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## **The Pursuit of Legitimacy and Professionalism: The evolution of pharmacy in Ontario**

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This paper explores the development of pharmacy practice in Ontario, Canada and outlines its initial professionalisation and the landscape in which the profession has evolved: reshaping and redefining itself against the push and pull of internal and external forces that have situated it amongst the health care professions, but also differentiated it from medical practices. In their pursuit to propel pharmacy from a trade to a profession, early Ontario pharmacists simultaneously embedded pharmacy within the history of Canadian health care.

The history of health care in Canada is a dynamic story that details Canadians' plight in attaining health as we know it today. The success of this story can be gauged by the superior level of health that many Canadians have come to take for granted. This level of health could not have been attained without the assistance of health care providers who disseminate health and medical knowledge to the public. The story of Canadian health care is also an account of the evolution of health care providers, and this story would be incomplete without discussing the role of pharmacy, and its place within the history of health care.

The profession of pharmacy has been muted in literature on professions in general, and in the history of health care in particular. This paper seeks to address this oversight by providing an examination of the development of pharmacy practice in Ontario.

From its inception to the present, the pharmacy field has experienced both internal and external pressures to its legitimacy (and status) in Canadian professional society. Internal debates stem from the apparent contradiction between pharmacy's mandates<sup>1</sup> and the nature of the profession as a business activity. Similarly, the quest for external legitimacy and relevance to modern health care means that pharmacy practice is constantly shaped by social, political, and economic factors – all of which dictate the precarious position of pharmacy in Canadian fields.

This paper explores these fundamental conflicts, as I discuss the origins of Ontario pharmacy, and outline its initial professionalisation, and the landscape in which the *professional project*<sup>2</sup> has evolved — reshaping and redefining itself against the push and pull of internal and external forces<sup>3</sup> that have situated it amongst the health care professions, but also differentiated it from medical practices.

This continual professionalisation is attributed to a number of factors: on the one hand, social, economic and political environments have changed over time and influenced the role of pharmacy in Canadian society. On the other hand, pharmacy's close relationship with medicine has meant an interconnected association in business activities that has been fundamental (at times detrimental) to the pharmacy profession. The forthcoming discussion of pharmacy's evolution in Ontario demonstrates how these forces have helped shape the profession, and clarifies pharmacy's previous struggles to both attain and retain social legitimacy, and how this challenge

is still relevant in present Canadian society.

## **The Pharmacy profession in Canada: the pursuit of legitimacy and role in society**

Pharmacy in Canada has been heavily influenced by European and American tradition, although the European practice seems to have been more influential on the development of the early profession.<sup>4</sup> The origins of pharmacy practice can be traced back to before the Middle Ages when individuals collected roots and herbs to create healing remedies. Canadian history reveals that native aboriginals were using aromatics, spices, and medicinal plants for therapeutic purposes. A famous example is the curing of Cartier's men of scurvy (winter 1535-36). They were treated by the Iroquois of Stadacona with a conifer tea of high vitamin C content (probably eastern white cedar).<sup>5</sup>

Historical literature reveals that pharmacy practice evolved under the influence of the church.<sup>6</sup> In remote rural areas the clergy were often required to take care of people in poor health. In many instances, clergymen were the only individuals who were permitted to dispense drugs.<sup>7</sup> Thus, rudimentary pharmacy was practised by priests and nuns,<sup>8</sup> and this role eventually extended their duties to that of lay physicians.<sup>9</sup>

Before the passage of the first Pharmacy Act (1871) the landscape of pharmacy practice was scattered with early practitioners who identified themselves as *pepperers*,<sup>10</sup> *spicers*,<sup>11</sup> *grocers*,<sup>12</sup> *apothecaries*, *chemists* and *druggists*. Despite variation in titles, little difference could be seen in these individuals' livelihoods; early practitioners shared a common expertise in the compounding and dispensing of drugs and remedies.

## **Pepperers, Spicerers, Grocers, and the challenge by Apothecaries**

Throughout the Medieval era (1000-1454), early forms of professionalisation took root, as various guilds attempted to secure their monopolies on articles for trade. These early pharmacists often fought amongst themselves, trying to demarcate their specialties and prevent others from encroaching upon their seemingly exclusive trade territories.

