Reviewer's report

Title: The cost effectiveness of UK National Health Service Physiotherapy support for occupational health services

Version: 1 Date: 22 September 2011

Reviewer: Chris J Salisbury

Reviewer's report:

Review of the cost effectiveness of NHS physiotherapy support

Thank you for asking me to review this paper. The authors are to be congratulated on introducing an innovative scheme and in attempting to evaluate it. I fully understand the challenges of evaluating a service in real life implementation. The paper is easy to read and well written. The background explains the argument for the new occupational health physiotherapy service.

They have carried out a before and after study without controls and the limitations of this design are fundamental to understanding the results. I recognise that a controlled design (whether an RCT or controlled before and after) is more difficult, but in the absence of such a design the authors need to be very cautious about interpreting their findings. Unfortunately I think they considerably overstate their findings in this paper.

Major revisions:

1. I would suggest that the authors describe the characteristics of the participants in the results rather than in the methods. It would be very useful to have more information about the characteristics of participants, e.g. their age, sex and (particularly crucially) how long they have been off work before they contacted the service.

2. The authors tell us that 517 questionnaires were distributed to service users who consented to participate. However, we also need to know how many people contacted the service, how many of them were invited to take part in the study and, of these, what percentage agreed to take part in the study. It would be important to know any differences between those who agreed to take part and those who did not, as well as differences between those who did or did not complete the questionnaires amongst those who agreed to participate. The authors tell us there were no differences between responders and non-responders to the questionnaire, but a table of these characteristics would be helpful. The authors point out that only 41% of those agreeing to participate completed a three month follow up and this is a major limitation because those who reply are likely to be quite different in terms of their outcome from those who did not. Have the authors got any information about whether there are differences between responders and non-responders in how much they used the occupational health service?
3. Rather than look at correlations between baseline variables and the extent of change, I think it would have been better to do a multivariable regression analysis to look for relationships between explanatory variables such as age, sex, initial problem type, health status, etc. and the outcome of interest, e.g. return to work.

4. I had concerns about the analysis of both the cost and the effects. In terms of effects, the authors have compared the findings from the beginning to the end of the follow-up period. However, all their analyses seem to assume that people would not have improved at all over the three month period in the absence of the occupational health scheme. This is very unlikely to be true. Other studies have shown that there is a large amount of spontaneous improvement in musculoskeletal conditions and of course many people who take sickness absence do return to work in time. The extent to which this is likely to be true of the participants in this study depends on whether they had long-term sickness absence or not and that is why we need that information in the description of participants. I would hypothesise that most of the improvement over three months that the authors observed is due to spontaneous resolution rather than the intervention. Furthermore, there is the issue of regression to the mean in that people with a low score in the EQ-5D are more likely to have a score closer to the mean on repeat testing three months later. Of course we do not know if I am correct, but the absence of a control group makes it impossible to measure a QALY gain from this study.

5. Costs: The bottom up costing is based on contact times in order to estimate a cost for service user contact hours. However, this does not take account of the amount of time that is not used productively by physiotherapists. This is a particular issue for telephone consultations. In the absence of that information it is probably better to use the top down costing and divide the total cost of the service by the number of contacts.

6. With regard to the unit costs in the paper in table 2, it would be important to provide a reference for these published hourly rates. I found a rate of £160 for face to face physiotherapy to be very surprising.

7. Given that I do not think that we can calculate a QALY gain from this study because of the lack of a control group, I definitely think it is a step too far to estimate the cost per QALY gain and to claim that the service is good value for money.

8. The discussion is much too positive and uncritical and does not mention some of the most important limitations that I have described above.

9. I would suggest that the authors present their data far more descriptively to describe the range of people who use the service, the cost of providing the service, and the findings before and after people use the service and are much more circumspect in assuming that the improvements over time are due to the service rather than natural resolution.
Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I am conducting an RCT of PhysioDirect services which are also based on initial telephone assessment and advice