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The path of least resistance? Jurisdictions, responsibility and professional asymmetries in pharmacists' accounts of antibiotic decisions in hospitals

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ABSTRACT

The misuse of antibiotics has become a major public health problem given the global threat of multi-resistant organisms and an anticipated 'antimicrobial perfect storm' within the next few decades. Despite recent attempts by health service providers to optimise antibiotic usage, widespread inappropriate use of antibiotics continues in hospitals internationally. In this study, drawing on qualitative interviews with Australian pharmacists, we explore how they engage in antibiotic decisions in the hospital environment. We develop a sociological understanding of pharmacy as situated within evolving interprofessional power relations, inflected by an emerging milieu whereby antibiotic optimisation is organisationally desired but interprofessionally constrained. We argue that the case of antibiotics articulates important interprofessional asymmetries, positioning pharmacists as delimited negotiators within the context of medical prescribing power. We conclude that jurisdictional uncertainties, and the resultant interprofessional dynamics between pharmacy and medicine, are vital delimiting factors in the emerging role of pharmacists as 'antimicrobial stewards' in the hospital environment. Moreover, we argue that a nuanced understanding of the character of interprofessional negotiations is key to improving the use of antibiotics within and beyond the hospital.

1. Introduction

The pharmacy profession has traditionally received less attention from sociologists than other healthcare professions with only sporadic attention over the last few decades (e.g. Denzin and Mettlin, 1968; Eaton and Webb, 1979; Mesler, 1991). In the context of an historic but persistent medical dominance in the health sector, there has been a focus within sociology on professional identity work, professionalisation and role delineations within nursing, physiotherapy, midwifery and social work (Apesoa-Varano, 2013; see Denzin and Mettlin, 1968; Svensson, 1996). This has meant that the social context and interprofessional dynamics associated with pharmacy, and its relations across the health sector, have been less transparent (Chiarello, 2013; Weiss and Sutton, 2009). Yet, pharmacy occupies an increasingly influential position within the rationalisation of healthcare delivery (Weiss and Sutton, 2009), playing key roles in practices of (enhanced) systematisation, computerisation and decision-making around medications in particular (Weiss and Sutton, 2009; Chiarello, 2013). Moreover, the broader expansion of biomedicine in the latter half of the 20th Century was accompanied by an expansion in the pharmacy role, including being directly involved at the bedside (e.g. Rosenthal et al., 2014). Thus, in hospital settings, pharmacists are prominent actors in the dynamics of team-based care, albeit operating within a particular distinct professional order involving potential power imbalances (Weiss and Sutton, 2009).

In the context of antibiotic use in the hospital and the rise of antimicrobial stewardship (AMS) programs internationally (CDC, 2014; IDSA, 2014), pharmacy has become an important player in attempts to moderate antibiotic use (e.g. Cairns et al., 2013; Hand, 2007; Ingram et al., 2012). *Antimicrobial stewardship* refers to: coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the

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optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration (IDSA, 2014). This drive to optimise antibiotics through AMS programs reflects recognition of an anticipated antimicrobial perfect storm within the next few decades, driven by rapidly diminishing antibiotic drug development, antibiotic overuse and the proliferation of multi-resistant organisms. Given the paucity of antibiotic options in development, there is broad agreement that an immediate tightening of antibiotic use internationally is urgently needed (CDC, 2014; IDSA, 2014), including, but not restricted to, the hospital sector (Fridkin and Srinivasan, 2013). Yet, AMS programs have had limited effects over time in Australia and internationally (Cairns et al., 2013), with, for example, between 20 and 50% of antibiotics utilised in Australian hospitals deemed clinically inappropriate (ACSQHC, 2014; Ingram et al., 2012). Similar results have been shown in studies of hospital-based antibiotic use in Europe and North America (e.g. Zarb and Goossens, 2011). While an understanding of the day-to-day pressures on hospital-based doctors and the various social dynamics underpinning antibiotic misuse is beginning to emerge (e.g. Broom et al., 2014, 2015), there is little research exploring pharmacy perspectives (Roque et al., 2014, 2015).

The aforementioned shift in priorities in health policy toward more judicious and appropriate antibiotic use globally presents significant implications for interprofessional relations between medicine and pharmacy (Weiss and Sutton, 2009). The rise of AMS, and the importance of pharmacists within such initiatives (CDC, 2014; IDSA, 2014), offers up the potential for important shifts in interprofessional dynamics (e.g. Hand, 2007). Thus, drawing on the accounts of hospital pharmacists, in this sociological analysis we argue that the arena of antibiotic use within hospitals reveals persistent but evolving professional asymmetries between pharmacy and medicine. Moreover, that understanding these dynamics is critical for the development of global strategies to optimise antibiotic use in hospital contexts.

