

Visiting Pharmacist and Multi-Dose Medication Management Service Model in Residential Care Homes for the Elderly (RCHE): A Case Study in Hong Kong

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SPEED

**“no one should be denied adequate
healthcare through lack of means”
- our long-established healthcare policy**

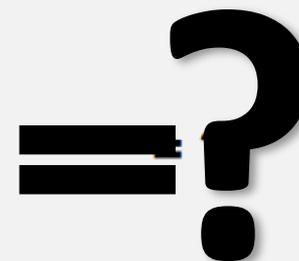
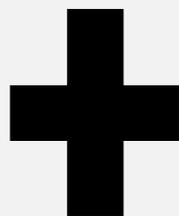
*ref : Appendix B Hong Kong's current healthcare system,
Your Life, Your Health document*

Hong Kong Elderly population

- Approximately 62% of population aged 60+ suffer one or multiple chronic disease(s)
- Most elderly patients use the public system for their illness and drug supplies
- Due to co-morbidities, an average elderly person can be supplied with more than 6-7 prescriptions items
- However, their ability to manage the medications and scheduling to take the right medications at the right times become problematic



The importance of regular medication review in elderly patients



- **Increase in co-morbidities with age**

- **Physiological changes**

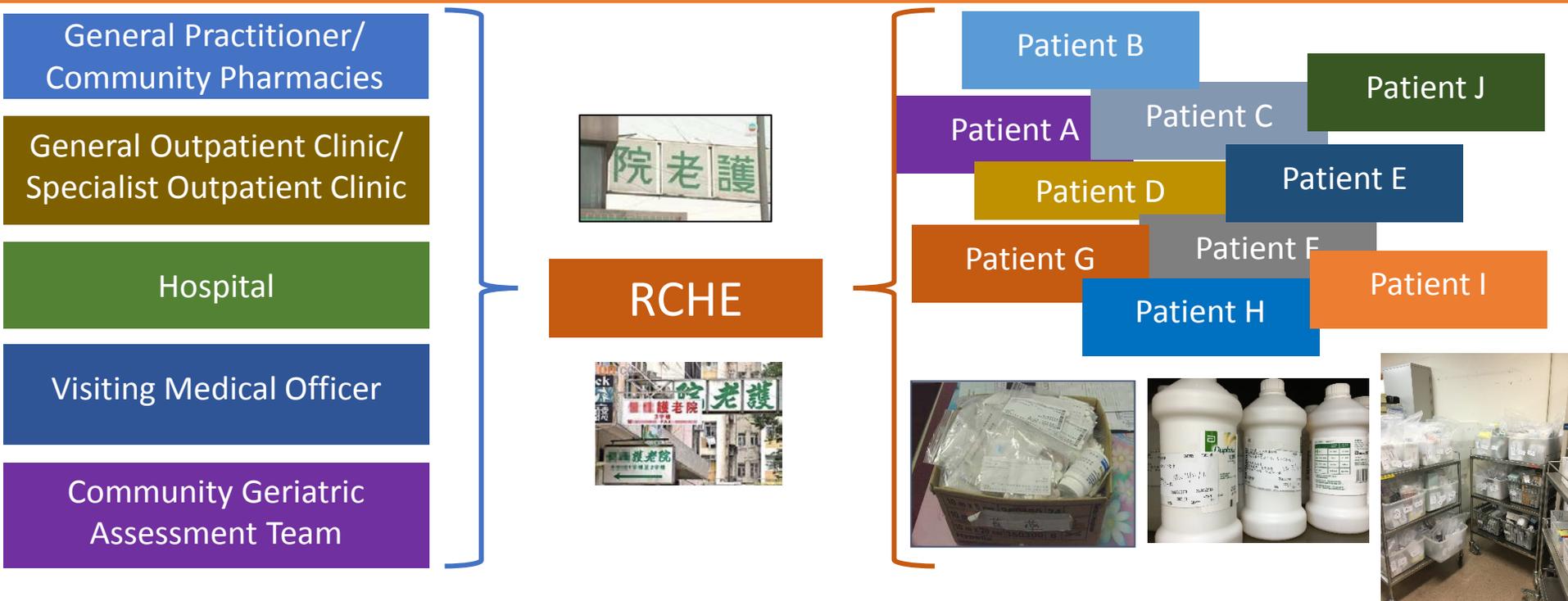
- pharmacokinetics
- pharmacodynamics



- **Increased susceptibility to:**

- Polypharmacy
- Drug interactions
- Adverse drug reactions
- Prescribing cascade
- Poor compliance
- Potentially inappropriate prescribing

