

Hub and Spoke Dispensing: Safety and Sociotechnical Pliability

Over the course of the last year, the Department of Health has looked at the use of hub and spoke dispensing systems for community pharmacy in England, a technology which some view as an inevitable extension of electronic prescription transmission in primary care. In a hub and spoke system, medicines required for a primary care prescription are put together at a remotely located warehouse and then transported to a spoke site, such as a community pharmacy, where they can be collected by the patient. The economies of scale that such a model offers support the use of robotic dispensing.

At present, the law governing community pharmacy only allowed for this model to be used when both the hub and the spokes were owned by the same company, but in September 2015, the Chief Pharmacist for England, Dr. Keith Ridge, suggested that the law should be changed to allow any community pharmacy to contract a hub service from another provider.

The use of hub and spoke models has been discussed for a number of years, and might become a viable proposition with the growing use of services for primary care electronic prescription transmission. In England, the Electronic Prescription Service (EPS) is now gaining increasing momentum as a means of providing paper-less transmission of prescriptions from primary care prescribers to dispensers, although some suppliers of EPS compliant dispensing systems have had problems in recent months with the reliability of their systems.

There appears to have been some enthusiasm for hub and spoke dispensing from the Department of Health in England, and a business case developed around use of hub and spoke services as a means of providing safety drug dispensing to patients. However, recent evidence to the House of Common's All Party Pharmacy Group (APPG) by Dr. Ridge, on the safety of hub and spoke was withdrawn. According to the trade paper *Chemist and Druggist*, this evidence was withdrawn by Ridge over concerns about the methodology used, and its relevance to English care, and also the limited dataset available. In the case of the data Ridge cited, the data was from a single site in Sweden.

In safety and health services research, notwithstanding the problems of generating comparable data, there is also the problem of identifying all factors that contribute to safe operation of a system. For example, in the recent evaluation of the EPS, it came to be recognized that the assumption made that dispensing reliability, in terms of ensuring that contents and labels matched prescriptions, was a limited measure. In this research, led by Professors Bryony Dean Franklin and Nick Barber, it was noted that pharmacists would intervene in the creation of the dispensing label to enhance the information available to patients about the appropriate storage, and use of their medicines.

The research that Professor Dean Franklin and colleagues conducted around the EPS serves to illustrate that measures of safety are in fact measures of reliability, safety being assumed through the model of the system adopted. However, within the real-world, systems are socio-technical, and as such are subject to continual creation and re-creation, as operating procedures, knowledge of system operation, workload, and possibly even organizational and institutional cultures change, independently of the technology itself.

The report about Dr. Keith Ridge's statement to the APPG can be found at [Chemist and Druggist](#), and Dr. Ridge's statement to the APPG [here](#). The September 2015 *Chemist and Druggist* article on proposals around hub and spoke dispensing can be found [here](#). Professor Dean Franklin's and colleagues study of dispensing reliability in community pharmacy before and after the introduction of electronic prescription transmission can be found at [BMJ Quality and Safety](#).



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