# Submission from Mrs Mary Catherine CHENG <u>LC Paper No. CB(2)965/18-19(07)</u>

On line registration no.993259A1 Submission on Corporate Governance and manpower situation of the Hospital Authority Panel on Health Services 8 March 2019

Dear Chairman and members,

## **Relieving Workload of Doctors and Nurses and Enhancing Patient Care Quality**

Currently, the public hospitals are overloaded with patients. It is apparent that there are insufficient doctors and nurses in the Hospital Authority to cope with the increasing workload. Patients are not getting the quality of care they deserve as doctors are given a short duration of time in consultation with the patients and no time to find out whether the patients are taking the medications appropriately or not. Pharmacists are most knowledgeable about drugs and can relieve the heavy burden of doctors and nurses in various ways:

## **Pharmacists Led Clinics**

In the specialist clinics, there are insufficient doctors to see the chronic patients within 8 to 12 months. In between medical appointments with the doctors, patients can make appointment to see a pharmacist. The pharmacist can review the medications that the patients are taking, check if there is duplication, any non- compliance and inappropriate use of medications. Pharmacists can educate and counsel patients, prepare and motivate them to follow their pharmacotherapeutic regimens and monitoring plans. This can contribute to positive outcomes of pharmacotherapy.

There are reports of various pharmacist-led clinics for chronic diseases or symptoms in different clinical settings in the United States [1-12] and other countries [13-18]. These include clinics undertaking education and counseling for anticoagulation [13, 15-17], asthma [2], diabetes [3], hyperlipidemia [4,5], hypertension [6,7], pain [8,9], smoking cessation [10], and cancer chemotherapy [11,12].

Beneficial effects of pharmacist-led clinics have been repeatedly reported in terms of cost-effectiveness, patients' adherence to and knowledge about pharmacotherapy, and the outcome of treatment [19-24].

#### Ward Clinical Pharmacy

A clinical pharmacist is stationed in the ward daily. The pharmacist can provide pharmaceutical care from admission to discharge.

(1) Upon admission, the pharmacist will conduct medication reconciliation. Medication reconciliation is a formal process in which healthcare providers work together with patients, families and care providers to ensure accurate and comprehensive medication information is communicated consistently across transitions of care. Medication reconciliation requires a systematic and comprehensive review of all the medications a patient is taking to ensure that medications being added, changed or discontinued are carefully evaluated. It is an essential component of medication management and will inform and enable prescribers to make the most appropriate prescribing decisions for the patient. An understanding of the patient's actual medication use is a prerequisite to safe medication management. Medication reconciliation on admission is to identify unintended discrepancies between medications prescribed on admission and the usual medications prior to admission—sources to assist medication reconciliation included: electronic patient record; patient's ward case notes; interview with patient and/or patient carers. The number and type of unidentified discrepancies were recorded [25--26].

(2) Patients have their medicines reviewed by a clinical pharmacist to ensure that their medicines are clinically appropriate, and to optimize their outcomes from their medicines. Medication review is to check for medication appropriateness on admission, during their stay in hospital and also at discharge. There are 10 criteria to assess for appropriateness, namely indication, effectiveness, dosage, correct direction, practical direction, drug-drug interaction, drug-disease interaction, duplication, duration, and expense [26]. Recommendations from the pharmacist after the reconciliation and medication review will then be communicated to the in-charge doctor via a written note in the medical records. Recommendations are reinforced verbally if deemed appropriate by the pharmacist.

(3) Pharmacist counselling on admission and also at discharge is provided to improve patients' drug knowledge to ensure proper use of drugs and compliance after discharge. A discharge counselling service is provided for all patients who returned home. The counselling included any changes to drug regimen; an explanation of each drug's indication; any untoward effects that might occur and when to seek medical advice; and drug storage and administration instructions. An up-to-date medication list is prepared by the pharmacists n discharge. They should be encouraged to share this list and request that it is reviewed with them during encounters with healthcare providers.

#### The Impact of Medication Reconciliation (MedRec)

Pharmacy-led MedRec at admission or discharge is shown to reduce medication discrepancies [25].

• A 2016 systematic review of 19 studies (11 of which were Randomised clinical Trials, showed pharmacy-led medication reconciliation interventions to be an effective strategy to reduce medication discrepancies. Greater impact was found when MedRec was conducted at either admission or discharge, but lesser during multiple transitions in care [27].