At the Residential Care Home for the Elderly (RCHE)



- Problems of medication management become more complicated
 - storage, sorting, dispensing & scheduling & disposal

Existing drug packing system in most OAHs

- There's no qualified pharmacist participation in the medication management of RCHE.
- Moreover, prolong working hours, inadequate training and high turnover rate of RCHE staff also increase the risk of medication related incident.
- As per our experience, it normally takes **6 hours** for a staff to pack drugs for each day of dispensing.



23宗食錯藥個案 2人病逝

派錯糖尿藥 長者入院

近年涉配錯藥事件



一名病人死亡後，醫管局早前接獲23宗誤服藥個案，1人昏迷，尚確有誤派藥物予長者個案，醫管局已派員調查。

【專案組報道】安老院是長者安享晚年的地方，卻又是藥物事故風險相對較高的場所。根據公立醫院的紀錄，本港每個月平均有兩至三宗安老院長者因誤服糖尿藥而入院的個案。專家警告，誤服糖尿藥隨時致命。鑑於社會福利署的發牌條例沒有訂明安老院需要設有到訪藥劑師，有藥劑師團體率先提供藥劑師到訪服務，以堵塞安老院藥劑專業真空的漏洞。



誤服糖尿藥 每月平均三宗

香港醫院藥劑師學會教育總監崔俊明（見圖）指出，根據醫院紀錄，本港每月平均有兩至三宗安老院長者誤服糖尿藥的入院個案。他指出，非糖尿病人誤服糖尿藥，輕則冒汗、手震，重則昏迷，嚴重者可致死亡；「腦部是最需要血糖的器官，誤服糖尿藥致血糖過低可令腦細胞壞死，一粒糖尿藥足已令人昏迷。」

過去本港曾發生多次因誤服糖尿藥入院甚至死亡個案。香港老年學會亦指，四成安老院在藥物管理上存在問題，包括派藥時沒有核對長者姓名，一次過為長者執三日藥、沒有棄掉舊藥等。

現時社會福利署的發牌條例訂明，安老院必須駐有註冊護士和到診醫生，卻沒規定要有到訪藥劑師。派錯藥事故公布後，不少營辦安老院的非政府機構曾主動接觸藥劑師團體。有見及此，約二十名醫院及社區藥劑師於兩個月前自發成立香港藥學服務基金，免費為全港安老院提供藥物管理到訪藥劑師服務；首階段會為二十間非牟利安老院提供服務。

基金發起人崔俊明表示，安老院的藥物管理主要有三方面：風險管理、防止派錯藥的系統或設施以及藥物協調，基金的註冊藥劑師會為安老院改善管理藥物程序，包括藥物的儲存、分發等，並利用電腦儲存院友的藥歷，同時提供各類有關藥物的課程和培訓，以減少職

安老院派錯藥事故不斷

老人院「派錯藥」過程

1. 去年5月揭發西醫李世澤將糖尿藥當胃藥處方，終5人死亡；
2. 醫管局加強監察，留意有否類似個案；
3. 過去9個月，局方懷疑23名病人誤服降血糖藥，9人居於院舍；
4. 醫管局與衛生署及社署聯合跟進事件；
5. 社署發現涉案9間院舍中，1間安老院證實派錯藥，另8名長者疑與服用中藥或營養補充品有關；
6. 社署向犯錯老人院發出警告信，衛生署則往該院加強培訓；
7. 社署昨日去信全港安老院主管，提醒藥物安全的重要性。

資料來源：醫院管理局、社會福利署及衛生署

近年涉配

日期	事件
01/03/06	患有甲狀腺病及糖尿病，在服用降糖藥時，因藥劑師配錯藥，導致病人死亡。
01/09/05	私營安老院，因藥劑師配錯藥，導致病人死亡。
22-23/06/05	東區醫院，因藥劑師配錯藥，導致病人死亡。
27/05/05	西醫李世澤，因處方錯誤，導致5名病人死亡。

