A Reflection
Our Journey in 2020
Apr 2020…
Singapore announced it’s Circuit Breaker period
Many countries supplying drugs & medical supplies to
Singapore are in lockdown

We need to ramp up medication delivery services quickly so that our patients can continue to have access to their medications safely at home.

There are long queues at my pharmacy! We are running out of masks and hand sanitizers.

How can we cope? When will this situation end? What if we run out of drugs for patients?

#passionatePM

#commpharm

#pharmnewbie
During COVID-19, together with our partners, Pharmacists, Pharmacy Technicians and Pharmacy Staff helped to ensure that all Singapore residents continued to receive the drugs and care that they needed.
At the frontline: Patient Care

Pharmacy staff (pharmacists and pharmacy technicians)

- Responded promptly to medication queries from patients, clinicians and nurses
- Development of treatment protocol for COVID-19 with emerging data
- Serve as a reliable resource of drug information and support for the medical teams
- As part of the mobile medical teams at the dormitories and community care facilities

PHOTO: National Cancer Centre Singapore

PHOTOS: PSS E-Bulletin Jul 2020
During COVID-19, together with our partners, Pharmacists, Pharmacy Technicians and Pharmacy Staff helped to ensure that all Singapore residents continued to receive the drugs and care that they needed.
Behind the scenes: Drug Supply Resiliency

MOH CPO, PHI pharmacies and ALPS have been working closely with HSA and pharmaceutical companies to mitigate potential shortages and ensure continuity in ICU and BAU drug supply via building buffer supply, implementing dispensing restrictions for drugs.
During COVID-19, together with our partners, Pharmacists, Pharmacy Technicians and Pharmacy Staff helped to ensure that all Singapore residents continued to receive the drugs and care that they needed.
Resources to Support the Community

Educate and empower the consumer through publications on

- COVID-19 prevention and treatment
- Frequently Asked Questions related to COVID-19 - addressing myths
- Ordering medications for home delivery
During COVID-19, together with our partners, Pharmacists, Pharmacy Technicians and Pharmacy Staff helped to ensure that all Singapore residents continued to receive the drugs and care that they needed.

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On 22 May 2020... 203 newly registered pharmacists took the pledge at the Singapore Pharmacy Council Pharmacist’s Pledge Affirmation Ceremony.

Schools rallied to ensure graduation of students:
- 173 NUS graduates
- 383 polytechnic graduates

169 pharmacy students and 232 pharmaceutical science students safely resumed clinical training either in alternative training sites or via e-learning modules.

PHOTO: SPConnect August 2020
During COVID-19, together with our partners, Pharmacists, Pharmacy Technicians and Pharmacy Staff helped to ensure that all Singapore residents continued to receive the drugs and care that they needed.
Research on the treatment of COVID-19 is ongoing and pharmacists have a multifaceted role ranging from logistic planning, research to providing pharmacotherapy.
Accelerated adoption of Medication Delivery Services

“Close to 395,000 medication deliveries were made from Feb 1 to Aug 19. Currently an average of 3,200 deliveries are made daily. This is a tenfold increase from the 320 daily deliveries before the start of the Covid-19 pandemic.”

Medication delivery services available to patients

We thank Mr Lim Choo Beng for his feedback (Set up centralised pharmacies to send medication to patients’ homes, Aug 20). Our public healthcare institutions have been providing medication delivery services for a few years now. Partnering with the Agency for Logistics Procurement and Supply (Alps) set up by the Ministry of Health, our public hospitals and polyclinics have worked with various providers to enhance the service quality and affordability of medication delivery services.

With the ongoing Covid-19 situation, we have also increased the delivery capacity.

Close to 395,000 medication deliveries were made from Feb 1 to Aug 19. Currently, an average of 3,200 deliveries are made daily. This is a tenfold increase from the 320 daily deliveries before the start of the Covid-19 pandemic.

In addition to this delivery service, selected polyclinics also provide patients the option to collect their medicine at their convenience from Pillbox lockers or certain Guardian outlets.

Patients may approach the pharmacy staff at public healthcare institutions to arrange for medication delivery or collection.

The Ministry of Health will continue to ensure convenient access to medication for patients to meet their medical needs.

Mr Lim can contact us at 1800-225-4122 and we can work on his medication delivery options.

Camilla Wong (Dr)
Chief Pharmacist
Ministry of Health

COVID happened, and we stepped up..

