Boosting research into mental health

Dr Gretchen L Haas is dedicated to increasing the nation’s recruitment of talented physicians to careers in mental health research. Here, she discusses the aims and successes of the National Institute of Mental Health-funded programme that she is conducting with collaborator Dr Jason Rosenstock.

Why is there a lack of talented medical school graduates choosing careers in mental health research in the US?

There are four key factors contributing to this problem. Firstly, relatively small numbers of medical students express an interest in research careers; on review of the biographies of successful scientists, one finds that most career scientists have typically enjoyed an intensive and early exposure to research – the more intensive, the more likely to light the fires of inquiry and fuel a career in science. To recruit future scientists into mental health research, we need to expose them to the clinical disorders and fundamental questions that must drive research, as well as enticing them with hands-on scientific pursuits.

In the US, opportunities for such exposure are typically limited until the second or third year of medical school, at a point when individuals are no longer able to prepare for, or even entertain, the possibility of a career in mental health research. The second factor is that funding for medical student research scholarships and intensive research training is costly and, in the US, largely depends on financial support from both private foundations and the National Institutes of Health (NIH). Thirdly, the majority of medical students receiving research fellowships are funded to work in basic biomedical science or non-mental health arenas. Finally, the spectre of four years of specialised post-residency research training and larger educational debt deter many physicians from pursuing research careers.

The National Institute of Mental Health (NIMH) is funding your educational programme, which engages faculty to recruit highly talented and motivated medical students into the field of translational mental health research. Could you elaborate on the key aspects of this new programme?

The research education programme features a full year of personalised mentoring in research methods and a specialised clinical preceptorship related to the chosen research focus. It consists of four major components – a part-time, 12-month mentored research experience in a clinical or basic science laboratory; a series of research practica focusing on topics such as the ethics of research with human subjects, manuscript preparation and effective oral and poster presentation; a monthly evening seminar with world-renowned scientists working in mental health-related research; and clinical- and community-based experiences intended to broaden clinical exposure and promote the further development of patient interview skills.

Your current NIMH-funded medical student programme has inspired a new phase of your project. How do you plan to expand the medical student track?

We have recently submitted a written proposal to the NIMH to develop a web-based mentoring programme in mental health research education. The focus of our research education and training efforts continues to be medical students, although the next phase will involve collaborations between faculty mentors from the University of Pittsburgh School of Medicine, along with visiting scholars, on-site research mentors and students at medical schools across the country. The aim is to build on the success of the Pittsburgh programme, extending key elements of our curriculum to expand medical student mentoring opportunities at collaborating medical centres across the country.

By what means do you plan to track the individual progression of students who have participated in the programme?

We contact graduates at one, three and five years after graduation to track their: long-term career trajectories, with a focus on advanced education and professional training; participation in formal post-residency and postdoctoral research training; contributions to scientific publications and grant-funded research activities; grant funding; and employment in academic and/or research settings.
Recruiting the next generation of mental health researchers

Insufficient numbers of medical students in the US are choosing to pursue careers in mental health research. However, researchers at the Department of Psychiatry of the University of Pittsburgh School of Medicine, Pennsylvania, are hoping to address this shortage through a novel education and training programme.

THE US HAS a well-documented shortage of medical students who opt to pursue a career in mental health research. The now long-standing lack of new physician-scientists entering the field may have a detrimental effect on the field, ultimately limiting the potential for cutting-edge research on the aetiology of mental illnesses and the development of new treatments to combat a range of debilitating disorders. In direct response, an ongoing programme at the University of Pittsburgh School of Medicine, funded by the National Institute of Mental Health (NIMH), aims to provide an intensive, year-long introduction to mental health research for medical students. The programme was developed by faculty from the Department of Psychiatry in collaboration with the University’s Neuroscience, Neurology, Neurobiology, Medicine and Psychology Departments. The project, led by Dr Gretchen L Haas, Associate Professor of Psychiatry, seeks to provide a model of early career mental health research education and training to recruit talented individuals into the field, and has attracted participants from across the US.

A FOUR-POINT PLAN

Within their broad mission to improve mental health research, Haas and her colleagues have identified four aims. They first hope to increase the uptake of physician-scientist careers in mental health research and mental health-related biomedical, behavioural and clinical studies. Secondly, they aim to increase the number of talented minority medical students pursuing careers in health research more widely, but particularly in mental health research and related fields. The third goal is to provide participants with a strong foundation for high achievement in subsequent stages of training and research. Finally, Haas and her collaborators work to develop effective models for evaluating the long-term success of the programme by tracking the education, professional training, and occupational outcomes of their graduates.

