Reviewer's report

Title: Analyzing repeated data collected by cell phones and frequent text messages. An example of Low Back Pain measured weekly for 18 weeks.

Version: 3 Date: 13 May 2012

Reviewer: Anthony Staines

Reviewer's report:

General comments
This is easier to follow. Thank you for taking the time to effect the changes.

Major revisions
You use what you describe as spline regression several times. You describe it thus “The shift in the course may be estimated more precisely by applying a spline regression technique where two regression lines are fitted to describe the two sections of the course and the intersection (“knot”) between these regression lines estimates the shift in the course.” Later you indicate that there are five parameters in your curves, a slope and intercept before and after the knot, and the knot location. This isn't the usual spline method, where the functional relation is approximated by several cubic curves, linked at the 'knots'. This sounds more like linear piecewise or 'hockey stick' regression (See e.g http://www.ncbi.nlm.nih.gov/pubmed/540593). Which did you use?

Minor revisions
You mention standard statistical software several times, and list SAS, STATA and SPSS. You indicate that the more complex models are hard to fit, but this is not the case. STATA and SAS both fit all the models you describe. I'm much less familiar with SPSS. R is arguably easier to use, and is also standard statistical software. Regardless, you need to say what software you actually used, as I still don't know.

References 25 and 27 are incomplete!
I assume 25 is

and 27 is
(Note the accent on the n – its an #, which is apparently a different letter in Polish.)
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I am the lead author on a manuscript which seeks to introduce people working in the field of biomechanics to multi-level modelling. This has not yet been submitted for publication, but it does cover some of the same ground as this paper.