National Healthcare Group
POLYCLINICS

Annual Report
FY2012

Advancing Family Medicine, Transforming Primary Healthcare

Our Vision

To be the leading health-promoting institution that helps advance family medicine and transform primary healthcare in Singapore.

Our Mission

We will improve health and reduce illness through patient-centred quality primary healthcare that is accessible, seamless, comprehensive, appropriate and cost-effective in an environment of continuous learning and relevant research.

Our Values

Integrity

We are committed to the highest standards of ethical conduct.

Compassion

Our paramount concern is the welfare and well-being of our fellow human beings. We sympathise with those struck with illness and suffering and will do our best to help alleviate their condition.

Professionalism

We are committed to being the best in what we do and achieving the best possible outcome for our patients.

Respect

We treat everyone with honesty, decency and fairness.

Collegiality

We nurture success by promoting collaboration, participation and trust between individuals and other healthcare organisations, within an environment of sharing and mutual respect.

Social Responsibility

We contribute positively to the well-being of the community.

Advancing Family Medicine, Transforming Primary Healthcare

National Healthcare Group Polyclinics
Annual Report FY2012

A child runs with a band that connects him to a senior citizen on the back cover. This depicts the person-centred, integrated and life-long nature of primary care, as well as our focus on keeping our population well and adding healthy years to their lives.

Advancing Family Medicine, Transforming Primary Healthcare
Annual Report FY2012

Editor-in-Chief
Lai Phui Ching, Manager, Corporate Development

Editorial Advisor
Dr Peter Chow, Director, Corporate Development

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Group CEO's Message

Primary Care as the Foundation

As the National Healthcare Group (NHG), the Regional Health System (RHS) for Central Singapore, furthers our work in improving population health, advancing knowledge and practices in medicine, and grooming our future generation of healthcare professionals, primary care remains one of our key and foundational ingredients for success. I am pleased to share the work done by the National Healthcare Group Polyclinics (NHGP) in leading the transformation of primary healthcare for our Regional Health System.

Over the past year, NHGP has strengthened our capability for integrated patient-centred care through team-based care and collaborations. And we have seen some early gains. For instance, poorly controlled diabetic patients aged 50 years and above have shown improvements in diabetic control with an estimated decrease of 0.88% in HbA1C level within six months of follow-up under the Continuing Care Patients (CCP) programme. This is due to the systematic screening of care gaps that go beyond clinical aspects and a dedicated multidisciplinary care team to manage the nutritional, functional, psychological, and social aspects of such complex cases.

Another example is the diabetic kidney care collaboration between NHGP and National University Hospital – Project NEMO (Nephrology Evaluation, Management, and Optimisation). As part of the project, appointed NHGP doctors were trained to manage diabetic kidney disease (DKD). NEMO coordinators help identify patients who had early DKD, and optimise treatment through close monitoring and education. The programme started in April 2011. By September 2013, 40% of the 1,200 patients who completed the angiotensin-converting enzyme inhibitor (ACEi) or angiotensin receptor blocker (ARB) optimisation cycles had their urine albumin level normalised or reduced.

Patients with common mental health disorders can now be managed at NHGP instead of a specialist outpatient clinic or the Institute of Mental Health (IMH). This is the result of the collaboration between NHGP and IMH forming the Assessment and Shared Care Team (ASCAT) that comprises psychiatrists, family physicians, care managers, and psychologists. The collaboration has made mental health services more accessible for adults with or who are at risk of developing mental health problems. It has also reduced stigma for our patients as they can now be cared for in the community.

Patients with mild to moderate dementia, previously treated in specialist outpatient clinics, can now be discharged to polyclinics and co-managed by family physicians at NHGP and geriatricians from Khoo Teck Puat Hospital (KTPH) and Tan Tock Seng Hospital (TTSH). This is made possible by strategic partnership between NHGP and the two hospitals to roll out the first and second dementia clinics at Yishun and Ang Mo Kio Polyclinics, respectively. The initiative will be further developed to benefit more patients.

As part of our work to improve our capability for integrated patient-centred care, NHG has also made progress in enhancing our information system to facilitate team-based care, improve patient safety, and streamline processes. In 2012, NHGP enhanced the templates in the Electronic Medical Records to incorporate screening for fall risks, identification of complex patients, screening for depression, and nursing triage notes, among others, to improve communication and information sharing among the care teams. The E-Orders module in the Computerised Clinician Order Entry (CCOE) was also enhanced to allow doctors to order nursing, pharmacy, and allied health services from a comprehensive list in the system. It enables all members in the care team to view the services required by patients. All these have facilitated the implementation of team-based care.

The advancement of Family Medicine is key to building up primary care's capability to meet the increasingly complex care needs of our ageing population. NHGP has led the development of Family Medicine for NHG, and contributed much to our work in medical education. With the launch of the Family Medicine Academy at Bukit Batok Polyclinic on 4 September 2013, the inaugural cohort of 54 students from Lee Kong Chian School of Medicine will gain early clinical exposure in the community by spending much more time training at the polyclinic, from as early as their first year of medical education. It is a milestone, an important foundation to develop the next generation of doctors who has deeper appreciation of person-centred and community care.

Our transformation journey is also one undertaken with many different partners. In April 2013, we saw the opening of NHG's first Family Medicine Clinic (FMC) at Ang Mo Kio – a partnership with Parkway Shenton with the aim to strengthen primary healthcare capabilities, especially in chronic disease management. The new model of care, as part of the Ministry of Health's Primary Care Masterplan, has helped bring quality healthcare closer to people's homes and the community. Since its launch, NHGP has been working closely with Ang Mo Kio FMC to facilitate the transfer of suitable patients to the latter. There is also ongoing work to redistribute suitable patients to Frontier FMC and the upcoming Lakeside FMC.

In supporting the expansion of the national Community Health Assist Scheme (CHAS), NHGP has also actively engaged CHAS-certified general practitioners (GP) to co-manage stable chronic patients who are eligible or already on CHAS. A few GP forums were organised in 2012 and 2013. More are planned for the coming year.

As we continue to progress on this journey to add years of healthy life to the people of Singapore, there is a need to learn and improve continuously, think as an integrated system, and keep our patients in focus. I would like to take this opportunity to thank our many stakeholders and partners for joining and helping us in this journey. I would also like to thank the management and staff of NHGP who have been working relentlessly with the rest of the NHG family and our partners to bring health to the population we serve.

Clinical Prof Chee Yam Cheng
Group Chief Executive Officer
National Healthcare Group

CEO's Message

A Fruitful Year, A Promising Future

Primary healthcare is the foundation of a health system as it is the first point of contact with the healthcare system for most people. It is where short-term health issues are resolved, where the majority of chronic health conditions are managed, where health promotion and education efforts are undertaken, and where patients in need of more specialised services are connected with appropriate care.

At National Healthcare Group Polyclinics (NHGP), our aspiration to transform primary healthcare is underpinned by the six facets of Family Medicine – the three P's (Primary or first contact, Personal, and Preventive) and the three C's (Comprehensive, Continuing, and Coordinated care). Good primary care requires all six facets to be done well.

The past year has been a significant one for NHGP. In addition to the opening of NHGP's Family Medicine Clinic (FMC) at Ang Mo Kio, Yishun Polyclinic was successfully relocated to a temporary site in late 2012, making way for the upcoming Yishun Community Hospital. This is a milestone in support of the strategic priorities under the Ministry of Health (MOH)'s Primary Healthcare Master Plan.

In August 2012, we attained the Joint Commission International (JCI) accreditation for Primary Care Centres. It reaffirms our continuing efforts to provide better and safer care to our patients. In our ongoing efforts to develop our team-based care capabilities, we expanded our Health and Mind Clinics and Dementia Clinics; introduced the Continuing Care Patients (CCP) Programme where more resources are allocated to support complex diabetic patients with multiple needs; and manage stable chronic patients through tele-consultation and tele-care services.

Equally significant were our efforts to advance Family Medicine. NHGP achieved the accreditation by the Accreditation Council for Graduate Medical Education International (ACGME-I) for our Family Medicine Residency Programme. As we scaled up the Family Medicine Residency intake for 2012, two more Family Medicine Centre – Resident Continuity Clinics (FMC–RCC) were set up in July 2012, in addition to the four existing FMC–RCCs. We were also proud to have commissioned the first Singapore Primary Care Research Scientific Competition in conjunction with our Primary Care Forum in September 2012.

To enhance patient experience, we have systematically upgraded our polyclinics so that patients are treated in a healing environment designed to support team-based care. I am glad to report that major upgrading works at Ang Mo Kio Polyclinic were completed in June 2012. In addition, the enhanced Appointment System (APS) was rolled out to all clinics by November 2012. It helps our patients better manage their wait time by informing them of the estimated consultation time, and also enables us to better manage our workload and resources. For better coordination of care, NHGP collaborated with Alexandra Hospital, National University Hospital, and KTPH to allow direct access to endoscopy services at these institutions, reducing unnecessary specialist visits, saving time and money for our patients.

Improvement to the "heart-ware" is a foundational aspect of our culture transformation. To achieve this, we need to have an excellent team and a culture of service (iCARE) and quality improvement (OurCare), anchored by the "Way of Being" principles, which are about seeing people as people and holding ourselves accountable to our patients and team members. These principles, aligned with NHG's 4P7R thinking, guide our behaviour to provide excellent care where our staff feel empowered and fulfilled.

We have the highest number of our staff achieving national accolades in our history in the past year, including the Healthcare Humanity Award, PS21 Star Service Award, and National Day Award. In particular, our three doctors won the Healthcare Humanity Award in 2013, the first time in the history of the award, signifying a greater recognition of the contributions of family doctors.

Good care touches the hearts of patients and those around them, and it was evident in the MOH Patient Satisfaction Survey 2012. We achieved 82.2% overall patient satisfaction, up by almost 2% from the last survey in 2010. NHGP clinched the top three polyclinic positions among 18 polyclinics in the past two consecutive surveys.

In the employee climate survey in January 2013, NHGP improved our overall score to 72% from 67% in the 2010 survey. The survey indicates that we have made significant improvement in learning and development, rewards and recognition, work organisation, and working relationships. This is a testament from our staff that we are moving in the right direction.

But we must not rest on our laurels. We need to do more to promote health and prevent disease. It's heartening for me to share that NHGP, NHG Diagnostics, and NHG Pharmacy had collaborated with community partners to conduct 31 health screenings and talks in 2012. Within our clinics, we piloted the patient weight management programme and smoking cessation programme in the past year and are planning to expand the services. We must continue to seize opportunities to promote health and provide preventive care for every patient that comes through our door and beyond.

In supporting future healthcare needs, we will continue to support MOH's initiative to build capacity in primary care. Some of the efforts include supporting the expansion of the Community Health Assist Scheme (CHAS), redeveloping of our polyclinics at Ang Mo Kio, Yishun, and Jurong, and building a new polyclinic at Pioneer, all timed for completion between 2017 and 2019.

We will stay focused in advancing Family Medicine through research and education, and continuously innovate to improve patient care and better manage resources. We believe we can achieve all these with the passion, determination, and perseverance of everyone at NHGP with the purpose of "Advancing Family Medicine, Transforming Primary Healthcare".

Leong Yew Meng
Chief Executive Officer
National Healthcare Group Polyclinic

Highlights in FY2012

Apr 2012

23 Implementation of Continuing Care Patients (CCP) Programme

40 Implementation of Infection Control Surveillance System

40 Pilot launch of ConviDose™ at Toa Payoh Polyclinic

May 2012

69 NHG Family Medicine Residency Programme achieved the Advanced Specialty Accreditation by Accreditation Council for Graduate Medical Education International (ACGME-I)

Jun 2012

28 Implementation of Patient Welfare Fund

61 Completion of Ang Mo Kio Polyclinic renovation

Jul 2012

36 Inaugural Safety Leadership Walkabout

43 Inaugural Clinic Service Makeover at Jurong Polyclinic

69 Launch of Family Medicine Centre – Resident Continuity Clinics at Jurong and Woodlands Polyclinics

Aug 2012

33 Joint Commission Accreditation (JCI) for Primary Care Centres

Sep 2012

22 Opening of the second Dementia Clinic at Ang Mo Kio Polyclinic

84 Primary Care Forum and inaugural Primary Care Research Scientific Competition

128 Receiving the Business Intelligence Asia Pacific Excellence Award

Oct 2012

41 Top three polyclinics in MOH Patient Satisfaction Survey 2012

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103 Formation of Patient Empowerment and Community Engagement (PEACE) Department

136 Inaugural Culture DNA Day

Nov 2012

59 Opening of new Yishun Polyclinic

123 Rollout of enhanced Appointment System (APS) to all clinics

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121 Enhancement of E-Order to include *Other Orders*

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21 Formation of the Collaborative Care Department

25 Direct access to endoscopy at AH and NUH

37 Launch of Incident Reporting Information System (IRIS)

Feb 2013

26 Telecare pilot at Clementi Polyclinic

123 First self-payment kiosk pilot launch

Mar 2013

122 Computerised Physician Support System 2 (CPSS2) pilot at Yishun and Ang Mo Kio Polyclinics

How We Are Organised to Serve Patients

Our Patients

Our Polyclinics

Northern Region

Woodlands Polyclinic
Head
Dr Gowri Doraisamy

Yishun Polyclinic
Head
Dr Simon Lee

Central Region

Ang Mo Kio Polyclinic
Head
Dr Karen Ng

Hougang Polyclinic
Head
Dr Lim Chee Kong
1 Dec 2006 – 14 Oct 2012
Dr Lee Eng Sing
15 Oct 2012 – Present

Toa Payoh Polyclinic
Head
Dr Tung Yew Cheong

Western Region

Bukit Batok Polyclinic
Head
Dr Keith Tsou

Choa Chu Kang Polyclinic
Head
Dr Yehudi Yeo
1 Nov 2006 – 30 Nov 2012
Dr Richard Hui
1 Dec 2012 – Present

Clementi Polyclinic
Head
Dr Evan Sim
1 Apr 2006 – 14 Oct 2012
Dr Steven Chong
15 Oct 2012 – Present

Jurong Polyclinic
Head
Dr Meena Sundram

Our Corporate Support Functions

Clinical Services
Senior Director
Dr Lew Yii Jen

Health Promotion and Preventive Care
Director
Dr Wee Wei Keong

Nursing Services
Director
Ms Chen Yee Chui

Corporate Development
Director
Dr Peter Chow

Human Resource and Finance
Director
Mr Simon Tan

Operations
Chief Operating Officer
Ms Grace Chiang

Dental Services
Director
Dr Kenneth Low

NHG Diagnostics
General Manager
Ms Lim Soh Har

Family Medicine Development
Senior Director
Dr Chong Phui-Nah

NHG Pharmacy
Executive Director
Ms Chan Soo Chung

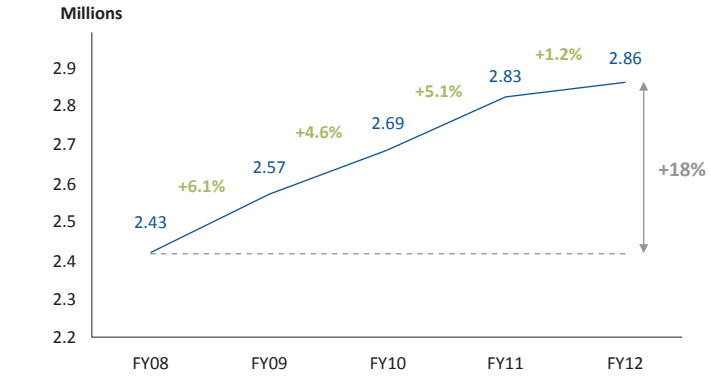
Chief Executive Officer

Mr Leong Yew Meng

Snapshot of Our Patients and Workload

Volume growth has become more gradual from 2011 to 2012

No. of visits* (millions)



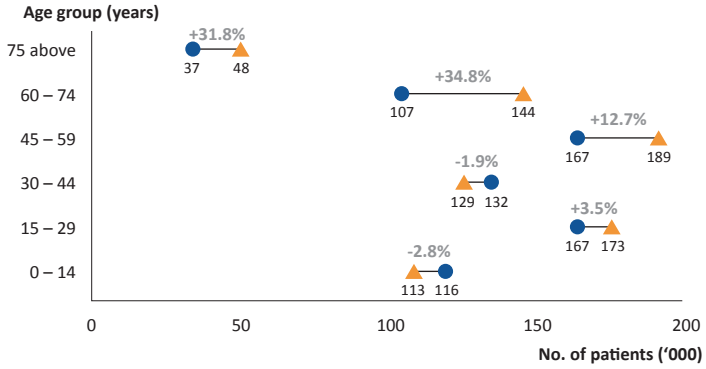
*Exclude dental visits

Daily averages

FY	Total	Doctor consults	Non-morbid services
08	8,760	6,910	1,850
09	9,310	7,160	2,150
10	9,680	7,350	2,330
11	10,220	7,300	2,920
12	10,420	7,400	3,020

Increase in number of patients above 45 years old

No. of patients of different age groups in FY08 and FY12 ('000)



▲ Number of patients who visited NHGP in FY12

● Number of patients who visited NHGP in FY08

Age group	No. patients ('000) FY12	No. patients ('000) FY08	Diff (%)
75 above	48	37	31.8
60 – 74	144	107	34.8
45 – 59	189	167	12.7
30 – 44	129	132	-1.9
15 – 29	173	167	3.5
0 – 14	113	116	-2.8

Note: Numbers are rounded for greater clarity; small rounding differences may arise.

Patients' Profile in FY2012

Top 10 primary diagnoses seen at NHGP

ICD 10	Diagnosis	No. of visits ('000)	% total 2012 visits
J06.9	Acute upper respiratory infection, unspecified	383	18.9
E11.9	Type 2 diabetes mellitus without complication	283	14.0
I10	Essential (primary) hypertension	275	13.5
E78.5	Hyperlipidaemia, unspecified	115	5.7
R99	Other ill-defined and unspecified causes of mortality	81	4.0
A09.9	Other specified non-infective gastroenteritis and colitis	68	3.3
L98.9	Disorder of skin and subcutaneous tissue, unspecified	47	2.3
T14.3	Dislocation, sprain and strain of unspecified body region	45	2.2
R51	Headache	38	1.9
M13.99	Arthritis, unspecified, site unspecified	37	1.8

ICD = International Classification of Diseases

Patients aged 45 – 74 years contribute to half of FY2012 visits

	No. of visits in 2012 ('000)				% within category			
Age group (years)	Total	Acute	Chronic	Non-morbid	Total	Acute	Chronic	Non-morbid
0 – 14	320	164	20	136	11	17	2	15
15 – 29	426	294	59	73	15	32	6	8
30 – 44	344	158	85	101	12	17	9	11
45 – 59	780	189	318	273	27	20	32	29
60 – 74	734	106	365	263	26	11	37	28
75 above	257	32	142	83	9	3	14	9
Total	**2,861**	**943**	**989**	**929**	**100**	**100**	**100**	**100**

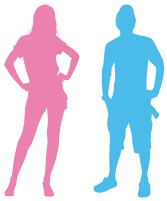
Definitions

1. Acute: Cases with short onset of symptoms such as upper respiratory tract infections, diarrhoeal diseases, and sprains.
2. Chronic: Conditions requiring long-term follow-up and in general, regular medications and management of risk factors. For example, hypertension, asthma, lipid disorders, chronic obstructive lung disease, and diabetes.
3. Non-morbid: Includes developmental assessment, nursing and allied health services (e.g. wound dressing, vaccination, case management), lab-only visits, and other administrative procedures.

Gender ratio of patients in 2012

Female 390,637

Male 389,612



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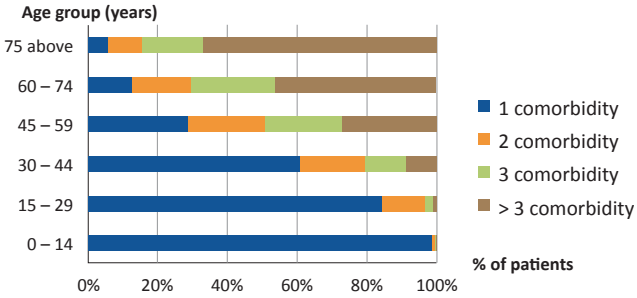
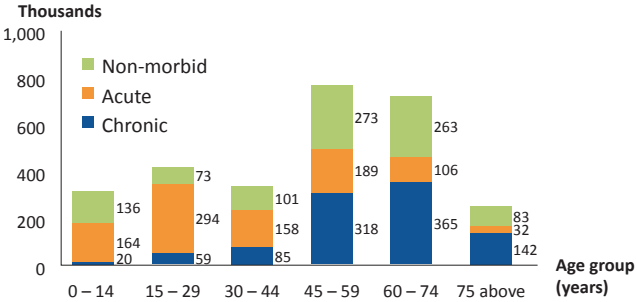
Corresponding increase in number of comorbidity with age

Percentage distribution of chronic patients of different age groups by no. of comorbidities

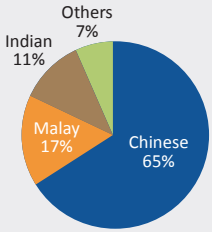


More chronic and non-morbid visits among patients above 45 years old

Number of visits by age groups ('000)



Ethnic composition of patients in FY12



No. of patients in 2012 ('000)

Ethnic group	No. of patients ('000)	% Total	Singapore population 2012 (%)
Chinese	510.8	65	74
Malay	129.5	17	13
Indian	88.0	11	9
Others	52.0	7	3
Total	**780.3**	**100**	**100**

Corresponding increase in average no. of visits per patient with age

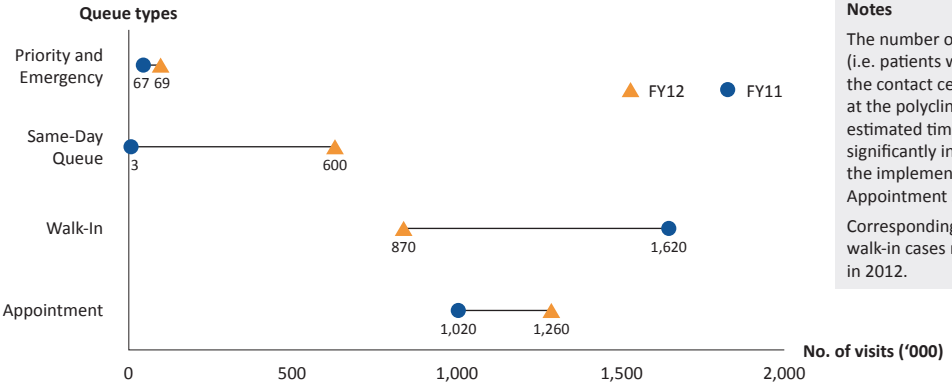
Average number of visits per patients

Age group (years)	Total	Acute	Chronic	Non-morbid
0 – 14	2.84	2.09	1.22	2.58
15 – 29	2.46	2.08	1.36	2.41
30 – 44	2.66	1.75	1.82	2.52
45 – 59	4.14	1.82	2.62	2.57
60 – 74	5.11	1.76	3.08	2.55
75 above	5.33	1.78	3.31	2.47

Workload Management in FY2012

More patients come by appointment and same-day queue in 2012

No. of visits by queue types ('000)



Notes

The number of same-day queue (i.e. patients who have called the contact centre and arrive at the polyclinic nearer to the estimated time given) increased significantly in 2012 due to the implementation of the Appointment System.

