



Understanding performance

difficulties in doctors



An NCAA report
November 2004



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Introduction

Like other health professionals, most doctors work hard, strive to achieve high standards and provide excellent services for their patients. But, of more than 100,000 practising doctors in the UK, it is inevitable that some fail to meet reasonable standards. Why does this happen? Why should someone who has had the ability and commitment to enter medical school and qualify as a doctor come to under-perform in practice? The reasons are complex and rarely as simple as lack of clinical knowledge and skills. What are the factors that cause a doctor who can practise safely not to do so? Why are some doctors able successfully to address their difficulties while others are not?



What is the impact of factors such as physical and psychological health, cognitive impairment, personality, attitudes, values, beliefs? How do workload, sleep loss, shift patterns, organisational culture, teamwork and leadership affect performance? What is the impact of life events, family and background? This report sets out to provide some answers to these questions.

The National Clinical Assessment Authority (NCAA) was established to promote good clinical performance by supporting NHS personnel in dealing with concerns about doctors and dentists. In order to understand the

various factors which might impact on performance, an expert group was brought together by the NCAA to explore and describe factors other than clinical competence. The names of those who contributed are included at the end of this report. Their work and that of other commissioned experts will be published as a book in 2005.

This report is in part a summary of the book, but set out in such a way as to assist those who deal with performance difficulties in doctors and dentists and make decisions about them. These staff may be, for example, senior health service managers, and medical and clinical

directors. It aims to help them recognise more easily, and perhaps earlier, what may lead to performance difficulties and, as a result of their understanding, how best to rectify them. The report should help them to make decisions and, where possible, assist them in bringing about any necessary changes more quickly than at present so that problems are less likely to cause harm, or become entrenched and so more difficult to ameliorate.

The sections are based largely upon research findings. Although these are not referenced here, the evidence base will be described in some detail in the book and is available on the NCAA website at www.ncaa.nhs.uk.

This work was initiated at a time when the NCAA's remit extended only to doctors, so this report focuses on factors that may impact on the performance of doctors. However it is likely that it is generally applicable to a range of staff working in

We also look at the effects of personality, attitudes and behaviour on a doctor's performance. Rarely investigated in medicine until now, these factors are attracting increasing interest, especially with the introduction of the behavioural assessment as part of the NCAA process.

Performance is affected by a complex interplay of personal and situational factors including organisational culture, physical environment, teamwork and leadership. Workload, sleep loss and shift patterns can all have a deleterious effect on clinical performance. Workload, for example, affects physical and mental ability in the form of decision-making, attention span, fine motor control and level of motivation. Sleep loss increases the risk of human error and shift work can cause biological disruption which in turn may lead to impaired health and psychological well-being including 'risky' coping behaviours such as alcohol or drug misuse.



the NHS. Even so, assessment of any factor and all interventions should take into account the characteristics, background and circumstances of the individual person.

Overview of contents

In this report we look at the difficulties of doctors in managing their own health. We consider physical and psychological health and disease including cognitive dysfunction, the disorders that cause it and the place of occupational health and neuropsychological assessments.

Where possible we suggest methods for assessing each factor and interventions for organisations as well as individual practitioners.

Whilst we are aware of many of the limitations of this exercise we hope that this report will be of interest to individual practitioners and to those responsible for professional performance in the NHS and abroad. In the longer term we hope that the insights gained from this work will help us to promote, and in some cases restore, confidence in doctors and improve the safety of patients.

How to use this publication

If there is concern about a doctor's performance consider all the following questions:



1. Is there a difficulty with clinical knowledge and skills?

This may require formal testing.

2. Do they have a physical illness?

Is there a new or previously unknown physical illness? Has previous chronic illness worsened or relapsed? Could the behaviour be medication related? See Section 1 on physical health.

3. Is the individual depressed or suffering other mental illness?

Whether or not linked to life events, this can affect decision-making and memory and make an individual lose confidence and be irritable. See Section 2 on psychological factors.

4. Might alcohol or substance misuse be involved?	See Section 2 on psychological factors.
5. Could there be a cognitive problem?	This may be caused by alcohol abuse, some chronic physical illness, a head injury (even one which seems mild) or by illness such as Alzheimer's Disease. See Section 3 on cognitive factors.
6. Have they had a recent life event?	Events such as separation, family illness, financial worries and even the birth of a child can affect both psychological and physical health temporarily. See Section 2 on psychological factors.
7. Might a deficiency in education, supervision or CPD be contributing to the problem?	It is possible for doctors to miss certain important aspects of education or to have had poor role models or supervision. See Section 5 on education, CPD and appraisal.
8. Have they been promoted?	It is possible they need support in learning leadership skills. See Section 9 on leadership.
9. Have work factors changed?	Are they losing sleep or working longer hours or with less support? See Section 7 on workload, shift work and sleep loss.
10. Are there team difficulties?	Has their principal team changed its function; is there new leadership or a new member who may have interpersonal problems with this doctor? See Section 8 on teamwork and Section 9 on leadership.
11. Have there been major organisational changes?	These may conflict with individual attitudes and values. See Section 6 on organisational culture and climate.
12. Could issues relating to equality and diversity be a problem?	Consider factors that may disadvantage an individual from a minority group. See Section 2 on stress and Section 6 on organisational climate.
13. Is this really new behaviour or is it an exacerbation of longer standing problems?	In this case the behaviour may result from a difficult personality or attitudes which are no longer acceptable. See Section 4 on characteristics and behaviour.

Section 1

Physical Health and Disability

Key points

- Doctors are often reluctant to seek help about their own health
- A full occupational health assessment is required in cases of chronic illness
- Problems can occur if the workplace is not suitably adapted for staff with disabilities, or if attitudes make practice difficult
- Many chronic illnesses can also be associated with depression.



