

SPECIALISING  
IN PREVENTION:

# THE PREVENTIVE MEDICINE RESIDENCY

Interview with A/Prof Jason CH Yap

Preventive Medicine practitioners engage in the research, review and implementation of health policies and systems, education programmes and medical practices to improve the ever-changing healthcare landscape. In contrast to most of their colleagues who practise curative medicine on individual patients, Preventive Medicine practitioners deal with healthcare on the population level, which can include health promotion, disease prevention, community health interventions and workplace safety, among others.

SMA News interviewed **A/Prof Jason CH Yap (JY)**, programme director of the National University Health System's National Preventive Medicine Residency Programme, to find out more about this unique residency.

## First off, tell us more about Preventive Medicine as a speciality in Medicine.

**JY:** Preventive Medicine is a term that was not often used in Singapore until the advent of the residency approach to specialist training. We used to have separate specialist training programmes for Public Health (called Hospital/Health Administration back in my time) and Occupational Medicine, but these were combined in 2010 to create the Preventive Medicine Residency Programme.

In the US and other developed countries, Preventive Medicine is a more global term that includes Public Health (which is broad enough to range from public policy to service delivery), Clinical Preventive Services (the operation of clinical services focused on promoting and protecting health), along with Occupational Health and Aviation Medicine.

Occupational Health is, in one sense, Public Health for those at work (concerned with both the workplace as well as the working population) and Aviation Medicine is perhaps Occupational Health for the aviation industry. Thus, each takes the general approach of Public Health deeper into

industry, but the core principles of promoting and protecting the health of a target population remain and range from policy formulation to services provision to health research.

Another way of looking at Preventive Medicine is that it is Public Health – a very broad and variegated field – that is practised by medical doctors. In Australia and New Zealand, the equivalent term is “Public Health Medicine”. Because much of the practice of Preventive Medicine physicians can also be done by non-medical practitioners (apart from seeing patients in clinical services), the differences are more in the actors than the activities.

## Tell us more about the NUHS Preventive Medicine Residency Programme. What are its goals and key features?

**JY:** The goal of the programme is to produce good Public Health and Occupational Medicine specialists. Residents do compulsory postings in primary care, infectious diseases and public health agencies, followed by elective sites depending on their tracks and areas of interest. Residents pass the Intermediate Examination to graduate from the three-year junior residency to the two-year senior term.



To exit, they must show that they are able to independently perform functions as described in their Entrustable Professional Activities (EPAs), which are based on the UK's Public Health Skills and Knowledge Framework (PHSKF).

Unlike other residencies, with more homogeneous cohorts of residents and thence fairly standard development trajectories, Preventive Medicine residents have widely varying backgrounds and experiences. They may choose four tracks: Health Policy and Management; Epidemiology and Disease Control; Health Services Research; and Occupational Medicine.

The six Core Competencies from the Accreditation Council for Graduate Medical Education – International (ACGME-I) have somewhat broader interpretations for the Preventive Medicine resident. Taking Systems-based Practice as an example, the resident engages not only the organisational system of the care facility, but also national policies, social care service provision and even issues of national security and trade. The very first competency – Patient Care – is expanded to Population Care, and the resident must be able to operate from the micro to the macro levels of healthcare. Their medical knowledge cannot be just a mile deep and an inch wide or the reverse; the resident must know enough (depth) of everything (width) to get their jobs done.

While clinical specialists relate largely to patients, family and colleagues, the Preventive Medicine resident also has to work with senior management, service vendors, politicians and policy-makers, grassroots leaders, and persons in the community. This requires a far wider range of relational skills.

Because Preventive Medicine residents operate at the policy and organisational levels, what is considered additional duties for the clinical resident (chairing committees, designing programmes, managing projects, etc) is routine work for them. (When I started the equivalent of a senior residency posting way back then, my first task was to lead a team

to design and implement the national licensing scheme for healthcare facilities.) It was not just doing our assigned tasks well but also about figuring out what needs to be done and how to make it happen; we lived in a much more unstructured world.

### What qualities do you look for in residency applicants?

**JY:** The demands of Preventive Medicine residents are diverse and at times quite intense. Residents must have the intellectual ability to manage the more advanced aspects of epidemiology and biostatistics, the relational ability to communicate and persuade many different constituencies, the personal drive to tackle challenges that have no clear solutions, and the resilience to keep going.

The last aspect of resilience is especially important because the goals of their work are much less clearly defined than in the clinical setting, where it should be clear to everyone that the patients' interests come first. In a Public Health setting, there are many stakeholders, each with their own agenda, and navigating and managing multiple constituencies can be gruelling, especially when they must not lose the ultimate focus of benefiting the patient and the population.

Doctors have diverse reasons to specialise in Preventive Medicine. Some realise that they are better suited to working with peers and organisations over a longer period than having one-on-one daily interactions with patients. (I for one made the choice when a friend pointed out that my rather intense involvement in undergraduate co-curricular activities suggested I would do a decent job in this field.) Others are interested in knowledge domains like Epidemiology or Biostatistics, which parallels how others decide to pick ENT or Pathology, loving the science within the specialities. Some doctors have even told me that they want to do good and serve patients but think that doing so one patient at a time is just too slow!