Correspondingly, the number of walk-in cases reduced by 47% in 2012.

Improvement in consult wait time

Consult wait time (minutes)

Visit type	Percentile	FY12	FY11	% change
Walk-In	50th	28	42	-33.3
	95th	100	123	-18.7
Appointment	50th	15	22	-31.8
	95th	63	73	-13.7

More staff in all categories to manage increased workload

Full-time equivalent

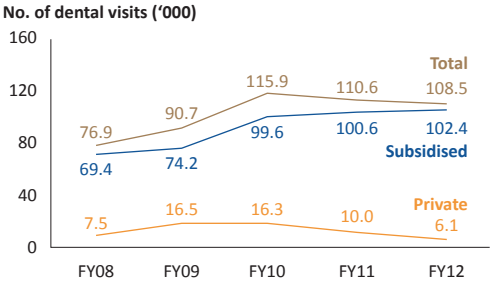
Job category	FY12	FY11	% change
Ancillary	532	510	4.4
Nursing	280	259	8.0
NHG Pharmacy	238	235	1.3
Medical	188	186	0.9
Administrative	158	137	15.7
NHG Diagnostics	131	119	10.1
Allied Health	46	37	24.2
Dental	41	34	21.3
Total	**1,614**	**1,517**	**6.4**

1. Medical category includes Medical Officers and Dental Officers from Ministry of Health Holdings.
2. Allied Health category excludes all pharmacy staff. Pharmacists, pharmacy technicians, pharmacy assistants, pharmacy store keepers, and retail pharmacy staff are subsumed under NHG Pharmacy.

Dental Workload

We mostly see subsidised patients

No. of dental visits ('000)

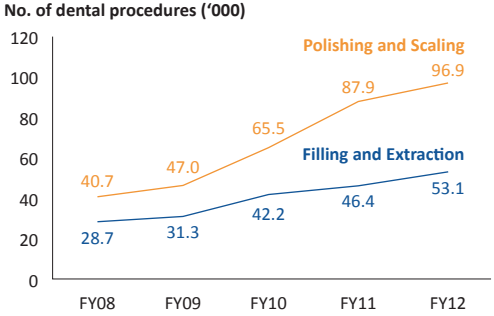


Daily average number of basic dental procedures

FY	08	09	10	11	12
Filling & Extraction	104	113	152	168	194
Polishing & Scaling	147	170	236	318	353

We do more preventive procedures over the years

No. of dental procedures ('000)



Notes

The number of subsidised dental visits has increased over the years.

We also see a growth in the daily averages of dental procedures done at our polyclinics.

Of the dental procedures performed, a larger proportion was preventive procedures (i.e. polishing and scaling). The proportion of preventive procedures has also grown over the years, signifying greater emphasis on preventive care at NHGP.


Guidelines to Choosing Healthier Products in the Supermarket
Meat and Alternatives – 2 - 3 servings/ day (Examples of 1 serving)
FOOD LABELS

Chapter 1

Caring for Patients

In this photo

Pauline Xie, Senior Dietitian, and a patient.

“They were so warm and kind and friendly. Dr Meenakshi heard all my complaints with sympathy and Dr Sanjeev explained my condition to me thoroughly. Coco escorted me to the next appointment. She held my hand hard as I had difficulty walking.”

Mdm Manjeet Kaur, a patient from Yishun Polyclinic, 14 August 2012

A more integrated and coordinated approach to patient care is crucial to achieving better patient outcomes, better patient experience, and more effective use of resources in healthcare. In 2012, NHGP has continued to develop various programmes to improve the continuity of care across the continuum.

New Collaborative Care Department

A Collaborative Care Department under the Clinical Services Division was formed on 1 January 2013. It advances a team-based approach of chronic disease management within NHGP and integrates the allied health professional practice into chronic disease management.

This new department oversees the provision of clinical care and professional development of the Allied Health, Mental Health, and Geriatrics teams. Its vision is to lead the delivery of holistic patient-centred care in the primary care setting. This is achieved through continuous professional development, inter-professional collaboration, and integration with community and healthcare partners.

Multidisciplinary Health and Mind Care Team

In line with the National Mental Health Blueprint, NHGP has continued to build on the foundation of mental healthcare in the primary care setting. From the initial Health and Mind Clinic run by our family physicians, NHGP has developed a multidisciplinary mental health arm known as the Health and Mind Care Team, comprising doctors, nurses, psychologists, and medical social workers.

The team is collaborating with psychiatrists from the Institute of Mental Health to form the Assessment and Shared Care Team (ASCAT) at Ang Mo Kio Polyclinic. In this physician-led mental health team comprising psychiatrists, family physicians, care managers, and psychologists, patients with common mental health disorders are seen in the primary care setting instead of being referred to a specialist outpatient clinic, thus bringing greater convenience and reducing stigmatisation for our patients. With ASCAT, NHGP aims to improve access to mental health services for our patients and bring under one roof – both physical and mental health services – for the population we serve *(Figure 1, Page 22).*

位于宏茂桥与裕廊

又两综合诊所能诊治心理疾病

裕廊综合诊所王銮成医生说，不少病人的心理疾病同慢性病有关，设立心理健康医疗诊所能让病人在综合诊所内就获得全面的照顾，医生也能更早发现他们的心理疾病，及早治疗。

王珏琪　报道
ongjq@sph.com.sg

本地有更多政府综合诊疗所提供心理疾病治疗，更多心理疾病病人现在可在邻里就医，不需舟车劳顿到医院看病。

宏茂桥和裕廊综合诊疗所设有心理健康医疗诊所（Health and Mind Clinic），特别为综合诊疗所病人提供心理疾病治疗。这两家诊所有一组家庭医生、心理学家、护士和医药社工团队负责照顾病人，可提供治疗、辅导等服务。在这里服务的家庭医生一般有治疗心理疾病的经验，上过短期心理健康课程、心理卫生文凭课程等。

裕廊综合诊疗所家庭医生王銮成受访时说，有不少病人的心理疾病同慢性病有关，设立诊所能让病人在综合诊疗所内就获得全面的照顾，医生也能更早发现他们的心理疾病，及早提供治疗。

另外，有些病人不想让他人知道有心理疾病而延迟或不愿求医，在综合诊疗所接受这类治疗就能改善这个问题。

到心理健康诊所看病的病人一般患有抑郁症、焦虑症和失眠问题。

王銮成解释，慢性病可能导致心理疾病，例如糖尿病病人可能出现并发症，因此感到忧郁、焦虑、不能入眠和失去胃口。针对复杂或看病一段时间后病情没起色的病人，诊所会转介病人到医院求医。

两心理健康医疗诊所 每周营业半天或一天

这两家心理健康医疗诊所每周营业半天或一天，医生问诊费从23元起，心理学家辅导费从20元起，以病人问诊时间长短而定，问诊时间可从15分钟到45分钟。病人要通过综合诊疗所医生才能转介到这两家诊所接受进一步治疗。王銮成说，以裕廊综合诊疗所为例，病人一般能在预约后的一两周内看医生。

国立健保集团属下的宏茂桥和裕廊综合诊疗所分别于2008年和2010年设立心理健康诊所，从去年4月至今年3月照顾约450名病人。该集团目前在探讨在更多综合诊疗所设立心理健康医诊所，最终目的是能及早、在基层医疗的阶段给予心理疾病病人治疗。

新加坡保健服务集团则同心理卫生学院合作，较早前在芽笼综合诊疗所设社区健康中心（Community Wellness Centre）和女皇镇综合诊疗所设心理门诊部（Behavourial Medicine Clinic），每年照顾平均8000名病人。这些病人主要是心理卫生学院病情稳定、需要复诊的病人，任何政府综合诊疗所和私人普通科医生也可转介病人到这里看病。

卫生部今年初宣布，未来五年将拨款1亿元支持一系列的社区精神健康项目的发展，目标是建立一个能与基层医疗服务及长期护理服务结合的护理及支援服务网络。这包括让家庭医生在医治患有轻微至中度精神疾病方面，扮演更积极的角色，以扩大社区辅导和心理治疗服务。

住裕廊西的41岁家庭主妇陈丽丽（化名）五年前丧偶，平时要照顾两个儿子，靠出租房间来维持一家人生计。她今年出外打兼职工，工作加上儿子学业不佳给她带来压力，导致她今年初突然病倒，精神崩溃，不能入眠。

陈丽丽（化名）今年初到裕廊的心理健康医疗诊所看病，被诊断患上轻微的抑郁症。在家庭医生王銮成和其他医疗人员照顾下，病情改善了。（严宣融摄）

在朋友的推荐下，她到裕廊的心理健康诊所看病，被诊断有轻微的抑郁症。除了服用治疗失眠和抑郁的药物，她还接受辅导，学习改善同儿子的沟通方式。她说，现在病情已经改善，精神状态比较好，每两三个月到诊所复诊。

陈丽丽认为，到诊所看病的好处是收费可负担得起，地点又方便，医生配给的药物也有帮助。因此，她目前没想到医院看精神专科医生，她鼓励其他有心理疾病的人到诊所接受治疗。

Figure 1 "Two Polyclinics Treating More Mentally Ill Patients", 23 October 2012, Lianhe Zaobao © Singapore Press Holdings Limited. Reprinted with permission.

[Translated excerpt] Ang Mo Kio and Jurong Polyclinics under NHGP set up the Health and Mind Clinic in 2008 and 2010, respectively. From April 2011 to March 2012, about 450 patients were seen. NHGP is planning for more of such clinics to provide timely care for mentally ill patients in the primary care setting.

Second Dementia Clinic in Collaboration with TTSH

Dementia was the tenth chronic disease included under the Chronic Disease Management Programme (CDMP)[1] in November 2011. This was in recognition of Singapore having one of the fastest ageing populations in the Asia Pacific region. A projected 22% of the total population will be aged 65 years and above by 2025.

In support of developing primary care capabilities and right-siting of care, NHGP has collaborated with hospital partners in the northern, central, and western regions. We have set up clinics for stable dementia

[1] The Chronic Disease Management Programme (CDMP) was introduced by MOH in October 2006 to reduce the out-of-pocket payments of outpatient bills for ten chronic diseases: diabetes mellitus, hypertension, hyperlipidaemia (lipid disorders), stroke, asthma, chronic obstructive pulmonary disease (COPD), schizophrenia, major depression, bipolar disorder, and dementia. CDMP allows patients and/or their family members to use their Medisave (up to ten accounts) of up to $400 per account per year to pay the outpatient bills for the listed conditions. Medisave use will be extended for the outpatient treatment of five more chronic conditions from 1 January 2014.

patients since 2011. Our first dementia clinic was set up with Yishun Polyclinic partnering KTPH; the second clinic in September 2012 partners Ang Mo Kio Polyclinic and TTSH. Under this programme, patients with mild to moderate dementia previously treated in specialist outpatient clinics are discharged to polyclinics and co-managed by geriatricians and our family physicians.

Continuing Care Patients: Looking Beyond Medical Needs

The Continuing Care Patients (CCP) Programme was launched on 1 April 2012. It aims to better manage patients with complex care needs who would benefit from closer, personalised, and longitudinal care provision. The programme currently focuses on poorly controlled diabetic patients with two or more needs in medication, nutrition, and functional, psychological, and social aspects. A care team, including doctors, nursing care managers, pharmacists, dieticians, psychologists, and medical social workers, is activated to manage these patients. Nursing care managers play a key role in identifying and coordinating care for this cohort of patients. As of February 2013, a total of 588 patients had been enrolled in this programme across all nine polyclinics in NHGP. Our analysis of the continuing care patients aged 50 years old and above showed improvement in diabetes control with an estimated 0.88% drop in HbA1c level[2] within six months of follow-up under the programme.

There are plans to include patients with other chronic conditions, such as frail elderly patients.

Multidisciplinary Diabetic Foot Ulcer Protocol

Our doctors, wound care nurses, and podiatrists collaborated to develop a multidisciplinary diabetic foot ulcer protocol in 2012. The goal is to reduce the national diabetic amputation rates and expand podiatry services to meet the increasing needs of our polyclinic patients.

In April 2013, the Singapore Footcare Centre, previously housed in Ang Mo Kio Hub, was relocated back to Hougang and Yishun Polyclinics. This has streamlined care, in line with our strategic vision of podiatrists becoming a part of our core Diabetic Care team. Currently, podiatry services are also available at Bukit Batok and Woodlands Polyclinics.

[2] HbA1c: A laboratory test that shows the average level of blood sugar (glucose) over the previous three months. It shows how well a diabetic patient is controlling his/her diabetes.

In addition, a diabetic foot screening workshop was conducted to equip nurses with relevant knowledge and skills as they play an integral role in providing foot care services to diabetic patients in the primary care setting. Sixteen nursing staff attended the first run on 31 October and 1 November 2012.

Figure 2 Ms Nur Ashikin Binte Mohamed Ismail, our Senior Podiatrist, demonstrating how to conduct a diabetic foot screening.

Optimising Management of Diabetic Nephropathy in Primary Care

Nephrology Evaluation, Management, and Optimisation (NEMO) is a programme to retard the progression of diabetic nephropathy[3] in the primary care setting. Funded by MOH, it is a collaboration between NHGP and the Division of Nephrology, National University Hospital.

[3] A progressive kidney disease due to longstanding diabetes mellitus.

From November 2011 to September 2012, some 1,300 patients were enrolled in the programme and managed in accordance with the Chronic Kidney Disease Management Guidelines. Dedicated coordinators helped facilitate the care delivery by multiple stakeholders and played a role in educating patients to manage their own conditions.

These patients benefited by having either angiotensin-converting enzyme inhibitor (ACEi) or angiotensin receptor blocker (ARB) initiated or optimised for them. ACEi and ARB are two classes of drugs that have shown to have protective effects on the kidney function in patients with diabetes. They slow down the progression of proteinuria[4] to more significant chronic kidney disease.

Seventy eight per cent of the 290 patients who had completed four cycles of the ACEi or ARB dose optimisation had their urine albumin level normalised. The outcomes from this collaboration were published in an e-poster at the World Health Summit Regional Meeting Asia in April 2013 and in an abstract at the World Nephrology of Congress in May – June 2013.

Direct Access to Endoscopy at Hospitals

In January 2013, NHGP collaborated with Alexandra Hospital (AH), Jurong Medical Centre (JMC), and National University Hospital (NUH) to design a workflow for referring patients who require endoscopy directly to the day surgical wards at the two hospitals and the medical centre, bypassing an extra consultation at a specialist outpatient clinic. It improves access to the service, reduces unnecessary specialist visits, and saves times and money for the patients. Similar direct access to oesophago-gastro-duodenoscopy (OGD) has also been made available for referrals from NHGP to NHG 1-Health @ Ang Mo Kio[5]. From 1 January to 9 July 2013, a total of 158 patients benefited from direct access to endoscopy at AH, JMC, and NUH.

In 2013, NHGP and KTPH will also be rolling out direct access to OGD and urea breath tests.

[4] The presence of an excess of serum proteins in the urine; an early and sensitive marker for progressive renal dysfunction.
[5] NHG 1-Health @ Ang Mo Kio is a private specialist centre offering consultation, day surgery, and endoscopy services. It is led by a team of senior doctors and nurses from TTSH.

Home-Monitoring Programme for Stable Chronic Patients: Telecare

Telecare is a home-monitoring programme that involves patients with stable diabetes mellitus, hypertension, or lipid disorders without complications, with a care manager as the main care coordinator. Patients in this programme submit their home-monitoring readings of glucose level (if diabetic), blood pressure, and weight through an Internet portal. Patients whose chronic conditions are well-controlled receive tele-consultations by the care managers instead of having to visit the polyclinic for face-to-face consultations.

The project involved developing a new care provider portal that interfaces across several existing electronic clinical systems for clinical documentation, clinical decision support, and a worklist for contacting patients and the collection of medication. The programme was piloted at Clementi Polyclinic in February 2013 and implemented in all polyclinics by September 2013.

Figure 3 Under the Telecare programme, care managers provide tele-consultations for patients whose chronic conditions are well-controlled.

Financial Counsellors as part of the Care Team

NHGP created the Financial Counsellor (FC) role in 2006 to help patients with financial difficulties. The FCs advise patients on the various financial schemes, such as Medisave and Baby Bonus, to help relieve their medical expenses. To empower needy patients to be financially self-reliant, our FCs also advise patients on approaching the Community Development Council for job placements and how to better manage their living expenses.

With the FCs, our medical social workers (MSW), who used to manage both social and financial assistance, can now focus on providing social assistance. The social aspect is usually more complex in nature, requires more house visits, and involves complicated social intervention plans.

Today, NHGP has 14 FCs. In FY2012, our FCs assisted about 10,000 patients under the Medicare Assistance Scheme.

From November to December 2012, FC roadshows were conducted in our polyclinics and headquarter office to improve our staff's understanding of the roles of FCs *(Figure 4).* The roadshows highlighted the different roles played by MSWs and FCs, with the aim of eliminating referral errors and the inconvenience caused to patients. Following the roadshows, we saw a drop in wrong referrals to the MSWs.

Figure 4 The Financial Counsellor roadshows were complemented by a skit to help staff better understand the role of FCs.

Welfare Fund for Needy Patients

NHGP implemented the Patient Welfare Fund on 1 June 2012 to help needy patients who require financial assistance to pay for items related to their visit or treatment. This ensures that the access and quality of care are not compromised by the patient's ability to pay. Patients will be referred to the medical social workers for assessment of eligibility. Eligible patients receive assistance for the purchase of sundry (e.g. daily necessities) and therapeutic items, consumables, small medical equipment and devices, and transportation fares, that are not covered by the Medicare Assistance Fund. From its implementation to June 2013, 34 patients have benefited from the fund.

Emergency Preparedness Exercise for Mass Casualty and Flu Outbreak

Toa Payoh and Choa Chu Kang Polyclinics conducted their emergency preparedness exercise on 19 January and 2 February 2013, respectively. Volunteers from the headquarter office and other polyclinics acted as patients and caregivers to add realism to the exercise. It aimed to test the operational readiness of the clinics in the event of a national or civil emergency. For Toa Payoh Polyclinic, the exercise scenario was a mass casualty incident during war *(Figure 5),* while Choa Chu Kang Polyclinic grappled with a pre-pandemic outbreak of a flu virus *(Figure 6).* The exercises were an educational experience for controllers, participants, and observers who shared lessons and issues during the post-exercise debrief sessions. The successful exercises indicated that NHGP is operationally ready to support the Ministry of Health during health-related emergencies.

Figure 5 A staff acted as a mass casualty victim during the emergency preparedness exercise in Toa Payoh Polyclinic on 19 January 2013.

Figure 6 Staff volunteers acted as patients and caregivers at the emergency preparedness exercise in Choa Chu Kang Polyclinic on 2 February 2013.


iCARE Champion

Chapter 2

Improving Quality and Safety

In this photo

iCARE Champions – staff who receive numerous compliments due to the great services they provide – are identified and recognised every year to reinforce our commitment to service quality.

“I have seen a lot of improvement in the services to help us – shorter waiting time, for example. I appreciate all the efforts.”

Mr Jacob Janet Rebeira, a patient from Choa Chu Kang Polyclinic, 20 March 2013

It is our aspiration and responsibility to deliver safe and quality care as well as a commendable patient experience with passion and dedication, time after time. To accomplish this goal, each employee must possess a desire for continuous learning and a will to challenge the *status quo* in order to find ways to do things faster, better, cheaper, and safer.

Accreditations and Certifications

JCI Accreditation for Primary Care Standards

NHGP, along with NHG Diagnostics and NHG Pharmacy, attained the Joint Commission International Accreditation (JCI) for Primary Care Centres in August 2012. The JCI's Primary Care Standards are developed by primary care experts from around the world. The accreditation process is designed to create a culture of safety and quality within primary care centres that strive to continually improve patient care processes and results.

The survey audit was conducted in all nine polyclinics and headquarter office from 27 August to 31 August 2013 *(Figures 7 and 8, Page 34).* The surveyors were Dr Paulo Neno, Physician Team Lead; Dr Arvind Patel, Physician Surveyor; and Ms Nahid Shavakhi, Nurse Surveyor. NHGP was assessed in the five core areas: Community Involvement and Integration, Patient-Centred Services, Organisation and Delivery of Services, Improvement in Quality and Safety, and the International Patient Safety Goals.

The accreditation by JCI affirms our continuing efforts to provide better and safer care to our patients. The JCI auditors commended NHGP in the following areas: facility management and safety, prevention and control of infection, and medication management system.

BreastScreen Singapore Re-Accreditation

All NHG Diagnostics centres, including the Mammobus, have been accredited under the national BreastScreen Singapore (BSS) programme since 2002. Five breast screening centres successfully passed the biennial audit exercise in September 2012 when they were due for re-assessment.

NHG Diagnostics performs about 26,700 screening mammography annually at the nine clinics under NHGP and Mammobus. With this continued BSS accreditation, patients undergoing mammography in NHGP and Mammobus are assured of a stringent and comprehensive quality assurance programme set by the Health Promotion Board.

Figure 7 Dr Paulo Neno, one of the JCI auditors, reviewing the medication process at Woodlands Polyclinic's pharmacy.

Figure 8 Dr Arvind Patel conducting a survey at Choa Chu Kang Polyclinic. He interviewed staff to assess NHGP's compliance with the JCI standards.

ISO 15189 – Quality System for Medical Laboratory Re-certification

NHG Diagnostics has maintained its ISO 15189 certification since April 2007. It is an international standard and requirement for quality and competence particular to medical laboratories. The third renewal assessment in March 2013 affirmed NHG Diagnostics' laboratory quality, reliability, and accuracy of the laboratory processes and results. Measurable qualities for the certification include the procedure, documentation, quality control, and tidiness of the lab.

OHSAS Re-certification Audit

NHGP was re-certified in August 2012 as having met the stringent requirements of OHSAS 18001:2007. The Occupational Health and Safety Advisory Services (OHSAS) standards require an organisation to address workplace hazards adequately and implement controls to eliminate or reduce health and safety risks at the workplace. The audit was conducted on 6 July 2012 at NHGP's headquarter office and Hougang Polyclinic by TÜV SÜD PSB. After reviewing the documents and delving into the details of NHGP's risk management system, the auditor inspected Hougang Polyclinic and ascertained that our ground practices and procedures were consistent with the written procedures.

bizSAFE STAR Award

NHGP's excellence in workplace safety and health was given additional recognition when we were awarded the bizSAFE Star by the Singapore Workplace and Health Council in November 2012. NHGP was the first and only healthcare institution in Singapore to be awarded the bizSAFE Star, which is the highest of five quality levels. bizSAFE certification is a national initiative started by the Singapore Workplace Safety and Health Council in April 2007 and is strongly supported by the Ministry of Manpower to promote workplace safety and health across all industries.