European history captures the evolution of early pharmacy practitioners best, telling a story of the amalgamation of various guilds who traded similar wares. Historical records indicate that pepperers, and later, spicers and grocers were originally branches of the same guild that dealt in items of trade known as *spicery*. 'This term embraced not only spices, crude drugs and prepared medicines, but also a host of other commodities such as sugar, alum and dried fruit'.<sup>13</sup> Grocers were challenged by a fraternity known as the Apothecaries, who established themselves as specialists in drugs.<sup>14</sup> In Europe, the apothecary's origins can be dated as far back as the early 1200s, although Canada's first apothecary was not referenced until 1610.<sup>15</sup>

Interestingly, dating back to before 1236, physicians and apothecaries were found in the same guild. As individual trades began to specialise, this association fragmented into separate guilds, under which the apothecaries (or spicers) were to have held a monopoly over 200 different items. The true beginnings of the apothecary shop and early drug store can be seen here, as these apothecaries traded a variety of wares such as books, wax candles, and for the 'right price' they would conduct funerals.<sup>16</sup> This

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persona, as a 'jack-of-all-trades', carried through to the 1800s where it was not surprising to find the apothecary conducting a church service or performing minor surgery.<sup>17</sup>

In this way, the apothecary's work began to resemble that of a physician. Needless to say, this caused discontent among the medical community. Physicians claimed that apothecaries were uneducated and untrained, whereas the apothecaries claimed that physicians were careless and charged too much.

Without any doubt, apothecaries practising medicine trespassed on territory not belonging to them. Yet, they had gradually gained a large number of clients who depended on them, and they had proved themselves useful in their medical role in a time of need.<sup>18</sup>

This was especially true during times of plague<sup>19</sup> where apothecaries gained increased respect due to their 'courageous dedication' in caring for the diseased. When physicians had either fled the cities or had succumbed to plague, apothecaries 'forsook' their shops and tended to those who were suffering.<sup>20</sup>

For poorer classes of citizens, apothecaries became attractive, alternative health practitioners because they charged less for their services than physicians.<sup>21</sup> Apothecaries also attracted sceptics of medical practitioners, who claimed that they could cure any possible problem in the human body. Thus, as time passed, the role of the apothecary paralleled medical practice and became less confined to compounding and dispensing drugs.<sup>22</sup>

### **Technological advancement brings chemists and druggists forward**

Meanwhile, as apothecaries were devoting more time to medical practice, great progress was being made in science and technology. Developments in chemistry saw new drugs being compounded, and a new breed of early pharmacist appeared – the Chemist and Druggist. Although encroaching upon the apothecary's territory, Bell (1880) argues it was the abhorrent notion of pharmacy as a trade that induced apothecaries to aspire to medical practice as a profession, and chemists and druggists opened shops to fill the gap left behind by the apothecaries.

In Europe, by the late 1800s apothecaries were recognised by many Colleges of Physicians as superior medical attendants, and were accordingly designated General Practitioners of Medicine. As a result, chemists and druggists continued to specialise in drugs and later become 'pharmacies'.<sup>23</sup> By contrast, in Canada, the apothecary was less likely to become a medical practitioner. Literature does not call into question why the trajectory of European and Canadian apothecaries differed,<sup>24</sup> but some may argue that Canadian apothecaries' potentially less rigorous origins dictated their streaming into certain practices that diverged from their European counterparts.

As there were no laws or legislation regarding pharmacy practice prior to Confederation, the early Ontario pharmacist could have been one of four types of people: an apothecary who was trained by apprenticeship; an individual who had qualifications from another country; an altogether unqualified quack who put up a sign that read 'open for business'; or, a properly qualified doctor who dispensed drugs in a shop.<sup>25</sup>

Typically, the nineteenth-century Canadian apothecary was a white upper-to-middle class male<sup>26</sup> who was educated to some degree,<sup>27</sup> and had established himself socially within the community.

[H]e dispensed prescriptions, was a part-time physician, clergyman and politician. He worked 16 hours a day for \$10 a week, and had to compound 90% of his prescriptions.<sup>28</sup>

By the early 1800s most apothecary shops/drugstores were stocked with a variety of wares — medicinal agents used in the compounding of prescriptions were only a fraction of the items found in the early store.<sup>29</sup> Apothecary shop windows were often decorated with ornate window dressings to attract passing pedestrians. Those who entered the shop would find a welcoming environment that doubled as a community gathering place. Long countertops with chairs provided customers with a place to wait while their prescriptions were being compounded.<sup>31</sup> Often patrons would sit and talk amongst themselves, while the woodstove crackled in the background, or people could browse the displays that were stocked with every possible commodity.<sup>32</sup> Numerous items graced the store windows, shelves, and countertops, so that something was bound to catch an unassuming customer's eye.

