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Sustainable Rural Practice: successful strategies from male and female rural doctors, Executive Summary

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Executive Summary

This report details the findings of a national mail survey of rural general practitioners conducted in late 2002 and early 2003. It is an Explanatory Case Control Study using the Delphi Method to develop the survey instrument. The survey was designed to discover the strategies female and male doctors use to make rural practice work for them and to test the hypothesis that women have developed innovative strategies for sustainable rural practice and that some of these work for men too. It sought to transfer from anecdote to data some of the troubling issues that have arisen in previous research. There is a comprehensive and integrated gender perspective underlying the study. The content of the survey was derived from previous studies and from extensive work using the Delphi Method with an Expert Panel of female rural and remote general practitioners. The Panel responded to the question: "what have you done to make rural practice work for you?" Their responses were refined to eight Strategies, and these formed the central section of the survey.

There are 4 dependent variables in the survey, and 21 explanatory variables. The dependent variables are:

1. Satisfaction with rural practice
2. Contentment with life as a rural doctor
3. Intended length of stay in current practice
4. Intended length of stay in rural practice

Explanatory variables include hours of work, on call, family relationships, hospital-based and emergency medicine and rurality.

Objectives

Integrating women into rural practice requires an understanding of the ways women work, and the similarities and differences with men. This study was undertaken to identify women's experience, and test how that compared with that of men. Specific objectives were to

- **Determine the effect of family work on clinical hours**
- **Develop a more nuanced understanding of what comprises 'work' for rural doctors**
- **Explore the relationship of general practitioners to rural hospitals**
- **Provide data on the relationship between rural general practitioners and the provision of emergency care**
- **Provide data on the different domains of general practice provided by male and female doctors**
- **Document innovative strategies of sustainable rural practice that women have developed and test whether men use them too**
- **Identify the impact of these strategies on intended length of stay in rural practice and test whether this differs for men and women**
- **Establish which strategies and variables influence satisfaction with rural practice and contentment with life as a rural doctor and test whether these differ for women and men**

Response

The survey was sent to a randomised sample of 1000 female general practitioners stratified to RRMA 4 – 7, and a matching sample of 1000 male general practitioners. There was no statistically significant difference between respondents and non-respondents for age, and between female respondents and non-respondents for RRMA but there was a significant difference for men, with male doctors from RRMA 5 over-represented and from RRMA 4 under-represented ($p=0.031$). Women working part-time were significantly over-represented ($p=0.008$). There was a high response from women ($n = 612$, 63% of eligible respondents) and a acceptable response from men ($n = 513$, 54%). The high response rate indicated that the approach taken was salient to the concerns of the doctors.

Analysis

A systematic and carefully constructed gender competent approach to research was taken to ensure that findings would include the experience of women and men. This began with the development of the questions to be asked, careful use of language, and systematic testing of the data to highlight commonalities and differences for men and women. Three Delphi Rounds were conducted with female rural and remote doctors that resulted in the identification of eight Strategies to make rural practice work. These are called 'strategies' rather than 'variables' in the analysis that follows. The 8 Strategies are:

- 1. Able to structure practice to reflect how want to work**
 - a) practice with flexible work arrangements
 - b) joined work partner with similar aims
 - c) work partner treats you as an equal
 - d) 5 sessions & some on call
 - e) 3 day weekend when working 1 in 2 weekends
- 2. Impliment personal strategies**
 - a) 4 – 6 weeks holiday per year
 - b) leave the community for holidays
 - c) take a break to spend time as a family
 - d) find a supportive life partner
 - e) employ a housekeeper
- 3. Obtain and update professional skills**
 - a) broad training for work in rural areas
 - b) short course in emergency procedures
 - c) regular courses and CME
 - d) extra courses for work with female patients
- 4. Establish professional and personal boundaries**
 - a) firm about limits of availability
 - b) balance work with goals outside medicine
- 5. Exposure to rural practice prior to being rural doctor**
 - a) RMO at rural regional hospital
 - b) GP training in rural placements
 - c) lived in a remote community
- 6. Network with female colleagues**
 - a) change rhetoric that 'super doc' is only the valued rural doctor
 - b) talk with other women doing similar things
 - c) avoid being a victim when male colleagues discriminate
 - d) learn to be more assertive
 - e) operate outside personal comfort zone
- 7. Make the community your own**
 - a) join local community events/groups
 - b) find other families with small children
 - c) participate in public health education
- 8. Impliment professional strategies**
 - a) diversify medical work
 - b) increase professional supports
 - c) take a job with some non-patient contact
 - d) accept help offered by Divisions
 - e) enjoy working for yourself



Data were entered into an Access database, and analysed using the Statistical Package for the Social Sciences (SPSS 2002), and the LIMDEP program (LIMDEP 1995).

Data were examined in three phases. The first was a univariate descriptive analysis, the second was multivariate analysis of relationships between the dependent and independent variables, using chi-square and log and linear regression modeling, and the third was Probit modeling.

Probit modeling was used to determine the marginal effects of explanatory variables on two of the dependent variables, Satisfaction with rural practice, and Contentment with life as a rural doctor. Female and male populations were run through the same model, but separately.

The findings reported in the Executive Summary concentrate on the outcomes of the Probit model.

Findings

Doctors go into rural practice for a variety of reasons, yet it is highly likely that they are an adventurous and self-managing group of the profession, with little liking for formal hierarchies and rigid work environments. The extended generalist nature of rural practice, the professional isolation and the relative paucity of back-up and support make rural practice appropriate for doctors who are independent and confident of their skills. It is a key finding of this research that the ability to practice medicine in a way that reflects the doctor's practice style, in a flexible environment based on common aims and mutual respect, is critical to keeping rural doctors happy. This applies to women and men alike. The ability to structure their practice environment to reflect the way they want to work is the most significant strategy used by rural doctors to enhance satisfaction and contentment. Those who are able to do this are statistically significantly more likely to be satisfied with their practice, contented with life as a rural doctor and intending to stay longer in rural practice than doctors who are not able to work this way. The key to this strategy is flexibility, common purpose and mutual respect among professional colleagues.

The first key finding is that doctors who are content with life as a rural doctor intend to stay longer in rural medicine, and that factors that contribute to contentment can be identified. With one exception, the variables that contribute to contentment and satisfaction differ in strength or direction between women and men.

