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# Role of Medical Engineering in Patient Handling Equipment Support

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## ABSTRACT

Recent years have seen a fundamental shift in the nature of Patient Handling Equipment (PHE), with advancing technology moving this equipment from basic mechanical functionality towards complex devices that can support clinical decision making. In some cases, this has even resulted in formal qualification of PHE as medical devices. This shift has come with some loss of clarity about where the responsibility for maintenance and management of these devices lies, made even more complex by the ongoing push by many manufacturers toward service contracts. Unfortunately, this results in confusion at a clinical level about where to look for repairs and, as a consequence, extended downtimes for crucial equipment.

For University Health Network (UHN), PHE includes, but is not limited to, patient beds, stretchers, exam chairs, wheelchairs, patient lifts and IV poles. Currently, the role of UHN Medical Engineering department in supporting this type of equipment varies across hospitals. At West Park Healthcare Centre, which merged with UHN in 2024, Medical Engineering supports patient beds and other PHE equipment. This is different from other UHN sites where Medical Engineering manages planning and procurement of PHE equipment, while the Facilities department supports its maintenance. This division of responsibilities combined with the historical lack of investment in a sustainable replacement strategy has led to significant challenges, including lower priority maintenance and a poor understanding of the equipment's age and condition. Unlike the other equipment supported by Medical Engineering or Facilities, PHE does not have an inventory management system. As a result, it is difficult to strategically plan equipment replacement and effectively distribute resources across the hospital. Additionally, there is an excess of broken equipment, such as patient beds and IV poles, and long equipment downtimes.

In this work, we discuss the implications of in-house and outsourced support models for PHE, as well as identifying the appropriate team to support this equipment. Further, we present a business case for bringing the support of PHE into Medical Engineering and open a conversation with Clinical Engineers and Biomedical Engineering Technologists from all hospitals about their experience with PHE support.

*Keywords:* Patient Handling Equipment, Equipment support, In-house maintenance

*Conflict of Interest:* The authors declare that they have no conflict of interest.