basis for the 18th century proverb that "shoemaker's wives go barefoot and doctors' wives die young". These risk factors are greatly increased in rural practices where access to alternative medical services for the doctor and their family is reduced (London, 1998).

Summary: Many doctors treat their own family members. While there are few studies showing negative consequences in relation to children, high rates of spouse suicide (four-six times that expected) does raise concerns over doctor's treating their own spouses, particularly in relation to diagnosis of psychiatric illness.

Patient care

There is increasing evidence that the health habits of medical practitioners are associated with the advice they dispense to their patients. The decline in smoking in the general population, preceded by a decline in smoking among medical practitioners, is a case in point. Unfortunately, the treatment of depression, and suicide risk, also appears to be an example of this association, although in this case, a negative one. In extreme circumstances, emotional health problems in the doctor may lead to patient abuse, including sexual abuse (Galletly, 2004).

Although it is thought that depression and associated problems may underlie most presentations in general practice, American studies have found that up to 60% of depressive cases receive inadequate treatment (Simon, 1995 and Young 2001 cited in Center 2003). The incidence of depression is increasing, particularly among younger cohorts. In Australia, up to 25% of young people who attend general practitioners have significant psychiatric morbidity (Llewellyn-Jones, 1997). A recent study conducted by the RACGP indicated that one in 17 young people visiting their GP have felt so distressed they have made serious plans to take their own lives. Depression is arguably the most important risk factor associated with suicide (Shaffer, Gould & Fisher, 1996) and general practitioners are a commonly visited within one month of suicide (Pirkis, 1998). In Australia, few general practitioners feel equipped to deal with mental health problems (Phongsavan, 1997; RACGP/RANZCP, 1998). Many GPs lack the necessary

skills and confidence in diagnosing and treating less severe psychiatric disorders, particularly in adolescents (Veit, 1995).

Research by Andersson *et al.* (2002) stressed the importance of personal experience in the ability to successfully work with depressed patients. It may be that improvements in GPs ability to deliver mental health services to their patients will also deliver improvements in their ability to obtain appropriate mental health services for themselves. However, it should be noted that the medical practitioners with the highest suicide risk are psychiatrists (Davis, 1998) suggesting that, just as medical training does not always improve the recipient's medical health, nor should mental health training be seen as any guarantee of improvement in the recipient's own mental health.

The underlying factor – emotional ill-health

There are three conditions from which doctors die more frequently than the general population: suicide, liver cirrhosis and accidents. Virtually all suicides are associated with significant psychiatric disorder, especially depression, and alcohol abuse. In the Western world, liver cirrhosis is usually secondary to alcohol abuse. Many fatal accidents may, in fact, be suicide. Therefore it can be seen that the presence of psychiatric disorder underlies the high mortality rates in these conditions.

Source: Davis, 1998

Summary: Patient care, particularly in the area of mental health, may be compromised by emotional illness in medical practitioners.

PART TWO

What are the origins of doctor emotional ill-health?

The literature surrounding the emotional health of medical practitioners suggests three potential sources. Firstly, people entering the medical profession may have a predisposition to develop mental illness. Secondly, medical training itself has been suggested as a potential source of emotional stress and damage. And thirdly, the work practices of medicine may place pressures of doctors which lead to emotional ill-health. Evidence for each of these factors will be reviewed in this section.

Predisposition to emotional problems

Personal characteristics

Selection into medical courses

Certain personality traits may be selected for by medical degree selection processes. Of those candidates who wish to become doctors, only those with particularly high grades may be accepted, potentially leading to the selection of personality traits associated with academic success in early life, such as intelligence, obsessive-compulsion, neuroticism, introversion, compliance to social control *etc.* Other factors, such as performance at school, may also influence career choice, with some entrants feeling obliged to enter medicine purely because they were fortunate enough to obtain grades good enough to do so. Allan (1988) found that 25% of students chose medicine because they were good at science as school. Such factors may be valuable for successful completion of university training, but may not always identify those best suited to medical practice. In particular, it seems likely that selection of academic high achievers is highly likely to increase the workaholic tendencies evidenced in doctors later in life along with an ability to single-mindedly focus on work to the detriment of other social activities.

