Rituals and Reassurance

–The Annual Medical Check-Up

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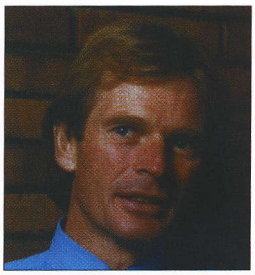

Curriculum Vitae

Guy Parr studied at UCT and has been in General Practice since 1979. He has been actively involved with the Academy since that time. He has been on the organising committee of two GP Congresses, and is involved in undergraduate, post graduate and vocational training programmes. Guy is married to Louise, they have three children and he enjoys cycling and canoeing.

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Summary

The periodic health encounter is evaluated: it should, in the final analysis, be tailored to deal with problems for which the patient is at relatively high risk. Its value is dependent on the ability of the doctor to establish a good patient-centred relationship, develop selective screening procedures and an ability to help his patient to change to a healthier lifestyle. These, and other aspects are looked at, and several screening tests are discussed in the light of specific surveys done and the outcomes which are available. Even experts' opinions vary in their own field, which emphasises the need to use scientific method with great care and as part of an overall holistic approach to helping patients along the road to health.

Introduction

Primary care medicine is moving increasingly away from heroic salvage medicine to less dramatic, but more demanding preventative care. Family doctors are spending more time on preventative care, either as part of an encounter for other reasons, or for periodic health checks.

When a sick patient initiates a consultation, the doctor's role is to help, not to guarantee an outcome. The obligations are more stringent when we make recommendations to a healthy individual. Screening is an attempt to predict certainty and to bring order into an unknown future, it involves probability, but not certainty. With any screening procedure there must be adequate evidence that the benefits exceed the harm and that this screening

is done in a way that is acceptable culturally and financially to the individual and his community.

The periodic health examination should be tailored to deal with problems for which the patient is at relatively high risk. Its value is dependent on the ability of the doctor to establish a good patient-centred relationship, obtain a good history, develop selective screening procedures and an effective strategy to help the patient to change his behaviour to adopt a healthier lifestyle. Screening can be done as part of a routine consultation (case finding) or a periodic health examination, or mass population screening for specific diseases.

Outcomes, accountability and evidence:

In the USA accountability has been referred to as the new revolution in medical care. There is increasing pressure to bring medical practice under closer public scrutiny. In the past, we did things the way our teachers and our teachers' teachers taught it and a physician's opinion was accepted as authority.

Today we are increasingly required to provide evidence on outcomes in terms of functional status, emotional and social health and degree of disability. Doctors are required to be more accountable to individuals, families, medical insurers and the community in general.[1] At best this occurs "in house" with peer review and audit of outcomes.

At worst this occurs with public scrutiny by the medical council and litigation. We need to be aware of these trends and ensure that we keep up to date with literature, modify it according to the situation in which we practice and together with individual experience, feed it back in the modification of our clinical behaviour.[2]

Medical knowledge not written in stone

A significant problem in medicine is that it has been estimated that less than 20% of medical practice is based on clear scientifically-proven fact. The Variation-Phenomenon (regional variations in medical practice)[3] is so wide-spread that it is difficult for both individual doctors and for policy-makers to know what, if anything, is the truth. Clinical decisions are very difficult and observers looking at the same thing will disagree with each other (and with themselves) in up to

To help; not to guarantee an outcome.

Less than 20% of medical practice is based on clear, scientifically proven fact.

50% of cases. In one study cardiologists disagreed on angiogram interpretations in 60% of cases. Expert opinions on colon cancer screening efficacy varied from 5 to 95% and specialists opinions on outcomes in their own field vary by up to 100%.[4]

Clinical decisions are complex with many incalculable variables, wide variations in practice and probably many different effective approaches to managing the same problem. We should not use this to justify a sense of academic nihilism or clinical inertia. Clinical decisions need to be made today, not in five years' time when the result of intervention studies are known. We need to appreciate the complexity and frailty of "medical knowledge" and to be prepared to continually reassess what we do in the light of our own and others' experience. It is important that we base our practice on evidence that is as sound as possible. This evidence-based medicine has lead to the establishment of consensus-panels and collaborative review groups, such as the Cochrane Centre in the UK[5] that reviews clinical trials and collects firm evidence, especially in the field of primary care.

Evidence is often conflicting and difficult even for epidemiologists to interpret. It is important that primary care physicians use a reliable and independent source of information. Information from pharmaceutical companies, who obviously have a vested interest in outcomes may be selected to confirm a preconceived opinion and should always be regarded with caution.