Improving Patient Safety

Safety Leadership Walkabout

NHGP initiated a monthly Safety Leadership Walkabout to increase the awareness of safety issues among staff and encourage non-punitive reporting of safety incidents. It serves as a platform for senior management to obtain and act on the safety concerns raised by our frontline staff. NHGP's chief executive officer, chief operating officer, directors of Clinical Services and Nursing Services, and the clinic's facility manager, lead the walkabouts.

The inaugural Safety Walkabout was conducted at Yishun Polyclinic on 17 July 2012. Subsequent Safety Walkabouts were conducted in Jurong (October 2012), Woodlands (February 2013), and Ang Mo Kio (March 2013) Polyclinics. Staff openly shared with the management safety concerns on the ground. These safety concerns were documented and tracked to ensure that follow-up actions are taken to improve the safety of both patients and staff.

The Safety Walkabout has been scheduled with the team visiting one clinic per month.

Figure 9 Mr Leong Yew Meng, Chief Executive Officer, NHGP, and Ms Grace Chiang, Chief Operating Officer, NHGP, hearing the concerns from the ground staff during the Safety Leadership Walkabout in February 2013.

New Incident Reporting System

The Incident Reporting Information System (IRIS) was launched in January 2013, replacing the electronic Hospital Occurrence Reporting (eHOR) system. This NHG cluster-wide system allows staff to report incidents, near misses, or unsafe conditions they encounter at work. These include incidents related to diagnosis and treatment, medication, security, patient falls, sharps injuries, and staff's and visitor's safety.

The reporting templates, workflows, and system functionalities were simplified to encourage more voluntary reporting. All polyclinics and HQ staff completed the user training sessions. The reporting culture has improved as staff voluntarily reported more incidents since the implementation of this new system.

Involving Everyone in Falls Prevention

Falls prevention is an organisation-wide effort where every member has a role to play. The Falls Workgroup developed a new workflow to empower Health Attendants (HA) and Patient Service Associates (PSA) to actively look out for and help patients at risk of falls (e.g. those who have impaired gait or use walking aids). Patients at risk of falls are screened in the consultation rooms. They are then referred to the nurses for more comprehensive assessments and given falls prevention education ranging from diet, exercise, and home safety to cognitive training. In some cases, when a specific correctable risk factor, such as poor diet, is identified, the patients will be referred to the appropriate healthcare professional for advice and counselling.

In June 2012, Primary Care Academy organised a series of roadshows on "Observation of Patients at Risk of Fall" for all operations staff including HAs, PSAs, and Dental Assistants. They were equipped with the essential skills in identifying falls risk patients and instituting necessary precautions, such as tagging these patients with a coloured sticker as a visual cue.

45% Reduction in Sharps Injuries

The number of sharps injuries sustained by staff was reduced by 45% in 2012. Various interventions were put in place to bring about the improvement. These include installing ultrasonic washers in dental decontamination rooms to replace manual washing of dental equipment, conducting orientation on safe sharps practice for new recruits, making sharps bins available in the segregation rooms, placing forceps alongside sharp bins, and introducing the use of intravenous cannula with safety features. We also produced educational posters and videos to remind staff of safe practices when handling sharps. These eliminated unsafe practices, such as direct hand contact when cleaning sharp probes and the use of hands to detach used lancets and uncapped insulin needles.

In addition, laboratory staff invented a customised phlebotomy table with safety features, such as colour-coded bins to separate needles from biohazard and general wastes *(Figure 10).* This has helped keep the number of sharps injuries close to zero in the laboratories. NHG Diagnostics also organises quarterly learning sessions for staff to share their experiences in handling sharp objects and infection control.

Figure 10 A customised phlebotomy table with colour-coded bins to separate used needles from biohazard and general wastes.

Minimising the Risk of Tuberculosis Transmission in Polyclinics

Tuberculosis (TB) is a public health problem and a major cause of morbidity and mortality globally. In tandem with the rising cases of TB in Singapore, we have also seen a corresponding increase in the number of patients undergoing Directly Observed Therapy (DOT)[6] in the polyclinics.

[6] Directly Observed Therapy (DOT) is a treatment method in which patients are under direct observation of a healthcare worker or designee when they take their medication or receive their treatment. This method is designed to reduce the risk of treatment interruption and to ensure patient compliance.

To reduce the risk of transmission to vulnerable patients (e.g. elderly, children) in the polyclinics, we have set up dedicated registration counters and treatment rooms for DOT patients in our polyclinics. We have also installed large windows and air outlet exhaust fans in the treatment rooms to reduce the risk of airborne contagion.

TB patients are fast-tracked through a separate queue. An orange tag note is clipped onto the patients' appointment card to remind them to wear their surgical masks while in the clinics. Our staff also don masks while providing health education to these patients.

Figure 11 Our nurses don N95 masks when they serve TB patients newly referred to our polyclinics for the Directly Observed Therapy.

Online Hand Hygiene Surveillance System

Hand hygiene is the single most effective strategy to prevent healthcare-associated infections. However, non-compliance with hand hygiene remains an issue that requires constant monitoring and education. Direct observation of healthcare workers during patient care activity is recognised as the gold standard for hand hygiene monitoring. Traditionally, observation data is recorded in a hardcopy form and transcribed into an electronic database for trend analysis. To eliminate this resource-intensive step, NHGP implemented the Infection Control Surveillance System (ICSS) in April 2012.

Accessible from a touch screen device (e.g. iPad), the system allows our infection control nurses to input the observation data instantly into an online system, which provides instant reporting of hand hygiene compliance rates. The real-time feedback and sharing across the polyclinics motivate staff to comply with hand hygiene practice. With this tool, hand hygiene audits are carried out effectively with greater accuracy, while cutting down data processing time.

Safer, Easier Medicines: ConviDose™

In April 2012, NHG Pharmacy launched its pilot for ConviDose™ – Singapore's first multi-dose medication management system – at Toa Payoh Polyclinic. The system was launched in all nine polyclinics in July 2013.

ConviDose™ packs patients' medications into individual sachets according to the prescribed dosages and time the pills need to be taken. This is a boon for patients who take multiple medications for long-term illnesses. It also improves medication safety as the sachets help ensure that patients take the right medications, in the right dose, at the right time.

The system has since won a few awards:

- CIO Award, a coveted award given every year to the top five organisations in Asia that break new ground by using IT systems to add value to their customers, in March 2013
- SiTF (Singapore infocomm Technology Federation) Bronze Award, an important accolade to the infocomm innovations in Singapore, in August 2012
- Merit Award in MOH's EXCEL Best Innovative Project in October 2010
- NHG Excellence in Action Award (Team category) in October 2010

To enhance convenience, NHG Diagnostics works closely with NHG Pharmacy to provide delivery service of ConviDose™ packs to patients' homes and general practitioners.

Figure 12 ConviDose™ packs the patient's prescribed medications into individual sachets, each for one-time use.

Improving Patient Experience

Top Three Polyclinics in MOH Patient Satisfaction Survey

The Patient Satisfaction Survey (PSS) in 2012 reflects that more of our patients are satisfied with our services as a result of our improvement efforts. We achieved 82.2% overall patient satisfaction, up by almost 2% from the last PSS *(Figure 13, Page 42).* Our five dental clinics achieved an average of 89.2% overall satisfaction. NHGP clinched the top three positions among the 18 polyclinics in the past two consecutive MOH PSS. Clementi Polyclinic, which scored 88.6%, retained the top spot in the survey. Jurong Polyclinic (87.4%) and Hougang Polyclinic (86.2%) came in second and third in the polyclinic ranking, respectively.

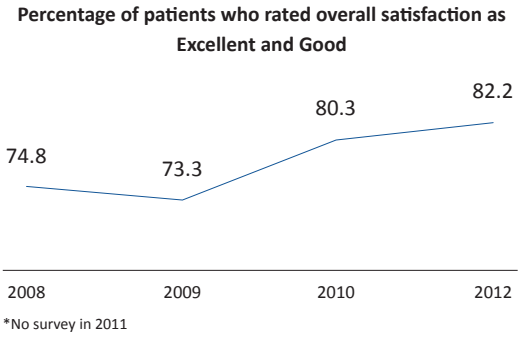


Figure 13 The MOH PSS Surveys showed that more NHGP patients are satisfied with our services over the years.

Five of our polyclinics saw improvement in the patient satisfaction score from the last survey. Woodlands Polyclinic took the largest leap from 66.9% in FY10 to 83.9% in FY12.

The survey is commissioned by MOH every year, with the exception of 2011. MOH-appointed Media Research Consultants conducted the fieldwork across our polyclinics from 17 July to 3 August 2012. They interviewed about 1,000 patients to complete a questionnaire.

iCARE Network of Service Leaders and Ambassadors

iCARE is NHGP's service framework made up of four service standards: Confidence, Attentiveness, Respect, and Empathy *(Figure 14).*

NHGP has established a strong iCARE service quality support network to reinforce NHGP service quality values on the ground with a view to improve patient experience. We formed an iCARE Service Leaders Workgroup in May 2012 to look into service-related issues and implement service improvement initiatives.

The workgroup consists of appointed iCARE service leaders of different professions from each clinic. Each iCARE service leader is supported by a group of iCARE ambassadors with the conviction to promote iCARE and make it a living culture in NHGP. The strong iCARE network of service leaders and ambassadors at clinic level helps spread and reinforce iCARE values on the ground, so that staff exhibit these values while delivering care and services to patients and next of kin.

Figure 14 iCARE mascots remind staff of NHGP service standards. The starfish mascot was inspired by "The Star Thrower" (or the "starfish story") by Loren Eiseley (1907 – 1977).

Customised Service Improvement Plans for Each Clinic

To improve the quality of services in the polyclinics, Service Leadership and Patient Relations Department works with the clinics to enliven them with service makeovers. The service makeover is a project involving a SWOT analysis[7], development of service improvement plans, and evaluation reviews with the targeted clinics.

The first service makeover took place at Jurong Polyclinic from July to December 2012. This was followed by the makeover at Yishun Polyclinic which was completed in June 2013. The clinics went through a series of activities such as grooming courses for frontline staff, audits of service standards, delivery and reinforcement of bite-sized service themes among staff, as well as the publication of a service language reference book. Mirrors were placed in strategic areas to allow staff to check on their personal grooming. Grooming messages and reminders were placed by the mirrors.

Ang Mo Kio and Hougang Polyclinics have started their makeovers since September 2013.

In 2012, a total of 379 NHGP staff attended the revamped service training programmes "Embrace iCARE" and "Inspire iCARE" that are customised for junior and executive staff, respectively. The training equipped staff with effective communication skills in delivering excellent and consistent service.

"My 1st Minute to WOW" Roadshows

"My 1st Minute to WOW" is a campaign to encourage staff to make a good first impression through making eye contact, smiling and greeting, and active listening *(Figure 15).* This campaign was introduced at various meeting platforms, such as clinic roll calls, department meetings, and iCARE roadshows in 2012. It was reinforced during the new grooming guideline roadshows in April 2012 across the nine clinics.

Figure 15 Computer monitor displays remind our staff to make a good first impression when interacting with patients.

[7] A structured planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business venture.

Patient Focus Groups

NHGP conducted eight patient focus groups in FY2012; each involved about 20 patients. An external consultant, aAdvantage, was engaged to facilitate the sessions.

NHGP has implemented various improvements, such as the self-payment kiosk and appointment-making via mobile apps, based on suggestions gathered from the patient focus groups. Another seven patient focus groups have been planned in FY2013.

Figure 16 An external consultant facilitating a patient focus group at Ang Mo Kio Polyclinic. During the session, we solicited feedback from a representative group of patients to help improve our services.

More Elderly-Friendly and Educational Retail Pharmacies

NHG Pharmacy has renovated its retail pharmacies to be more elderly-friendly and innovative. The new look was implemented at the new Yishun Polyclinic in November 2012 and at Woodlands Polyclinic in March 2013. Plans have been made to revitalise all the retail pharmacies at the rest of the polyclinics by December 2014.

The new store design incorporates elements like education corners with LED monitors and attractive educational cards *(Figure 18, Page 46),* compact display for rehabilitation aids, and clean and simple in-store communication materials.

Figure 17 The renovated retail pharmacy at Yishun Polyclinic incorporated elderly-friendly features such as wheelchair parking lots.

Figure 18 An interactive education corner in a renovated retail pharmacy.

New Satellite Laboratories at Ang Mo Kio and Yishun Polyclinics

In August 2012, a new satellite laboratory was set up at Level 1 of Ang Mo Kio Polyclinic to serve acute patients. The laboratory at Level 2 is dedicated to serving babies and chronic patients. Patients no longer need to move beyond their cluster to receive their required services. The addition has also helped relieve the crowded waiting area at Level 1. Pneumatic tubes were installed to transfer specimens across two levels of the diagnostics area.

A satellite laboratory was also set up in the chronic cluster in Yishun Polyclinic in November 2012 to provide common tests such as HbA1c, point-of-care testing (POCT) for prothrombin time and glucose, and electrocardiography (ECG). With closer proximity between laboratory services and consultation rooms, the satellite laboratory brought greater convenience to patients who require lab tests and doctor consultations on the same day.

New Analysers to Boost Onsite Laboratory Capacity and Improve Turnaround Time

New analysers were added to the laboratories at Toa Payoh, Bukit Batok, and Clementi Polyclinics.

A biochemistry analyser was added to the laboratory in Toa Payoh Polyclinic in August 2012. With this, 95% of the tests, including lipid panel, kidney function tests, hypertension panel, diabetes panel, and liver function tests, are processed onsite. Thus, there is no longer a need to transport the lab specimens to external referral laboratories. This ensures the integrity of the specimens and reduces the safety risk of those coming in contact with them during transportation. In addition, the turnaround time for results was shortened from six hours to two. As a result, the majority of critical results can now be handled during office hours without any delay. Doctors can also order urgent laboratory tests.

Additional HbA1c analysers (D10) were added to Bukit Batok and Clementi Polyclinics in May and November 2012, respectively. This addition helped ensure that the HbA1c test results were provided in a timely manner, even during peak hours.

Figure 19 The new biochemistry analyser at Toa Payoh Polyclinic.

Ancillary Staff Uniform Change

From 15 April 2013, frontline staff from NHGP, NHG Pharmacy, and NHG Diagnostics donned their new uniforms and name badges. The new look reinforced the NHG corporate identity and refreshed our service image.

In line with the change, Human Resource Division and Service Leadership and Patient Relations Department conducted roadshows on grooming guidelines and service standards at the clinics.

Figure 20 Staff in their new uniform: *(left to right)* Charmaine See and Nor'Ain Binte Perah, Patient Service Associates; Jessie Jong and Josephine Ang, Health Attendants.

Building Quality Improvement Capabilities

87 Quality Improvement Projects Completed

In FY2012, 87 projects were completed and 7 projects were spread to all polyclinics *(Tables 1 and 2).* Refer to Appendix A for the list of completed projects.

Polyclinics / HQ	No. of projects completed in FY12
Ang Mo Kio	16
Headquarter Office	15
Bukit Batok	13
Hougang	10
Yishun	6
Jurong	6
Choa Chu Kang	6
Clementi	5
Toa Payoh	5
Woodlands	4
Ang Mo Kio and Hougang	1
Total	87

Table 1 Quality improvement projects breakdown by clinics and headquarter office.

Figure 21 OurCare Framework

Project Title	Department
Reducing the time spent in preparing and serving a glucose drink to a patient with hypoglycaemia	Nursing
Enhancing decontamination and sterilisation workflows at all dental clinics to meet internationally recognised standards	Dental
Eliminating sharps injuries in dental clinics	Dental
Improving the management of patients with tuberculosis referred to the polyclinics for Directly Observed Therapy (DOT)	Nursing
Improving patients' compliance with wearing a surgical mask during first two weeks of DOT	Nursing
Eliminating waste in the registration process of dental patients	Dental
Standardising infection control filing system in all polyclinics in NHGP	Nursing

Table 2 Quality improvement projects that were spread to all nine polyclinics.

QI Project Awards and Poster Presentations

Two projects garnered the Best Project Award and Merit Project Award at the NHG Quality Convention 2012. They were led by Ms Tan Poh Ching, Pharmacist from Jurong Polyclinic, and Dr Florencio Santos III, Resident Physician from Choa Chu Kang Polyclinic. The award presentation was held on 28 September 2012, in conjunction with the Singapore Health and Biomedical Congress.

The project, led by Dr Santos, also won the Merit Award at the Improvement Poster Competition 2012, organised by the Ministry of Health and held in conjunction with the 9th National Healthcare Quality Improvement Conference. The project aimed at increasing the percentage of eligible chronic kidney disease patients referred to the Renal Specialist Care in Choa Chu Kang Polyclinic.

Five quality improvement project posters were presented at the 17th International Forum on Quality and Safety in Healthcare 2012, jointly organised by the Institute for Healthcare Improvement and BMJ Group *(Table 3)*.

Figure 22 Ms Jacinta Ong, Senior Pharmacist, Jurong Polyclinic, presenting their team project on improving the safety and efficiency of dispensing by improving the dispenser–patient language match.

Poster Title	Project Lead
Implementing one-stop service for patients requiring contraceptive injections by Nursing Services	Jancy Mathews, Nursing Services
Improving the percentage of patients with newly diagnosed type 2 diabetes receiving timely diabetes education	Winnie Poh, Hougang Polyclinic
Redesigning Toa Payoh Polyclinic using the 3P methodology	Toa Payoh Team
Improving Influenza vaccine uptake in elderly patients in Toa Payoh Polyclinic	Dr Mohamed Asifulla, Toa Payoh Polyclinic
Increasing timely ophthalmology referrals for abnormal diabetic retinal photographs	Dr David Ng, Toa Payoh Polyclinic

Table 3 Quality improvement project posters presented at the 17th International Forum on Quality and Safety in Healthcare 2012.

Figure 23 Clinical Practice Improvement Programme (CPIP) graduates from NHGP receiving their certificates of completion at the NHG Quality Convention on 28 September 2012.

Learning from the Best

In an evolving healthcare landscape, healthcare providers need to continue to learn, organise, and translate new information into patient care in order to improve the system's performance.

On 20 February 2012, nine members of our multidisciplinary team and two colleagues from the Institute of Mental Health visited the Hospital Authority of Hong Kong to learn how the hospital integrates mental health services into its primary care treatment for patients with acute and chronic illnesses. In addition, NHGP also hosted world-class subject matter experts to address the topics that are relevant in transforming primary care *(Table 4, Page 52).*

	Visiting Expert	Topic	Date
1	**Dr Josip Car** Director of Public Health and Primary Care, Imperial College Healthcare NHS Trust	Integrated Care System	22 January 2013
2	**Professor Alexander Blount** Clinical Professor of Family Medicine and Psychiatry, University of Massachusetts Medical School in Worcester	Integrated Primary Care	24 – 29 September 2012
3	**Mr Göran Henriks** Chief Executive, Learning and Innovation, Jönköping County Council	Creating Value in Healthcare	25 September 2012
4	**Professor Michael Kidd** President Elect, World Organisation of Family Doctors, WONCA; Executive Dean, Faculty of Health Sciences, Flinders University, School of Medicine and School of Nursing and Midwifery	• Global Review of Primary Healthcare: Emerging Trends and Roles of Family Physicians • Contribution of Primary Care Systems to Population Health Outcomes • New Paradigm for Quality in Primary Care • Primary Care Assessment Tool: A Yardstick for Primary Care Excellence? • Pay-for-Performance: Picking the Right Indicators and Targets • Team-based Care Discussion • Examinations for Residency: Parameters to Assess Competency of a Family Physician • An Adaptive Family Medicine Curriculum for the Evolving Needs of Primary Care	25 – 29 September 2012
5	**Professor Richard Bohmer** Professor of Management Practice, Technology and Operations Management, Harvard Business School, USA	• Management Practice Redesign • Responding to Population Healthcare Needs With Practice Limitations • Challenges of Workload and Resource • Care Redesign – Operational Efficiency vs. Patient Safety	27 – 29 September 2012

Table 4 Visiting experts hosted by NHGP in 2012.

Figure 24 Dr Josip Car (3rd from right) at Toa Payoh Polyclinic.

Figure 25 Mr Göran Henriks delivering a lecture on creating value in healthcare at Toa Payoh Polyclinic on 25 September 2012.

Figure 26 Professor Alexander Blount (4th from right) was hosted by Dr Lew Yii Jen, Senior Director, Clinical Services (5th from right), on 24 – 29 September 2012.

69% Staff Trained in Quality

NHGP schedules all staff for OurCare training programmes to empower them to constantly look out for aspects of their daily work in which they can improve on. As of 2012, a total of 1,107 (69%) NHGP staff completed at least one OurCare training programme. In addition to the compulsory OurCare basic training, staff may also attend the advanced workshop and/or Clinical Practice Improvement Programme (CPIP).

Programme	No. of staff
OurCare Basic	878
OurCare Advanced	165
CPIP	57
Total	1,100

Table 5 Number of staff who attended quality improvement programmes.

Figure 27 A Lean workshop conducted at Choa Chu Kang Polyclinic on 15 and 16 March 2013.

NHGP as part of Singapore Healthcare Improvement Network

In support of building the national capacity and capability for improving quality and safety, NHGP was one of the founding members of the Singapore Healthcare Improvement Network (SHINe). The network was commissioned by MOH in collaboration with the Institute for Healthcare Improvement. It is a platform for formal and informal sharing and learning of best practices. It aims to facilitate cross-institutional collaborations to solve quality and safety issues. In addition, the network adds value to institutions by harnessing joint action on national priorities for quality and safety.

On 7 November 2012, MOH organised the inaugural Public Hospitals' Quality Agenda Setting Forum in conjunction with the 9th Healthcare Quality Improvement Conference. Mr Leong Yew Meng, CEO; Dr Lim Chee Kong, Deputy Director, Clinical Services; and Ms Alice Tang, Deputy Director, Operations (Lean Office) participated in the forum.

Figure 28 CEOs and Chairmen of Medical Board from all public healthcare institutions attended the Public Hospitals' Quality Agenda Setting Forum.

Chapter 3

Building Primary Care Capacity

In this photo

Launched in May 2013, Ang Mo Kio Family Medicine Clinic – a collaboration between NHG and Parkway Shenton – is a new model of care under MOH's Primary Healthcare Master to engage private GPs to help meet the growing demand for health services.

"The Ang Mo Kio Family Medicine Clinic is timely given the increasing number of patients with chronic ailments. As NHG develops the Central Regional Health System, this win-win partnership with Parkway Shenton will enable us to leverage on each other's strengths and provide Ang Mo Kio residents – as well as the Central region population – with more comprehensive care in the community for patients with chronic illnesses."

Prof Chee Yam Cheng, Group CEO, National Healthcare Group

In recognition of the importance of primary care in the transformation of Singapore's healthcare, MOH launched its Primary Care Masterplan in 2011. Since then, NHGP has been playing a key role in spearheading and supporting various initiatives under the plan. Some of the efforts include supporting the expansion of the Community Health Assist Scheme (CHAS)[8], the establishment of our first Family Medicine Centre at Ang Mo Kio, as well as the upcoming plans to redevelop our polyclinics at Ang Mo Kio and Jurong, and to build a new polyclinic at Pioneer, all timed for completion between 2017 and 2019.

