Research collaborations in Tajikistan: lessons to be learnt

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Summary

We have been working on an association of physicians 'links with developing countries' scheme in Tajikistan, which is a nation of 7.5 million people, 93% of which is mountainous, of a similar size to England and Wales, landlocked, resource-poor and richly licked by the brush of history. Understanding the challenges faced by academics working with Tajikistan today requires a cursory understanding of Tajikistan's genesis. Through this lens, present-day technical, organizational and socio-political challenges can be appropriately considered, with a view to improving academic collaboration in the future.

Modern Tajikistan has been subject to many great empires, including Alexander the Great, the Islamic Caliphate and Russia. Under the Islamic Caliphate, Samarkand and Bukhara became centres of culture and learning, a time symbolized by Avicenna, the man who defined medical education for 1000 years. His statue has replaced one of Lenin in Dushanbe’s main square. For Russia, Turkestan was a strategic buttress to thwart British advances from the south.

Russian colonization of Central Asia was bloody, but expedient. Central Asian states became vassals to Russia and subsequently, Soviet Republics, after 1920. Ethnic divisions, seeded by Tsarist Russia as 'Tajik plums in the pie of Uzbekistan' and 'Uzbek currants in Tajik and Kirghiz cakes' have remained sources of tension to this day, evidenced by the post-independence Tajik Civil War in 1992 that stalled the country's progress for a decade. This left thousands dead and deep scars in Tajik society, the slow healing of which hampers academic endeavours to this day.

Prior to Soviet departure, the Tajik Soviet Socialist Republic was the poorest state in the region. Without Kazakh oil, Uzbek minerals or Turkmen gas, Tajikistan could only offer hydroelectric power and arable land, of which there is little. Without support from Moscow, its economy collapsed. By 1996, the GDP had contracted to 34% of its 1991 peak and industrial production had fallen by 70%. The Soviet health system, imposed upon the Tajiks, was “inefficient, over-specialized and over-centralized, with emphasis on inpatient care in specialized institutes”. The broad aim of current government strategy is to shift from secondary to primary care, and from curative to preventative medicine.

The Russian departure, along with funding and expertise, has left much intellectual and physical infrastructure in Central Asia frozen in time. Specialist institutes, organized by medical speciality or by disease, work in isolation, pursuing objectives that are sometimes common, but rarely shared. Within these institutes, one finds highly trained academics using out-of-date techniques. Beyond these edifices, there are regional hospitals and rural clinics. In 2009, the average monthly salary for health care workers was US$38, compared with a workforce average of US$65. This often leads to healthcare workers demanding payments for delivering ‘free’ service. The current annual expenditure per capita
by the Ministry of Health is US$ 10.6. It was in this challenging setting that the opportunity for fruitful collaboration presented itself.

Hepatitis in Central Asia

According to even the most optimistic official statistics, hepatitis B prevalence in Central Asia is high despite increasing, but by no means universal, vaccination at birth. Vaccination hit rock bottom in the decade following Soviet collapse and the post-independence Civil War in 1992, but political stability has now improved this. Hepatitis B vaccination began again in 2002. High prevalence and vertical transmission, lack of awareness of safe sex practices, an economy that needs and therefore tacitly condones the drug trade from neighbouring Afghanistan and difficult access to healthcare in high risk groups create an emergent system for a hepatitis epidemic. Consequently, the disease burden remains high.

In a resource-poor setting with high disease prevalence, and little intervention, a cheap but effective screening tool becomes attractive. Imperial College research led to the development of a panel of urinary biomarkers that in African populations hold promise for the development of a urinary dipstick test for discriminating liver cancer and cirrhosis in a primary care setting. Though the appropriate metabolites have been isolated in West Africa, a generalizable model remains elusive. A team from the Tajik Institute of Gastroenterology in Dushanbe became aware of Imperial College research and the possibility of a parallel study in Tajikistan materialized.

The politics of transparency

The objectives were clear: ensuring good laboratory practice, improving relationships between healthcare actors and sharing best practice. The appropriate clearances and permissions were sought from multiple ministries and institutes. Once in Tajikistan, conversations with officials revealed that the path would prove difficult were it to progress as intended. Many expected to benefit personally from their interactions with the team; the size of the benefit was proportional to the individual’s station.

Language

The research protocols were written in English and translated locally to Russian. The translation was loose. ‘Waist-to-hip ratio’ became ‘hips or waist’, and questions such as ‘do you inject drugs’ and ‘are you a man who has sex with men’ were omitted, summarily precluding the presence of these demographics in research. The lack of academic English excludes a generation of scientists in Tajikistan from international science. Junior academics rely on translators and consequently the professor’s whim to access papers or speak with potential collaborators overseas. The degree to which simple exploration of ideas are curtailed cannot be overexpressed. A spark of inspiration could lead to Wikipedia in Russian, but little further. The result of this is an academic divide, a linguistic iron curtain. English is the door to international intellectual expansion and the professor alone holds the key.

An entrenched hierarchy has compounded with language barriers to hamper progress. The Tajik academic system, redolent of its Soviet predecessor, requires an extremely ‘hands on’ head of laboratory, through whom all communication passes and by whom all decisions are made. This prevents parallel working and speedy trouble-shooting as issues arise. Local members of staff are expected to ask questions of professors, who are expected to have all the answers. The place of the Principal Investigator as sole source of original thought from whence all creativity must spring leaves little scope for personal scientific initiative. Members of the team are expected to do as they are told and rarely afforded opportunity to ask questions.

Moving forward

Despite these catalogues of woe, we believe the future is bright in Tajikistan. Though multiple challenges were identified, causes have also been identified and where possible addressed. The economy is growing faster and the government is actively tackling structural limitations of its ossified healthcare system through considered reorganization. The Tajik Academy of Medical Sciences has been created to foster research and creative scientific thinking, and to act as an apolitical advisory body to the Ministry of Health. The effects of vaccination programmes adopted in 2002 should soon be felt. The team in our collaborating laboratory have begun taking online English lessons and to question authority. One hopes this will lead to greater understanding, personal motivation and fewer mistakes.

Operating in another language can be dangerous. The quality of science is as good as the weakest translator’s English. Linguistic ability must not be assumed and technical translational skills must be verified through reverse translation by reliable technical translators. Once protocols have been established, further communication should proceed cautiously, without use of idiom, leaving no room for ambiguity. Language training must continue in Tajikistan. The Tajik Academy of Medical Sciences is working to secure multiple language and capacity-building programmes available to all branches of Tajik science. With appropriate donor support and local engagement, this can only go well.

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References