One of Canada's most famous apothecaries, although not remembered for practising pharmacy per se, was William Lyon MacKenzie. 'The MacKenzie's Drug and Books Store' opened its doors in Dundas, Ontario in 1823. The shop sold a variety of items such as dry goods, hardware, groceries, drugs and medicines, glassware, fancy goods, oils and paints, teas, stationery, and crockery. As a result of this diversified stock,

...the early pharmacy, or the drug and book store as many were called, looked much like a general store. The dispensary was just a section of the store and it was surrounded by sundries.<sup>33</sup>

This example foretells the role of contemporary drugstores in Canadian society.<sup>34</sup>

Here we see the origins of the awkward reconciliation between business behaviour and the profession of pharmacy. This calls into question whether business behaviour can be associated with professional conduct, since typically, professionals are expected to bestow a certain extent of public interest ahead of private gain. If business behaviour is motivated out of private interest, can a pharmacist be a true professional? This is especially critical when connection with a product, as in the case of pharmacy, made professional claims less acceptable ... Apothecaries viewed the selling of nostrums as detrimental to the public and to the image of the calling, but necessary to 'make it' in business.<sup>35</sup>

Nineteenth-century progress in science and technology influenced a growth in drug manufacturing firms. Many chemists and druggists either worked for or opened their own drug wholesale/manufacturing companies, as this proved to be a lucrative area of the nascent profession. Alongside technological advancement, this very industry posed a threat to pharmacists' skills and knowledge, as machines were being used to compound and dispense drugs in mass quantities, thus challenging the pharmacists' professional purpose. Moreover, this posed a threat to the training of apprentices: as fewer basic ingredients for compounding were made in the shop, apprentices gained less and less experience in this sort of in-house manufacturing. The prospects of a future where poorly trained apprentices would become preceptors and pass along their ignorance presented the elite with a quandary: how to maintain

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professional progress as the vocation abandoned a critical part of its claim of expertise.<sup>36</sup>

The precarious relationship between the drug manufacturers/pharmaceutical companies and the professional 'calling' would only become more pronounced in the twentieth-century.<sup>37</sup>

As business behaviour remained embedded within pharmacy practice, the pharmacist necessarily relied on alternative means of demonstrating their professionalism and social legitimacy. As a result, we start to see the reshaping and redefining of pharmacy's professional project, as pharmacists attempted to negotiate and retain their position among the professions.<sup>38</sup>

### **Challenge to legitimacy and status in face of the medical profession**

In addition to conflicted claims of internal legitimacy and status based on professional standards, a further challenge facing pharmacy practice was the conflicted relationship shared with the medical profession. This external pressure would initiate political battles in Canada, and eventually provided impetus to gain more widespread support for differentiation between the two professional fields.

During the nineteenth century, the medical profession remained dominant within the professional division of labour.<sup>39</sup> The role of pharmacist and medical doctor too closely overlapped in areas regarding compounding, independent assignment, and dispensing of drugs. Unfortunately, an ambiguity in practising patterns among physicians, apothecaries, chemists and druggists was due to the fact that medical legislation in the late 1700s and early 1800s typically focused on the physician and not the pharmacist/apothecary. Prior to Confederation the Medical Board of Upper Canada controlled all forms of practice in the medical field. Accordingly, pharmacy practice was governed under medical acts, but relatively little supervision or control was imposed upon pharmacists.<sup>40</sup> In 1859 the Upper Canada Legislature passed the *Poison Act*, to regulate the sale of 'deadly poisons,' which provided that no chemist or druggist could sell poisons of any sort unless presented with certification issued by a physician, magistrate or minister, indicating that the patron could be in the possession of such remedies that could be found deadly. In this way, the work of pharmacists would not be fully controlled by physicians, but it would be reliant upon the prescribing work of physicians.<sup>41</sup>

In occupational terms, pharmacists saw themselves as subservient to physicians. The craft of pharmacy, in which they professed special skill and knowledge, was a division of the department of medicine.<sup>42</sup>

