Table 2
Known Cost of Outcomes

<table>
<tr><th>Outcome</th><th>Financial Impact</th><th>Sources</th></tr>
<tr><td>Asthma</td><td>Return on Investment (ROI): Ranging from $2.40-$4 for every $1 spent on guidelines-based medical mgt.
Cost Savings: through reduced emergency visits and hospitalizations.
<table><tr><td>Emergency Room Visits</td><td>$ 935 PER VISIT</td></tr><tr><td>Urgent Care</td><td>$ 250 per visit</td></tr><tr><td>Hospitalization</td><td>$ 2,638 per night</td></tr></table></td><td>(CDC Centers for Disease Control and Prevention. (2022, March 9). CDC Archive Control Asthma. From https://archive.cdc.gov/www_cdc_gov/sixeighteen/asthma/index.htm?utm_source=chatgpt.com

Maine Department of Health and Human Services. (2023). Economic evaluation of the Maine Asthma Self-Management Education Program. Retrieved from: https://www.maine.gov/dhhs/mecdc/sites/maine.gov.dhhs.mecdc/files/Economic%20Evaluation%20of%20the%20Maine%20Asthma%20Self-Management%20Education%20Program%20%28PDF%29.pdf</td></tr>
<tr><td>Catheter Assoc. Urinary Tract Infection (CAUTI)</td><td>Average additional hospital cost of $48,108 per CAUTI case
Range of estimates $4,694–$29,743; Mean $13,793</td><td>Scott, R, Culler, S, & Rask, K. (2019). Understanding the economic impact of HAI: A cost perspective analysis. The Art and Science of Infusion Nursing, 42(2), 61–69. https://doi.org/10.1097/NAN.0000000000000313</td></tr>
</table>

		AHRQ Agency for Healthcare Research and Quality. (2017). Estimating the additional hospital inpatient cost and mortality associated with selected hospital-acquired conditions. From https://www.ahrq.gov/hai/pfp/haccost2017.html
Central–line–associated bloodstream infections (CLABSI)	Range: $17,896–$94,879; Average: $48,108 ($27,232–$68,983) Mean excess length of stay (LOS) of 24.9 days for patients with CLABSI LOS difference, 12.1–17.4 days, costs ($25,207–$55,001/admission)	AHRQ Agency for Healthcare Research and Quality. (2017). Estimating the additional hospital inpatient cost and mortality associated with selected hospital-acquired conditions. From https://www.ahrq.gov/hai/pfp/haccost2017.html Hasan, B, Bechenati, D, Bethel, H, Cho, S, Rajjoub, N, Murad, S, Kabbara Allababidi, A., Rajjo, T, & Yousufuddin, M. (2025). A Systematic Review of Length of Stay Linked to Hospital-Acquired Falls, Pressure Ulcers, Central Line-Associated Bloodstream Infections, and Surgical Site Infections. Mayo Clinic proceedings. Innovations, quality & outcomes, 9(3), 100607. https://doi.org/10.1016/j.mayocpiqo.2025.100607 Yu, K. C., Jung, M., & Ai, C. (2023). Characteristics, costs, and outcomes associated with central-

		line-associated bloodstream infection and hospital-onset bacteremia and fungemia in US hospitals. Infection control and hospital epidemiology, 44(12), 1920–1926. https://doi.org/10.1017/ice.2023.132
Clostridium difficile infection (CDI)	Per-patient direct medical costs for recurrent CDI: $67,837–$82,268/year.	Reveles, KR, Yang, M, Garcia-Horton, V, Edwards, ML, Guo, A, Lodise, T, Bochan, M, Tillotson, G, & Dubberke, ER, (2023). Economic Impact of Recurrent Clostridioides difficile Infection in the US: A Systematic Literature Review and Cost Synthesis. *Advances in Therapy*, *40*(7), 3104–3134. https://doi.org/10.1007/s12325-023-02498-x
Diabetes	Individuals incurred avg. annual medical expenditures of $19,736, approx. $12,022 directly attributable to diabetes. Health Benefits and Cost Savings for the management of: Blood Sugar: reduces risk of eye, kidney, & nerve diseases by 40%. Blood Pressure: lowers risk of heart disease & stroke by 33% -50% Cholesterol: reduces CV complications by 20%-50%. Prevent Blindness: Regular eye exams, timely treatment prevents 90% Prevent Amputations: reg. foot exams & pt. education prevents 85%	Parker, E, Lin, J, Mahoney, T, Ume, N. Yang, G, Gabbay, R, & Bannuru, R (2024). Economic costs of Diabetes in the US in 2022. *Diabetes Care*, *47*(1), 26-43. https://doi.org/10.2337/dci23-0085 CDC Centers for Disease Control and Prevention. (2022). Health and Economic Benefits of Diabetes Interventions. Retrieved Aug 7, 2025