Racing against time to secure essential drugs

In March, when countries started to implement lockdowns due to the surging pandemic, the procurement team at Tan Tock Seng Hospital’s (TTSH) pharmacy scrambled to secure medicines before exports were clamped down. Thus began their race against time to avoid medicine shortages and ensure sufficient Covid-19 drugs - not just for TTSH, but for other hospitals as well.

“Even as we placed orders with the vendors, there was no certainty that the drugs would come in, until they reached our doorsteps,” said Mr Wong Yee Su, 45, a senior pharmacist from healthcare logistics firm Alps, who is based in TTSH’s pharmacy procurement and supply chain unit.

During the peak of the pandemic, the team had to order five to five times more medicines for symptomatic treatment, such as cough syrups and antibiotics, said Mr Wong.

The usage of hand rubs in the hospital also increased by 50 per cent.

TTSH and the National Centre for Infectious Diseases also procured drugs used in Covid-19 treatment for national use at the start of the pandemic.

When hospitals were ramping up intensive care unit (ICU) capacity in April, a neuromuscular blocking drug used during intubation was running low. The procurement team and the authorities consulted ICU clinicians to bring in an alternative drug in time.

Principal pharmacist Koh Gui Fan, 45, who is the principal pharmacist at TTSH’s outpatient pharmacy, said: “(We) spent a lot of effort trying to procure Covid-19 medicines. When we read in the papers that an ICU patient recovered and was discharged, it was heart-warming.”

Shabana Begum
Accelerated adoption of Medication Delivery Services

“Close to 395,000 medication deliveries were made from Feb 1 to Aug 19. Currently an average of 3,200 deliveries are made daily. This is a tenfold increase from the 320 daily deliveries before the start of the Covid-19 pandemic.”

My staff are getting burnout from the heavy workload

#passionatePM
Listening to the voices of Pharmacy

✓ StraightTalk with CP (Ongoing)
✓ CP-PharmTech Leader Meeting (Ongoing)
✓ Community Pharmacy Engagements (Dec 2020 to Mar 2021)

What is the future of pharmacy?
How can I contribute?

Is telehealth & medication delivery here to stay?

How do I prepare for the future?

How do we recognize the contributions of our pharmacy workforce?
Let me share with you the progress of NPS initiatives to future-proof pharmacy...

**National Pharmacy Strategy**

1. Pharmaceutical Care Excellence
2. Confident Pharmacy Workforce
3. Redesign Supply Chain
4. Information Enablement
5. Technology Enablement

#dynamicDyCP
We must adapt by transforming the medicine delivery model and redesigning our roles to provide seamless patient-centric care to meet evolving healthcare needs.

#FutureProofingPharmacy

#dynamicDyCP
To meet the growing demand of our healthcare system, pharmacy must evolve by transforming the way we deliver medications to patients.

#FutureProofingPharmacy

#dynamicDyCP
As a Year 1 pharmacist who aspires to provide better care for my patients, I can use DFP to identify areas for growth and plan for development.

DFP serves as a guide for me to self-reflect and improve. It also helps me to give better feedback for developing my juniors.
The 2nd edition of Pharmacy Technicians Entry-to-Practice (ETP) Competency Standards was introduced in September 2020. The ETP Competency Assessment Framework helps to ensure graduates who are planning to join the healthcare sector are equipped with the minimum competency requirements at recruitment.

The implementation guide for competency assessment comes with handy assessment checklists for training my juniors.

The competency assessment helps us develop job-ready pharmacy technicians to better support our busy pharmacy operations.
Our future is in our hands....

I want to develop myself so that I can provide better care for my patients.

I want to take every opportunity to transform the way we deliver care & medications.

I hope to develop and lead new services to improve patient outcome and ensure continuity of care in community.

I want to upskill myself to take up expanded roles to better support my pharmacy team.

Every step counts towards better health and better care for our future.

I want to improve teamwork and build resilience within my team.
How would you like this story to continue?

