Surgical research collaboratives in the UK

Over the past 5 years, trainee-led regional networks in general surgery have been developed to adopt a novel collaborative approach to research in the UK. This approach allows for a larger number of patients to be included in less time, prevents repetition, and permits greater generalisability than single-centre studies. Trainees are ideally placed to deliver this model; they follow a rotational pattern through several hospitals, are in regular contact with each other, are motivated, and require formalised evidence of research and audit. As these trainees become consultants, a culture of trials could be distilled in UK surgical practice.

The first regionally developed general surgical research collaborative was the West Midlands Research Collaborative. Their recently published randomised controlled trial, ROSSINI (Reduction Of Surgical Site Infection using a Novel Intervention),[1] recruited 760 patients from 21 centres to use either a wound-edge protection device or standard practice. The rapid recruitment (the trial ran ahead of schedule throughout) and minimal loss to follow-up demonstrated the ability of trainees to plan and conduct high-quality multicentre research.

Other general surgical research collaboratives were subsequently established allowing for almost complete coverage of the UK. These regional networks recently delivered the Multicentre Appendicectomy Audit, including 3326 consecutive patients undergoing appendicectomy from 95 centres during 2 months.[2] Further trainee-led randomised trials and national cohort studies developed from these groups are ongoing, and are recruiting patients across the UK. The ROCSS (Reinforcement of Closure of Stoma Site) study[3] is an example of how trainee network can deliver a large randomised trial for a complex surgical intervention, while collaborating successfully with industry.

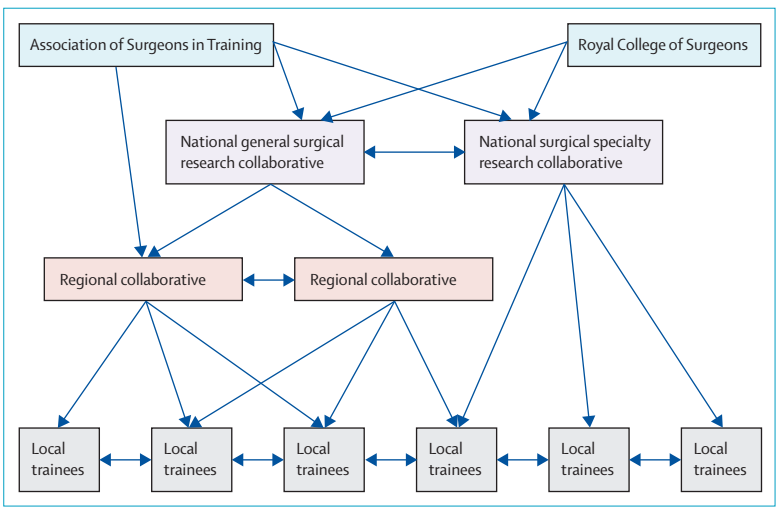

Figure: **Models for organisation and communication of national research collaboratives in the UK**

More specialised surgical disciplines are centralised in tertiary units or large regional hospitals, and so require a national rather than regional network. Examples of trainee collaborative model include paediatric surgery, neurosurgery, plastic surgery, and cardiothoracic surgery. In June, 2013, the first national study from the British Neurosurgical Trainee Research Collaborative was launched: a prospective cohort study of patients with chronic subdural haematoma. Two randomised trials and a further prospective cohort study are currently in development.[4] Cross-specialty collaboratives are now developing in the UK following these successful surgical models, including anaesthetics, dermatology, gastroenterology, endocrinology, and oncology; a national surgical medical student network has also formed (STARSurgUK).

All collaboratives find alignment with existing organised structures beneficial, including professional specialty associations (figure). In the UK, the pan-specialty Association of Surgeons in Training, the Royal College of Surgeons of England, and the Association of Surgeons of Great Britain and Ireland have already provided academic, structural, and logistical support to surgical trainee collaborative development.[5]

To our knowledge, these UK trainee-led models are a world-first, and we welcome international collaboration to facilitate development in other countries. A global surgical proof of principle study is planned for early 2014, with dissemination via social media (such as GlobalSurg). We hope that this will make possible development of trainee-led collaboratives on a truly global scale.

We declare that we have no conflicts of interest. We thank Prof Dion Morton for his guidance.

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See **Editorial** page 1071

For **GlobalSurg** see http://globalsurg.org/

For more on **UK Trainee Research Collaboratives** see http://www.asit.org/resources/collaboratives

Submissions should be made via our electronic submission system at http://ees.elsevier.com/thelancet/

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Alcohol-related road traffic injury and Global Burden of Disease 2010

Quantification of the disease burden of potentially modifiable risk factors is crucial for health decision-makers. The 2010 Global Burden of Disease (GBD) study provides an update of comparative risk assessment of the burden of disease and injury attributable to 67 risk factors and cluster risk factors.[1] However, the validity of GBD 2010 estimates of burden attributable to risk factors remains unreported because of the lack of country-level directly reported data.