護士難求 資歷低保健員派

安老院藥劑師人手不足，有藥劑師指出，院舍與大醫院抽調護士，長期缺乏專業人士，部分資歷較低的保健員較難接受社會規定，聘請足夠護士，並確保其資歷能落在資歷較低的保健員手中。

薪酬低 難與醫院搶人

私營安老院協會秘書長陳志育指，社署現時有規定，處理藥物時必須由保健員或註冊護士負責，社署更規定安老院的院舍需要有一定比例的註冊護士。這種規定難以對住者保障十足，但難以執行。

「現在醫院都不夠護士用，護士又怎肯在院舍工作？一些院舍為湊夠數，符合社署對護士比例的規定，惟有請退休護士，又或者資歷差一點的人。」陳志育指，或令院舍護士薪酬平，有資助院舍能聘請保健員代為湊夠數。

保健員較難接受社會規定，聘請足夠護士，並確保其資歷能落在資歷較低的保健員手中。

業性不及護士亦不同樣重要。長期而言，石濤強指，起薪可低至5.00元人士入職，亦難好不足，「一班培訓可言。」

陳志育指，爭聘護士，根本學位的專業護理得認可，相信可理行的新市。

公院無

專家解構 安老院長期人手不足，有藥劑師指出，局為長者診治時，各專科不會年約80歲女院友被處方18種藥物，導致誤服或劑量出錯風險重複，導致誤服或劑量出錯風險重複，導致誤服或劑量出錯風險重複。

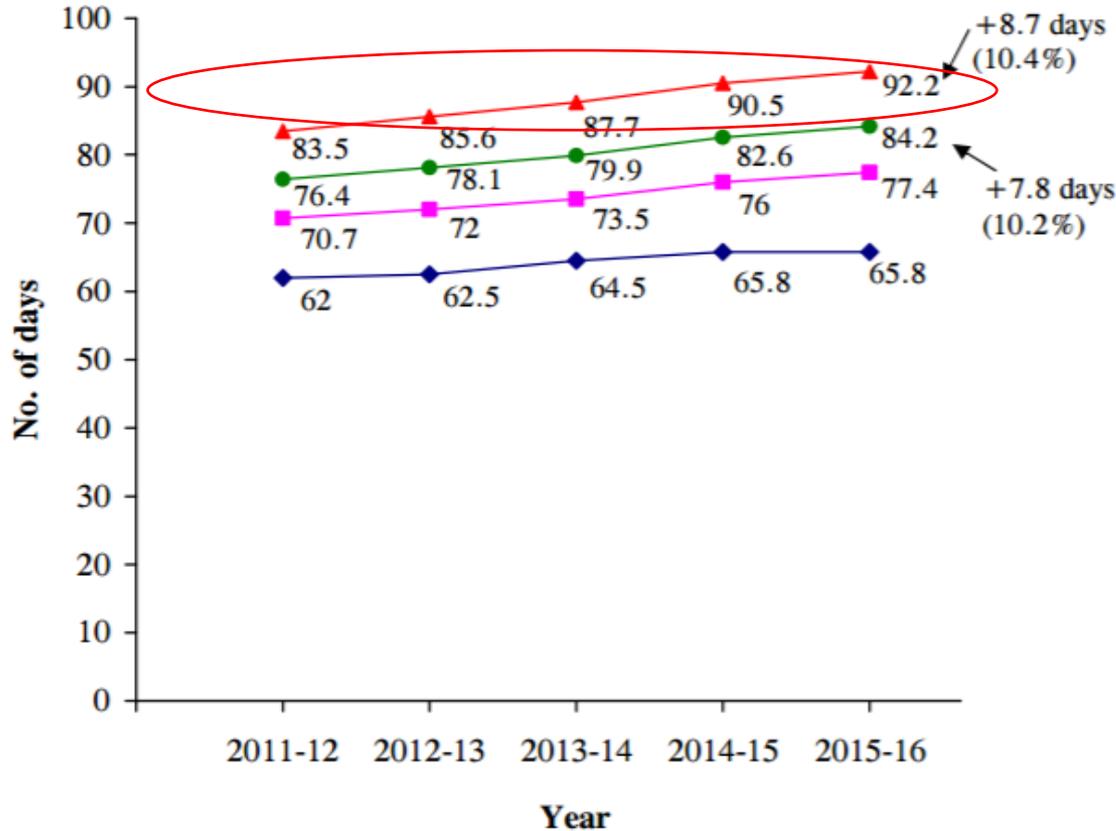
「一個長者住不同科，精神科、骨科、骨科、精神科、骨科、骨科，應有責任協調用藥，又給止痛藥、胃藥、安眠藥！」

