Community and hospital pharmacists in Europe: encroaching on medicine?

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Received: 4 August 2020 / Accepted: 4 September 2020 / Published online: 13 September 2020
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Abstract
Pharmacy has been historically regarded as a discipline between health and chemistry devoted to drug development, production, and compounding. These tasks have been almost lost with the industrial manufacturing, and dispensing remains the main activity of pharmacists. Hospital pharmacists are usually employees in their workplace, while the professional framework of community pharmacists is very different, being pharmacies predominantly private shops in almost all European countries. In the last years pharmacists have strongly advocated that the focus of their services should switch from ‘product’ to ‘patient’. Clinical pharmacy and pharmaceutical care are the two most cited concepts to support this shift. Clinical pharmacy was originally defined as the area of pharmacy concerned with the science and practice of rational medication use, pharmaceutical care as the responsible provision of drug therapies to achieve definite outcomes. The practice of clinical pharmacy should embrace the philosophy of pharmaceutical care. The new wave of pharmacists’ patient-centered care in Europe still seems to be a reaction against the loss of their traditional professional role after the drug manufacturing revolution. To depict a realistic scenario for progress, it is worth differentiating between hospital and community. Hospital pharmacists should strengthen their pivotal role of medication gatekeepers to improve among clinicians the appropriateness of drug prescriptions and generate savings in expenditures. Any proposal for clinical services provided by community pharmacists is inevitably affected by the issue of their potential remuneration, especially in countries where the remuneration for reimbursable drugs is still a proportion of the retail price.

Keywords Pharmacy · Hospital · Community

Historical background
Pharmacy has been historically regarded as a discipline between health and chemistry devoted to drug development, production, and compounding [1]. Until relatively late in the last millennium the vast majority of pharmacists used to make drugs, regardless of whether they worked in hospital or in community. These early tasks have been substantially lost with the large-scale industrial manufacturing of drugs, so that their dispensing remains the main activity of pharmacists. In the long run these changes have weakened the original value of the combination of pharmacist’s profession and education [2]. Although still focused on scientific topics (e.g., physics and biology), the university education of pharmacists has been inevitably influenced by the different national regulations for the profession, especially in the community working domain, which remains by far the most important labor market for pharmacy graduates. At present, pharmacists’ education shows a wide range of different arrangements in European countries, starting from the shortest duration of graduation, which ranges from 3 (in the Scandinavian countries), 5 (in Italy), up to 6 years (in France and the Netherlands) [2].

In the last years pharmacists have strongly advocated that the focus of their services as drug therapy has increasingly switched from the ‘product’ to the ‘patient’ regardless of where they work [3]. Shifting the slogan from ‘getting the right drug to each patient’ to ‘getting the drug therapy right for each patient’ [4], both hospital and community pharmacists are expected to increasingly contribute to reduce clinical errors and eventually improve the efficient use of health

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care pharmacy and pharmaceutical care narratives back-
hospital and community pharmacies. Then we look at the
this trend (see third section).
Here, first we analyze the present role of pharmacists in
hospital and community pharmacies. Then we look at the
clinical pharmacy and pharmaceutical care narratives back-
the pharmacists’ claim to patient-centered care. Finally,
we depict a possible future strategy for a common European
policy in the two settings.

Two clear-cut settings
Patient drug therapy can be divided into three steps: pre-
scription, distribution and administration. Traditionally, each
step can be easily delegated to a specific health professional
in hospital—respectively the physician, the pharmacist and
the nurse [7]. Fostering the hospital pharmacist’s role from
simply moving boxes and handling supplies to providing
clinical services to patients would imply that seven ‘rights’
are always fulfilled for all pharmaceutical therapies [8]: right
patient, dose, route, time, drug, information and documenta-
tion. The most recent cogent argument is why hospital
pharmacists are not allowed to prescribe drugs in Europe,
like in other continents [7]. Although opposed by the medi-
cal profession from the outset, this already happens in Eng-
land and Ireland, a move possibly favored by the shortage
of physicians in these countries. Besides requiring adequate
clinical knowledge (diagnostic skills included), the request
to extend prescribing rights is likely to bring hospital phar-
macists, who are usually employees in their workplace, into
conflict with their medical colleagues. It might also involve
legal litigations with patients and their relatives in case of
negative outcomes, a costly risk that many European hos-
pital pharmacists may not necessarily be prepared to share
with clinicians.

The professional framework of European pharmacists in
the community is very different from those acting in hos-
pitals. Community pharmacies are predominantly private
shops in almost all European countries [9], mainly owned by
single pharmacists (like in France, Italy and Spain) or chains
like in the NL and the UK). Therefore, management strat-
gies are crucially directed towards profitability. Community
pharmacists have always had a potential ‘conflict of interest’
when employed in a private pharmacy, owing to their dual
role of health professionals and commercial agents. Clear
evidence of the importance of commercial reasoning is the
wide range of products other than drugs sold in private phar-
macies, including some that are in conflict with pharmacist’s
education (e.g., homeopathic products). The vast majority
of European community pharmacists are still profession-
ally responsible only for checking prescriptions and then
for delivering the requested medications. To our knowledge,
the only (partial) exception is represented by Dutch com-
nunity pharmacists, who can intervene on prescriptions if these
fail to respect national guidelines or do not seem appropriate
for that individual patient [10]. Conversely, Italian com-
munity pharmacists employed in para-pharmacies and health
corners of large retail outlets (which are obliged to employ
them) are forbidden to dispense ethical medicines despite
their university degree, being only allowed to provide over-
the-counter drugs [11]. The only realistic justification for
this odd limit is likely to be the defense of financial privi-
leges matured by community pharmacies hereditarily owned
by single pharmacists, reimbursed drugs being still around
60% of the total turnover.