Health promotion and prevention

Health promotion is a complex procedure linking current medical knowledge to the individual patient. The appropriateness of an intervention must be estimated by considering the costs and benefits to the individual and the community and involves behaviour changes in both the doctor and the patient.

The natural history of the disease is important in determining the outcome. In this century many illnesses have declined in importance as a result of improved socio-economic conditions (especially in developed countries) rather than as a result of direct medical interventions. Some illnesses, like the TB epidemic in the Western Cape, are difficult to explain. Others, like Aids, will arise de novo and will substantially alter many health care parameters.[6]

Screening procedures are difficult to assess for effectiveness. Initial results are often good, patients detected by screening fare better than those detected clinically. However, long term results may differ. The wearing of seatbelts has reduced injuries by 25% and deaths in motor vehicle accidents by 60% in the UK. The Mayo Lung Project in which random patients were screened for lung cancer by chest X-ray and cytology showed a doubled five year survival, but no difference after nine years – probably because many of the screened patients were detected earlier and their survival was better in the short term. (A longer lead time bias). Screening programs are often unsuccessful because those at highest risk are unlikely to present for screening eg CA cervix.

The annual physical examination (multi-phasic screening process) has been criticised as failing to show any substantial benefit. In the Holland and Kaiser Permanente study some diseases had a lower mortality but there was no overall reduction in death rates. This may well point to the fact that these were doctor-centred screening processes and that to be successful, a clear patient-centred approach should be used.

Many screening procedures have failed to show any substantial benefits.

A patient-centred approach is often more effective.

Definite criteria for undertaking screening are important.

This approach establishes the patient's reason for attending, and his agenda. It explores the patient's ideas about health and values his subjective belief system. It explains the choices and encourages the patient's autonomy. Decision-making is shared and the patient is offered support and enabled in making positive choices. Patients presenting for routine examinations may have significant unstated fears that have prompted the encounter with a doctor. A patient-centred approach is more effective in perceiving and managing these unstated fears.

Compare this approach to the routine insurance examination that is a wholly doctor-centred exercise and has been found to be of minimal value to both parties.

There are several criteria that need to be fulfilled for a screening process:

1. The disease must be a serious health problem.
2. Detection in the presymptomatic phase must improve the outcome.
3. Screening and treatment procedures must be acceptable to the public.
4. The screening procedure must be clinically effective with acceptable sensitivity and specificity.
5. It must be cost-effective – does the individual or community have the resources to sustain it?[7]

In short, one must screen an individual for problems he is most at risk in a way that is most acceptable and enabling to the individual at an affordable cost.

The implied benefits of screening are an improved prognosis for cases detected early, less radical treatment for early cases and reassurance for those with true negative results.

Unreliable screening proceedings may do more harm than good.

Screening procedures may also have substantial disadvantages. The longer morbidity for those whose prognosis is unaltered may have a negative psychological impact eg screening for Duchenne muscular dystrophy in infancy which may only present in adulthood. In the USA routine sickle cell testing in black patients often leads to their being dealt with adversely by insurance companies and potential employers. Routine screening for Thalasaemia in Greece lead to affected individuals feeling socially ostracised and less valued as marriage partners. Unreliable screening procedures may lead to significant anxiety in those with false

Many conditions suitable for screening require a change in the patient's behaviour. It is difficult to help patients change their life-style.

positive results or with unfounded reassurance for those with false negative results. Unnecessary intervention for false positive results or overtreatment of questionable abnormalities may lead to unnecessary morbidity and expense.[8]

Ethical issues

Four pertinent ethical issues are raised in screening:

- Patient autonomy should always be respected, especially when the patient may not be attending voluntarily, eg insurance examinations, pre-employment or routine, or examinations required for work.
- The screening procedure and results must do no harm (primum non nocere). Many patients may suffer unnecessary anxiety, expense and risk due to false positive tests. Unnecessary labelling of variations of normal as disease states equally may cause patients may cause distress eg mitral valve prolapse, mildly raised cholesterol, or asymptomatic haematuria.
- The procedure must be proven (as far as possible) to be beneficial to the patient.
- Issues of social justice must be addressed – is the screening procedure an equitable use of limited resources?

Doctors' attitudes towards preventative care

Up to 70% of cancers are considered to be preventable by changes in behaviour. In surveys of the general public, doctors have been described as being the most reliable source of health information. Yet many doctors are pessimistic about their ability to change patients' behaviour. More than 90% of doctors believe that smoking cessation was beneficial, yet only 50% routinely offered this advice to their patients and only 3% believed that they were successful.[9] Barriers to doctors' participation in screening procedures are:

- Lack of time – "I'm too busy".
- Lack of motivation – "I'm not paid to do it and my patients don't really like it".
- Lack of training or protocols – "I don't know how to do it".
- Disillusionment with low success rates – "It never works anyway".