熟悉安老院藥物全營運總監鍾永明藥

與析院錯。任，隨舍，高門（安老牌後）將

■本報記者 尤弘毅

Average prescription lengths for HA specialist out-patients
(2011-12 to 2015-16)



- Legend:
- ◆ Aged 18 or less
 - Aged 19 to 65
 - ▲ Aged over 65
 - All ages



Finding:

the average prescription length for people aged over 65 showed the greatest increase of 8.7 days (10.4%), from 83.5 to **92.2** days.

- large quantities of drugs are wasted and disposed



Source: HA records

Overview of Visiting Pharmacist Service

1 — Medication Management

- Assist RCHes in complying “Drug Management in RCHes”, including medication storage and distribution work

2 — Medication Reconciliation on Various Sources of Prescription Drugs

- Build a set of complete and accurate medication profile list
- Identification of drug duplication, unnecessary prescribing, necessary dosage adjustment
- Medication Administration Record generation and renewal

3 — Medication Review and Inspection

- Follow up and verify medications upon discharged from hospital
- Identify side effects, adverse reactions etc.

4 — Make Suggestions on Clinical Interventions

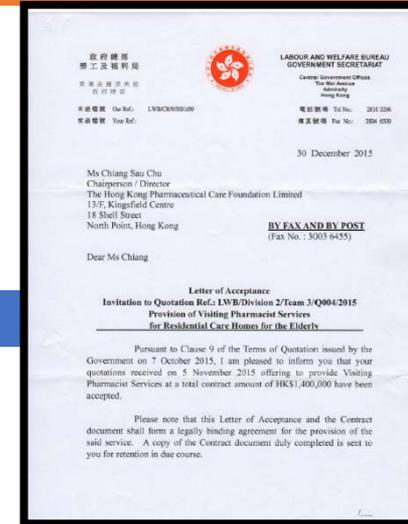
- Maintain communication and close cooperation with Medical Service Teams

5 — Advise Disposal of Medications

- Advise staff to contact Environmental Protection Department for the arrangement of disposal of unwanted medications

6 — Training and Education

- Provide trainings and education for nurses and health workers on safety principles of drug usage



Tackle Medication Management issues

Medication Reconciliation

- Go through the bags of drugs from various sources
- Go through the patients' charts
- Verify with carers, CGAT nurse, VMO
- Build up the drug list
- Generate the Medication Administration records

Medication Review

- Need for New Medication
- Unnecessary Medication
- Wrong Medication
- Dose Too Low
- Dose Too High
- Adverse Drug Reactions (ADRs)
- Failure to Receive Drugs
- “Natural” Does Not Necessarily Mean Safe and Effective

Objectives and Outcome of VP service

Objectives :

- Assess and monitor the appropriateness of drug therapy
 - Appropriate to patient use
 - (Licensed) Indications
 - Contra-indication, Caution
 - Experience of Side Effects
 - Drug Interactions
 - Cost effectiveness
 - Evidence Based Practice

Outcome :

- Improved Efficacy of Drug Therapy
 - Evidence Based Therapy
 - Optimisation of Therapy
- Improved Medication Safety
 - Reduce duplication of therapy
 - Minimise side effects / medicines incidents
 - Improved drug knowledge of OAH staff
- Improved Cost Effectiveness
 - Cost effective drug usage
 - Decrease wastage of drug

