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A philosophical framework for pharmacy in the 21st century guided by ethical principles

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ABSTRACT

Pharmacy has a long history of providing products and services for healthcare. In the last century, these roles have taken a strong focus on clinical care with the provision of medicines review, medicines optimisation, and prescribing services being at the forefront. The profession, however, is diverse. Pharmacists operate across a wide range of healthcare practices that often embrace both historic and contemporary roles simultaneously. The purpose of this article is to provide an overarching philosophical framework for pharmacy that encompasses roles that the modern pharmacist may assume. In doing this, we explore how pharmacy services align with healthcare and how different services require different approaches to clinical decision making.

1. Introduction

The role of the modern pharmacist in healthcare can be traced back over several centuries and stems from the apothecary.[1] An apothecary was a practitioner who examined patients, prescribed treatments for illnesses, and compounded medicines for sale. The sale generated the revenue for the consultation. In the 1800s, the apothecary role split to form what we now know as the modern family doctor and pharmacist. While some roles of both the apothecary and modern pharmacist remain consistent today, such as purveying medical products, many roles have extended the historic scope far beyond that of the past. In the 21st Century, pharmacists perform fee-for-clinical service roles, such as prescribing and medicines optimisation, as well as acting as advisors to physicians, patients, and other healthcare providers about the optimal use of medicines.

As modern drug treatments have become more complex, so has the role that pharmacists play in ensuring their safe and effective use. It is important to note that the profession of pharmacy has not become complex as a function of *what* it seeks to achieve in terms of patient care, but rather as a function of *how* it provides its expertise, and, to a certain extent, as a function of *who* receives this expert service. For pharmacy, *what* we seek to achieve, better health outcomes for our communities, remains consistent with the past. However, *how* we achieve this outcome in the 21st Century, perhaps by optimising medicines usage, is often neither clear nor transparent to the lay public. The layperson, while central to our professional goals, is often not a physical participant in our professional activities. For instance, during a consultation with a pharmacist, the person may not be manipulated physically as during a consultation with the family doctor or physiotherapist. Instead, the pharmacist will often perform key professional functions tacitly. The pharmacist will apply in-depth reasoning processes while in conversation with the person or at some stage after the formal interview is concluded. While the pharmacist will work with the patient and their goals, the primary recipient of the pharmacist's knowledge and skill will often culminate in a set of recommendations regarding a treatment plan for the prescriber, rather than the person. The outcome of the professional activity, therefore, may not be obvious to the person. In this context, there is a potential danger that the pharmacy profession may be perceived by the lay public, and other health professionals, as a silent partner in healthcare and, as such, reinforce a possible belief that it does not contribute greatly to health outcomes.

This paper proposes a philosophical framework to encompass the *what* (goal of pharmacy practice) and *how* (methods used by pharmacists to achieve their goals) for the pharmacy profession in the 21st century. This framework should provide a basis for discussion and thinking about how pharmacists define their professional service roles and how we design education programmes to

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train future pharmacists. It will first define the professional roles of pharmacy and develop a conceptual outline of the clinical decision making processes that lie at the heart of these activities. It will then propose that the professional activities of modern pharmacy practice are linked philosophically to the principles of bioethics, primarily beneficence (to do good) and non-maleficence (to not do harm). It is observed that most traditional professional activities for pharmacy are underpinned by a non-maleficent approach while the recent move towards expanded clinical services are underpinned by a beneficent focus. The paper concludes by proposing *how* the profession achieves its goals, the skills required, and the educational underpinnings, will be fundamentally different given its philosophical orientation.

In this work, the authors do not interrogate the *who* (the "patient", "healthcare partner", "health service purchaser"), other than to highlight that the person is integral to the healthcare process and that this includes the clinical decision making process.

This paper does not attempt to survey the tasks and duties that are performed by pharmacists. There is a wide-ranging literature that shows health benefits in terms of access to medicines (such as provision of vaccines[2,3]), quality of medicines (such as cold chain[4]) and quality use of medicines.[5] It does not advocate or promulgate the need, or otherwise, for change. Rather, it suggests a framework to accommodate current and future changes in the profession. This framework is intended to create a foundation for the profession to acknowledge the varied roles pharmacists are now performing in their practice.

