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Integration of Community Pharmacy in Primary Health Care: The Challenge

ABSTRACT

Community pharmacies and pharmacists predominantly operate in a retail environment independently of other health care providers and they are not often viewed as an integral member of the healthcare team. Thus, they remain overlooked or excluded during integration processes of health care systems. At the same time there are calls by the profession at national and international levels for community pharmacy to be integrated within primary care systems. The COVID-19 pandemic appears to have further stimulated this desire. When pressing for integration, various terms, such as integration, integrated care or interprofessional collaboration, are used in an interchangeable manner leading to lack of clarity, ambiguity and confusion for health care policy makers, planners, and other healthcare professionals. The literature was reviewed to identify critical components for community pharmacy to consider for integration. From the five selected articles describing integration of community pharmacies, four different constructs were identified: Consensus, connectivity, communication and trust. The integration of community pharmacy into the health system may translate into better access for patients to primary care services, contribute to cost effectiveness and promulgate the sustainability of the system. However significant political, economic, social and practice change would be required by all stakeholders. Further research is needed to underpin a consensus for a definition, the type of integration and the model optimally suited to integrate community pharmacy into primary care. These models, specific and adaptable to each national health care system and political environment, would need to be consensus-based by principal stakeholders to overcome a variety of barriers, including government resistance. Mere calls or demands by the pharmaceutical profession, although laudable, will not be sufficient to overcome the historical, cultural and economic challenges.

Keywords: Community pharmacy; pharmacists; integration; systems integration; primary care.

TITLE PAGE

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Integration of Community Pharmacy in Primary Health Care: The Challenge

Health systems around the world are undergoing major policy and organizational changes in an attempt to reduce fragmentation of care, increase efficiency, be sustainable and improve health outcomes.[1, 2] The integration of primary, secondary and tertiary health care is being promulgated in an attempt to coordinate services, promote efficient use of limited health resources and improve continuity of care (i.e., a systems approach in conjunction with an integrated care approach).[3]

Systems integration has been extensively studied over the last 20 years with various types identified in the literature[4] (e.g., horizontal, vertical, clinical and functional integration). Due to its multifactorial nature, the evaluation, implementation and evidence generated for integrated systems has been challenging. As the integration of health systems and services evolve at an international level,[5] it is concerning that policy makers and stakeholders, apart from exceptional cases, do not appear to be giving much consideration to community pharmacy during these processes.[6,7]

Call for the integration of Community Pharmacy in Primary health care

More recently there have been calls for community pharmacy to be integrated into primary health care.[8-9] However, researchers and professional leaders of pharmacy organizations, when calling for integration, use a variety of terminology,[10] such as integration, integrated care, interprofessional collaboration or coordination. These terms are often used in an interchangeable manner, leading to lack of clarity, ambiguity and confusion for health care policy makers, planners and other healthcare professionals.

Community pharmacy is claimed to be the most visited, consulted and accessible primary health care setting[6] due to a wide distribution, accessibility[11] and high consumer trust.[12] Apart from the major professional role in the distribution and dispensing of prescription medications, a variety of patient-centered services are offered.[13-14] Community pharmacists who work within these community pharmacies are trained as health care professionals with expert medicines knowledge, contributing to improve patient care processes and outcomes.[12] However, community pharmacists operate independently of other health care providers and are not usually viewed as an integral member of the healthcare team.[6,15,14] The retail environment in which they operate leads community pharmacy to be perceived by some stakeholders as “shopkeepers”, thus having a business bias.[16]

Community pharmacy’s role and contribution to primary health care has been viewed by governments and third-party players predominantly as a supplier of medications.[17] This view is reflected by governments in policy statements, contractual arrangements and legislation as sellers or dispensers of medications. However, this logistics role has been increasingly associated, albeit at a different pace in various countries, with a role in improving the rational and quality use of medications. In some countries, this role has been expanded with additional health promotion and preventive services such as vaccinations and health screening.[13-14] The rate and extent of implementation and remuneration of these patient-oriented services is highly variable between and within countries.[18-20] Although it would be expected that the underlying international trend in the increased role of patient-oriented community pharmacy professional services would drive collaboration within primary care, this does not appear to have substantially occurred.[6,13-14]