Selection on the basis of academic merit may have other unexpected consequences. For example, high academic standards required for medical school do not permit representative entry from different ethnic and socio-economic groups. Medical schools are dominated by Asian students (50% at University of Sydney) but Pacific Islander and Maori students are underrepresented at the Auckland University medical school (despite a preferential entry scheme) (O'Hagan, 1998b). This potential lack of cultural diversity among doctors not only has consequences for the health care of minority populations, but may also place additional cultural pressures on doctors in attempting to provide health care to all sectors of the community.

Selection of medical career

Choice of occupation is strongly influenced by underlying personality traits. Fire-fighters are unlikely to score highly on introversion scales while librarians probably don't rate highly on sensation-seeking measures. People choosing medicine as a career may be influenced by an underlying desire or

interest in helping others or an interest in science and the disease process. Alternatively, some might be motivated by the prospects of professional autonomy and income.

Other factors may be significant, but not consciously recognised by intending medical students themselves, for example a fear of disease and death and a need to control them. Feifel (1967) found that doctors were more afraid of death than either seriously ill patients or healthy controls, however this finding has not been replicated. Similarly some have suggested that selection of a medical career may be a counterpoint against poverty, abuse, worthlessness, powerlessness and personality disorders. More specifically a body of research dating from the 1960s has suggested that students take up medicine because of a desire for social approval and identity.

In a highly influential study which has been widely cited in the literature on doctor health, Vaillant *et al.* (1972) concluded that doctors who experienced marital, drug abuse and psychiatric problems tended to have had unstable childhoods and adolescence. This finding was based on an intensive, largely qualitative, longitudinal study of 46 medical students over thirty years. These doctors were compared with 79 controls. More doctors reported marital disharmony, drug abuse and psychiatric disturbance than controls and Vaillant *et al. (1972)* suggested that these troubled doctors were also characterised by unhappy childhoods, figures derived from ratings of interviews and surveys of the subjects, their spouses and parents. Vaillant *et al.* (1972) also noted that these doctors tended to be involved in direct patient care, rather than in administration, surgery or research.

The small sample size and highly qualitative methodology employed by Vaillant *et al.* (1972) makes this research suggestive, rather than definitive. Unfortunately, little research has been conducted to either replicate or expand upon Vaillant's theories, making it difficult to assess their validity or generalisability across the medical profession. However, Pitts *et al. (*1961) reported that 35% of medical students had a family history of psychiatric illness (affective disorders and alcoholism) while Lief (1971) surveyed 60 first year medical students and found that 68% were responding in part to unconscious neurotic drives and unresolved conflicts from childhood. Virshup *et al.* (1993) and Bowermaster (1988) reported that 25-33% of medical students have families with significant alcohol problems.

Personality traits are not the only factors influencing career choice. Career choice is also strongly influenced by family occupational patterns. Children are more likely to take up their parent's occupations than other unfamiliar occupations and this familial tendency is well-recognised in medicine. Allan (1998) found that 15% of students were influenced in their choice of medicine by relatives and family. In the same study 15% of medical students had always wanted to be a doctor with 13% of student saying they had decided to be a doctor by age 10 and 57% having decided by age 15.

The decision to pursue medical practice may be influenced by a variety of personality traits which may be of considerable importance in the practice of medicine, but may also contribute to doctor's vulnerability to emotional ill-health. Allan (1998) reported that 12% of students chose medicine because they wanted to help and work with people. This high level of empathy may be a very desirable trait in a medical practitioner but empathy may also be associated with vulnerability to depression. Firth-Cozens (1987) found that

"those who had more depression as students and house officers, tended often to become more empathetic, self-critical and more internal in their attributions than their peers—all desirable attributes for a healthy doctor."

However the negative consequences of such traits are obvious. McCranie (1988) found that burn-out in practising doctors correlated with low self-esteem, passivity, social anxiety and withdrawal at time of entry to medical school. Pitts *et al.* 1979 attributed their finding of elevated suicide risk among female doctors to an "association between affective disorder and selection of a medical education and career by U. S. women." (p696).

The medical practitioner profile

Thus we have the stereotype of the grandiose workaholic doctor needing endless patient admiration to support self-esteem, denying personal weakness, yet fragile because of excessive emotional detachment and isolation.

Source: Hagan, 1998

Summary: The personal characteristics associated with the choice of medicine as a career (such as being a workaholic, high level of empathy, desire for social standing) may also make doctors vulnerable to emotional ill-health in later life.

