

their perceptual experience—a point germane to why the patient described by Logsdail stopped talking about her synaesthesia for 25 years.

Given the high prevalence of synesthesia, doctors need to know about this phenomenon in case they mistake it for a peculiar type of cognitive fragmentation.

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## Home based cardiac rehabilitation

An effective way of widening access to preventative services



HOMER SYKES/ALAMY

### RESEARCH, p 249

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In the linked systematic review, Dalal and colleagues assess the effect of home based cardiac rehabilitation on mortality and morbidity, health related quality of life, and modifiable cardiac risk factors in patients with coronary heart disease.<sup>1</sup> They found that home based cardiac rehabilitation was as effective and efficient as centre based rehabilitation at reducing mortality and cardiac events; improving risk factors such as exercise capacity, systolic blood pressure, and total cholesterol; and increasing health related quality of life. This finding is consistent with another recent meta-analysis,<sup>2</sup> which found that home based programmes provided by “telehealth” show promise in reducing mortality and can lead to clinically significant benefits in cholesterol, blood pressure, and prevalence of smoking.<sup>2</sup> As with centre based programmes,<sup>3,4</sup> a variety of home based programmes can improve health and quality of life outcomes in suitable patients.

Providing programmes in the patient’s home makes sense because of what is needed for risk factor reduction. To improve morbidity and mortality, health behaviours must be sustained for at least two years.<sup>4</sup> Home based programmes can provide support for these behaviours longer than the usual two to three months offered by hospital based cardiac rehabilitation, the most common type of centre based rehabilitation.

However, centre based programmes have several potential advantages. Some patients prefer the reassurance and perceived safety offered by a clinical setting. They also provide more face to face access to health professionals from different disciplines, opportunities to do supervised group-based exercise, and contact with other patients. For patients with more complicated or chronic health needs, specialists from centres can design tailored programmes. Yet, the greater centralisation needed to provide these types of programmes is often accompanied by lower access, relatively weak links to general practice and the local areas in which patients try to sustain healthier lifestyles over the long term.<sup>5</sup>

The home is the most natural place to situate long term support for secondary prevention because it provides con-

stancy, familiarity, and family support. Home based programmes are important because the large population with established coronary heart disease has high levels of modifiable risk factors but is difficult to reach with centralised programmes.<sup>6,7</sup> Uptake of hospital based programmes is consistently lower in groups most in need of support for risk factor reduction, including women, elderly people, people in different ethnic groups, and people of low socioeconomic status.<sup>6</sup> Ensuring access to centre based services is more challenging in large countries. Even in high income countries with universal and free access to cardiac rehabilitation, such as Australia and Canada, rural populations have limited access to centre based programmes. Home based programmes overcome many of the most common barriers to participation in these populations and settings.

Despite the potential of home based programmes, they do have important differences that may influence their effectiveness. Some home based interventions, notably those based on the *Heart Manual*,<sup>8</sup> have a more substantial theoretical basis and require clinical providers to be trained to a more advanced level. Language, health literacy, ethnicity, and cultural appropriateness are further local considerations that must be tackled when developing a home based programme. Where possible, new home based programmes should draw on established models but adapt them to local populations and needs.

Dalal and colleagues’ analysis is not without weaknesses.<sup>1</sup> Patients in the trials were younger, healthier, and likely to be wealthier than patients in clinical practice. However, this is the case with most trials of secondary prevention programmes,<sup>3,4</sup> and the overall quality of the analysis is strengthened because the trials included were of moderate quality. Just under half of the home based programmes included were “exercise only” interventions, but for more than a decade it has been recommended that secondary prevention services be multifactorial—most now include physical activity, smoking cessation, diet and weight, and psychosocial health elements. The authors do not adequately explore how the characteristics of the home

based programmes influenced outcomes, despite considerable heterogeneity in trial samples, trial settings, and programme characteristics. To tackle this problem and explain variations in trial results in future meta-analyses, published trials should contain more comprehensive descriptions of programmes and the care given to intervention and comparison groups.<sup>9</sup>

The findings emphasise the importance of patient choice in determining the services offered. Giving patients choice about the type of programme they will receive increases access to services and leads to health benefits even in patients who have previously decided not to use centre based programmes.<sup>10</sup> This choice is not only between home based and hospital based services but should extend to a range of settings and delivery mechanisms. Taking account of all existing evidence, home based multifactorial cardiac rehabilitation is one of several effective models of providing secondary prevention services, including face to face risk factor counselling clinics and programmes provided by specialists and trained generalists in community settings and general practice.<sup>3,4</sup> Because programmes have additional benefits to those arising from medicines and foster greater responsibility for self care and health behaviours, the case for increasing investment in programmes is persuasive.<sup>11</sup> Each model has strengths and weaknesses, but home based programmes can help fulfill an over-riding priority that—irrespective of sex, age, race, location, or social status—all eligible patients can use secondary prevention services.

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## Smoking cessation

It is never too late for people to stop, even when they have lung cancer



### RESEARCH, p 251

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Do we need more evidence on the harm done by smoking? Smoking is a major contributor to common diseases such as heart attack, stroke, peripheral vascular disease, and chronic obstructive pulmonary disease. In addition, most lung cancers are caused by smoking and it is also a risk factor for cancers of the breast and bowel. The blogger who wrote last year that smoking bans were illiberal and “justified by bullshit science”<sup>1</sup> will have gained little informed support. Smoking costs life and limb; smokers are even prematurely wrinkly.<sup>2</sup>

The linked study by Parsons and colleagues adds more to the evidence. The meta-analysis of the effect of continued smoking after a diagnosis of mostly early stage lung cancer shows that continued smoking substantially increases the risk of death, and that a large proportion of the increased risk is the result of cancer progression rather than cardiorespiratory disease. The estimated effects are large, with five year survival in “quitters” in the order of 60-70% compared with about 30% in those who continue to smoke.<sup>3</sup> Patients and those caring for them should be given this information because the potential benefit is great. The problem is, however, that fewer than one in three patients with lung cancer survive even one year, so the patients likely to benefit are probably healthier to begin with. So, although the information is valuable its application may be limited.

Perspectives differ among healthcare professionals

who have to advise patients with lung cancer. Some discuss smoking habits with all patients and caution against smoking. Others think it is inhuman to dwell on the matter—that it adds to feelings of guilt and takes away a life long comfort from the dying patient. At the extremes this results in stereotyping the opposing factions as zealots and nihilists. In support of those who would tone down antismoking harangues (most patients diagnosed with lung cancer are in the last months of their lives) are recent reports from the National Confidential Enquiry into Patient Outcome and Death (NCEPOD). They found that aggressive but unavailing cancer treatment was still being given to some patients too near to the end of their life,<sup>4</sup> and that hospital care did not always switch in a sensitive and timely fashion from sustaining life to allowing natural death.<sup>5</sup>

Smokers themselves are well informed of the harm. It is written in big black letters on every cigarette packet: smoking kills. So why don't they stop? Smoking is comforting and pleasurable. The traditional image is that the first thing a comrade would do for a wounded soldier was to light a cigarette and place it tenderly between his lips, and in the mud and blood of the first world war they sang, “While you've a Lucifer to light your fag, smile, boys, that's the style.”

Smoking is the most efficient way to deliver nicotine. It reaches the left side of the heart via the lung capillaries