The second key finding is that a gender analysis is a powerful way of constructing the study and examining the data. The study confirms the hypothesis that women have found innovative ways to make rural practice work for them, and that while some of these strategies work for men as well, there is a measurable difference between women and men. Using a systematic gender analysis in researching rural doctors provides important new data.

Women and men share a common experience of the core features of rural practice, and differences in some important aspects of practice. An example of a common finding is that 45 hours a week clinical work is the point at which both women and men are most satisfied with rural practice, and 15 years as a rural doctor is the point at which both men and women are least contented with their life as a rural doctor. An example of an important difference is that **caring for dependent children reduces women's clinical hours by 20%, and makes no apparent difference to men's clinical hours.**

Women caring for dependent children have the highest workload of all rural doctors. They work an average of 91 hours per week, including family



work, professional work and on call. Men with dependent children have the next highest workload, they work 88 hours per week.

The third key finding is that there is a high underlying level of satisfaction with rural practice and contentment with life as a rural doctor. More than 75% of male and female doctors are satisfied and/or contented. This contrasts with findings from other studies, (Tolhurst, Bell et al. 1997; Wainer 2002; Tolhurst and Lippert 2003) and is likely to be a result of concentrating on what works for rural doctors, rather than what is troubling them.

Satisfaction and contentment are based on different factors for female and male doctors. As hypothesised at the beginning of this research, women have already implemented strategies that contribute significantly to satisfaction with rural practice. Two of these strategies also contribute significantly to satisfaction for men. Only one strategy is statistically significant for both women and men. Of the other nine variables statistically significantly related to satisfaction that were not 'strategies' as identified in this research, only two are common to both men and women, and one has the opposite effect on satisfaction depending on whether the doctor is male or female.

The ability to practice medicine in a way that reflects the doctor's practice style, in a flexible environment based on common aims and mutual respect, is critical to keeping rural doctors happy. The strategy defined by the Delphi process and named as 'Structure your medical practice to reflect the way you want to work' is highly statistically significantly related to satisfaction and contentment for male and female doctors.

Doctors who are unsatisfied with rural practice are less likely to belong to a medical college. Thirty two percent of male and female doctors who are unsatisfied with rural practice do not belong to a medical college, compared with 23% of doctors in general. The Australian College of Rural and Remote Medicine has 45% of male doctors as members, but only 27% of women. Rural doctor organisations may not be representing their female members as well as they are their male constituency. Governments and other medical workforce planners could benefit from careful consideration of how the experiences of women are included in their planning and programmes, for example by making it a condition of grant that women and men be included in research, planning and decision making.

The fourth finding is that rural general practitioners felt better prepared for rural practice in 2002/3 than they did in 1996. The National Rural General Practice Study (Strasser, Kamien et al. 1997) found that half the women and a third of the men did not feel their formal training prepared them for the type of medicine they now practice. The question was replicated in the Sustainable Models survey, and there has been a marked increase in the percentage of doctors who feel prepared. In the current study 66% of women and 72% of men felt they were prepared for rural practice. **Nevertheless it is a finding of this study that a substantial proportion of doctors (approximately 25%) become rural doctors without specific training or experience in this type of practice.**

A fifth finding is that rural doctors of both sexes are managing difficult and demanding, life-threatening illnesses and trauma as a regular part of their general practice. This increases the complexity and challenge of rural practice, the stress and tension



of being a rural doctor, and for many doctors, their professional satisfaction. It is certainly a key to why the rural doctor is so valued by their community. Nearly all rural doctors (86% of women and 93% of men) provide at least some emergency care to their communities, although men are twice as likely to provide hospital-based emergency care, and provide more episodes of emergency care than women. Women who do provide emergency care manage an average of 50 episodes a year, and men 88 episodes.

It is an important finding of this study that men are more able to implement professional strategies that provide them with diversity in their work and control over their working environment than women are. This is possibly a reflection of the non-medical work that women do in family care which men do not do. Men therefore seek other ways, related to their professional role, to diversify their work. Women may find that taking on additional roles is less manageable because of the double shift (professional and family work) they already do.

In addition, female rural general practitioners spend nearly two thirds of their time providing women's health, mental health, men's health and counseling services to their patients, and male doctors spend half of their time. Men spend a much higher proportion of their clinical time in 'other' general practice. So the domains of practice do vary between male and female doctors in ways that are quantifiable and this data should underpin planning for payment structures, training and continuing medical education programs for rural doctors.

The male doctors in this study who are able to access additional training to support their work with women patients are one and a half times more likely to be satisfied with rural practice than men who do not do this, suggesting that men may be under confident in working with some aspects of women's health.

Female doctors are more likely than men to be working in towns serving very small or much larger populations, and in towns where there is at least one other female doctor.

The data from this study contributes to understanding future rural medical workforce strengths and highlights the importance of coming to grips with what women and men need to keep them in practice. The future trend will be for an increasing proportion of female rural doctors and they will require flexible professional and practice structures that allow them to be women as well as doctors.

Intended length of stay in rural practice

Intended length of stay was divided into two components, intention to stay in their current practice, and intention to stay in **rural** practice.

Men and women intend to stay in their current practice for a mean of 7 years. Women intend

to stay in rural practice for a mean of 11.1 years, and men for a mean of 9.5 years.

Intended length of stay in rural practice is influenced by similar factors for women and men, but the size (and sometimes direction) of the effect varies by sex. For example, male doctors who are contented are nearly three times more likely to be still in rural practice in ten years than male doctors who are not contented (65% compared with 25%). Contented female doctors are twice as likely to be still in rural practice in 10 years time (41% compared with 20%) than discontented women. Clearly, it is critical to understand the source of that contentment.

Eleven strategies were identified that result in a statistically significant increase in intended length of stay in rural practice.

Rural practice

Women who are contented with their life as a rural doctor intend to stay in rural practice 12.1 years and discontented women 8.6 years. Contented men intend to stay in rural practice 10.9 years and discontented men 5.7 years.

Men who are satisfied with rural practice intend to stay 10.6 years in rural practice, dissatisfied men intend to stay 6.6 years. Satisfied women intend to stay 12.0 years in rural practice, dissatisfied women intend to stay 9.4 years.

Prior exposure to rural practice is the strategy that has the greatest impact on intended length of stay for men and women. Women with this experience intend to remain rural doctors 3.8 years longer, and men 2.9 years longer than doctors who have not had this experience.