Training and education sessions

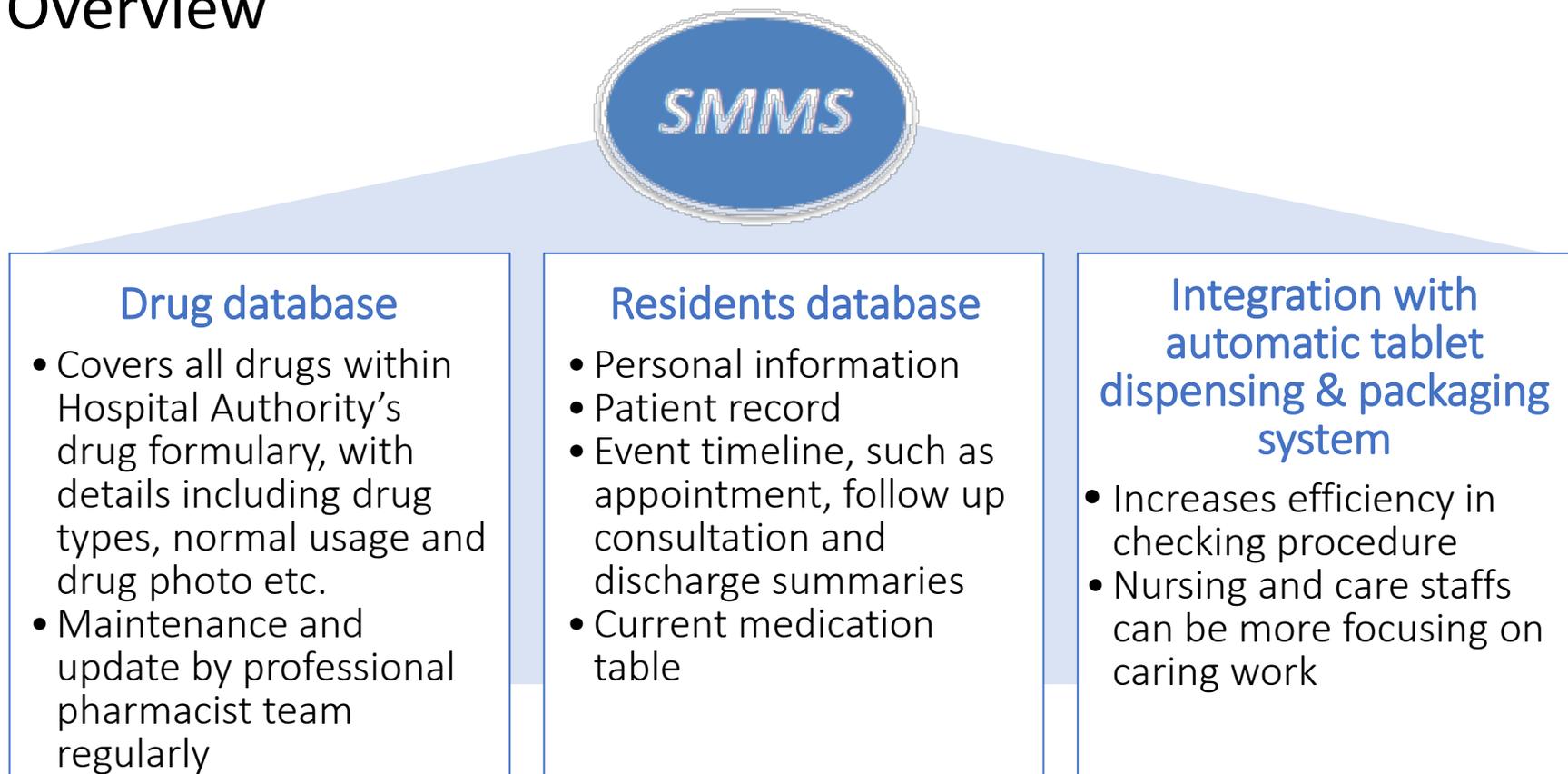
藥物講座及培訓



Integrated Service Model

Developed and IT system -

SafeMed Medication Management System (SMMS) Overview



Patients' information and medication list

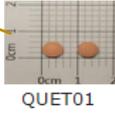
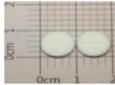
院友個人資料

診斷歷史

目前服用的
藥歷資料

The screenshot displays a web-based patient information system. The browser address bar shows the URL 192.168.201.66:8080/sdps/default.jsp. The page title is '院友資料' (Patient Information). The main content area is divided into several sections:

- Personal Information:** Includes fields for '覆診卡' (Referral Card) and '病歷' (Medical History). The referral card lists: FYK(馮義敬醫院) / CGAT(社區老人評估組), QMH(瑪麗醫院) / PGT(精神科評估組), and QMH(瑪麗醫院) / Breast Clinic(乳腺外科). The medical history lists: Cataract(白內障)@-, Dementia(認知障礙症)@-, Hemifacial spasm(半面痙攣)@-, HTN(高血壓)@-, Psychiatric illness(精神疾病)@-, and Trigeminal neuralgia(三叉神經痛)@-.
- Medication List:** A table showing the current medication history. It includes columns for '圖片' (Image), '藥物資料' (Medication Information), and dates. The table lists three medications: 1. SERTRALINE (HCL) TABLET 50MG, 2. QUETIAPINE (FUMARATE) TABLET 25MG, and 3. TAMOXIFEN (CITRATE) TABLET 20MG.