There is only a small body of research into the physical health of doctors and its effect on their performance. Although doctors undoubtedly suffer from all the illnesses that afflict others, the principal studies on their health primarily concern depression, burnout and substance abuse. Studies show excess mortality for doctors from overdose of prescribed drugs (males), suicide (females) and cirrhosis of the liver. Mental health will be dealt with primarily in Section 2, while this section deals with the potential for physical illnesses to affect judgement and performance.

As a group, doctors appear reluctant to admit to illness and colleagues may collude in this. There is evidence of considerable self-prescribing and informal referrals to consultants. Less than half of junior doctors have a general practitioner. Doctors have very little short-term sickness absence. Treating doctors can be difficult because they are constrained by their knowledge of disease and by their previous professional experience. In general doctors' perceptions of what it is like to be ill are based on their observation of patients who are ill.

Disability

Disability is defined as the result of either long-term ill health or of physical, mental or sensory impairments. Although people can be perfectly healthy with an impairment and can fulfil professional responsibilities despite having a chronic illness, there is the potential for problems to occur if the workplace is not suitably adapted or if attitudes make practice difficult. Full occupational health assessment will be required.

The table that follows lists illustrative examples of some common chronic illnesses and their potential to affect performance, also the potential of work to impact on the course of the illness.

Condition	Possible impact
Diabetes	Long hours of work, irregular meals and stress may impair control. Doctors with diabetes may maintain blood sugars at higher than desirable levels to avoid hypoglycaemia, for example in the operating theatre. Occupational Health (OH) support and awareness by colleagues may help.
Multiple sclerosis	Relapses may occur intermittently, causing periods of temporary unfitness followed by periods of fitness to practise. Other cases progress more steadily. MS may affect eyesight, mobility, coordination and balance. Attitudes and support of colleagues matter considerably.
Epilepsy	Implications for safety-critical and on-call work if alone or driving. The difficulties involved depend on whether there is sufficient warning of seizures, their frequency and nature. OH assessment is essential.
Parkinson's disease	Generally presents in later life with tremor, rigidity, slowness, and difficulty in starting and stopping walking. Side effects of drug treatment may cause additional problems. Continuing to practise may be difficult after diagnosis, especially in surgeons.
Bowel disease	Those with ulcerative colitis may suffer malaise and tiredness. There may also be behavioural changes if steroid treatment is used. OH support and understanding by colleagues is often needed.
Arthritis	Spending time standing or walking may be difficult, and use of the hands may be affected. Doctors may not be able to maintain set postures so some branches of medicine (particularly in theatre or interventional radiology) may be hard to pursue. Progress and disability are very variable.

Depression with physical illness

Many illnesses, including those referred to above, can be associated with depression. Some symptoms, such as tiredness, and weakness, are difficult to distinguish from the physical illness that underlies the depression. For assessment of depression see Section 2.

Cognitive impairment and physical illness

Some illnesses may cause cognitive impairment at some point. The commonest of these are: **multiple sclerosis, Parkinson's disease and cardiovascular disease**. Cognitive impairment is dealt with in more detail in Section 3.

Assessment

A **full occupational health assessment** should be considered when there are concerns about a doctor's performance. The performance difficulty may be the first indication of a new health problem or a health problem previously unrecognised or it may relate to the impact of a chronic illness. The NCAA routinely includes an occupational health assessment when it assesses a doctor or dentist. There is increasing discussion of **screening**, including checks for drug or alcohol misuse, for all health workers, particularly those in safety-critical jobs.



Ageing and ability to work

Functional decline can be seen from 30 years, and significantly after 50. Examples of age-related decline are decreases in cardio-respiratory capacity, muscle strength, hearing acuity and speed of response.



Section 2

Mental Health and Performance

Key points

- Stress, depression, alcoholism and drug dependency are all recognised as particular problems within the medical profession
- Evidence clearly shows that these factors can have an impact not only on the doctor but also on patient care and/or the patient experience
- It is important to understand the underlying causes, in particular the interplay of individual and organisational causes, so that appropriate remediation can be put in place
- There are a number of questionnaires which can be used as tools in assessing stress, depression, alcoholism and drug dependency.



Levels of stress in health service professionals – especially in doctors and nurses - are high, with around 28% showing above threshold symptoms at any one time compared with 18% of British workers as a whole. In addition, depression, alcoholism and drug dependency are particular problems for doctors, not only in the UK, but also in North America, Europe and Australia. Between 10-20% of UK doctors become depressed at some point, and the suicide rate is also raised, particularly for women. Alcoholism affects a higher proportion of doctors compared with other professional groups, and is a largely hidden problem that often goes unacknowledged for many years.

Drug addiction appears to be growing worldwide and again this is becoming recognised as a particular problem for doctors who have easy access to opiates and other drugs of choice.

Co-morbidity between these conditions is frequent – correlations between stress and depression and between depression and alcohol abuse are particularly high. Although doctors experience other mental health disorders, these are not present in unusually high proportions.

Effects upon performance

Stress and depression produce a number of symptoms and signs which affect good doctoring. The most important of these are problems with concentration, attention, memory and decision-making and a rise in irritability. Alcohol and drug abuse not only affect patient care directly but may also affect long-term performance by causing long-lasting brain dysfunction (see Section 3). In addition, under-treatment by doctors of these disorders in themselves is well recorded, and may increase the likelihood of their under-treating their patients, particularly for depression and alcohol abuse.

There is evidence that errors rise along with stress levels in a number of settings, including health care. Low job satisfaction is highly related to high stress, and has been shown to lower patient satisfaction

What causes the problems?

Stress, and probably depression too, may come from a combination of individual and organisational causes.

