Reviewer's report

Title: Teleradiology using iPad improves the use of health system human resources for paediatric fractures: prospective study in a tertiary care hospital in Italy

Version: 3
Date: 9 May 2014

Reviewer: Elizabeth Krupinski

Reviewer's report:

Teleradiology iPad

Overall: This paper reports on the use of iPads to view radiographic bone images from kids with fractures by orthopedists. It found that compared to not being able to view the images there was a lowered need to come into the hospital, faster time to treat, and high image quality. It was a very nice study on a practical application yet to be examined.

Abstract: Fine as written.

Introduction: Fine as written. It does a nice job of summarizing the literature on this topic, noting gaps, and thus providing the rationale for this study in the context of the local need for this types of service.

Methods: A couple of minor points need to be addressed.

1) Page 7 top: Are these digitally acquired radiographs or scanned in films? Typically a bone exam acquires more than one image – are all acquired images sent or just the one(s) with critical findings?

2) Page 10 para 4 line 2: What were the characteristics (resolution etc.) of the PACS displays? Did you counterbalance the conditions or did they all view PACS first then iPad or vice versa? How much time was there between sessions? Was viewing in both modes done using the same ambient lighting?

3) For the iPad viewing did they orthopedists control the ambient lighting? Was it similar to what the radiologists had in the IQ study?

4) Why didn’t you get IQ & confidence ratings with the orthopedists as it is really them that use the iPad and not the radiologists?

Results: Generally fine with appropriate analyses and good support of the tables & figures. A couple of minor points need to be addressed.

1) Page 11 para 3 line 3: Did you happen to record whether the fractures were subtle or obvious as this could impact the results? Figure 1 is a very obvious and clear break not just a fracture and would be visible even on a smartphone without issue!

2) Page 12 para 1 line 2: As there were 3 orthopedists were there any differences between them or were these results typical of all of them?

Conclusions: Fine as written. It does a good job of summarizing the results and
discussing in the context of the literature. Limitations are noted.

References: Fine.

Tables & Figures: Fine although see point above about Figure 1 – can you show anything less obvious?

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests