



MINISTRY OF HEALTH
SINGAPORE

National Pharmacy Strategy Information Pack

Better Health
Better Care
Better Life

Foreword by Chief Pharmacist



Dear Pharmacy colleagues,

Singapore faces multiple challenges in healthcare like many developed countries. Evolving and increasing healthcare needs due to an ageing population, prevalence of chronic diseases and a shrinking workforce spurs the transformation in our delivery of pharmaceutical care in Singapore. As pharmacy professionals, we play a critical role and are in a timely position to contribute to the tremendous opportunities to transform the future of healthcare in Singapore.

Through the National Pharmacy Landscape study conducted in 2014, various pain points and challenges were analysed to identify opportunities and its findings motivated the conceptualisation and development of the National Pharmacy Strategy (NPS) in 2015 by the Chief Pharmacist's Office at MOH. The NPS is a 10-year visionary plan that is closely aligned with MOH's key strategic healthcare shifts of *Beyond Hospital to Community*, *Beyond Quality to Value* and *Beyond Healthcare to Health*.

The NPS envisions transformation in the delivery of pharmaceutical care and medication management to a person-centric care model. The pharmacy care model will focus on providing quality care to patients, advancing preventive care in the community, promoting safe and effective medication use, and playing an active role in care integration of the patient's journey across different healthcare settings. Five key strategic thrusts are formulated to support the NPS in its vision – *pharmaceutical care excellence*, *building a confident pharmacy workforce*, *re-designing the supply chain*, *information and technology enablement*.

The NPS information pack provides an overview of the 5 key strategic thrusts and details how people, process, information and technology can enable and empower the pharmacy profession to contribute to pharmaceutical care excellence.

Your participation in the NPS is invaluable to help transform the delivery of care. Together, let us press forward in the journey to transform the delivery of pharmaceutical care to provide good and sustainable healthcare for our community.

For queries and feedback, please connect with the National Pharmacy Programme Management Office (NPPMO) at nps@moh.gov.sg.

Best regards,
A/Prof Lita Chew
Chief Pharmacist, Ministry of Health, Singapore



Content

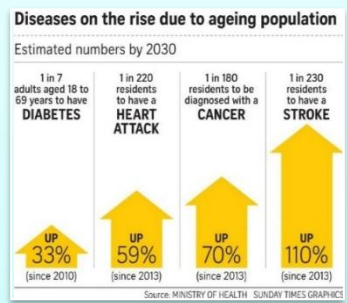
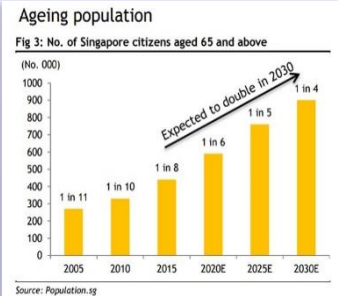
- Introduction
- The National Pharmacy Strategy (NPS)
- NPS Thrust 1: Pharmaceutical Care Excellence
- NPS Thrust 2: Confident Pharmacy Workforce
- NPS Thrust 3: Re-design Supply Chain
- NPS Thrust 4: Information Enablement
- NPS Thrust 5: Technology Enablement



Introduction



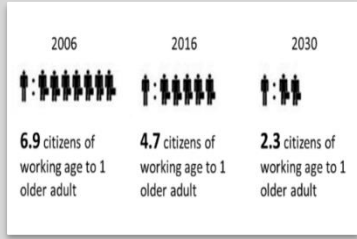
The need for healthcare transformation...



Demand for more healthcare and social services

- Increase in demand for community-based services (*day care, nursing, befriender service*)
- Demand for trained welfare staff

More resources spent on meeting these needs, less funds for development of the nation



We are growing old fast

More of us are getting chronic diseases

Health care needs will increase

But fewer people to support

Health care shift to a H2H concept



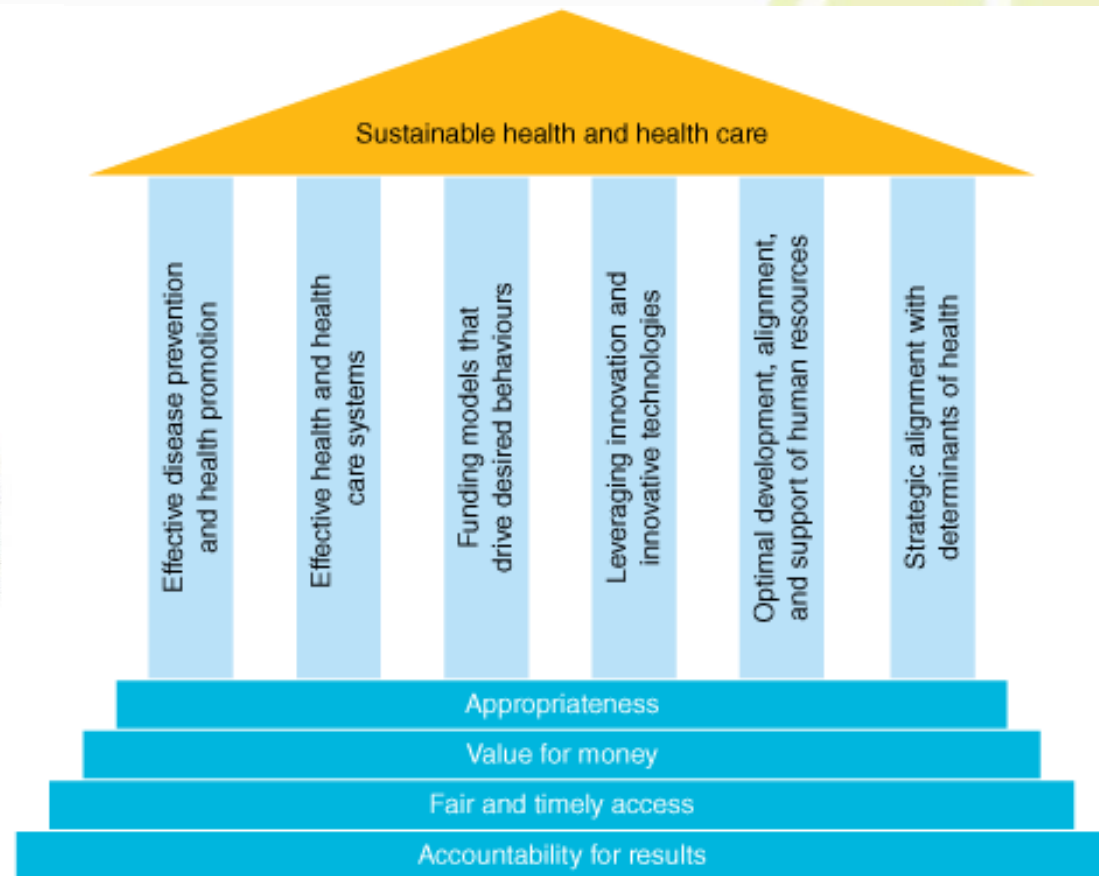
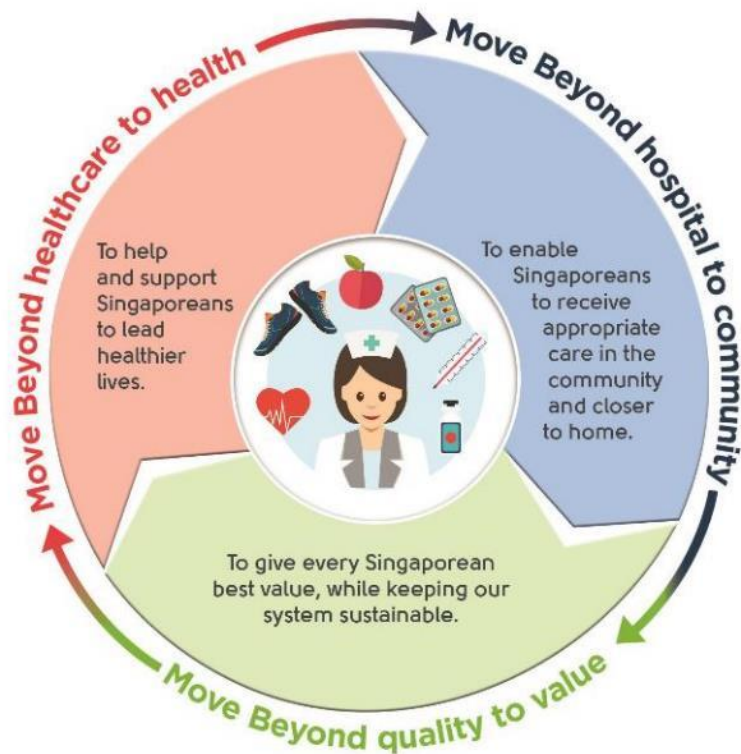
Sin Y. Finding a cure for rising costs in healthcare. The Straits Times 2018, Jan 28.
Ageing population expected to double by 2030. Healthcare Asia 2017, Feb 1.

The need for healthcare transformation...

Parliament: Key shifts needed to keep healthcare system sustainable, says Gan Kim Yong

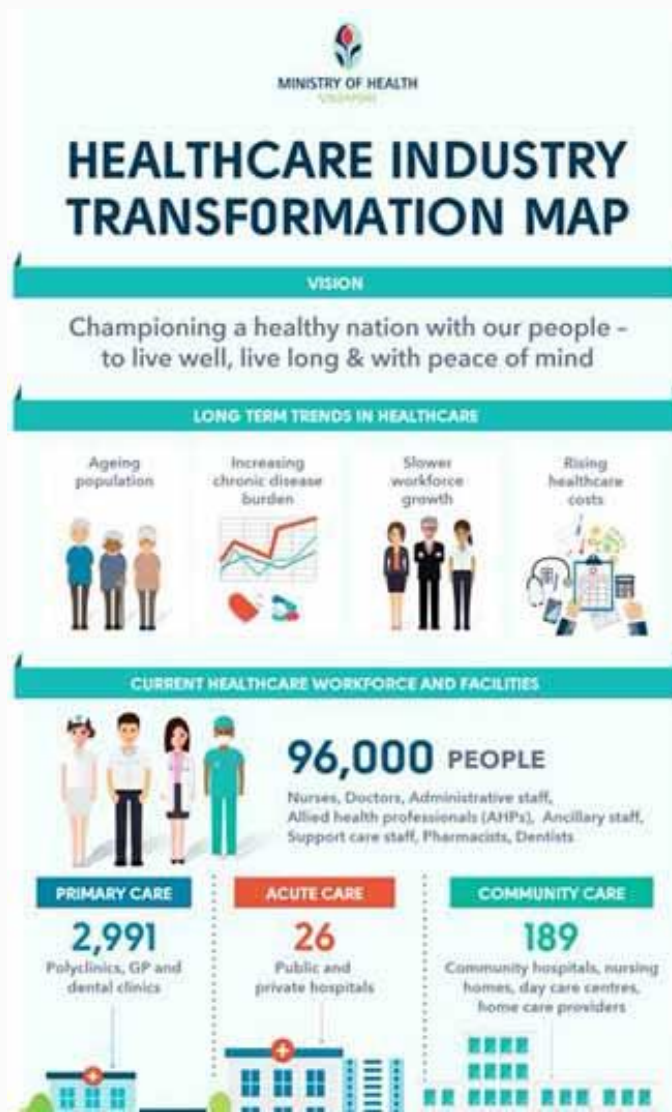
THE STRAITS TIMES

THREE KEY SHIFTS FOR A FUTURE-READY HEALTHCARE SYSTEM



Khalik S. Parliament: Key shifts needed to keep healthcare system sustainable, says Gan Kim Yong. The Straits Times 2017, Mar 9.

Strategies for healthcare transformation...



Ng K. Innovation, skills upgrading part of healthcare transformation roadmap unveiled. Today News 2018, Jul 25.
The future of Singapore healthcare. NUS Medicine Insights 2017, Sep 9.

Strategies for healthcare transformation...



Assoc Prof Benjamin Ong receiving a token of appreciation from Dean of NUS Medicine, Assoc Prof Yeoh Khai Guan at the Keynote Address

We will need skilled healthcare professions to lead the charge in the community. Patient care will be more complex and challenging. It is therefore even more important that you see yourselves as part of one public healthcare system. The relationships that you build in school now will allow you to have a shared goal and camaraderie. More importantly, the relationship you build with your patients will enrich your professional lives ahead.

A/Prof. Benjamin Ong
Director of Medical Services, MOH
Keynote Address at the NUS Medicine Congress

Healthcare transformation journey has already started...

1) Providing care beyond hospital to community

Singapore
340 GP clinics join primary care scheme, providing better care of chronic conditions



Nurse counsellor Serene Ang explains a patient's condition to Dr Lam Pin Min. (Photo: Gwyneth Teo)

Channel News Asia
2018, Jan 18.

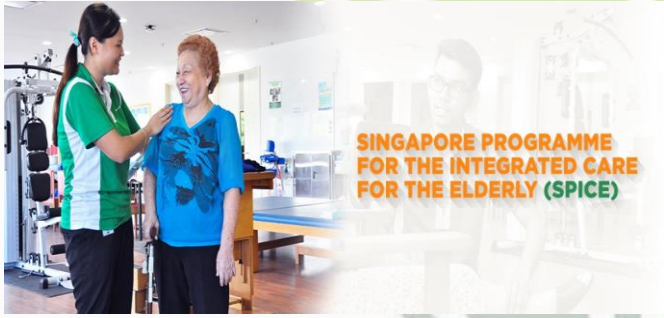
Speedoc app lets you call the nearest doctor to your home



Dr Shrayan Verma checking a patient's blood pressure and heart rate in the comfort of her home. PHOTO: SPEEDOC

Doctor created app to cut number of people going to A&E departments in hospitals

The New Paper 2018, Apr 5.