Pharmacist-led MedRec showed reduced rate of all cause readmissions, all cause Emergency Department visits, and Adverse Drug Event-related hospital interventions.

• A 2016 systematic review of 17 studies (eight of which were Randomised clinical Trials), showed pharmacist-led medication reconciliation programmes to have clinical impact – a substantial reduction in the rate of all-cause readmissions (19 per cent), all-cause Emergency Department visits (28 per cent) and Adverse Drug Event-related hospital revisits (67 per cent) [28].

Pharmacists Led Clinics, medication reconciliation and medication review by clinical pharmacists have been shown to be cost effective and greatly enhance patient care quality. I hope the Hospital Authority can speed up the implementation of Pharmacists Led Clinics and Ward Clinical Pharmacy to relieve the workload of doctors and nurses.

Mary Catherine Cheng Member, Pharmacy & Poisons Board of Hong Kong Ex-- president, the Pharmaceutical Society of Hong Kong

### <u>References</u>

1. Kiyofumi Yamada, Toshitaka Nabeshima, J Pharm Health Care Sci. 2015;1:2

 Pauley TR, Magee MJ, Cury JD. Pharmacist-managed, physician-directed asthma management program reduces emergency department visits. Ann Pharmacother. 1995;29:5– 9. [PubMed].

 Davidson MB, Karlan VJ, Hair TL. Effect of a pharmacist-managed diabetes care program in a free medical clinic. Am J Med Qual. 2000;15:137–142. doi: 10.1177/106286060001500403.
[PubMed] [CrossRef]

4.Bozovich M, Rubino CM, Edmunds J. Effect of a clinical pharmacist-managed lipid clinic on achieving National Cholesterol Education Program low-density lipoprotein goals. Pharmacotherapy. 2000;20:1375–1383. doi: 10.1592/phco.20.17.1375.34895. [PubMed] [CrossRef]

5. Cording MA, Engelbrecht-Zadvorny EB, Pettit BJ, Eastham JH, Sandoval R. Development of a pharmacist-managed lipid clinic. Ann Pharmacother. 2002;36:892–904. doi: 10.1345/aph.1A158. [PubMed] [CrossRef]

6. Okamoto MP, Nakahiro RK. Pharmacoeconomic evaluation of a pharmacist-managed hypertension clinic. Pharmacotherapy. 2001;21:1337–1344. doi: 10.1592/phco.21.17.1337.34424. [PubMed] [CrossRef]

7. Geber J, Parra D, Beckey NP, Korman L. Optimizing drug therapy in patients with cardiovascular disease: the impact of pharmacist-managed pharmacotherapy clinics in a primary care setting. Pharmacotherapy. 2002;22:738–747. doi: 10.1592/phco.22.9.738.34061. [PubMed] [CrossRef]

Rapoport A, Akbik H. Pharmacist-managed pain clinic at a Veterans Affairs Medical Center.
Am J Health Syst Pharm. 2004;61:1341–1343. [PubMed]

9. Weitzel KW, Presley DN, Showalter ML, Seymour S, Waddell RF. Pharmacist-managed headache clinic. Am J Health Syst Pharm. 2004;61:2548–2550. [PubMed]

10. Dent LA, Scott JG, Lewis E. Pharmacist-managed tobacco cessation program in Veterans Health Administration community-based outpatient clinic. J Am Pharm Assoc. 2003;44:700– 714. [PubMed]

11. McKee M, Frei BL, Garcia A, Fike D, Soefje SA. Impact of clinical pharmacy services on patients in an outpatient chemotherapy academic clinic. J Oncol Pharm Pract. 2011;17:387–394. doi: 10.1177/1078155210389217. [PubMed] [CrossRef]

12. Ruder AD, Smith DL, Madsen MT, Kass FH., 3rd Is there a benefit to having a clinical oncology pharmacist on staff at a community oncology clinic? J Oncol Pharm Pract. 2011;17:425–432. doi: 10.1177/1078155210389216. [PubMed] [CrossRef]

13. Choe HM, Kim J, Choi KE, Mueller BA. Implementation of the first pharmacist-managed ambulatory care anticoagulation clinic in South Korea. Am J Health Syst Pharm. 2002;59:872–874. [PubMed]