Women who can structure their work to have some non-patient contact component intend to stay an additional 2.2 years in rural practice, and having a supportive life partner keeps women intending to stay in rural practice an additional 2.1 years.

Women who are able to network with female colleagues intend to stay a mean of 1.9 years longer in rural practice. Women who are able to challenge the rhetoric that ‘super doc’ is the only valued rural doctor intend to stay an extra 1.6 years in rural practice.

Men who are able to make the community their own intend to stay as rural doctors for an additional 1.8 years. This is very similar to the strategy identified in the Viable Models study as ‘integrating GP and family into local community’, used by 10% of the practices studied (Mildenhall and Humphreys 2003). Men who find other families with small children intend to stay in rural practice an extra 1.4 years. Men who find working colleagues with similar aims intend to stay in rural practice an extra 1.5 years, and in the current practice an extra 2.2 years.

Two of these strategies are currently being supported by Commonwealth workforce policies. The Commonwealth has funded universities and general practice training to transfer significant amounts of medical education and post-graduate training to rural environments, thus encouraging exposure to rural practice. In addition the National Female Rural GP Network has been established in response to the study of rural female general practitioners conducted by the General Practice Partnership Advisory Council (Tolhurst and Lippert 2003) supporting women to network with female colleagues.

The other successful strategies can be supported by rural doctor organisations, individual practices, and rural communities.

Strategies statistically significantly related to increased Intended Length of Stay

Table 1 Additional years in rural practice

Strategy	Additional years in rural practice	
	Women	Men
Gain exposure to rural practice before becoming a rural doctor	3.8	2.9
Undertaken GP training in rural placements	2.8	
Job has some non-patient contact duties	2.2	
Find a supportive life partner	2.1	
RMO at rural regional hospital	2.0	
Network with female colleagues	1.9	
Make the community your own		1.8
Take a break to spend time with family	1.7	
Change rhetoric that ‘super doc’ is the only valued rural doctor	1.6	
Join a work partner with similar aims		1.5
Find other families with small children		1.4

Current practice

There is a highly significant association between the ability of doctors to structure medical practice to reflect the way they want to work and intended length of stay in current practice for women and men. Women will stay nearly 3 years longer and men nearly 2 years if they are able to do this. Employing a housekeeper and being firm about limits of availability are other successful strategies employed by women that increase their intended length of stay in their current practice.

The biggest impact for men is the ability to make the community their own and if they can do this they intend to stay in their current practice for an additional 2.6 years. If men can find other families with small children they intend to stay an additional 2.1 years in their current practice, and if they can take time to be with their family they intend to stay an additional 1.8 years with their current practice. Men with a supportive life partner intend to stay in current practice an additional 1.7 years.

Both men and women intend to stay longer if they have trained in women's health.

Strategies statistically significantly related to increased Intended Length of Stay

Table 2 Additional years in current practice

Strategy	Additional years in rural practice	
	Women	Men
Structure practice the way you want to work	2.7	1.6
Make the community your own	1.9	2.6
Join a work partner with similar aims		2.2
Employ a housekeeper	2.1	
Find other families with small children	2.0	2.1
Participate in public health education	1.6	2.0
Be firm about limits of availability	2.0	
Find a supportive life partner	1.9	1.7
Balance work with goals outside medicine	1.9	
Diversify medical work	1.7	
Join local community events/groups		1.7
Take a break to spend time with family	1.6	1.8
Talk with women doing similar things	1.6	
Network with female colleagues	1.4	
Practice provides flexible work arrangements	1.4	
Undertake extra courses to support work with female patients	1.4	1.3

Satisfaction with rural practice

Probit modelling was used to determine the contribution to satisfaction and contentment of each of the General Strategies used by men and women, and all theoretically relevant variables that had sufficient data. Three strategies were identified as statistically significantly related to satisfaction for women, and two for men. For women these are 'Establish professional and personal boundaries', 'Implement personal strategies' and 'Structure your medical practice to reflect the way you want to work'. These strategies contribute between 15% and 19% each to satisfaction with rural practice for women.

For men the strategies that are statistically significant are 'Structure your medical practice to reflect the way you want to work' (13% contribution to satisfaction) and 'Implement professional strategies' (20%). Each of these is significant at the 5% level, and has a positive effect on satisfaction.

Three variables relating to professional practice are significantly associated with satisfaction for men and women. These are 'Number of hours of clinical work', 'Provide hospital-based general practice and specialist services', and 'Formal training prepared you for type of medicine now practiced'. In addition 'Provide hospital-based general practice only services' is significant for women, and providing emergency care is close to significant for men.

Two additional variables are statistically significant for women. These are 'Thinks of self as a healer', and 'Has children'. Men are more satisfied with their practice if they have additional training in women's health, and becoming part of their community is one of the most important ways men identified to enhance satisfaction, contentment and intended length of stay. It works for women too.

There are two statistically significant variables ('provision of emergency care, and having children)

and four non-significant variables (marital status, confidence to intubate, RRMA 4 and RRMA 5) that have the opposite effect on satisfaction depending on the sex of the doctor.

Adequate leave and time with family is an effective way to increase satisfaction and contentment for rural doctors.

Contentment with life as a rural doctor

The outstanding strategy contributing to contentment for women and for men is the ability to 'structure your medical practice to reflect the way you want to work'. This is significant at the 99% level ($p < 0.000$), and doctors who are able to do this are 26% (women) or 22% (men) more likely to be content with their life as a rural doctor, than doctors who are not able to. The odds ratio of female doctors being contented are increased by a factor of 3.01 (CI: 1.85-4.90), if they structure their rural practice to reflect the way they want to work compared to those who do not (or cannot) do this. The odds ratio of male doctors being contented are increased by a factor of 3.13 (CI: 1.93-5.09), if they structure their rural practice to reflect the way they want to work compared to those who do not (or cannot) do this.

Two other strategies are significant in relation to contentment. For men 'Making the community your own' is significant at the 1% level and men who are able to do this are 15% more likely to be content than men who are not. This strategy includes components such as joining local community events or groups and finding other families with small children. Women also use this strategy but it has a nonsignificant, negative effect on contentment of -1%.

Women who implement personal strategies, such as leaving the community for holidays and finding a supportive life partner, are 11% more content than women who do not. This strategy contributes

8% to contentment for men too, but is not statistically significant.

Women who refuse to be intimidated by discrimination from their colleagues are twice as likely to be contented with their life as a rural doctor.