Share your thoughts with us:
NPS@moh.gov.sg

To be continued...
National Pharmacy Strategy (NPS) Fact Sheets

- CPO & NPS updates for 2020
- Summary of NPS initiatives
  - 1.1 Establish the role of pharmacy in the community care setting
- 2.1 Implement Development Framework for Pharmacists
- 2.2 National Pharmacy Residency Programmes
- 2.3 Enhanced Pre-registration Pharmacist Training Programmes
- 2.4 Develop and Train Pharmacy Technicians
- 2.5 Build Up Manpower Capabilities for Community Care Setting
- 2.6 Collaborative Prescribing Practice
- 3.1 Centralise procurement, packaging, compounding and distribution
- 3.2 Deliver Medicines to Where, When and How Patients Need Them
- 4.2 Increased Access to Contextualised Health Info
- 4.3 Establish a National Drug Formulary (NDF)
- 5.1 Standardise drug terminology and code structures
- 5.2 Provide a common pharmacy system
  - National Harmonised Integrated Pharmacy System (NHIPS)
- Contact us @ NPPMO

Click on links for more information on each NPS initiative
**CPO SUPPORT FOR COVID-19 WORK**

Ensure drug supply resiliency

CPO and ALPS worked with SAPI and industry to regularly track stock levels of drugs and to mitigate any stock-out situation.

CPO worked with PHIs, ALPS, SAPI, EDB, MTI, HSA etc to minimise disruption to drug supply.

**PHARMACEUTICAL CARE EXCELLENCE**

Support ageing in community

Due to COVID-19, Pharmaceutical Care Services (PCS) study will commence in 2021 instead of 2020.

Face-to-face onboarding training for PCS pharmacists continue to be conducted virtually via online platforms.

**CONFIDENT PHARMACY WORKFORCE**

Developing and engaging pharmacy workforce

The Development Framework for Pharmacists was launched in May 2020.

New programme and training standards for National Residency Year 1 (R1) and 7 Residency Year 2 (R2) programmes were implemented.

New Residency Year 2 (R2) exit exam blueprints were completed, to launch in Jan 2021 intake.

2 Graduate Certificates training programmes were introduced for development of pharmacists in community practice.

Pharmacy Technicians Entry-to-Practice Competency Standards with implementation guide was published in Sep 2020.

Straight Talk with CP was launched in Sep 2020, conducted 4 sessions to engage pharmacists in patient care settings.

**RE-DESIGN SUPPLY CHAIN**

Deliver medicines to where, when and how patients need them

Obtained MOH Senior Management’s approval in Nov 2020

Commencement of planning with ALPS and PHIs.


Drug compounding hubs progress on

Drug compounding hubs at SGH and NCCS kicked off journey towards attaining GMP-standards with onboarding of GMP consultants in Feb 2020.

Joint steering and working committees for joint NHG-NUHS compounding hub were formed in Sep 2020.

**INFORMATION ENABLEMENT**

National Drug Formulary

The NDF tenders had been published. Target launch of NDF is in Q2 2022.

CPO had been engaging stakeholders in preparation for NDF content and website development.

**TECHNOLOGY ENABLEMENT**

Improved drug code standardisation

PHIs contributed 88.7% of drug transactions in SDD codes. SDD editorial updates have been implemented to reach 93.3%.

SDD codes are used for vaccine subsidy claims and immunisation records sent to NEHR and NIR.

Progress in harmonisation of medication dispensing

National Harmonised Integrated Pharmacy System (NHIPS) project kicked off in Feb 2020, adopting Agile methodology.

NHIPS system design was completed in Sep 2020. Target to implement the first site in Apr 2023.
The National Pharmacy Strategy (NPS) initiatives

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 Development Framework for pharmacists
Competency continuum for pharmacists to progress from early career to advanced practice.

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.

Learn more about NPS

Scan the QR code:

Click here OR

Learn more

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Updated Oct 2020

National Pharmacy Programme Management Office | Email: nps@moh.gov.sg

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
Objective

Delivering Pharmaceutical Care Services to **empower and support** seniors & caregivers to manage medication independently in the community

What is PCS?

- Understand the challenges faced by seniors and caregivers with medications given by various prescribers when they are at home
- Engage seniors and caregivers to develop a personalised plan to take their medications
- Coordinate with multi-disciplinary care team across care settings
- Regular follow-up with seniors and caregivers on changes on medications
- Engagement of lay extenders to help seniors and caregivers

Who will receive PCS?