Individual causes:

Life events are linked to both physical and mental illness. Young doctors often have a number of events coming together. **Gender** differences are apparent in that female doctors are more likely to become depressed than males, but only when they begin work, and only in hospital medicine. **Poor coping** strategies, especially dismissing or avoiding stressful situations, lead to higher symptoms. There are indications too that doctors may learn to cope with stress by excessive alcohol use which may lead to later problems both of alcoholism and depression. Strongly **self-critical personality** is predictive of later



and compliance with treatment. Stress levels and medication errors are related but group-based stress management interventions lower both symptom levels and legal claims, showing that organisational remediation is possible. High staff stress also affects patient care by its cost to the organisation in terms of increased absence, suspensions, early retirement and litigation.

depression and stress. (But see Section 4 on Personality and low self-criticism).

Organisational causes:

There is no doubt that the organisation plays a large part in the mental health of its staff.

Organisational causes of stress include all those which research shows lead to stress in workers in general: **poor support** from supervisors and managers; **poor teamwork** (see Section 8); a **lack of control** over how the tasks are performed; **overload** (see Section 7) and a **lack of resources**. **Sleep loss** has a significant effect in lowering mood. In addition, within medicine a major and increasing stressor includes a **fear of making mistakes** and of **litigation and complaints**. An **organisational culture** which is open and fair and where trust is high is likely to reduce this stressor somewhat, though doctors will usually need extra support if they face litigation or suspension.

Assessment

Clinical assessment of the individual doctor is important, and psychometric assessment can help. The General Health Questionnaire (12 items) is a good measure of general distress in a population, such as a department or Trust. The Hospitals Anxiety and Depression Scale (HAD) is a well validated measure of individual depression and anxiety, and is easy to complete. Asking the person "Are you depressed," is a simple screening measure. Other questionnaires (e.g. "AUDIT") are available to help detect harmful and hazardous alcohol use.



Institutional racism may be defined as the collective failure of an organisation to provide appropriate and professional services to people because of their colour, culture or ethnic origin. There is evidence that racism experienced by doctors is an important source of stress for those affected by it and can impact on health and performance. In addition, perceived discrimination or harassment impact negatively on an individual's sense of personal well-being and result in higher levels of psychological distress.

Prevention

Organisations may help to prevent high stress levels and promote mental health by good **management practices and supportive cultures**. The growing use of **mentoring and coaching** may also prove to have a preventive role. Other preventive measures for all staff include: **stress management training**, educational programmes to encourage **recognition of alcohol problems and depression**; and having one's own **GP**.

Secondary interventions include the **provision of psychiatric, counselling and psychotherapy services**; links to **agencies such as Alcoholics Anonymous and Relate**; **improving communication with patients in handling complaints**; **supporting doctors at risk or facing claims**; **career counselling**.



Section 3

Cognition and Performance

Definition

Cognitive impairment is the term used to cover concerns about a practitioner's memory, reasoning or decision-making ability.

Key points

- If a doctor's performance has changed, it is worth considering cognitive impairment as a possible cause
- The possibility of cognitive impairment may be raised by a change in a practitioner's memory, reasoning, decision-making or organisation and psychomotor skills
- There are a number of possible underlying causes
- Treatment is possible for some conditions, but expert assessment will be needed to reach a diagnosis and determine future work possibilities.



Good Medical Practice, the General Medical Council's guidance to doctors, describes key competencies which include consulting skills, decisions around treatment, recognition of and action in emergencies, and recognition of one's limitations. All of these involve cognition. A doctor's memory, reasoning, learning, attention, understanding, communication, empathy, decision-making, and emotional control all involve cognitive functions that are necessary to perform well. Nevertheless, after their final postgraduate exams, most doctors are never tested again on any of these skills.

Although cognitive impairment is relatively unusual, if a doctor's underperformance represents a change from how he or she was in the past, it is worth bearing the possibility in mind and, if necessary, arranging for a neuropsychological assessment.

Presenting Symptoms of Possible Cognitive Impairment

Memory difficulties, both long- and short-term:

Memory loss caused by head injury, Alzheimer's disease and some cases of depression affects current and recent memory. This may make it impossible for an individual to hold new information long enough to make a decision.

Inability to plan, organise and prioritise:

Frontal lobe dysfunction causes apathy, decision-making problems and mood changes.

Psychomotor skills deficits:

Impairment can occur in visuo-spatial skills, leading, for example, to ineffective physical examination of patients or deterioration in performance in pathology or surgery.

Mood disorders, particularly depression:

These can be seen with head injuries, particularly of the frontal lobe, but also in dementia and other cognitive disorders as the person finds increasing difficulty in dealing with everyday work. Distinguishing depression from the dementias is often difficult and requires expert assessment.

Potential Underlying Causes of Cognitive Impairment

The Dementias: There are many causes of dementia, the different symptoms and signs depending on which area of the brain is affected and the stage of progression. The following are some of the commoner dementias.

Medical conditions:

Dementia may arise in a number of conditions such as multiple sclerosis, Parkinson's disease, epilepsy, cardiovascular disease, and infections.

Alzheimer's Dementia:

The cardinal early signs are memory impairment and difficulty in naming and word-finding, followed by reduced concentration and inflexibility. There is usually a lack of insight. The age of onset is very variable.

Alcoholic brain damage:

Binge drinkers seem less at risk of long-term cognitive damage than do daily heavy drinkers. However even moderate alcohol intake can impair memory, attention, visuo-spatial processing, performance of complex tasks and decision-making. Abstinence leads to improvement.

Head trauma and brain injury: Especially common after road traffic accidents, even if unconsciousness or amnesia did not occur. Work-based signs include slower thinking, concentration loss and fatigue. Depression is common. Symptoms often improve between 6-12 months, but some become chronic, showing some or all the presenting problems listed earlier and personality and behaviour changes.

Depression: When severe, this usually affects cognition, in particular recent and current memory and learning and decision-making processes, with a general slowing of mental functioning.

Medication: Some medication, such as anticholinergic agents or steroids can affect cognition.

