

Clinical Pharmacy in Psychiatry

Subjects: Pharmacology & Pharmacy

Contributor: Bastien Langrée, Hervé Javelot

Although clinical pharmacy is a discipline that emerged in the 1960s, the question of precisely how pharmacists can play a role in therapeutic optimization remains unanswered. In the field of mental health, psychiatric pharmacists are increasingly involved in medication reconciliation and therapeutic patient education (or psychoeducation) to improve medication management and enhance medication adherence, respectively. However, psychiatric pharmacists must now assume a growing role in team-based models of care and engage in shared expertise in psychopharmacology in order to truly invest in therapeutic optimization of psychotropics.

Keywords: clinical pharmacy ; mental health ; psychiatry ; expertise ; psychopharmacology

1. Introduction

Twenty-five years ago, the ESCP questioned how clinical pharmacists could play a role in optimizing pharmacotherapy ^[1]. Three scenarios have been proposed for describing the position of the clinical pharmacist and named "clerk", "controller" and "care manager". Only the last one referred to a proactive model, centered on the patient with a real partnership with physicians, and appeared to be the most desirable scenario for the future of clinical pharmacy ^[1].

However, in psychiatry, it clearly appears that knowledge in psychopharmacology is paramount to the quality of clinical practice and thus, pharmacists could be privileged interlocutors for forging a link between pharmacological knowledge and clinical practice. This connection between clinical pharmacology and clinical pharmacy had been thought of by the pioneers of this discipline—Paul Parker (pharmacist) and Charles Walton (pharmacologist)—and was still later relayed by another father of the discipline, Russell R Miller ^[2].

While recent publications continue to demonstrate the interest and scalability of clinical pharmacy in psychiatry ^{[3][4][5][6]}, its deployment continues to be held back for various reasons ^{[7][8][9]}.

2. Medication Reconciliation Process in Psychiatry

Medication reconciliation (MedRec) consists of collecting all prescribed and non-prescribed drugs at the patients' admission in order to identify potential discrepancies with the hospital prescription. This process also occurs at discharge to explain all therapeutic changes to primary care providers. The aim is to secure medication management and to improve links between daily care providers and hospitals. MedRec is particularly interesting in psychiatry because sometimes the patient profile makes it difficult to get an exhaustive medication list due to numerous reasons (therapeutic break, cognitive impairment, prevalence of comorbidities) ^[10].

Several studies showed that MedRec reduces adverse drug events and re-hospitalization rate in general hospitals ^[11]. Fewer studies are available about MedRec in mental health hospitals ^{[12][13]}. Nevertheless, a multicenter study showed an error rate of 6.3% in mental health hospitals' prescriptions, of which more than half were considered as clinically relevant errors ^[14]. According to local experimentations, performing MedRec at admission enables detection of medication errors for half of patients ^{[15][16]} and recognition of new clinically significant drug–drug interactions for more than a quarter of prescriptions ^[17]. Moreover, MedRec has also had an impact at discharge: an error rate of more than 20% on discharge prescriptions were found in three mental health trusts ^[18]. In addition, this process could improve the drug follow-up by primary care providers by specifying monitoring parameters (e.g., lithium, clozapine, prescription duration of benzodiazepines). These studies therefore demonstrate that MedRec reduces prescription errors in transition of care and can optimize medication management.

To complete this process, CMM is being developed in the USA. CMM consists of reviewing all patients' medications to determine adherence, effectiveness, relevance and safety. This pharmacist-led practice has been demonstrated to improve patients' treatment goals and to reduce costs ^[8]. These practices show that pharmacists' expertise in

pharmacotherapy is essential to enhance medication-related outcomes for patients with psychiatric disorders. In turn, the skills of clinical pharmacists in psychopharmacology are often a crucial element to ensure real benefit to the process of MedRec, alone or integrated in CMM, in psychiatry.

3. Global Collaborative View of Psychiatric Pharmacists and Psychiatrists

This narrative review of the literature makes it possible to formalize an extended vision of the field of collaboration between psychiatric pharmacists and psychiatrists in patient care. The interventions of psychiatric pharmacists may be broken down into two levels. A first level integrating conventional clinical pharmacist missions such as MedRec—integrated or not in CMM or MTM—and TPE. The second level is based on the principle of Interdisciplinary Team Care Interventions and corresponds in our practice to an advanced form of CCI, offered by some countries. This level revolves around a network of practitioners, with psychiatric pharmacists and psychiatrists recognized as experts on a (or more) targeted domain(s), in order to formalize guidelines tailored to the particularities of each patient and offer advice about the rational use of TDM for optimize the prescription of psychotropics. Psychopharmacotherapeutic optimization co-developed by psychiatric pharmacist and psychiatrists and integrated: MedRec, advanced CCI and TPE is the challenge proposed by the new Resource and Expertise Centers in PsychoPharmacology (CREPP—Centres de Ressources et d'Expertise en Psychopharmacologie—in French) [3].