**Target 2000 seniors in:**
- Senior Care Centres
- Care Close to Home w Centre-based Nursing
- Senior Activity Centres with Comm Nurse Post

**Inclusion Criteria:**
- ≥5 meds or ≥12 doses daily + ≥ 3 providers
- Need help with managing medication

Benefits

- Empower seniors and caregivers to self manage their own medications
- Strengthen pharmacy support for seniors and caregivers in the community

Timeline

- PCS 3 year study will commence from FY2021

Person Centred Care Model

1 to 1 consultation

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2.1 Implement Development Framework for Pharmacists

Objectives

1. Providing clarity on scope of practice and the competencies required for pharmacists to gear up towards advanced practice
2. Facilitating effective use of resources for training and development of pharmacists
3. Promoting a culture of lifelong learning

Benefits

- Learns the building blocks of successful pharmacists, for today and tomorrow
- Prepares pharmacists for healthcare transformation towards better care for patients
- Equips pharmacists to lead change in healthcare transformation

Timeline of activities

<table>
<thead>
<tr>
<th>Year</th>
<th>Activities</th>
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<tbody>
<tr>
<td>2020</td>
<td>Launch of DFP</td>
</tr>
<tr>
<td>2021</td>
<td>Publish DFP Guidebook</td>
</tr>
<tr>
<td>2022</td>
<td>End of transition from APF to DFP</td>
</tr>
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Call to action

- Familiarise about DFP: Download the document **HERE** or scan the QR code
- Speak to your supervisor/mentor about DFP and portfolio training
Objective

1. Structured training of pharmacy specialists via the broad-based pharmacotherapy residency (R1) and specialty-specific residency (R2) programmes.

Timeline of activities

1. 4 residents from Jan 21 supplementary intake will commence training on 4 Jan 2021
2. Next intake will be in July 2021 with the last run of National R1 Exemption review for projected R2 candidates

Call to action

1. HODs to ensure identified candidates are on track for residency training and accreditation upon exit
2. Pharmacists to have career conversation with their ROs to plan for their specialization journey in specialties of interest

Benefits

1. To build pharmacy specialists workforce who will provide care to complex patients in various specialties
2. To retain and groom clinical pharmacists to practise at the top of their licenses and nurture the next generation of pharmacy specialists

RESIDENCY YEAR 1 (R1)

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

RESIDENCY YEAR 2 (R2)

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

PHARMACY SPECIALIST ACCREDITATION

The 7 PSAB-recognised specialties are Cardiology, Critical Care, Infectious Diseases, Geriatric, Oncology, Paediatric and Psychiatric Pharmacy.
### Objectives

1. To review the SPC’s Competency Standards for Pharmacists and improve training curriculum, manuals and assessment templates as appropriate.
2. To ensure alignment of competency standards, EPA and NUS B Pharm curriculum.
3. To recommend robust accreditation method for rotation sites.

### Timeline of activities

1. The appointed Review Workgroup will convene and start work in early 2021.

### Call to action

1. To provide necessary input to the review work streams overseen by the workgroup.

### Benefits

1. More structured and robust pre-registration pharmacist’s training and assessment framework.
2. Better quality assurance of training rotation sites.

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**PRE-EMPLOYMENT CLINICAL TRAINING (PECT)** (in-course)

2 x 12 weeks of rotations across retail/polyclinic pharmacies, specialty centres, ILTC facilities, pharma Industry and HSA.

**PRE-REGISTRATION PHARMACIST TRAINING (post-course)**

2 x 12 weeks of rotations across acute care and ambulatory care settings in PHIs and specialty centres.

**REGISTRATION WITH SINGAPORE PHARMACY COUNCIL**

To pass SPC’s Competency Exam prior to registration.

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*EPA = Entrustable Professional Activities*
2.4 Develop and Train Pharmacy Technicians

Objectives
Developing a confident and adaptive pharmacy support workforce from entry-to-practice to advanced level

Entry-to-Practice Competency Standards

- For implementation of the competency standards, the Entry-to-Practice (ETP) competency assessment framework for pharmacy technicians is developed by the Pharmacy Technicians Training and Development Committee
- The 2nd edition was published in September 2020 with implementation guide for competency assessment

Benefits

- Promote better alignment of school curriculum and assessment strategies with the competency standards of entry-level pharmacy technicians
- Enhance job-readiness of graduates for practice as pharmacy technicians

Timeline

<table>
<thead>
<tr>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce Implementation Guide for competency assessment</td>
<td>Review of results from ETP trial assessments</td>
<td>First batch of students (AY2019) to receive Letter of Competency Attainment</td>
</tr>
</tbody>
</table>

Call to action

- Find out more: Download the Pharmacy Technicians ETP Competency Standards [HERE](#) or scan the QR code
- Utilise the assessment checklists for training of entry-level pharmacy technicians

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Objectives

Advancing community practice through training and development of pharmacists

Development Plan for Community Practice

Structured foundation training
On-the-job training for seamless transition towards advanced practice

Graduate Certificates for Community Practice
Part-time blended learning with community attachments

Community of Practice
For sharing of best practices and sector-wide peer support networking

Timeline of activities

✓ Graduate Certificate in Advanced Pharmacy Practice was launched by NUS in May 2020. Registration for AY2021 will start in April/May 2021.
✓ Graduate Certificate in Community-based Geriatric Pharmaceutical Care was launched by NUS in October 2020. Registration for AY2021 will start in Sep/Oct 2021.