Pressures from medical training

The high levels of stress and depression experienced by medical students is well-reported in the UK and US literature. Many medical students experience significant psychiatric morbidity during training. In an early study of 374 medical students at Otago, Ironside (1966) found that whilst almost a quarter had signs of psychological disturbance, 13.4% were psychiatrically ill from clearly recognisable clinical syndromes and a further 1.3% (or five individuals) were diagnosed as psychotic on the Minnesota Multiphasic Personality Inventory (MMPI). Few of these students sought any professional assistance for their illnesses despite the debilitating effects of ill-health on their work and personal lives.

In a review of the literature, Firth-Cozens (1987 cited in O'Hagan, 1998b) concluded that generally between 15-25% of medical students meet the criteria for a psychiatric diagnosis. Firth (1986) had estimated through her own research that emotional disturbance of 31.2% among UK medical students compared to 9.7% for an age-matched employed population. Similarly, Clark (1988) found that medical students had three times the prevalence of depression of age-matched general populations. Among female medical students the rate was ten times that of the general population.

Other studies have found that 30% of UK medical students have significant emotional distress (compared to around 10% for the general population or other students). Similarly, a Canadian study found that 30% of interns (and 40% of female interns) were depressed (compared to 15% for matched controls). A quarter of interns experienced suicide ideation. Similarly,

Center (2003) cites studies revealing rates of depression (15-30%) are higher in medical students and residents than in the general population. A recent study of New South Wales medical students found that stress and burnout levels steadily increased through their medical training, peaking in their intern year (Willcock et al., 2004).

Sources of stress

In Firth's (1986) study of fourth year medical students on placement found that overwork was rarely cited as a cause of stress. Relationships with consultants were the single greatest cause of particularly stressful incidents, with effects on personal life, responsibility and talking to terminally ill patients also rating highly. Stress may be increased through academic pressures to perform as well as personal abuse from consultants and workplace sexism.

Medical training may be criticised for its focus on the rational and biological issues of health, while it neglects the intuitive and emotional aspects. Training tends to be hierarchical, competitive and grade or success-focused, rather than acknowledging personal feelings and self-awareness. Performance based measures of success may undervalue the development of interpersonal skills. The lack of recognition according to personal and emotional health (both of self and of others) may significantly reduce the medical student's ability to deal with these issues in later practice. The culture of self-denial and altruism may seem appropriate in medical practice, yet taken to an extreme may seriously impede a doctors ability to both stay healthy and deliver quality health care to others.

Summary: Medical training appears to be a particularly stressful process, not just because of academic demands, but because of the lack of emphasis on interpersonal and communication skills among students and their teachers. Absence of interpersonal support not only has a negative emotional effect on students, but may fail to provide them with necessary emotional skills for their subsequent medical practice and self care.

Occupational stress of medical practice

Despite abundant anecdotal and qualitative evidence of the sources of workload stress among doctors, there are few quantitative studies illustrating either the level of workload among doctors, compared to other professions, or evidence of the stresses caused by this workload.

Doctors frequently report difficulties caused by workload, time pressures, paperwork, practice management, after hours work and bureaucratic changes. Problems with financial management and adequate levels of remuneration may also contribute to occupational stress. Such stressors are likely to vary depending upon the area of medical specialisation and type of practice. For example, administrative stressors may be lower for part-time practitioners operating as part of a large practice or clinic compared to rural solo GPs. Sutherland & Cooper (1992) found a slight increase in burn-out levels among general practitioners between 1987 and 1990, following the introduction of the general practitioner contract in the UK, which increased

both medical and administrative workloads. Occupational stresses relating to medical practice may also be greater for practitioners with few professional colleagues for liaison, referral and locum services.

Health professionals also face significant emotional pressures within their work. Doctors may face difficult consultations involving death and dying, complex psycho-social issues and emergencies. Many practitioners, particularly those involved in psychiatric, drug abuse and general practice may face risks of violence and concerns for personal safety. All medical practitioners face pressure to meet patient expectations and every increasing concern over potential litigation. Schattner and Coman (1998) revealed that time pressure to see patients was the most frequently cited stressor for general practitioners, while threat of litigation was rated as the most severe stress (see below).