We propose a synthetic vision of the collaborative view between psychiatric pharmacists and psychiatrists to promote shared expertise in clinical psychopharmacology through development of CREPPs on **Figure 1**.

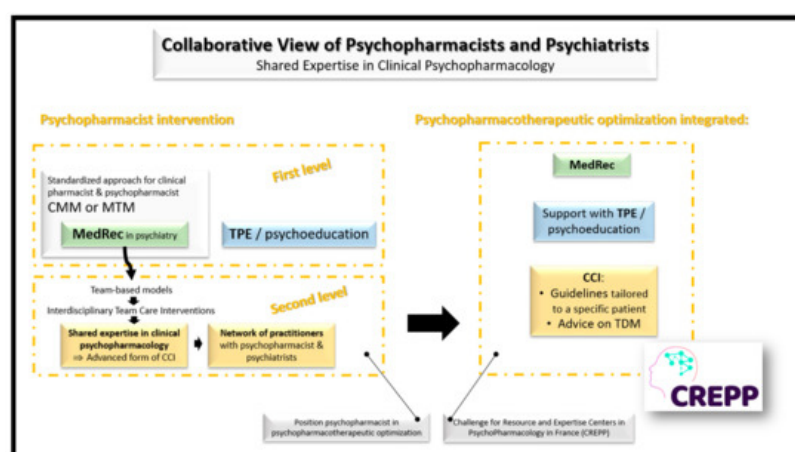


Figure 1. Collaborative view of psychiatric pharmacists and psychiatrists for a shared expertise in clinical psychopharmacology and the development of CREPPs. CCI: Case Conferencing Intervention—mainly developed in Scandinavian countries and in Australia; CMM: Comprehensive Medication Management and MTM: Medication Therapy Management—mainly structured in English speaking countries; CREPPs: Centres de Ressources et d'Expertise en PsychoPharmacologie = Resource and Expertise Centers in PsychoPharmacology—currently in full expansion in France; MedRec: Medication reconciliation—widely developed around the world; TDM: Therapeutic Drug Monitoring—applied to psychotropic drugs has been particularly developed in certain German-speaking countries—Germany, Austria and Switzerland—which have proposed the "Consensus Guidelines for Therapeutic Drug Monitoring in Neuropsychopharmacology" at the initiative of the TDM task force of the Arbeitsgemeinschaft für Neuropsychopharmakologie und Pharmakopsychiatrie (AGNP); TPE: Therapeutic Patient Education—widely developed around the world.

4. Conclusions

In several countries, and in particular non-English-speaking countries, such as France, the pharmacist is often more of a quality manager than a true clinical pharmacist. To overcome this "identity crisis" it is undoubtedly necessary to question the visions that pharmacists have of their own aptitudes and wishes in relation to what clinical practice is [7][19][20]. This perspective also places them in front of a potential socio-professional transformation leading them to transition to a conception of care closer to that of physicians [19][20].

We believe that MedRec and TPE are important bases to keep as the first foundations in the construction of clinical pharmacy in mental health. Nevertheless, psychiatric pharmacists must now assume a growing role in team-based models of care, as well as to participate intensively in the shared expertise in psychopharmacology aiming for therapeutic optimization and a shared decision on treatments. In this perspective, increasing skills in psychopharmacology and

developing expertise in TDM in particular, should build the future legitimacy of the working partnership between psychiatrists and psychiatric pharmacists. This model of shared expertise in psychopharmacology is currently in full expansion in France through the deployment of Resource and Expertise Centers in PsychoPharmacology ^[3].