Being a general practitioner rather than a registrar had a significantly positive effect on contentment for men. Men who are general practitioners are 30% more contented than men who are registrars. The effect is in the same direction for women and contributes 7% to contentment, but is not statistically significant.

Two of the five significant variables relating to professional practice have a negative effect on contentment. Increasing number of years spent in rural practice decreases contentment for women by 19% and for men by 20%. Women who provide emergency care to their communities are 8% less contented than women who do not. The effect is in the opposite direction for men, and is nearly but not quite significant ($p=0.183$, ME 7.75%).

Provision of hospital-based general practice only services is significantly related to contentment for men. Men who do this are 11% more likely to be content than men who do not. Hospital-based general practice care is also positively related to contentment for women, contributing 5% to contentment, but is not statistically significant.

Undertaking formal training to prepare for the type of medicine now practiced is significant for women and increases contentment by 9%. It is not statistically significant for men and has almost no effect on their contentment.

Six variables have opposite effects on contentment for women and men. One of these, the strategy of making the community your own, is statistically significant. The others are being in a marriage-like relationship, providing emergency care, confidence

to intubate an unconscious patient, obtain and update professional skills, and working in RRMA 6 and 7.

Result of Probit modeling

The Probit model was chosen to estimate the marginal effects of explanatory variables on the dependent variables. This model helps uncover the unobserved or latent process that lies behind a binary outcome, and is appropriately used in medical and health sciences research. The marginal effect is estimated by applying the mean to all variables except one explanatory variable at a time, thus keeping the data constant, and turning the nominated explanatory variable on and off.

The model predicts the relationship between the dependent variable and the explanatory variables, in both the direction and the amount of marginal effect.

The two dependent variables are:

- Satisfaction with rural practice
- Contentment with life as a rural doctor

The independent variables and their comparatives are listed in the table on the following page:

Women and men

Probit modeling has identified those variables in the model that are significantly associated with satisfaction with rural practice and contentment with life as a rural doctor for general practitioners, and those that are not. The striking finding is the difference that is apparent between women and men. Only four variables related to Satisfaction and two related to Contentment are significant for both sexes. Six variables have opposite effects on Satisfaction and six others on Contentment for women and men. Two of these are statistically significant and two others almost so.

Table 3: Variables in the Probit Model

Variable	Comparative variable/Binary variable
General practitioner	GP Trainee
In a marriage like relationship	Any other arrangement
Years of rural practice	Continuous variable
Hours of work	Continuous variable
Provide hospital-based general practice and specialist services	Do not provide hospital based care
Provide hospital-based general practice only services	Do not provide hospital based care
Provide emergency care	Do not provide emergency care
Confident to intubate an unconscious patient	Unconfident or very unconfident to intubate
Formal training prepared you for the type of medicine you now practice	Unprepared
Structure your medical practice to reflect the way you want to work	Do not structure medical practice to reflect the way you want to work
Implement personal strategies	Do not implement personal strategies
Establish professional and personal boundaries	Do not establish professional and personal boundaries
Gain exposure to rural practice before becoming a rural doctor	Do not gain exposure to rural practice before becoming a rural doctor
Make the community your own	Do not make the community your own
Obtain and updated professional skills	Do not obtain and update professional skills
Think of yourself as a healer as student, as doctor, as student and doctor	Do not think of yourself as a healer
Age less than 40	Age equal to or greater than 40
Have children	Do not have children
RRMA 4	RRMA 1
RRMA 5	RRMA 1
RRMA 6 & 7	RRMA 1

The variables, **Structure your medical practice to reflect the way you want to work, Hours of practice, Provide hospital-based general practice and specialist services** and **Formal**

training prepared you for the type of medicine now practiced, are strongly and positively associated with Satisfaction with rural practice for both female and male doctors.

Table 4 Significant relationship with Satisfaction with Rural Practice

Satisfaction with Rural Practice
Statistically Significant Variables

Variable	Women n = 453		Men n = 400	
	M/E	p-value	M/E	p-value
Strategies				
Establish professional and personal boundaries	19.05%	0.001		
Implement personal strategies	15.45%	0.030		
Structure your medical practice to reflect the way you want to work	18.95%	0.002	12.81%	0.012
Implement professional strategies			19.72%	0.000
Professional practice				
Number of hours of clinical work	16.96%	0.005	26.95%	0.000
Provide hospital-based general practice and specialist services	10.56%	0.088	12.71%	0.074
Provide hospital-based general practice only services	8.54%	0.073		
Formal training prepared you for type of medicine now practiced	8.09%	0.089	9.47%	0.081
Provide emergency care			9.12%	0.108*
Personal qualities				
Thinks of self as a healer	8.71%	0.044		
Has children	10.57%	0.037		

* Nearly statistically significant

The variable **Structure your medical practice to reflect the way you want to work** is also strongly and positively associated with Contentment with life as a rural doctor for both women and men.

Number of years spent in rural practice is strongly and negatively associated with Contentment for women and men.

Table 5 Significant relationship with Contentment with life as a rural doctor

Contentment with life as a rural doctor

Statistically Significant Variables

Variable	Women n = 453		Men n = 400	
	M/E	p-value	M/E	p-value
Strategies				
Structure your medical practice to reflect the way you want to work	26.04%	0.0000	21.82%	0.0000
Make the community your own			14.89%	0.0173
Implement personal strategies	11.07%	0.0813		
Professional practice				
General practitioner			29.64%	0.0858
Number of years spent in rural practice	-18.72%	0.0819	-19.89%	0.0899
Provide hospital-based general practice only services			10.97%	0.0836
Formal training prepared you for type of medicine now practiced	8.63%	0.0426		
Provide emergency care	-8.41%	0.0650		
Personal qualities				
Thinks of self as a healer	11.44%	0.0030		

The standout variable, the one that has maximum marginal effect on Contentment and the second highest effect on Satisfaction for both sexes, is one of the strategies that was developed through the Delphi work with the Expert Panel of female rural and remote doctors. **Structure your medical practice to reflect the way you want** to work reflects the individualistic character of rural doctors, that 'one size does not fit all', and the importance of changing practice structures to reflect the way doctors want to work, rather than trying to change the doctors to fit into existing structures. This is particularly important for doctors who do not want to work within frameworks established by the older cohort of (mostly) male doctors with full-time wives, extended hours of work and on call availability. The high rate of participation as practice principals by men may allow them to implement this strategy more readily than women, who are more likely to want the flexibility of working as assistant or employee, especially during the years of maximum family responsibilities (Wainer 2001). This finding reinforces previous research that has identified flexibility as a key issue for female rural doctors (Tolhurst, Bell et al. 1997; RACGP 2000; McEwin 2001; Wainer 2002). In addition, women with families have a readily recognisable reason for requesting flexibility that is not as obvious for men and men may find themselves less likely to be able to structure their practice to reflect the way they want to work because of the universal expectation that existing work structures suit them, and this may be reflected in the lower marginal effect on Satisfaction the strategy has for men.

