Abstract
A standard application form for the ethical review of health-related research studies has recently been adopted by many Irish medical research ethics committees. In order to assess the impact of the new form, we reviewed all comments made by the Beaumont Hospital Ethics Committee during two six-month periods, immediately prior to adoption of the new form (2010), and soon afterwards (2011). Neither volume nor comment type differed significantly between the two observation periods. Participant documentation (information leaflets and consent forms) accounted for the largest proportion of comments (2010; 44%, 2011; 37%). Other common areas prompting queries were study administration (7%), design (12%) and procedures (13%), participant selection and recruitment (8%), and lastly data protection (9%).

Because of these findings, the standard operating procedures of the committee have been revised. Use of provided template participant documentation is strongly encouraged, and a Recurring Review Themes checklist is highlighted to all applicants.

Introduction
All clinical research studies, except clinical trials of medicinal products, reviewed by the Beaumont Hospital (Medical Research) Ethics Committee between January and June 2010, and between January and June 2011, were included in this audit. The type of study, the study intervention and level of the principal investigator were recorded for each application. All comments made by the committee are documented in the monthly meeting minutes. In order to optimise consistency and so as to avoid bias, comments from 2010 and 2011 were collected and analysed according to month order i.e. January comments for both 2010 and 2011 were analysed first followed by February comments for both 2010 and 2011.

Each comment was classified according to the following criteria: Category - most categories were derived from the section headings of the new standardised application form: general study and administrative details; study design and description; selection and recruitment of participants; consent; inclusion of vulnerable groups; research procedures; data protection; human biological material; radioactive material; medical devices; indemnity; cost and resource issues; other ethical issues; and participant documentation. Nature of comment: Requests for a change to the application or participant documentation; or for further information or clarification; Level of importance of comment: major / intermediate / minor. Qualitative data was also extracted by recording a short summary of each comment.

The above data was entered into a spreadsheet and underwent both qualitative and quantitative analysis. Wilcoxon rank-sum (Mann Whitney) tests were used to test for between year differences in the volume, category, nature or level of importance of the comments.

Results
Eighty-six ethical review applications were analysed in total, 52 from 2011 and 34 from 2010. This represented all applications considered at full committee meetings (other than clinical trials of medicinal products under S.I. 190/2004) between January and June of those two years. The majority of applications were submitted by medical consultants, accounting for 54% of the total (n=47). Surgical consultants accounted for 10% (n=9), as did non-consultant hospital doctors (NCHDs) and laboratory scientists. Paramedical staff and other allied health professionals made up 9% of submissions (n=8). Four studies were sent back for a complete rewrite of the protocol, application form and patient documentation prior to resubmission for ethical review two from each six-month period.

There were in total 915 queries made by the REC concerning the 86 applications. Between January and June 2010, 409 comments were made concerning 34 applications; 173 were requests for further information (mean=SD per application; 5.1 ± 4.5), and 236 were requests for changes to the protocol or participant documentation (6.9 ± 6.1). During the same period in 2011, 517 comments were made concerning 52 applications (further information requests; n=242, 4.7 ± 3.9, and change requests; n=275, 5.5 ± 4.6). Two-sample Wilcoxon rank-sum (Mann-Whitney) tests showed no significant difference in numbers of comments per application, category type, nature of comment, nor comment level of importance, between the two periods.

Table 1 shows the volume, nature and level of comments made in each category for each period. It is clear that in both 2010 and 2011, Participant Documentation accounted for the greatest proportion of comments; 170 out of 388 in 2010 (44%) and 359 out of 517 in 2011 (38%). It can also be seen that the other areas prompting a large number of comments were general study details and administration (7%), study design and descriptions (12%), study research procedures (13%), participant selection and recruitment (8%), and lastly data protection (9%). These 5 categories along with participant documentation accounted for 88% of all queries.

It was noted that within each of the six categories accounting for greater than 5% of comments, there were common themes or sub-categories. The 6 categories and any sub-categories that prompted at least 1% of the total comments, along with the most common queries or required corrections are illustrated in Figure 1. This figure forms the basis of a checklist to provide applicants, aiming to reduce committee queries and comments through highlighting our previous most common comments, queries and requests for changes.
Figure 1: The most common comments made by Beaumont Hospital (Medical Research) Ethics Committee, in response to 86 submitted application forms and participant documentation during two six-month periods in 2010 and 2011, are grouped according to category and sub-category. Numbers of comments, and the percentage of the total number of comments (n=915) in each category and sub-category are indicated. This figure forms the basis of a checklist provided to applicants to this committee, aiming to highlight common comments, queries and requests for changes.

Discussion

While adoption of a standard application form for the ethical review of health-related research studies by the majority of medical research ethics committees country-wide is a welcome initiative towards streamlining the review process, this audit clearly demonstrates that it had little or no impact on the volume or nature of comments made by the Beaumont Hospital (Medical Research) Ethics Committee. The second major finding of this audit was that a very limited number of areas accounted for a very high proportion of comments: queries concerning participant documentation prompted 40% of comments, and five other categories (general study details and administration, study design and descriptors, study research procedures, participant selection and recruitment, and data protection) were responsible for a further 48% of all queries. As a consequence of these findings, the standard operating procedures of the Beaumont Hospital (Medical Research) Ethics Committee have been revised. First, the table of recurring review themes and comments is provided as a checklist to all investigators intending to submit an application to the REC. Second, use of provided template participant information leaflets and participant consent forms in drafting the participant documentation is strongly encouraged.

Our findings are likely to be generalisable to other Irish RECs reviewing clinical studies and using the standard application form. It is to be anticipated that the same common issues are raised by many committees. Hence we have made our checklists and template participant documentation freely available to all on our website www.beaumontethics.ie/application/index. It is hoped and anticipated that through identifying and highlighting the common sources of REC queries to future applicants, that completion of the application form and participant documentation will be improved, and that fewer comments will be raised by the REC. If this does occur, applicants will gain ethical approval with a lesser number of document adjustments, the workload of REC members could be considerably reduced, and the timelines of the review process would be likely to shorten. This question will be the subject of a future audit.

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References
2. Research Ethics Committee Standard Application Form for the ethical review of health-related research studies which are not clinical trials of medicinal products as defined in S.I. 190/2004. Standard Application Form Consultation Group. Version 5.4, 9.8.10