The call and drive for integration with primary health care appears to be supported by community pharmacies and is actively promulgated by international professional organizations.[12-15,21] The factors that stimulate this development, may include the need to have the pharmacist's professional role recognized by governments, other health care professionals and the public.[16,22] Economic needs, particularly the need for the remuneration of new professional services, may also be an underpinning factor. There are excellent examples where community pharmacies have been included as part of the COVID-19 pandemic government policy response. This has been mainly manifested through the provision of masks, provision of information, testing, preparing disinfection lotions, securing vaccines and administering vaccinate. However, there are some countries where there has been limited or late inclusion and even full exclusion. During the COVID-19 pandemic, community pharmacy[23-24] has shown exemplary courage and effort, remaining accessible to provide the health and medication needs of the population. This professional behavior at a global level has resulted in a change of usual practices and an acceleration in the introduction of new technology and services.[21]

The factors for the apparent exclusion of community pharmacy from the integration processes in primary health care systems are difficult to discern, but could include lack of political recognition, private-public contractual arrangements, interprofessional turf wars, internal and external role clarity, social and economic pressures and importantly a lack of strategic direction by and for the profession by most governments. What is clear is that there is a need to conceptualize and define how community pharmacy could and would be better integrated into primary care, public health and social services. Moreover, there appears to be a gap in the literature addressing how an integrated community pharmacy network would contribute to the efficiency, efficacy and sustainability of the primary health care system.

As a first step in the process of conceptualizing the integration of community pharmacy into primary health care systems, the objective of this commentary is to identify critical components of integration from the perspective of community pharmacy.
A narrative review of the literature identified five articles describing integration involving community pharmacies were identified.[25-29] These five articles were all qualitative studies exploring stakeholders' perceptions of the integration of community pharmacy within primary care. Lake et al.[27] used Kodner's[30] definition of integration, understood as "a coherent set of methods and models on the funding, administrative, organizational, service delivery, and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors". Bradley et al.[26], based on Lawrence and Lorsch' organizational theory[31], suggested that first there must be a differentiation of the units of organizations to deal with their external environment and then, to achieve their overall goal, these units must be linked leading to integration. In addition, Bradley et al.[26] stated a series of stages taken from Armitage's collaboration theory[32] which led to integration, including: 1. Isolation; 2. Encounter; 3. Communication; 4. Collaboration between two agents and 5. Collaboration throughout the organization. Similar concepts were described by Bradley et al. in 2008[25], which referred to Ahgren & Axelsson's[33] and Leutz's[34] research, suggesting that integration was "a continuum with several stages". Ahgren & Axelsson in 2009[35] defined integration ".....as the extent to which different welfare services are combined in a way that is consistent with the needs and personal circumstances of the service users". Meanwhile integration was defined by Leutz[34], "as the search to connect the health care system (acute, primary medical, and skilled) with other human service systems (e.g., long-term care, education, and vocational and housing services) in order to improved outcomes

(clinical, satisfaction, and efficiency)." The other two articles did not include a specific definition[28-29], however key features related to integration in the context of community pharmacy were reported.

In summary, the integration of community pharmacy could include a "coherent set of methods and models"[27] assuring "a continuum of services" and "coordination at different levels". The following elements could be critical: connectivity, direct communication[25-27,29] and information exchange using similar or interoperable technologies;[25-26,28] collaboration following same system objectives and sharing decisions;[26-28] recognition of professional roles[26,28-29] and respect among professionals [26-27] building trust;[25-27,29] and good interprofessional relationship.[28-29] These elements can be grouped under the following constructs: Consensus, connectivity, communication and trust (figure 1). Consensus between community pharmacy and primary care system may be required, leading to having common objectives for the health care system, participating in shared decision-making and health strategies. Through connectivity, community pharmacy would have access to use the same or interoperable technologies as the health care system thus sharing knowledge and information. These technologies would allow bidirectional communication. Participating in these processes and systems could assist in increasing and improving trust, respect and recognition of roles leading to enhanced interprofessional relationships and integrated care. The value of identifying these underpinning constructs is that interventions, activities and programs can target and facilitate the process of integration irrespective of how it is defined or what type (s) of integration is found to be optimal in the context of community pharmacy. In addition, if validated measures or instruments for these constructs can be found then the impact of interventions could be measured.