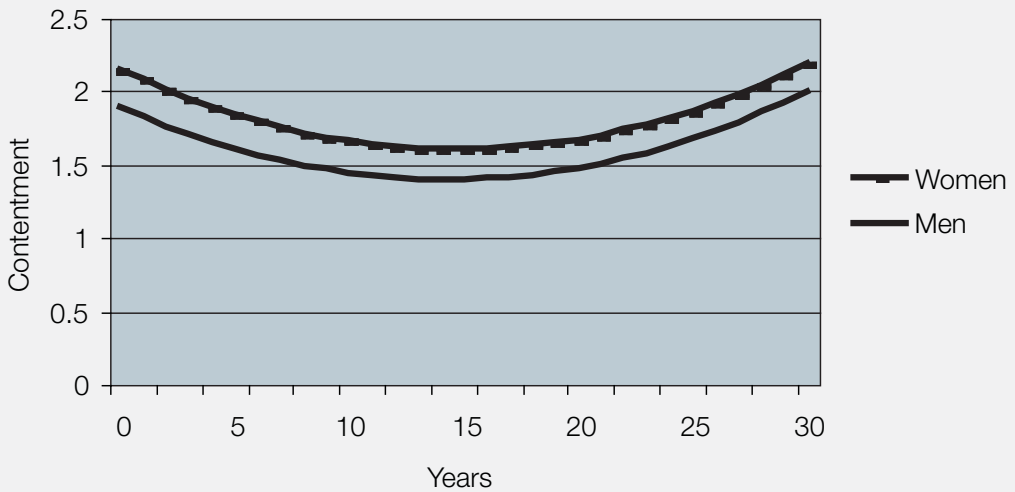
The model demonstrates that 45 hours of clinical work (excluding other professional hours, including on call) is the optimum working week for rural doctors of both sexes. The marginal effect of **hours of work** on satisfaction with rural practice becomes negative after that number of hours. Hours worked has the highest marginal effect on satisfaction for

men of any variable for either sex, or for both sexes combined. It is also significantly and positively associated with Contentment when the data for both sexes is combined. Structuring rural practice to allow men to control the hours they work could be the single most important action to support their satisfaction with rural practice.

The model also demonstrates that there is a turning point in the effect the number of **years in rural practice** has on Contentment for both sexes.

The curve for predicted Contentment trends down from 1 – 15 years of practice, at which time doctors are at their most discontented. After that the curve trends upwards. Years in practice has a negative marginal effect on Satisfaction for both sexes that is not statistically significant. This negative effect is likely to be a reflection of professional factors such as fatigue from long hours of work and on call, and personal issues such as children entering secondary school and the difficulty of resolving that. It is encouraging that the model predicts a rise in Contentment after 15 years, which may be 'survivor bias', that is the doctors who are still there really like being rural doctors and have the authority to structure their professional life to reflect how they want to work, or it may reflect a lessening of the stressors of balancing work and family as children become more independent.

Providing **hospital-based care** contributes to Satisfaction and Contentment for women and men. Doctors of both sexes are more satisfied when they are able to provide specialist type services as well as general practice care. Women also experience a significant increase in satisfaction with rural practice when they provide general practice only based hospital care and this contributes significantly to Contentment for men. Hospital-based care is one of the aspects of general practice that distinguishes rural from urban practice and contributes to the 'extended generalist' (ACRRM 1997) nature of rural

Chart 1 Years in practice and predicted Contentment

practice that is one of the attractors of rural medicine to women (McEwin 2001; Wainer 2001; White and Ferguson 2001). This finding has implications for the impact of the closure and restructuring of rural medical services that was a feature of the 1990's, and the training and professional development programs of the RACGP and ACRRM. Women as well as men value their work in hospital, which makes it critical that doctors of both sexes are welcome in hospital structures and that these structures are flexible enough to accommodate a variety of working styles.

Having undertaken **Formal training that prepared you for the type of medicine now practised** has a positive and significant marginal effect on Satisfaction for women and men. It also has a positive and significant effect on Contentment for women, but not for men. One third of women and a quarter of men do not feel prepared for rural practice, and this finding that such preparation

contributes significantly to Satisfaction and Contentment provides further impetus to the work of ACRRM, regional general practice training consortia, and the rural workforce agencies to provide such training.

Women

Two of the Strategies developed by the Delphi Expert Panel contribute significantly to Satisfaction and Contentment for women but not for men. The Strategy with the highest marginal effect on Satisfaction is that of **Establish professional and personal boundaries**. It has a positive but not significant effect on Contentment for women and men, and Satisfaction for men. It is statistically significant in the combined data, suggesting that the lack of significance is a factor reflecting sample size rather than lack of impact. This strategy is likely to be a reflection of the capacity women have to put limits on their hours of practice, and the transition

that an unspecified portion of women are making from reduced hours (usually due to family commitments) into increased hours of work as their children become more independent. Men do not reduce their hours of work noticeably (in fact they tend to increase them) when they have children, [(Mildenhall and Humphreys 2003)] and thus increases in hours of work are more likely to reflect uncontained demand for their work, rather than a decision to engage more fully with paid work. The men work longer hours in clinical work (mean is 47 hours for men and 33 for the women) and are likely to experience additional hours as a burden, rather than a chance to rebalance their family and professional work. Women have already done this by implementing strategies to control the boundaries between personal and professional life, and support for this will contribute the most to satisfaction with rural practice for women.

Establishing professional and personal boundaries is the solution female rural doctors have developed to the most pressing of their dilemmas, how to be a doctor to their community while providing most of the family care, and also perhaps how to manage the question of privacy in a working environment where the importance of the services provided results in the doctor being highly visible to their community. It reflects one of the core differences between the experience of rural practice for women and men, that women use their authority to set boundaries around their professional practice, and men do not seem able to do this, or are not attracted to it as a way of increasing satisfaction.