Top ten sources of stress for general practitioners

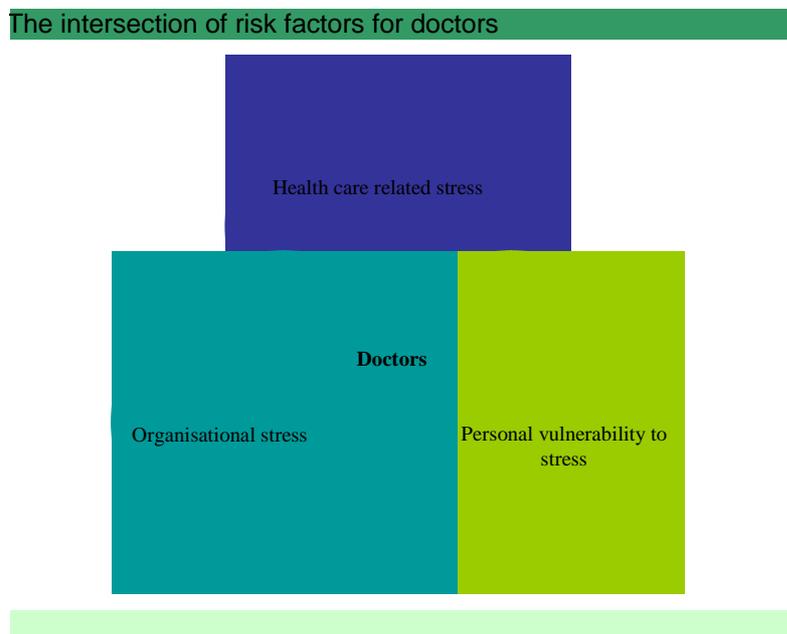| *Most frequent stressors*	*Most severe stressors*
1. Time pressure to see patients	1. Threat of litigation
2. Paperwork	2. Too much work to do in a limited time
3. Phone interruptions during consultations	3. Earning enough money
4. Too much work to do in a limited time	4. Patients who are difficult to manage
5. Intrusion of work on family life	5. Paperwork
6. Patients who are difficult to manage	6. Intrusion of work on family life
7. Home visits (in hours)	7. The cost of practice overheads
8. Earning enough money	8, Time pressure to see patients
9. Intrusion of work on social life	9. Unrealistic community expectations
10. Unrealistic community expectations	10 Negative media comments

Source: Schattner & Coman,1998

Doctors frequently report difficulties in dealing with role conflict and establishing clear personal and professional boundaries. Doctors complain that they are too often seen as people who "are" doctors rather than people who "do" doctoring. This may be a function both of the social expectations placed upon doctors as community figures as well as the expectations doctors have of themselves. Such pressures may be greater on rural general practitioners, for example, than urban doctors. However, Vaillant (1972) argues that many doctors chose medicine as a career precisely because of their need for social approval and recognition. It is noteworthy that scores on the General Health Questionnaire in Schattner and Coman (1998) did not correlate strongly with self reported stress levels. Many of the pressures facing doctors, particularly those associated with direct patient care, may also be shared with other health professionals. Evidence for the influence of general health-care stress can be found in the similar mortality from suicide and cirrhosis across health professions (Balarajan, 1989).

There is little doubt that medical practice frequently interferes with family and leisure time (Puddester, 2004). Part of this interference maybe common to both "self-employed or fee-for-service occupations and highly paid occupations. Highly paid salaried occupations, such as upper management, typically require longer hours, fewer holidays and less sick leave than lower paid waged positions paid by the hours worked. Such work conditions may be "expected" rather than "required". Similarly self-employed or fee-for-service occupations tend to take fewer holidays and less sick leave. In this sense, some of the unhealthy work practices associated with medical

practice may be associated with more general social or personal expectations associated with highly paid and self-employed work.

Thus many of the stresses facing doctors may be common to other highly paid and/or self-employed individuals or to other members of the medical profession. Nor are all doctors equally exposed to these risks—salaried medical researchers, for example, may have little exposure to either the pressures of direct patient care or organisational stress of self-employment or fee-for-service arrangements. Overall, however, it seems that doctors as a profession, and some specialities and practices in particular, lie at the intersection of two high pressure occupational spectra. If the psychological profile of people entering the medical profession, or the training system provided to doctors, is found to predispose them to poor coping strategies and vulnerability to emotional distress, then the risks facing doctors are further compounded.