Fig 1.: Critical constructs underpinning the integration of community pharmacy in the primary care system.

Conclusions

The integration of community pharmacy into the primary care health system would reduce the fragmentation of patient care processes by increasing the chances of optimizing the incorporation of pharmaceutical policies, products and services in holistic health system thinking. The economic advantages of using an established health care resource, such as the existing community pharmacy network would contribute to the sustainability of the health care system. A greater contribution by community pharmacy to reaching governmental objectives would be inevitable. Integration would enhance the existing trend for community pharmacy to provide patient-centered care. Community pharmacists would use their clinical and medicine expertise more fully empowering other health care professionals and patients in enhancing the quality use medicines. However, significant political, economic, social and practice change would be required by all stakeholders. Further research is needed to determine a definition, the type of integration and model for the integration of community pharmacy in primary care. This model, adaptable and specific to each national health care system and political environment, would need to be consensus based by principal stakeholders to overcome a variety of barriers, including governance resistance. Mere calls or demands by the pharmaceutical profession, although laudable, will not be sufficient to overcome the historical, cultural and economic challenges.

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Declaration of competing interest

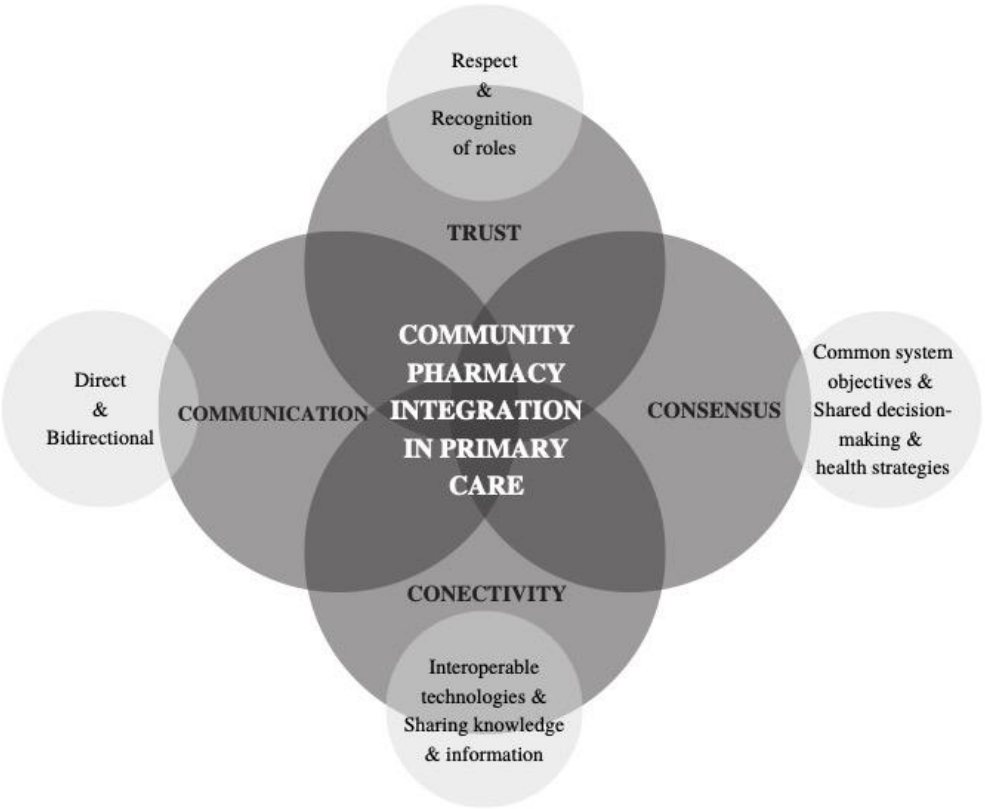
None.