Implementing personal strategies reflects the types of actions doctors can take on their own initiative to enhance their lives, such as adequate holidays and finding a supportive partner. This is a strategy that contributes significantly and positively to Satisfaction and Contentment for women and men, but it is not significant for men. It is significant

in the combined data, suggesting that non-significance is a result of small sample size. Workforce agencies and divisions may not be able to influence whether rural doctors find partners, but they have an important role to play in providing affordable and accessible locum relief for doctors to take the holidays they need, and time away from the community with their families that contribute so strongly to satisfaction for female rural general practitioners.

The personal quality of **Thinks of self as healer** is positively and significantly associated with Satisfaction and Contentment for women. It is positively associated with both for men too, but not significantly. Thinking of yourself as a healer is significantly associated with Satisfaction and Contentment in the combined data, suggesting that the lack of significance for the men is a result of small sample size. The question about whether doctors thought of themselves as healers was designed to uncover some of the underlying forces behind the relationship between the doctors and their work, and it has begun to do that. It is hypothesised that thinking of yourself as a healer will be reflected in work practices, relationship with patients and satisfaction with medical practice in ways that differ from those of doctors who do not have this belief. It is a surprise finding of this research that thinking of yourself as a healer contributed significantly to satisfaction for female doctors, and had a positive but nonsignificant effect for men too. This could be an explanatory factor in the struggle and determination of doctors to practice in a way that reflects their belief in who they are and why they became doctors, despite working environments that often militate against that. High workloads, short consultation times, little respite and financial imperatives could be factors that conflict with working as a healer. On the other hand, rural practice, with its continuity of care,



located in the context of the community, could be supportive of practising as a healer.

Having children is the last of the variables that is significant for women only, and only for Satisfaction. Having children has a negative impact on men's satisfaction. Children make a positive, but not significant, contribution to Contentment for both women and men, but this is not significant even in the combined data. It is possible that women with dependent children are able to insist on flexible and limited practice in a way that increases their satisfaction with practice, and that this is not available to men. Men may experience the stress of the dual role of parent and doctor, without the sanctioned opportunity to limit hours and availability to enable them to carry out both roles without conflict. If this is so, then more attention must be paid to helping fathers of dependent children articulate what they need so that having dependent children contributes to their satisfaction and contentment with rural medicine.

Men and women differently

The other unique aspect of rural practice, the provision of emergency care, increases Satisfaction for men and decreases it for women, and is not quite statistically significant. It significantly and negatively affects Contentment for women and positively but not significantly affects contentment for men. The contradictory impact on satisfaction and contentment for women and men of providing emergency care is likely to be a reflection of the intrusive and chaotic impact that the provision of emergency care has on family life. Women are less likely than men to have the family backup that allows them to step out of their family at a moment's notice. In this study 58% of women compared with 8% of men who have dependent children have all or most of the responsibility for their care, which is incompatible with provision of emergency care unless carefully designed support systems are in place. This raises the important question of what infrastructure needs to be put in place to allow women to provide this type of care without experiencing intolerable conflict in their family roles.

There are different levels of Satisfaction and Contentment between women and men with the different **Rural locations**. Although not statistically significant, men are more polarised than women in their response to location. Men who work in remote areas are more satisfied, while men who work in regional and small rural areas are less likely to be satisfied with rural practice. Location was not a significant contributor to satisfaction for women, but regional, rural and remote locations all contributed positively to satisfaction with rural practice, but RRMA 4 and 5 contribute negatively to contentment for women, although not statistically significant in any case. **Remote** practice is the rural area with the highest marginal effect on contentment and satisfaction for men, and **Small rural** practice



contributes the most to satisfaction for women, but not to contentment. This new knowledge can be used to target different areas of practice to women and men, while keeping open the challenge of all types of rural practice to both sexes.

Men

It is a surprise finding of this research that the Probit model uncovers maleness as contributing significantly to reduced Contentment, and nonsignificantly to reduced Satisfaction with rural practice. This might be a reflection of the difficulty men have in changing the way they practice to reflect the way they want to work because of the weight of expectation that they will continue to work they way male doctors have always worked. It identifies the need for further careful consideration of what men need in order to be satisfied with rural practice and contented with their lives as rural doctors.

Two of the Strategies identified in the Delphi process are used significantly and positively by men with a positive marginal effect. **Implementing professional strategies** contributes 19% to men's Satisfaction with rural practice and is highly statistically significant. This strategy includes diversifying medical work, solo practice, and work with some non-patient contact duties. Structuring rural practice to include components such as these, particularly in RRMA 4 and 5, is predicted to lead to an increase in satisfaction for men.

The other Strategy that works for men is **Make the community your own**. This contributes significantly to Contentment with life as a rural doctor and communities and practices wanting to attract and keep male doctors should be able to factor this in to their thinking about what men need. Doctors who can find a place for themselves in the community as men, as well as doctors, will be more contented with their lives.

In all, 19 of the 24 variables in the model contributed positively to Satisfaction for women, and 5 had a negative impact. Seventeen variables had a positive effect for the men, and 7 had a negative impact. Fifteen variables contributed to Contentment for women, and 9 had a negative effect. Seventeen variables contributed to Contentment for men, and 7 had a negative impact.

Discussion

This study has been systematically constructed to elaborate strategies and aspects of rural practice that contribute to positive experiences of rural practice. This has been done initially by drawing on previous work of the author and others in studying female rural general practitioners, then by working with an Expert Panel to identify what works for rural doctors. One result is that all the General strategies contribute significantly in some way to satisfaction,

contentment or intended length of stay. Statistical techniques allow us to refine that contribution to determine which are the most effect for each sex.

There is a high underlying level of satisfaction with rural practice and contentment with life as a rural doctor among general practitioners. However satisfaction and contentment are based on different factors for female and male doctors. As hypothesised at the beginning of this research, women have already implemented strategies that contribute significantly to satisfaction with rural practice. Two of these strategies also contribute significantly to satisfaction for men. Only one is common to both women and men. Of the other nine significant variables in the model, again only two were common to both men and women, and one had the opposite effect on satisfaction depending on whether the doctor was male or female. The use of the Probit modelling with a systematic gender analysis has uncovered important ways in which rural doctors can be supported to increase the level of satisfaction in their work, with the understanding that this support may need to be tailored explicitly to reflect the experiences of women and men.