The intersection of risk factors for doctors

Health care related stress

Doctors

Organisational stress

Personal vulnerability to stress

Summary: Many doctors face an increased risk of emotional ill-health because of the intersection of three major risk factors. These risk factors include (1) stressors related to the health care profession (particularly direct patient care), (2) stressors related to self-employment, fee-for-service and/or high remuneration employment and (3) increased vulnerability to stress through personality traits and/or medical training.

PART THREE
Improving doctor emotional ill health

The evidence for emotional ill health among medical practitioners has been apparent for many decades. Despite wide variation in study approaches, methodologies and subject populations, consistent patterns have emerged since the 1950s across many different countries. The most striking outcome of this literature review is not the paucity of evidence for emotional ill-health, but the apparent past lack of interest in addressing the problem in an effective manner.

Recent developments suggest that this attitude is finally changing. Internationally there has been an upsurge in programs aimed at improving doctor health (reviewed in the US by Brown & Schneidman, 2004; the UK by Oxley, 2004 and Canada by Puddester, 2004), while in Australia concerns over emotional health issues seem finally to have moved into the public sphere as evidenced by the recent Doctor's Health and Lifestyle issue of the Medical Journal of Australia (2004:181;7) and increasing contributions to the Royal Australian College of General Practitioner's "Doctor's health" website (http://www.racgp.org.au). Despite these promising developments, the approach to tackling doctor's health issues is by no means straightforward.

Notwithstanding some evidence of a predisposition to emotional vulnerability among people choosing a medical career, there is no simple means of selecting against such vulnerability. Many researchers have pointed out that the very values which make good doctors may also make them vulnerable doctors. Nonetheless, medical schools have apparently reported improved medical student outcomes from selection methods which do not rely simply on academic achievement but instead measure a broader spectrum of social and personal skills.

Some of the stresses associated with direct patient care may also have an intractable element. Death, responsibility and patient demands are probably unavoidable in medical practice. Organisational demands such as administrative workload is always an ongoing concern for medical practice and one which probably has a permanent place on the agenda of consultations between the relevant peak medical bodies and government agencies.

The seeming intractability of these stresses, however, belies the relatively simple measures taken by many doctors to overcome them. Stress is an internal reaction to external demands and while external demands may be difficult to alter, appropriate support mechanisms may dramatically alter the individual's internal reaction and significantly reduce stress in their lives.

Medical training is clearly the starting point for assisting future medical practitioners to deal with the significant stress factors they may face in their careers, a challenge many medical faculties are currently tackling. Calls for improved training in interpersonal skills, communication and acknowledgement of emotional values in medicine have come from a variety of sectors. There is little doubt that such training would assist

medical practitioners to improve their quality of patient care, particularly in areas of mental or emotional health. This report highlights that such training would also assist medical practitioners to take better care of themselves and their families. Over time, such training would also improve the skills of medical practitioners and consultants involved in the superversion and training of students and interns, potentially reducing a major source of stress for medical students. In the interim, however, specialised training programs are probably required to "train the trainers", thus breaking the cycle of negativity, self-denial and masochism which may be perpetuated in some aspects of the medical training system.

Alterations to medical training are central to addressing the disproportionate level of suicide and depression among female doctors. Rather than requiring segregated or targeted support programs for female students, a process of "feminising" medical training has the potential to bring significant benefits to all medical students and their future patients, not just women doctors. Increased recognition of emotional health issues and improved psychological training has the potential to assist doctors to maintain their own emotional health, the health of their spouses and families and more effectively address the increasingly frequent emotional health issues seen in their patients.

Beyond this long-term approach, there are numerous strategies available to provide immediate support for doctors already working.

Support strategies

Self care

As part of a campaign to improve the health of general practitioners in New Zealand, the Royal New Zealand College of General Practitioners published a guide to self-care. The booklet focuses on identification, prevention and support and outlines numerous methods for improving self-care and professional support.

Role boundaries

Some of the strategies for prevention include reviewing boundaries between work and other parts of life. Given the tendency to see doctors as doctors rather than doctors as people who doctor, role definition and clear boundaries are an important mechanism for minimising work encroachment on personal lives.

Stress reduction strategies

The adoption of appropriate stress reduction strategies will differ between individuals but may include, learning to say no to work commitments, separating work from home and taking breaks from work (small and large). Other strategies which may suit some people include grounding, meditation or regular exercise. One of the most important stress reducers is, however, the ability to ask for help when it is needed.

Upskilling in a variety of management skills may also significantly reduce workload and work pressure in medical practice. These skills may include time management skills, communication, team work and interpersonal skills.