Expanding Infrastructure

Development of the New Yishun Polyclinic

On 26 November 2012, Yishun Polyclinic moved to Yishun Central 1 – an interim site – to make way for the upcoming Yishun community hospital next to KTPH. It is part of the urban redevelopment plan to expand the infrastructure to meet the ageing and growing population in the Yishun area, which is expected to reach some 239,000 by 2020. This move enables better organisation of care in the northern region of Singapore. Different levels of care including primary, secondary, intermediate, and long-term care can then be close to one another geographically, making transition of care even more seamless for patients.

The new Yishun Polyclinic was officially opened on 15 Feb 2013 by guest of honour and Member of Parliament for Nee Soon Group Representation Constituency (GRC), Associate Professor Muhammad Faishal Ibrahim. Also present were the members of Government Parliamentary Committee (GPC): Dr Teo Ho Pin, Mr Patrick Tay, and Ms Ellen Lee *(Figure 30, Page 61).*

Facility for Team-Based Care

Located next to the Yishun Pond amid lush greenery, the new Yishun Polyclinic seeks to create a calm and healing environment with its higher ceilings and skylights. Patients are treated in a brighter and more spacious facility, designed to cater to team-based care and the increasing healthcare expectations. The clinic has doubled the number of blood-taking stations and treatment rooms. More consultation rooms were added. Relevant service stations for chronic and acute conditions have been clustered to minimise unnecessary shuttling between different parts of the clinic.

[8] CHAS was enhanced in 2012 by MOH to give needy citizens above 40 years old and disabled Singaporeans subsidies at private GPs and dental clinics near their homes. There are two schemes – Blue CHAS cardholders are patients whose per capita monthly household income is less than $900, and Orange CHAS cardholders are patients whose per capita monthly household income is more than $900 but less than $1,500. Blue CHAS cardholders receive more subsidies. CHAS will be further enhanced on 1 January 2014.

Full Compliance with BCA Accessibility Code

We have also incorporated many elderly-friendly features into the new clinic. Many aspects of the design are co-created with patients through focus group discussions.

These include:

- Intuitive wayfinding using colours and alphanumeric signage
- One floor for better accessibility
- Consultation rooms with sliding doors and signs with large fonts
- Hydraulic couches in all examination rooms
- Handrails and slip-resistant flooring along corridors
- Wheelchair and baby stroller parking lots
- Lower counters for wheelchair users at the registration area, pharmacy, and the Family Medicine Centre – Resident Continuity Clinics (FMC–RCC)
- An accessible toilet and a nursery room

With these features, Yishun Polyclinic has achieved a rating of 4 (beyond full compliance with prevailing accessibility code) for the handicapped and family-friendly building features under the Building and Construction Authority (BCA)'s Friendly Built Environment framework.

Figure 29 Facade of the new Yishun Polyclinic.

Figure 30 At the opening ceremony of Yishun Polyclinic.

Left to right: Mr Leong Yew Meng, CEO, NHGP; Dr Simon Lee, Head, Yishun Polyclinic; Ms Ellen Lee, GPC; Assoc Prof Muhammad Faishal Ibrahim, Parliamentary Secretary, Ministry of Health and Ministry of Transport; Mr Patrick Tay, GPC; Dr Teo Ho Pin, GPC; Prof Chee Yam Cheng, Group CEO, NHG; Mr Liak Teng Lit, Group CEO, Alexandra Health.

Redevelopment of Ang Mo Kio Polyclinic

Major upgrading works at Ang Mo Kio Polyclinic were completed in June 2012 as part of the continuing efforts to improve our facilities. The upgrading works included reconfiguration of the existing administrative office and front counters, expansion of the main entrance, creation of additional waiting areas, and re-clustering of the service rooms at Levels 1 and 2 to improve patient flow and enhance visitor experience. In addition, the diagnostic laboratory was split into two levels, separating acute patients from babies and chronic patients. It is envisaged that these improvements will relieve the space constraints until the polyclinic moves to its new location in 2017.

New Pioneer Polyclinic in the Pipeline

In early 2013, NHGP started planning for the new Pioneer Polyclinic to cater to the raising demand for healthcare services in Jurong West. The clinic will provide core services such as consultations, diagnostic services, treatment and minor procedures, allied health services, pharmacy, diabetic foot screening, diabetic retinal photography, and children's and women's health services.

NHGP met with the Member of Parliament for Pioneer Constituency, Mr Cedric Foo, on 7 May 2013. Mr Foo supports the set-up of the new polyclinic in his constituency as he recognises the benefits that it will bring to the residents. NHGP will be working closely with community partners and patients to design and build a patient- and community-centred clinic. The clinic is targeted to be ready for operations by 2017.

Tapping on Private Capacity

Ang Mo Kio Family Medicine Clinic

Launched on 11 May 2013, Ang Mio Kio Family Medicine Clinic (AMK FMC) is a collaboration between National Healthcare Group and Shenton Parkway. The new model of care is part of the Ministry of Health's Primary Healthcare Master Plan to engage private general practitioners (GP) to help meet the growing demand for healthcare services.

Leveraging the strengths of both the public and private sectors, the new entity is staffed by two Family Physicians from Parkway Shenton, and experienced nurses, allied health professionals, pharmacy and laboratory technicians, care facilitators, and operations staff from NHGP to provide a comprehensive range of services. These include treatment of common ailments like flu, acute and chronic care, diabetic foot and eye screenings, treatment procedures, and pharmacy and laboratory services.

To keep medical bills affordable for patients, eligible Singaporeans may apply for subsidies under CHAS and Medisave under the Chronic Disease Management Programme at AMK FMC. Patients may also request to see the same doctor for all their visits for better continuity of care. Located in the neighbourhood – 4190, Ang Mo Kio Ave 6, #03-01 Broadway Plaza – AMK FMC is less than ten minutes' walk from Ang Mo Kio Polyclinic.

In setting up the AMK FMC, GPs in the area were consulted for ideas and concerns. Dialogue sessions and community events were held to reach out to grassroot leaders, local advisors, and the community to get buy-in and promote support for the FMC. All the pre-launch efforts have translated into a smooth opening in May 2013.

Figure 31 Family Medicine Centre at Ang Mo Kio.

Figure 32 At the soft opening of AMK FMC.

Left to right: Mr Leong Yew Meng, CEO, NHGP; Prof Chee Yam Cheng, Group CEO, NHG; Mr Soh Gim Teik, Board Member, NHG; Ms Grace Chiang, COO, NHGP; Prof Philip Choo, Group Deputy CEO, NHG; Mr Seng Han Thong, Member of Parliament, AMK GRC; Dr Koh Hau-Tek, Medical Director, Parkway Shenton; Dr Gilbert Yeo, Lead Doctor, AMK FMC.

Improving Accessibility and Affordability of care through CHAS

The Community Health Assist Scheme (CHAS) is one of the Ministry of Health's programmes to help provide accessible and affordable medical and dental care to Singaporeans. NHGP has been supporting MOH's rollout and enhancement of CHAS since January 2012.

The CHAS working committee was formed in May 2012 with the aim of raising NHGP patients' awareness on CHAS. From September to November 2012, the committee surveyed some 4,000 patients in NHGP and found that 60% of the respondents did not hold the CHAS card and 80% of them were not aware of the scheme.

Following the survey, CHAS promoters were positioned in the clinics to promote and create awareness of the benefits of the scheme to eligible patients. By the end of 2012, there were about 85,000 CHAS patients in NHGP.

In supporting the expansion of CHAS, NHGP has been working closely with GPs on signing up for CHAS and claims processing. The various polyclinics and the Patient Empowerment and Community Engagement Department (PEACE) have also been proactively engaging these CHAS-certified GPs to work in partnership with us in managing stable chronic patients who are eligible or already on CHAS.

Since January 2013, the CHAS working committee has also been working with Ang Mo Kio Polyclinic and AMK FMC to facilitate the handover of suitable CHAS patients to AMK FMC. As of September 2013, about 2,000 patients have agreed to transfer to AMK FMC.

NHGP has also been collaborating with Jurong Health Services to transfer CHAS-eligible patients to their new Lakeside FMC. Jurong Polyclinic has been hosting doctors from Lakeside FMC as Adjunct Family Physicians, with the intent of bridging the transfer of appropriate patients.

Since October 2012, Clementi Polyclinic has been working with National University Health System to develop a collaborative care model and a workflow to transfer CHAS patients to Frontier Family Medicine Clinic.

GP Engagement Session

On 22 January 2013, NHGP participated in a successful GP engagement session organised by NHG and Alexandra Health. The session was held at KTPH's auditorium with 26 GPs and MOH in attendance.

Minister for Health Mr Gan Kim Yong shared the latest updates on the Primary Care Masterplan, which included the latest developments for the Community Health Centres and Family Medicine Clinics. NHG and Alexandra Health also updated on their different outreach efforts to the GPs and programmes to facilitate collaborative care for the population jointly served by the Regional Health Systems and GPs.

In addition, NHGP has been actively engaging CHAS-certified GPs around Ang Mo Kio, Hougang, and Toa Payoh Polyclinics. GP forums were organised in March and June 2013. More sessions have been planned for FY2013.

Figure 33 NHGP participated in a GP engagement session organised by NHG and Alexandra Health on 22 January 2013.


PRIM
CARE
FORUM 201
IN CONJUNCTION WITH SINGAPORE HE
BIOMEDICAL CONGRESS 2012
Panel Discussion
Dr Lee Suan Yew

Chapter 4

Advancing Family Medicine

In this photo

A panel discussion entitled "Excellence in Primary Care: Putting the Pieces Together" held during the Primary Care Forum on 28 and 29 September 2012. The panelists: *(left to right)* Dr Lee Chien Earn, CEO, Changi General Hospital; Professor Michael Kidd, President Elect, WONCA; Dr Lee Suan Yew, Medical Practitioner, S.Y. Lee Clinic; Mr Leong Yew Meng, CEO, NHGP.

"I feel proud to be a Family Medicine Resident as it is fulfilling to manage patients as unique individuals with therapies tailored to their lifestyles and social settings. Extending that, I think no other specialty has the privilege of treating their family members as well. Improving my medical knowledge in all the various fields of medicine and communication with patients remains a personal challenge every day."

Dr Trina Tay Lin, Family Medicine Resident, 2012 Cohort

Family Medicine (FM) provides primary, preventive, comprehensive, continuing, and coordinated healthcare in community settings to a broad range of paediatric and adult patients. To do this well, NHGP strives to consistently equip present and future generations of healthcare providers with the required skills and knowledge. The Primary Care Academy (PCA) was established in April 2007 to meet the professional training needs of primary healthcare professionals in Singapore and the region.

We also promote and conduct research in Family Medicine and Medical Education, as a means to develop, consolidate, and disseminate new knowledge in achieving the vision of advancing Family Medicine.

Family Medicine Residency Programme

Advanced Specialty Accreditation by ACGME-I

NHGP has been constantly improving the quality of teaching, learning, research, and professional practice in our organisation. The NHG Family Medicine Residency Programme achieved the advanced specialty accreditation by Accreditation Council for Graduate Medical Education International (ACGME-I) in 2012. The accreditation audit interview, involving faculty members and residents, was held at PCA Learning Centre at Choa Chu Kang Polyclinic on 8 May 2012.

ACGME-I is an international USA-based non-governmental organisation responsible for the accreditation of international graduate medical education programmes based on similar standards imposed for USA medical residency training programmes. Its accreditation is an endorsement of the high standards of Family Medicine training in NHGP.

Family Medicine Centre – Resident Continuity Clinics

Following the launch of the four Family Medicine Centre – Resident Continuity Clinics (FMC–RCC) in Bukit Batok, Hougang, Toa Payoh, and Choa Chu Kang Polyclinics, two more FMC–RCCs were set up at Jurong and Woodlands Polyclinics in July 2012.

The FMC–RCCs provide a conducive environment for the training of FM Residents. As part of the three-year traineeship under the Family Residency Programme, the FM Residents conduct clinical sessions under the supervision of an appointed core faculty member of the programme. In addition, they also get rotated to various hospital departments such as General Medicine, Paediatric, and Emergency Medicine.

The first batch of the programme consisted of 10 FM Residents. There were 14 Residents in the 2012 cohort.

Figure 34 Cohort of FM Residents in 2012.

Back row, left to right: Dr Leung Muk Yan Victoria, Dr Zhao Jing, Dr Goh Xin Wei Ivanna, Dr Sim Li Kun, Dr Foo Shi Xian (no longer in the programme), Dr Chin Chi Hui, Dr Sim Sai Zhen, Dr Goh Chok Chin Rachel.

Front row, left to right: Dr Nor Izuan Bin Rashid, Dr Chao Chien-Chih Steven, Dr Zhang Zhi Peng, Dr Ong Chong Yau.

Not in this photo: Dr Ong Sze Tat, Dr Trina Tay Lin, Dr Lam Sue May.

Recognising Our Clinician-Educators

Clinician teachers are central to the successful education of medical graduates. In 2012, our clinician-educators and teaching partners were recognised for their commitment and contribution in teaching and mentoring junior clinicians.

NUS Best Tutor Award 2012

David Tan	Assistant Director, Family Medicine Development Deputy Head, Jurong Polyclinic

NHG Teaching Awards – Junior Clinicians 2012

Ruth Zheng Mingli	Family Physician, Bukit Batok Polyclinic

NHG Outstanding Education Partners Awards 2012

Eng Soo Kiang	Adjunct Family Physician, Family Medicine Development

NHGP Best Nursing Preceptor Award 2012

Satran Kaur	Senior Staff Nurse, Choa Chu Kang Polyclinic

NHGP Best Family Medicine Trainers' Award 2012

Angelia Chua	Family Physician – Consultant, Yishun Polyclinic
Darren Seah	Family Physician – Associate Consultant, Toa Payoh Polyclinic

Figure 35 Dr David Tan, Assistant Director of Family Medicine Development Division (left), received the Best Tutor Award 2012 from the Medical Society of Yong Loo Lin School of Medicine, National University of Singapore, on 13 August 2013.

Figure 36 Dr Eng Soo Kiang (right) received the NHG Outstanding Education Partners Awards 2012 from Prof Chee Yam Cheng, Group CEO, NHG.

Figure 37 Dr Ruth Zheng (right) received the NHG Teaching Awards – Junior Clinicians 2012.

Professional Advancement

Master of Medicine in Family Medicine

In 2012, five doctors attained the Master of Medicine in Family Medicine.

Ong Eng Koon	Ang Mo Kio Polyclinic
Kwek Sing Cheer	Bukit Batok Polyclinic
Hui Jor Yeong Richard	Choa Chu Kang Polyclinic
Ong Cong Wei Alvin	Choa Chu Kang Polyclinic
Chan Qiuhua Catherine	Hougang Polyclinic

Graduate Diploma in Family Medicine

A total of 20 doctors from NHGP passed the Graduate Diploma in Family Medicine (GDFM) in 2012, achieving a 95% pass rate.

Megha Gupta	Ang Mo Kio Polyclinic
Yong Yuan Chen	Bukit Batok Polyclinic
Rohilla Sandeep	Choa Chu Kang Polyclinic
Su Shichang	Choa Chu Kang Polyclinic
Zhang Yijun	Choa Chu Kang Polyclinic
Si Khin Yuen Gary	Clementi Polyclinic
Teh Tiong	Hougang Polyclinic
Koh Wei Thye	Hougang Polyclinic
Moe Kyaw Lwin	Jurong Polyclinic
Kheterpal Hemant	Jurong Polyclinic
Rohit Bansal	Jurong Polyclinic
Poon Sher Lynn	Jurong Polyclinic
Chin Chi Hui	Jurong Polyclinic
Anita G Krishna Dass	Woodlands Polyclinic
Chew Kwong Yik Jimmy	Woodlands Polyclinic
Wong Jeng Hung	Woodlands Polyclinic
Selvaganapathi Yogeswari	Yishun Polyclinic
Meenakshi Jain	Yishun Polyclinic
Boon Jiabin	Yishun Polyclinic
Laxmanan Raja Rajeswari	Yishun Polyclinic

Graduate Diploma in Mental Health

In 2012, four NHGP doctors attained their Graduate Diploma in Mental Health. The programme is jointly offered by the Division of Graduate Medical Studies, National University of Singapore, and the Institute of Mental Health. It aims to increase the capability of general practitioners in detecting and managing mental health conditions.

Winnie Soon	Ang Mo Kio Polyclinic
Lai Shan Hui	Choa Chu Kang Polyclinic
Colin Tan	Clinical Services
Nasir Jameel Iqbal	Toa Payoh Polyclinic

Family Medicine Competency Programme

The Family Medicine Competency Programme was introduced in 2008 to convert doctors with temporary registration to conditional registration with the Singapore Medical Council (SMC). The 18-month programme involves twelve months of supervised clinical postings in hospitals and six months of training in a polyclinic. At the end of the programme, examiners appointed by the SMC and College of Family Physicians Singapore (CFPS) will assess the doctors. In 2012, seven doctors were appointed as Resident Physicians after receiving their conditional registration.

Rachelle Libunao De Gracia	Ang Mo Kio Polyclinic
Win Thu	Bukit Batok Polyclinic
Ramos Ann Eileen Bersalona	Choa Chu Kang Polyclinic
Vittal Sunil Pawar	Toa Payoh Polyclinic
Nasir Jameel Iqbal	Toa Payoh Polyclinic
Mahalingam Venkatesan Premdhevi	Woodlands Polyclinic
Chitra Sundarrajan	Yishun Polyclinic

Master of Nursing

In 2012, three nurses completed the 24-month Master of Nursing programme offered by the Alice Lee Centre for Nursing Studies. The programme equips nurses with advanced knowledge and skills in the clinical management of patients. It enhances the use of research findings as the basis of effective practice. Graduates of the programme are eligible to apply for certification as an Advanced Practice Nurse with the Singapore Nursing Board.

Michelle Lee Cai Feng	Ang Mo Kio Polyclinic
Bian Li	Bukit Batok Polyclinic
Margaret Chia Wai Peng	Clementi Polyclinic

Bachelor of Science (Nursing) Degree (Honours)

The Bachelor of Science (Nursing) Degree programme is a three-year undergraduate programme to provide nurses with a broad foundation in nursing, humanities, biological, and social sciences. These areas are essential for preparing safe and professional nurses.

Ng Sze Ern	Yishun Polyclinic

Advanced Diploma in Nursing

Tan Peck Hoong	Ang Mo Kio Polyclinic
Jesmia Abdullah Lee	Ang Mo Kio Polyclinic
Chan Su Sie	Bukit Batok Polyclinic
Munaliza Bte Mokminin	Choa Chu Kang Polyclinic
Tan Yen Ching	Clementi Polyclinic
Alarvarasi D/O Samynathan	Clementi Polyclinic
Lim Hwee Hua	Hougang Polyclinic
Lydia Koh Huai Yun	Hougang Polyclinic
Irene Kong Chiu Yee	Jurong Polyclinic
Song Sin Hooi	Jurong Polyclinic
Chang Xiaopei	Toa Payoh Polyclinic
Arumugam Vasantha	Toa Payoh Polyclinic
Soh Eng Luan	Woodlands Polyclinic
Du Na	Woodlands Polyclinic

Master of Clinical Pharmacy

Evonne Lee Yanqun	NHG Pharmacy

Board Certification for Ambulatory Care Pharmacist (BCACP)

Esther Bek Siew Joo	NHG Pharmacy
Evonne Lee Yanqun	NHG Pharmacy
Ong Soo Im	NHG Pharmacy

Clinical Pharmacist Preparatory Programme

Cheryl Char Wai Teng	NHG Pharmacy
Woo Jia Xiang	NHG Pharmacy

Doctor of Philosophy in Clinical Psychology

Wong Mei Yin	Clinical Services

Master of Clinical Rehabilitation

Lee Yung Hsiang	Clinical Services

Certificate in Orthopaedic Manual Therapy

John Abraham	Clinical Services

Advanced Musculoskeletal Physiotherapy Certificate

Duraimanickam Ramadas	Clinical Services

Specialist Diploma in Counselling Psychology

Lim Siew Neo	Finance

National ITE Certificate in Dental Assisting

Han Limei	Hougang Polyclinic
Tan Wan Ying	Jurong Polyclinic
Zuriana Binte Abdul Rahim	Toa Payoh Polyclinic
Jasmine Binte Joffri	Woodlands Polyclinic
Siti Rahmah Binte Kamaruddin	Woodlands Polyclinic

Continuing Education and Development

Primary Care Forum 2012

The Primary Care Forum 2012, themed "Excellence in Primary Care: Rhetoric to Reality", was held on 28 and 29 September 2012 at Max Atria @ Singapore EXPO. It attracted about 900 healthcare providers and administrators.

There were four plenary sessions and three symposiums. Keynote speaker, Professor Michael Kidd, President-Elect of World Organisation of National Colleges, Academies and Academic Associations of General Practitioners / Family Physicians (WONCA), gave his address on "Distilling the Essence of Primary Care Excellence: A Global Perspective". He also shared on "Clinical Practice Guidelines in Achieving Quality Patient Centred Care".

Professor Richard Bohmer from Harvard Business School shared his management expertise on "Systemic Reforms in Primary Care: What works?" and "Medical Leadership for Delivering Excellent Patient Care in the Frontlines".

Professor Alexander Blount, Director of Behavioural Science from the University of Massachusetts Medical School, delivered his address on behavioural healthcare in chronic management.

Dr Colin Tan, Ms Ng Soh Mui, and Ms Janie Chua shared their experiences in inter-professional collaboration in the care of patients with chronic diseases.

This year's GP symposium "Surfing the Silver Tsunami: Getting on Top of Care for our Elderly" provided updates on the management of common conditions of the elderly.

Figure 38 At the Primary Care Forum 2012.

Left to right: Dr David Tan, Deputy Director, Family Medicine Development, NHGP; Mr Leong Yew Meng, CEO, NHGP; Dr Lee Chien Earn, Deputy Director, Medical Services, MOH; Prof Richard Bohmer, Keynote Speaker; Mrs Tan Ching Yee, Permanent Secretary, MOH; Professor Michael Kidd, Keynote Speaker; Dr Chong Phui-Nah, Senior Director, Family Medicine Development and Primary Care Academy, NHGP; Dr Lew Yii Jen, Senior Director, Clinical Services, NHGP; Dr Tang Wern Yee, Head, Clinical Research Unit, NHGP; Dr Darren Seah, Assistant Director, Family Medicine Development, NHGP; Dr Predeebha Kannan, Deputy Director, Family Medicine Development and Primary Care Academy, NHGP.

Figure 39 Professor Michael Kidd delivering his keynote addresses.

Figure 40 Professor Richard Bohmer sharing his management expertise.

Minor Surgical Procedures Competency Workshop

PCA organised a Minor Surgical Procedures (MSP) competency workshop to align practices and skills of our doctors. It also served to accredit doctors who are proficient in their MSP skills.