It is important to appreciate that effective screening may involve a change in the doctor's behaviour to become more compliant, as well as a change in the patient's behaviour.

A patient's readiness to change is a process that goes through several stages - not a single event.

Strategies for helping patients change behaviour

Advice-giving in the traditional doctor-patient relationship forms the basis of most discussions on behaviour change. Patients are not uniformly committed to receiving advice and success rates of five to ten percent are not uncommon. Unsolicited advice may lead to an unconstructive clash, such as the "Yes Doctor, but ..." response.

Addiction studies have highlighted several new concepts:

Three major organisations have evaluated screening procedures and have drawn up guidelines.

Ambivalence – the experience of heightened psychological conflict about choosing between two courses of action. Patients in this stage are aware of the pros and cons of their actions.

However, any overtly persuasive effort by the doctor may lead to their adopting the opposite stance to resist any change. Allowing the patient to articulate any change himself and to negotiate a solution, is more likely to be effective at this stage.

A patient's readiness to change is a process that goes through several stages – not a single event. The patient should be offered increasing

support and counselling to suit the readiness to change. Do not be despondent if it does not all happen in one consultation.[10]

Remember the four "A's":

- Ask the patient about his behaviour
- Advise on the risks and benefits
- Assist the patient in making constructive decisions
- Arrange follow up

Major Agencies involved in evaluating screening

Assessment of screening procedures has been done by a number of bodies, however there are three major bodies that have assessed the efficacy of commonly used screening procedures in developed countries:

1. the Canadian Task Force (CTF).
2. US Preventative Services Task Force (USPSTF).
3. American College of Physicians (ACP).

These bodies have reviewed evidence relating to mass population screening and have made wide-spread recommendations based on clear evidence. They have divided individuals into those at average risk and those at increased risk. The recommendations (which do not always agree) are summarised in two recent articles[11,12] and include the following recommendations:

Blood pressure measurement:

BP should be taken in all adults at least every two years.

Breast examination:

Annual breast palpatation for all women over forty and mammography every two years for women over fifty is recommended. Breast self-examination may be valuable, but has not been proven to be effective. Breast examination should begin ten years earlier for women with a first degree relative with pre- or peri-menopausal breast cancer. Predictions are that for every 1000 women who have initial mamography, 80 will have a positive mamogram. Of these, only five will have breast cancer. One woman in 1000 with breast cancer will have a negative mamogram.

Bone mineral content testing

Bone mass density testing is not recommended routinely. Some groups recommend its use in women

Indications for cholesterol screening are constantly being reviewed and the benefits should be carefully weighed.

at high risk ie those over forty, Caucasian, low body mass, surgical menopause, smoking or heavy alcohol use.

It may also be valuable in assessing the need for hormone replacement therapy.

Cervical screening

Pap smear testing is recommended for all sexually active women every one to three years. If there has been regular screening, with normal results, this may be discontinued at age 65. Where resources are limited, testing intervals can be extended to every ten years (WHO recommendations) or even a single smear at age forty to fifty.

Generally, women who present for screening are those that are not at high risk and carcinoma often arises in women who are unscreened. Effective screening programs with recall is more important than repetition of normal results.

Note that routine bimanual pelvic examination is of no proven value as a screening procedure and is not recommended by the major task forces.

Cholesterol screening

Total cholesterol should be measured every five years and should start at age 35 in males and 45 in females. This should be done earlier if more than one risk factor for cardiac disease is present. There is evidence that although lowering cholesterol will reduce the incidence of coronary artery disease (especially non-fatal myocardial infarction), there is an increased risk of death from non-cardiac events (cancer and trauma) which is greater in men who are at low risk for coronary artery disease.[13] Thus aggressive treatment of raised cholesterol in younger men who have no other cardiac risk factors is not recommended at present.

Drug treatment for raised cholesterol in the USA can cost up to $10 00,000 million per year of life prolonged. Treatment of raised cholesterol begun in middle-age and in secondary prevention studies have shown a clear benefit with reduced cardiac risk – most of which is achievable in two years[14]. In primary prevention trials cholesterol level reduction in men at low risk has been calculated to increase life expectancy by three months and in men at high risk by eighteen months[15].

Triglyceride levels are not a proven cardiac risk factor and routine measurement is not recommended.

In prostate cancer, screening methods and outcomes are still the subject of controversy.

