Does South Africa need a national clinical trials support unit?

N Siegfried, J Volmink, A Dhansay

Background. No national South African institution provides a coherent suite of support, available skills and training for clinicians wishing to conduct randomised controlled trials (RCTs) in the public sector. We report on a study to assess the need for establishing a national South African Clinical Trials Support Unit.

Objectives. To determine the need for additional training and support for conduct of RCTs within South African institutions; identify challenges facing institutions conducting RCTs; and provide recommendations for enhancing trial conduct within South African public institutions.

Design. Key informant interviews of senior decision-makers at institutions with a stake in the South African public sector clinical trials research environment.

Results. Trial conduct in South Africa faces many challenges, including lack of dedicated funding, the burden on clinical load, and lengthy approval processes. Strengths include the high burden of disease and the prevalence of treatment-naive patients. Participants expressed a significant need for a national initiative to support and enhance the conduct of public sector RCTs. Research methods training and statistical support were viewed as key. There was a broad range of views regarding the structure and focus of such an initiative, but there was agreement that the national government should provide specific funding for this purpose.

Conclusions. Stakeholders generally support the establishment of a national clinical trials support initiative. Consideration must be given to the sustainability of such an initiative, in terms of funding, staffing, expected research outputs and permanence of location.

In 15 of 16 interviews, representatives suggested that participants were asked to consider how such an entity would best operate and where its funding should come from. Four potential operational structures (Table II) and 4 key deliverables were identified: (i) provision of quality control, monitoring, and oversight of trials; (ii) training pertaining specifically to trials to avoid duplication with current university-based training programmes; (iii) mentoring support for the entire trial process from grant procurement to final report writing; and (iv) potential to play an advocacy role to streamline regulatory processes.

In 15 of the 16 interviews, representatives suggested that funding derived from a national government source; specific recommendations included the MRC (5), DoH (2), Department of Education (1), Department of Science and Technology (1), national or provincial government with no departments specified (3), a combination of national departmental funding

Trial funding

All informants reported funding sources as broad-based, including a combination of institutional support and grants, international agencies, the MRC and pharmaceutical industry. Strong themes that emerged were: (i) lack of funding for investigator-driven (also known as self-initiated) trials; and (ii) difficulty in obtaining funding for specific research questions important to the public sector.

Strengths and challenges to trial conduct

Participants identified the high disease prevalence and relatively strong infrastructure in the South African health system as being fundamental to potentially successful trial conduct in the country. Participants identified the lengthy MCC processes and complex logistics of RCTs, the high cost of trials and the potential burden of trial conduct on clinical care as major obstacles.

Training and support needs

Table I outlines the identified training and support needs, with research methods training a strong theme. Responses to needs for support structures were more diverse, with assistance with statistical analysis, data management and science writing emerging across the responses.

Participants were specifically asked if they believed that South Africa had sufficient and suitably experienced researchers able to conduct monitoring and quality control of RCTs. Of the 13 who expressed an opinion, 3 believed this to be true, 5 felt there were some suitably skilled researchers but insufficient for the need, and 5 stated that this was a major skills shortcoming.

Need for a clinical trials support unit

In 15 of 16 interviews, participants reported a need for an initiative at national level to encourage and improve the conduct of clinical trials. One interviewee stated that it should be focused on previously disadvantaged institutions; one stated that it should start small, and another stated that it should focus only on quality control and monitoring. Several participants expressed surprise that such an entity did not exist already.

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Characteristics of key informants

Sixteen interviews (15 face-to-face and 1 telephonic) were conducted; 14 were conducted with a single informant, 1 was conducted with 2 informants, and 1 with 3 informants. The views of 19 senior individuals from 14 institutions were thus elicited. At 7 of the 8 South African universities with clinical faculties of health sciences, interviews were conducted at the level of a dean or equivalent. The representatives from other institutions were all at senior management levels. Two key informants who agreed to be interviewed subsequently were not able to participate in the interview. The Medicines Control Council (MCC) was invited to participate, but no representative was forthcoming.

Institutional trial experience

Of the 10 institutions which reported conducting clinical trials, 9 believed that they were experienced in trial conduct, with 2 reporting that the level of trial experience was variable across the institution. At the time of the interview, 3 institutions were conducting over 50 trials, 3 were conducting between 10 and 50 trials, and 4 were conducting less than 10 trials. Respondents whose institutions did not conduct trials reported using trial results to determine policies or were involved in administering trial research training, or funding.

Data analysis

The transcripts of the in-depth interviews were reviewed, and a code list of the emergent themes and sub-themes was generated for analysis. Participants were emailed the preliminary analysis for additional comment. The data are presented as frequencies, and illustrative quotations appear in italics.