Healthcare transformation journey has already started...

2) Deepening integration within and across public healthcare institutions



Ng Teng Fong General Hospital
Jurong Community Hospital
Jurong Medical Centre



Polyclinics: Bt Batok, Bt Panjang (tbc), Choa Chu Kang, Clementi, Jurong, Pioneer, Queenstown



Community Hospitals: Yishun, Woodlands (2022)
Polyclinics: AMK, Geylang, Hougang, Sembawang Primary Care Centre (TBC), Toa Payoh, Woodlands, Yishun

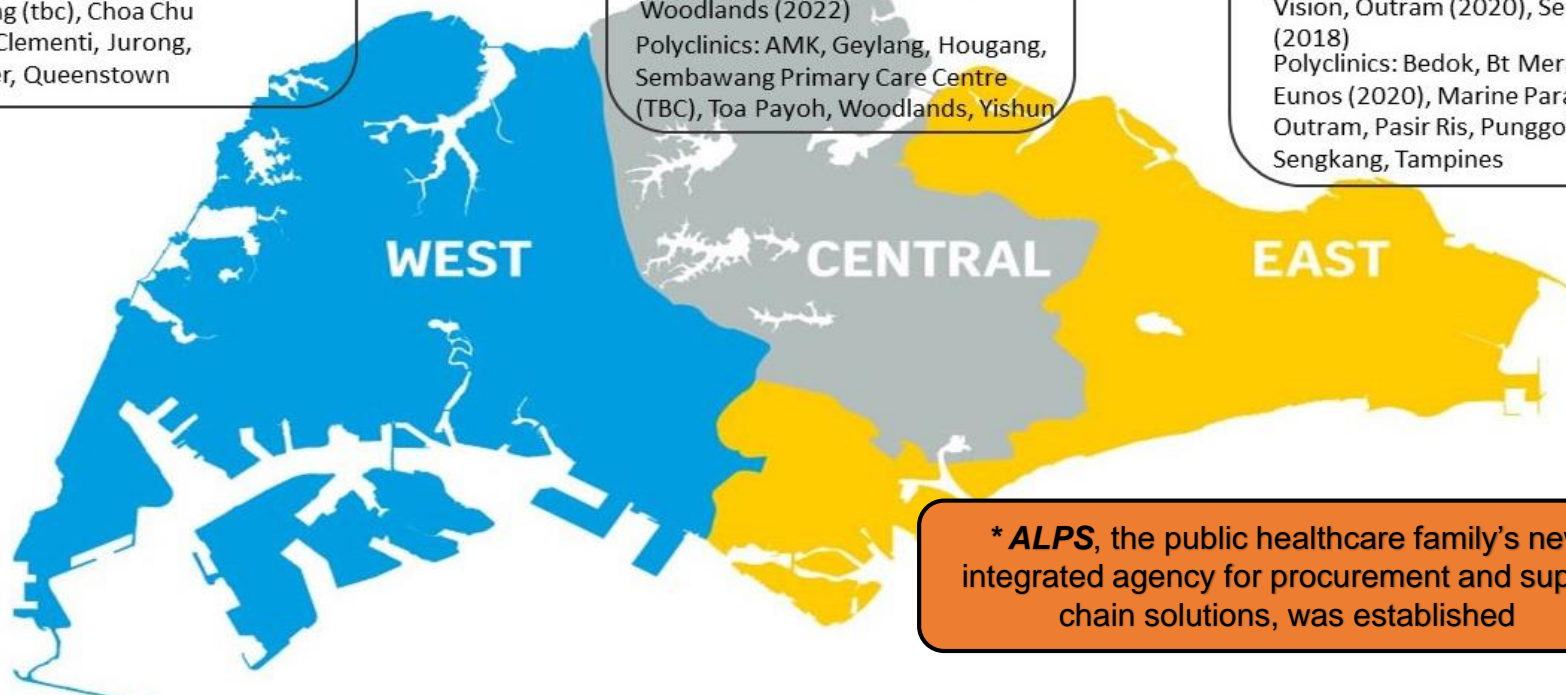


Changi General Hospital



Singapore General Hospital
SingHealth

Seng Kang GH (2018)
Community Hospitals: Bright Vision, Outram (2020), Seng Kang (2018)
Polyclinics: Bedok, Bt Merah, Eunos (2020), Marine Parade, Outram, Pasir Ris, Punggol, Sengkang, Tampines



* **ALPS**, the public healthcare family's new integrated agency for procurement and supply chain solutions, was established

Healthcare transformation journey has already started...

3) Social-Health integration: Bringing social care and healthcare closer together

Singapore Budget 2018: Social, healthcare services for the elderly to fall under MOH

The Straits Times
2018, Feb 19.



The Government will also be reviewing the ElderShield scheme, with an update expected later this year. PHOTO: DIOG VINCOY JR FOR THE STRAITS TIMES



Senior Cluster Network



Integration of health & social care



=



Beyond reactive to proactive care



Community Network for Seniors



What is it?

Pilot to form networks of community partners in a few areas, and coordinate local services to keep seniors active and engaged

- Connect healthy and mobile seniors to a wide range of community activities
- Help discover and manage health conditions early
- Target and coordinate health and social support for seniors to age better in place

Beyond institution to person

Healthcare transformation journey has already started...

4) Closer collaborations across public, private and VWO sectors

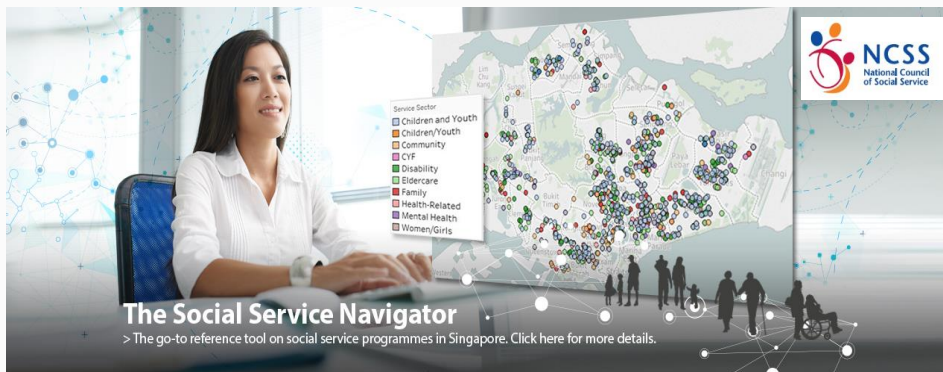
Singapore

Social services sector aims to strengthen service delivery with two new digital initiatives

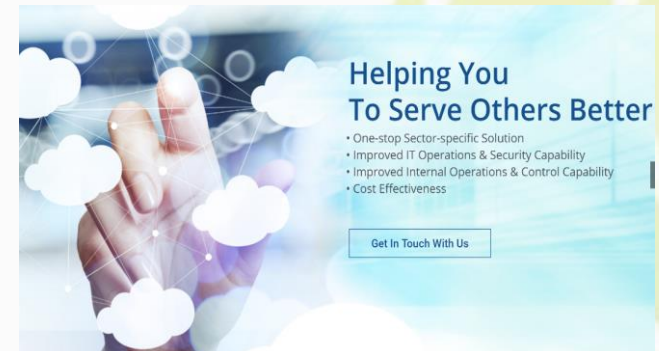


CHANNEL NEWSASIA

Channel News Asia 2018, Jul 24.



- Social Service Navigator is an interactive online platform and mobile portal that consolidates information on social service providers, programmes and resources all over Singapore.



- iShine Cloud provides a suite of integrated IT cloud services specific to the charity sector, which VWOs can enjoy at subsidised rates.

Healthcare transformation journey has already started...

5) Healthy living everyday, everywhere



- 278 out of 643 RC zones with weekly HPB exercise.
- Since Apr 2017, over 6,000 seniors in 50,000 attendances
- More than 1,400 participated more than 12 times



Welcome to the Healthy Lifestyle Index.

It's an easy and quick way to see how everyday habits affect your health — just answer 10 simple questions to get your score and a personalised report. Or see how your score measures up against your friends' in a Healthy Rivalry!

[SIGN UP NOW >](#)

Every doctor, every patient...every visit

Exercise is Medicine aims to make physical activity and exercise a standard part of a disease prevention and treatment paradigm in Singapore, improving community health and reducing long-term health care costs.



Healthcare transformation journey has already started...

6) Preventive care and annual preventive home visits

More help from early 2018 for people with mental health issues, who aid peers, back into workforce

The Straits Times 2017, Sep 8.



Year 5 student Jeanne Tan (left), 17, a peer helper, speaking to a student at a booth set up for Awareness Week held at Raffles Institution in August 2016. PHOTO: RAFFLES INSTITUT

Regular visits a key pillar in prevention of elders' suicide

The Straits Times 2017, Jan 11.



Simple, low-key and regular visits by volunteers can be the first step in getting the isolated elderly to take part in social activities, says Mr Tan Chuan-Jin. The Health Promotion Board is also teaching seniors social-emotional and self-care skills and how to seek help if necessary. ST FILE PHOTO

SINGAPORE

The Straits Times 2017, Mar 8.

Emphasis on preventive care is the way to go



having his blood pressure checked

MOH steps up disease prevention amid ramp-up of primary care

© FRI, MAR 10, 2017 - 5:50 AM

The Business Times 2017, Mar 10.

CLAIRE HUANG ✉



Along with the growth in healthcare sector comes the need for some 9,000 additional staff for new facilities and services in the public healthcare and aged care settings. ST PHOTO: ALPHONSUS CHERN

Healthcare transformation journey has already started...

7) Providing accessible care that bridges across health settings

TODAY Opinion

MENU ▾

Integration of healthcare services paramount as Singapore ages

Today News 2018, Jul 26.

By GAN KIM YONG



Health Minister Gan Kim Yong (centre) says that with changing demographics and increasingly complex healthcare needs, care integration is paramount in providing holistic and patient-centric care. TODAY file photo

Hospital-to-Home programme has helped around 8,000 patients

The Straits Times 2018, Feb 2.



Health Minister Gan Kim Yong greeting seniors from nursing homes who performed in the opening performance of the inaugural Global Conference on Integrated Care 2018 at the Resorts World Convention Centre in Sentosa. ST PHOTO: FELICIA CHOO

Hospital-to-Home (H2H):

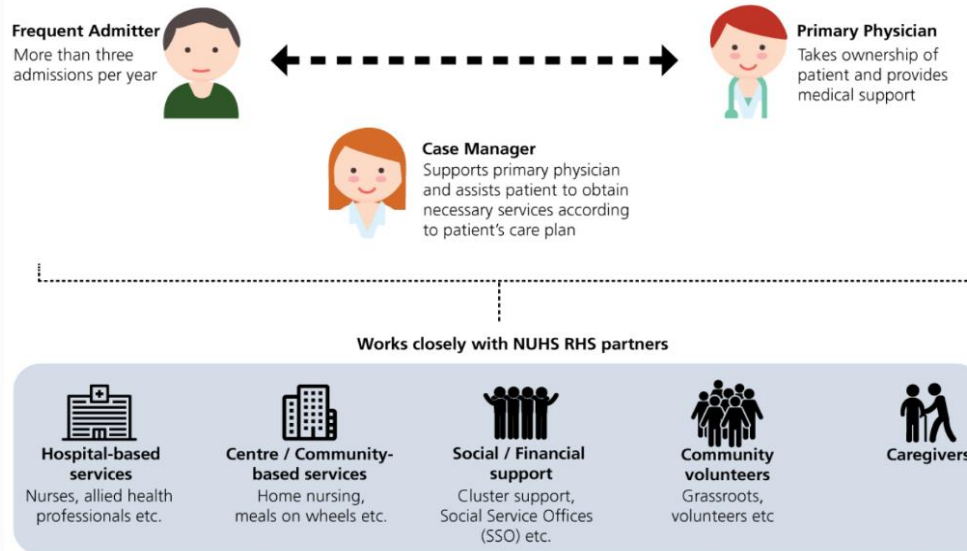
- Supports transitional care through discharge planning and care coordination

Healthcare transformation journey has already started...

7) Providing accessible care that bridges across health settings

Outpatient-to-community (O2C) (as a refinement and continuation of RHS P3/P4):

- Facilitate right siting of patients from SOC to primary care (PCN, FMC, etc.)
- Promote chronic disease management in community
- Close to 15,000 patients have benefitted from RHS Right Siting & Share Care programmes between Apr 2014 – Jun 2017



NUHS-RHS Integrated Interventions and Care Extension (NICE) Programme



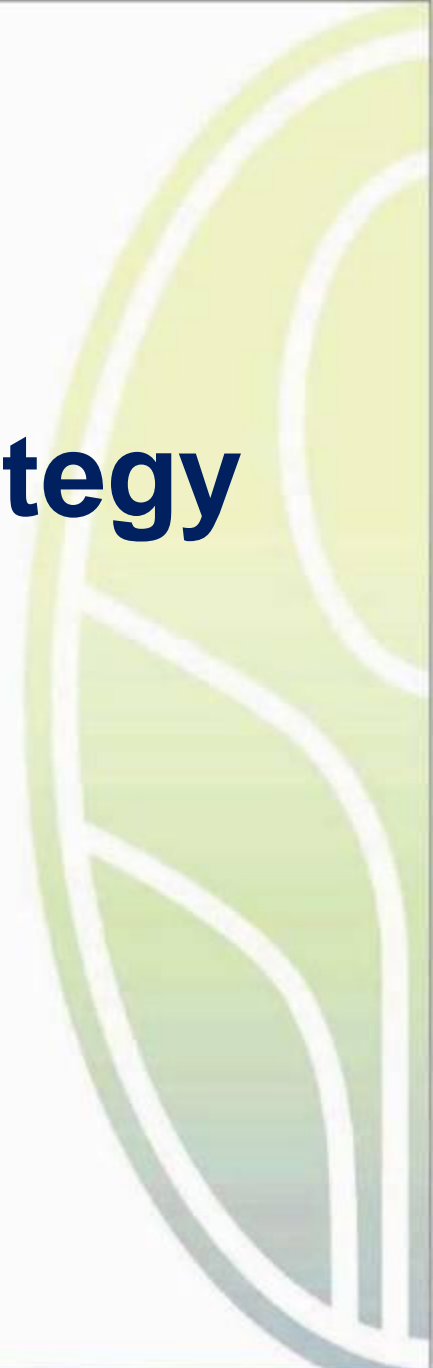
Delivering On Target (DOT) Right Siting Programme

The National Pharmacy Landscape study was commissioned to help address these challenges ...