Assessment

Diagnosing neurological disorders is complex and a neuropsychological or neuropsychiatric assessment is important in order to do this accurately and to judge the effects of the condition upon work. Distinguishing primary depression from brain disorders is often necessary.

Remediation

About a third of **head trauma** patients get back to previous employment and rehabilitation may help, especially alongside psychological help for coping with memory problems. Outcomes are worse in older



Coronary heart disease: There is increasing evidence of some slowing of cognitive processes with coronary disease, especially following a cardiac arrest or bypass operation.

people who have had a head injury, and in heavy drinkers. Personality change following frontal lobe damage can be intractable and fitness to work needs careful assessment.

Treating **depression** with cognitive-behavioural therapies has been shown to increase cognitive functioning (unless there is an underlying brain disorder). Other psychological interventions such as counselling and work-based interventions may also be appropriate. [See Section 2 on Mental Health.]



Section 4

Personal Characteristics, Behaviour and Performance

Key points

- Personality can have significant effects on the behaviour of individuals, and those they work with
- It is important to understand what makes individuals behave in different ways; there are a number of psychometric tools to assist with this
- While underlying personality can be difficult to change, attitudes and behaviours can be adapted (for example, through coaching).



The personal characteristics of individuals play a role in the quality and safety of care. The doctor always has an effect in terms of direct communication with and treatment of patients. Individuals also affect other staff by their behaviour and this in turn can benefit or diminish the quality of care given. Underlying these behaviours are individual characteristics - personality type and attitudes (discussed in this section) and mental health (covered in Section 2).

Most of the evidence for this section comes from studies not undertaken on health care staff – in literature covering health, social and clinical

psychology, and management. Much of it is of high quality and findings are strengthened by their concurrence across different fields.

Impact of personality on behaviour

The table on the next page shows the key personality characteristics shown to affect trustworthiness, safety behaviours, leadership, interpersonal relationships and performance. Those with a star* have been investigated in health care staff, including doctors. Because the table is derived from different studies there is some replication and overlap.

Personality characteristics	Behaviours
Risky personality*	May show: low risk perception , though those with high risk perception may still seek risk; sensation-seeking (risky sports, driving, alcohol and drug taking, criminal and risky sexual behaviours); impulsiveness ; low boredom threshold ; disinhibition or inappropriate behaviour .
High self-criticism*	Highly linked to depression and perfectionism, but more difficult to see as behaviours because individuals describe harsh self-scrutiny, are likely to blame themselves internally when things go wrong and have feelings of inferiority, failure and guilt (but may still blame others verbally). They may show the following behaviours: difficulty taking criticism/feedback ; hypersensitivity ; striving for excessive achievement and perfection ; often highly competitive ; hard working ; often stressed .
Low self-criticism*	These people are more likely to blame others when things go wrong; less likely to be stressed themselves; more likely to have poor relationships with colleagues and patients .
High self-esteem* /grandiosity	Probably highly linked to low self-criticism. Apparent to some degree in all organisations, they show the following behaviours: arrogance and/or boastfulness ; more aggression ; sometimes a lack of probity .
Type A	Not studied in health service staff but more likely to have traffic accidents, speeding offences, etc. so possible factor in risk. Their behaviours include being: speedy, double-tasking, highly competitive, and hostile .
16PF*	Long-term studies of anaesthetists show poorer performance in those who were as students found to be: unstable, timid and casual .
Self-defeating behaviours	Managers who fail are more likely to: have problems with relationships by being aloof, cold or arrogant ; fail to meet objectives ; inability to lead a team ; lack of adaptability to transition . These occur more frequently under pressure.
Big Five Personality Factors	Successful managers show; conscientiousness, emotional stability and resilience, openness to change and curiosity, extraversion, and are agreeable and cooperative .
Integrity	Measures assess general dishonesty, laziness, aggression, disruptiveness, substance abuse, absenteeism, tardiness, counter-productive work behaviours and a lack of integrity .

*These have been considered in health care staff including doctors.

Impact of attitudes on performance

Attitudes have a strong effect on behaviour, and have also been shown to affect safety performance, probably via behaviour. For example, the key distinguishing attitudes of the “macho” style of unsafe behaviour concern those who do not recognise their limitations during stress or emergencies, do not use team members well, are less sensitive to others’ problems and tend to be consistently authoritarian. Although attitudes sometimes have their origins in personality, they may also be culturally based and therefore easier to change.

Personality type and Performance

It is important that people and the way tasks are performed are not seen as problematic merely because

Assessment

All these personality types have well validated, reliable tests to identify them. However, it is the **behaviours** arising from personality that matter most in practice because they affect colleagues and patients. Appreciating diversity, listening to concerns and providing 360 degree assessment and feedback are likely to be the most worthwhile ways of understanding and addressing difficulties.

Remediation

Although an underlying personality may not be easily changed, the attitudes and behaviours that it leads to can sometimes be adapted, occasionally by changing the context, or by interventions such as education, coaching or psychotherapy. There seems to be less

they differ from those who are judging them. The Myers Briggs Type Inventory (MBTI) is a useful way of understanding normal differences which, used well, are necessary strengths in the workplace. When conflicts arise it is worth considering whether they are due more to different approaches and preferences of each party rather than the underlying personality of one. If overplayed, strengths can become problematic, but not irremediable. For example, confidence can become arrogance, diligence can become perfection and charm can become manipulation.

likelihood of change in over-confident, arrogant people and in those who are impulsive or easily bored.





Section 5

Education and Training

Key points

- Training in communications skills and professional values/attitudes are now included in modern medical education. Doctors who graduated in the 1960s or 70s may have acquired attitudes which sit uneasily in today's health service
- Evidence suggests that doctors in the early stages of a Pre-Registration House Officer (PRHO) post may be particularly vulnerable to disillusionment and depression
- Continuing professional development needs to be relevant to the context in which doctors work and Personal Development Plans should reflect doctors' learning needs as well as their particular interests
- There are a number of potential early indicators of doctors in difficulty to which colleagues can be alert.



