



How to build capacity strengthening into blood services: T-REC in Ghana and Zimbabwe

Key points:

- Adapting blood service policies and practices depends on Africa's blood services having people with technical knowledge, and who are able to identify, design and conduct research that can guide changes to policy and practice.
- To be effective, capacity strengthening needs to provide these individuals with research skills and ensure there are systems in place to use research results.
- New researchers must be able to consolidate and expand their learning by sharing experiences and research findings with other transfusion services and the academic community.

A programme in national blood services in Ghana and Zimbabwe has supported staff and students to conduct research that can change local policy and practice. This capacity strengthening is important for African blood services to be able to respond to problems in their own context, rather than depend on international guidelines which are often inappropriate. T-REC brings together African transfusion practitioners and managers who have in-depth knowledge of the needs and challenges of their transfusion services, with academics experienced in designing and conducting international quality research

Why build research capacity in blood transfusion?

Many of the blood transfusion practices we take for granted in high-income countries may not be appropriate for low-income countries in Africa where disease patterns are different and critical blood shortages are common. How unsafe is it to accept blood from malaria-positive donors in malaria endemic areas when, in some countries, such a policy could reduce available blood by 30–50%?

In Mombasa in 2008 a group of blood services directors and transfusion users from across Africa, developed a list of research topics that were priorities for them to be able to improve blood services. Worryingly, the 36 participants from 13 countries could only identify a handful of African researchers working on blood transfusion. The most urgent priority therefore became the need to significantly strengthen the research capacity in Africa's transfusion services.



Finger prick being undertaken on pupil as part of blood donation drive at school in Zimbabwe

“Local research findings will inform blood service policy and clinical care for patients.”

Daniel Ansong, Kwame Nkrumah University of Science & Technology, Ghana



About T-REC

With funding from the European Community, T-REC is a partnership between the universities of Copenhagen (Denmark) and Groningen (the Netherlands) and blood services and universities in Ghana and Zimbabwe. It is led by Professor Imelda Bates from the Liverpool School of Tropical Medicine, UK.
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How T-REC helped to build local capacity

Between 2011 and 2015 T-REC strengthened research capacity at individual, institutional and supra-national levels through:

PhDs Four students from Zimbabwe and Ghana were selected through open competition and jointly supervised by researchers from their local university and a European university. Their projects cover donor motivation, rationalising syphilis screening, changing HIV patterns and economics of infection screening.

Diploma in Project Design and Management (DPDM) Each year up to nine staff each from the transfusion services in Ghana and Zimbabwe undertook a one-year, work-based part-time course which took them through the process of designing and carrying out their first transfusion research project. The course is managed by local facilitators supported by a Faculty based in Kumasi and Accra, Ghana and the Diploma is a UK Professional Diploma award. The research project is intended to directly inform policy and practice in the local services.

Student bursaries Supplementary research funds were provided to undergraduate and postgraduate students in Ghana and Zimbabwe to undertake research on a blood transfusion-related project. The students were from local universities and undertook research in a range of topics including medicine, science, media studies and the arts.

What happened as a result of the programme?

The effects of research capacity strengthening often take many years to be made clear. However, changes in national blood services are already taking place. For example, in Ghana, a Research Uptake Group has been formed as a result of T-REC. This group feeds into the National Research Steering Committee and the findings of research from the PhD students and DPDM students will be useful at this level. The blood service in Zimbabwe held a national consultation in February 2015 to decide how to use its research experience, including lessons from the T-REC collaboration, to improve the safety and availability of blood. T-REC has provided first-time opportunities for individuals from the transfusion services to present their research and to exchange ideas at international meetings. For example, blood transfusion staff presented at the African Society for Blood Transfusion (AfSBT) Annual Congress in 2014 on topics such as the use of blood components in Zimbabwean hospitals and a review of 14 years work of a hospital transfusion committee in Kumasi, Ghana.

Lessons learnt

- Blood transfusion staff and students found the research capacity strengthening to be highly motivational professionally. They gained the ability to be constructively critical of existing practices and found ways to solve problems.
- It is not always easy for research projects to directly inform policy and practice as there are many things that influence policy, including resource constraints.
- International collaboration and working across universities in different continents is laudable, but the limitations of the mechanisms for this in practice are challenging.
- Capacity strengthening activities take at least ten years to achieve autonomy so the African transfusion services need to find mechanisms to consolidate and sustain the gains made through T-REC.