The study confirms the hypothesis that women have found innovative ways to make rural practice work for them, and that while some of these strategies work for men as well, there is a measurable difference between women and men.

Doctors go into rural practice for a variety of reasons, yet it is highly likely that they are an adventurous and self-managing group of the profession, with little liking for formal hierarchies and rigid work environments. The extended generalist nature of rural practice, the professional isolation and the relative paucity of back-up and support make rural practice appropriate for doctors who are independent and confident of their skills. It is a key finding of this research that the ability to practice



medicine in a way that reflects the doctor's practice style, in a flexible environment based on common aims and mutual respect, is critical to keeping rural doctors happy. This applies to women and men alike. The ability to structure their practice environment to reflect the way they want to work is the most significant strategy used by rural doctors to enhance satisfaction and contentment. Those who are able to do this are statistically significantly more likely to be satisfied with their practice, contented with life as a rural doctor and intending to stay longer in rural practice than doctors who are not able to work this way. The key to this strategy is flexibility, common purpose and mutual respect among professional colleagues.

This finding provides guidelines for individual doctors, practice principals, rural workforce agencies and national medical policy. Individual doctors and practice principals who respond to

their colleagues in a respectful way and put in place practice structures that allow each doctor to work within a framework that recognises the individual needs and values of the doctor will have the best chance of attracting and retaining doctors to work with them. The rural doctor shortage makes it a seller's market and practices that expect doctors to work within a predefined and inflexible structure will miss out on the benefit of a satisfied and contented workforce. Medical colleges and government programmes will benefit if they systematically address the desire for flexibility and mutual respect and avoid the temptation to impose undue regulation and requirements in an attempt to make one size fit all. It is an important finding that male and female doctors have the same requirement for flexibility, respect and common purpose. It is a critical aspect of practice for younger doctors and the only group for whom it is not significant is the older doctors. It may be assumed that older doctors are the ones running the practices and colleges, and existing structures suit them. It is they who have the most to gain from responding to this clearly identified need of their younger colleagues.

Female and male doctors have in common the relationship between professional contentment and keeping up their skills. Women who obtain and update professional skills are nearly twice as likely as women who do not to be content with their life as a rural doctor (OR 1.91) while men are more than twice as likely to be satisfied with rural practice (OR 2.18). This is an illustration of the way in which professional identity and function supersedes personal identity and socially constructed roles. Rural doctor organisations such as ACCRRM, workforce agencies and rural divisions of general practice have worked hard and effectively to deliver continuing professional development in an accessible and relevant ways (ACCRRM 2002) and have succeeded in a way that attracts the envy of rural doctors from other specialities (Wainer 2001).

Doctors in this study have identified that being able to access continuing medical education support for their work with female patients contributes significantly to their satisfaction and contentment, particularly for male doctors.

Another initiative of rural doctors and supported by government that has been successful is exposing medical students and young doctors to rural and remote practice before they become rural doctors. This does not contribute to satisfaction or contentment, but it does significantly increase the number of years doctors intend to be rural doctors for women and men. It is likely that a more realistic assessment of the life of a rural doctor before becoming one means that doctors are better prepared for the work they are required to do and for rural life, and less likely to find a mismatch between their expectations and reality. Doctors in this survey who had prior exposure to rural practice were highly significantly ($p < 0.000$) likely to be better prepared for rural practice than doctors who had not had such exposure. There is a large difference in the means between women who had had prior exposure to rural practice and those who had not, in their sense of preparedness for rural practice. There is a lesser although still significant effect for men. It may also be that doctors who have prior exposure to rural practice are those who want to become rural doctors, rather than becoming rural doctors by default, for example because they are required to in order to enter a training programme or to obtain a provider number, or who follow their partner into the country. This is an important finding that requires further systematic inquiry to determine what is really going on.

Women and men make use of personal strategies, such as adequate leave and taking time with their families, to enhance satisfaction and contentment. Men who do this are more than one and a half times, and women are nearly two and a half times

more likely to be satisfied and contented. The larger effect for women is important in prioritising policies and programmes of support for rural practice. This is a critical issue for women, not one that can be left until all the other problems are solved. It ties in with their other strategy of putting boundaries around their practice.

One of the most important ways men identified to enhance satisfaction, contentment and intended length of stay is to become part of their community. This involves joining local community events and groups and making friends with other families. Rural Australia is a masculine culture and there is a ready place for men in public spaces (Dempsey 1992). Communities can use this finding to ensure that they welcome and make a place for the rural doctor when he joins their town and if they do he is likely to stay an extra 2 – 3 years. Women who are able to find a place for themselves in the community in addition to their role of doctor also intend to stay longer in their current practice. Some rural communities may find it difficult to assist women to integrate into the community because of discomfort with professional women, but those communities that succeed in this are likely to keep their rural doctor two years longer.

This study has been carefully designed to bring forward the gender issues inherent in rural practice. It has successfully identified the common strategies, such as those noted above, as well as the strategies and variables that affect women and men differently. The strategies that make the next highest contribution for women and men differ.

Women use with great success the strategy of putting boundaries around their professional and personal life. Their multiple roles as doctor, wife and mother skill women in separating these disparate worlds, and it may be that there is greater legitimacy for women in insisting that these boundaries be accepted. It is also possible that

women gain satisfaction from their family and friends in addition to their professional practice and are less tied up in the identity of doctor and so are able to hold firm against expectations that their doctor selves are always available. This study has demonstrated that women and men work as hard as each other, but that women distribute their work more evenly between professional tasks and family and community than men do. The Viable models study conducted by the RDAA and Monash University School of Rural Health in 2003 quantified the reduced income that women receive as a result of this, yet the study of female doctors conducted by the author in Victoria in 2001, and the Access Economics study conducted for the AMA (AccessEconomics 2001) found that very few doctors, men or women, want more hours of clinical work. Rural doctors want to be paid more for the complex work they do, and this is possibly even more important for women who are unable or unwilling to increase their clinical hours because of the multi-tasking and complexity of the interplay between their professional and personal lives. Medical practices, college training programmes and workforce planners are well advised to proactively build into their strategic planning the skill and determination women show in putting limits on their professional practice and quarantining time for family and non-medical activities. Any medical environment that makes this part of its main-stream culture rather than leaving it to individual doctors to struggle and juggle, will attract women and young doctors of both sexes.