### Do you have any advice for potential applicants?

**JY:** Talk to me. Explore. We will take it from there.

It may be useful to do a Preventive Medicine posting for the experience, but because the domain is so wide, any one posting (say in the Ministry of Health [MOH], Health Promotion Board [HPB], the regional health systems, or an Occupational Health clinic) is too narrow an experience to give the full flavour. They would have missed more than they have experienced. So, it's back to "talk to me".

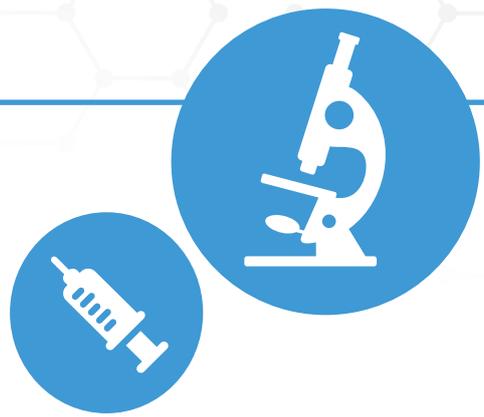
### What are the roles Preventive Medicine practitioners play in the ongoing national healthcare projects?

**JY:** Singapore faces a convergence of an ageing population, increasing chronic disease, escalating healthcare costs and a maelstrom of healthcare reforms at macro, meso and micro levels. These are bread-and-butter issues for the Preventive Medicine practitioner.

They must at least guide, if not lead, the development and implementation of responses to these challenges. The "medical model of thinking" (first, what's the problem, then, what can we do, and finally, what are the best/likely outcomes?) is often not the best approach to such complex problems. The Preventive Medicine practitioner seeks to prevent issues from even appearing, rather than trying to care and cure after they arise.

Incidentally, while there is much concern in the various residencies about whether there are "enough jobs" for all the specialists being trained, there isn't (or shouldn't be) a like concern for Preventive Medicine residents. They can choose from the obvious positions in hospitals (eg, Occupational Health, Epidemiology and Clinical Operations), regional health systems (for community and regional programmes), and government agencies (eg, government ministries like MOH, Ministry of Manpower and Ministry of Home

## “Effective Public Health is a multidisciplinary effort and the physician is not, and does not have to be, always the leader.”



Affairs, HPB, Health Sciences Authority and even the Singapore Armed Forces), or to farther afield in non-governmental organisations (eg, World Health Organization) and pharmaceutical and medical technology manufacturers (who have taken our residents even before the completion of their specialist training, such is the demand), and even in more tangential industries like health informatics and the private sector.

### In terms of training and accreditation, what are some upcoming changes that Public Health practitioners can expect to see in the coming years?

**JY:** The residency approach to specialist training has had many benefits for the training of Preventive Medicine residents, not least in the resources that are currently available to support training. The more intentional approach to training is a far cry from the early days when I was a trainee, where the basic requirements were to pass the necessary examination and then “do the time”. Back then, the focus, nature and level of work that I did was almost entirely up to my employer.

The Preventive Medicine domain, however, is different from the other clinical specialties and (like some sister sufferers like Pathology) we’ve had to fit our square pegs into round holes. Simple processes like appraisals are awkward because the clinical skills are “Not Applicable” while other important areas are unrecorded. These problems have been ameliorated with the publication of the Specialty-Specific

Competencies and the adoption of the UK’s PHSKF last year.

This leads to the biggest change in the residency programme, which is the adoption of Programmatic Assessment as the centrepiece of the training programme. In this approach, residents create and maintain portfolios structured around narratives on their development in their EPAs based on the UK’s PHSKF. This formative tool enables the residents to plan and direct their learning, and their faculty to support, mentor and assess their readiness to take on independent practice.

On the larger scene, the biggest change to the practice of Public Health is one that has already happened. Around the world, Public Health practice is no longer a medical preserve, if indeed it ever was. Effective Public Health is a multidisciplinary effort and the physician is not, and does not have to be, always the leader. In the UK, for example, Fellows of the Faculty of Public Health (a joint faculty of the UK’s three Royal Colleges) do not have to be medically qualified. Some 60 countries have members in the World Federation of Public Health Associations, in which Singapore ironically has no representative because we do not have a multidisciplinary Public Health organisation.

With the challenges facing Singapore, Preventive Medicine physicians are needed as never before, but they must prove their value to the organisations and the society they serve, and justify the leadership positions that they are placed in. ♦



A/Prof Yap is a Public Health physician who’s been around a bit. He is currently a practice track faculty in the Saw Swee Hock School of Public Health, and the Programme Director of the National University Health System’s (NUHS) National Preventive Medicine Residency Programme. He was recently dragged to the Gundam Base Tokyo by his youngest scion.