

Pharmacy, Pharmaceuticals and Public Policy: Solving the puzzle

Abstract

Increasing pressure on healthcare demand and delivery has resulted in the development of new roles and services for pharmacists. As current models of pharmacy practice continue to be evaluated, pharmacists must be involved in identifying new areas that may require research. In order to do so, the current vision of the future of pharmacy practice is discussed in this commentary. Issues such as adequate funding, professional competency and building strong interprofessional relationships are still identified as major barriers to change. These barriers have been grouped into the themes that form a conceptual model of the factors affecting the future of pharmacy practice, which have led to the development of key questions for the future.

Keywords

Future; pharmacy practice; pharmacy practice research; health policy; public policy; pharmaceutical policy

Introduction

Changing population demographics have resulted in an increasing pressure on healthcare demand and delivery worldwide. These changes have led to challenges in the management of people, especially those living with long term conditions. In order to adapt to these challenges, there have been changes in the healthcare workforce, resulting in the development of new roles and services for pharmacists.¹

It is said that effective medicines management and the expanding roles of pharmacists need to be coupled with organized technology infrastructure, along with support from professional training and ethical, legal and regulatory frameworks.^{2,3} Evidence-based policymaking determines the funding priorities within the healthcare system. In order to firmly establish the necessity of the pharmacy profession, it is vital to show evidence through research that the adapting roles of pharmacists add value to the healthcare system.² At present, pharmacy practice models are and will be continuously evaluated. For these evaluations to influence changes in policy, it is pertinent that practicing pharmacists actively participate in research to evaluate the relevancy of the services they deliver and to help identify new areas that may require research.² These new areas for example, could be novel mechanisms by which pharmacists could deliver patient care. However, in order to make these projections, the current vision for the future of pharmacy must first be discussed. Therefore, the aim of this commentary is to discuss the future of pharmacy and present a conceptual model leading to questions. Answering these questions could help in solving the puzzle of how the pharmacy profession operates in a broader public policy context and its future role in improving healthcare efficiency.

Future of pharmacy: current vision

48 In response to budget cuts and an increase in demand for medical attention in the
49 population, evidence from the literature suggests that the pharmacy profession provides an
50 accessible and supportive environment to consumers.^{4,5} As a result, pharmacy practice is
51 moving away from a dispensing-based to a more service-based model for healthcare
52 delivery. Increased collaboration between healthcare professionals in primary and
53 secondary care is enhancing patient-centered care by redistributing the workload so it is
54 more tailored to patients' needs.^{2,6}

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56 Given that healthcare provision is no longer predictable or immune from disruptive change,
57 there are many factors that significantly increase the scope for the future.⁷ However, issues
58 such as adequate funding, remuneration and time constraints are still bigger barriers that
59 are difficult to change.⁸ In addition, this has led to some pharmacists believing that
60 pharmacists themselves are ultimate barriers to change in pharmacy practice⁹, whilst others
61 believe that there needs to be a bigger emphasis on professional competency, enhanced
62 leadership skills and a push towards organizational change.^{10,11} This shows that firstly, there
63 is a need for there to be system-wide understanding of the scope of a pharmacist, followed
64 by an overhaul in the support structure in place that can be used to define the role of the
65 pharmacist within the healthcare system as a whole. Overall, studies on the future of
66 pharmacy practice agree that the future of the pharmacist in practice is that of a service
67 provider.^{2,6,12-14} However, in order to develop this future vision, there is a need for
68 consistency in developing roles and strong interprofessional relationships between
69 pharmacists, other healthcare professionals and key stakeholders.

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71 The need for sustainable growth of pharmacists' roles and skills is key to the development
72 of the pharmacy profession. In this context, some studies have focused on workforce
73 adaptation and mapping^{10,11,15}, whilst others have looked at service provision and
74 evaluation.^{5,8,14,16} This highlights the need for a clear and concise definition of what is
75 meant by the term 'future of pharmacy practice'.

