**A Web Platform for Public Involvement in Patient Information Design: Employing Text Analysis and Crowdsourcing for PPI when Revising RCT PILs.**

**Background**

Current Patient Information Leaflets (PILs) for Randomised Controlled Trials (RCTs) have been found lacking in their quality. They are not easy to read (Moult 2004) and participant understanding of essential trial aspects is rarely assessed outside high-risk trials (HRA 2017)(NHS 2014)(NIHR 2014). This calls into question the PIL’s capacity to support meaningful consent when patients are asked to join RCTs (Moore 2002)(Reinert 2014)(Giles 2014) (Knapp 2011)(Saldaña  2015).

PPI groups are generally employed in high-risk or large RCTs to review and comment on PILs from their perspective. Normally this feedback is submitted as comments on the document margin and not stored or further analysed. However, the importance of these comments is recognised by the high recommended hourly payments for PPI participants of £25 (INVOLVE 2018) and the requirement of funding bodies for public involvement before supporting most trials (HRA 2017).

**Aim**

Our novel Web platform seeks to resolve these problems by giving principal investigators a structured format that enhances the feedback received from Patient and Public Involvement (PPI) groups.

**Method**

Our PIL platform collects PPI feedback online and link each comment to a specific section of the document. It also highlights readability issues to principal investigators using text analytics. Sentiment analysis on the PPI comments will highlight PIL sections associated with high negativity. Quantitative metrics identify specific phrases that are difficult for the audience to understand, which are then revised by crowdsourcing tasks in Amazon Mechanical Turk. Finally, data collected by the system will generate an algorithm to bring potentially relevant comments from other documents to the author’s attention, based on document similarity.

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