Family support

The high level of suicide among the spouses (particularly wives) of doctors is an under-researched area and few strategies have been implemented specifically to address this concern. In general it is assumed that improvements to the self-care strategies of the medical practitioners, including improved role boundaries, communication skills and stress reduction strategies will result in improvements to family life and marital relations, thus indirectly reducing suicide levels among the spouses of medical practitioners. This assumes, however, that suicidal intent is higher in this group than the general population. The contribution of improved medical knowledge and access to potentially fatal drugs (independent of any increase in suicidal intent) has not been investigated. Greater awareness of suicide risk among medical spouses and the importance of independent medical care for family members is probably also required to minimise this significant problem. Specific support mechanisms for doctors' spouses have also been developed overseas, for example the New Zealand Rural GP Network and related Spouse and Nurse Networks (London, 1998) and may require further investigation within the Australian context.

Professional support

Doctors for doctors

Encouraging doctors to see their own general practitioner is very difficult, even when they agree it is important in theory. Even more difficult is recognising the need for doctors to see GPs about emotional health issues, despite the fact that this seems to be an area of particular vulnerability. The New Zealand Self-Care booklet suggests selecting an appropriate general practitioner and making sure they are visited on a professional basis at least twice a year to establish a good relationship. In relation to medical self-care, the Self-Care book advises:

> **Your own general practitioner should NOT be**
>
> - Your partner in life nor
> - Your partner in practice.
>
> *Source: RNZCGP, 2002*

The Doctor's Health Advisory Service in NZ receives about 50-70 referrals/year mostly in a late stage (O'Hagan, 1998). Similarly the Victorian Doctors Health Program has provided 220 services for doctors over the 3 years it has been operating (Warhatt, 2004). The tendency to seek help only late is one of the key problems underlying doctor health and the need to move into preventative health issues for GPs is well-recognised, if not well-practised. Specialist training for GPs as "doctors for doctors" may be worthy of further investigation.

Supervision and mentoring

Many doctors rely upon professional supervision or mentoring programs to address specific work-related concerns. Mentoring and supervision are often conducted by a senior member of the doctor's speciality, by a specially trained colleague or by a trained counsellor or psychotherapist. This

process tends to be short-term rather than ongoing and allows one-to-one tutoring in stress reduction strategies, identification of problem areas and methods for dealing with problematic work situations.

Balint groups

Balint groups were established for doctors in the United Kingdom by Michael Balint. Balint's seminal book "The doctor, his patient and the illness" (1957) outlined the need for improved training for doctors in psychoanalysis to assist them to better communicate with and understand their patients. This lead Balint and his wife Enid to set up a number of training groups for GPs in London facilitated by a psychoanalyst, allowing GPs to discuss ways of working with their patients, particularly "difficult" patients or patients with psychological problems (Kutter, 2002).

Balint groups spread throughout the world over the ensuing decades although they have declined in recent years (Salinsky, 2002). Nonetheless some of the principles of Balint groups have been taken on by other support methods, particularly peer review processes and quality circles (Kutter, 2002).

Personal account from a successful Balint group

"As a solo rural practitioner and a long term member of a Balint group for 17 years, the knowledge gained from the group has been invaluable in decreasing stress within the consulting room. When a colleague presents with a pressing problem, either work related or personal, the group has deviated totally from its agenda to accommodate the needs of the doctor. The strong emotional support with the group and sense of trust allows issues to be aired that would be difficult to discuss in any other situation."

Source: RNZCGP, 2002

Peer review groups

Peer review groups were first trialled in the Netherlands in 1979, through a project run at Nijmegen University to improve quality of general practice through peer review in local groups (Beyer *et al.* 2003). Small groups of GPs met eight times a year for 1.5 hours to discuss doctor-patient communication, practice management issues and medical performance. These trials were very successful and received positive evaluation by participating general practitioners. Quality control studies demonstrated the effectiveness of the peer review groups in improving practices and optimising patient care. Peer review groups were adopted by the Dutch College of General Practice and became widely established through the Netherlands in the 1990s. It is estimated that between 60-80% of GPs in the Netherlands participate in some kind of peer review process. A similar program was established in Denmark in 1995 (Beyer *et al.* 2003).

