

Table 2

Barriers to Radio-Frequency Identification (RFID) in the Hospital Supply Chain

Barrier	Details
Cost/ROI challenges	<ul style="list-style-type: none"> • Passive tag cost of \$0.10 to \$0.50 each; active tag cost of \$0.50 to \$50 (Barcoding Corporation 2011)⁶⁷ • Expensive RFID infrastructure to be implemented in the hospital setting (Page 2007⁶⁸; Fisher and Monahan 2008⁶⁹; Ngaia et al. 2008²⁵; Martinez Perez et al. 2012⁷⁰) • Increased networking costs (Fisher and Monahan 2008⁶⁹; Krohn 2008⁷¹) • High cost of implementation (Kumar et al. 2009³⁴) • Unclear ROI (Bunduchi et al. 2011⁴³; Yao et al. 2012⁶⁶) • Shortage of comprehensive information to evaluate RFID implementation cost and ROI for assessment of adoption (Chao et al. 2007⁷²)
Interoperability	<ul style="list-style-type: none"> • Lack of RFID interoperation with existing hospital systems (Fisher and Monahan 2008⁶⁹) • Lack of international standards between Europe and the United States (Sarac et al. 2010⁵⁵) • Lack of interoperability of existing hospital systems (Fisher and Monahan 2012³¹)
Location accuracy	<ul style="list-style-type: none"> • Limited location accuracy (Krohn 2008⁷¹; van der Togt et al. 2011⁷³; Kamel Boulos and Berry 2012³²; Okoniewska et al. 2012⁷⁴)
Organizational challenges	<ul style="list-style-type: none"> • Resistance to change or failure to get buy-in from personnel (Attaran 2007¹⁴; Revere et al. 2010⁵⁸; Fisher and Monahan 2012³¹)
Competing strategic healthcare informatics systems	<ul style="list-style-type: none"> • Implementation of electronic prescribing, CPOE, EMR/EHR systems, HIE, ICD-10-CM/PCS, business analytics/intelligence, tablet integration, new healthcare business models, and IT privacy and security (CMS, 2013 “EHR”⁷⁵, 2013 “ICD-10”⁷⁶; US Department of Health and Human Services 2010⁷⁷, 2011⁷⁸)