References

1. Thorstensen-Woll C, Wellings D, Crump H, C G. Understanding integration: how to listen to and learn from people and communities. Available from: https://www.kingsfund.org.uk/publications/understanding-integration-listen-people-communities. Accessed November 19, 2021.
2. Gov UK. Integration and innovation: working together to improve health and social care for all (HTML version). Available from: https://apps.who.int/iris/handle/10665/330491. Accessed November 19, 2021.
3. Rechel B. How to enhance the integration of primary care and public health? Approaches, facilitating factors and policy options. Copenhagen (Denmark): European Observatory on Health Systems and Policies; 2020.
4. World Health Organization. Integrated care models: an overview. Available from: https://www.euro.who.int/__data/assets/pdf_file/0005/322475/Integrated-care-models-overview.pdf. Accessed November 19, 2021.
5. Hill J. Integration doesn't have to mean handing the NHS power. Available from: https://www.lgcplus.com/politics/lgc-briefing/integration-doesnt-have-to-mean-handing-the-nhs-power-12-10-2021/. Accessed November 19, 2021.
6. Khaira M, Mathers A, Benny Gerard N, Dolovich L. The Evolving Role and Impact of Integrating Pharmacists into Primary Care Teams: Experience from Ontario, Canada. *Pharmacy (Basel)*. 2020;8:234. doi:10.3390/pharmacy8040234
7. Williams S, Brad L, Jones D, Hayes J. Pharmacy professionals are part of the solution to reduce GPs' workload. *BMJ*. 2021;373:n1176. doi:10.1136/bmj.n1176
8. Rolf von den Baumen T, Lake J, Everall AC, Dainty K, Rosenberg-Yunger Z, Guilcher SJT. "Clearly they are in the circle of care, but . . .": A qualitative study exploring perceptions of personal health information sharing with community pharmacists in an integrated care model. *Can Pharm J (Ott)*. 2020;153:378-398. doi:10.1177/1715163520956686
9. Hansen RN, Norgaard LS, Hedegaard U, et al. Integration of and visions for community pharmacy in primary health care in Denmark. *Pharm Pract (Granada)*. Jan-Mar 2021;19:2212. doi:10.18549/PharmPract.2021.1.2212
10. Shaw S, Rosen R, Rumbold B. An overview of integrated care in the NHS. What is integrated care? Available from: https://www.nuffieldtrust.org.uk/files/2017-01/what-is-integrated-care-report-web-final.pdf. Accessed November 19, 2021.
11. Berenbrok LA, Gabriel N, Coley KC, Hernandez I. Evaluation of Frequency of Encounters With Primary Care Physicians vs Visits to Community Pharmacies Among Medicare Beneficiaries. *JAMA Netw Open*. 3:e209132. doi:10.1001/jamanetworkopen.2020.9132
12. Lyles LF, Hildebrandt H, Mair A. Population Health Management Approach: Integration of Community-Based Pharmacists into Integrated Care Systems: Reflections from the U.S., Achievements in Scotland and Discussions in Germany. *Int J Integr Care*. 2020;20:13. doi:10.5334/ijic.5431