The study shaped the **National Pharmacy Strategy (NPS)**:
*A transformation programme to make pharmacy services **accessible, affordable and quality** focused, giving patients **safer and more integrated** care*

The National Pharmacy Strategy



In alignment with Healthcare 2020 and beyond, the National Pharmacy Strategy envisions that:



Necessary medications and services are **affordable** for all patients / consumers who require them.

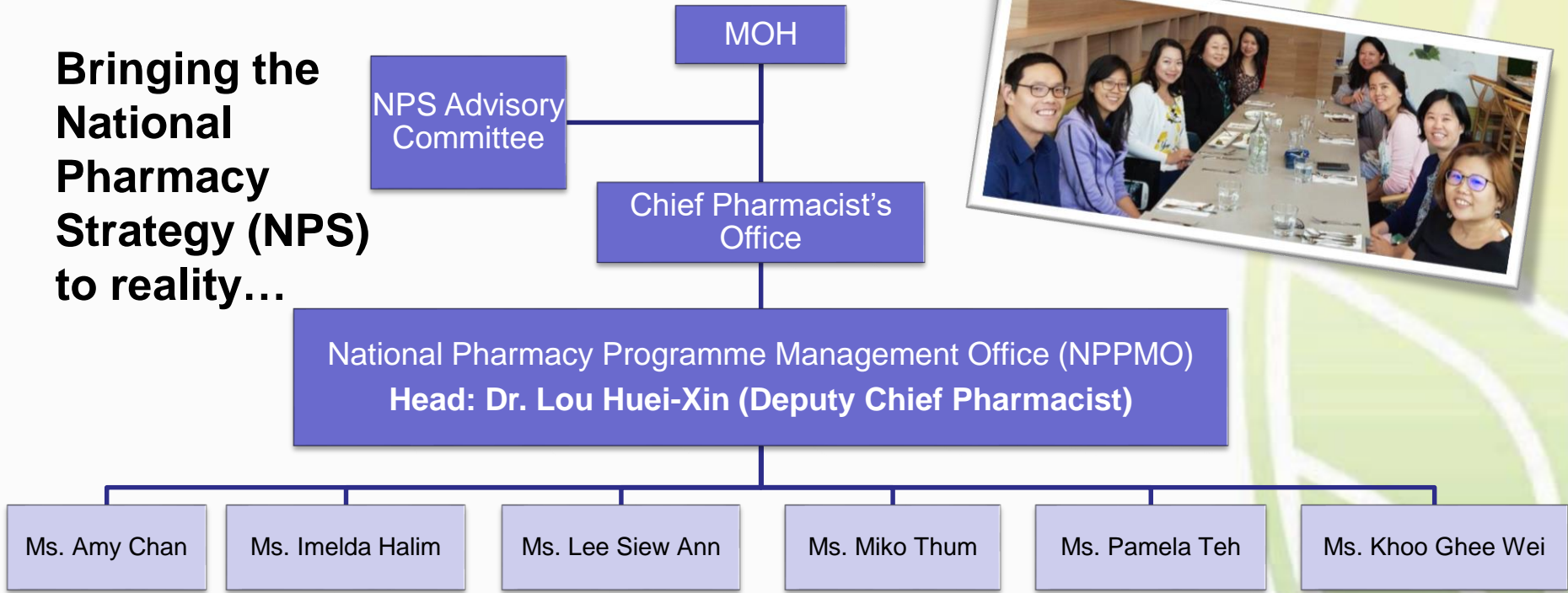
Patients / consumers have **timely, accessible** medications and pharmacy expertise, at each point of care.

Pharmacy services focus on **quality** by promoting **health** and **preventive care** within the community, ensuring **safe and effective** medication use and delivering **integrated care** across all settings.



National Pharmacy Programme Management Office

Bringing the National Pharmacy Strategy (NPS) to reality...



- To deliver the projects to achieve the National Pharmacy Strategy vision in a timely manner
- To ensure NPS projects maintain the business focus of aligning with the NPS vision and objectives
- To establish the appropriate control structure and governance to deliver the NPS projects using best practices across all disciplines
- Communicate and educate project teams in the NPS project lifecycle methodology from initiation to execution and evaluation, across all lines of business
- To ensure the NPS project resources, from manpower to budget, are appropriately equipped



NPS Advisory Committee



Chairman
Associate Professor Benjamin Ong
Director of Medical Services,
Ministry of Health, Singapore



Member
Professor Ranga Krishnan
Dean, Rush Medical College; Senior Vice President, Rush University Medical Center, USA; Chairman, National Medical Research Council, Ministry of Health, Singapore



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Dr Camilla Wong
Director, Sengkang Health; Deputy Group Director, Allied Health, SingHealth Group Allied Health; Deputy Head, Pharmacy, Singapore General Hospital; Deputy Group Director, Allied Health (Talent Management and Governance), Singapore Health Services Pte Ltd; Secretary, Pharmacy Specialist Accreditation Board, Ministry of Health, Singapore; Member, Singapore Pharmacy Council



Member
Dr Stephen Phua
Staff Consultant, Pavilion Capital International Pte Ltd; Faculty Member, Duke Corporate Education; Chairman, A. Menarini Biomarkers Singapore Pte Ltd



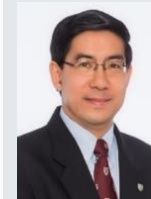
Member
Dr Tan Weng Mooi
Chief, Community Mental Health Division, Agency for Integrated Care, Singapore



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Mr Bruce Liang
Chief Executive Officer, Board Member (Executive Committee), Integrated Health Information Systems, Chief Information Officer, Ministry of Health



Member
Mr Wu Tuck Seng
Deputy Director, Pharmacy, Clinical Support Services, National University Health System; Deputy Director, Department of Pharmacy, National University Hospital (S) Pte Ltd; President, Singapore Pharmacy Council



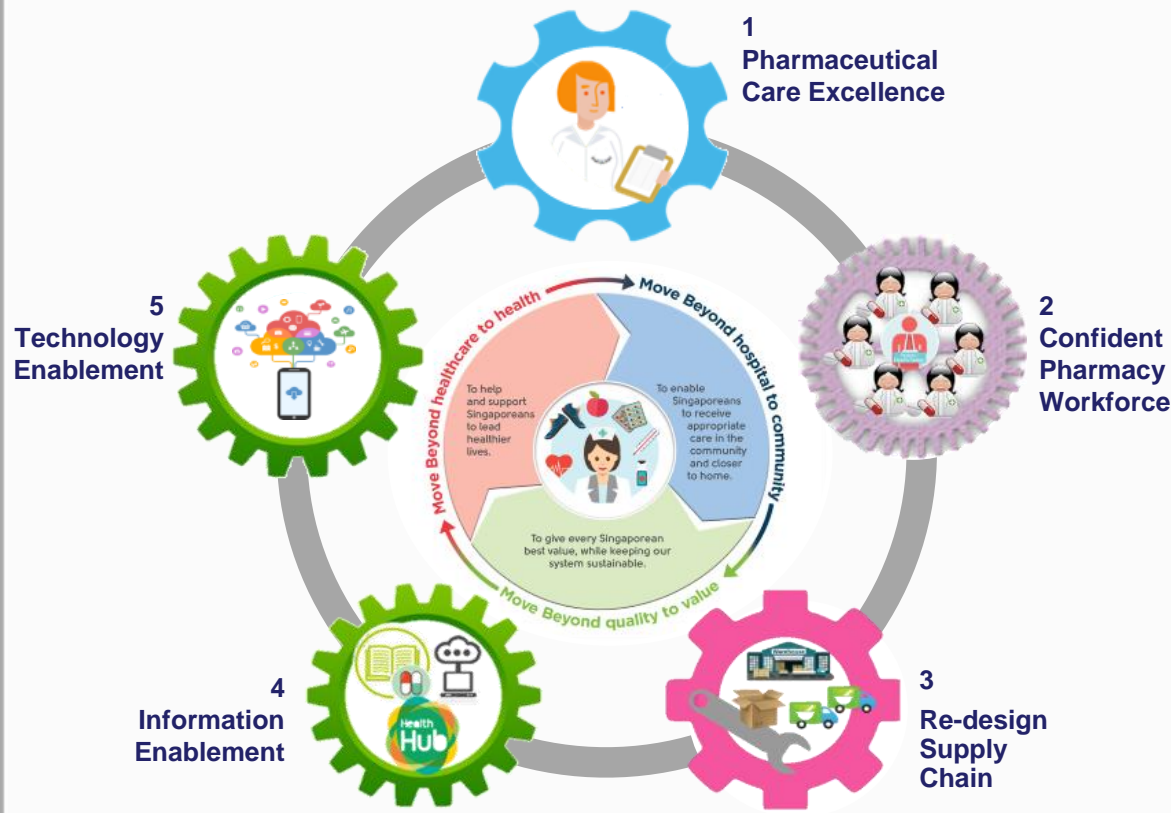
Member
Mr Yeo Li Pheow
Principal & CEO,
Republic Polytechnic, Singapore

TERMS OF REFERENCE

To provide independent and objective advice to MOH on National Pharmacy Strategy, which includes:

- Overseeing the vision, mission and objectives for the National Pharmacy Strategy (NPS)
- Ensuring alignment and synergy of NPS projects with other national policies and current healthcare needs
- Advising and providing support on other pharmacy or medication related initiatives to achieve synergies
- Providing overarching guidance and as advisory role to the NPPMO and the Chief Pharmacist Office

The National Pharmacy Strategy (NPS) has 5 key thrusts that align to the key shifts in the healthcare transformation strategy



Pharmaceutical Care Excellence We Care

Enhancing pharmacy services that bring health and value for everyone in our community

Confident Pharmacy Workforce

Providing a skilled, future ready and innovative pharmacy workforce

Re-design Supply Chain

Delivering seamless, convenient, accessible, affordable and safe medications at every point of care

Information Enablement

Empowering people to get the best out of their medications and achieve care goals

Technology Enablement

Delivering seamless and effective transition of care across all care settings through technology as an enabler

Pharmaceutical Care Excellence

1.1 Establish the role of pharmacy in the community care setting

Patients and consumers have increased access to trusted pharmacy services within community care, from receiving guidance and support on preventive health through to managing long term conditions.

1.2 Improve drug stewardship in non-acute care settings

Community pharmacy services will ensure that medication interventions are coordinated so that patients / consumers receive safe and effective use of medications to improve their health outcomes.

1.3 Establish collaborative models of care for medication reconciliation

Healthcare teams work in partnership with patients, empowering them to actively manage their medication list to get the best health outcomes.

1.4 Implement a clinical governance framework for medication management

A clinical governance framework supports medication management services to deliver care that is patient-focused, standards driven and consistent.

1.5 Promote pharmacists as part of the multidisciplinary healthcare team

Patients receive holistic care delivered by coordinated, integrated teams, which include pharmacy professionals, to deliver a seamless experience and engage patients and families along the care journey.

Confident Pharmacy Workforce

2.1 Implement Advanced Practice Framework for pharmacists

A competency framework to define the scope of practice and the skills required for development of advanced pharmacy practitioners.

2.2 Establish pharmacy residency programmes

Training for development of specialist pharmacists to provide specialized pharmaceutical care services.

2.3 Enhance pre-registration pharmacist training programme

A holistic programme that integrates experiential learning across settings for development of pharmacists at entry-level.

2.4 Develop and train pharmacy technicians

Developmental pathway to strengthen the core competencies of pharmacy technicians from entry to advanced levels.

2.5 Build up manpower capabilities for community care setting

Manpower capabilities will be developed to support community care practices.

2.6 Build capability in collaborative prescribing

Enhance the role of pharmacists as part of multi-disciplinary team-based care.

Re-design Supply Chain

3.1 Centralise procurement, packaging, compounding and distribution

Consolidating operational functions to drive efficiencies and economies of scale, giving patients and consumers affordable and readily available medications.

3.2 Deliver medications when patients need it, where patients need it

Patients / consumers have timely, convenient access to medications supported by expertise and advice from pharmacy services.



Information Enablement

4.1 Deliver a common platform to stimulate and share clinical, practice-based research and innovation

Sharing research, innovations and new ways of working will stimulate Pharmacy to address challenges in the healthcare landscape and transform practice to deliver better standards of care.

4.2 Increase consumer and patient access to contextualised health information and education

Access to personalised health information resources will empower patients and consumers to proactively manage their medications and health.

4.3 Establish a National Drug Formulary (NDF)

A national comprehensive resource to establish standardised and safe use of medications supported by best clinical practices.

Technology Enablement

5.1 Standardise drug terminology and code structures for seamless communication and accurate transfer of information

Standardised terminology and code structures will enable care providers to communicate more easily, ensuring a safe and seamless transition between care settings for patients.

5.2 Provide a common pharmacy system for harmonised medication dispensing and implement a national charging engine to streamline the medication-related billing process

A common pharmacy system will harmonise dispensing and billing, enabling pharmacists to deliver a seamless, more cost-effective service.