圖片	藥物資料	
	1. SERTRALINE (HCL) TABLET 50MG 口服每日一次,每次25毫克 (0.5粒)	(for 190 days) 10/07/2015 - 15/01/2016 QMH/PGT@10/07/2015 首次服藥: 10/07/2015
	2. QUETIAPINE (FUMARATE) TABLET 25MG 口服需要時(25%)晚上一次,每次25毫克 (1粒)	(for 190 days) 10/07/2015 - 15/01/2016 QMH/PGT@10/07/2015 首次服藥: 10/07/2015
	3. TAMOXIFEN (CITRATE) TABLET 20MG 口服每日一次,每次20毫克 (1粒)	(for 185 days) 15/05 - 15/11 QMH/Breast Clinic@15/05

自動化配藥及包裝系統

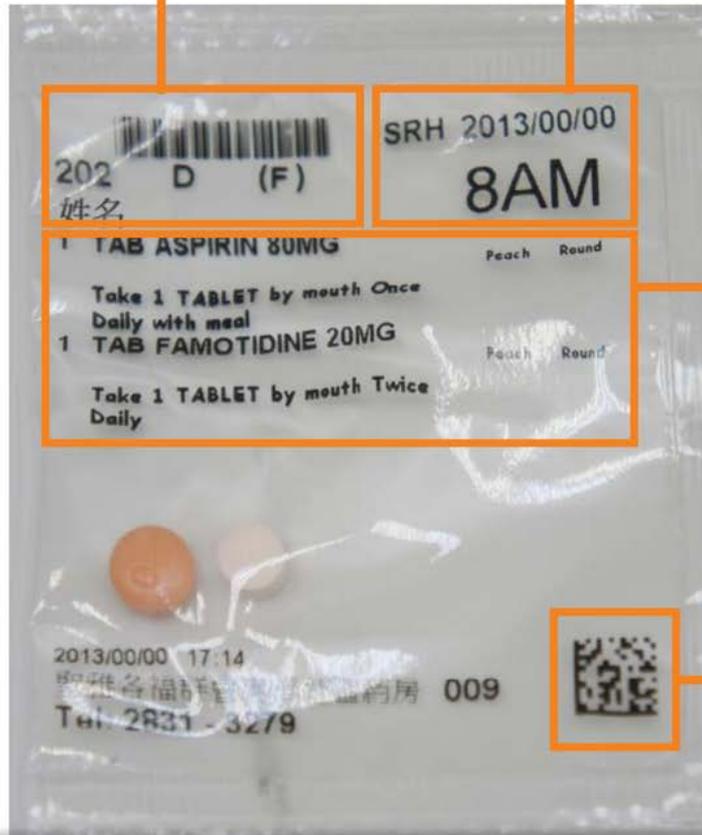
Automatic Tablet Dispensing & Packaging System