The *Poison Act* assisted in regulating the dispensing of drugs in Ontario. However, it did not include a provision for *who* could practise pharmacy. Thus, doctors retained their ability to dispense drugs alongside apothecaries, chemists and druggists. The result was to fuel the continuing battle for power between pharmacy and the more dominant and socially legitimate medical profession.<sup>43</sup> This was exacerbated by the existing tensions between the two professional groups, such that physicians asserted that these early pharmacists were unqualified, unskilled, and encroaching on their territory of diagnosing and prescribing. At the same time, pharmacists claimed that physicians dispensed unnecessary drugs for ailments that did not exist.<sup>44</sup>

A few months prior to Confederation (1867), tensions continued to mount between the medical and

pharmaceutical communities, as physicians wanted to see pharmacy practice regulated. It was proposed that all practising pharmacists would have to pass examinations taken before a medical board. This uncertain future proposed for pharmacy practice in Canada prompted a chemist, Edward Shuttleworth (1842-1934), to create a unified voice among practising pharmacists. Founding the *Toronto Chemists' and Druggists' Association* in 1867, he and 18 other pharmacists established a local association that would raise pharmacy 'from the level of a trade to that of a profession',<sup>45</sup> thereby increasing the independence and the social legitimacy of the profession.<sup>46</sup> Specifically, in order to protect their livelihoods, their practice required clearly defined professional boundaries that would ensure their skills could not be acquired by physicians, and would safeguard their profession from encroachment by other professionalising occupations.<sup>47</sup>

Seeking federal pharmacy legislation fashioned after the 1868 Pharmacy Act of Great Britain,<sup>48</sup> Edward Shuttleworth believed that a national voice would be both useful and necessary to demonstrate support of any proposed legislation. Four months later, the *Toronto Chemists' and Druggists' Association* disbanded, to become *The Canadian Pharmaceutical Society*.

The Canadian Pharmaceutical Society had the aim to advance the profession through the advancement of science, to define the precise position of an apothecary and establish his relations towards physicians and the public, to establish a board of examiners, and to restrict as much as possible the dispensing of medicines by any except those qualified by such Board.<sup>49</sup>

By the end of 1867, the Society had recruited 55 members. Although national in scope the majority were druggists and chemists from Ontario. In 1868, their quest to see federal legislation passed was repealed, and so the Society attempted to see legislation applied at the provincial level. Legislation would protect the public and ensure occupational security.<sup>50</sup> Finally, Bill No. 20 went through three readings and was granted assent on 15 February 1871. With their success politically, *The Canadian Pharmaceutical Society* witnessed the inauguration of the first Pharmacy Act of Ontario, which made possible the creation of the first College of Pharmacy, one step on the way to building legitimacy for the practice of pharmacy.

In reality, pharmacists would still have to contend with medical dominance. Yet, they had made the first stride in securing a niche for themselves in Canadian professional fields, and ensuring that their skills would not be enveloped by doctors or other professionalising occupations. This would mark the beginning of pharmacy's *professional project*, launched in an effort to secure the rights and status of the pharmacy profession. The passage of the Pharmacy Act of 1871 legally recognised pharmacists' rights and promoted standardised licensing<sup>51</sup> and educational programmes.

The formation of professional associations helped create a sense of solidarity among early pharmacists. With the founding of *The Canadian Pharmaceutical Society* in 1867, Edward Shuttleworth believed that intercommunication among Canadian pharmacists would have to be improved in order to generate momentum in legislative arenas. To this point, the *Canadian*

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*Pharmaceutical Journal* was launched by Shuttleworth, to allow for thoughtful discourse among pharmacy counterparts. Within two months, membership in the Canadian Pharmaceutical Society had climbed to 118 members and the journal had brought practising pharmacists across Canada closer. Not only did the journal provide a forum for pharmacists across Canada to voice their concerns, but it also doubled as an educational tool used to train apprentices and pharmacists across the country.

Little would these founding pharmacists realise that this professional project would see many transformations throughout history, as it would be shaped over time by social, economic, and political change throughout the remainder of the nineteenth and into centuries beyond. Finally, the conflicted legitimacy had been met, and pharmacists had devised a means to promote their own positioning, as a professional field, in the face of much contest on the part of other professional bodies.