Peer review groups have also been established in New Zealand where up to 470 operate around the country. The success and function of these groups varies considerably, with their approach and outcomes largely determined by their participants. While the New Zealand College of General Practice advises all GPs to join a peer review group, they also stress the importance of choosing a group which suits the needs of each individual (RNZCGP, 2002).

Quality circles

Following the success of the Dutch trials, "quality circles" were established in many European countries in the 1980s and 90s. These groups share some similarities with the Balint groups, in that they are lead by a moderator or "tutor". However, rather than being a psychoanalyst, these group leaders are general practitioners who have received some training as moderators or in small group facilitation. These groups often developed spontaneously, driven by demand among medical practitioners, particularly GPs, and participation is voluntary rather than part of any accreditation process. The focus of the quality circles tends to be improving quality of care, rather than education or self-awareness *per se*. Trials in Germany, Poland and Ireland have all investigated training for tutors or facilitators (Beyer *et al.* 2003). In Germany around 2500 quality circles across a variety of medical professions have been established. In Ireland, up to 60% of GPs belong to Continuing Medical Education small groups with a total of 120 groups across the country. These groups are lead by local GPs who are trained and funded as tutors. The groups encourage mutual support between members including inter-referrals between GPs. In addition to tutor training, the Irish College of General Practitioners has also produced a manual on small group facilitation and organization and regularly evaluates tutors (Beyer *et al.* 2003).

Personal account from a successful peer review group

"Over the past 11 years, the group has met every two weeks, apart from holidays…We have shared professional success and failure, professional error, professional misjudgement and many problem patients. During each crisis we have all had support from within the group...The success of the group has been largely due to real commitment, regular meetings and the constant nature of the members. For me the friendship, support and understanding has been immeasurable."

Source: RNZCGP, 2002

The Australian context

Professional Peer Support Groups

This literature review has been conducted as part of a process to investigate appropriate means of improving the emotional health of medical practitioners in Australia.

Investigation for introducing improved university training in self-care and psychological health among medical practitioners requires the involvement of a wide variety of stakeholders, particularly the Deans of the relevant medical faculties. Making medical training and medical practice more appropriate for women would also require input from organizations and networks representing female medical practitioners.

Development of a self-care program similar to that operating in New Zealand and Ireland would seem to be the most appropriate course of action to improve the emotional health of doctors, their levels of work satisfaction and the quality of care they provide to their patients.

A self-care program would require the involvement of a number of organizations, particularly the peak body representing different medical specialties. Given that general practitioners and psychiatrists, for example, seem to be particularly vulnerable to the problems outlined in this review involvement of the Royal Australian College of General Practitioners and the Royal Australian and New Zealand College of Psychiatrists would be essential. The field of psychiatry has extensive experience in the use of peer review groups and professional support programs for their members, while recent developments have seen these strategies spread into general practice in other parts of the world. By sheer weight of numbers, general practice remains one of the core target groups for self-care programs. Professional expertise from organizations like the Australian Psychoanalytic Society and the Psychotherapists section of the RANZCP would also be particularly beneficial for program development and implementation. Other key organizations include the Medical Board of Victoria and the Victorian Doctor's Health Program.

Following the completion of this literature review, and incorporation of feedback and comments, a plan could be developed around the framework and function of a professional peer support program. This might include training strategies for group leaders, a code of ethics for PPSGs, a framework for the content of groups and the development of a work book or manual for doctors. In order to be successful, PPSGs may need recognition as part of Continuing Medical Education and will certainly require support from the APS and RANZCP as well as a specific organisational location within the RACGP.

Recommendations: That the professional peer support group (PPSG) program be developed for Australian medical practitioners including:

- A review of current medical education practices in relation to supporting and promoting emotional health among medical students, particularly female students
- Support for areas of medicine with high vulnerability to emotional health issues, such as rural and/or solo general practice and psychiatry
- Specific programs, such as doctor and spouse support networks, for family members
- The establishment of a PPSG advisory and review body comprising stakeholders from the state and federal health authorities, the medical practitioner's board and the colleges associated with the relevant medical disciplines
- A model of small professional peer support groups underpinned by a credible ethical framework, to be run by and across the medical profession, in association with the relevant professional bodies
- A self-care workbook for doctors, based on overseas model and adapted for the Australian context
- Ongoing training, support and evaluation for peer support group leaders
- Promotion of peer support group membership
- Promotion of doctors for doctors and doctors for doctors' families

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