Medical education and training, including the selection of students to their respective courses, have been designed to identify and encourage the development of professionals who give good quality care. The introduction of appraisal is, among other things, a way of encouraging the continuing educational process and professionalism. This section considers the way factors relating to education and training as well as individual factors during training go on to influence subsequent professional behaviour.

The attributes of students

While previous academic ability accounts for 23% of variance in undergraduate performance, other attributes are associated with clinical performance after graduation. These include intellectual ability, conscientiousness, integrity, helpfulness, willingness to co-operate, interpersonal skills, empathy, psychological stability and resilience.

Changing curriculum

Topics such as communications skills were rarely taught before the GMC published *Tomorrow's Doctors*, but they are now part of the standard curriculum. Training improves students' overall communications competence as well as their skills in relationship building, organisation and time management, patient

countries, may well have had attitudes instilled in them that sit uneasily with current medical practice in the UK. A paternalistic approach to patient care, an expectation that it is the doctor who should always lead other health care workers, and a refusal to take resource factors into account when dealing with an individual patient, are examples of attitudes that may lead a conscientious and committed doctor into trouble in today's health service.

Transition from student to pre-registration house officer

New house officers are at the bottom of the medical hierarchy. The needs of patients come before their most basic and pressing of personal needs. The consequence may be disillusionment and depression, especially for those young doctors with empathy and



assessment, negotiation and shared decision-making – tasks that are important to positive patient outcomes.

Professional values and attitudes are also part of the curriculum defined by *Tomorrow's Doctors*, and of the GMC's guidance for all doctors *Good Medical Practice*. Values have to be adjusted as society changes. For example, respect for diversity is now accepted as an important professional value, but only recently have graduates covered this as part of their curriculum at medical school. Doctors who graduated in the 1960's or 1970's, or graduates from medical schools in other

self-criticism. The approach of organisations to quality improvement must recognise the tendency of health care professionals to respond to stress by increasing personal detachment, even to the point of dehumanising patients. This coping strategy is learned early and unlearned with difficulty. Inevitably some new doctors fail to cope with this transition and stress levels in the PRHO year are high, with up to 30% demonstrating evidence of psychological morbidity. When this happens, it is rarely lack of factual knowledge that lets them down but a lack of preparedness for the world of

work. (See Section 2 for more on stress and mental health).

In 2005, the Foundation Programme will be introduced for all doctors in the UK. This programme will cover the first two years after graduation and will include generic skills of professionalism in the curriculum and assessment.

Poorly performing junior doctors

One to two percent of PRHOs are now required to undertake remedial training. It is likely that this is the result of closer supervision and scrutiny than was in place in the past.

PRHOs are the source of a disproportionate number of drug errors in hospital. To reduce prescribing errors,

hospitals should prepare, train and supervise junior doctors in the principles of prescribing, and enforce good practice in documentation. They should also create a culture in which prescription writing is seen as important as well as formally reviewing locum arrangements, interventions made by pharmacists and the workload of junior doctors. They should make doctors aware of situations in which they are likely to commit errors.

Postgraduate Education and Training

Over the past two decades reforms of postgraduate training have been introduced to make the selection process more transparent, consistent and fair. Entry criteria to each specialty have been defined, a curriculum published, and an assessment process developed. A new wave of reforms under the title *Modernising Medical Careers* is in the process of changing the structure of the senior house officer grade.

Continuing Professional Development

Lifelong learning is an inevitable requirement for practice in a profession where advances are accelerating and societal attitudes are undergoing a revolution. Continuing professional development needs to be relevant to the context in which doctors

work. Personal Development Plans should reflect doctors' learning needs as well as their particular interests.

Appraisal

All learners, including established doctors practising independently, need feedback on their progress. Appraisal is intended to be a supportive, developmental, two-way discussion of progress,



resulting in objectives for the next phase of training. Training in appraisal skills is provided for educational supervisors, by deaneries, by employers and on-line.

Early signs of doctors in difficulty

There are some signs that may raise concerns that a doctor is getting into difficulty. While the list below is not based on published research, it draws on the

experience of staff working with doctors undergoing postgraduate training. The signs would suggest the need for an approach to the doctor by a skilled senior professional, to identify any underlying factors and to set clear goals for improvement. This may prevent the problems becoming intractable with unfortunate consequences for patients, the doctor concerned and his/her colleagues.

Signs may include:

The “disappearing act”:

not answering bleeps; disappearing between clinic and ward; lateness; frequent sick leave.

Low work rate:

slowness in doing procedures, clerking patients, dictating letters, making decisions; arriving early, leaving late and still not achieving a reasonable workload.

“Ward rage”: bursts of temper; shouting matches; real or imagined slights.

Rigidity: poor tolerance of ambiguity; inability to compromise; difficulty prioritising; inappropriate ‘whistle blowing’.

“Bypass syndrome”: junior colleagues or nurses find ways to avoid seeking the doctor’s opinion or help.

Career problems: difficulty with exams; uncertainty about career choice; disillusionment with medicine.

Insight failure: rejection of constructive criticism; defensiveness; counter-challenge.

Section 6

Organisational Culture and Climate

Key points

- Culture is a very important determinant of staff behaviour
- Culture is most frequently changed as a result of a new leadership style
- Measuring and assessing culture is difficult, but staff experiences and perceptions of working in an organisation (“climate”) can be measured.