### Looking to the future of pharmacy's professional project

Few academics would contest pharmacy's role within the Canadian health care system. Yet, few scholars have chosen to examine the evolution of pharmacy practice within the history of health care. Pharmacists' future role of providing pharmaceutical care<sup>52</sup> to ensure optimal health outcomes for patients alongside a team of medical providers is tentative at best. However, with educational programmes and private-party initiatives, pharmacy *will* continue to specialise in drug knowledge.

This paper sets the foundation for understanding how pharmacy fits into the history of health care, as it situates itself among professional fields in Canada. It is uncertain as to what exact role pharmacy will hold in the future of Canada's health care system. However, pharmacy practice and policy continue to evolve in response to both internal and external challenges to the field's legitimacy and individuality.

Pharmacy has had many obstacles to overcome (and perhaps some remain) in pursuit of social legitimacy: a close relationship with the dominant medical profession; a business mentality that taints the professional image; and a rise in industrialisation and technological advancement that has largely taken over dispensing and compounding responsibilities.

By examining the history of the professionalisation of pharmacy, we can better understand the underlying factors in its evolution, and why it continues to redefine its professional purpose. The field of pharmacy continues to professionalise in order to demonstrate its social legitimacy among the public (as a valuable member of a patient-centred health care team), and to maintain its position relative to other health care professions.

The challenge ahead is two-fold: first, pharmacy practitioners must continue to build a consistent and pervasive message of competence, authority, and longevity; second, with internal morality and external legitimacy being constantly called into question, leaders in the field of pharmacy might consider the lessons of the pepperers, spicers, and apothecaries when contemplating the future profession: how it will take shape within the Canadian marketplace, and alongside the changing health needs of Canadians is something that can only be predicted as history unfolds.

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### Endnotes and References

1. Such mandates include: the compounding and dispensing of drugs; the adoption of clinical duties that provide a level of service that focus on drug therapy in addition to drug distribution; the implementation of pharmaceutical care (PC) strategies that focus on *the patient* rather than *the product*.
2. Similar to the term professionalisation, *professional projects* entail the achievement of power and control over an occupation by determining what skills are valuable, and capitalising on them. Traditionally, in the history of professions, men initiate and define tasks that serve to preserve their best interest within their given field (Witz, Anne. *Professions and Patriarchy*. New York: Routledge, 1992: 5).
3. Pharmacy's quest for social legitimacy is hindered by the business mentality of the profession, as well as its close relationship with the medical profession. Externally, the profession, much like every other profession, is influenced by social, economic and political change.
4. The author of this paper has attempted to provide a detailed account of the early landscape of pharmacy in Ontario; however, due to limited accounts of this period, this section is seemingly Euro-centric.
5. *Historica: Aboriginal Healing*. In Canadian Encyclopaedia On-line. [On-line]. *The Canadian Encyclopaedia*. [4 Paragraphs]. Available: <http://www.thecanadianencyclopedia.com> [Plants, Native Uses/Medicinal Plants] Paragraph 3 [November 30, 2003].
6. Kremers, E, and Urdang, G. *History of Pharmacy*. London: J.B. Lippincott Company, 1951.
7. Wilkinson, Ron: Pharmacy 1867-1967. *Drug Merch* 1967; July, 48(7): 3-15.
8. A review of literature reveals that '[t]hree Sisters with basic qualifications as nurses but also possessing some basic knowledge of compounding and dispensing, were among those who founded the Hotel-Dieu in Quebec in 1639' (Patterson, G.R: Educators win tough battles for pharmacy. *Drug Merch* 1967; July, 48(7): 21-27, 41-42, p. 21).
9. Reference 6, p. 45.
10. During the MiddleAges, the English trade in drugs was largely in the hands of the guild of *Pepperers* (Reference 6: 137) who were primarily wholesale merchants and shippers (Reference 13: 297).
11. During the 1300s the *Pepperers* amalgamated with the *Spicers*, who were concerned with retail sales and the compounding of medicines (Reference 13: 297; Reference 6).
12. During the 1400s a body known as the *Grocers* evolved separate to the *Spicers*, and dealt more in drugs for medicinal use than spices (Reference 6: 137).
13. Culp-Pierce, Patricia: The society of apothecaries: A transition from lowly craftsmen to qualified medical practitioners. *Can Pharm J* 1974; 25: 296-300.
14. Apothecaries sold a wide variety of goods, but dealt mainly in medicines, and regarded other items such as castile soap, sponges, wines, cotton, wood, pots from Geneva, leather bags, cloth, banners, and silver spoons as sidelines (Reference 13: 297).
15. Louis Hébert, son of the apothecary to Queen Catherine de Medici of France, was Canada's first known apothecary. In 1610 he sailed to what is now Quebec City, and is remembered as having provided free medical care to the settlers. He 'played many significant roles in the life of the community not the least of which was caring for the health of the white man and Indian alike'. (Reference 40: 3).
16. Reference 6: 68-70.
17. Reference 7: 7.
18. Reference 6: 140.
19. Literature documents apothecaries' valuable assistance during plagues in Europe (1665-6) and America (1793) (Reference 6).