2. The professional role of pharmacy

Traditionally, an apothecary was a conglomerate of healthcare practitioners, including pharmacist and family doctor.[1] They relied on the sale of medicines to compensate for provision of healthcare services rather than directly charging, or otherwise being compensated, on a fee-for-service basis. In this sense, the balance of needing to maintain a sustainable business by sale versus meeting the health needs of the patient, who may not need a product, would represent an ongoing conflict of interest. Despite this apparent conflict, the apothecary was able to provide affordable healthcare to their communities.[1] While, in the 1800s medical practitioners broke away from this model towards a solely fee-for-service, pharmacists have maintained a mixed model of fee-for-product and fee-for-service.

The main change in the role of the modern pharmacist has been a move away from the provision of bespoke manufactured products to provision of clinical care. Fig. 1 depicts a schematic of the transitions in the pharmacy profession. The four transition states are (1) manufacturer and purveyor of medicinal products, (2) dispenser and manufacturer, (3) dispenser and clinical checker and (4) clinical service provider. The first three roles are defined by a fee-for-product whereas the fourth role represents a fee-for-service. The fourth role here is further subdivided into medicines optimisation, and prescribing. The central premise in the clinical checking and clinical service roles lies in the enactment of a clinical decision aimed at promoting healthcare. This contrasts with a role-based around safe preparation of a product. In this schematic, the span of roles is greater in the 21st century than previously. The greater span of roles indicates that the addition of new services has begun prior to the demise of older services.

This paper focuses on the role of the pharmacist in clinical care which is driven by clinical decision making.

3. Clinical decision making

Clinical decision making, like all decision making, is a formal process that defines the way a practitioner arrives at a decision from the information at hand. Generically, decision making has been described as a 7-step process [http://www.umassd.edu/fycm/decisionmaking/process/]: (1) identifying the need for a decision, (2) gathering information, (3) identifying alternatives, (4) weighing the evidence, (5) choosing among alternatives, (6) take action and (7) reviewing the decision. The authors herein describe a simpler process consisting of information gathering followed by a three-stage process comprising reasoning, judging, and deciding. This approach delineates pre-decision components (i.e. which include workup of the patient and orientation to patient goals) and post-decision components (i.e. developing reasoning, developing and enacting a clinical decision with the patient and evaluating feedback from patient outcomes). The three steps of clinical decision making in Fig. 2 map directly onto items 3, 4 and 5 of a standard decision making model. Finally, it is noted that patient outcomes are monitored and provide further information in a decision making cycle. This is implicit in the approach taken here. Showing the components linearly helps to signify the start and finish of an individual decision making cycle.

While the schematic in Fig. 2 can be applied directly to healthcare decisions, it is important to note that the healthcare decision making process is inherently complex. Typically, decisions are based on many factors including those relating to the history and goals of the patient and family, the current evidence base for medicine effectiveness, the pharmacological and pharmaceutical implications of the drug and product, societal expectations and constraints, and the ability of the practitioner to arrive at, communicate and negotiate the decision. In order to represent this

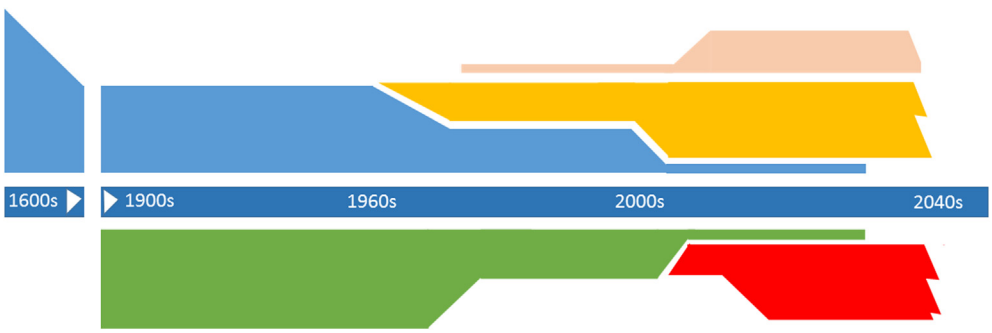

Fig. 1. This timeline depicts the key roles of pharmacists over the last half millennium. Starting in the role of apothecary (from the 1600s), the blue shade denotes manufacturing and selling products, the green signifying dispensing against a physician order, gold the advent of clinical checking (an additional clinical safety check linked to the dispensing service), and the red and pink represent the provision of fee for service clinical service. The red denotes medicines optimisation services and the pink prescribing. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

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