Organisational climate reflects staff members' experiences and perceptions of working in that organisation. Culture underlies climate, shaping almost unseen, taken-for-granted assumptions about how to behave in the organisation and giving meaning to events within it. Different countries and health services produce very different doctor-patient relationships, partly to do with the background culture of the country, and partly related to the means of delivery of health care (for example, state-funded or privately funded model). In addition, doctors who trained in the UK over the last 40 years are likely to have been influenced by very different professional cultures in the past,

compared with the culture of today. Although culture is undoubtedly very important in terms of staff behaviour, and has been highlighted in the Bristol Royal Infirmary Inquiry and in the CMO's publication, *An Organisation With a Memory*, it is not something that can be easily perceived or always swiftly changed.

A wide variety of methods are used to measure culture, and an equally wide variety of factors are regarded as demonstrating it. Very little research has taken place in hospital settings. Climate is more easily measured than is culture, coming as it does from staff perceptions which can be assessed.

The effects of culture and climate on performance

This is a field which is only beginning to be studied and so at present there is almost no evidence of links between **culture and doctors' performance**. However, provision of adequate resources to ensure consistency of theatre staff and forbidding distractions during operations is an example of a culture which demonstrates the importance of patient safety. This has been linked to better patient outcomes.

The evidence concerning culture, climate and organisational performance of hospitals is still largely indirect but is growing in strength. For example, there is some evidence concerning lower mortality in US hospitals which nurses perceive to be good places to work. In the UK there is evidence that different

HRM practices are associated with higher levels of organisational productivity and effectiveness. Within health care there is a relationship between some HRM practices (such as the extensiveness and sophistication of appraisal, training and teamwork) and patient mortality.

Discrimination against any minority group within an organisation can result in reduced career prospects and fewer opportunities to enhance work related skills and develop supportive relationships. This may in turn impact negatively on the performance of individuals. For this reason it is vital that the aspect of an organisation's culture which relates to its approach to equality and diversity needs to be taken into account.



cultures may have an effect on star ratings. Stronger evidence, however, shows links between culture/climate and clinical governance review ratings. Although culture and climate may be the result of previous performance and may not predict it, the evidence available suggests that they do matter in terms of organisational performance and patient care.

Also of growing importance, easier to measure, and likely to be affected by culture and leadership, are **human resource management (HRM) practices**. Studies outside health care have shown that better

A Culture of Safety

A safety culture is not separate from the general organisational culture but at its core. It involves fairness and openness, rather than blame, in dealing with adverse

incidents. The development of a safety culture requires trust and good leadership (see Section 9). Reliable organisations have the following cultural values:

Interpersonal responsibility

Person centeredness

Co-workers who are helpful and supportive of one another

Friendly, open and sensitive personal relations

Creativity

Goal achievement

Strong feelings of credibility and trust

Resilience.



Assessment

Culture is best measured using a variety of different methods to explore its layers. However, this can be expensive. Questionnaire surveys of climate are probably most convenient. A number of climate questionnaires are available but there is still only limited experience of using these in the NHS. The reporting and learning culture advocated by *An Organisation With a Memory* includes objective measures which can be assessed, such as:

- the degree to which members report unsafe conditions
- the speed of remedial action by management
- the number of near-miss reports.

Can culture be changed?

Culture and climate can be changed when new leaders introduce different values and ways of working. The dramatic differences that result from external forces such as mergers show that cultural change is possible and can be remarkably fast. There is also evidence that culture can be extremely resistant to change during mergers unless work is specifically undertaken to improve it.



The NHS Staff Survey provides a useful comparative snapshot of health care organisations. It discriminates well between organisations and predicts outcomes such as recognised errors and patient satisfaction.

Section 7

Workload, sleep loss and shift work

Key points

- High workload, shift work and lack of sleep can exacerbate other stressors that exist in health care
- As well as simply reducing workload or altering shift patterns, other interventions include providing more support/resources in the workplace and helping individuals develop coping strategies
- A number of tests and tools can be used to assess workload, shift patterns and sleep loss, and occupational health assessments also have a part to play in establishing the impact of these factors on performance.



Medicine is a 24-hour discipline and the work has become more intense, particularly in secondary care. Working time arrangements and their effects on sleep can exacerbate other stressors and have an indirect effect on care, since higher stress levels may adversely affect quality of care. This section considers the direct effects that high workload, shift work and lack of sleep can have on performance. Evidence comes from industrial, military and medical studies and the research is largely of good quality.

Workload

Workload is not only a matter of long hours, but a combination of

- the demands of the task
- the resources available such as support, supervision and efficient equipment and systems
- the effort that needs to be expended, both physical and mental.

Heavy workload has been linked with burnout, loss of aerobic fitness, work-home conflict and less, or poorer quality, sleep. Increased hours of clinical responsibility are related to greater fatigue, which in turn may make the effects of other stressors more severe.

Sleep loss

Problems of sleep come with shift work, typically associated with shorter sleep duration, and from the exhaustion of higher workload which can cause changed sleep patterns. Although there are wide individual reactions to sleep deprivation, and although many doctors respond well in crisis situations, sleep loss has been found to cause lower mood and psychological well-being, as well as poorer attitudes to work performance and safety.

A number of studies show that there is a potential risk of significant decline in cognitive performance with greater sleep loss or more hours awake. Reviews and meta-analytic studies tend to support the findings. Sleep deprivation can affect performance for up to 48 hours. Sleep inertia (after waking) can affect performance for up to 30 minutes.



Shift work

Problems in performance associated with heavy workload are made worse by shift work. Many serious incidents are caused or worsened by human error at times when sleepiness is high: deterioration in performance is more likely between 1-6 am (and, to a lesser extent, from 2-6 pm). Repeated experience of acute sleep deprivation which occurs in shift work does not seem to inoculate against its effects.

To the individual, shift work is associated with physiological disruption, including to the sleep cycle, impairment of physical health and wellbeing, lowering of alertness, more sickness-absence and turnover, and interference with social and domestic life. In addition, shift workers may engage in more “risky” coping

Assessment

Many subjective and objective measures of workload have been developed. The principal two for perceived workload are the NASA Task Load Index, and the Subjective Workload Assessment Technique. Sleepiness and actual sleep need to be measured during work or during sleep respectively, and there are a number of tests for this. Shift work effects are measured in relation to the actual shifts worked along with a number of individual differences, biographical details and fatigue.



behaviours such as increased smoking, alcohol or other drug use, and impaired eating habits, though there are always individual differences in response.

