

# NEIGHBOURHOOD HEALTH SERVICE

## The Nation's First Integrated, Community-Based, Holistic Health Screening

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*This article was adapted from an article by the same writers, first published in the November 2018 issue of MediCine.*

In 2007, a small group of enthusiastic medical students found a gap in the healthcare system that they believed they could help bridge. They pooled what little resources they had, garnered the support of their teachers and introduced Singapore's pioneering student-led health screening and follow-up programme.

Twelve years later, the Neighbourhood Health Service (NHS) has grown to become the National University of Singapore (NUS) Yong Loo Lin School of Medicine's flagship community service project. Gifted with the dedication of our mentors and seniors, NHS has grown to become the only student-led school project with nationwide reach, having partnered all three Regional Health Systems to serve close to 6,000 residents in ten different districts island-wide.

Today, our interdisciplinary, inter-school student committee and volunteers hail from all three medical schools in Singapore, as well as the nursing, social work and physiotherapy faculties at NUS, Nanyang Polytechnic and the Singapore Institute of Technology. While many things have changed since 2007, one thing has not – our core ethos of serving the underprivileged. Our research found that lower-income residents living in Housing Development Board rental blocks are four times less likely than the average Singaporean to go for regular health check-ups, hence our mission to reach out to them at their doorsteps.

### Uniting key players in healthcare delivery

For the first time last year, NHS pioneered an eight-way partnership, involving the Ministry of Health, SingHealth, National Healthcare Group, Health Promotion Board (HPB), Agency for Integrated Care, Singapore Eye Research Institute (SERI), National Dental Centre Singapore (NDCS) and Singapore Cancer Society.

This novel collaboration saw the key players in healthcare delivery – each with their own screening programmes – come together to organise a one-stop holistic health screening. By synergising our efforts, we improved upon the conventional practice of holding separate screenings for different aspects of health, saving residents a significant amount of time.

Bringing the key players on board also meant that the holistic health screenings

were well-aligned with nationwide screening efforts such as HPB's Project Silver Screen.

Residents were assessed via multi-level tests through a "one-stop shop" screening covering:

- Chronic diseases (diabetes mellitus, hyperlipidaemia, hypertension and obesity)
- Functional abilities (vision, oral health and hearing)
- Fall prevention (screening and education)
- Cancer (colorectal, cervical and breast)
- Mental health (dementia and depression)
- Social assistance (financial, social and psychological)

Through the efforts of more than 600 student and professional volunteers, NHS reached out to over 8,000 selected





households at their doorsteps and screened 863 residents at Kampong Glam and Queenstown (Leng Kee) in September and October last year.

Notably, both basic and advanced screenings for vision and oral health were conducted within the same visit at NHS, enabled by the strong support of our long-time partners, SERI and NDCS. In most other screenings, the practice is to arrange separate follow-up screenings at community-based mobile clinics, but for the elderly residents of rental blocks who live alone without caregivers, streamlining the process could help to encourage timely follow-up.

### Cost-effective door-to-door screenings

Many years back, NHS devised the unique approach of door-to-door publicity, health screenings and follow-ups. Healthcare students equipped with the relevant logistics would visit residents, especially the immobile, to conduct screenings in the comfort of their homes.

As our long-term goal is to evolve into a replicable and scalable healthcare model, NHS partnered NUS Business students in 2015, under A/Prof Albert Teo's guidance. The team conducted a social return on investment analysis to evaluate the cost-effectiveness of our labour-intensive approach. Interestingly, they found that for every \$1 invested in NHS over a five-year cycle, \$2.29 in social returns was generated yearly on the average. This shows, perhaps counter-intuitively, that the door-to-door approach is in fact cost-effective.

### Follow-up care driven by research

Since its inception, NHS has followed up with residents via phone calls and house visits (in more complex cases) post-screening. The aim was not to replace primary care, but to motivate these residents to follow up with their family doctors on their screening results.

Every year, NHS also engages in population health research, guided by our chief academic advisor A/Prof Gerald Koh and research mentor Dr Ian Wee Liang En. In the past, NHS found that only 11% of rental block residents preferred to approach Western-trained doctors,

while 30% preferred alternative medicine. Another 53% preferred "self-reliance".