Multi Dose Medication pouches

病人資料：房號 · 床號 · 性別 · 姓名

服用日期及時間



藥袋

Class A吸塑包裝

- ✓ 將每輪需要服用的藥物獨立包裝
- ✓ 透濕率低, 可保存至少 28 天
- ✓ 容易打開
- ✓ 可以列印詳細資料

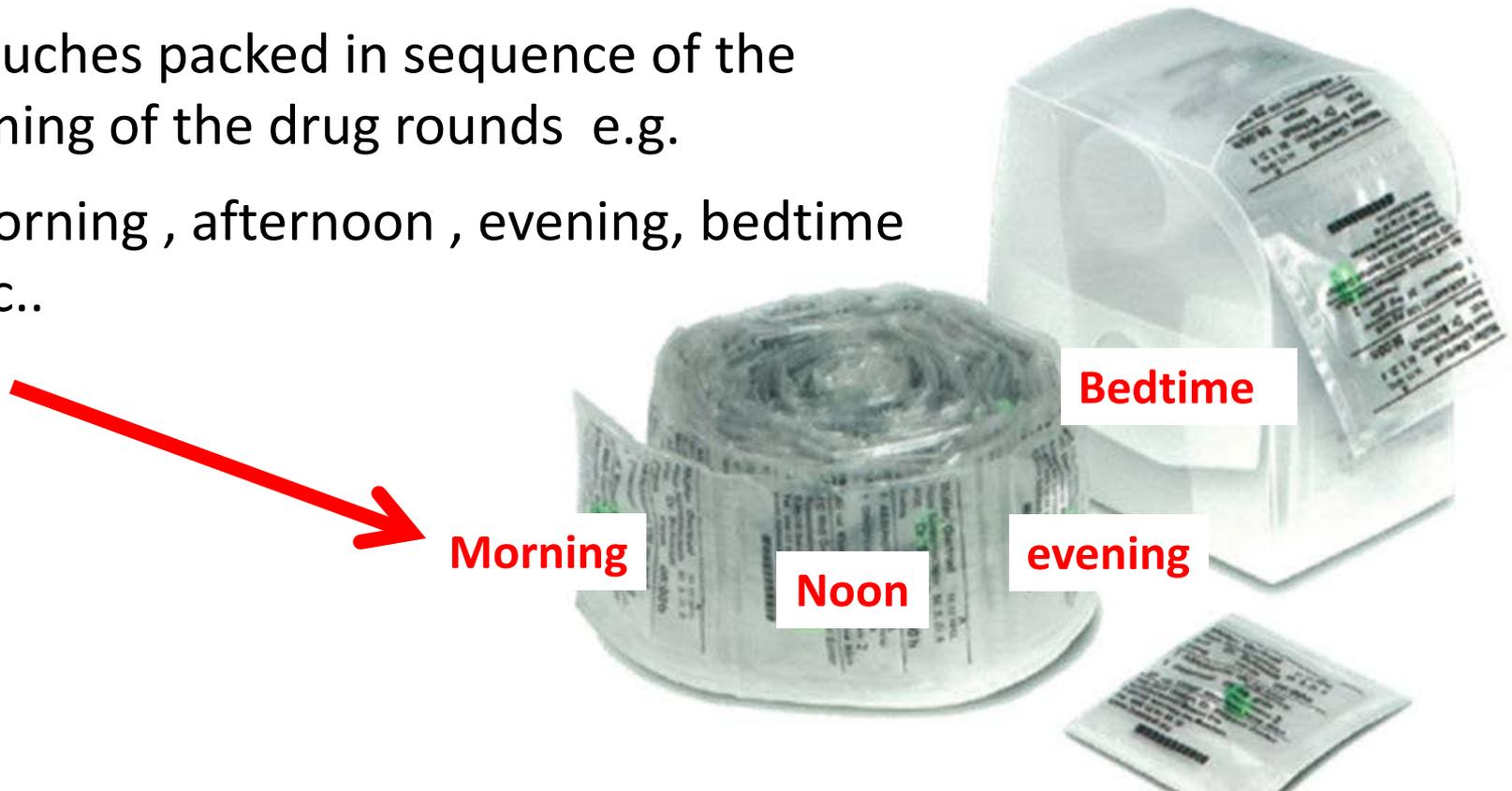
藥物資料：

藥物名稱 · Dose ·
SIG · 形狀 · 顏色

Vizen核對用Barcode

Multi-Dose Medications packed into rolls

- Each roll packed to guide the drug administration rounds
- Pouches packed in sequence of the timing of the drug rounds e.g.
- Morning , afternoon , evening, bedtime etc..



Automated Dispensing and packaging

- Decrease human touches in dispensing and storing
- Streamline OAH dispensing operations and increases accuracy
- Help OAH eliminate the opportunity for medication errors during dispensing
- Improve residents medication safety

Bar Code Medication Administration (BCMA)

real time recording the tasks

Scan the drug bar code



Counter check



Scan the Resident ID & photo verification



Give drug

Bar Code Medication Administration (BCMA)

- A. Patient name
- B. Medication name and strengths
- C. Time of administration
- D. Bar code for bedside scanning