2. Background

2.1. Pharmacy in interprofessional context

It is useful to briefly reflect on the historical position, role and evolution of pharmacy. The role of pharmacy has continued to evolve over the latter half of the 20th Century, including moves to delineate and enhance pharmacy's role and responsibilities in healthcare delivery (Denzin and Mettlin, 1968; Eaton and Webb, 1979; Mesler, 1991). As Denzin and Mettlin (1968) outlined several decades ago, pharmacy initially received limited recognition in terms of professional role and power, suffering from a perception of merely delivering and counting drugs on the orders of physicians. According to early work in the area (circa 1970s), agreement between medicine and pharmacy was traditionally negotiated whereby those tasks viewed as repetitive and irreconcilable with the elevated status of doctors, were delegated to pharmacists (Eaton and Webb, 1979). In return, physicians would refrain from trespassing onto core pharmaceutical territory – namely drug dispensing (Eaton and Webb, 1979). While roles have shifted markedly over the course of the late 20th Century (cf. Mesler, 1991), what continues to define the relationship to pharmacy to medicine is medicine's prescribing power (Emmerton et al., 2005). Specifically, capacity to prescribe, continues to dominate boundary maintenance for medicine and in relation to pharmacy (Apesoa-Varano, 2013). While pharmacists are drug experts, doctors maintain significant professional control over drug decisions, largely through the enactment of prescribing power.

A number of recent professional developments have challenged traditional medical dominance in relation to the pharmacy profession. The move to greater involvement of pharmacy at the bedside, rather than as dispensers of medications, began in the 1970s and gathered significant momentum over the following four decades (Eaton and Webb, 1979). The clinical pharmacy movement, for example, has been articulated as the "ongoing negotiation of order in contemporary medicine" (cf Mesler, 1991: 311), reflecting its power in legitimising and expanding the pharmacy role (Rosenthal et al., 2014). In occupying this space pharmacists contend with many of the same challenges as physicians as they engage with patients, healthcare workers, and organisations while making ethical decisions (Chiarello, 2013: 320).

Such shifts have been partnered with an international trend toward increasing prescribing rights for pharmacists (Emmerton et al., 2005; Makowsky et al., 2013; Pojskic et al., 2014; Rosenthal et al., 2014; Weiss and Sutton, 2009). In terms of the current study's focus, hospital pharmacy has evolved from supplying and managing antibiotics to holding key responsibilities in AMS programs and advising on antibiotic use (e.g. Hand, 2007). This has involved the emergence of *AMS pharmacy* as a professional speciality, with tasks including: giving expert advice; raising awareness of guidelines; enforcing formulary restrictions; and, auditing of antibiotic use (Hand, 2007). In this way antibiotic decisions represent an important site of interprofessional change in the basis of professional negotiations, including the potential reconfiguration of power and roles between medicine and pharmacy.

2.2. The Australian context

The pharmacy profession is not linear across sectors or cultural contexts. For example, prescribing rights differ significantly internationally (Emmerton et al., 2005), with countries such as Canada, the UK, America and New Zealand recently extending (albeit limited) prescribing rights to pharmacists (Makowsky et al., 2013). In Australia, the prescribing dominance of doctors continues, but is increasingly being challenged by pharmacists (see PSA, 2010). Currently neither community or hospital pharmacists are able to prescribe antibiotics, yet they are increasingly tasked with their governance in institutions (ACSQHC, 2014). This includes responsibility for enacting *formulary limits* within hospitals guiding which antibiotics can be used, and by whom, shaping interprofessional relations. Public hospitals in Australia require an active AMS program in order to receive annual accreditation (ACSQHC, 2014). Bringing with it enhanced systematisation of antibiotic controls, and dedicated pharmacy input, AMS bolsters the potential role of pharmacists in influencing antibiotic decisions. Yet, and as reflected in the results below, the minutiae of antimicrobial governance and everyday practice may not be dictated by such guidelines and controls, limiting the potential power of pharmacy at a local level. We note that interprofessional dynamics in private hospital settings in Australia, where medical clinical practice is more autonomous and less regulated, may be significantly different than those presented below drawn from a public setting.

2.3. Borders, professional boundaries and moral gatekeeping

The role of pharmacy in the hospital is quite specific in terms of professional power/autonomy and roles/expectations. As Chiarello argues, hospital pharmacists exercise less autonomous power than community pharmacists as the higher level of interaction and stronger relationships with other professionals increases their accountability and reduces flexibility. In the hospital context, direct patient interaction can be limited (i.e. number of pharmacists and capacity to provide direct advice to doctors 'at the bedside') which can result in a sense of disconnect from the social and cognitive context of the medication decision (Chiarello, 2013).