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(3), and the pharmaceutical industry in partnership with the
DoH (1). One respondent recommended that trial sponsors
including international agencies should contribute funds for
establishing such an entity.

Many participants appeared dispirited by the apparent lack
of long-term sustainability of such an initiative, some citing
previous failed attempts at national collaborative projects, and
cautions about the potential for competition rather than
collaboration between institutions.

Discussion

South African clinical trial research community senior
stakeholders and decision-makers voiced the significant need
for a national clinical trials initiative to support and enhance
the conduct of public sector RCTs. Participants agreed that,
ideally, the national government should provide specific
funding to establish this initiative, and that its long-term
sustainability should be carefully considered.

Kahn and Gastrow estimate that industry turnover in clinical
trials run by the South African pharmaceutical industry is
worth around R14.1 billion annually.9 Despite this, they argue
that South Africa neither has the requisite human resources
to be competitive internationally, nor does it invest enough.
They report that increased trial activity could be attracted to
South Africa by our well-established credentials in medical
research, the high burden of disease and relatively drug-naïve
populations. These factors were recognised by our participants
as key reasons for conducting trials locally. Recommendations
for a more proactive regulatory environment were echoed in
our respondents’ complaints regarding MCC waiting times and
requests for assistance in negotiating the regulatory processes.

Most participants described the difficult local conditions
facing trial investigators. Conducting trials within communities
where literacy and health care knowledge of participants
and providers is poor, has led to speculation that trials of
high methodological quality are not possible within these
settings.10-12 A comparison of African and North American
HIV/AIDS RCTs found that the reported methodological
quality of African trials was better than that of North American
trials, independent of the country of residence of the principal
investigator,13 which is encouraging for the future of local trial
conduct.

Qualitative research was appropriate as it helps the
development of concepts, giving emphasis to the meanings,
experiences and views of all participants.14 Individual
interviews allowed detailed exploration of the issues15 and
provided rich, comprehensive data16 which might not have
been achieved with a survey-driven approach. Consistency was
ensured by each interview being conducted by NS. Interviews
took place over a 4-month period to maximise availability of
the appropriate institutional key informants. All but one of
the pre-specified institutions were represented in the final sample.

Table I. Training and support needs identified by participants

<table>
<thead>
<tr>
<th>Training needs</th>
<th>Support needs</th>
</tr>
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<tbody>
<tr>
<td>• Good clinical practice</td>
<td>• Statistical analysis and management</td>
</tr>
<tr>
<td>• Research methods: general and specific to trials</td>
<td>• Quality control and monitoring</td>
</tr>
<tr>
<td>• Statistics</td>
<td>• Data collection</td>
</tr>
<tr>
<td>• Epidemiology</td>
<td>• Scientific writing</td>
</tr>
<tr>
<td>• Data management</td>
<td>• Ethics writing</td>
</tr>
<tr>
<td>• Project management</td>
<td>• Negotiating the regulatory environment</td>
</tr>
<tr>
<td>• Protocol and grant writing</td>
<td>• Mentorship</td>
</tr>
<tr>
<td>• On-site training of field staff</td>
<td>• Database management</td>
</tr>
<tr>
<td>• Ethics training</td>
<td>• Pilot testing</td>
</tr>
<tr>
<td>• Oversight training</td>
<td>• Guidance in using tax incentives (relevant to industry-led trials)</td>
</tr>
</tbody>
</table>

Table II. Proposed models of a national clinical trials support initiative

<table>
<thead>
<tr>
<th>Model</th>
<th>Structure</th>
</tr>
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<tbody>
<tr>
<td>Hub-and-spokes</td>
<td>Unit is fully staffed and situated at a national centre, such as the MRC, and provides support and</td>
</tr>
<tr>
<td>Collaborative</td>
<td>training on an ad hoc basis to academic institutions, non-government organisations and research</td>
</tr>
<tr>
<td>Virtual</td>
<td>councils conducting RCTs</td>
</tr>
<tr>
<td>Extramural unit within university</td>
<td>No central site exists; any available national funding is directly allocated to a university</td>
</tr>
</tbody>
</table>

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Limitations

The study is subject to limitations inherent in qualitative research. It was funded and conducted by the MRC, which has an interest in the location of such a unit, which might have influenced the investigators’ interpretation of results. Participants working in government departments may be far removed from the ‘coalface’, and their comments may not accurately reflect needs. However, given the consistency of comments from all participants, this does not seem to have been a major limiting factor. Perhaps most limiting were the voices missing from this study, notably a stakeholder from the MCC. Feasibility issues prohibited a larger study, but opinions of more clinical investigators and of trial participants, civil society groups and community representatives would have enriched the study. Such studies could be key outputs of a future clinical trials unit.

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References


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