Remediation

Individual differences in tolerance to workload, sleep loss and shift work means that it is not possible to offer interventions which will work for everyone. Nevertheless, there are general remedies for improving these areas. The detrimental effects of **workload** may be reduced by providing greater participation and control over the work and by providing greater support. These methods appear more useful than simply reducing hours. In terms of **shift work**, more appropriate coping strategies may be taught, or new patterns of shifts introduced. Partial shifts have mixed results in terms of wellbeing, satisfaction and training.

Although the only real solution to **loss of sleep** is achieving an adequate amount of it, educational

and counselling interventions to improve sleep and cope better with its loss may also be helpful. In addition, napping has been found to be beneficial: even 15 minutes structured into a lunch break can affect subsequent alertness and performance, and napping during night shifts helps post-shift recovery. These could be built in legitimately rather than taken surreptitiously, and this will be more possible with the European Working Time Directive, which came into force in August 2004. In addition, teams can protect those with sleep loss from tasks that require high concentration and vigilance.



Section 8

Teamwork and Performance

Key points

- There is emerging evidence that the effectiveness of a team in the health care setting has an impact on the quality of care offered by the individuals within it
- There is comparatively little robust evidence on the impact of remediation on underperforming teams, but it may be that the most useful intervention is to train team leaders.



Although most health service staff see themselves working in teams, data from the 2003 National Staff Survey show that much less than half of them work in *effective* teams – those linked with productivity gains and service benefits. The shift from uni-professional teams, such as a medical firm or a nursing team, to multi-professional groups working within a clinical area to provide a service, demands new, more demanding teamwork skills.

Teamwork and Patient Care

The key elements of a good team are as follows:

Its task is defined and its objectives clear

It has reasonably clear boundaries and is not too large (ideally fewer than 10 people)

Its members know who leads it and the leadership is good

There is participation in decision-making by all members, good communication, and frequent interaction between them

It meets regularly to review its objectives, methods and effectiveness

Its meetings are well conducted

Its members trust each other and feel safe to speak their minds

There is a shared commitment to excellence of patient care.



The effects of teams on individual doctors

Group processes are powerful influences on individual actions. Studies have shown

General practitioners in poor teams are more likely to opt for early retirement

The quality of teamwork is the principal influence on whether junior doctors take sick leave

The team can compensate for an individual member's errors over time, so a well-established team is likely to make fewer errors overall, and to identify and deal with the underlying causes

Those in high quality health care teams are significantly less stressed than those in ineffectively functioning teams or those not in a team - and low stress is related to better patient care.

The aspects of a team that matter most in terms of individual performance are:

Teams should not be too large so that communication can remain good. Large teams may need to be structured into several smaller teams with specific roles

Women may find it more difficult than men to air their views in teams, and to have them valued when they do. Although evidence shows that women's participative leadership is particularly effective, they may need support in overcoming some of the difficulties they encounter

Diversity is important in teams, reflecting the complexity of service delivery and the heterogeneity of patients, and leading to better decision-making. However, diversity sometimes causes difficulties in the early days of team development

Scape-goating – heaping onto one group member the problems of the team as a whole - is a well-established tendency of groups. Leaders and members need to be alert to this possibility or the real causes of poor performance may be missed

The longer teams are together the better they perform, but this can be difficult for more transient members such as doctors in training

Good leadership is essential to ensure that a team, and its individual members, perform well (see section 9 for a review of leadership qualities).

Assessment

Good reliable team effectiveness measures exist to assess teams in general. These include the Team Performance Inventory. In addition, a number of measures are currently being developed or tested for more specialised settings such as theatre teams or Accident and Emergency teams. As well as considering team effectiveness in terms of the processes and outcomes of its patient care, it is also useful to look at its stress levels, sickness absence and turnover in order to see how well its members are working together.

Remediation

There are numerous types of team-building interventions which have a reliable effect upon members' attitudes to one another. Where they have been assessed, there have been mixed results, but this may be the result of the design of the research. The most useful way of intervening to promote effective performance is probably to train team leaders and provide them with ongoing support for their role. Team leadership training should be part of undergraduate and postgraduate medical education. A useful website is www.teamworking.nhs.uk, part of www.HealthcareSkills.nhs.uk.



Section 9

Leadership

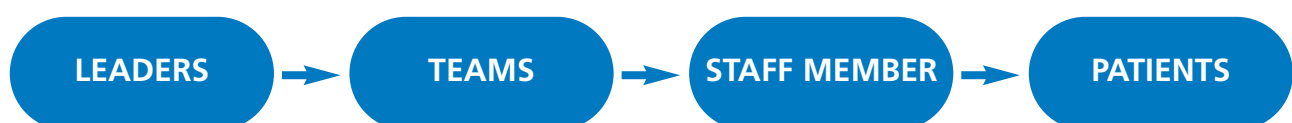
Key points

- There is growing evidence of links, some of them direct, between the qualities of leaders and the quality of patient care
- Psychometric questionnaires can be used as a tool for assessing leadership qualities
- Leadership skills can be improved through interventions such as coaching and team development.



Leadership qualities affect the work of both the leaders themselves, and those whom they lead. When performance problems arise it is important to consider not only individuals' characteristics and the context which may contribute to the problems, but also those

of their superiors. There is growing evidence of direct and indirect links between the qualities of leaders and the quality of patient care. This occurs because leaders affect the performance of individuals and teams (see Section 8).



