SCIENCE WITHOUT BORDERS

4 BIG QUESTIONS

Working as a scientist in low- and middle-income countries can be challenging, but it also provides the opportunity to make a difference to people's lives.

BY RICHARD HODSON

QUESTION

WHAT WE KNOW

WHAT WE CAN DO

THE RESEARCHER'S VIEW

1

How can scientists in training best prepare for a research career in Africa?

Budding researchers often study in other countries. When they return to Africa, many find themselves facing unexpected challenges — from coping with an overwhelming amount of teaching to having to find their own funding.

Programmes are emerging that provide scientists with financial and technical support to establish a career in Africa. With the help of local mentors, students can plan for the challenges ahead, for example, by choosing a specialism that is likely to attract funding.

"You can get all the training you want overseas, but it doesn't mean that when you come home the environment is conducive, or that you are actually prepared." **Mashiko Setshedi**, Groote Schuur Hospital, South Africa.

2

How can health-care systems in low- and middle-income nations adapt to changing needs?

Non-communicable diseases such as diabetes and cardiovascular disease are on the rise in low- and middle-income countries, claiming the lives of millions each year. Health systems in many of these nations lack the capacity to monitor, prevent or treat such conditions.

Infrastructure can be repurposed for non-communicable disease research and health workers can be trained to better understand chronic diseases. International researchers need to collaborate with in-country scientists to take advantage of their local knowledge.

"Many countries still lack a culture of non-communicable-disease research. They don't have the right skill sets and haven't had the time to get to the right questions". **Venkat Narayan**, Emory University, Atlanta, Georgia.

3

What can scientists do to gain and maintain the trust of local communities?

Distrust of researchers and health workers in local communities can limit scientist's ability to do their work. A lack of trust and understanding, particularly during disease outbreaks, has hampered efforts to contain disease, and even led to violence.

Reducing the turnover of staff at research centres can engender trust through familiarity. Some centres, such as the Macha Research Trust in Zambia, also make an effort to involve members of the local community in the planning and execution of research projects.

"False rumours can ignite if communication with the community is poor." **Sungano Mharakurwa**, Africa University, Mutare, Zimbabwe.

4

What can the research establishment do to pave the way for young scientists to succeed?

For scientists who are just starting out, funding can be difficult to come by — more-established researchers are often favoured. Some scientists can feel as though they are just an extra pair of hands for their supervisor.

Several funding agencies are setting aside portions of money for early-career scientists. Governments of some high-income countries, including Germany, offer training specifically for scientists from low- and middle-income countries.

"We are doing a lot of damage to our science by not supporting young people." **Michael Levitt**, Stanford University, California.

Richard Hodson is supplements editor at Nature.