A/Prof Ganesan Naidu Rajamoney Naidu, Chief of Orthopaedic Trauma Surgery Service and Head of Department, TTSH, conducted the first part of the workshop "Lumps, Bumps and Simple Procedures" on 9 June 2012. A total of 15 doctors were accredited.

The second part of this workshop on joint and soft tissue injection was conducted by Dr Bernard Thong, Head of Department, Senior Consultant, Department of Rheumatology, Allergy and Immunology, TTSH, on 28 July 2012. A total of 14 NHGP's doctors were accredited.

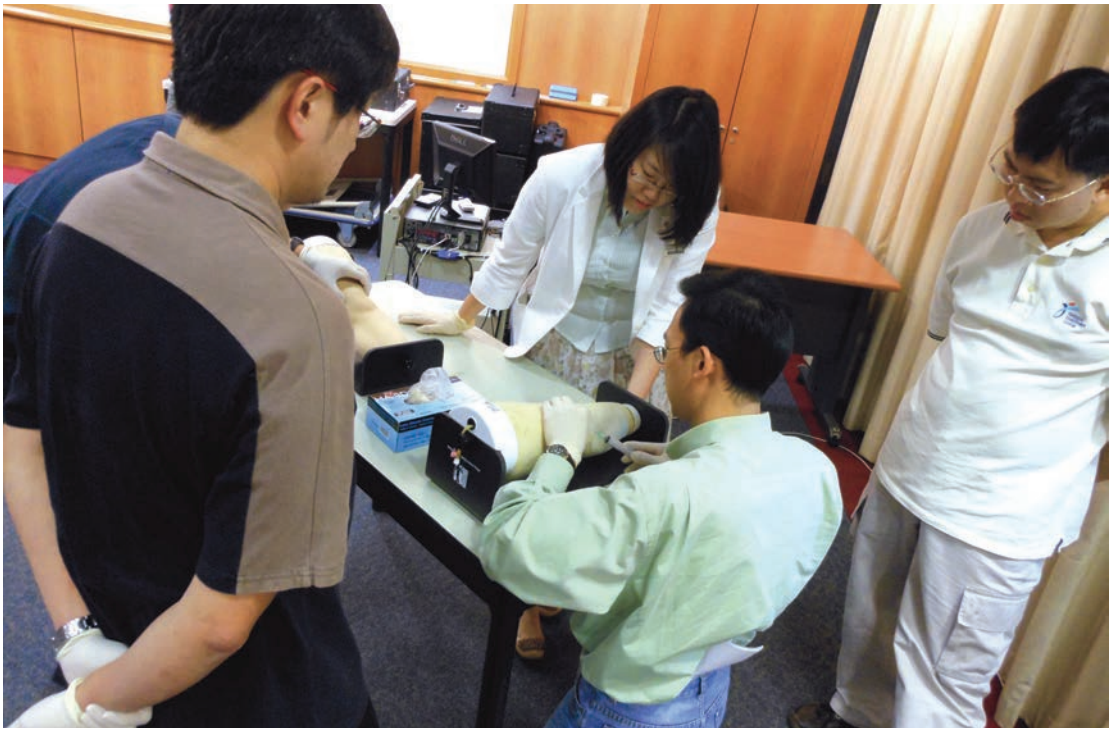


Figure 41 Dr Marvin Chan, Family Physician, Hougang Polyclinic, practising a knee injection during the MSP workshop.

Advanced Wound Management Workshop

The first Advanced Wound Management workshop was organised for NHGP's doctors and nurses on 2 and 23 February 2013. A multidisciplinary team consisting of doctors and wound clinicians developed the curriculum and conducted the workshop together.

It was designed for primary healthcare professionals who were providing advanced wound care for individuals in the primary healthcare setting. This workshop increased the participants' understanding of the pathophysiology of wound repair and regeneration, the principles of wound assessment, and the management of different types of wounds, as well as understanding on when and how to use different wound dressings.

Figure 42 Vasanthi D/O Ganesan, Principal Assistant Nurse, introducing wound care products to the participants of the Advanced Wound Management workshop.

Continuing Education for Doctors: Medical Forums

Family Medicine Development Division conducts bi-monthly medical forums to equip primary care doctors with the six competencies for healthcare professionals under the ACGME framework: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Subject matter experts are invited to deliver the lectures. In FY2012, PCA organised six medical forums *(Table 6).*

Topic	Speaker
Pre-emptive Strike on Pain	Dr Teh Kong Chuan, Senior Consultant, Orthopaedic Surgery, Sports Medicine, KTPH Ms Sharika Udipi, Senior Physiotherapist, TTSH
Tuberculosis – What Primary Healthcare Physician Needs to Know	Dr Cynthia Chee, Senior Consultant, Tuberculosis Control Unit (Contact Clinic), TTSH Dr Gan Suay Hong, Principal Resident Physician, TTSH Dr Angelia Chua, Family Physician – Consultant, NHGP
Colorectal Cancer Screening – What Does the Evidence Really Say?	Dr Jarrod Lee Piao, Consultant, Gastroenterology and Hepatology, Internal Medicine, KTPH
Burnout!	A/Prof Nicholas Chew, Senior Consultant, Psychological Medicine, NUH
Home Care: Delivering Quality Care to the Doorstep	Dr Sabrina Wong, Family Physician – Associate Consultant, TTSH Dr Julian Lim, GP, Newlife Family Clinic and Surgery
Community Care of Psychiatric Patients – Nothing to Fear but Fear Itself!	Dr Habeebul Rahman S/O Sahul Hameed, Consultant, Psychological Medicine, TTSH

Table 6 Six medical forums conducted in FY2012.

Figure 43 A medical forum held at TTSH's Theatrette.

New Courses for Healthcare Professionals and Beyond

PCA has been continually reviewing the existing courses and developing new courses based on the feedback we received. To meet the professional training needs of healthcare providers in NHGP, PCA introduced several new courses in 2012:

- Advancing Ethics and Professionalism in Primary Care
- Handling Critical Communication and Stress at Work for Financial Counsellors
- Translating Commonly used Medical Terms in Polyclinics from English to Mandarin using *Han Yu Pin Yin* (Basic Level)
- Mentoring: A Guide by the Side
- Teaching 101 for Busy Healthcare Professionals

In April 2012, PCA passed the Singapore Workforce Development Agency's Continuous Improvement Review audit and obtained its re-accreditation for its course 'Use of Medical Terminology during Work Activities'. The course adheres to the Singapore Workforce Skills Qualification System framework, guaranteeing the quality of the course's delivery and assessment.

PCA Re-accredited as Basic Cardiac Life Support Training Centre

PCA has been accredited as a life support training centre by the National Resuscitation Council (NRC) since 2008. In September 2012, it passed the audit conducted by NRC and had been re-accredited as a Basic Cardiac Life Support training centre for two years commencing December 2012.

Primary Care Research

Inaugural Primary Care Research Scientific Competition

The inaugural Singapore Primary Care Research Scientific Competition was held in conjunction with the Primary Care Forum. Commissioned by PCA, the competition aimed to reward outstanding primary care research. It also recognised the importance of research in guiding and shaping clinical practice in primary care. The award ceremony was held on 28 September 2012 at the opening ceremony of the 3rd Singapore Health and Biomedical Congress.

The winners of the 2012 competition are as follows:

Oral Category

Award	First Author	Research Title
Gold	**Dr David Tan Hsien Yung** Family Physician – Associate Consultant Jurong Polyclinic	A Study on Burnout amongst Doctors in a Singapore Public Primary Healthcare Institution
Silver	**Dr Lee Eng Sing** Family Physician – Associate Consultant Hougang Polyclinic	Potential Risk Factors for Albuminuria in Patients with Type 2 Diabetes
Bronze	**Mr Gerald Boh Boon Tiong** Psychologist Clinical Services	Relationship between Anxiety and Insomnia in Primary Care

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Poster Category

Award	First Author	Research Title
Gold	**Dr Darren Seah Ee-Jin** Family Physician – Associate Consultant Toa Payoh Polyclinic	Reducing Hypoglycaemia among Type 2 Diabetics Managed in Primary Care
Silver	**Mr Tan Liang Sheng** Senior Podiatrist Clinical Services	Plantar Fasciitis in Primary Care

Table 7 Winners of the Primary Care Research Scientific Competition 2012 and their respective research titles.

Figure 44 Winners of the Primary Care Research Scientific Competition.

Left to right: Dr David Tan, Dr Lee Eng Sing, Mr Tan Liang Sheng, Mr Gerald Boh, Dr Darren Seah.

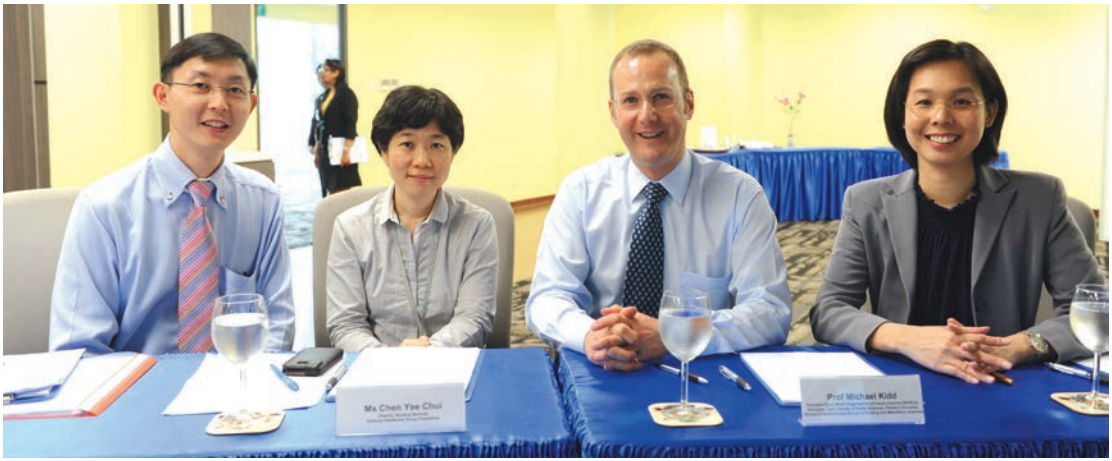

Figure 45 Judges of the inaugural Primary Care Research Scientific Competition: *(left to right)* Dr Matthias Toh, Ms Chen Yee Chui, Prof Michael Kidd, Dr Tang Wern Yee.

Research Proposal Awards at Asia Pacific Primary Care Research Conference

A team of Family Medicine Residents led by Dr Angelia Chua won the Pre-Conference Research Championship at the Asia Pacific Primary Care Research Conference held on 1 and 2 December 2012. The winning research proposal was "Faecal Occult Blood Test (FOBT) Screening in Colorectal Cancer: Does Physician Education and Screening Result in Increased Uptake?"

Teams with other FM residents led by Dr David Ng and Dr Gary Ang won the 2nd runner-up and "Most Innovative Research Idea Award" respectively.

Research Poster Award at WONCA Conference

Dr Baby Liza Santiago presented four research papers and won the poster award at the WONCA Asia Pacific Conference at Jeju, Korea, on 23 – 27 May 2012. The winning research poster was titled "The Effectiveness and Safety of Gingko Biloba in the Elderly: A Meta-Analysis" *(Figure 46).*

Dr Angelia Chua spoke on the topic "Providing Acupuncture to Patients with Chronic Knee Pains in the Polyclinics". Dr Darren Seah presented on "Restructuring Training in Primary Care for Family Medicine Development".

Workshop to Strengthen Research Capabilities

On 21 and 28 April 2012, PCA organised a research workshop "You Can Do It: Primer on Research" for all NHGP healthcare professionals. The workshop was conducted by Associate Professor Sim Kang, a senior consultant psychiatrist, who had won the prestigious Singapore Clinician-Investigator Gold Award at the Singapore Health and Biomedical Congress 2011.

The workshop taught the participants, made up of doctors, nurses, allied health professionals, and administrative staff, the key elements of a research process, with a focus on formulating research questions around clinical domains. Dr Sim Kang also shared his knowledge on applying for research grants for budding researchers embarking on larger funded research projects.

Figure 46 Dr Baby Liza Santiago won an award based on her research poster titled "The Effectiveness and Safety of Gingko Biloba in the Elderly: A Meta-Analysis".


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Chapter 5

Promoting Health and Preventing Disease

In this photo

Some 700 NHGP staff participated in the Active Day on 13 October 2012 at Yio Chu Kang Stadium.

“I would like to thank the Weight Management Programme because it really works for me. After the briefing with dietitian, I realised why I put on weight.”

Mdm Rosilah Binte Osman, a patient in Choa Chu Kang Polyclinic, 21 January 2013

Over the years, there has been a greater emphasis on health promotion and disease prevention as every individual's own responsibility. This has also led to primary care playing a pivotal role in empowering people to enhance and achieve wellness, prevent illness, and participate in self-care. Polyclinics today are playing a bigger role as a health educator for the public and actively facilitating positive changes in lifestyle, including dietary changes, weight reduction, smoking cessation, and falls prevention. The shift from managing disease alone to promoting wellness will help reduce the escalating healthcare cost.

Promoting Health for Patients

Opportunistic Health Screening for Early Detection of Risk Factors

NHGP offers opportunistic health screening (OHS) services to patients for the early detection of hypertension, diabetes, dyslipidaemia, and major cardiovascular risk factors. As a post-screening measure, patients are offered health counselling, referral for diagnostic confirmation, follow-up, and further care management. In 2012, a total of 11,508 patients had taken up OHS in the polyclinics.

In the next few years, Health Promotion and Preventive Care Division (HPPC) will drive the development of the Systematic Health Risk Profiling (SHARP) framework within our polyclinics. This framework will allow NHGP to stratify the health risk of our patients, enabling the care teams to subsequently offer targeted health promotion interventions for these patients.

Building a robust health registry will ultimately allow the multidisciplinary care teams to engage our patients on a common platform through the use of a health report card. All parties will then focus on the same set of relevant risk factors. The objective is to cultivate a patient who is activated, informed, and empowered to have an ongoing, productive health conversation with a proactive and prepared care team.

Polyclinics as Health-Promoting Classrooms

With almost three million attendances to our clinics in a year, NHGP recognises that each visit to the polyclinic presents a window of opportunity for us to engage the community in health promotion and disease prevention. To do this, NHGP has set up the health promotion corners, the Ageing-in-Place (AIP) Studio, healthy drink and fruit vending machines, and healthy cafeterias in the polyclinics.

Ageing-In-Place Studio

The Ageing-in-Place (AIP) Studio at Toa Payoh Polyclinic is a mock-up of a studio apartment, equipped with educational materials and customised tactile displays on home safety and independent living. Various fixtures and functional aids, such as non-slip tiles and handrails, have been installed in the studio. Educational messages and practical information are displayed on walls and placards to provide simple tips on how to improve home safety and make simple modifications to the home, so as to make independent living easier.

In collaboration with the Occupational Therapy Department of TTSH, a customised patient education programme was formulated for our NHGP health promoters to conduct guided educational tours of the studio. Tours of the studio are conducted every Monday, Wednesday, and Friday in English, Malay, Mandarin, and dialects. There have been close to 900 visitors since its launch on 16 November 2011 *(Figure 47).*

Patient Weight Management and Smoking Cessation Programme

To address the needs of obese and overweight patients, the HPPC Division piloted a weight management programme at Choa Chu Kang Polyclinic in November 2011. This is a structured, modular approach towards weight loss. It is based on the promotion of healthy eating and regular physical activity and comprises a combination of individual and group sessions. In January 2012, HPPC piloted another smoking cessation programme for patients who wish to quit smoking. NHGP is planning for the services to be expanded to other clinics in FY2013.

Strength Training and Exercise Programme

In December 2012, Choa Chu Kang Polyclinic piloted the Strength Training and Exercise Programme (STEP) in collaboration with the Health Promotion Board (HPB). Two batches of 14 patients were identified to be at risk of falls through the HPB's Community Functional Screening Programme[9] for the elderly. They were subsequently recruited into this 12-week programme, where a physiotherapist and his/her assistant coached them on low-intensity exercises. These have been shown to be effective in improving muscle strength, balance and coordination, and eventually preventing falls in the community.

[9] The HPB's Community Functional Screening Programme helps seniors detect early signs of functional decline. It is a series of simple tests and questionnaires administered by healthcare professionals in the following six areas: continence, mood, physical function, oral health, hearing, and vision.

Polyclinics to assess elderly for risk of falls

Initiative targets patients aged 65 and up; those at risk will be given help

By Poon Chian Hui

THE elderly are vulnerable to falls, and the nine polyclinics under the National Healthcare Group will soon roll out an initiative to assess their risk of falling.

When elderly patients visit the polyclinics to seek treatment for ailments, doctors, nurses and allied health workers will use a set of questions to assess their risk of suffering falls.

The initial phase of the initiative, targeted at people over 65, is slated to start by September.

Consultant family physician Tung Yew Cheong, who heads Toa Payoh Polyclinic, said many elderly people suffer falls but do not report it. "Many don't think it's important to see a doctor for a fall," he added. "But once you have a fall, the risk of a second one is higher if you don't address the root cause."

A combination of factors can lead to a fall – balance problems, dizzy spells, poor vision and footwear that causes a person to slip too easily.

Local studies put the prevalence of falls among Singaporeans aged 65 and older at 17.2 per cent. Of these, two-thirds fell once while the remaining had recurrent falls.

The nine polyclinics registered more than 2.8 million patient visits last year, of which 14 per cent are made by those aged 65 and up. SingHealth runs another nine polyclinics.

Under the initiative, those deemed at risk of falling will be asked to go for a functional test that monitors factors like vision and gait. Some may be referred to a hospital for further assessment. Others may be advised to use walking aids or install devices at home to assist them.

Dr Tung said the initiative will help elderly patients prevent falls and enable those who have suffered falls to regain a better quality of life.

"The quality of life after a fall can be quite drastically reduced. Not every patient can continue to be as active as they usually are," he added. "Many of them stay cooped up at home because they develop a phobia of falling again."

A studio resembling a one-room flat, where families can learn how to make their homes safer for elderly members, opened in Toa Payoh Polyclinic last November. It has seen 213 patients.

Toa Payoh estate has a higher-than-average proportion of elderly people aged 65 and up – about 15 per cent to 19 per cent. The national average of this age group is 9.3 per cent.

About 23 per cent of patients at Toa Payoh Polyclinic are 65 and above.

At the studio, which is open on Wednesdays, a health promoter takes elderly patients and their caregivers on a short tour and introduces safety tips. These range from using non-slip mats in the bathroom and hand grips along the stairs to choosing beds of a suitable height.

Further help is given through Tan Tock Seng Hospital which the polyclinic collaborates with. For example, the elderly can ask the hospital's occupational therapists to assess their home environment for safety modifications.

There are plans to run the studio more frequently and, when the fall-risk framework is in place, selected patients will be asked to take the tour.

chpoon@sph.com.sg

Health promoter Siti Sukmakanah giving a demonstration to cleaner Mohamed Munteel, 68, at a studio built to resemble a one-room flat in Toa Payoh Polyclinic. Families can learn how to make their homes safer for elderly members. Some tips include installing bigger and sturdier railings (above) and longer shower hoses (below). ST PHOTOS: NEO XIAOBIN

Figure 47 "Polyclinics to assess elderly for risk of falls", 20 March 2012, The Straits Times © Singapore Press Holdings Limited. Reprinted with permission.

[Excerpt] At the (Ageing-in-Place) studio, which is open on Wednesday, a health promoter takes elderly patients and their caregivers on a short tour and introduces safety tips. These range from using non-slip mats in the bathroom and hand grips along the stairs to choosing beds of a suitable height.

Mobile Bone Mineral Densitometry Service at Woodlands Polyclinic

The launch of mobile bone mineral densitometry service at Woodlands Polyclinic in April 2012 brought greater convenience and accessibility for elderly patients living in the northern vicinity. This new service location is in addition to the existing locations at Ang Mo Kio–Thye Hwa Kwan Hospital and Jurong Polyclinic where patients from the east, central, and west areas are served.

Bone mineral densitometry is a simple, non-invasive screening test for osteoporosis. This test was primarily available in hospitals in the past. With the service made available in the community setting, early detection and intervention of osteoporosis is now possible.

Reaching Out to the Community

In addition to promoting health within the polyclinics, NHGP, NHG Pharmacy, and NHGP Diagnostics participated and supported 31 health talks, health screenings, and other health-promoting events in the community in FY2012. See Page 105 for a comprehensive list of outreach activities supported by NHGP, NHG Pharmacy, and NHG Diagnostics in FY2012.

Figure 48 Clementi Polyclinic and Clementi Community Centre organised a health talk on 6 October 2012 to share nutrition facts and Traditional Chinese Medicine diet therapy with participants.

Figure 49 Ms Lee Poh Ling, Pharmacist, giving advice on medication and health screening results to one of the participants at the public health forum on 22 September 2012.

Figure 50 A participant trying out a resistant band at the public health forum organised by NHG Pharmacy on 22 September 2012.

Promoting Health for Staff

Healthy employees are an organisation's strongest assets. NHGP also recognises that health and well-being is key to the individual's productivity, performance, and success.

In addition to promoting health among patients, HPPC Division also works to promote health among NHGP staff.

Annual Health Checks and Follow-Up Programmes for Staff

Free annual health checks are conducted for all staff to detect any latent diseases and health risk factors. The screening package includes a health and lifestyle questionnaire, height and weight and waist circumference measurement, blood pressure check, fasting blood glucose and lipid profile, as well as hepatitis B and C, and HIV screening. In 2012, 81% of staff took part in the health checks conducted from 26 November to 11 December 2012 *(Figure 51).*

In June 2012, HPPC launched a 12-week weight management programme for staff in Choa Chu Kang, Woodlands, and Yishun Polyclinics. Participants received tele-consultations from our health promotion consultant and dietitians to guide them on lifestyle changes. By the end of the programme, 15 out of 19 staff achieved the desired weight loss.

Regular Health-Promoting Activities for Staff

NHGP supports staff to embrace a healthy lifestyle by organising activities such as regular exercise classes, annual fitness assessments, Active Day, and Fruit Day.

Fruit Day takes place bi-weekly with HQ Office coordinating the purchase of fruits. Fruits, such as apples, pears, and bananas, are distributed to all staff. An email is also sent to all staff explaining the nutrition values of the fruits as well as to remind them to eat healthily.

Healthy eating sessions and healthy cooking demonstrations are organised to educate staff on the types of healthy food. This is conducted during lunch time using food models and labels, together with a sandwich-making competition. Healthy drinks, such as soya bean, are distributed as part of the healthy eating initiatives.

Figure 51 Every year, NHGP provides free health screening for staff to detect any latent diseases and health risk factors.

Physical activities are organised bi-weekly in NHGP. Exercise classes range from Zumba, Aerobics, and Yoga to Strength Training.

Stress management talks are conducted by a doctor, nurse, medical social worker, or psychologist, teaching staff on coping strategies and relaxation techniques.

Health promotion corners were set up in our clinics to educate staff on the importance of staying healthy. The theme for the corner is changed quarterly to cover different topics.

Figure 52 Some 700 staff participated in the mass workout.