It is likely that men are less able to tolerate the reduced income that results from putting boundaries around professional practice, and that men's identity is more closely bound up in their professional role so that they are unwilling to step outside that role. There is considerable pressure on men to meet community need for professional services, and less legitimacy for them in saying they

have other equally pressing commitments that require them to put limits on their availability. This study did find that balancing work with goals outside medicine is positively associated with satisfaction and contentment for men and for women. Stories that men tell suggest that men are likely to do this through sport or professional activities rather than family life, as these are the activities that have legitimacy in their own eyes and those of their colleagues and community. It is acceptable for male doctors to be absent from the clinic in order to chair the division of general practice, but not acceptable to leave at 5pm to collect the children from school. It is a particular challenge that the workforce shortages pressure rural doctors to behave in ways that reduce their satisfaction with rural practice and are likely to lead to premature withdrawal from practice. The expectation that the rural doctor is to be available at all times no longer fits the incoming rural general practice workforce and alternative ways to meet community need must be devised, for the wellbeing of both the community and the doctor.

Women who are able to network with female colleagues intend to stay longer in their existing practice, and women who refuse to be intimidated by discrimination from their colleagues are twice as likely to be contented with their life as a rural doctor. These sex-specific behaviours provide important evidence of the need to make rural practice more welcoming of women, and are consistent with the finding that women are more likely work in towns that have other female doctors. There is a culture in some parts of rural practice that is dismissive of female doctors. Women respond to this by gaining support from each other, and this works to make them more contented and more likely to stay.

This finding supports the recommendations of the study by Tolhurst and Lippert (Tolhurst and Lippert 2003) that a female rural doctor network be established. This important work is being supported by the Commonwealth and undertaken by rural doctor organisations. Women identify in private conversations the struggle they have to gain a voice at the table of their professional organisations, and appropriate respect from their colleagues. It is not good policy to leave individual women to find ways to deal with a hostile culture on their own. Practices, rural doctor organisations and medical colleges have an ethical and legal responsibility to their members to examine their culture and take the actions necessary to ensure that an enabling and supportive culture exists for all doctors.

This study has provided clear evidence that the sustained and prolonged training that is required to become a doctor does not overcome prior and continuing socialisation of women and men in gender-specific behaviours.

Conclusion

There is a complex web of inputs and influences that affect the way women and men practice rural medicine. It includes confidence in procedural and emergency skills, competence in women's health, preference for complex or focused presentations, patient expectations, preparation for rural practice, and practice environments. It is also likely to include the pathway to rural practice, whether the doctors are there because they want to be rural doctors and have gained the skills they will need, or whether they are there for some other reason.

Data from this study illuminates some of the threads of the web and further analysis may identify patterns and relationships that could provide the underpinning to a more rational use of scarce resources in providing support and training for rural practice.

The study has provided clear evidence that sex matters. The myth that there is a 'generic' doctor patterned on male patterns of practice ignores the reality that doctors bring their sex and gender into their professional roles and behaviours. It is deceptively simple to assume that the generic doctor exists and design workforce programmes on that basis. There are core aspects of medical practice that are unaffected by the personal characteristics of the doctor, and there are critical aspects where the traits doctors bring with them differ. Sex and gender are fundamental determinants of how life and professional practice is experienced. Competent gender analysis should be built in to all research, analysis and policies relating to the rural medical workforce and when it is the results are likely to be relevant for the new generation of rural doctors.



Recommendations

Actions to be taken

Recommendation 1

It is recommended that it be made a condition of grant that an effective gender analysis and proportional numbers of women and men be included in research, planning and decision making funded by government. Governments and other medical workforce planners could benefit from careful consideration of how the experiences of women are included in their planning and programmes. Competent gender analysis should be built in to all research, analysis and policies relating to the rural medical workforce.

Recommendation 2

It is recommended that professional structures, from national funding and accreditation to local practice management, be systematically designed to maximize flexibility and encourage diversity in rural practice. The future trend will be for an increasing proportion of female rural doctors and they will require flexible professional and practice structures that allow them to be women as well as doctors.

Recommendation 3

The 'generic doctor' approach to rural medical practice is no longer appropriate and the complexity of doctors' lives and practice must be recognised by national and state government and medical colleges and built into models of funding, training and support for rural practice.

Recommendation 4

Medical colleges, universities and regional training providers could support the transition to rural practice by providing improved access to post-graduate education and training for the distinct discipline of rural practice.

Recommendation 5

Medical colleges, regional training providers, workforce agencies and divisions should provide funded, easily accessible and readily identified up-skilling and re-skilling programmes for doctors who want to become rural doctors and have not trained specifically for rural practice, and also for doctors who may have taken a temporarily reduced clinical workload in order to pursue other aspects of their private and professional lives.

Recommendation 6

Rural workforce agencies and divisions of general practice will benefit from providing women-resourced emergency medical training to all rural doctors.

Recommendation 7

That short courses in women's health be available and presented in a way that attracts male doctors.

Recommendation 8

This study has identified a group of doctors who are not accessing the sort of training and support they need to thrive in rural practice. Workforce agencies and divisions could identify these doctors and provide training and support that is designed to be accessible and relevant to these doctors.

Further Investigation

Recommendation 9

Further research is required to identify the factors in training and subsequent practice that result in more women than men feeling under confident, and less willing to provide emergency and in-hospital care. The answer cannot be found in the data in this study, but it has been identified as an important question with major workforce implications that would respond to further serious inquiry.

Recommendation 10

Further research is required to investigate the differential in the provision of emergency and hospital-based care between women and men.

Recommendation 11

Male and female doctors apportion their consulting time differently across some of the domains of general practice. This difference should be studied systematically and the findings used to underpin a strategic approach to payment structures and continuing medical education for rural doctors, with a commitment to ensure the work of doctors of both sexes is valued properly.

Recommendation 12

A comprehensive study of 'on call' is needed to unpack the meaning, structure and effects of on call on rural doctors, generalists and specialists, working with a minimum of three dimensions, those of hours of call, intensity of work when on call, and the impact of on call on the well being of the doctor and their family.

Recommendation 13

A detailed study of 'work' as a rural doctor should be undertaken. The findings from this study add to understanding of the complexity of investigating the working hours of doctors. Effective workforce planning and support for rural doctors, especially those with family responsibilities, requires a more detailed understanding of what comprises 'work' and how to measure it.

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