5.3 Enhance telepharmacy services

Telepharmacy will deliver quality pharmaceutical care to patients in a manner that is convenient for them, at their point of need.

National Pharmacy Vision ● Medications and services are affordable for all ● Timely and accessible medications and expertise at each point of care ● Focus on quality health promotion and prevention through effective medication use and integrated care ● Delivering the MOH Vision of **Beyond Hospital to Community – Beyond Quality to Value – Beyond Healthcare to Health**

Affordable & accessibility to medication

Safe and effective use of medication

Quality health and preventive care



Pharmaceutical Care Excellence

People

Confident & competent Pharmacy Workforce

Process

Re-design supply chain & streamline processes

Information

Enabler to empower healthcare professionals & patients

Technology

Enabler to deliver seamless care & innovations

Enhance policy to improve model of care

Thrust 1

Pharmaceutical Care Excellence

Pharmacy services that bring Health and Value for everyone in our Community



Affordable & accessibility to medication

Safe and effective use of medication

Quality health and preventive care



Pharmaceutical Care Excellence

People

Processes

Information

Technology

- Pharmaceutical Care Services
- Improve Drug Stewardship
- Collaborative Models of Care for Medication Reconciliation
- Clinical Governance Framework for Medication Management
- Pharmacists as Part of Multidisciplinary Healthcare Team

Design & streamline processes

Enabler to empower healthcare professionals & patients

Enabler to deliver seamless care & innovations

Enhance policy to improve model of care

Beyond Hospital to Community (COS Debate 2018)

Healthcare for the Future

A bigger push towards preventive, primary and community care



Improve Accessibility to Wider Range of Care Options

- \$100 million top-up over the next 5 years to the Seniors' Mobility and Enabling Fund
- \$150 million over the next 5 years for subsidised transport services to MOH-funded eldercare and dialysis centres
- \$300 million top-up to the Community Silver Trust, expanded to active ageing initiatives
- New forms of assisted living developments
- Expand Care Close to Home programme by 4 new sites
- Pilot cluster-led community nursing teams in the next 2 years
- Pilot community pharmaceutical care services



NURTURE A FUTURE-READY HEALTHCARE WORKFORCE

Investing in a workforce that delivers quality healthcare

Raising Capabilities in the Community

- New 2-year Bachelor degree programme in Nursing at NUS for mid-career entrants
- New Graduate Diploma in Community Health Nursing for nurses
- New Work-Learn Technical Diploma in Rehabilitation Care for therapy support staff



Expanding Scope of Practice to Support Community Care

- Advanced Practice Nurses and Senior Pharmacists to prescribe medicines and order tests in collaboration with doctors
- Community pharmacists to provide medication review services





1.0 Pharmaceutical Care Services Framework

Pharmacists provide services beyond traditional medication dispensing services

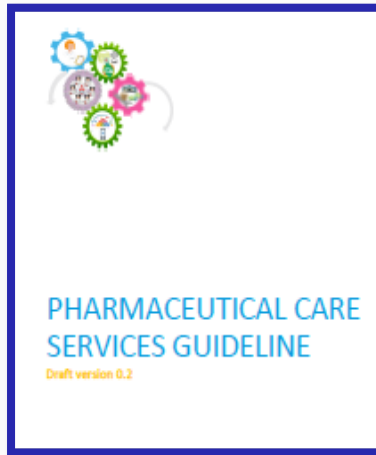
Pharmaceutical Care Services (PCS)

Medication Reconciliation

Adherence and knowledge assessments

Medication Optimisation

Patient Counselling



Guidelines to promote standardised structured services

- Ensure consistent quality and value pharmaceutical care services across care settings
- Harmonised service evaluation measures to track service impact



MEDICATION HISTORY [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30] [31] [32] [33] [34] [35] [36] [37] [38] [39] [40] [41] [42] [43] [44] [45] [46] [47] [48] [49] [50] [51] [52] [53] [54] [55] [56] [57] [58] [59] [60] [61] [62] [63] [64] [65] [66] [67] [68] [69] [70] [71] [72] [73] [74] [75] [76] [77] [78] [79] [80] [81] [82] [83] [84] [85] [86] [87] [88] [89] [90] [91] [92] [93] [94] [95] [96] [97] [98] [99] [100]

ORDERED DISPENSED PML Hide Discontinued / Deleted

List	Medication Name	Instructions	Duration / Qty	Facility
15-Aug-2016 - Ordered - Dr. J. Cai	FRUSEMIDE 40MG TABLET	80MG - ORAL - 2 TIMES A DAY	4 / 56 TABLET	NUH
	ATENOLOL 50MG TABLET	50MG - ORAL - 2 TIMES A DAY	4 / 56 TABLET	NUH
	ENALAPRIL MALEATE 10MG TABLET	10MG - ORAL - EVERY MORNING	4 / 28 TABLET	NUH
05-Sep-2014 - Ordered - Dr. D. Wong	FRUSEMIDE 40MG TABLET	80MG - ORAL - 2 TIMES A DAY	4 / 56 TABLET	NUH
	ATENOLOL 50MG TABLET	50MG - ORAL - 2 TIMES A DAY	4 / 28 TABLET	NUH
	ENALAPRIL MALEATE 10MG TABLET	10MG - ORAL - EVERY MORNING	4 / 28 TABLET	NUH
26-Apr-2014 - Ordered - Dr. T. Lee	ASPART INSULIN (novoRAPID) 100U/ML PEN 3ML	25 units - SC Injection - 2 TIMES A DAY	4 / -	NUH

Latest PML [2 Med(s)] - 29-Mar-2017 10:56 (0 days ago) - SINGAPORE GENERAL HOSPITAL

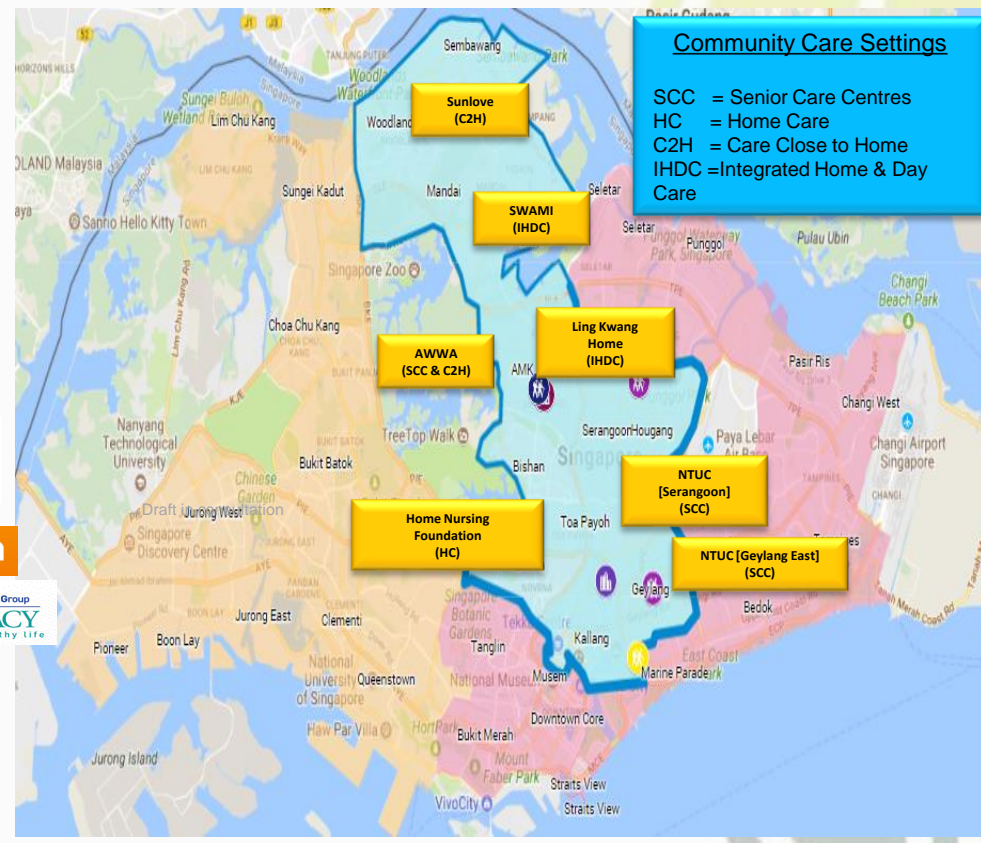
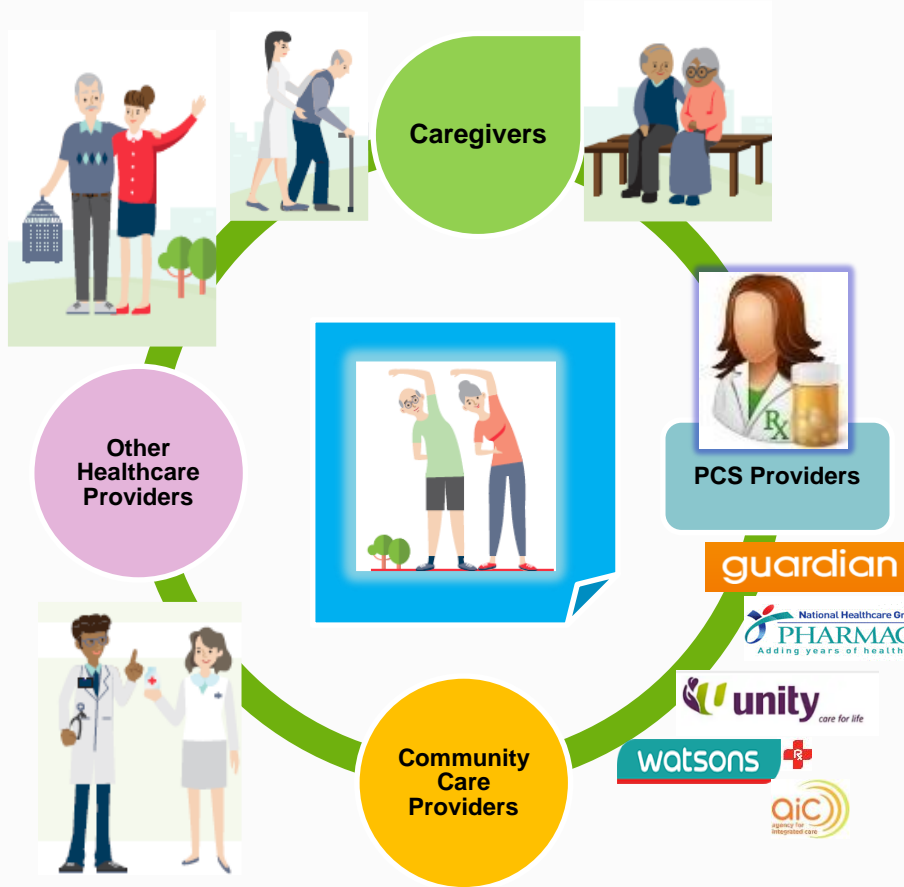
Route	Medication Name	Dose	Dose Unit	Frequency / Qualifier	Indication	Other Instructions	Remarks (for HCP)	Status
PO	PREDNISOLONE 15MG TABLET	15	mg	OM		For 3 days from 15 Aug to		Active

- Leverage National Electronic Health Records (NEHR) to facilitate seamless communication and transition of care
- Ensure Patient's Medication List and Pharmaceutical Care Plan are shared across healthcare settings



1.0 PCS Pilot in Community Setting

Supporting Ageing in Community - Pilot in Central Region





1.1 Role of Pharmacy in the Community

Patients and consumers have increased access to trusted pharmacy services within community care, from giving guidance and support on preventive health through to managing long-term conditions.

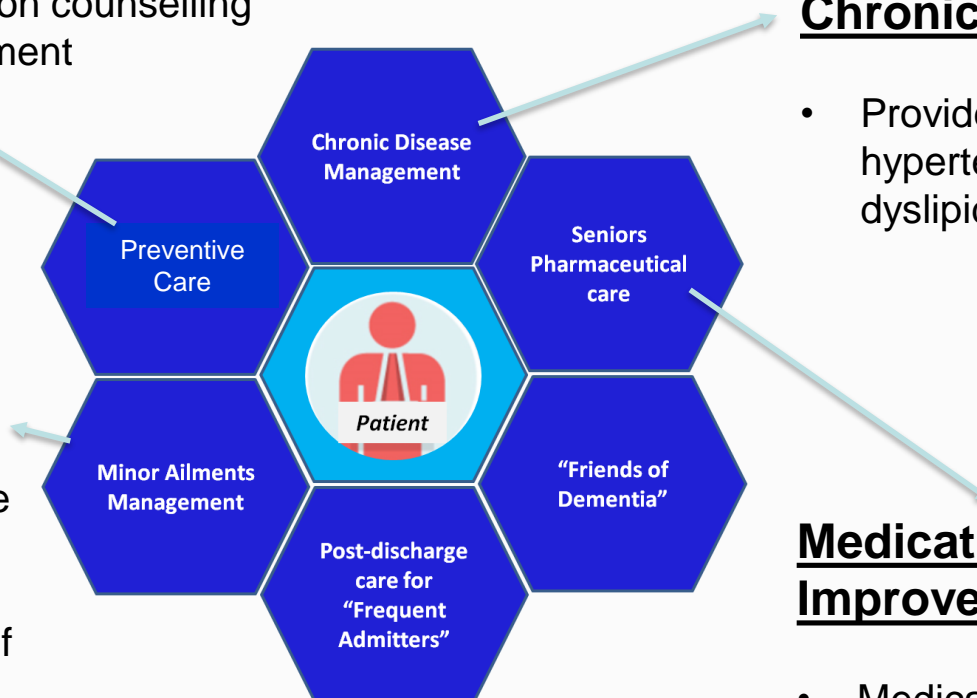
Preventive Care

- Smoking cessation counselling
- Weight management



Self Care

- Promoting standards of care from pharmacist
- Increase public awareness of self care
- Ensure quality assurance



Chronic Disease Mgmt

- Provide counseling on mgmt of hypertension, diabetes and dyslipidemia

Medication Optimisation Improve use of medication

- Medication adherence counseling
- Medication reconciliation
- Medication review



1.2 Improve Drug Stewardship in Non-acute Care Settings

Community pharmacy services ensure that medication interventions are coordinated so that patients/consumers receive safe and effective use of medications to improve their health outcomes.