Active Day 2012

It was a great turnout despite the rain; about 700 staff participated in NHGP's Active Day on 13 October 2012. In addition to the mass workout, there was a highlight to the event – our management competed in the Management Olympics (4x100m Torch Relay) and the fastest team handed the torch over to our CEO, Mr Leong Yew Meng, for his individual run.

During the Telematch, there was a spectacular sea of colours as staff were decked out in a specific colour to represent each clinic and HQ. Each did their very best to win the top prize. Yishun team clinched the top prize for the Telematch, while Choa Chu Kang team, HQ team, and Ang Mo Kio team won second, third, and fourth respectively.

Our colleagues also got a special treat that afternoon as the Choa Chu Kang team had set up a special balloon sculpting stall, adding more fun to the event.

NHGP and NHG Diagnostics Receive the HEALTH Awards

NHGP's and NHG Diagnostic's efforts in promoting good health and well-being among staff were recognised nationally through the Helping Employees Achieve Life-Time Health (HEALTH) Platinum Award 2010 and Silver Award 2012, respectively. The Platinum Award is awarded by the Health Promotion Board to organisations that have achieved at least two Gold Awards consecutively and have demonstrated tangible benefits from their workplace health promotion programme.

The assessment criteria of this award are Programme Positioning and Organisation, Programme Planning, Programme Evaluation and Results, and Programme Comprehensiveness.

Figure 53 NHG Diagnostic received the HEALTH Silver Award in 2012, affirming its commitment and effort in promoting good health and well-being among staff.

Chapter 6

Engaging Community and Stakeholders

In this photo

NHG Pharmacy organised a public forum on 22 September 2012 at the Grassroots' Club. The event, which was conducted in Mandarin, attracted about 260 participants. There were interactive health talks, Q&A sessions, free health screenings, and medication counselling by pharmacists.

“Chong Pang Women’s Wing Executive Committee has a very good relationship with Yishun Polyclinic. We look forward to our continued partnership in taking care of the health and well-being of our community.”

Ms Winnie Ng, Treasurer, Chong Pang Women’s Wing Executive Committee

Improvement of health is a massive and shared responsibility. NHGP or any other health providers cannot work in isolation, as health is an outcome of multiple complex biological, psychological, and social factors. We need to continue to engage and strengthen the partnership among primary care, community care, social care, acute care, and the home care sector, so as to holistically manage our patients with chronic disease and multiple comorbidities, and address their functional, psychological, or social needs.

New Patient Empowerment and Community Engagement Department

In recognition of the need to integrate services across the continuum and establish inter-sectorial partnerships, NHGP established the Patient Empowerment and Community Engagement Department (PEACE) in October 2012.

With dedicated resources set aside for community and stakeholder engagement, NHGP is committed to improving population health outcomes and facilitating right-siting of care. This is done through forging strategic partnerships with providers from other healthcare and community sectors.

Collaborations with Community Providers

Subsidised Drugs for Home Nursing Foundation's Patients

Home Nursing Foundation (HNF) is the oldest and one of the largest home nursing services in Singapore, providing nursing services island-wide in Singapore to people in their own homes. In August 2012, NHGP piloted a project with HNF and NHG Pharmacy to avail access to subsidised drugs for HNF patients at Ang Mo Kio, Toa Payoh, and Hougang Polyclinics. There are plans to spread the initiatives to all our polyclinics.

Collaborative Care with Tzu Chi Foundation

Tzu Chi Foundation, literally "compassionate relief", is a voluntary welfare organisation that provides free medical, dental, and health screening services for patients with financial difficulties.

NHGP has made arrangements with Tzu Chi Free Clinic opposite Jurong Polyclinic, to allow their patients to access our subsidised medications, diabetic retinal photography, diabetic foot screening, and other diagnostics services. In addition, some of our needy patients will also be able to visit Tzu Chi Clinic as part of collaborative care between the two institutions.

Plugging into a Community Mental Health Network – THRIVE

NHGP has been a partner of a community mental health programme – Total Health Rich in Vitality and Energy (THRIVE) – since October 2012. The programme is anchored by KTPH and funded by the Ministry of Health (MOH) and Agency for Integrated Care. It is part of the MOH Community Mental Health Masterplan. It aims to provide the community with easy access to information and services for their mental healthcare needs from the mildly distressed to the severely ill.

NHGP's medical social workers and psychologists have attended workshops and training programmes conducted by KTPH and met with other service partners for cross-disciplinary learning and networking.

Appointment Scheduling for Nursing Homes' Residents

Our polyclinics have been attending to many residents from the nursing homes such as Pelangi Village, Surya Home, and the Singapore Cheshire Home. By the end of FY2012, NHGP has started regular communications with our community partners like Sunlove Home, Welfare Homes in Pelangi Village (e.g. Thuja Home, Tembusu Home, Angsana Home), and TOUCH Home Care to explore potential collaboration to provide care at the right site and to improve the continuity of care.

One example of such collaboration is the appointment scheduling for the residents of various nursing homes, including Evergreen Nursing Home and Pelangi Village. Instead of waiting at the polyclinics, the residents visit the polyclinics by appointment and this has helped to streamline the consultation process and shorten the wait time.

There are ongoing discussions between NHGP and the nursing homes' management teams to explore opportunities for collaboration, such as shared care schemes to deliver care at the right site for these residents.

Capability Building at Metta Home for the Disabled

Metta Home for the Disabled is managed by the Metta Welfare Association, a charity organisation that runs other homes for the less fortunate and the elderly.

The Home was concerned about whether their vegetarian menus provide adequate nutrition for their residents. On 12 March 2013, NHGP conducted a session to advise them on nutrition adequacy for

different types of care, such as diabetic care and elderly care, and on food selection by reading food labels. We also observed their plating process and dining facilities in order to advise them on the handling of food to ensure its safety. On 22 April 2013, our senior dietitian trained 19 of their staff on nutrition and food safety. Management at Metta Home took our recommendations to purchase industrial type of warmers for their other homes as well.

Caring Beyond the Polyclinic Walls: Outreach Initiatives

Despite the heavy workload in the polyclinics, NHGP, NHG Pharmacy, and NHG Diagnostics have been actively reaching out to the community. We supported 31 outreach activities in FY2012 as listed in the table below.

No	Date	Activities	Event / Venue	No. of beneficiaries	Supported by
1	1 April 2012	Talk: Women Health Screening and Menopause	Family Day at Al-Khair Mosque	150	Choa Chu Kang Polyclinic
2	15 April 2012	Free health and mammogram screening for needy residents	Woodlands Healthy Day 2012	262	Woodlands Polyclinic, NHG Diagnostics
3	15 April 2012	Talk: Common Ailments that Affect Children	Choa Chu Kang Community Club Baby Show	50	Choa Chu Kang Polyclinic
4	18 – 20 April 2012	Mammogram screening	Marks and Spencer's Opening Ceremony at Wheelock Place	61	NHG Diagnostics
5	29 April 2012	Judges of the healthy baby show	Yew Tee Community Club	-	Choa Chu Kang Polyclinic
6	17 May 2012	Mammogram screening for Muslim Kidney Action Association	Telok Kurau	21	NHG Diagnostics

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No	Date	Activities	Event / Venue	No. of beneficiaries	Supported by
7	30 May 2012	Hand hygiene awareness programme for pre-schoolers	PAP Community Foundation, Bedok Reservoir – Punggol Branch Kindergarten School	100	Hougang Polyclinic
8	2 June 2012	Befriender services and support; donation of food and basic essentials (e.g. blanket)	Sunlove Abode Home	200	Headquarter
9	9 June 2012	Talk: Healthy Living and Diabetes	Yishun Junior College	50	Yishun Polyclinic
10	30 June 2012	Health screening	Woodgrove Family Day Carnival 2012	126	Yishun Polyclinic
11	1 July 2012	Health stage programme: Depression in Elderly	Chong Pang Zone 7 Neighbourhood Connect	150	Yishun Polyclinic
12	12 and 13 July 2012	Talk: Personal and Hand Hygiene	St Andrew's Junior School	200	Bukit Batok Polyclinic
13	14 and 15 July 2012	Mammogram screening sponsored by Robinsons & Co (S) PL	Parkway Parade	17	NHG Diagnostics
14	22 July 2012	Health and mammogram screening	Teck Ghee Community Club	170	Ang Mo Kio Polyclinic, NHG Diagnostics
15	4 August 2012	Screening services and counselling for migrant workers in Hougang	Singapore Contractors Association Limited's Dormitory	200	Hougang Polyclinic
16	17 August 2012	Infection control sharing session with nursing staff	Asian Women's Welfare Association Community Home	9	Ang Mo Kio Polyclinic

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No	Date	Activities	Event / Venue	No. of beneficiaries	Supported by
17	22 September 2012	Public forum "Graceful and Healthy Ageing" and free medication check-up and health screening	The Grassroots Club	260	NHG Pharmacy
18	24 – 28 September 2012	"Know Your Medicines Week" campaign	NHGP's clinics	-	NHG Pharmacy
19	29 September 2012	Mammogram screening	Health Promotion Board BreastScreen Singapore 10th Anniversary	28	NHG Diagnostics
20	29 September – 6 October 2012	Free medication review	World Pharmacists' Day	457	NHG Pharmacy
21	5 October 2012	Hand hygiene presentation to pre-schoolers from Global Child Development Centre	Annual Infection Control Week	30	Woodlands Polyclinic
22	6 October 2012	Nutrition talk by dietitian	Clementi Community Club	120	Clementi Polyclinic
23	6 and 7 October 2012	Mammogram screening	Toa Payoh HDB Atrium	42	NHG Diagnostics
24	20 October 2012	Talk: Safety Measures in Polyclinic to Prevent Fall	Jurong Spring Community Club	48	Jurong Polyclinic
25	21 October 2012	Bone mineral densitometry screening	World Osteoporosis Day	18	NHG Diagnostics
26	18 November 2012	Mammogram and bone mineral densitometry screening	Nee Soon East Community Club	77	NHG Diagnostics

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No	Date	Activities	Event / Venue	No. of beneficiaries	Supported by
27	9 December 2012	Mammogram screening	Launch of Health Promoting Woodlands Zone 9 RC	22	NHG Diagnostics
28	2 March 2013	Befriender services and support	Evergreen Nursing Home	80	Choa Chu Kang Polyclinic
29	9 March 2013	Talk: Healthy Eating for Teck Ghee Elderly	Teck Ghee Community Club	100	Ang Mo Kio Polyclinic
30	9 March 2013	Mammogram screening	International Women's Day Celebration at Yuhua Community Centre	21	NHG Diagnostics
31	17 March 2013	Mammogram screening	Top of the World at Tampines Central	23	NHG Diagnostics

Table 8 Health screenings and talks supported by NHGP, NHG Pharmacy, and NHG Diagnostics in 2012.

In appreciation of the support for the 2nd National Life Saving Day held in January 2012, National Resuscitation Council (NRC) presented Primary Care Academy with a token at the opening ceremony of "Would You Save a Life?" public forum on 21 April 2012. Held on 15 January 2012, National Life Saving Day certified 6,000 people in cardiopulmonary resuscitation and the use of an automated external defibrillator.

Figure 54 A talk on "Fall Risk Management of the Elderly" organised by Jurong Polyclinic on 20 October 2012 at Jurong Spring Community Centre for residents from the Jurong West district and Jurong Polyclinic's Stroke Support Group members.

Figure 55 Seventy five staff from Toa Payoh, Ang Mo Kio, and Clementi Polyclinics visited the Society for the Aged Sick on 10 March 2012.

a.


COMMUNITY HEALTH SCREENING @ TECK GHEE CC 22.07.12
© kensongs photography 2012
Psychologist
Consultation

c.

d.

Figure 56 Teck Ghee Community Health Screening Programme:

a. Ang Mo Kio Polyclinic collaborated with Teck Ghee Community Club to hold a health screening programme on 22 July 2012, benefiting over 180 needy elderly residents in Teck Ghee.

b. Dr Karen Ng providing consultation for patients' post-screening.

c. Dr Wong Mei Yin, our Principal Psychologist, providing consultations.

d. Ms Wong YueFen, our Senior Dietitian, delivered a talk and a cooking demonstration to help residents manage their diet.

e. Ms Quek Imm Pin, our Advanced Practice Nurse, conducting an eye screening.

Figure 57 Choa Chu Kang Polyclinic and PEACE Department supported a health and community event organised by Fei Yue Community Service on 28 October 2013.

Falls Prevention Volunteer Programme

Every day, NHGP attends to many elderly patients who are at risk of falling. Recognising these issues, NHGP piloted the Falls Prevention Volunteer Programme at Toa Payoh Clinic in July 2012. It aims at engaging the public to prevent and reduce falls among the elderly in the polyclinic and community.

The Falls Ambassadors are trained to identify and help patients at risk of falling. A dedicated programme coordinator empowers the Falls Ambassadors to play an educator role in falls prevention (e.g. home modification and use of proper walking aids). The ambassadors also act as resource persons by providing information related to relevant public schemes such as the Senior Mobility Fund.

Since its implementation, we have received positive feedback from our staff, volunteers, and patients. With this successful pilot, we are looking at expanding the programme to other clinics in FY2013.

Sharing Our Knowledge and Experience

34 Visits Hosted to Facilitate Learning

Over the years, NHGP has hosted delegations from various sectors to facilitate learning and help our stakeholders and community to better understand Singapore's healthcare system and NHGP. From March 2012 to March 2013, our polyclinics hosted 34 visits. These include delegations from foreign health ministries, local and foreign hospitals, statutory boards, and academies. Some delegations came to learn about the workflows and services in NHGP; most came to understand more about Singapore's primary care system. Refer to the table below for a comprehensive list of visits hosted by NHGP from March 2012 to March 2013.

No	Date	Delegations	Venue
1	8 March 2012	Luoyang 5th People's Hospital	Clementi Polyclinic
2	11 March 2012	Jurong Health Services	Clementi Polyclinic
3	19 March 2012	Ambassador and Minister for Health (Turkey)	Choa Chu Kang Polyclinic
4	20 March 2012	Lee Kong Chian School of Medicine	Choa Chu Kang Polyclinic
5	22 March 2012	Minister for Health (Brunei)	Bukit Batok Polyclinic
6	23 March 2012	Luoyang 5th People's Hospital	Yishun Polyclinic
7	5 April 2012	Luoyang 5th People's Hospital	Yishun Polyclinic
8	13 April 2012	MOH Permanent Secretary, Mrs Tan Ching Yee	Jurong Polyclinic
9	19 April 2012	Government officials from Shandong province, China, under a management training programme by Singapore International Management Academy	Hougang Polyclinic
10	14 May 2012	Institute for Healthcare Improvement	Choa Chu Kang Polyclinic
11	17 May 2012	National University Hospital	Clementi Polyclinic
12	23 May 2012	Healthcare specialists from China, under a management training programme by Singapore International Management Academy	Hougang Polyclinic

(Continue)

(Continue)

No	Date	Delegations	Venue
13	13 June 2012	A*STAR and KTPH	Woodlands Polyclinic
14	13 June 2012	Induction of two NHG Board Member: Mr Lionel Yeo and Mr Seow Choke Meng	Toa Payoh Polyclinic
15	14 June 2012	Health Promotion Board	Bukit Batok Polyclinic
16	21 June 2012	Republic Polytechnic	Yishun Polyclinic
17	6 July 2012	Aravind Eye Hospital, India	Yishun Polyclinic
18	12 July 2012	Guangdong Human Resource and Social Security Department	Bukit Batok Polyclinic
19	31 July 2012	Indian Administrative Service	Clementi Polyclinic
20	29 August 2012	Dali Prefectural Health Bureau, Yunnan, China	Choa Chu Kang Polyclinic
21	5 September 2012	Indian Economic Service (IES)	Clementi Polyclinic
22	17 September 2012	MOH Parliament Secretary, A/Prof Muhammad Faishal Ibrahim	Choa Chu Kang Polyclinic
23	4 October 2012	Huachiewchalermprakiet University, Thailand	Hougang Polyclinic
24	11 October 2012	Shenzhen Managers' College, China	Hougang Polyclinic
25	31 October 2012	Social Management Officials from Guandong, China	Ang Mo Kio Polyclinic
26	1 November 2012	Chief Nursing Officer of Thailand, Office of Permanent Secretary, Ministry of Public Health, Thailand	Bukit Batok Polyclinic
27	6 December 2012	Social Management Officials from Tianjin Eco-City	Ang Mo Kio Polyclinic
28	6 December 2012	Healthcare specialist from Gansu Province, China	Yishun Polyclinic
29	12 December 2012	Health Department of Henan Province	Clementi Polyclinic

(Continue)

(Continue)

No	Date	Delegations	Venue
30	20 December 2012	SingHealth Polyclinics	Clementi Polyclinic
31	15 January 2013	Dr Gareth Tudor Williams, Paediatrician, Imperial College London	Hougang Polyclinic
32	6 February 2013	Induction of NHG Board Member: Mrs Yee Jee Hong	Hougang Polyclinic
33	18 February 2013	Hamad Medical Corporation, Qatar	Choa Chu Kang Polyclinic
34	28 February 2013	Sutong Science and Technology Park	Yishun Polyclinic

Table 9 Visits hosted by NHGP from March 2012 to March 2013.

Figure 58 Jurong Polyclinic hosted MOH Permanent Secretary, Mrs Tan Ching Yee, on 13 April 2012.

Left to right: Dr Peter Chow, Director, Corporate Development, NHGP; Mrs Tan Ching Yee, Permanent Secretary, MOH; Mr Leong Yew Meng, CEO, NHGP; Dr Meena Sundram, Head, Jurong Polyclinic, NHGP; Ms Grace Chiang, Chief Operating Officer, NHGP.

Courses for GP Assistants and Caregivers

Primary Care Academy (PCA) regularly conducts courses for GP assistants and caregivers, as part of our efforts in building capacity and capability at the community level.

The GP Assistant course covers an overview of the use, common side effects, precautions, and active ingredients of medication for common medical conditions, such as upper respiratory tract infection, pain, infection, hypertension, and diabetes. It also trains the GP assistants to perform common clinic-based procedures such as electrocardiography, application of eye ointment, and administration of ear drops, nasal spray, and nebuliser via facemask and space device.

Recognising the importance of equipping caregivers with the skills and knowledge of caring for the elderly in the community, PCA conducts the "Care of the Elderly" programme quarterly. The following topics are covered during the programme by experienced nurse trainers: hygiene and grooming, waste handling, safety, feeding, and communication.

Figure 59 Primary Care Academy conducts GP Assistant course for the public. The course is structured in three stages: Foundational, Intermediate, and Advanced level.

Figure 60 The "Care of the Elderly" programme is conducted in small groups to enable ample opportunities for hands-on practice.


3
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stated below & wait for your number to
be called. Number may not be called in
sequence.
1. CONSULTATION
(08:50AM CONSULT ROOM 42/43/44/45 - LE
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[ ] Pharmacy
(Please take a new queue number at the
Pharmacy if you are collecting medicine.)
[ ] Referral
[ ] Appointment
(Please proceed to Referral/Appointment
counter.)
Remarks: MCPS
Case Notes: DDS

Chapter 7

Leveraging on Technology

In this photo

NHGP leverages on technology to improve the quality and safety of care. One such example is the implementation of enhanced Appointment System (APS) in November 2012. With the enhanced APS, NHGP can inform patients of the estimated wait time for same-day appointments. It helps patients better manage their wait time and enables our clinics to better manage the workload.

“Better, safer care for patients was the ultimate aim, which electronic clinical documentation has helped to achieve.”

Dr Lew Yii Jen, Senior Director, Clinical Services, NHGP

Technology for Clinical Excellence

Clinical excellence is dependent on staff, patients, and their families having the right information at the right time and using this information to make the right decisions. In recognition of the importance of leveraging on information technology to improve communication and information sharing among care providers, a core group of clinicians, represented by medical, nursing, pharmacy, and allied health, have met regularly to review the objectives of clinical documentation and the clinical data captured during the consultation process, and to rationalise the clinical data and design of structured clinical note templates.

In addition to keeping medical records of the consultation, clinical documentation should facilitate inter-professional collaboration, patient engagement and empowerment, population health management, evaluation and research, and healthcare integration with external healthcare partners.

Electronic Clinical Documentation Enhancements

The Electronic Medical Records (EMR) team has continued to improve our electronic clinical documentation systems for better team-based care. The structured templates were enhanced to include screening for falls risk, identification of Continuing Care Patients (CCP), screening for depression, nursing triage, care coordination for hypertensive and chronic kidney disease patients, annual assessment for dementia and CCPs, and patient progress summary for Health and Mind Clinics' patients.

Improved Team Communication: CCOE *Other Orders*

The E-Orders module in the Computerised Clinician Order Entry (CCOE) has been expanded to include *Other Orders* since December 2012. This allows a doctor to select nursing, allied health, and pharmacy services required by a patient from a comprehensive list in the system, and allows other members in the care team to view the services requested. The shared access improves the communication of patients' care plans among the team members.

Multiple Data Sources, One User Interface: CPSS2

Computerised Physician Support System 2 (CPSS2) was piloted at Yishun and Ang Mo Kio Polyclinics in February and March 2013 respectively. It will be rolled out to the other polyclinics by June 2013. The system pulls all relevant clinical information from multiple data sources (e.g. CCOE) and presents the information to doctors through a single user interface. This relevant clinical information is displayed in Patient Summary view and includes the medical alerts and reminders, the problem list, the recent prescription history and investigations, and the key hospital events about the patient. Our doctors can document patient history, order medications and lab tests, and view lab results in this integrated system, without having to launch multiple clinical applications. The context-switching capability of the system ensures that only one patient record is active at any one time, across multiple clinical applications. This eliminates the risk of documenting on a wrong patient record. The system improved safety and efficiency, and was well-received by our clinicians.

National Electronic Health Record

The National Electronic Health Record (NEHR) was rolled out to NHGP on 28 March 2012. By March 2013, some 600 clinicians have accessed the database. The NEHR extracts and consolidates clinically relevant information from patients' encounters across the public and private healthcare system throughout their lives. It allows authorised healthcare providers, across the continuum of care, to access the record for better continuity of care.

With NEHR, our clinicians can refer to all up-to-date clinical information to support clinical decisions. The transparency and accessibility of such information will also reduce unnecessary treatments and tests and adverse events. This enables our clinicians to better manage the quality and cost of healthcare.

Technology for Better Processes and Patient Experience

Improved Communication between Institutions: E-Referral

E-referral was successfully piloted with Alexandra Hospital and Jurong Medical Centre, and has been in operation since early 2012. In 2013, the e-referral workflow was expanded to TTSH and NUH in May and July, respectively.

Electronic referrals created by NHGP's doctors in E-Notes can now be viewed as a work list by Patient Services Associates at the hospitals and the medical centre. They can also use the work list to make appointments for patients who are referred to the specialist outpatient clinics. This has greatly streamlined the workflow for referrals, eliminated duplicate tests, saved time for both institutions and patients by removing delays related to paper-based transmission, and also improved communications.