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'Their service during this calamity played a considerable part in the transfer of the apothecaries from pharmacy to medicine.' (Reference 13: 298).

20. Reference 6: 234; Reference 13: 298.

21. Wallis, Patrick: The first English histories of pharmacy: their origins and influences. *Pharmacy in History* 2000; 42(1/2): 36-47.

22. In this instance, it is interesting to note that the apothecary seems somewhat of an 'irregular' physician; although there is no direct reference to apothecaries practising eclectic medicine during the 1800s, perhaps the closest account would be in likening the *Apothecary* to the *Thomsonian* root doctor of this time.

23. Reference 6: 84.

24. The investigation of the differences between European and Canadian apothecary practice warrants further investigation, but is beyond the scope of this paper.

25. (Reference 7: 4; Reference 40: 70).

26. Readings on nineteenth-century professions typically discuss the 'professional gentlemen' (Gidney, R.D. and W.P.J. Millar. *Professional Gentlemen; The Professions in Nineteenth-Century Ontario*. Toronto: University of Toronto Press, 1994). Literature on pharmacy practice tends to focus on the male practitioner. Although a token number of women practised pharmacy during this time, the exclusion of women from early pharmacy literature is likely attributed to vague documentation on women in pharmacy, prior to confederation (Stieb, E., Coulas, G., Ferguson, J. Women in Ontario pharmacy, 1867-1927. *Pharmacy in History* 1986; 28(3): 125-135: 125). Those women who did practise pharmacy likely worked for their husbands or fathers who owned their own drug stores. Accordingly, women in pharmacy did not encounter the obstacles faced by women in other traditionally male-dominated health professions (ibid.).

27. The early pharmacist of Lower Canada was usually a self-educated man, learning from experience (through a period of apprenticeship) as well as from readings from textbooks in chemistry and botany, to which they might have had access (DesRoches, B.P. The first 100 years of pharmacy in Ontario. *Can Pharm J* 1972 (July); 23: 225-228, p. 226).

28. Reference 7: 3.

29. The nineteenth-century pharmacist had a serious dilemma regarding how much stock they required for their shop, as 'drugs, tinctures and ointments were imported from Europe. So, with the almost primitive and slow transportation services compared with today, [the pharmacist] had to stock up in September to carry him through the winter' (Reference 7: 5-6).

30. As early as 1796, F.W.A. Hirst's apothecary store in Niagara, Ontario advertised products, presumably from Europe, such as Aloes, Antim. Tartar, Cera Flav., Calomel, Cantharides, Tinctures, Hooper's Pills, etc. (Reference 40: 71).

31. Literature suggests that apothecaries were the first early pharmacists to receive prescriptions from physicians. This marked the early beginnings of the awkward association that pharmacists and physicians would have, as the pharmacists' livelihoods were in part governed by the physicians' prescribing patterns. '[D]octors would send patients to the shop, asking for a percentage from the sale of drugs sold to the patient ... if the apothecary refused then the doctor could send the patient elsewhere' (Reference 7: 6).

32. Reference 6: 201; Ibid.

33. Reference 7: 4-5; Reference 40: 71.

34. Pharmacists of the 1920s and early 1930s were still responsible for a large proportion of their compounding; however, the pharmacy doubled as an ice-cream parlour – a place where people could go for a sundae, frappé, or soda. These would have been equally as important to their livelihood as the compounding of prescriptions. Therefore, a pharmacy apprentice during this era would have been trained to distinguish between the various cold beverages and frozen treats, different kinds of gramophone needles, and how to appropriately dress shop windows with holiday novelties (Reference 7, pp. 6-7). The early 1900s also saw a love-affair between pharmacy and photofinishing – as pharmacists had the technical skills to be able to handle photo developing chemicals. Accordingly, pharmacists who owned Kodak Dealerships were one step ahead of others who simply worked with prescriptions and drug compounding (Cameron, Donald. *The History of Pharmacy in Alberta: The First One Hundred Years*. Edmonton: D.W. Friesen and Sons, 1993: 202-204).