13. Raiche T, Pammett R, Dattani S, et al. Community pharmacists' evolving role in Canadian primary health care: a vision of harmonization in a patchwork system. *Pharm Pract (Granada)*. 2020;18:2171. doi:10.18549/PharmPract.2020.4.2171
14. Anderson C, Sharma R. Primary health care policy and vision for community pharmacy and pharmacists in England. *Pharm Pract (Granada)*. 2020;18:1870. doi:10.18549/PharmPract.2020.1.1870
15. Dineen-Griffin S, Benrimoj SI, Garcia-Cardenas V. Primary health care policy and vision for community pharmacy and pharmacists in Australia. *Pharm Pract (Granada)*. 2020;18:1967. doi:10.18549/PharmPract.2020.2.1967
16. Hindi AMK, Schafheutle EI, Jacobs S. Community pharmacy integration within the primary care pathway for people with long-term conditions: a focus group study of patients', pharmacists' and GPs' experiences and expectations. *BMC Fam Pract*. 2019;20:26. doi:10.1186/s12875-019-0912-0
17. PGEU. Position Paper on Affordability of Medicines and Health Systems Sustainability. Available from: https://www.pgeu.eu/publications/pgeu-position-paper-on-affordability-of-medicines-and-health-systems-sustainability/. Accessed November 19, 2021.
18. Houle SK, Grindrod KA, Chatterley T, Tsuyuki RT. Paying pharmacists for patient care: A systematic review of remunerated pharmacy clinical care services. *Can Pharm J (Ott)*. 2014;147:209-232. doi:10.1177/1715163514536678
19. Houle SKD, Carter CA, Tsuyuki RT, Grindrod KA. Remunerated patient care services and injections by pharmacists: An international update. *Can Pharm J (Ott)*. 2019;152:92-108. Published 2019 Jan 24. doi:10.1177/1715163518811065
20. Czarniak P, Krass I, Sunderland B, Sim TF, Carter S. Factors associated with the intensity of government remunerated and unremunerated service provision in community pharmacies. *Res Social Adm Pharm.* 2021;17:1614-1622. doi:10.1016/j.sapharm.2020.12.014
21. Community pharmacy at a glance 2021. Regulation, scope of practice, remuneration, and distribution of medicines through community pharmacy premises and other outlets. Viegas R, Poe M, Sousa G, FIP. Available from: https://farmaciavirtuale.it/wp-content/uploads/2021/07/Community-pharmacy-at-a-glance-2021.pdf. Accessed November 19, 2021.
22. Schindel TJ, Breault RR, Hughes CA. "It Made a Difference to Me": A Comparative Case Study of Community Pharmacists' Care Planning Services in Primary Health Care. Pharmacy (Basel). 2019;7:90. doi:10.3390/pharmacy7030090
23. Bahlol M, Dewey RS. Pandemic preparedness of community pharmacies for COVID-19. *Res Social Adm Pharm*. 2021;17:1888-1896. doi:10.1016/j.sapharm.2020.05.009
24. Hoti K, Jakupi A, Hetemi D, Raka D, Hughes J, Desselle S. Provision of community pharmacy services during COVID-19 pandemic: a cross sectional study of community pharmacists' experiences with preventative measures and sources of information. *Int J Clin Pharm*. 2020;42:1197-1206. doi:10.1007/s11096-020-01078-1
25. Bradley F, Elvey R, Ashcroft DM, et al. The challenge of integrating community pharmacists into the primary health care team: a case study of local pharmaceutical services (LPS) pilots and interprofessional collaboration. *J Interprof Care*. 2008;22:387-398. doi:10.1080/13561820802137005
26. Bradley F, Ashcroft DM, Noyce PR. Integration and differentiation: a conceptual model of general practitioner and community pharmacist collaboration. *Res Social Adm Pharm*. 2012;8:36-46. doi:10.1016/j.sapharm.2010.12.005

27. Lake JD, Rosenberg-Yunger ZRS, Dainty KN, Rolf von den Baumen T, Everall AC, Guilcher SJT. Understanding perceptions of involving community pharmacy within an integrated care model: a qualitative study. *BMC Health Serv Res.* 2020;20:396. doi:10.1186/s12913-020-05237-y
28. Hindi AMK, Schafheutle EI, Jacobs S. Community pharmacy integration within the primary care pathway for people with long-term conditions: a focus group study of patients', pharmacists' and GPs' experiences and expectations. *BMC Fam Pract*. 2019;20:26. doi:10.1186/s12875-019-0912-0
29. Ryan K, Patel N, Lau WM, Abu-Elmagd H, Stretch G, Pinney H. Pharmacists in general practice: a qualitative interview case study of stakeholders' experiences in a West London GP federation. *BMC Health Serv Res*. 2018;18:234. doi:10.1186/s12913-018-3056-3
30. Kodner DL, Spreeuwenberg C. Integrated care: meaning, logic, applications, and implications--a discussion paper. *Int J Integr Care*. 2002;2:e12. doi:10.5334/ijic.67
31. Lawrence PR, Lorsch JW. Differentiation and Integration in Complex Organizations. *Adm Sci Q*. 1967;12:1. doi:10.2307/2391211
32. Armitage GD, Suter E, Oelke ND, Adair CE. Health systems integration: state of the evidence. *Int J Integr Care.* 2009;9:e82. doi:10.5334/ijic.316
33. Ahgren B, Axelsson R. Evaluating integrated health care: a model for measurement. *Int J Integr Care*. 2005;5:e01-e09. doi:10.5334/ijic.134
34. Leutz WN. Five laws for integrating medical and social services: lessons from the United States and the United Kingdom. Milbank Q. 1999;77:77-v. doi:10.1111/1468-0009.00125
35. Ahgren B, Axelsson SB, Axelsson R. Evaluating intersectoral collaboration: a model for assessment by service users. *Int J Integr Care*. 2009;9:e03. doi:10.5334/ijic.304



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