Positive and negative attributes that have been shown to be important appear below. Those in bold have evidence to support them from a number of different

fields; however, a lack of evidence may be more to do with a lack of research than with negative findings:

Positive Attributes of leaders	Negative Attributes of leaders
<p>Intelligent</p> <p>Able</p> <p>Confident</p> <p>Warm and friendly</p> <p>Benevolent</p> <p>Emotionally stable</p> <p>Able to recognise limitations</p> <p>Having Integrity</p> <p>Able to delegate/share load</p> <p>Skills:</p> <ul style="list-style-type: none"> • Good communication skills • Creating a sense of justice • Giving staff control and discretion • Able to anticipate events and plan to address them 	<p>The opposite of those in column 1 and:</p> <p>Dictatorial/Authoritarian</p> <p>Hostile</p> <p>Arrogant</p> <p>Boastful/promoting own ideas</p> <p>Laissez-faire style</p>

In terms of safety, leaders who:

- take safety seriously
- are emotionally resilient
- recognise their limitations
- involve others in decision-making
- anticipate and plan for events

are safer in both health care and aviation.

Trustworthiness is important in encouraging reporting and learning from error.

Evidence suggests that the most important characteristics in leadership are ability, benevolence and integrity. **The style of leadership** (whether transactional and task-oriented or transformational and engaging staff) is probably less important since both are necessary in health care leadership.

Assessment

Useful tools for understanding and appreciating differences between team members and for resolving conflict include the Myers Briggs Type Inventory (MBTI). This enables leaders and others to recognise their own strengths and limitations and to value diverse styles and ways of working.

Assessment might also include **360 degree feedback**, and also where possible, measurement of **teamwork** and organisational culture along with measures of **staff absence and turnover**. Assessing leaders solely by whether or not they meet targets is unsatisfactory.

The sections on assessment under Teamwork (8), Organisational Culture (6) and Characteristics and Behaviour (4) are also relevant to Leadership.

Remediation

Interventions to improve leadership skills and style aim to increase self-awareness and raise understanding of individual and group factors. These include coaching, team development and auditing how easy it is for teams to report and address errors and concerns.

There is no strong evidence for interventions that improve leadership style, but this is principally because the research has not been carried out. However, there is some evidence that attitudes - for example, towards safety - can be changed with educational input, and that emotional resilience can be improved through a number of psychological interventions, though there is much less evidence for change in arrogant, hostile personalities (See Section 4).





Summary

We have provided an analysis of why the performance of a minority of doctors – intelligent individuals who have been sufficiently talented and motivated to complete demanding training and qualify as doctors – causes concern.

The factors fall into three broad categories:

Individual factors

- Physical health
- Psychological health
- Cognitive function
- Personality, attitudes and behaviour
- Clinical knowledge and skills.

Factors associated with the work environment

- Teamworking
- Climate and culture
- Leadership
- Workload, sleep and shift-work.

Education, training and continuing professional development

- Selection of future doctors
- Undergraduate education
- Postgraduate training
- Continuing professional development (CPD).



Individual factors

Doctors' physical and psychological health is a major issue. Health problems are under-diagnosed and often poorly managed, not least when doctors choose to self-diagnose and self-treat. It is important for employers, colleagues and educators to moderate the causes of drug and alcohol misuse, for example by reducing stress at work, increasing awareness of the problems and providing support and effective intervention when problems arise. Impaired cognitive function, frequently caused by alcohol misuse,

is under-diagnosed and may be concealed by the effective social and interpersonal skills typical of educated people. It seems that, to date, there is no specific and sensitive screening test available and that, if it is suspected, expert assessment is necessary.

Personality is a major factor which determines the behaviour of an individual. Assessment of personality may lead to increased understanding of attitudes and behaviour and these can then sometimes be adapted

by changing the working environment or by interventions such as education or coaching.

While the focus of this report has not been on the **clinical knowledge and skills** of the practitioner, if there are concerns about his or her performance, then comprehensive assessment will be required to clarify the concerns and identify areas that need to be addressed.

Factors associated with work environment

The relative contributions of the individual practitioner and the environment in which he/she works should be taken into consideration when a doctor appears to be performing poorly.

Fewer patients die when they are looked after by well managed **teams**, which are also more cost-effective. The evidence points to the importance for patient outcomes of a **culture** that promotes patient safety. Effective **leadership** increases the performance of teams and reduces stress in team members. Teamwork, organisational culture and leadership can be improved by interventions to train and support leaders, and through team development and feedback.

The detrimental effects of workload can be reduced by providing greater control over work and greater support. For shift work appropriate coping strategies can be taught, or new patterns of shifts introduced. Educational and counselling interventions can improve sleep and help cope with its loss. Implementation of the European Working Time Directive should help prevent prolonged shifts that lead to sleep deprivation.

Education, training and continuing professional development

In addition to the teaching and learning of clinical knowledge and skills, professional values and role-modelling are important. There may be early signs of difficulty in trainees ('disappearing act', low work-rate, ward rage, rigidity, bypass syndrome, career problems and insight failure). The challenge is to use available information to identify colleagues in difficulty and to ensure effective, early intervention before patients and the public are put at risk.

In conclusion

This report has drawn on the literature to provide background and some practical advice about identification, assessment and intervention when concerns are raised about a doctor's performance. We are aware that the study of factors that contribute to performance difficulties is in its infancy. Nevertheless, the NCAA trusts that this report and the more comprehensive book to be published in 2005 are useful contributions in this developing field.

We hope that this work will be a practical guide to those responsible for managing doctors' performance difficulties, and for their career guidance. We also consider it has a place in informing those responsible for planning and managing health services. We believe the findings are of relevance to health care professions other than medicine and to the wider NHS.

We sincerely hope that use of this report will lead to increased safety for patients and better support for health care professionals.

Acknowledgements

This report is the result of the work of an NCAA working group whose members were:

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The NCAA is grateful to Kevin Hunt and Sheila Mariswamy for their support to the group.



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