Our findings spurred the continuous expansion of our follow-up programme. In 2017, a record number of more than 300 residents (30% of those screened) with abnormal chronic disease screening results were selected for follow-up. To improve our follow-up counselling, NHS collaborated with the National University Health System Department of Family Medicine and NUS Medical Society to train our student committee in motivational interviewing techniques. We were ecstatic to see improvements, with 64% of residents successfully reconnected to the healthcare system – quite a good number considering the many socio-economic barriers which rental block residents face in seeking healthcare!

### A note of gratitude

It has been a humbling experience to represent our schools, professions and generation of youths in serving our community. We are also sincerely grateful for our mentors' excellent guidance and our schools' unwavering support. Along with A/Prof Gerald Koh, mentors who provided invaluable support in this run of the NHS include A/Prof Tay Sook Muay (who gifted us with energy, encouragement and enthusiasm) and Dr Sue-Anne Toh (who has truly been a pillar of support)! Last but not least, we are deeply grateful to Dr Ian Wee, Dr Chiong Yee Keow (who also initiated our newly launched sister project last year – NHS Kids!) and many other NHS alumni who continue to dedicate their time and hearts after so many years!

The team would also like to thank all students and healthcare professionals who generously gave their time, as well as partners and sponsors for their unwavering support. In particular, we would like to thank the generous donors of the SMA Charity Fund (SMACF), without whom we would not have had the means to serve our residents! Little deeds of kindness over the past 12 years have inspired countless generations of students and created a lasting culture of community service at our schools. We sincerely hope that our story

inspires you to support NHS and other ground-up community initiatives through the SMACF. To find out more about NHS and its initiatives, visit <https://www.neighbourhoodhealthservice.com>.

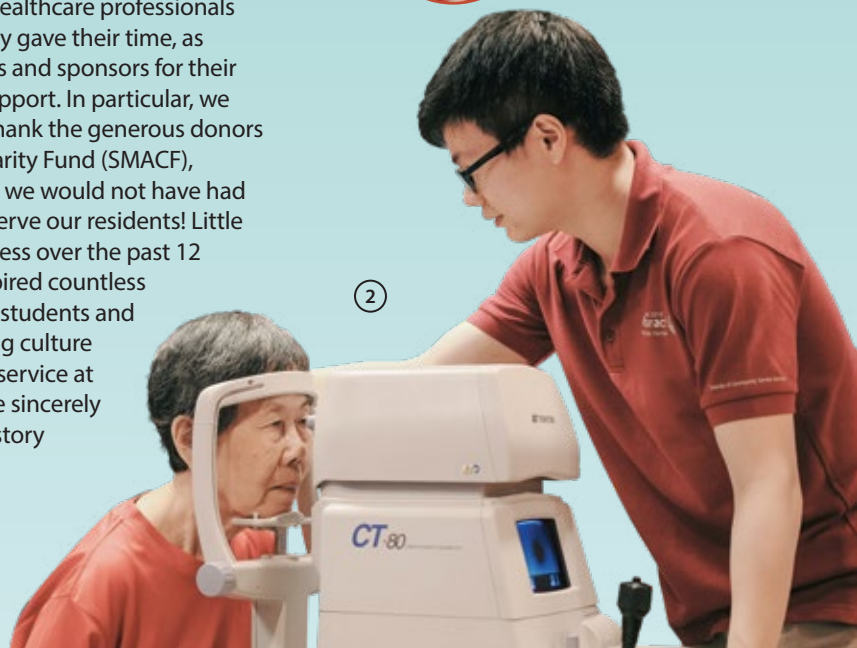
The next committee, like the ones before, will continue to improve and adapt amid the changing landscape, driven by our common passion to make a positive difference in our community! ♦

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#### Legend

1. NHS 12th Committee at our Kampong Glam Health Screening
2. NHS Advanced Eye Screening Station in partnership with SERI

Benjamin and Ying Ying are the outgoing directors of the NHS and represent a committee of 70 students across the four schools – NUS Medicine, NUS Nursing, NUS Social Work and NTU Medicine. Rarely, when they are not attending to their duties at NHS, they are also Year 2 medical students at the NUS Yong Loo Lin School of Medicine.



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