Stewardship
accreditation



Educating healthcare professionals in non-acute settings to **implement drug stewardship into daily practice**



Across care settings, patients receive **RIGHT drug, dose, time & duration**

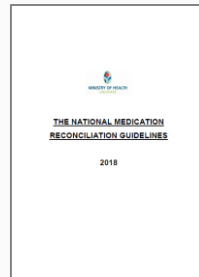


Developing Guidelines for drug stewardship programmes



1.3 Collaborative Models of Care for Medication Reconciliation

National Medication Reconciliation Guidelines
(launched Dec 2018)



Resources to engage and empower patients to manage their medications.

Available at
<https://www.moh.gov.sg/resources-statistics/medication-safety>

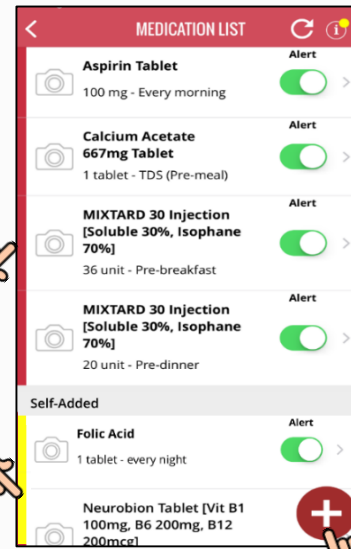


Secure IT platform for sharing patient medication information with patients, caregivers and healthcare professionals.

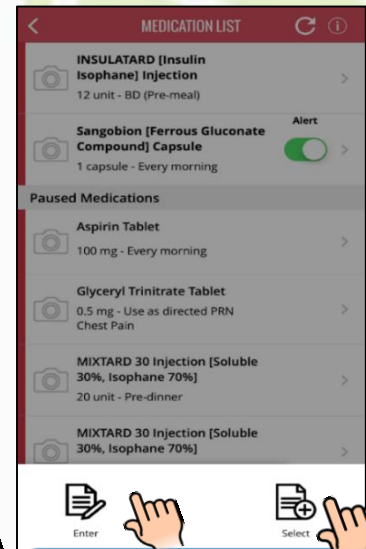
Sharing of patient medication list (PML) from NEHR PML module is now available. HCP, including pharmacy staff, can share PML with patients via the HealthHub mobile app.



Red bar indicates medication in the downloaded PML from NEHR PML module.
Yellow bar indicates medication in the Self-Added medication list.



Users can add their medications to their medication list.



Add medication(s) by self entering details or selecting from Prescription Records.



1.4 Implement a Clinical Governance Framework for Medication Management

A clinical governance framework supports medication management services to deliver care that is patient focused, standards driven and consistent.



Establishing **national policies** for medication management to ensure effective clinical governance and patient safety



Setting **national standards** for medication management to implement clinical governance and patient safety



Embedding governance and quality standards into **daily clinical practice**



Setting outcomes to achieve **positive patient experience**



1.5 Promote Pharmacists as Part of Multidisciplinary Healthcare Teams

Patients receive holistic care delivered by coordinated, integrated teams, that include pharmacy professionals, to deliver a seamless experience and engage patients and families along the care journey.

Define role of pharmacists and their expertise within multidisciplinary teams

Educate and train pharmacists on roles and responsibilities

Develop outcome measures for pharmaceutical care to help establish clinical priority models of care

Execute models of care (cross-cluster) and evaluate outcomes

“Seamless patient experience”



Thrust 2

Confident Pharmacy Workforce

Skilled, future ready and innovative pharmacy workforce



Affordable & accessibility to medication

Safe and effective use of medication

Quality health and preventive care



Pharmaceutical Care Excellence

People	Process	Information	Technology
--------	---------	-------------	------------

Confident & competent Pharmacy Workforce

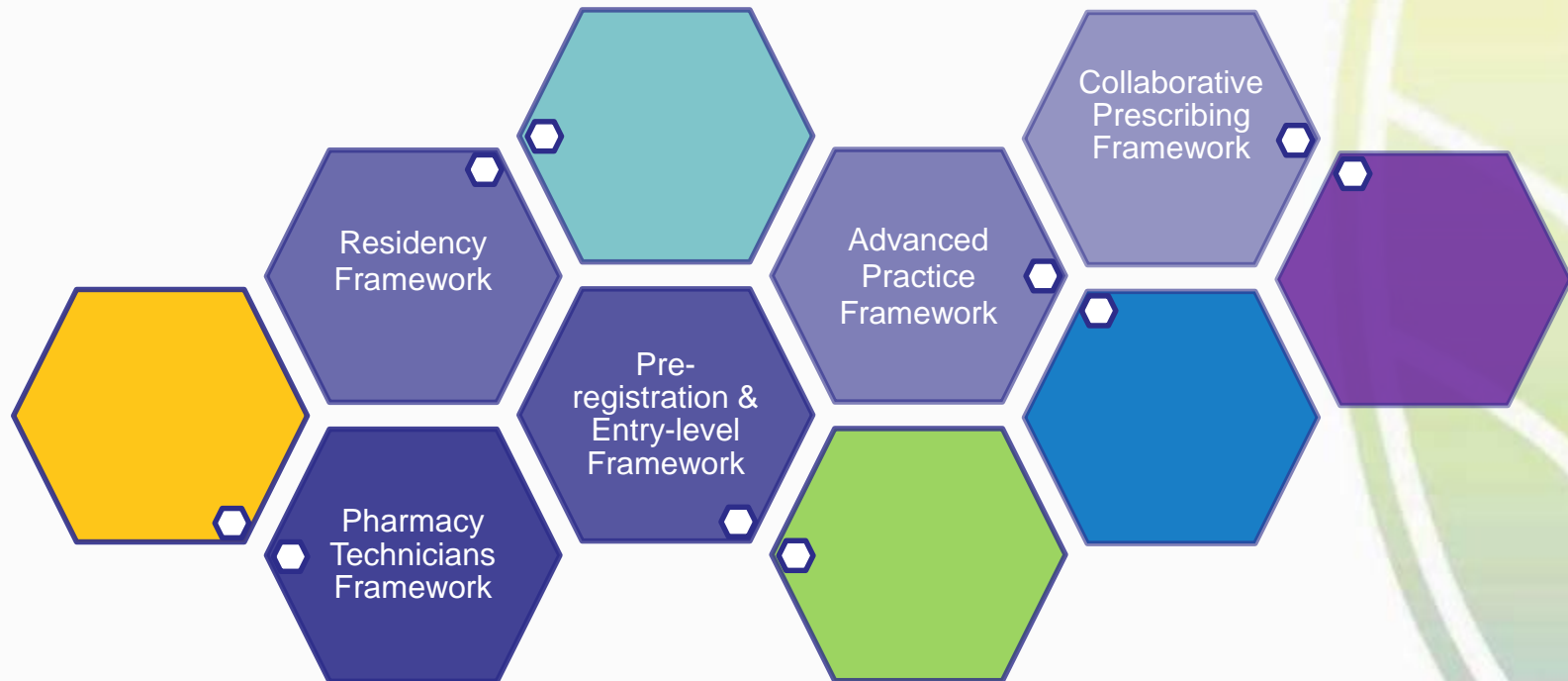
- Advanced Practice Competency Framework
- National Pharmacy Residency Programmes
- Enhanced Pre-registration Training
- Developing and Training Pharmacy Technicians
- Build Up Manpower Capabilities for Community Care Setting
- Collaborative Prescribing Practice



Enhance policy to improve model of care



Quality Training to Develop & Enhance Workforce Capabilities





2.0 Confident Pharmacy Workforce

Overview: Pharmacist Workforce Development

**2.1
Advanced
Practice
Framework**

**Entry Level
Framework**

C **Advanced Generalist Practitioner**

- Wide variety of patients and diseases with complex healthcare issues

A **Generalist Practitioner**

- Wide variety of patients and diseases
- Minor ailments to more complex conditions

D **Advanced Focused Practitioner**

- Focused patient population with medically complex therapies and/or technology

B **Focused Practitioner**

- Wide variety of diseases in unique setting or population or a narrow disease focus

**2.2
Pharmacy
Residency
Programmes**

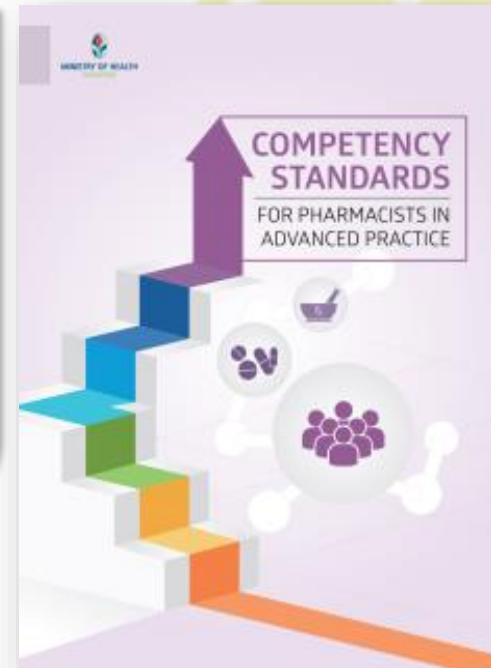
**Entry Level
Framework**

**2.3 Enhance Pre-Registration
Pharmacist Training Programme**



2.1 Advanced Practice Competency Framework

- To provide clarity on scope of practice and the knowledge, skills and attributes required for advanced pharmacy practitioners
- To facilitate effective use of resources for training and development of advanced pharmacy practitioners
- To empower pharmacists to take greater responsibility for their own development and to promote a culture of life long learning



Pharmacist
Career
Pathway
Framework
(2009)

APF
Roadshows
(2016-2017)

Portfolio
Training
Workshops
(2018 -
2020)

APF
Development
(2010 – 2016)

Review of
Training
Roadmaps
(2017 –
2018)

Strategic Plan for
Development of
APP (Ambulatory
Care)
(2018 – 2019)

Continuous
Professional
Development



2.1 Advanced Practice Competency Framework

Portfolio Training Workshops:

- To develop skill sets for pharmacists to use portfolio for competency-based learning and assessment
- To enable pharmacists to use Advanced Practice Framework as a developmental tool to acquire new competencies systematically
- To equip institutions with the capabilities to develop and implement a coherent portfolio framework for development of pharmacist workforce



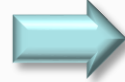
202 senior pharmacists in public and private sectors have received portfolio training since May 2018



2.2 National Pharmacy Residency Programmes

PGY1 RESIDENCY

- Broad-based residency to develop professional and clinical competencies in the delivery of patient-centred and high quality pharmaceutical care



PGY2 RESIDENCY

- Specialty residency to develop accountability, practice patterns and expert knowledge, skills, attitudes, and abilities in the specialised areas of pharmacy practice



ACCREDITED SPECIALIST PHARMACISTS

Cardiology

Geriatrics

Infectious Disease

Oncology

Psychiatry

NEW

Critical Care

NEW

Pediatrics

A total of **8** PGY1 and **10** PGY2 residents across 5 different specialties have completed training in 2018.

Additionally, portfolio-based residency assessment framework has been implemented in July 2018 to enhance learning and ensure more robust exit assessment of PGY2 residents





2.3 Enhanced Pre-registration Training

Pre-Registration Pharmacist Training Programme

In-course training (PECT*)

Community Care

- Retail pharmacy or
- Polyclinic pharmacy

Ambulatory Care / Indirect Patient Care

- Specialty centre or intermediate and long-term care (ILTC) facility
- Pharmaceutical industry or regulatory body

Acute Care

- Hospital inpatient pharmacy

Ambulatory Care

- Specialty centre or Hospital outpatient pharmacy

Post-course training

** Pre-registration Pharmacist Training Programme consists of 4 x 12-week rotations conducted at various accredited training sites, with the 2 x 12-week Pre-Employment Clinical Training (PECT) conducted during the 4th year of NUS pharmacy undergraduate programme*



2.3 Enhanced Pre-registration Training

Enhancement of Pre-Registration Training Programme through development of Entrustable Professional Activities (EPA) framework

- Formation of Pharmacy EPA Workgroup in Jan'18 to develop standards/ guidelines for education and training for entry-to-practice pharmacists.
- To align with local and global workforce development strategies through EPA-directed education and training.