35. Higby, G. Professionalism and the nineteenth-century American pharmacist. *Pharmacy in History* 1986; 28(3): 115-124, p.1 18.

36. Reference 35: 119.

37. Drug companies (at the prospect of having a lack of graduates to assist with future research) would assist with 'upgrading the

profession' by providing scholarships and vocational guidance to promote pharmaceutical research (Matthews, A.W. History of pharmacy: The initial impact. *Can Pharm J* 1984; December: 578-5 83, p. 578). Accordingly, most of the curriculum in schools of pharmacy became tailored to pharmaceutical research and explains why 'much of the pharmacy curriculum consists of molecular science, and why professors of pharmaceutical science spend so much time in the laboratory, rarely making the connection with practice and rarely teaching the broader context of health and the health-care system' (Muzzin, Linda, Patricia Sinnott and Claudia Lai. Pawns between patriarchies: Women in Canadian pharmacy. In *Challenging Professions: Historical and Contemporary Perspectives on Women's Professional Work*. Elizabeth Smyth, Sandra Acker, Paula Bourne, and Alison Prentice (eds). Toronto: University of Toronto Press, 1999: 296-314, pp. 307-3 08).

38. Dominant professions, such as law and medicine, are clearly established, and have secured professional boundaries to prevent other occupations from encroaching upon their skills and services (Mesler, M.A. Boundary encroachment and task delegation: clinical pharmacists on the medical team. *Social Health Illn* 1991; 13(3): 310-331).

39. Kronus, C.L. The evolution of occupational power. *Social Work Occup* 1976; 3(1): 3-37; Schepers, R. Pharmacists and medical doctors in nineteenth-century Belgium. *Social Health Illn* 1988; 10(1): 68-90.

40. Canadian Pharmaceutical Association. *A Brief History of Pharmacy in Canada*. Ottawa: Canadian Pharmaceutical Association, 1967: 71.

41. Reference 39, *Social Health Illn*: 86

42. Reference 35: 118.

43. Reference 40: 7 1-72.

44. Ibid.

45. Stieb, E. Edward Buckingham Shuttleworth 1842-1934. *Pharmacy in History* 1970; 12(3): 91-113, p. 94.

46. The 'threat of engulfment by medicine *sic* forced Canadian pharmacists to press for recognition through organisation, under circumstances similar to those that had also brought into being the first permanent organisations of pharmacists in Great Britain a quarter century earlier and in the United States two decades earlier still' (Stieb, E. Organization. In *One Hundred Years of Pharmacy in Canada*. Toronto: Canadian Academy of the History of Pharmacy, 1969: 11-15, p. 11).

47. Reference 38.

48. Greatest influences upon the evolution of Canadian organisations of pharmacy, as upon Canadian pharmacy itself, have come from Great Britain, the mother country, and to a lesser extent the United States (Reference 46: 12).

49. Reference 45: 96.

50. Clark, R.J: Professional aspirations and the limits of occupational autonomy: The case of pharmacy in nineteenth-century Ontario. *Bull Can Hist Med* 1991; 8: 43-63, p. 48.

51. '[R]egistration as "chemist and druggist" was granted to those who were in practice at the time of the passage of the Pharmacy Act, or had served a three-year term of apprenticeship and one year as assistant prior to the measure. All others [who did not fall into these categories] were required to pass an examination set by the Ontario College of Pharmacists' (Reference 27: 226).

52. Hepler and Strand (Opportunities and responsibilities in pharmaceutical care. *Am J Hosp Pharm* 1990; 47: 533-543) identify pharmaceutical care (PC) as a movement that encourages that pharmacists, on top of clinical care duties, (to) strive for a level of patient care that will achieve a greater quality of life 'outcome' for the patient, which is based on the premise of 'identification', 'rectification', and 'prevention' of drug-interaction problems. In an effort to advance and protect the profession, these skills constitute a thrust and link to professionalisation.