76 77 **The need for a conceptual model**

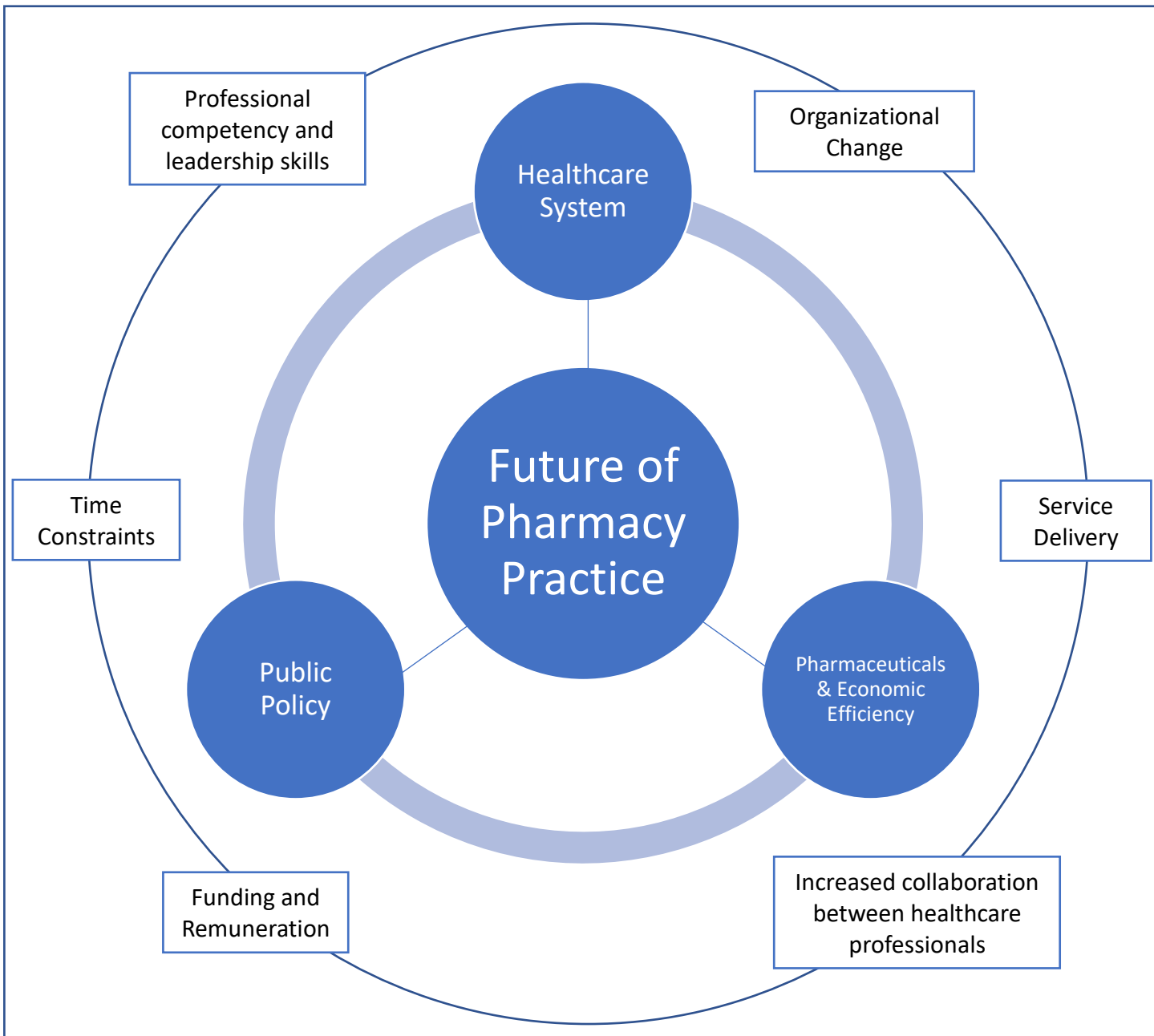
78
79 Although there are multiple visions for the future of pharmacy practice, they lack clarity due
80 to individual interpretations of the term 'future of pharmacy practice' A clear and concise
81 definition could be achieved and enhanced by the development of a conceptual model,
82 based upon that of Scahill et al. (2017), but with a greater focus on the future.¹⁷

83
84 Other factors such as the use of technology and migration patterns of the population must
85 be considered when mapping for the future.¹⁸ Conceptualizing these barriers in the form of
86 a model which provide points for discussion and ultimately embracing these advances could
87 bring about change in the future.

88
89 The factors contributing to the future of pharmacy practice discussed can be viewed at in a
90 narrow or broad manner, depending on the context in which they are required. Narrow
91 concepts include those such as workforce patterns, funding, service provision and service
92 evaluation. These concepts can be encompassed into broader themes that take these
93 concepts into consideration when looking at the health system as a whole. This model is
94 based on these broad themes, which have been categorized by the authors based upon

95 their insights and experiences. In this particular model, the emphasis remains on pharmacy
96 practice as the central point through which key themes relate. The themes that have been
97 identified are; pharmacy as a key stakeholder in the healthcare system, pharmacy practice
98 and the role of pharmaceuticals, pharmacy and public policy.
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101

102 Figure 1: A conceptual model of the factors influencing the future of pharmacy practice

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104 Pharmacy as a key stakeholder in the healthcare system

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106 Concerns about the sustainability of healthcare expenditures have fueled interest in the
107 expanding roles of pharmacists in the healthcare system, a role which pharmacists are well-
108 suited to with their extensive training and expertise.¹³ Quality improvement objectives that

109 provide remuneration based on the quality of services provided show that the quality of
110 pharmacy services are improving. This could go one step further, as in the case of the
111 Netherlands, where there are quality indicators for all sectors of healthcare, bringing
112 pharmacy onto the same level of discussion in healthcare decision-making.¹³ In addition, use
113 of the Accountable Care Organization (ACO) model in the United States suggests that
114 greater integration of pharmacy services in the management of safe, effective use of
115 medicines could lead to overall costs to patients and insurers being reduced.¹⁹
116 Not only are strong relationships between commissioners and local pharmaceutical
117 committees important¹³, open dialogue with doctors, nurses and allied healthcare
118 professionals are just as necessary to drive the future. Ultimately, shifting responsibilities
119 and tasks from doctors to other healthcare professionals is dependent on the context in
120 which they are implemented and on the reactions of all those involved in these changes.²⁰
121 Therefore, this relationship between pharmacy and other healthcare professionals needs to
122 be defined before it can be developed further.