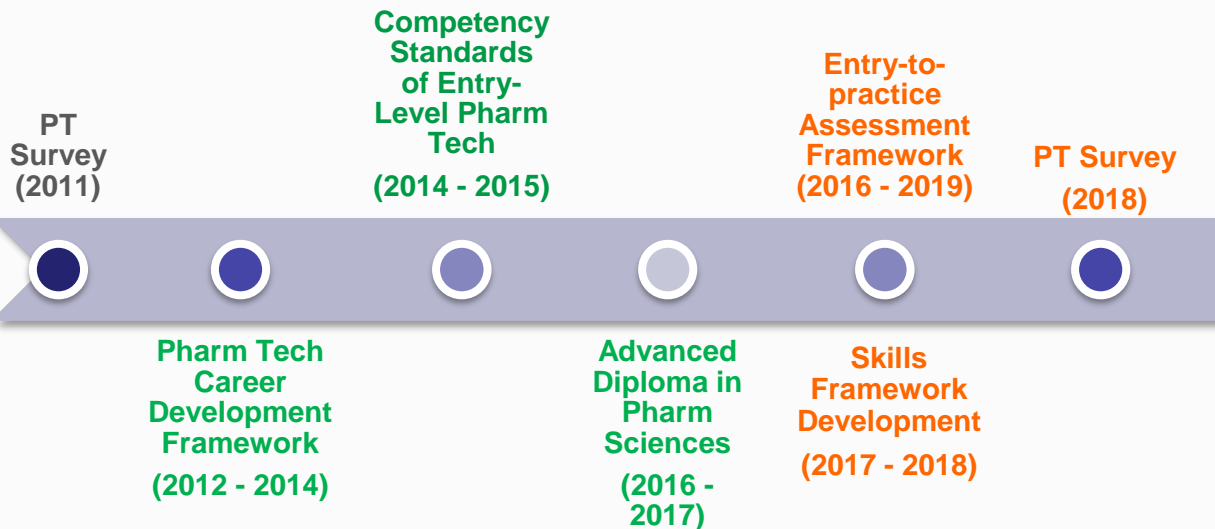
EPA Workshop on 1 March 2018



2.4 Developing and Training Pharmacy Technicians

Key initiatives in 2018: From entry-to-practice to advanced level

- Skills Framework Development for Pharmacy Technicians (2018)
- Implementation of transitional period for Pharmacy Technicians Entry-to-Practice Assessment Framework (2018)
- Pharmacy Technicians Survey 2018



Pharmacy Technicians Development Workshop on 20 July 2018



2.5 Build Up Manpower Capabilities for Community Care Setting

Community Practice Plan

- For development of manpower capabilities for community practice in tandem with healthcare system shift from hospital to community
- Equip pharmacists with broad-based knowledge and skills to practice community care
- Strengthening community care capabilities from preventive care to end-of-life care





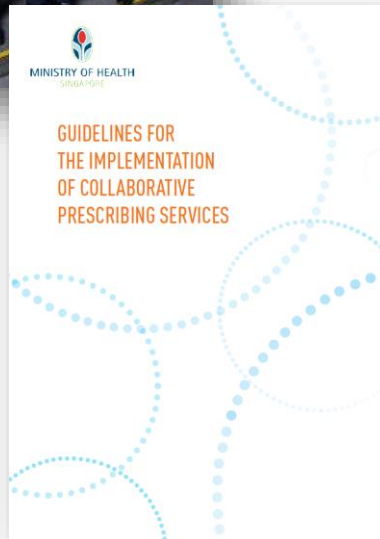
2.6 Collaborative Prescribing Practice

National Collaborative Prescribing Programme



Graduation of Inaugural Cohort of the National Collaborative Prescribing Programme on 2 July 2018

*Available for download at MOH website:
Healthcare Professional Portal > Pharmacist >
Guidelines > Collaborative Prescribing*



Experienced public healthcare sector pharmacists, nurses to be allowed to prescribe medicines from July

They will first undergo a three-month Collaborative Prescribing Programme organised by the National University of Singapore. The inaugural intake of 38 will undergo the course on Mar 19.

A first batch of 38 people has been selected to go for training, made up of 19 pharmacists and 19 advanced practice nurses from National Healthcare Group, National University Health System and Singhealth, an MOH spokesperson said.

These pharmacists and advanced practice nurses have a minimum five years' experience - three of which are in their respective areas of practice.

TIME FOR NURSES, PHARMACISTS TO SHINE

It's our shining
TODAY

From July, qualified senior pharmacists and advanced practice nurses (APNs) in the public sector will be legally empowered to prescribe medicines and order tests without the need to obtain a doctor's counter-signature, said Dr Khor. For instance, they may order a blood test for a diabetic patient.

Safeguards will be put in place to ensure safe and effective prescribing services, which will be within a "collaborative framework overseen by doctors", said the MOH.

Affordable & accessibility to medication

Safe and effective use of medication

Quality health and preventive care



Pharmaceutical Care Excellence

People	Process	Information	Technology
Confident & competent Pharmacy Workforce	Re-design supply chain & streamline processes	Enabler to empower healthcare professionals & patients	Enabler to deliver seamless care & innovations

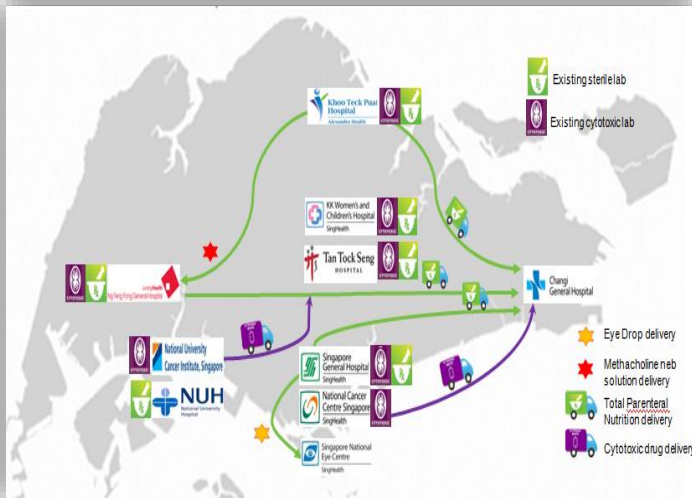
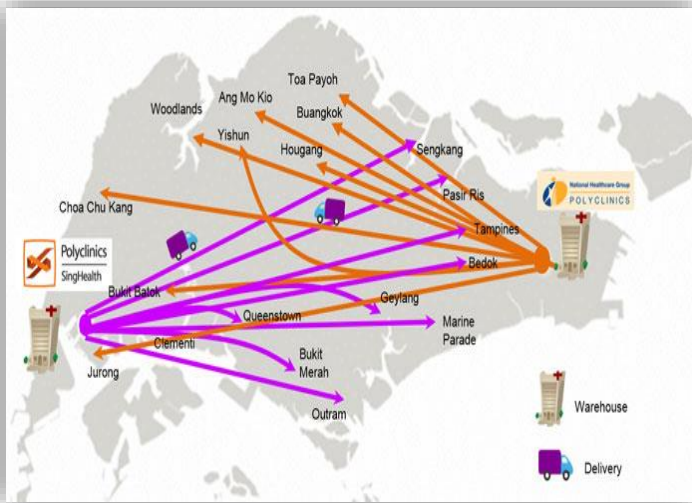
• Re-design Supply Chain

Enhance policy to improve model of care

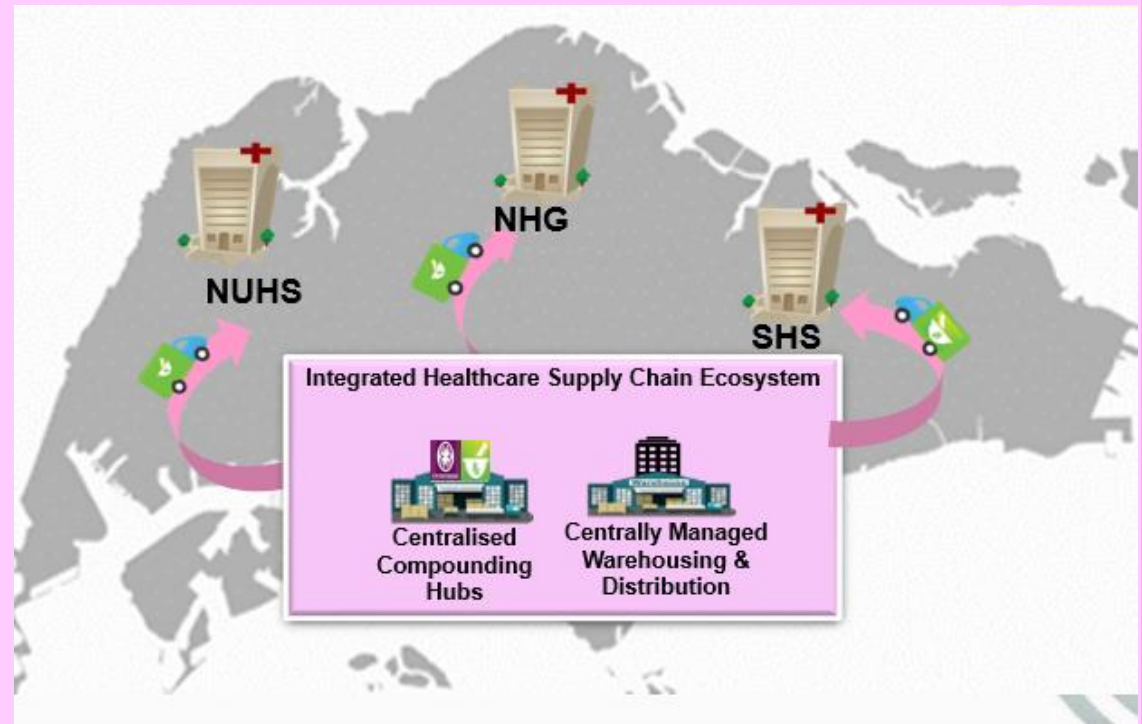


3.0 Re-design Supply Chain

Current Landscape



Future Integrated Landscape



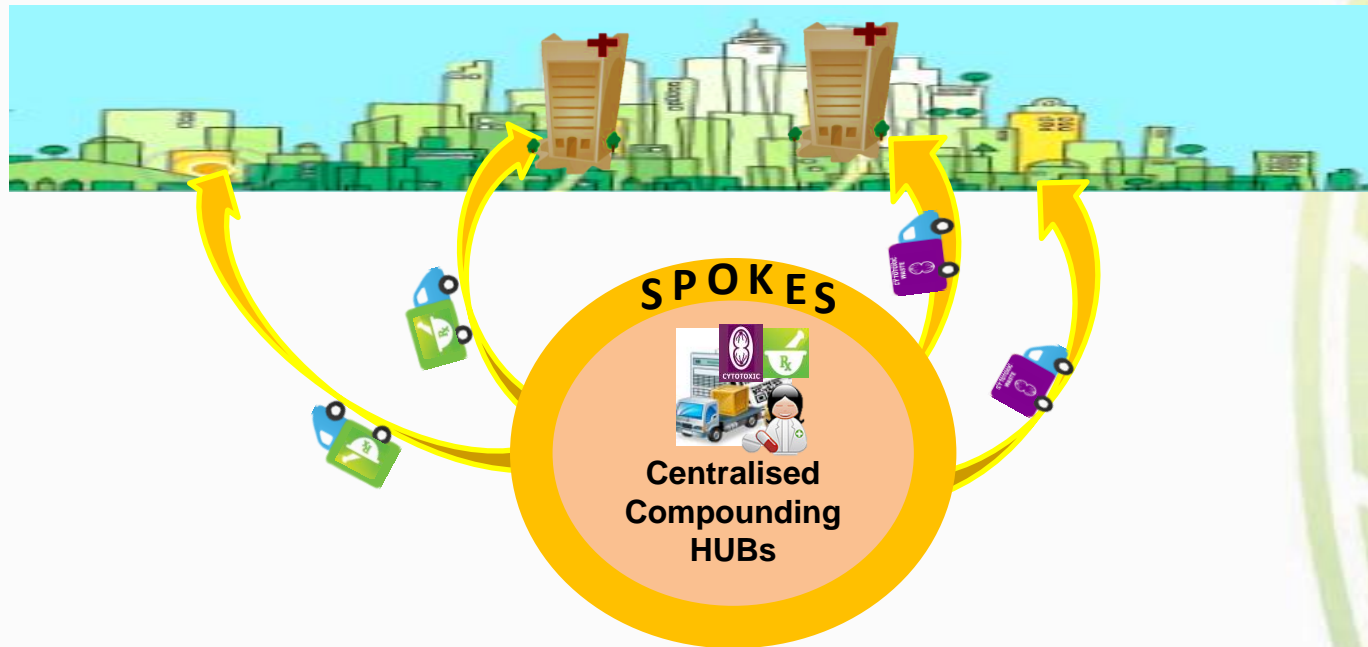
System-wide Benefits

- Improve cost savings, efficiency & productivity
- Scalable to meet increasing demands & resiliency
- Improve overall safety, patient satisfaction & confidence



3.1 Centralised Drug Compounding Hub-and-Spoke Model

A “Hub-and-Spoke” business model to achieve **system benefits** ...