Empowering Patients to Manage their Wait Time: Enhanced Appointment System

The enhanced Appointment System (APS) was implemented to all clinics by November 2012, following the pilots in Clementi Polyclinic in July 2011 and Yishun Polyclinic in February 2012. The electronic Polyclinic Outpatient System (ePOS) system was enhanced to provide real-time integration with the self-registration kiosks to issue same-day queue ticket and synchronise queue numbers to appointment times. This enables patients to get a same-day queue by calling the Contact Centre and do self-registration when they arrive at clinics nearer to the estimated time given.

With APS, we have achieved 75% of chronic patients coming to polyclinics by appointments. Every month, more than 10,000 patients call the Contact Centre to get a same-day appointment. The system enables patients to better manage their wait time and improves the overcrowding situation in the clinics with a more predictable and regulated patient arrival pattern. APS enables our clinics to manage workload in a systematic manner based on available resources and desired doctor workload.

Self-Payment Kiosk

To improve the wait time and queues for payment, a survey was conducted in March 2012 to find out patients' preferences towards the different payment modes. More than 90% of patients preferred to make payment at the clinics. While most preferred cash payment, above 80% of respondents surveyed said they would use a self-payment kiosk if available.

After eight months of preparation, NHGP launched its first self-payment kiosk on 7 February 2013 at Jurong Polyclinic. Hougang and Woodlands Polyclinics were the next to launch the kiosks on 27 February 2013, followed by Choa Chu Kang and Yishun Polyclinics on 6 March 2013.

The screen was designed with elderly-friendly features such as big fonts and user-friendly graphics with minimal navigational clicks.

Figure 61 A self-payment kiosk.

Streamlining Pre-Consults: Healthcare and Wellness Kiosk

NHGP has partnered with Agency for Science, Technology and Research (A*STAR) to develop Healthcare and Wellness Kiosks (HAWKS). The kiosks allow patients to measure and record their health conditions prior to consultation. The pilot was launched in Woodlands Polyclinic on 10 May 2012.

The HAWKS allow patients to input their medical conditions and symptoms relating to upper respiratory tract infection (URTI) while getting their weight measured. This information will then be transmitted to their personal medical records, which will be viewed by the doctor during consultation. The kiosks eliminate repeated information gathering at different service stations as they capture all symptoms during registration.

After a trial is completed, the clinic team will start the phase two developments that involve using the kiosks to measure patients' temperatures as well as assign those who display symptoms of flu and fever to the URTI cluster *(Figure 62, Page 126).*

Making and Tracking Appointments on Smart Phones

NHGP piloted a new mobile application, supported on both the Apple IOS and Android platform, for patients of Clementi Polyclinic on 28 Jan 2013. This application allows NHGP patients to make and check clinic appointments through their smart phones. In addition, patients could look for health and corporate information, and request medication refill. They could also make enquiries, provide feedback, and rate their experience at the polyclinic. With the successful pilot at Clementi Polyclinic, this application will be rolled out to all polyclinics by the end of 2013. More services, such as mobile registration and payment, would be introduced in 2014.

Online Retail Pharmacy and Prescription Refill

In May 2012, NHG Pharmacy launched its online pharmacy to provide consumers with the ease and convenience of shopping for healthcare products. With this, the products ordered are delivered right up to the doorstep. The online pharmacy offers healthcare products from homecare rehabilitation needs to diagnostic medical equipment and specialty vitamins *(Figure 63, Page 127).*

From 15 January 2013, the online prescription medicines refill function was launched. NHGP patients can simply log on to NHG Pharmacy website to arrange for refills of their remaining prescribed medicines from the polyclinics to be delivered to their homes, without having to visit the clinics.

Polyclinics' coordinated system of patient care

NHGP makes use of technology and the expertise of the entire healthcare team

By **TEH SHI NING**

PATIENTS visiting Woodlands Polyclinic with runny noses and sore throats could find themselves ushered into a Health & Wellness Kiosk (Hawk) before they enter the doctor's room.

There, they are invited to key in responses to basic health questions on their medical history and clinical symptoms related to upper respiratory tract infections, and take their weight and temperature.

All this information is then sent electronically to the polyclinic's medical records system and logged – even before the doctor has met the patient.

By providing a means for patients to conduct pre-screening independently, these kiosks aim to better utilise the polyclinics' limited clinical resources and expedite the registration process, reducing patient waiting time.

"Doctors can also now spend more quality time with patients during consults for the assessment, diagnosis and treatment advice to them," says the National Healthcare Group Polyclinics (NHGP), which operates a total of nine polyclinics including Woodlands Polyclinic.

With an estimated 20 per cent of Singapore's population affected by the flu each year, polyclinics, where healthcare services are subsidised, are often crowded with flu patients.

A conservative doctor-to-patient ratio for influenza at the polyclinics is 1:50, says A*Star (Agency for Science, Technology and Research), which initiated the Hawks project along with CIMIT (Centre for Integration of Medicine and Technology, Boston Massachusetts).

The project is fully funded by A*Star as one of its A*Star-CIMIT commercialisation projects.

NHGP provided specifications on what patients would need to help create the kiosk, while IHiS (Integrated Health Information Systems), which architects and manages the integrated IT systems across Singapore's public healthcare sector, linked the kiosk with the electronic medical records system.

The pilot run of Hawks, launched at Woodlands Polyclinic in April, is still being evaluated.

But this could not have happened if NHGP had not completed its switch to electronic medical records. Piloted in May 2009, the new E-notes module for electronic record taking was rolled out across all NHGP clinics by January 2010.

Going paperless was no easy feat for a family of nine polyclinics, but doing so was far more than an attempt to keep up with the times.

Better, safer care for patients was the ultimate aim, which electronic clinical documentation has helped to achieve, says Lew Yii Jen, NHGP senior director, clinical services.

Previously, paper medical records for each patient were filed in folders and stored away in a medical records office in each polyclinic.

But the time taken to retrieve and deliver case notes to the doctors often led to consultation delays.

On occasion, patients' case notes were misplaced. On top of that, laboratory and X-ray reports were not always in the case folder and the medication list for each patient was at times not updated.

"It was resource intensive and time-consuming for staff to manage these paper records," says Dr Lew. NHGP set up a digital document system in November 2008 to convert all old, handwritten records into electronic format – this was completed in February 2011.

The time, manpower and even space savings brought about by the switch to electronic medical records have not been trivial.

IHiS, which was also behind the implementation of the electronic medical records (EMR) system across all public hospitals, national specialty centres and polyclinics, says the EMR has raised healthcare staff productivity as well as improved patient care quality and safety significantly.

Dr Lew estimates that the introduction of the E-Notes system has saved each NHGP patient about 35 minutes of waiting time.

And the quality of records has also improved as the electronic forms come with structured templates and eliminate errors due to bad handwriting.

"Patient laboratory test results and X-rays once ready, are input into the EMR system, so doctors and healthcare staff can access them quickly. Doctors input their prescriptions into the system and pharmacists can read them online. The pharmacists no longer have to spend time deciphering doctors' handwriting, and can review more medication orders for more patients. This has also eliminated the risk of potential medication errors from deciphering doctors' unclear handwriting," says IHiS.

Staff who previously had to manage these folders of medical records have also been retrained to assist doctors and other members of the healthcare team, again resulting in better patient care, says Dr Lew.

Not only has the system freed up manpower, it has freed up polyclinic space, too.

The NHGP polyclinics have been able to convert more than 50 per cent of what was previously storage space for case notes into new consultation rooms.

NHGP stresses that the impetus for productivity and efficiency for healthcare providers is the need to deliver ever-better care to patients.

"In NHGP, our goal is to provide quality care, defined by providing accessible, safe, patient-centred and appropriate care to our patients," says Alice Tang, NHGP deputy director, Operations – Lean Office.

In seeking ways to continually cut waste from processes and improve processes, the group's goal is to bring more value to patients. Its productivity push thus extends beyond technology to what NHGP refers to as "Team-Based Care", Ms Tang says.

This key approach adopted by the group to improve healthcare outcomes and productivity has meant moving away from a "Doctor-only" model to engage the expertise of the entire healthcare team including nurses and allied health professionals, to care for each patient in a coordinated manner.

But even there, technology helps. The E-Notes system includes a module that supports communication and collaboration between members of each healthcare team too.

Clinic DIY: *By allowing patients to conduct pre-screening independently, the Health and Wellness Kiosks (Hawks) at Woodlands Polyclinic aim to better utilitise limited clinical resources and reduce patients' waiting time.*

Fast and accurate: *Polyclinic doctors now key in notes from each consultation into the E-notes system (screen on the right), which is automatically linked to a patient's medical record. This prevents errors, speeds up records retrieval and cuts patients' waiting time.*

In seeking ways to continually cut waste from processes and improve processes, the group's goal is to bring more value to patients. Its productivity push thus extends beyond technology to what NHGP refers to as 'Team-Based Care'.

This series is a collaboration between The Business Times and the National Productivity & Continuing Education Council

Figure 62 "Polyclinics' coordinated system of patient care", 11 December 2012, Business Times. Reprinted with permission.

[Excerpt] By providing a means for patients to conduct pre-screening independently, these (Health and Wellness) kiosks aim to better utilise the polyclinics' limited clinical resources and expedite the registration process, reducing patient waiting time.

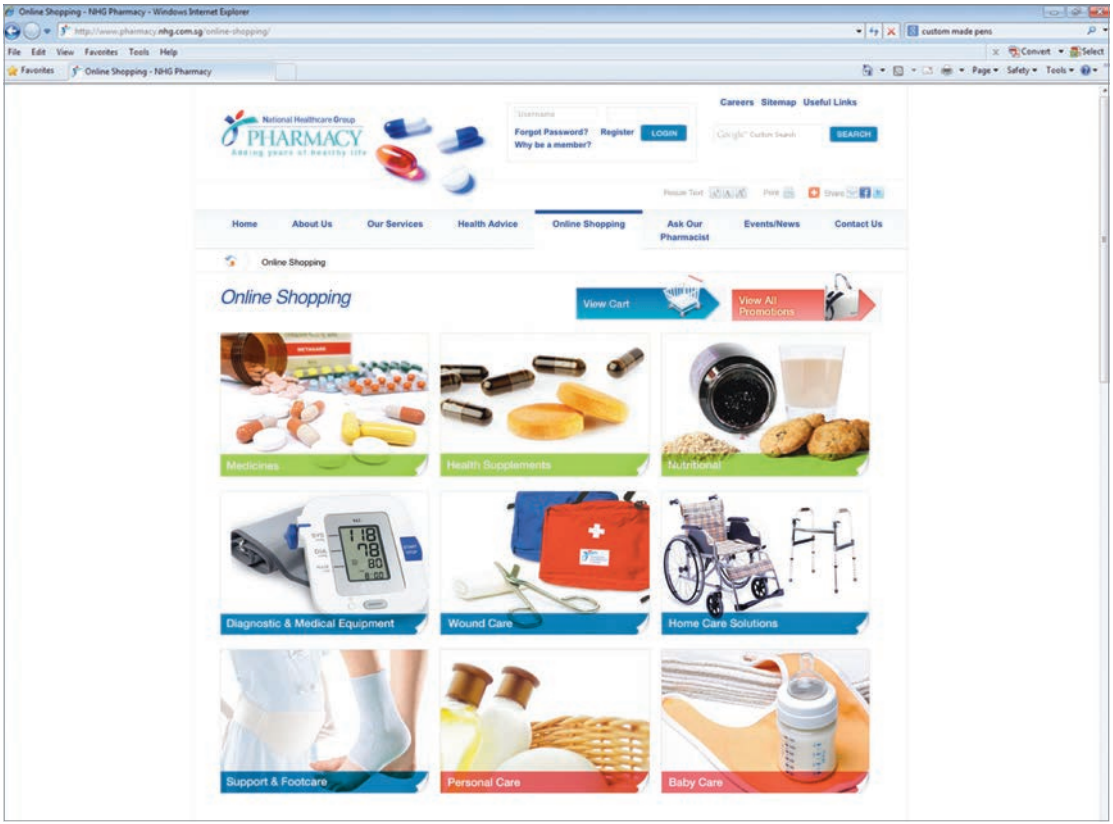

Figure 63 Online retail pharmacy and prescription refill improve accessibility of medications and patient experience.

Auto Transmission and Validation of Glucose Point-of-Care-Testing Results

In July 2012, NHG Diagnostics automated the transmission and validation of glucose point-of-care-testing (POCT) results from the phlebotomy stations. The POCT results are transmitted in real-time to Laboratory Information System (LIS) for instant viewing by doctors.

Before the auto-transmission and auto-validation, glucose results were manually transcribed into the request forms and then keyed into LIS. This process might cause transcription errors and misplacement of request forms, which could result in the recall of patients for repeat testing and unnecessary time spent on corrective action.

This automation not only eliminates transcription errors caused by manual processing, but also boosts efficiency, saving an estimated 3,742 man hours annually. In addition, it provides better traceability through an audit trail.

Technology for Decision Support and Resource Planning

Revamped Business Information System

In place since 2004, NHGP's Business Information (BI) System uses a data mart to support decision-making and resource planning, reporting needs, operational surveillance, and operational research. The system was revamped in May 2012 to cater to new business rules and a dynamic operating environment. In addition to improvement in the retrieval of up-to-date and accurate information, the system also allows NHGP to mine the data to provide insights on our standards of care and identify areas of improvement. The BI System pushes relevant operational data onto a management dashboard. Information presented daily on the dashboard includes clinic attendances, healthcare provider workload, and patients' access to our services measured by the availability of appointments and waiting time to be served and financial information.

The information gathered from the BI system also allows NHGP to mine data that helps in future scenario planning, thus allowing us to better meet the needs of the fast-ageing population in Singapore.

NHGP Business Information System Clinches Top Award

NHGP was named the runner-up in the Business Intelligence Asia Pacific Excellence Award presented at the Global Science and Technology Forum (GSTF) Business Intelligence Asia Pacific Summit in September 2012 *(Figure 64).* The awards recognise organisations that practise innovative applications of business intelligence tools. The extensive application of the Business Information System on the management dashboard earned NHGP this award.

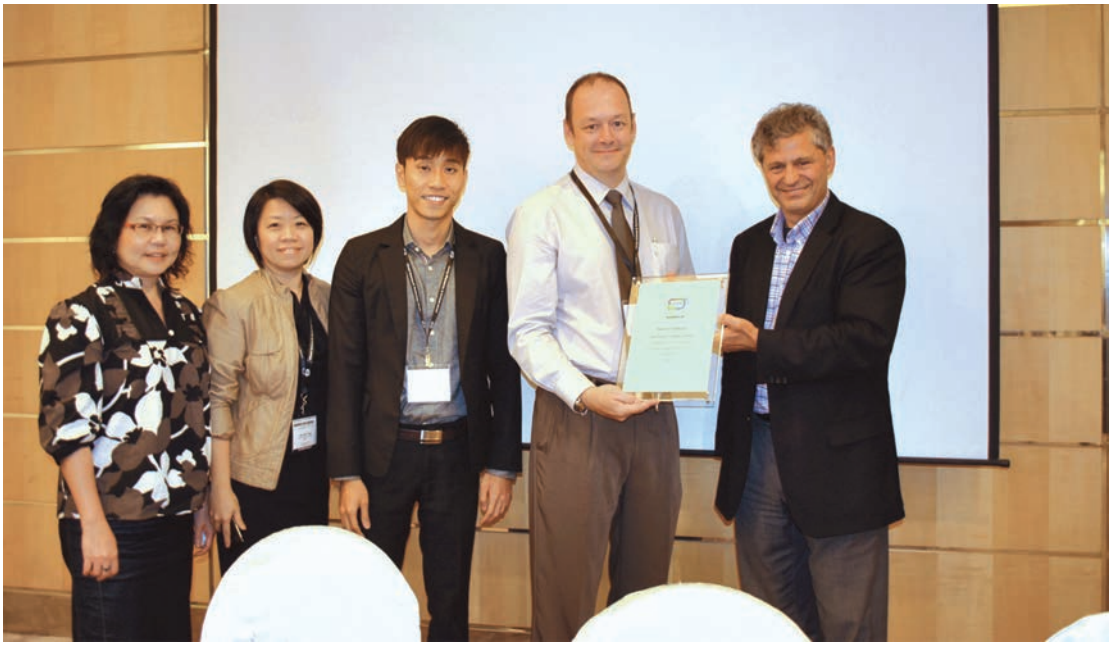

Figure 64 Our BI System received a runner-up award at the GSTF Business Intelligence Asia Pacific Summit.

Chapter 8

Nurturing Our People

In this photo

NHGP launched the Family Medicine Academy at Bukit Batok Polyclinic on 4 September 2013. The Academy provides primary care training as part of an innovative curriculum mapped by Lee Kong Chian School of Medicine and National Healthcare Group.

“Thank you for this opportunity to learn and grow.”

Ms Wong Mei Yin, Manager, Primary Care Academy, on attending the Way of Being workshop on 10 and 11 May 2012

Building Our Culture

Way of Being Campaign

In 2012, NHGP embarked on the Way of Being (WoB) Campaign to help our staff better understand our Culture DNA.

The Corporate Communications Department created e-newsletters and different collaterals to help staff understand the WoB principles of seeing people as people, taking the responsibility to make things right, and taking the initiative to help patients and co-workers achieve the right outcomes.

The e-newsletter shared these concepts with our staff in detail while also featuring stories from staff on how practising WoB had impacted their lives. To help our staff remember the different WoB principles, collaterals such as pens, post-it pads, thank you cards, as well as an eco-bag were created to remind our staff to practise WoB whether they are at work or at home.

Figure 65 Wall stickers at staff areas create awareness and improve understanding of the WoB principles among staff.

Caring Culture at Workplace: CARE Act

A caring and fun workplace is a nurturing ground for cultivating and permeating our iCARE culture. CARE Act is an ongoing initiative to show care to our staff by springing pleasant surprises on them so as to energise and appreciate them.

Figure 66 Caroling groups, made up of staff from HQ, visited the clinics to spread the Christmas cheer in December 2012.

Figure 67 Small gifts such as toothpaste, mouth rinse, hand rub, and stationery were given to patients during the Christmas caroling.

Figure 68 In November 2012, another CARE Act, "Kacang Puteh", was organised during lunch hours at the clinics and HQ to thank our staff for the good performance in the MOH Patient Satisfaction Survey.

Figure 69 After our JCI accreditation, Service Leadership and Patient Relations Department organised "Fun with Popcorn" in September 2012 to reward staff for their hard work.

Culture DNA Day

The inaugural Culture DNA Day was held on 31 October 2012. The event commemorated the beginning of our transformational culture journey and celebrated our quality improvement endeavours.

Some 150 staff and senior management were present at TTSH's Theatrette to witness the prize presentations for the Way of Being, iCARE, and OurCare Awards winners.

The ceremony was graced by Professor Low Cheng Hock, Chair of NHG's Culture Building Steering Committee; Associate Professor Lim Tock Han, Deputy Group CEO (Education and Research); Mrs Olivia Tay, Chief Human Resource Officer; and Adjunct Associate Professor Nellie Yeo, Chief Quality Officer.

Figure 70 A rap performance by the WoB facilitators on the inaugural Culture DNA Day.

Figure 71 Ms Jenny Tan, Heath Attendant from Bukit Batok Polyclinic, sharing her personal service journey after winning the iCARE Star Award.

Engaging Staff and Building Relationships

Regular Communication: CEO Connection, CEO Townhalls, and Workplan Seminar

The CEO Connection was held on 16 May 2012. Mr Leong Yew Meng, CEO of NHGP, shared with staff an overview of NHGP's strategic directions and upcoming activities.

On 17 January 2013, a workplan seminar was organised to disseminate key information on the strategic initiatives in 2013, allow opportunities for feedback, and engage the NHGP family to work towards the organisation's objectives. The participants were engaged in a panel discussion with CEO, COO, and a few division heads to discuss issues highlighted by the participants through an interactive "Pigeonhole Live Q&A system".

To reach out to more frontline staff, a series of CEO townhalls were conducted at each polyclinic and HQ from 7 February 2013 to 8 March 2013. Mr Leong presented the organisation's goals, provided inspiration for the work ahead, as well as recognised staff for their hard work and contributions.

The feedback from the townhall sessions was generally positive with some employees sharing that they were motivated by our CEO's speech and more than 85% rated the session as good and excellent.

Figure 72 NHGP's workplan seminar on 17 January 2013 at Hotel Fort Canning. The seminar engaged middle and senior management in conversation on the strategic initiatives in 2013.

Figure 73 The HQ Townhall was held at the Civil Service College. An interactive feedback system was deployed to encourage staff to provide their feedback instantaneously.

Building Bonds at Work

In 2012, we organised various activities to build and foster strong bonds among staff. These included festive celebrations, health talks, bowling sessions, and mass exercises.

The annual Dinner and Dance was held on 3 November 2012 at the Marina Bay Sands Grand Ballroom to celebrate a year of hard work and to recognise our staff's efforts. About 1,100 staff attended the event *(Figures 74 and 75, Page 140 and Figure 76, Page 141).*

Figure 74 Staff enjoying themselves at NHGP's annual Dinner and Dance.

Figure 75 The team from Ang Mo Kio Polyclinic won the championship in the Talent Competition of the Dinner and Dance 2012.

Figure 76 Staff from Choa Chu Kang Polyclinic cheering for their colleagues who were performing on stage during the Dinner and Dance.

Figure 77 Staff from Toa Payoh Polyclinic held their team-building session at The Hill Lodge @ Mount Vernon on 12 and 13 May 2012.

Figure 78 Celebrating Nurses' Day on 1 August 2012. In addition to thanking nurses for their hard work in caring for patients, the event also helped staff to bond with one another.

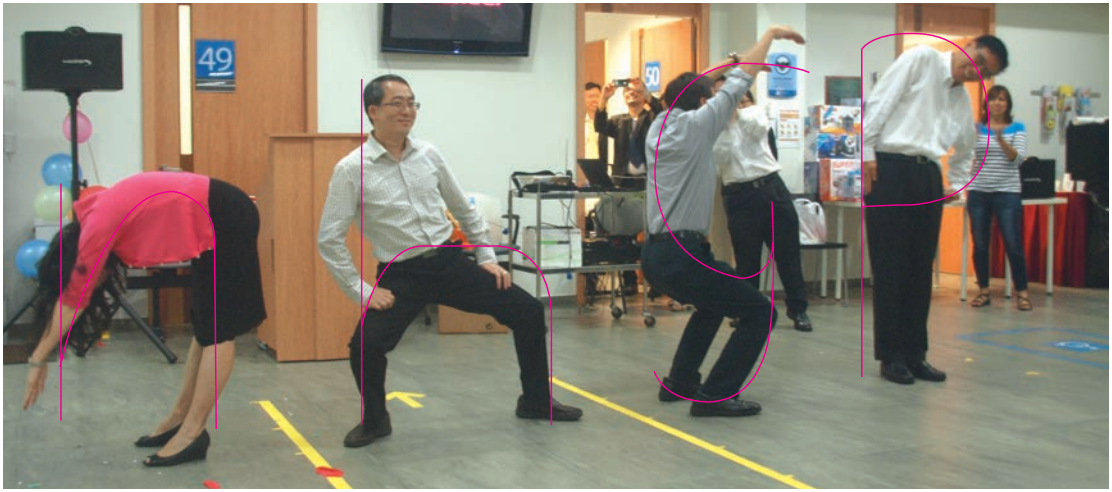

Figure 79 Year-end party at Ang Mo Kio Polyclinic on 20 December 2012.