Two overlapping concepts
Clinical pharmacy was originally defined as the area of phar-
macy concerned with the science and practice of rational
medication use [12]. Thanks to this discipline, pharmacists
are expected to provide patient care meant to optimize drug
therapies. Pharmaceutical care was originally defined as the
responsible provision of drug therapies in order to achieve
definite outcomes and the ultimate goal to improve patients’
quality of life [13]. The underlying recommendation was to
move toward a patient-centered philosophy of clinical prac-
tice aimed at improving therapeutic outcomes. Although a
recent survey found evidence that pharmaceutical care is
mainly associated with community pharmacies in Europe
[14], the two concepts are widely used and mixed in both
primary and secondary care despite various attempts to fur-
ther define and differentiate them [6]. Trying to put it briefly,
the practice of clinical pharmacy should embrace the phi-
losophy of pharmaceutical care [12], the patient being the
primary target for both.

From theory to practice, patient-centered care should
make use of pharmacists to advise patients directly for
medication therapies and collaborate with other health pro-
fessionals (especially physicians and nurses) in the frame
of multidisciplinary teams [12]. Consistently with pharma-
cutical care, the former activity should involve a narrative
approach meant to develop communication and empathy
skills with patients, while the latter would imply providing
additional patient-related services of clinical pharmacy [6].
Owing to the continuously increasing numbers of elderly
people, multimorbidities have become prevalent in Europe
and polypharmacy is an obvious consequence [3], with many
patients taking five or more medicines daily. So, medication
review—a structured evaluation of a patient’s medicine regi-
mens with the aim of optimizing them and improving health
outcomes [15]—has become a frequently cited concept in
the literature, being a sort of ‘umbrella term’ covering drug
therapy adherence and reconciliation between medicines too [16].

In general, although it seems obvious to expect positive results from clinical pharmacy services and pharmaceutical care philosophy of practice, they are hard to prove on the basis of clinical evidence. Many interventions are of difficult standardization, and this is also true for their related outcomes in trials [7, 9]. Yet most studies have been conducted on small samples in single facilities, probably prompted by pharmacists to demonstrate the usefulness of their services, so that results cannot be generalized. On account of the scant clinical evidence, cost-effectiveness analyses focused on trade-offs between the additional costs of clinical pharmacy services and potential savings on other healthcare services at a local level may only add further confusion. However, needless to say, each pharmacist is able to provide a good clinical service regardless of the healthcare setting, just like any other health professional who offers her/his job in the interests of patients.

**Policy implications**

The new wave of pharmacists’ patient-centered care in Europe still seems to be a reaction against the loss of their traditional professional role after the drug manufacturing revolution, somehow masking a perceived identity crisis by shifting towards clinical medicine [17]. To envisage a realistic scenario for a rational prospective evolution of the pharmacist’s role in health care, one must obviously differentiate the hospital and community settings, very different in terms of healthcare provision.

**Hospital**

Rather than claiming prescription rights, hospital pharmacists should strengthen their pivotal role of medication ‘gatekeepers’ in the frame of a close collaboration with clinicians, so as to improve prescription appropriateness and eventually generate savings in drug expenditures [18]. Being in the right position as experts to advise clinicians on drug kinetics and dynamics, hospital pharmacists may be able to reinforce their role by specializing in specific therapeutic areas and affirming their independent opinions within multidisciplinary teams to enhance cost-effective prescriptions. After medical specialists make their diagnosis and prescribe a given therapy, hospital pharmacists might check that the most appropriate drugs have been selected, especially for patients in polypharmacy such as the elderly and those with chronic conditions, to minimize the risks of drug interactions and adverse reactions. Moreover, to help free up work time of their clinical colleagues, hospital pharmacists might discuss with problematic patients the preferred route of drug administration and/or form.

**Community**

Community pharmacists are among the most easily accessible and highly visible healthcare professionals in primary care, and are ideally in a very good position to advise patients directly on medication therapies. They can also encourage their adherence to prescriptions (especially for multi-morbid patients), possibly curtailing drug-related morbidity and mortality. However, the proposals for clinical services provided by community pharmacists, like that recently approved by the Italian Government on the detection of risk factors (e.g., glycaemia and cholesterolemia assays), are inevitably affected by the crucial issue of their potential remuneration. Many European community pharmacists still work in small to medium shops, which must ensure returns on their investments [19], as the sky-high prices of face masks during the very first wave of COVID-19 pandemic in Italy has recently shown. The major marketing advantage of pharmacies is attracting extra customers for other health products and services owing to their monopoly on reimbursable drugs. It would be useful to establish a systematic regulation for remuneration of both drug delivery and additional clinical services. Otherwise pharmaceutical care remains a disputable concept in practice, potentially driven by commercial incentives at the time of intervention on prescriptions. This is especially true in a country like Italy where the remuneration for reimbursable drugs is still a (high) proportion of the retail price, and not like in the UK a (low) flat fee for the dispensing service delivered [20]. Last but not least, a minimum of three years for graduation should probably be enough for pharmacists to start working in a community pharmacy and to avoid feeling too qualified for their daily activities of drug dispensing only. By the way, this is the duration in all European faculties but human and veterinary medicine.

In conclusion, despite the weakness of the European Union in this field (inherited from a piecemeal national framework) and its present lack of political strength, we are still firmly convinced that European solutions are potentially the best in the long run.

**Acknowledgements** LG would like to thank his friend Duvan Finazzebri for his useful comments on the first draft of the manuscript.

**Funding** No sources of funding were used to conduct this study or prepare this manuscript.

**Compliance with ethical standards**

**Conflict of interest** Livio Garattini, Anna Padula and Pier Mannuccio Mannucci have no conflicts of interest directly relevant to this article.
Statements on human and animal rights  This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent  None.

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