Improved **Medication Safety**



Improved **Staff Safety**



Build System **Resiliency & Continuity**



Build **National Compounding Capability**



Enable **Pandemic Preparedness**



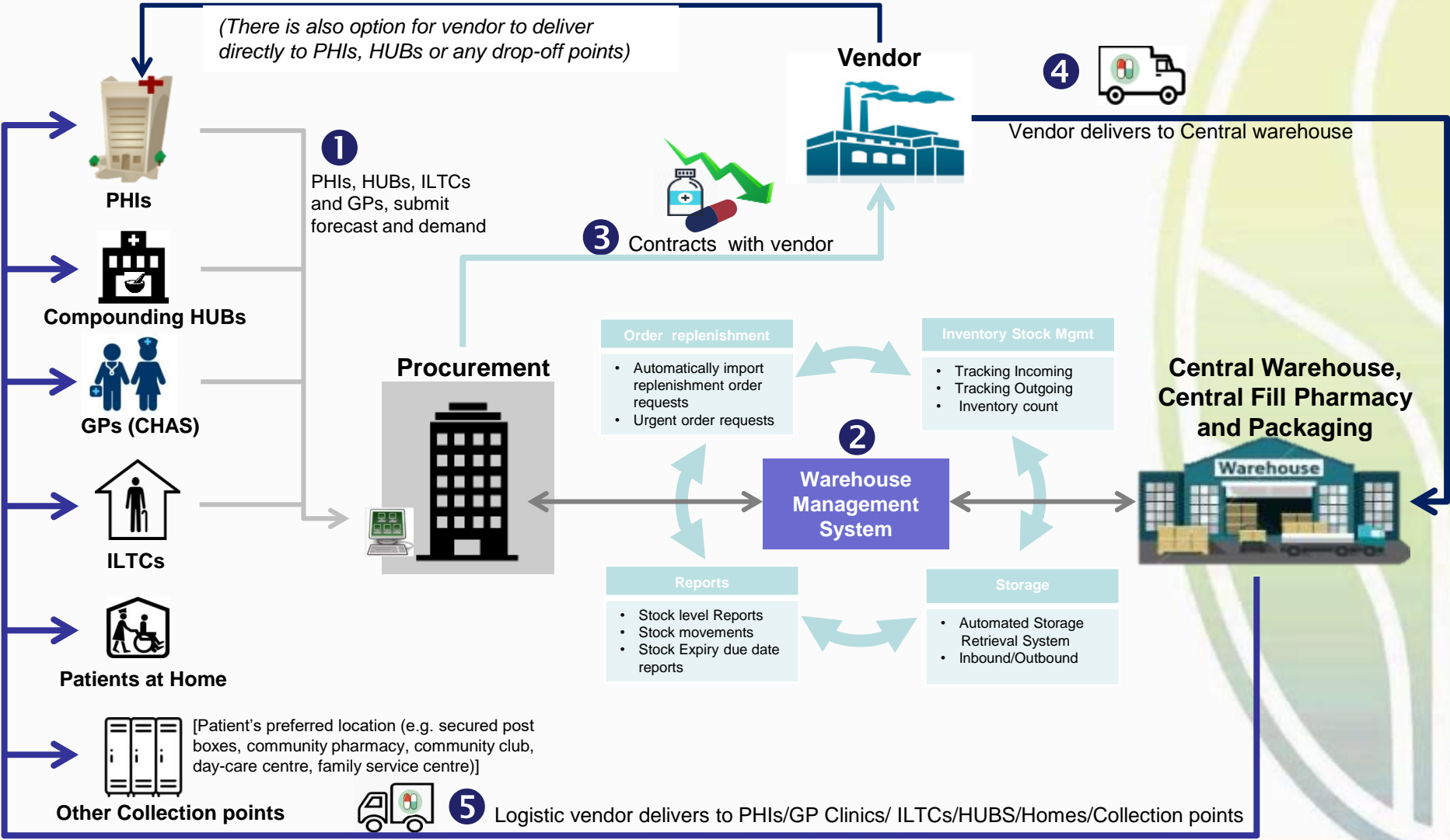
Cost **Savings**



3.0 Re-design Supply Chain

'Re-designed Supply Chain' in Future

- ✓ Support new model of care;
- ✓ Deliver medication when & where patients/consumers need it.





3.1 Formation of ALPS



Formed in **Jul 2018** by pooling all procurement & supply chain functions from the three public healthcare clusters: **NHG, NUHS & SHS**



Short term goals

- ✓ Provide **cost effective and reliable procurement**, warehousing, supply chain and site operation services
- ✓ **Reap system level gains** for patients, providers and staff through economies of scale, stronger procurement capabilities and integrated supply chain management

Long term goals



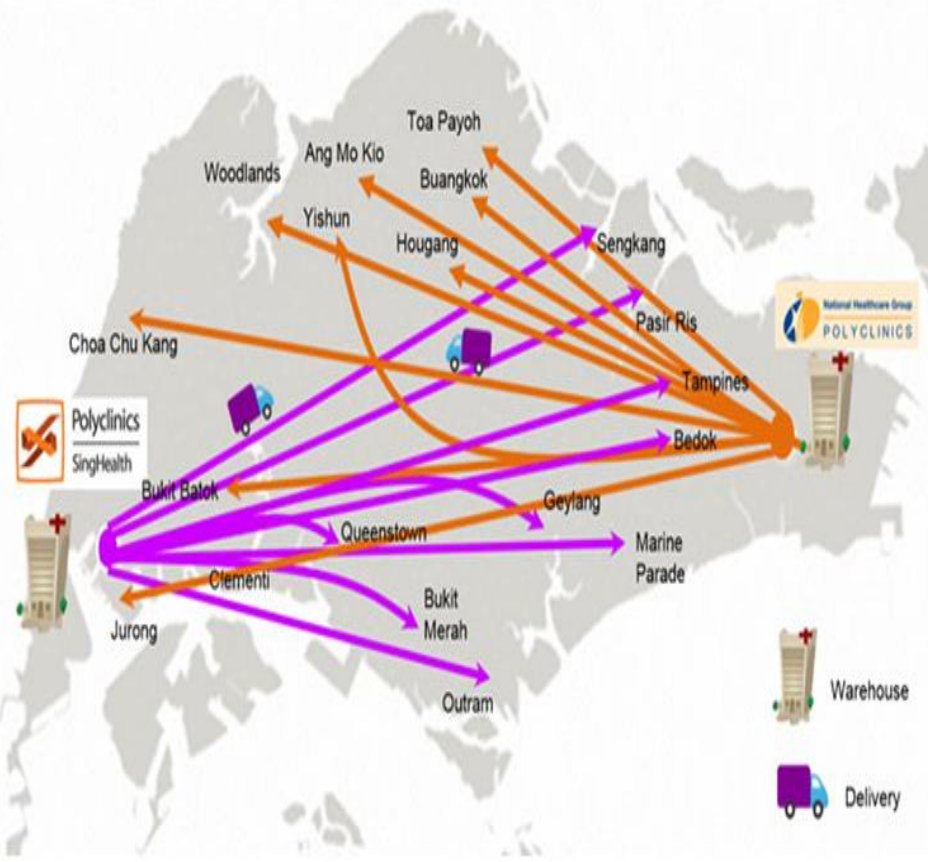
- ✓ Develop **strategic and innovative capabilities**, to optimise procurement and supply chain models, and lower costs at the system level
- ✓ Provide **more development and opportunities** for procurement and supply chain staff
- ✓ Enable **new services and partnerships**, and drive **care transformation** to achieve our vision of shifting care out of our institutions into the community (e.g. GPs, VWO nursing homes, other community based providers)



3.1 Centrally Managed Warehousing and Distribution for Polyclinics

Current polyclinics supply chain landscape: Fragmented

2019 Centrally Managed Warehousing and Distribution for Polyclinics – Managed by ALPS



NHGP NUP SHP

1. Stocks owned by ALP to optimise stock holding and manage associated risk e.g. inventory obsolescence.
2. Provide End-to-End services
 - Procurement
 - Warehouse Management
 - Supplier Management
 - Logistics Management
 - \pm Central Re-Packaging



3.2 Deliver Medication When Patients Need It, Where Patients Need It

Patients/consumers have timely, convenient access to medications supported by expertise and advice from pharmacy services.

Current
Home Delivery
Services

Hospital, pharmacy and polyclinic

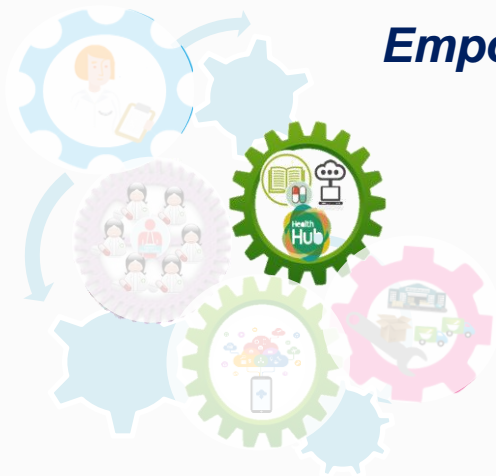
Future
More choices for
self-collection, with
access to expertise
and advice.

Community Pharmacy
Day-care / Family Service Centre
Community Centre
Secured Post-box

Thrust 4

Information Enablement

Empowering people to get the best out of their medications and achieve care goals



Affordable & accessibility to medication

Safe and effective use of medication

Quality health and preventive care



Pharmaceutical Care Excellence

People	Process	Information	Technology
<ul style="list-style-type: none">• Common Platform to Stimulate and Share Clinical, Practice-based Research and Innovation• National Drug Formulary• Increased Access to Contextualised Health Information		Enabler to empower healthcare professionals & patients	Enabler to deliver seamless care & innovations



Enhance policy to improve model of care



4.1 Platform to Stimulate and Share Clinical, Practice-based Research and Innovation

Sharing research, innovations and new ways of working, stimulates Pharmacy to address challenges in the healthcare landscape and transform practice to deliver better standards of care.

Establish a platform to **share** and **promote** research, best practice guidance, standards and innovations.



Create **awareness** and incentivise **participation**

Stimulate **new** and further **pharmacy practice research** and **innovations**

Pharmacy Innovations in Practice (PhIP) Programme – Mainstreaming Innovations in Alignment with MOH and NPS visions

Embedding Pharmacists Into the Practice



PhIP Programme

- **Objective:** To translate innovative services into mainstream practices.
- Consists of:
 - **2 innovation tracks**
 - **3 environments**
- **Logo** to show that their innovative practice/service is being trialled and monitored by MOH.



TT environment

Think Tank (TT)

- i) Practice-focused innovations
- ii) Telepractice innovations

Aim: To generate ideas & actionable solutions for problems/ issues in practice

Target audience:

- Organisations who need help in solving a problem or conceptualising their ideas.

Help provided:

- Connect with suitable leaders/ partners for guidance and sharing of perspectives.
- Provide a suitable environment for ideas generation.
- Facilitate work on key ideas to generate actionable insights for implementation.



DI environment

Design & Implementation (DI)

- i) Practice-focused innovations
- ii) Telepractice innovations

Aim: To develop a methodology for implementing innovation in actual practice

Target audience:

- Organisations who need help in implementing their innovations in practice.

Help provided:

- Connect with expertise/ resources for help and advice in methodological design of feasibility studies.
- Co-create new practice workflows, policy and implementation plans, as needed.



VM environment

Verification & Mainstreaming (VM)

- i) Practice-focused innovations
- ii) Telepractice innovations

Aim: To support innovation into an efficient and sustainable practice model

Target audience:

- Organisations who intend to roll out their innovations into mainstream practice.

Help provided:

- Connect with relevant authorities for discussion and fulfillment in accordance to regulatory requirements, guidelines and standards.
- Co-create new practice workflows, policy and implementation plans, as needed.



4.2 National Drug Formulary

Vision

- **Reference of choice** for healthcare practitioners practicing in Singapore when they need drug related information

Strategy

- Establish a national comprehensive resource to **influence** healthcare professionals in providing harmonised, safe use of medications and best clinical practice

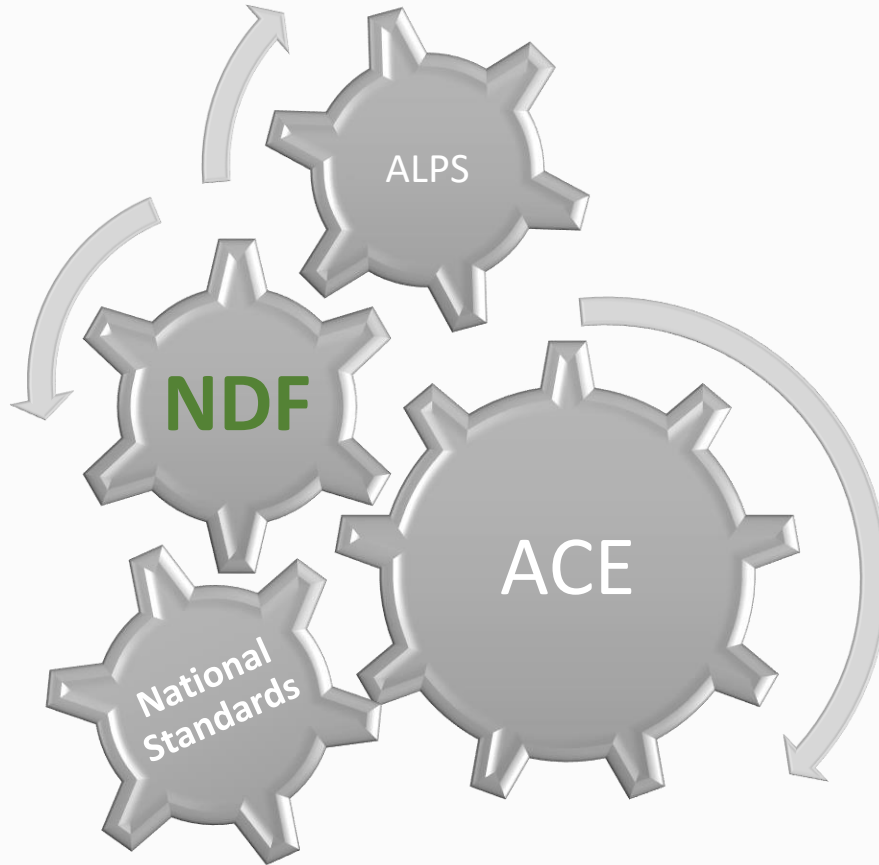
Beyond Quality to Value

- Support Appropriate Utilisation of Drugs





4.2 National Drug Formulary



NDF will gel and complement the works of ACE, CQPT, ALPS, National P&T Committee, etc. to align the use of drugs in Singapore



ACE = Agency for Care Effectiveness, MOH
CQPT = Clinical Quality, Performance and Technology Division, MOH
National P&T = National Pharmacy & Therapeutics, MOH



4.3 Increased Access to Contextualised Health Information

Starting with provision of medication related information on HealthHub

Access to harmonised medication information

Ability to share medication information with loved ones



Ability to keep a medication list including allergy information

Ability to set reminder to take medication

< SALMETEROL XINAFOATE / FLUTICASONE PR... >

Salmeterol xinafoate / Fluticasone propionate Accuhaler

by National University Hospital

It is used to control and prevent symptoms (wheezing and shortness of breath) caused by asthma or chronic obstructive pulmonary disease (COPD). Salmeterol is a long-acting bronchodilator that relaxes muscles in the airways to improve breathing. Fluticasone is a steroid that reduces inflammation in the lungs.