Left to right: Dr Karen Ng, Head, Ang Mo Kio Polyclinic; Dr Lew Yii Jen, Senior Director, Clinical Services; Mr Simon Tan, Director, Human Resource; and Mr Leong Yew Meng, CEO, participated in the games organised by the clinic.

Figure 80 Toa Payoh Polyclinic organised a New Year celebration on 11 January 2013 to thank staff for their hard work in the past years and to bond through games and performances.

Figure 81 World Oral Health Day celebrations were organised in appreciation of our Dental colleagues.

Awards and Accolades

Healthcare Humanity Award 2013

The Healthcare Humanity Award is presented annually to outstanding healthcare workers, who are inspirational role models and go the extra mile to offer care and comfort to the sick and the infirmed. In 2013, three staff from NHGP and one staff from NHG Diagnostics were honoured with the Healthcare Humanity Award. They were:

Apil Luberiano Agasang	Radiographer, NHG Diagnostics
Djoni Huang	Deputy Head, Ang Mo Kio Polyclinic
Lee Eng Sing	Head, Hougang Polyclinic
Tung Yew Cheong	Head, Toa Payoh Polyclinic

Figure 82 Dr Djoni Huang, Deputy Head of Ang Mo Kio Polyclinic, receiving the Healthcare Humanity Award from President Tony Tan Keng Yam.

Figure 83 Dr Tung Yew Cheong, Head of Toa Payoh Polyclinic, was recognised at the Healthcare Humanity Awards 2013.

PS21 (Excellence in Public Service) Star Service Award 2012

The PS21 Star Service Award is a national recognition of outstanding individuals who embody the best customer service in the public sector. The 2012 winners were *(Figure 84, Page 146):*

Evan Sim	Head, Clementi Polyclinic
Gary Si	Family Physician, Clementi Polyclinic

Figure 84 Excellence in Public Service Awards Ceremony 2012.

Left to right: Ms Tracy Gan, Deputy Director, Service Leadership and Patient Relations, NHGP; Dr Gary Si, Family Physician, Clementi Polyclinic; Dr Evan Sim, Head, Clementi Polyclinic; Mrs Tan Ching Yee, Permanent Secretary, MOH; Ms Grace Chiang, COO, NHGP; Regina Goh, Assistant Director, Operations.

MOH Nurses' Merit Award 2012

Agatha Chai Yee Fong	Senior Staff Nurse, Jurong Polyclinic
Goh Poh Suan	Nurse Clinician, Yishun Polyclinic

Figure 85 Winners of the MOH Nurses' Merit Award: Ms Goh Poh Suan (2nd from left) and Ms Agatha Chai (3rd from right).

National Day Awards 2012 – Long Service Medal

Satran Kaur	Senior Staff Nurse, Choa Chu Kang Polyclinic
Zaiton Binte Osman	Senior Assistant Nurse, Yishun Polyclinic

National Day Awards 2012 – Commendation Award

Chia Li Yong	Senior Radiographer, Yishun Polyclinic
Wang Hui Hui	Deputy Director, Informatics, NHG Pharmacy

National Day Awards 2012 – Efficiency Medal

Dhanam Raghupathy	Medical Technologist, Jurong Polyclinic
Rohana Binte Tambi	Medical Technologist, Clementi Polyclinic
Lee Hock Eng	Pharmacy Executive, Toa Payoh Polyclinic

Figure 86 At the National Day Awards 2012.

Left to right: Dr Tyrone Goh, Executive Director, NHG Diagnostics; Ms Lim Soh Har, General Manager, NHG Diagnostics; Mr Simon Tan, Director, Human Resource, NHGP; Ms Satran Kaur, Senior Staff Nurse, Choa Chu Kang Polyclinic; Ms Zaiton Binte Osman, Senior Assistant Nurse, Yishun Polyclinic; Ms Chia Li Yong, Senior Radiographer, Yishun Polyclinic; Ms Dhanam Raghupathy, Medical Technologist, Jurong Polyclinic; Mr Leong Yew Meng, CEO, NHGP.

NHG Outstanding Citizen Award 2012

The Outstanding Citizenship Award recognises staff who have made immense contributions to NHG's strategic objectives and have taken on additional responsibilities outside of their portfolios.

Chong Phui-Nah	Senior Director, Family Medicine Development / Primary Care Academy
Meena Sundram	Head, Jurong Polyclinic

Figure 87 Dr Meena Sundram receiving the NHG Outstanding Citizenship Award 2012 from Mdm Kay Kuok, Chairman of NHG.

NHG Excellence in Action Award 2012

The Excellence in Action (EIA) Award honours staff from the NHG family who have made significant contributions, and displayed outstanding qualities aligned with NHG's CARE values: Confidence, Attentiveness, Respect, and Empathy. The following staff were recognised for providing exceptional service to both internal and external customers, as well as exhibiting outstanding customer service through their work practices.

Individual Award

Angie Lim	Pharmacy Technician, NHG Pharmacy
Duraimanickam Ramadas	Physiotherapist, Clinical Services
Esther Tan	Health Attendant, Woodlands Polyclinic
Gonzales Gabriel Ma Canicosa	Medical Officer, Woodlands Polyclinic
Henry Ramaya	Resident Physician, Woodlands Polyclinic
Karen Ng	Head, Ang Mo Kio Polyclinic
Kelly Loh	Senior Patient Service Associate, Toa Payoh Polyclinic
Neo Lay Choo	Pharmacy Executive, Bukit Batok Polyclinic
Noorlela Binte Adam	Senior Health Attendant, Choa Chu Kang Polyclinic
Richard Low	Nurse Manager, Ang Mo Kio Polyclinic
Shaynaz Parveen	Principal Assistant Nurse, Toa Payoh Polyclinic
Soo Yoke Kiew	Senior Staff Nurse, Ang Mo Kio Polyclinic
Susan Lim	Deputy Head, Toa Payoh Polyclinic
Tan Chia Hui	Operations Executive, Toa Payoh Polyclinic
Tan Lay Khim	Principal Pharmacist, Bukit Batok Polyclinic
Yan Chau Chain	Senior Nurse Manager, Nursing Services

Team Award

Yishun Wound Care Team
Toa Payoh Polyclinic Project Team

Figure 88 Toa Payoh Polyclinic's project team won the Excellence in Action Award 2012. Their project focused on redesigning Toa Payoh Polyclinic using the 3P Methodology.

Left to Right: Dr Tung Yew Cheong, Head, Toa Payoh Polyclinic; Dr Susan Lim, Deputy Head, Toa Payoh Polyclinic; Ms Alice Tang, Deputy Director, Lean Office, NHGP; Ms Sharon Lee, Senior Executive, NHG Pharmacy; A/Prof Lim Tock Han, Deputy Group CEO (Education and Research), NHG; Ms Ng Mok Shiang, Deputy Director, NHG Pharmacy; Ms Chong Pue Kim, Deputy Director, Kaizen Office, TTSH; Ms Nirmala N, Head Nurse, Toa Payoh Polyclinic.

Nurturing Our Talents and Developing Leadership

Training and Sponsorships

In 2012, there were 1,158 attendances to the core programmes.

Staff used up 9,468 training places of local clinical, functional, technical, and workplace competencies programmes. In addition, a total of 45 staff attended overseas conferences in both clinical and non-clinical related areas.

Core Programme	Number of Runs	Number Attended
Staff Orientation	10	219
Way of Being	29	313
Embrace iCARE	15	272
Inspire iCARE	7	107
Core Safety Programme	10	247

Table 10 Number of attendances to NHGP's core programmes

NHGP has given 28 sponsorships to different categories of staff, including Medical, Dental, Nursing, and Administrative, to further their studies. Together with the Health Manpower Development Plan (HMDP) sponsorship given by NHG and the Nursing Development sponsorship by MOH, a total of 55 NHGP staff received study awards in 2012.

To help the supervisors and staff track the learning activities, NHGP launched a learning management system "Prosoft Learning Space" in April 2013. With functionalities such as online application, approval, and tracking of courses, staff can better manage and take greater ownership of their development.

HMPD Sponsorship in 2012

Medical

Lee Eng Sing	Family Physician – Associate Consultant, Hougang Polyclinic
Seah Ee-Jin Darren	Family Physician – Associate Consultant, Toa Payoh Polyclinic
Tan Hsien Yung David	Family Physician – Associate Consultant, Jurong Polyclinic

Administrative

Ang Chee Chiang	Deputy Director, Operations
Evan Sim	Deputy Director, Operations

Allied Health

John Abraham	Physiotherapist, Clinical Services
Sandra Xu Jialun	Pharmacist, Hougang Polyclinic
Serene Kho	Senior Medical Technologist, NHG Diagnostics
Weng Wanyu	Pharmacist, Toa Payoh Polyclinic

Nursing

Adeline Ho Pei Ee	Staff Nurse, Choa Chu Kang Polyclinic
Chong Lee Sze	Senior Staff Nurse, Yishun Polyclinic
Yap Hwee Luan	Senior Staff Nurse, Jurong Polyclinic
Zhang Min	Senior Staff Nurse, Clementi Polyclinic

Team-based

Alice Goh Khoon Chin	Senior Nurse Clinician, Toa Payoh Polyclinic
Chew Geok Lan	Senior Nurse Manager, Hougang Polyclinic
Clare Teo	Assistant Manager, Clinical Services
Jancy Mathews	Deputy Director, Nursing
Lim Pui San	Deputy Head, Toa Payoh Polyclinic
Nor Shawiyah Binte Haron	Nurse Clinician, Toa Payoh Polyclinic
Tan Pek Hoon	Nurse Clinician, Woodlands Polyclinic
Tung Yew Cheong	Head, Toa Payoh Polyclinic

NHGP Sponsorship in 2012

Medical

Aditya Gupta	Family Physician – Senior Staff, Clementi Polyclinic
Angelia Chua	Family Physician – Consultant, Yishun Polyclinic
Beatrice Nayagam D/O James Nayagam	Medical Officer (NTS), Toa Payoh Polyclinic
Catherine Chan	Resident Physician, Hougang Polyclinic
Chau Chwen Hwe	Family Physician – Senior Staff, Jurong Polyclinic
Kong Jing Wen	Family Physician, Bukit Batok Polyclinic
Lai Shanhui	Family Physician, Choa Chu Kang Polyclinic
Manojkumar Amarlal Kharbanda	Resident Physician – Senior Staff, Ang Mo Kio Polyclinic
Nyi Nyi Tun	Resident Physician, Clementi Polyclinic
Rajni Gupta	Resident Physician, Ang Mo Kio Polyclinic
Richard Hui	Head, Choa Chu Kang Polyclinic
Ruth Zheng Mingli	Family Physician – Associate Consultant, Bukit Batok Polyclinic
Tan Wee Hian	Resident Physician, Jurong Polyclinic
To Ka Chi	Family Physician – Senior Staff, Clementi Polyclinic

Dental

Chiew Guat Kim	Dental Assistant, Toa Payoh Polyclinic
Lee Xiao Hui	Dental Assistant, Hougang Polyclinic
Ma Rui	Dental Assistant, Hougang Polyclinic
Nur Azeanna Mohamed Azmi	Dental Assistant, Toa Payoh Polyclinic
Shalani D/O Sukumaran	Dental Assistant, Hougang Polyclinic
Siti Maryana Binte Mohamad Amin	Dental Assistant, Hougang Polyclinic
Siti Rafeah Binte Selamat	Dental Assistant, Toa Payoh Polyclinic

Nursing

Julia Zhu Xiaoli	Staff Nurse, Toa Payoh Polyclinic

Administrative

Alice Wong Choy Pin	Senior Secretary, COO's Office
Loh Chii Fong	Senior Account Assistant, Finance
Ong Tse Hian Patrick	Senior Financial Counsellor, Finance
Summer Ha Ka Man	Senior Patient Service Associate, Jurong Polyclinic
Teo Lan Yun Selene	Patient Service Associate, Hougang Polyclinic
Yeoh Hui Ling	Trainer, Primary Care Academy

Leadership Development

A total of 19 NHGP staff attended the NHG's SEAL (Senior Management Engagement, Experiential Team Bonding, Action Projects, Learning to Lead) Leadership Programmes in 2012. The programmes prepared our leaders for their roles at different levels. The coverage also includes leadership and functional topics contextualised to NHG.

List of Quality Improvement Projects Completed in 2012

No.	QI TOOL	Project title	Clinic / Division
1	LEAN	Improve hypoglycaemia management of type 2 diabetic patients	Ang Mo Kio Polyclinic Hougang Polyclinic
2	LEAN	Design a new dressing trolley	Ang Mo Kio Polyclinic
3	LEAN	Improve the documentation of specialised counselling	Ang Mo Kio Polyclinic
4	LEAN	Redesign and renovate Treatment Room and Directly Observed Therapy (DOT) Room	Ang Mo Kio Polyclinic
5	CPIP	Increase the uptake of faecal occult blood test among people older than 50 years old	Ang Mo Kio Polyclinic
6	LEAN	Improve the efficiency and accuracy of documenting staff's training records	Ang Mo Kio Polyclinic
7	CPIP	Increase the attendance of all patients on warfarin at the Anticoagulation Clinic	Ang Mo Kio Polyclinic
8	LEAN	Ensure that all patients with abnormal diabetic retinal photography results obtain an appointment at a specialist outpatient clinic	Ang Mo Kio Polyclinic
9	CPIP	Increase the percentage of patient population with high lipids who are using lifestyle therapies as a first-line of treatment from 5% to 60% over the next six months	Ang Mo Kio Polyclinic
10	LEAN	Relocate and renovate the Dressing Room	Ang Mo Kio Polyclinic
11	LEAN	Renovate and enhance the work process for women's and children's cluster	Ang Mo Kio Polyclinic
12	CPIP	Achieve 100% patient education on antenatal screening tests for all women who are diagnosed with pregnancy at Ang Mo Kio Polyclinic within six months	Ang Mo Kio Polyclinic
13	LEAN 6S	Cleaning up measurement workstations at Ang Mo Kio Polyclinic	Ang Mo Kio Polyclinic
14	LEAN	Standardise the forms needed by doctors and the informative board in consult rooms	Ang Mo Kio Polyclinic
15	LEAN	Relocate and renovate Diabetic Retinal Photography Room	Ang Mo Kio Polyclinic

No.	QI TOOL	Project title	Clinic / Division
16	LEAN	Renovate and enhance the work process at the Minor Procedure Room	Ang Mo Kio Polyclinic
17	LEAN	Renovate Ang Mo Kio Polyclinic to improve patient's journey	Ang Mo Kio Polyclinic
18	CPIP	Increase the percentage of normotensive type 2 diabetes mellitus patients with albuminuria on renal protectors	Bukit Batok Polyclinic
19	CPIP	Reduce the percentage of patients who are referred back by the ophthalmologist for undiagnosed hypertension	Bukit Batok Polyclinic
20	LEAN	Improve the workflow and patient's understanding on metered dose inhaler (MDI) technique counselling	Bukit Batok Polyclinic
21	CPIP	Improve the condition of patients with adhesive capsulitis who are newly referred to Bukit Batok Polyclinic	Bukit Batok Polyclinic
22	LEAN	Improve the dispensing process for patients with multiple collections	Bukit Batok Polyclinic
23	Clinical	Improve glycaemic control in patients with poorly controlled diabetes	Bukit Batok Polyclinic
24	LEAN	Increase the percentage of chronic patients with measurement readings taken prior to consultation by doctors	Bukit Batok Polyclinic
25	LEAN 6S	Index the manuals in Treatment Room 16 for easy reference	Bukit Batok Polyclinic
26	LEAN	Eliminate defects and rework during handover of documents for the Digital Document System	Bukit Batok Polyclinic
27	LEAN	Introduce the use of disposable vaginal speculum for intrauterine device insertion and pap smear examination in Bukit Batok Polyclinic	Bukit Batok Polyclinic
28	LEAN	Improve the handling of developmental assessment items after cleaning and disinfection	Bukit Batok Polyclinic
29	LEAN 6S	Consolidate all pap smear recall cases into one file	Bukit Batok Polyclinic
30	LEAN 6S	Reorganise the Lost and Found drawer	Bukit Batok Polyclinic

No.	QI TOOL	Project title	Clinic / Division
31	LEAN	Eliminate waste in temperature taking process for patients in acute cluster	Choa Chu Kang Polyclinic
32	LEAN	Reduce waiting time at the pharmacy check-out counters	Choa Chu Kang Polyclinic
33	CPIP	Increase the percentage of eligible chronic kidney disease patients who are referred to renal specialist care	Choa Chu Kang Polyclinic
34	LEAN	Ensure patient safety through improving the workflow of amended prescriptions	Choa Chu Kang Polyclinic
35	LEAN 6S	Reorganise Treatment / Utilities Room	Choa Chu Kang Polyclinic
36	LEAN	Improve patient safety through medication reconciliation using Cluster-Shared Patient Record System (CPRS) checks for patients with latest medication history outside of Choa Chu Kang Polyclinic	Choa Chu Kang Polyclinic
37	LEAN	Educate patients on a more effective method of keeping their wounds dry	Clementi Polyclinic
38	LEAN	Improve the nurse-initiated bronchodilator therapy	Clementi Polyclinic
39	LEAN	Improve accuracy in receiving the correct patient at the correct counter	Clementi Polyclinic
40	CPIP	Improve asthma care by ensuring 100% compliance to Act Score Guided Treatment Protocols for all asthma patients seen at Clementi Polyclinic in six months	Clementi Polyclinic
41	LEAN	Improve oxygen cylinder order and dispatch workflow	Clementi Polyclinic
42	LEAN	Eliminate sharp injuries	Dental Division
43	LEAN	Enhance decontamination and sterilisation workflows to meet internationally recognised standards	Dental Division
44	LEAN	Eliminate waste registration process of dental patients	Dental Division
45	LEAN	Improve the percentage of asthma patients on nebuliser treatment who are counselled by the Treatment Room nurses	Hougang Polyclinic

No.	QI TOOL	Project title	Clinic / Division
46	LEAN	Redesign the payment process for patients who have lab-only visit	Hougang Polyclinic
47	CPIP	Increase post-nebulisation review attendances of asthma patients	Hougang Polyclinic
48	LEAN	Shorten the turnaround time of lab results for patients with consultation	Hougang Polyclinic
49	LEAN	Standardise the insulin teaching kits	Hougang Polyclinic
50	CPIP	Increase the uptake of cervical cancer screening among high-risk patients	Hougang Polyclinic
51	LEAN	Reduce unnecessary waiting time of patients for lab reports	Hougang Polyclinic
52	LEAN	Create a "Hypo Box" for patients requiring hypoglycaemia treatment	Hougang Polyclinic
53	LEAN	Improve hand hygiene compliance of dental assistants In Hougang Dental Clinic	Hougang Polyclinic
54	LEAN	Improve the visibility of missing queue numbers	Hougang Polyclinic
55	LEAN	Improve the management of Directly Observed Therapy (DOT) patients in primary care setting	Infection Control Committee
56	LEAN	Ensure patients' compliance in wearing a surgical mask during the first two weeks of DOT	Infection Control Committee
57	LEAN	Implement an Infection Control Surveillance System to monitor hand hygiene compliance	Infection Control Committee
58	LEAN	Improve the process of annual staff health screening	Jurong Polyclinic
59	LEAN	Reduce rework and improve waiting time for patients who have informed the doctors of their balance medication	Jurong Polyclinic
60	LEAN	Eliminate the time spent on counting patient's own balance medication	Jurong Polyclinic
61	CPIP	Reduce the percentage of diabetic patients who took their diabetic medication on the day of their fasting blood tests	Jurong Polyclinic

No.	QI TOOL	Project title	Clinic / Division
62	Clinical	Standardise the teaching of Obstetrics and Gynaecology to Family Medicine Residents	Jurong Polyclinic
63	CPIP	Increase the uptake of mammograms by 50% among eligible female patients at Jurong Polyclinic	Jurong Polyclinic
64	LEAN	Improve processing time to generate Dental Efficiency Report	Lean Office
65	LEAN	Improve project management using a project repository system	Lean Office
66	LEAN	Implement E-Referral combined with Business Information System 2 database to enable E-Referral related data request	Lean Office
67	LEAN	Improve the processing time of Ang Mo Kio Family Medicine Clinic's reports	Lean Office
68	LEAN	Improve the processing time of the Monthly Statistical Report	Lean Office
69	LEAN	Eliminate unanticipated Intranet downtime	Human Resource
70	LEAN	Redesign supply chain to achieve man-hour savings	Nursing Services, Materials Management, IHIS
71	LEAN	Streamline the Service Catch! process	Service Leadership and Patient Relations
72	LEAN	Design and deploy a fire safety cabinet for storage of alcohol-based hand rubs and gels	SHINE Committee, Nursing Services
73	LEAN	Minimise medication discrepancies for patients with the latest medication records from another healthcare institution	Toa Payoh Polyclinic
74	LEAN	Reduce the number of missing hepatitis A and B screening notification forms not received by patients	Toa Payoh Polyclinic
75	LEAN	Improve pharmacy's payment and appointment counters	Toa Payoh Polyclinic

No.	QI TOOL	Project title	Clinic / Division
76	LEAN	Improve the accuracy in measurement of vital signs through evidence-based practice	Toa Payoh Polyclinic
77	CPIP	Increase the use of the child's weight in paediatric prescriptions	Toa Payoh Polyclinic
78	LEAN	Segregate Hand, Foot And Mouth Disease and Chicken Pox patients	Woodlands Polyclinic
79	LEAN	Improve the efficiency in dispensing of paediatric prescriptions	Woodlands Polyclinic
80	LEAN	Standardise infection control filing system across all polyclinics at NHGP	Woodlands Polyclinic
81	LEAN	Improve hand hygiene compliance among doctors	Woodlands Polyclinic
82	LEAN	Eliminate calculation error of used dressing instrument sent for autoclaving	Yishun Polyclinic
83	LEAN	Redesign children care value stream	Yishun Polyclinic
84	LEAN	Remove unnecessary visits for patients who are referred to hospitals due to abnormal diabetic retinal photography results	Yishun Polyclinic
85	LEAN	Improve efficiency and reduce waiting time for purchase of balance medication	Yishun Polyclinic
86	CPIP	Increase uptake of influenza vaccination for patients with chronic diseases from 1.12% to 10% in Yishun Polyclinic within six months	Yishun Polyclinic
87	CPIP	Increase uptake rate of hepato-biliary system (HBS) ultrasound among existing hepatitis B carriers in Yishun Polyclinic	Yishun Polyclinic

List of Our Polyclinics

National Healthcare Group Polyclinics

3 Fusionopolis Link
Nexus @ one-north #05-10
Singapore 138543

Contact Centre	(65) 6355 3000
Email	enquiries@nhgp.com.sg
Website	www.nhgp.com.sg

A Member of the
National Healthcare Group