123

124 **Pharmacy practice, pharmaceuticals and economic efficiency**

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126 There is a need to balance expenditure between spending on pharmaceuticals and
127 remuneration for the delivery of pharmacy services. On one hand, managing drug
128 expenditures and costs could reduce financial access and distribution barriers, such as
129 through drug pricing transparency and generic substitution mechanisms, therefore causing
130 less of a financial burden.²⁰ On the other hand, reducing the number of pharmacy-led
131 services provided could further increase the strain on healthcare demand and contribute to
132 the growth of parallel private sectors, with a long-term increase in cost to the system.²⁰ As a
133 result, it is key to strike a balance between these factors, which could be achieved by clear
134 mapping of concepts for the future.

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136 **Pharmacy and public policy**

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138 Public policy could influence the way pharmacy operates and integrates with overall
139 healthcare. The impact it could have on broader public and health agenda includes
140 medicines optimization, medicines management, acting as an information provider for
141 consumers, pharmacists and public health campaigns.^{21,22} According to Mossialos et al.
142 (2015), policy documents highlight the increasing appetite for reconfiguring the
143 responsibilities of the pharmacist profession.¹³ Furthermore, pharmacists need to prove
144 that their skills and expertise add value, which in turn can underpin changes in practice,
145 funding and ultimately, policy.²

146

147 In addition, pharmacy already plays a key part in the public health needs of the population.
148 In community pharmacy for example, there is emphasis on campaigns such as antimicrobial
149 resistance, smoking cessation and alcohol awareness.^{22,23} However, community pharmacists
150 are the only health professionals who are not primarily rewarded for delivering healthcare
151 and are consequently under-utilized as public health professionals.¹³ Also, according to
152 Babar et al. (2018), some pharmacists would like to see research into practice models that
153 do not make a profit out of delivering pharmacy services, whilst others are more interested
154 in research relating to patient outcomes.² Furthermore, in the study by Mossialos et al.
155 (2015), the authors also propose devising new remuneration and performance-based

156 incentive mechanisms.¹³ Therefore, exploring how these possibilities can relate to and
157 ultimately improve the healthcare needs of the population from the perspective of the
158 pharmacy profession are vital.

159

160 Health policy, pharmaceutical policy and pricing policy

161 Globally, drug pricing varies from being government-led and managed to being set by
162 pharmaceutical companies themselves. Regardless of how they are set, current policy
163 initiatives such as drug pricing transparency has led to decreased monopoly of the market,
164 improving patient accessibility to medication therapy.²⁴ The importance of such
165 transparency has been raised at the 72nd World Health Assembly, led by the World Health
166 Organization, where member states have resolved to encourage public sharing of pricing
167 and reimbursement information in order to ensure fair and affordable pricing around the
168 world.²⁵ Greater drug pricing transparency coupled with patient-centered, pharmacist-led
169 services focused on medication therapy management could also play a role in lowering
170 pharmaceutical spending. As a result, healthcare systems must respond to these changes in
171 their models. This is to expand development into the future.

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174 **Re-defining and remodeling complex environments: Questions for the future of pharmacy**

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176 The themes discussed above have led to questions relating to future of pharmacy practice
177 and for the further development of this concept. Re-defining and remodeling complex
178 environments are not without their challenges. These challenges can be defined as from an
179 individual, systemic and wider organizational point of view. For example, in England, there
180 are many visions and new models of practice for the future of pharmacy that have been
181 developed, little has been done to bind these together into a coherent narrative for the
182 future roles of pharmacists within the National Health Service (NHS).¹⁴ In order to overcome
183 the challenges discussed in this article, multi-collaborative research teams that have
184 knowledge of organizational behavior and political sciences are necessary.⁶

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186 Key questions to explore based on the above themes could include:

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- 188 • Other than the points mentioned above, what other contextual, intrinsic and
189 extrinsic factors are needed to define the term 'future of pharmacy practice'?
- 190 • How can the future relationship between pharmacy, healthcare and public policy be
191 mapped out?
- 192 • Can a model for future pharmacy services to improve health-related outcomes be
193 developed?

194

195 **Conclusion**

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197 This article concludes that the pharmacy profession needs to invest in its future by
198 answering key questions on the expanding relationship between pharmacy,
199 pharmaceuticals and economic efficiency, healthcare and public policy. The answers to
200 these questions can be found by overcoming current barriers to change, leading to the
201 identification of further themes that can be used to develop a future model for pharmacy

202 practice. This model could then be used to inform challenging policy-making decisions
203 within healthcare environments in order to improve health-related outcomes.

204

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211 **References**

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