

Supplemental Table 1. Cost avoidance per intervention (15)

Intervention	Cost Avoidance per Intervention (year)	Cost Avoidance per Intervention (2019 USD)	Level of Evidence
Section 1: Adverse drug event prevention			
Major ADE prevention	\$2,013 (1997)	\$3,349.35	III
Minor ADE prevention	\$233.51 (1997)	\$388.52	III
Medication reconciliation resulting in major ADE prevention	\$2,013 (1997)	\$3,349.35	III
Medication reconciliation resulting in minor ADE prevention	\$233.51 (1997)	\$388.52	III
Recommend laboratory monitoring	\$233.51 (1997)	\$388.52	IV
Section 2: Resource utilization			
Preventing unnecessary labs and/or tests	Cost of test avoided	Cost of test avoided	IV
Prevention of inappropriate screening of heparin induced thrombocytopenia	\$739.29 (2014)	\$796.07	III
Medication route: intravenous to oral conversion	Medication cost	Medication cost	IIA
Medication route: hypertensive crisis management	\$18,475 (2012)	\$20,334.90	IIA
Medication route: resolving shock management	\$70.80 (2016)	\$74.63	III

Discontinuation of clinically unwarranted therapy	\$60 (2010)	\$68.41	III
Prevention of unnecessary high-cost medication	Medication cost	Medication cost	IV
Section 3: Individualization of patient care			
Dosage adjustment: continuous renal replacement therapy	\$2,345.98 (2013)	\$2,546.85	III
Dosage adjustment: no continuous renal replacement therapy	\$153 (2012)	\$168.41	III
Antimicrobial therapy initiation and streamlining	\$386.80 (1999)	\$615.45	IB
Anticoagulant therapy management	\$420 (1997)	\$698.82	III
Initiation of non-antimicrobial therapy	\$153 (2012)	\$168.41	III
Antimicrobial pharmacokinetic evaluation	\$153 (2012)	\$168.41	III
Total parenteral nutrition management	\$63.35 (2016)	\$66.78	III
Section 4: Prophylaxis			
Change venous thromboembolism prophylaxis to most appropriate agent	\$60 (2003)	\$83.92	IIA
Initiation of venous thromboembolism prophylaxis	\$1183 (2003)	\$1,654.45	IIA
Initiation of stress ulcer prophylaxis	\$53 (2015)	\$56.67	III
Initiation of ventilator associated pneumonia prophylaxis with chlorhexidine	\$588 (2012)	\$647.19	III

Section 5: Hands-on care			
Bedside monitoring	\$233.51 (1997)	\$388.52	IV
Emergency code blue participation	\$1,283 (2008)	\$1,537.55	III
Rapid response team participation	\$153 (2012)	\$168.41	III
Emergency code stroke participation	\$627.90 (2013)	\$681.66	III
Emergency code sepsis participation	\$1,415.50 (2011)	\$1,584.91	III
Blood factor stewardship	\$8,941.40 (2014)	\$9,628.03	III
Emergency procedural sedation or rapid sequence intubation participation	\$211.70 (2005)	\$277.35	III
Medication teaching or discharge education	\$631.34 (2013)	\$685.39	III
Culture follow-up after emergency department discharge	\$631.34 (2013)	\$685.39	IV
Section 6: Administrative and supportive tasks			
Drug information consultation	\$101 (2011)	\$113.08	III
Drug information consultation: toxicology specific	\$385.62 (2012)	\$424.44	III
Patient own medication evaluation	\$233.51 (1997)	\$388.52	IV
Therapeutic interchange	Non-oral: \$94.60 (2011) Oral: \$16.62 (2011)	Non-oral: \$105.92 Oral: \$18.61	III

Pharmacist provided drug protocol management pursuant to collaborative practice agreement	\$101.54 (2014)	\$109.33	III
Rejection of a restricted medication	\$373.36 (2016)	\$393.57	III

ADE: adverse drug event; USD: United States dollar

Note: When costs for cases and controls were provided, the difference between the two was used as the cost avoidance amount

Note: The values from all interventions were inflated to 2019 U.S. dollars using the consumer price index for medical care

Note: Categories of evidence were classified using the GRADE evidence-to-decision framework as follows: IA- Evidence from meta-analysis of randomized controlled trials; IB- Evidence from at least one randomized controlled trial; IIA- Evidence from at least one controlled study without randomization; IIB- Evidence from at least one type of quasi-experimental study; III- Evidence from nonexperimental descriptive studies, such as comparative studies, correlation studies, and case-control studies; IV- Evidence from expert committee reports or opinions or clinical experience of respected authorities, or both