 TrackMyMeds



Add Medication



My Meds



Takings



Reminder Settings



User Account

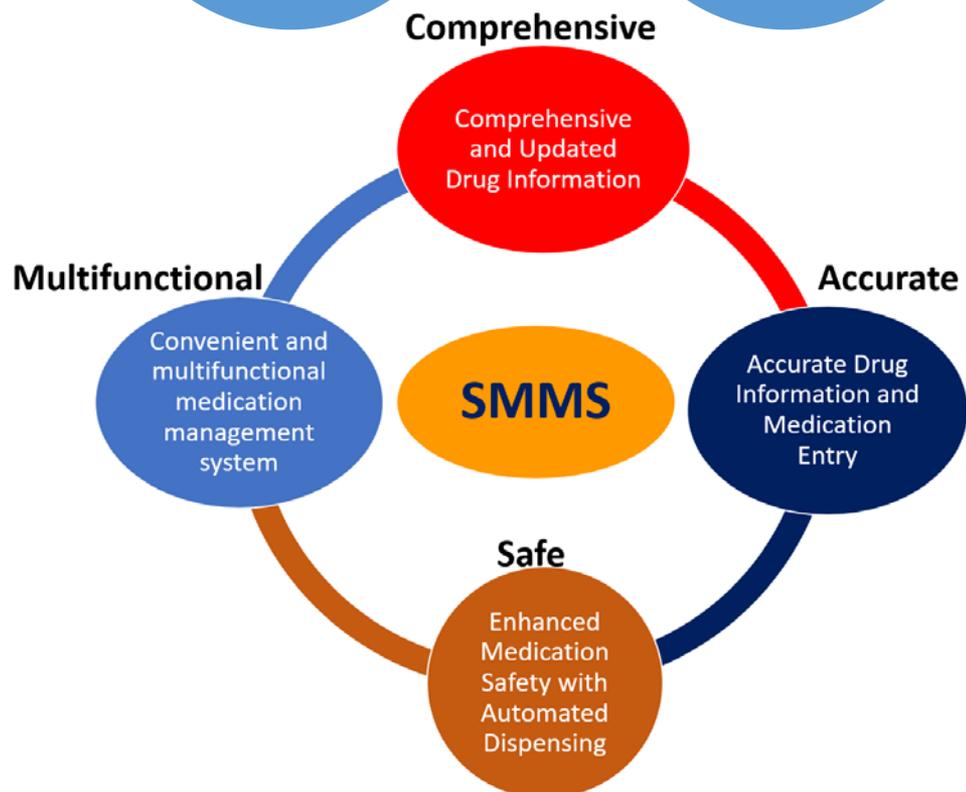
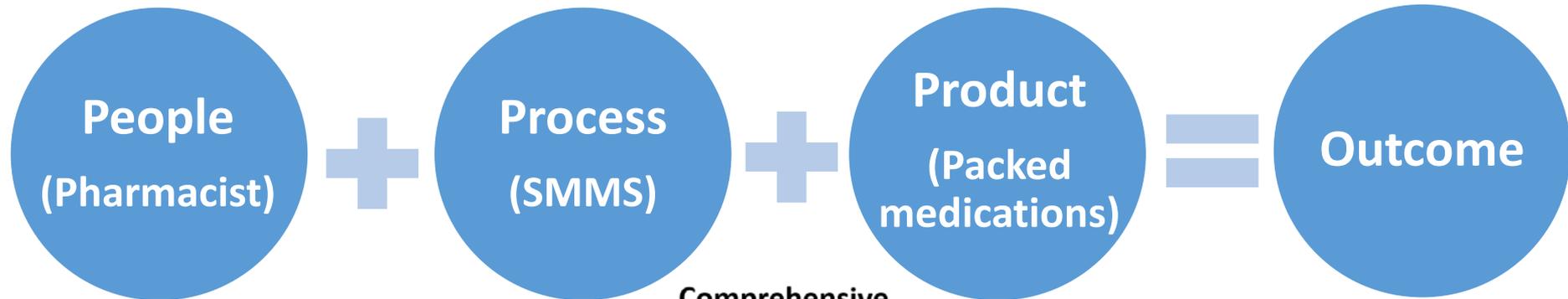


Information

Change the existing scenes at most OAH



Integrated system assisted approaches to handle medication safety at OAH



Conclusion

- Evaluations on service model undertaken and to be published
- Need funding support to continue and expand the service
- Needed not only in the RCHEs
- Hope the society and the HK government can recognize the value of the service model
- To adopt in the future plans and budget as part of elderly service support

THANK YOU!

Q&A

