

Not only is choosing the best therapeutic road difficult but it remains uncertain whether the best route has, as yet, been found. The available clinical evidence leans heavily on parenteral therapy of inpatients with pelvic inflammatory disease.⁴ To extrapolate these findings to outpatients receiving oral antibiotics may result in inconvenience and overtreatment, while direct conversion to oral regimens might be associated with reduced efficacy. The use of a two week treatment period in trials reflects common clinical practice, but it is not known whether outcomes would be similar for shorter treatment periods or improved with longer courses. The choice of therapy is only partially aided by microbiological studies that show a wide variety of bacteria in the fallopian tubes of women with pelvic inflammatory disease but which cannot determine whether some or all of these are primary pathogens.

Despite these limitations, signposts, in the form of national guidelines, which generally point in the same direction, have been erected at the crossroads. Outpatient therapy with a parenteral cephalosporin followed by doxycycline and metronidazole, or a combination of oral ofloxacin with metronidazole, is recommended by the American, Dutch, and British guidelines.⁵⁻⁷ The presence of guidelines in themselves may not change clinical practice, and in some countries, including the UK, the use of doxycycline (for two weeks) with metronidazole (for one to two weeks) remains common. This provides cover for *Chlamydia trachomatis*, the commonest recognised causal pathogen, and anaerobes, associated with tubo-ovarian abscess formation. The three available trials comparing this combination with alternative antibiotic regimens treated a total of only 56 patients and report clinical cure rates of 70-85%⁴ despite most patients receiving their treatment parenterally. One further small study with longer term follow up reported infertility in 43% (6/14) of patients treated with doxycycline plus metronidazole.⁸

The evidence for ofloxacin is derived primarily from two randomised controlled trials enrolling a total of 165 patients and reporting clinical cure rates of 95% and 96%.⁴ In both trials outpatient management was assessed, with oral therapy used throughout. The quoted cure rates were obtained with ofloxacin alone, but concerns about inadequate coverage of anaerobes have led to the recommendation that metronidazole should be added the regimen.⁹ Longer term outcomes were assessed in an additional small study: at repeat laparoscopy none of the patients with mild tubal disease at the initial examination had progressed to tubal occlusion (n=14), while 6 of 9 patients with severe disease at an initial laparoscopy developed bilateral tubal occlusion.¹⁰

No Cochrane review is available but a meta-analysis published in 1993⁴ and updated in 1999⁹ assessed a variety of different antibiotic regimens. Microbiological and clinical cure rates of 91% to 100% were reported, except for the combination of doxycycline plus metronidazole, which had a pooled clinical cure rate of 75% and microbiological cure rate of 71%. There is biological plausibility for this lower success rate related to the limited bacteriological cover provided by doxycycline plus metronidazole: resistance may occur to *Neisseria gonorrhoeae*¹¹ and other facultative bacteria, such as coliforms, *Garnerella vaginalis*, and viridans streptococci,¹² which are commonly found in the fallopian tubes of women with pelvic inflammatory disease.

There are many questions about the treatment of pelvic inflammatory disease that remain unanswered, and much work remains to be done. From the available published evidence the use of oral doxycycline and metronidazole appears to have a lower cure rate than alternative therapies. Until, and unless, new evidence becomes available it is difficult to justify their continuing use in isolation.

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Promoting wellbeing among doctors

We should move away from a disease model and focus on positive functioning

Studies on physician functioning have focused almost exclusively on impairment, and as a result we know much about doctors' disease and despair, their substance misuse, burnout, and dysfunctional relationships. But we know very little about what keeps them feeling well.

Though this may simply reflect the tendency for psychological research to focus on pathology rather than health, it nevertheless leaves doctors with little information to guide them in living positive and healthy lives. For this reason we have devoted the January issue of *ujm*, the *Western Journal of Medicine*, to

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exploring what we can do to promote physician wellbeing (www.ewjm.com). The issue includes studies on physician wellbeing, offers practical advice to physicians and policymakers, and gives some healthy alternatives to our damaging ways of living and working. There are two key themes that run throughout the issue—the ability of doctors to influence their own happiness through their personal values and choices, and the need for them to have some control over their external work environment.

The importance of the first theme is shown by a qualitative study of the practices used by 130 primary care physicians in Wisconsin to promote their own wellbeing.¹ The five main practices were spending time with family and friends, religious or spiritual activity, self care, finding meaning in work and setting limits around it, and adopting a healthy philosophical outlook, such as being positive or focusing on success.

Such data are obviously self reported, and we don't yet know whether they are associated with objective measures of wellbeing. But they are at least consistent with the predictors of happiness that have been identified through "positive psychology," the discipline that seeks to "measure, understand, and then build human strengths and civic virtues."² Myers recently reviewed these predictors and found that they included social support, close relationships, and religion.³ We would do well to remember that yuppie values—seeking a high income and occupational prestige—are strongly associated with misery. Internal psychological factors associated with wellbeing include setting and pursuing goals, attempting to realise one's potential, and possessing positive self regard.⁴

Drawing on these lessons from positive psychology, doctors could therefore foster their own wellbeing by re-examining their personal lives and values. This might include changing their relationship to money; devoting more time to intimate relationships; or adopting a regular self care practice such as meditation, which is effective in reducing anxiety.⁵ They can increase their awareness of their emotional lives through Balint or personal awareness groups.⁶ Research is needed on the effectiveness of such groups in fostering wellbeing, though the limited data suggest that doctors find them valuable.⁷ They might also practice cognitive or behavioral techniques that can challenge their self critical thoughts and help to foster optimism and self worth.⁸

The second theme—the ability of doctors to influence their work environment—is highlighted by a survey of 608 physicians working for a health maintenance organisation in the Western USA.⁹ The survey aimed to identify factors that predict psychological wellbeing, satisfaction, and professional commitment, all measured using validated scales. The single most important predictor for all three outcomes was a sense of control over the practice environment. This included the opportunity to participate in decision making, to work autonomously, and to dictate the work schedule.

Therefore if healthcare organisations want healthy, happy doctors they need to engage them in the design and delivery of care. This will be empowering for patients and organisations, not just doctors, since physician satisfaction affects quality of care, patient

satisfaction, and the effective use of healthcare resources.¹⁰ Acknowledging the need for doctors to influence their working environment, the Canadian Medical Association has adopted an impressive national policy on physician wellbeing.¹¹ This demands an occupational environment with clearly defined limits to doctors' duties, training for medical students and graduates in maintaining wellbeing, and specialised health promotion services for doctors. Another north American innovation is the establishment of regional centres for physician wellbeing, offering courses for physicians and consultation services to healthcare organisations.¹² Their impact has yet to be formally evaluated, but at least they raise awareness of the importance of healthy doctors to a community and allow medical schools, practice settings, and health insurers to join together in promoting wellbeing.

Organisations must also recognise that certain physicians—women; those from visible and invisible minority groups; and those practicing in rural, remote, or underserved areas—face a unique constellation of stressors. Their wellbeing requires sustainable and supportive work environments, free from discrimination, and sensitive to their needs.

In thinking about the future, we would echo the Canadian Medical Association policy, which closes with a wish, a call, and a vision.¹¹ The wish is for further research, which to date has been largely cross sectional. We need prospective, longitudinal studies using better measures of wellbeing to determine causality. The call is for doctors to acknowledge their duty to help each other stay well. The vision is of a healthcare system led by example, where the doctors are as healthy as they wish their patients to be. Such health requires doctors to take personal responsibility and organisations to create nurturing environments.

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