References

1. Leufkens, H.; Hekster, Y.; Hudson, S. Scenario analysis of the future of clinical pharmacy. *Pharm. World Sci.* 1997, 19, 182–185.
 2. Miller, R.R. History of clinical pharmacy and clinical pharmacology. *J. Clin. Pharmacol.* 1981, 21, 195–197.
 3. Javelot, H.; Dizet, S.; Straczek, C.; Langrée, B.; Michel, B.; Haffen, E.; Bertschy, G. Enhancing the role played by clinical pharmacists in psychiatric settings to better integrate clinical psychopharmacology into the decision-making process. *Thérapie* 2021, 76, 149–156.
 4. Elbe, D.; Chapman, A. Formal Psychiatry Resident Rotations with a Clinical Pharmacy Specialist: Preliminary Experience at BC Children's Hospital. *J. Can. Acad. Child. Adolesc. Psychiatry* 2019, 28, 7–8.
 5. Mohiuddin, A.K. Psychiatric Pharmacy: New Role of Pharmacists in Mental Health. *Sch. J. Psychol. Behav. Sci.* 2019, 2, 219–223.
 6. Macdonald, O.; Smith, K.; Marven, M.; Broughton, N.; Geddes, J.; Cipriani, A. How pharmacist prescribers can help meet the mental health consequences of COVID-19. *Evid. Based Ment. Health* 2020, 23, 131–132.
 7. Tanty, A.; Dantigny, R.; Bardet, J.D.; Chanoine, S.; Bedouch, P.; Allenet, B. French hospital clinical pharmacy: An identity crisis? *Ann. Pharm. Fr.* 2021, 79, 431–439.
 8. Goldstone, L.W.; DiPaula, B.A.; Caballero, J.; Park, S.H.; Price, C.; Zasadzki Slater, M. Improving medication-related outcomes for patients with psychiatric and neurologic disorders: Value of psychiatric pharmacists as part of the health care team. *Ment. Health Clin.* 2015, 5, 1–28.
 9. Rubio-Valera, M.; Chen, T.F.; O'Reilly, C.L. New roles for pharmacists in community mental health care: A narrative review. *Int. J. Environ. Res. Public Health* 2014, 11, 10967–10990.
 10. Dizet, S.; Varnier, V. La conciliation médicamenteuse en psychiatrie. *Medication conciliation in psychiatry. Santé Mentale* 2016, Août, 38–40.
 11. Mekonnen, A.B.; McLachlan, A.J.; Brien, J.A.E. Effectiveness of pharmacist-led medication reconciliation programmes on clinical outcomes at hospital transitions: A systematic review and meta-analysis. *BMJ Open* 2016, 6, e010003.
 12. Paton, C.; McIntyre, S.; Bhatti, S.F.; Shingleton-Smith, A.; Gray, R.; Gerrett, D.; Barnes, T.R.E. Medicines Reconciliation on Admission to Inpatient Psychiatric Care: Findings from a UK Quality Improvement Programme. *Ther. Adv. Psychopharmacol.* 2011, 1, 101–110.
 13. Brownlie, K.; Schneider, C.; Culliford, R.; Fox, C.; Boukouvalas, A.; Willan, C.; Maidment, I.D. Medication reconciliation by a pharmacy technician in a mental health assessment unit. *Int. J. Clin. Pharm.* 2014, 36, 303–309.
 14. Keers, R.N.; Williams, S.D.; Vattakatuchery, J.J.; Brown, P.; Miller, J.; Prescott, L.; Darren, M.; Ashcroft, D.M. Prevalence, nature and predictors of prescribing errors in mental health hospitals: A prospective multicentre study. *BMJ Open* 2014, 4, e006084.
 15. Noblot-Rossignol, M.; Vailleau, J.L.; Hamad, M.; Denis, F.; Beye, F. Conciliation des traitements médicamenteux à l'admission: Expérimentation en établissement de santé mentale et éligibilité des patients pouvant en bénéficier en priorité. *Pharm. Hosp. Clin.* 2017, 52, 177–185.
 16. Leherle, A.; Kowal, C.; Toulemon, Z.; Dalle-Pecal, M.; Pelissolo, A.; Leboyer, M.; Paul, M.; Diviné, C. Is the medication reconciliation achievable and relevant in Psychiatry?: Feedback on the implementation of medication reconciliation on hospital admission. *Ann. Pharm. Fr.* 2020, 78, 252–263.
 17. Choi, S.J.; Storey, R.; Parikh, S.V.; Bostwick, J.R. The Impact of Completing Medication Reconciliation and Depression Treatment History in an Outpatient Depression Clinic. *Psychopharmacol. Bull.* 2019, 49, 44–55.
 18. Keers, R.N.; Williams, S.D.; Vattakatuchery, J.J.; Brown, P.; Miller, J.; Prescott, L.; Ashcroft, D.M. Medication safety at the interface: Evaluating risks associated with discharge prescriptions from mental health hospitals. *J. Clin. Pharm. Ther.* 2015, 40, 645–654.
 19. Austin, Z.; Gregory, P.A.; Martin, J.C. Negotiation of interprofessional culture shock: The experiences of pharmacists who become physicians. *J. Interprof. Care* 2007, 21, 83–93.
 20. Yeung, E.Y.H. Pharmacists Becoming Physicians: For Better or Worse? *Pharmacy* 2018, 6, 71.
-