Call to action

▪ Find out more about the Graduate Certificates for Community Practice [HERE](#) or scan the QR code.
Objectives

Empowering pharmacists for collaborative prescribing practice through National Collaborative Prescribing Programme (NCPP)

National Collaborative Prescribing Programme

Purpose:
- Equip pharmacists with prescribing competencies and hands-on training
- Practice and apply collaborative prescribing competencies in clinical settings
- Attain the prescribing competencies via a single formative and summative assessment framework

Benefits

- Pharmacists are empowered to prescribe medicines and order tests within a collaborative framework overseen by doctors
- Enable expansion of pharmacist-led patient care services

Timeline of activities

- 66 pharmacists have completed NCPP since March 2018
- Training for Cohorts 5 and 6 started in August 2020

Call to action

- Find out more about the NUS National Collaborative Prescribing Programme [HERE](#) or scan the QR code
To establish a resilient supply chain of quality sterile preparations for the public healthcare sector

**Objective**

**Hub and Spoke Model**

- Pharmacy compounding centers (hubs) will be built to **PICS GMP* standards** to prepare and supply sterile preparations to other PHIs (spokes).
- Spokes may retain sterile preparation facility to prepare urgent and short expiry preparations, if required

**Benefits**

- Improved medication safety with automation and adoption of GMP standards, provision of ready-to-use preparations that include high alert medications
- Improved staff safety by leveraging on technology & reducing cytotoxic exposure
- Build system resilience & continuity (hubs cross-coverage)
- Enhancement of compounding capability for Singapore

**Timeline of activities**

- SGH and NCCS hubs at SHS are projected to commence operations from Oct 2021 and July 2022 respectively
- NHG-NUHS joint hub planned to commence operations by 2025

**Call to action**

- Continued support for compounding hubs and adopting the GMP standards to ensure patient safety in sterile preparations

*PICS GMP = Pharmaceutical Inspection Cooperation Scheme Good Manufacturing Practice*
Objective
To establish a national medicine delivery platform that is integrated with pharmaceutical care services to meet patients’ needs

What is NCFP?
- Consolidate and leverage on technology to prepare medicine for delivery to patients’ preferred location.
- Supported by enhanced pharmacy practice model to provide appropriate care for all patients using the medicine delivery service.

Benefits
- Build system resilience & continuity to enable pandemic preparedness
- Achieve End To End Supply Chain Efficiency
- Supports Telemedicine And New Model Of Care
- PHIs Pharmacy Staff Can Focus On Provision Of patient-centric care
- Consolidated Patients’ Medicine List By Different Doctors To Empower Ownership
- Improved patient and caregiver satisfaction & confidence

Timeline of activities
- Phased approach starting with polyclinics
- First site targeted to operationalize in 2H2021

What to expect
- Job redesigning and reskilling of pharmacy staff to support the enhanced pharmacy practice model
- Channeling of resources to focus on patient-centric care

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Objectives

To increase patient and consumer access to contextualised health information and education so that they can proactively manage their medications and health.

HealthHub My Medication & Medication A-Z

• Through My Medication and Medication A-Z, patients and consumers are able to access their own medication list and nationally harmonised medication information leaflets and videos*

Benefits

✓ Patients and consumers have access to trusted information about the medications that they are taking at their fingertips

✓ Healthcare professionals can use the information during patient counselling

✓ Promotes patient education, engagement and empowerment

Progress

• To date, PSS-NMI WG has published nearly 400 medication information leaflets on Healthhub, reaching 250k page views from Jan to Oct 2020

*Materials are jointly reviewed by multi-professional team through the Pharmaceutical Society of Singapore-National Medication Information (PSS-NMI) Workgroup. The workgroup consists of cluster partners (National Healthcare Group, National University Health System and SingHealth), community pharmacies (Guardian, Unity and Watsons) and Pharmaceutical Society of Singapore.
Objectives

To establish a Singapore specific and authoritative national reference to guide evidence-based best practices for medication prescribing, dispensing and administration by consolidating clinical and drug related information.