We analysed data for road injuries from the USA, Canada, UK, and New Zealand, and compared them with alcohol-related deaths from transport injury from GBD 2010.

The reported alcohol-related deaths of these four countries were limited to road traffic injury and therefore should be less important than the GBD 2010 estimates for all alcohol-related transport deaths. Yet, all four countries reported numbers of deaths that were notably larger than the GBD 2010 estimates except for 2010 in the UK (figure). This unexpected difference could be primarily due to differences in estimation methods. Compared with the methods based on direct observation that the four countries used,[2–6] the GBD 2010 used a five-step approach[1] to estimate alcohol-related transport injury that was based on systematical review and synthesis of published and unpublished data because most countries lack high-quality data such as the data for these four countries.The GBD method is more likely to be affected by some potential confounding factors than the direct method because few countries have data that can satisfy the requirement of the GBD five-step method. For example, the aetiological effect size of alcohol use on transport injury may change over time and across countries, as other factors change. Country-specific and year-specific effect sizes of alcohol use are unavailable. The GBD group has to use a systematic review to estimate the effect size and apply it to all countries and all years.

Because of the large difference between GBD data and reported data from four countries with high-quality data, the GBD 2010 data should be used cautiously to support policy related to alcohol use. When possible, high-quality directly observed data should be given priority, and further studies are needed to explain the large differences observed.

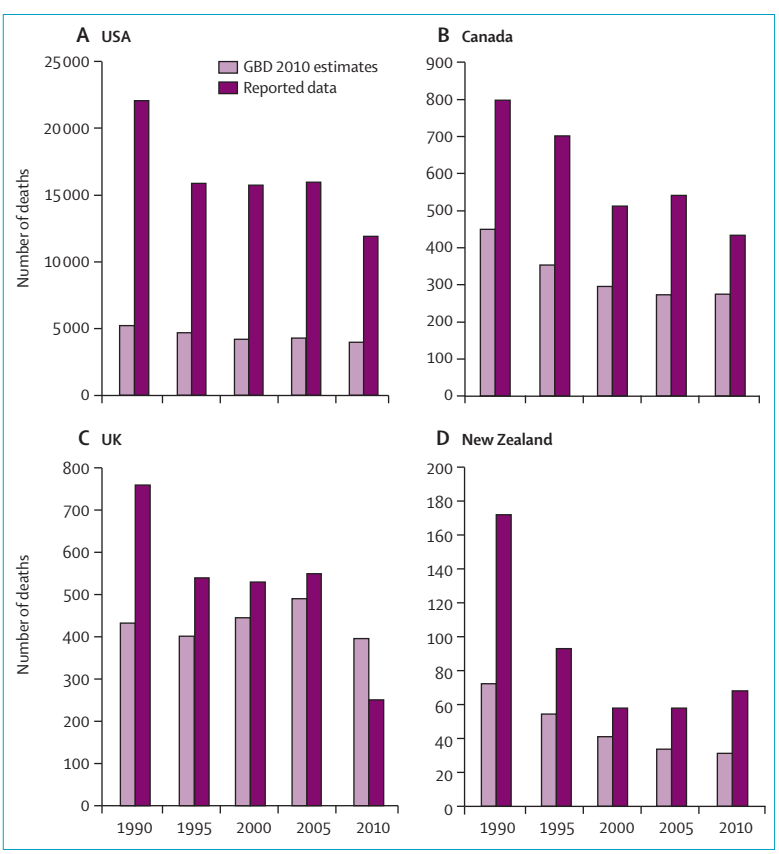

Figure: **Transport-related deaths attributed to alcohol use in the USA, Canada, UK, and New Zealand, 1990–2010**

(A) USA: based on the number of people killed by drivers with a blood alcohol concentration (BAC) ≥0·1 g/L.[2] (B) Canada: based on the number of fatally injured drivers with BAC ≥1 mg%.[3] (C) UK: based on the estimated number of persons killed by drink drive accidents BAC ≥80 mg%.[4,5] (D) New Zealand: based on the estimated number of killed drivers with BAC over the legal limit (≥30 mg% from 1993).[6]

We declare that we have no conflicts of interest. We acknowledge support from the 2009 New Century Scholar Support Program of the Ministry of Education of China (NCET-10-0782).

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