14. Lee VW, Leung PY. Glycemic control and medication compliance in diabetic patients in a pharmacist-managed clinic in Hong Kong. Am J Health Syst Pharm. 2003;60:2593–2596. [PubMed]

15. Dib JG, Mohammed K, Momattin HI, Alshehri AM. Implementation of pharmacist-managed anticoagulation clinic in a saudi arabian health center. Hosp Pharm. 2014;49:260–268. doi: 10.1310/hpj4903-260. [PMC free article] [PubMed] [CrossRef]

16. Thanimalai S, Shafie AA, Hassali MA, Sinnadurai J. Comparing effectiveness of two anticoagulation management models in a Malaysian tertiary hospital. Int J Clin Pharm. 2013;35:736–743. doi: 10.1007/s11096-013-9796-6. [PubMed] [CrossRef]

17. Manji I, Pastakia SD, DO AN, Ouma MN, Schellhase E, Karwa R, Miller ML, Saina C, Akwanalo C. Performance outcomes of a pharmacist-managed anticoagulation clinic in the

rural, resource-constrained setting of Eldoret, Kenya. J Thromb Haemost. 2011;9:2215–2220. doi: 18.1111/j.1538-7836.2011.04503.x. [PubMed] [CrossRef]

18. Conde-Estevez D, Salas E, Albanell J. Survey of oral chemotherapy safety and adherence practices of hospitals in Spain. Int J Chin Pharm. 2013;35:1236–1244. [PubMed]

19. Aspinall SL, Cunningham FE, Zhao X, Boresi JS, Tonnu-Mihara IQ, Smith KJ, Stone RA, Good CB, ESA Clinic Study Group Impact of pharmacist-managed erythropoiesis-stimulating agents clinics for patients with non-dialysis-dependent CKD. Am J Kidney Dis. 2012;60:371–379. doi: 10.1053/j.ajkd.2012.04.013. [PubMed] [CrossRef]

20. Snider M, Carnes C, Grover J, Davis R, Kalbfleisch S. Cost-benefit and cost-savings analyses of antiarrhythmic medication monitoring. Am J Health Syst Pharm. 2012;69:1569–1573. doi: 10.2146/ajhp110270. [PubMed] [CrossRef]

21. Wallgren S, Berry-Cabán CS, Bowers L. Impact of clinical pharmacist intervention on diabetes-related outcomes in a military treatment facility. Ann Pharmacother. 2012;46:353–357. doi: 10.1345/aph.1Q564. [PubMed] [CrossRef]

22. Wilt VM, Gums JG, Ahmed OI, Moore LM. Outcome analysis of a pharmacist-managed anticoagulation service. Pharmacotherapy. 1995;15:732–739. [PubMed]

23. Garton L, Crosby JF. A retrospective assessment comparing pharmacist-managed anticoagulation clinic with physician management using international normalized ratio stability.

J Thromb Thrombolysis. 2011;32:426–430. doi: 10.1007/s11239-011-0612-7. [PubMed] [CrossRef]

24. Vivian EM. Improving blood pressure control in a pharmacist-managed hypertension clinic. Pharmacotherapy. 2002;22:1533–1540. doi: 10.1592/phco.22.17.1533.34127. [PubMed] [CrossRef]

25. Canadian Patient Safety Institute/ISMP Canada(2017) Medication Reconciliation in Acute Care Getting Started Kit Ver. 4 pp12-16

26. Chiu Patrick KC, Lee Angela WK, See Tammy YW, Chan Feli HW. Outcomes of a pharmacist-led medication review. HKMJ 2018 24 EPUB 9 Feb 2018 DOI:100.12809 27. Mekonnen AB, McLachlan AJ, Brien JE. Pharmacy-led medication reconciliation programmes at hospital transitions: a systematic review and meta-analysis. J Clin Pharm Ther. 2016 Feb 23. doi: 10.1111/jcpt.12364. [Epub ahead of print] Review.PubMed PMID: 26913812.

28. Mekonnen AB, McLachlan AJ, Brien JA. Effectiveness of pharmacist-led medication reconciliation programmes on clinical outcomes at hospital transitions: a systematic review and meta-analysis. BMJ Open. 2016 Feb 23;6(2):e010003. doi: 10.1136/bmjopen2015-010003. PubMed PMID: 26908524; PubMed Central PMCID: PMC4769405.