What is this medication used for

It is used to control and prevent symptoms (wheezing and shortness of breath) caused by

< MEDICATION LIST >

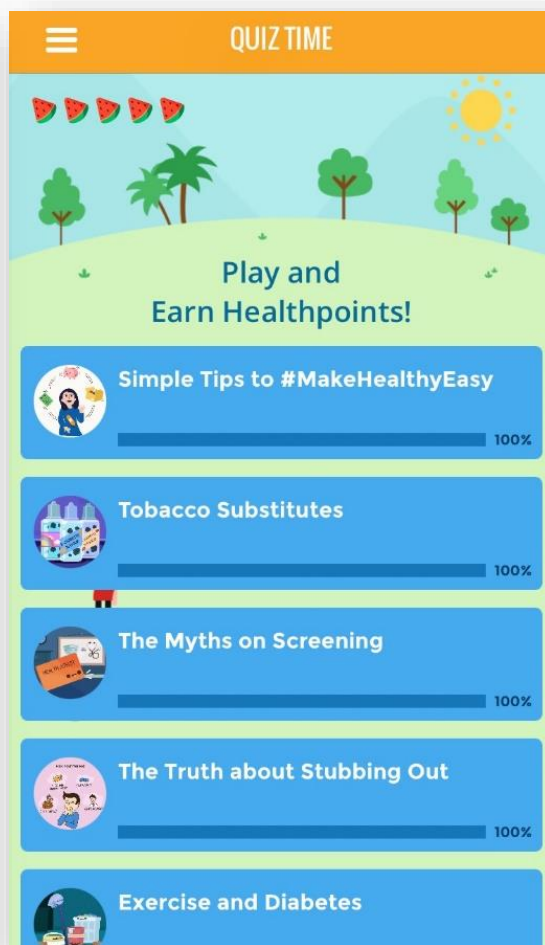
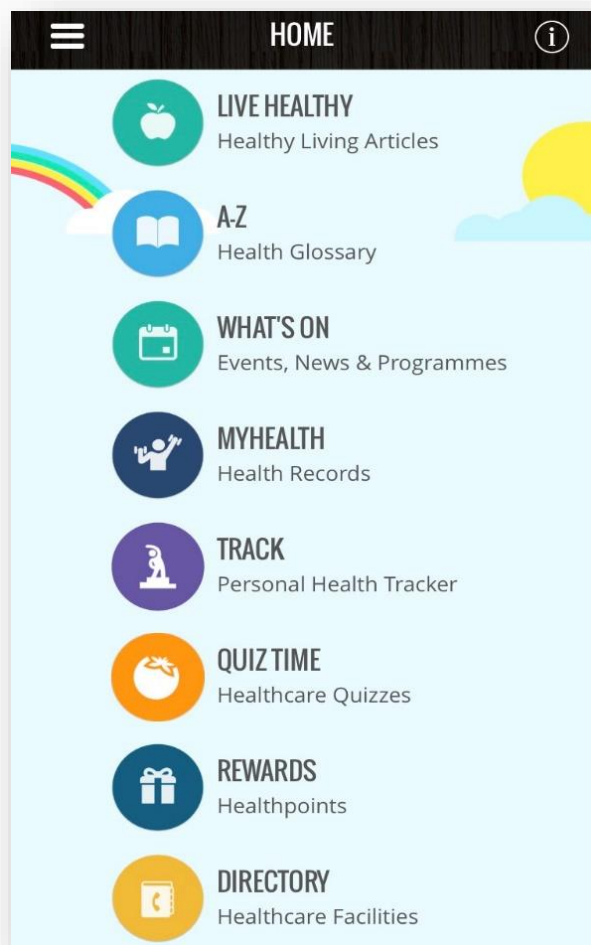
- Seretide Accuhaler (Salmeterol 50mcg/ Fluticasone 100mcg)** Alert
1 puff - 2 times a day
- Salbutamol Inhaler**
2 puff - 4 times a day when necessary
- Cetirizine 10mg**
1 tablet - Every morning when necessary





4.3 Increased Access to Contextualised Health Information

Public education through on medication-related topics on “Quiz Time”



Intended topics:

- Self care
- Medication management
- Travel medicines
- Anti-diabetes medicines
- Smoking cessation

Thrust 5

Technology Enablement

*Delivering seamless and effective transition of care
across all care settings*



Affordable & accessibility to medication

Safe and effective use of medication

Quality health and preventive care



Pharmaceutical Care Excellence

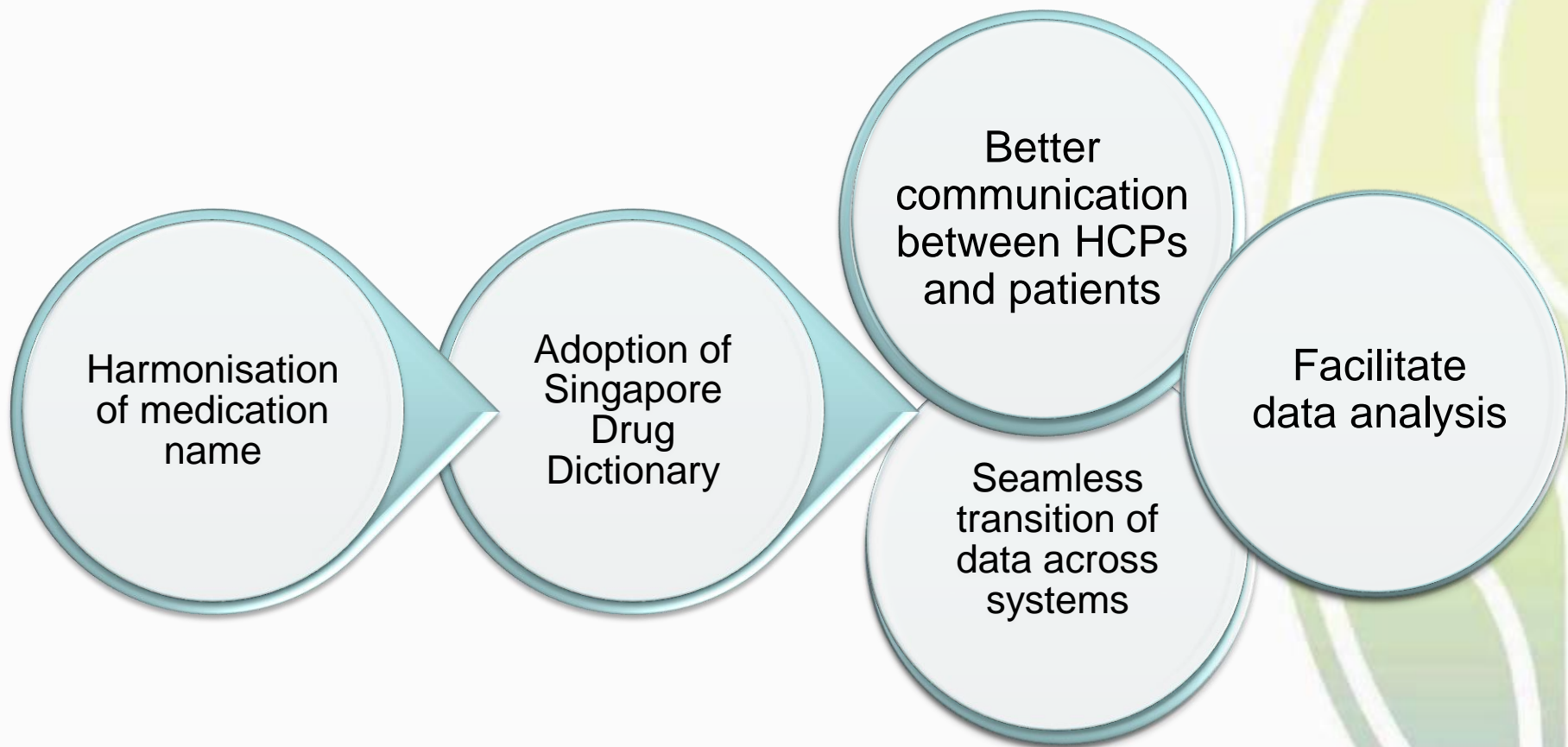
People	Process	Information	Technology
<p>Workforce</p> <ul style="list-style-type: none"> • Singapore Drug Dictionary • National Harmonised Integrated Pharmacy Solution • Enhancing Telepharmacy Services 	<p>processes</p>	<p>Enabler to empower healthcare professionals & patients</p>	<p>Enabler to deliver seamless care & innovations</p>



Enhance policy to improve model of care



5.1 Singapore Drug Dictionary





5.2 National Harmonised Integrated Pharmacy Solution

NHIPS Key Capabilities

Patients and Caregivers



Pharmacy Reception



Medication Collection



Patient Empowerment



eServices (Online, Apps, Kiosk)



Service Provider



Prescription/Order Processing



Dispensing, Counselling



Med Supply Tracking



Compounding/Repackaging



Medication Support Services



Supply & Med Reconciliation



Business Rules, Medication Translation



Business Intelligence



National Program Enablers



Prescription Cross Fill



Central Compounding



SDD



Platform for harmonised outpatient, discharge and A&E medication dispensing

Will be supported by national charging platform

Designed for both public and private pharmacies... 1st site from 2021

Enable cross filling and facilitate on-line refill



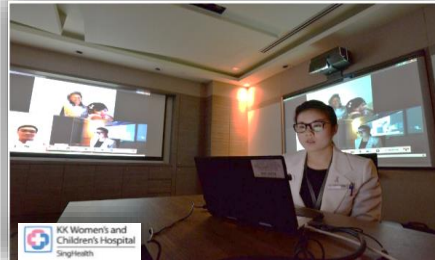
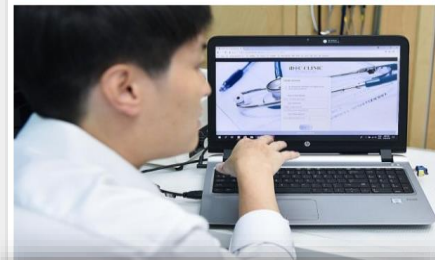
5.3 Enhancing Telepharmacy Services

MOH launches regulatory sandbox to support development of telemedicine



What's up, iDoc? Giving a virtual consult at a pharmacy

By: straitstimes.com 22 days ago



KK Women's and Children's Hospital SingHealth



Pharmaceutical Society of Singapore

Guidelines for Telepharmacy & Tele-Pharmaceutical Care Services

Adoption of technologies

Professional Guidelines

New model of practice

Facilitation - NPPMO

Pharmacy Innovations in Practice (PhIP) Programme – Mainstreaming Innovations in Alignment with MOH and NPS visions

• **Objective:** To translate innovative services into mainstream practices.

• **2 innovation tracks:**

- Practice-focused innovations
- Telepractice innovations

• **3 environments:**

- **Think Tank (TT):**
 - To generate ideas & actionable solutions for problems/ issues in practice
- **Design & Implementation (DI):**
 - To develop a methodology for implementing innovation in actual practice
- **Verification & Mainstreaming (VM):**
 - To support innovation into an efficient and sustainable practice model



Your Guardian Pharmacist is now on MyDoc md

Ask health-related questions and get expert advice from our qualified Guardian Pharmacists.

STEP 1 Download MyDoc App

STEP 2 Join the Guardian Group

STEP 3 Start Chatting

Keep in Touch with Us and the National Pharmacy Strategy!



**Connect with
National Pharmacy Programme Management Office
(NPPMO)**

Email: nps@moh.gov.sg

Keep Updated on What's Happening in the Profession!

SPC Connect
(<https://www.moh.gov.sg/hpp/pharmacists>)

The screenshot shows the Singapore Government website with the Ministry of Health logo. The navigation bar includes 'For Public' and 'For Healthcare Professionals'. The 'For Healthcare Professionals' section is active, showing 'E-Licensing (ELIS)', 'Health Professionals Portal', and 'Policies & Guidelines'. A search bar is visible. The main content area is titled 'PHARMACISTS' and contains the following text: 'The portal contains information relevant to pharmacy practice in Singapore. We hope that this website will be informative and helpful to you. Pharmacists registered with the Singapore Pharmacy Council (SPC) can login to the secure pages of this Portal to access various information resources and e-services, including SPC e-services and the Continuing Professional Development System (CPDS)'. Below the main content, there is a 'NEWS (9)' section.

The screenshot shows the Pharmaceutical Society of Singapore (PSS) website. The header includes the PSS logo and the tagline 'To maximise the contribution of pharmacists to the healthcare of Singaporeans'. The navigation bar has 'About Us', 'Healthcare Professionals', 'Store', 'Know Your Medicines', and 'What's Happening'. The main content area is titled 'What's Happening' and 'In This Section'. It features several sections: 'Join PSS Member's Benefits' with a link to 'Be a PSS Volunteer'; 'Member's Login' with a form for ID and Password; 'Membership Renewal' with a call to action for members; 'Pharmacy Week'; 'Event Highlights' with a list of past events; 'Events Listing'; 'E-Bulletin'; 'Pharmacy News'; and 'Medscape Pharmacist News' with the Medscape logo.

PSS News & Events
(<https://www.pss.org.sg/whats-happening>)

THANK YOU