NDF Content

- A list of drugs that are registered in Singapore
- A list of drugs with government subsidies
- Links to subsidy information, local drug safety information and clinical guidance where relevant

NDF Access and Benefits

Hosted on a publicly accessible website to

✓ Help HCPs in Singapore make better-informed decisions in a confident manner and influence the appropriate use of drugs in Singapore
✓ Promote patient education and empowerment

Timeline

- Q4 2019: Started engagement with Product Registrants
- 2020: Ongoing stakeholder engagement
- Q1 2021: Commence development of NDF Website
- Q2 2022: Target NDF Launch Date

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4.3 Establish a National Drug Formulary (NDF)

Clinical Information
- Singapore-registered drug information
- Indication, dosing and contraindications
- Patient education materials and physician medication guide
- Product safety information
- Drug guidance

Pricing & Accessibility
- MOH drug subsidy status: Standard Drug List and Medication Assistance Fund
- Price range/ guide*
- General availability across public healthcare institutions*

Drug Terminology
- Singapore-registered product details** (licence holder, licence number, active ingredient, product name, route of administration, strength, ATC code, dosage form, forensic classification, manufacturer)
- Singapore Drug Dictionary code
- Barcode, product image*

*Components will be available at later phases
**As referenced to HSA Infosearch

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

Objectives

To achieve safe, unambiguous and seamless medication information exchange and interoperability for all healthcare settings in Singapore to improve medication safety

What is SDD?

- A national terminology standard for medicines
- Includes standardized, consistent descriptions
- Needs to meet diverse requirements of different users and cater for new innovative products

SDD Scope

- HSA registered drugs
- Exemption and extemporaneous drugs
- Single and multi-ingredient vitamins

Benefits

- Enables unambiguous identification, coding & interpretation of medicines
- Facilitates seamless exchange of medicines information

Call to action

- Continued adoption of SDD and SMST* as the preferred standards for medicines and dosing instructions

Timeline of activities

- **Q4 2019**: Implemented editorial rule changes to close mapping gaps
- **Q2 2020**: Started NHIPS engagement on drug master data
- **Q3 2020**: Go-live for Vaccine Subsidy (SVL) using SDD codes
- **2021**: Initiate audit of SDD mapping using NEHR data

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*SDD = Singapore Drug Dictionary, SMST = Singapore Medicines Supporting Terminology

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Objectives

To consolidate patient medication management and supply at the public healthcare pharmacies onto a common digital platform, enabling more efficient work processes and access to service or information by the patients, which will transform the care delivery.

What is NHIPS?

- A common pharmacy system for harmonised medication dispensing and leveraging on a national charging engine for harmonised medication-related billing.
- Transformation of outpatient medication management and supply through consolidating the multiple current isolated pharmacy systems, from being provider-centric to one that puts the patient at the center of outpatient medication supply.

Benefits

<table>
<thead>
<tr>
<th>Patients and Caregivers</th>
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<tbody>
<tr>
<td>Improve accessibility of medications to all patients where and when they need it for seamless patient care.</td>
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<tr>
<td>Facilitate multi-channel communication for patients and caregivers.</td>
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<tr>
<th>Service Provider</th>
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<tr>
<td>Facilitate pharmacists to access comprehensive medication history and patient active medication list for medication reconciliation.</td>
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<tr>
<th>National Level</th>
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<tr>
<td>Facilitate medication information exchange and system interoperability through data standardization and harmonization.</td>
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Timeline of activities

- Dec-20 - Establishment of Product Roadmap
- Mar 21 - Completion of Foundation Services Development
- Apr-23 - First Site Go-Live

Call to action

- Continued support from cluster pharmacists and MOH CPO to harmonize data and processes for a truly National Harmonized Pharmacy System

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1.1 Establish the role of pharmacy in the community care setting

2.1 Implement Development Framework for Pharmacists

2.4 Develop and Train Pharmacy Technicians

2.5 Build Up Manpower Capabilities for Community Care Setting

2.6 Collaborative Prescribing Practice

3.1 Centralise procurement, packaging, compounding and distribution

3.2 Deliver medications when patients need it, where patients need it - National Central Fill Pharmacy (NCFP)

3.3 Enhanced Pre-registration Pharmacist Training Programmes

4.3 Establish a National Drug Formulary (NDF)

For queries on other NPS initiatives, please contact us at: NPS@moh.gov.sg

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