Reflecting on feedback from graduates of their own programme and published empirical data on educational outcomes from early educational intervention programmes, the researchers are persuaded of the importance of three key contributors to success in bringing talented physicians into the field of mental health research: early exposure to a diverse range of science investigators; early immersion in programmes of clinical or laboratory research; and early education on the practicalities of a successful research career. A fourth major aim is to build long-term relationships with scientific and careers mentors in the development of their research education and training programme at Pitt.

LAYING THE FOUNDATIONS FOR INSPIRATION

Haas and her collaborators, together with established scientists from the Pittsburgh biomedical community, encourage sharing and collaboration in scientific inquiry across generations. The experience of conceiving, planning and implementing a research project in collaboration with a senior mentor and affiliated research team is of profound...
INTELLIGENCE

RECRUITMENT OF MEDICAL STUDENTS TO CAREERS IN MENTAL HEALTH RESEARCH

OBJECTIVES

• To increase the national pool of talented medical school graduates who go on to seek further training in preparation for careers in mental health research

• To promote active collaboration between clinical and basic science researchers – advocating early induction of highly talented and motivated medical students into the field of translational mental health research – with the option to focus on basic or clinical neuroscience research, or patient-orientated research, as well as exposing all students to aspects of both bench to bedside and clinical to community types of translational research

FUNDING

National Institute of Mental Health – grant #5R25 MH054318

CONTACT

Gretchen L Haas, PhD
Associate Professor of Psychiatry
Director, NIMH Medical Student Fellowship in Mental Health Research
Associate Director, VA VISN4 MIRECC
VA Pittsburgh Healthcare System

Department of Psychiatry
University of Pittsburgh School of Medicine
3811 O’Hara Street
Pittsburgh
Pennsylvania 15213
USA

T +1 412 383 5467
E haasgl@upmc.edu

CREATING OPPORTUNITIES FOR MINORITY STUDENTS

Central to the ethos of the NIMH-funded programme has been a commitment to recruiting talented individuals from racial and ethnic groups that have historically been underrepresented among medical researchers in the US, such as the African-American and Hispanic-American groups. By advertising the programme in university and medical school newsletters, and by contacting medical schools across the US, Haas and her colleagues have effectively raised awareness of their work. “In addition to this, the University of Pittsburgh School of Medicine’s Dean of Student Affairs, Dr Joan Harvey; Vice Chancellor for Health Diversity, Paula Davis; and Director of the Clinical Scientist Training Program, Dr Amber Barnato, have helped identify promising potential female and underrepresented minority student candidates,” Haas explains. Two leading organisations of medical students – the American Medical Students Association and the Students’ National Medical Association – have introduced a number of minority candidates to the programme. Early response has demonstrated that interest is keen amidst the targeted groups. Haas and her colleagues are confident that this is just the beginning of efforts to launch more minority students into successful careers in medical research.

BENCH-TO-BEDSIDE AND CLINICAL-TO-COMMUNITY

The programme directors are especially gratified with the exposure all participants have to both bench-to-bedside and clinical-to-community translational research. “Successful research careers in basic and clinical sciences, that are relevant to mental health, will increasingly depend on the basic scientist’s continued exposure to clinical phenomena and research findings,” Haas suggests. “The clinical research investigator who recognises the relevance and potential significance of a particular line of basic science investigation for the understanding and treatment of mental disorders has the powerful potential to make scientific in-roads into the complex terrain of mental illness.”

Thus, successful preparation for mental health research must include (but not be limited to) education in, and exposure to research that utilises core methods of neuroscience, biostatistics, epidemiology, behavioural sciences and biochemistry. Through their programme, the researchers strive to give students an understanding of the importance of translating basic science research findings into clinical applications in patient settings, and of transferring technical advances from controlled trials into the field.

Programme staff also strive to instil in students an appreciation of the value of collaboration between scientists of different disciplines – as well as between educators, clinicians and health services researchers – in order to promote the transfer of technology, skills and expertise and the impact of research on the field. Haas and her colleagues are confident that their efforts are contributing to a promising future for mental health research in the US.