Colon cancer screening

Screening is recommended for all patients at high risk because of adenomatous polyps, ulcerative colitis, familial polyposis or first degree relatives with colon cancer. In these patients, more invasive procedures, such as sigmoidoscopy, colonoscopy or barium enemas are recommended in middle life(or 10 years before the age of onset in a first degree relative) and repeated every two to four years.

Opinions differ on screening people at average risk. A fifteen year study of faecal occult blood testing showed a significant reduction in death rates with annual screening (five per 1 000 versus eight per 1 000 in non-screened patients), but no reduction when the screening is performed every two years. Screening with faecal occult blood testing is inefficient with a low sensitivity (a high false negative rate) and a low probability of cancer after a positive test (2,2%). The results of a number of other trials of faecal occult blood screening are currently awaited.

Periodic health checks and screening are an opportunity for exploring patient's concerns, assessing life-styles and counselling.

Screening sigmoidoscopy can reduce mortality from colon cancer by detecting lesions within twenty

centimetres of the anus (approximately 20% of all colon cancers) but this is costly and difficult to implement as a screening procedure in primary health care.

In Britain, it is estimated that a single, flexible sigmoidoscopy at age sixty could prevent 5500 cases of colon cancer annually.[16]

The American Cancer Association recommends annual digital rectal examination in all adults over age forty, annual faecal occult blood testing over age fifty and flexible sigmoidoscopy every three years over the age of fifty. The recommendations, however are not followed by the other task forces.

Exercise stress testing

Recommendations are against routine exercise stress testing as a screening tool in people who are not at high risk. EST is recommended by some for individuals who are at increased risk over the age of forty, ie with two or more cardiac risk factors, if sedentary and planning to begin an exercise program or if the occupation affects public safety, eg bus drivers. The recommendations for routine resting ECGs are similar.

Lung cancer screening:

Routine annual chest x-rays and sputum cytology have not been shown to alter the long-term morbidity or mortality from lung cancer and these are not recommended. Routine chest x-rays are more valuable for case finding in individuals who are at high risk for tuberculosis.

Screening for prostate cancer

This is a difficult and contentious issue. Up to 1991 both the Canadian and the US task forces concluded that there was insufficient evidence to recommend routine digital rectal examination (DRE), transrectal ultrasound (TRUS) or prostate specific antigen testing (PSA). Routine PSA measurement in healthy men has not been proven to be an accurate screening tool.[17]

Even if screening were efficient, there is no evidence that early treatment reduces the probability of dying from carcinoma of the prostate. In one study of more than 200 patients in which carcinoma of the prostate was diagnosed when it was confined to the prostate gland, only eight percent of the patients died from the carcinoma and only three percent had substantial morbidity. Treatment of well-differentiated prostate cancer in men over the age of 75 has shown no benefits. Survival after operation, in one study, showed little difference to the age matched population which has considerable competing risks of death in an elderly population. It is estimated that over treatment occurs in two-thirds of patients. In most cases carcinoma of the prostate is very slowly progressive and is never detected clinically. However in the UK it still remains the third commonest cause of cancer deaths in men.

Of the tumours that present clinically, forty percent have spread beyond the gland. The difficulty is to detect and eradicate those that may spread and not to over-treat those in whom the tumour would never cause problems. It has been suggested that cure is unnecessary for those in whom it is possible, and impossible for those in whom it is necessary!

There are clearly many unanswered questions regarding the screening and management of carcinoma of the prostate. Present evidence, however shows no benefit for routine screening, detection or treatment in most patients[18].

Urine analysis

The Task Forces highlight the problem of common false positive haematuria tests and the unnecessary cost involved in investigating this in young adults. Urine testing should be limited to those at increased risk from renal or other diseases (eg diabetes) or urinary tract infections (eg elderly)[12]

Conclusion

The value of a periodic health check/screening procedure is the opportunity for an encounter between the doctor and patient in which the patient's concerns can be explored. It is an opportunity for the doctor to assess the patient's lifestyle and help the patient adopt a healthier lifestyle. The opportunity for counselling and lifestyle modification is probably the main benefit of this encounter.

The main benefits of screening accrue form a good history, clinical assessment of the problems for which the individual may predictably be at risk and selective examination. Routine screening tests should be limited to those that are of proven value, affordable and acceptable to the patient.

We need to be aware of the barriers to screening in both the doctor and the patient and cautious about the potential waste and dangers in unproven or unselected screening procedures. In the final analysis much of what we do in clinical medicine is unproven. Because we cannot prove an entity, does not mean it is not true. As clinicians we need to use scientific method with care and as part of an overall holistic approach to helping patients along the road to health.

We need to be prepared to review this approach in the light of new evidence on outcomes and ensure that we are accountable to the public and that our rituals and reassurances are always in the patient's best interests.

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