		https://www.cdc.gov/nccdphp/priorities/diabetes-interventions.html
Emergency Dept Visit	Aged 17 years and younger: $290; Aged 65 years and older: $690	Moore, BJ, & Liang, L (2020). Costs of emergency department visits in the US, 2017. HCUP Statistical Brief #268. *Agency for Healthcare Research and Quality*. From https://hcup-us.ahrq.gov/reports/statbriefs/sb268-ED-Costs-2017.jsphcup-us.ahrq.gov+4hcup-us.ahrq.gov+4hcup-us.ahrq.gov+4
Employee Injury	Direct Cost: (some examples from website) Carpel Tunnel Syndrome: $30,930 Fractures: $54,856 Hernia: $20,940 Mental Stress: $35,151 Average Cost/Claim: for all workers' compensation claims combined for accidents that occurred in 2021-2022 was $44,179 Needlestick Injury (NSI): Avg. cost/NSI (inflation-adjusted): $4,352 Lifting-Related Injuries (Overexertion & Musculoskeletal Disorders): Average cost/workplace injury, $40,000, Slips, Trips, and Falls Average cost/patient handling injury: $15,600	OSHA Occupational Safety and Health Administration (n.d.). Safe patient handling programs: Effectiveness and cost savings. Retrieved May 30, 2025, from https://www.osha.gov/hospitals/patient-handling/ National Safety Council. (2023). Workers' compensation costs. Injury Facts. Retrieved May 12, 2025, from https://injuryfacts.nsc.org/work/costs/workers-compensation-costs/ Wakeman, L. (2018). The cost of a needlestick injury. *Daniels Health*.

		Retrieved Oct 6, 2025, from https://www.danielshealth.com/knowledge-center/cost-needlestick-injury L Liberty Mutual Research Institute for Safety (2023). The Liberty Mutual Workplace Safety Index. Retrieved May 12, 2025, from https://www.libertymutualgroup.com/research-institute-safety
Employee Wellness	Influenza Vaccination Program: Avoided medical treatment costs: $2,454; avoided absenteeism: $7,988; reduced presenteeism (work while ill): $10,303; Savings: $16,325. ROI: 3.7 X cost of vaccine program Every $1 spent on behavioral health benefits, employers save $2 in costs. -Net savings $1,070/participant in 1st year; -Behavioral health care increased 47%	Hubble, M, & Renkiewicz, G (2021). Estimated cost-effectiveness of influenza vaccination for emergency medical services professionals. *The Western J of Emergency Medicine,* 22, 1317–1325. https://doi.org/10.5811/westjem.2021.7.50681 Spring Health. (2025). Spring Health study published in *JAMA Network* Open demonstrates 1.9x ROI of employer-sponsored behavioral health benefits. https://www.springhealth.com/news/jama-study-roi-employer-behavioral-health
Epilepsy	Mean Hospital Charges per patient: $14,779.16 Mean inpatient cost/admission =$18,834; Average LOS of 12.9 days	American Epilepsy Society. (2019). *Financial burden of nonconvulsive status epilepticus in*

		the United States during 1993–2014. Retrieved from https://aesnet.org/abstractslisting/financial-burden-of-nonconvulsive-status-epilepticus-in-the-united-states-during-1993-2014 Kortland, L. M., Knake, S., Rosenow, F., & Strzelczyk, A. (2015). Cost of status epilepticus: A systematic review. *Seizure*, *24*, 17–20. https://doi.org/10.1016/j.seizure.2014.11.003
Hospital-acquired pressure ulcer (HAPU)	$20,900 to $151,700/pressure ulcer Average increase cost/hospitalization with HAPU was $21,767 Length of stay (LOS) increased by an average 12.9 days for pressure ulcers	AHRQ Agency for Healthcare Research and Quality. (2017). Estimating the additional hospital inpatient cost and mortality associated with selected hospital-acquired conditions. From https://www.ahrq.gov/hai/pfp/haccost2017.html Wassel C, Delhougne G, Gayle J, Dreyfus J, Larson B. (2020). Risk of readmissions, mortality, and hospital-acquired conditions across hospital-acquired pressure injury (HAPI) stages in a US National Hospital Discharge database. *Int Wound J.* Dec;17(6):1924-1934. doi: 10.1111/iwj.13482. Hasan, B, Bechenati, D, Bethel, H, Cho, S, Rajjoub, N, Murad, S,

		Kabbara Allababidi, A., Rajjo, T, & Yousufuddin, M. (2025). A Systematic Review of Length of Stay Linked to Hospital-Acquired Falls, Pressure Ulcers, Central Line-Associated Bloodstream Infections, and Surgical Site Infections. Mayo Clinic proceedings. Innovations, quality & outcomes, 9(3), 100607. https://doi.org/10.1016/j.mayocpiqo.2025.100607
Heart failure	Mean total costs of $15,618 ± $25,264 for patients with 30-day readmission and $11,845 ± $22,710 for patients without a readmission.	Kwok, C, Abramov, D, Parwani, P, Ghosh, R, Kittleson, M, Ahmad, F, Al Ayoubi, F, Van Spall, H, & Mamas, M (2021). Cost of inpatient heart failure care and 30-day readmissions in the United States. *International J of Cardiology*, *329*, 115–122. https://doi.org/10.1016/j.ijcard.2020.12.020
Hospitalization	Average cost per day United States: $3,132 Each state has an average cost listed on this site	Kaiser Family Foundation. (2023). *Hospital inpatient day expenses archives.* https://www.kff.org/state-category/health-costs-budgets/hospital-inpatient-day-expenses/
Infections: MRSA CRAB IPD PNE	$22,293 for Methicillin-Resistant Staphylococcus Aureus (MRSA); $57,390 for Carbapenem-resistant Acinetobacter baumannii (CRAB); Hospital-onset $30,998 for MRSA & $74,306 for CRAB; Community-onset CRAB $62,396. Invasive pneumococcal disease (IPD)- hospitalization $40,575- $95,607; Pneumonia (PNE) -$16,631-$21,429 for hospitalized cases	Nelson R, Hyun D, Jezek A & Samore M (2022). Mortality, length of stay, & healthcare costs associated with multidrug-resistant bacterial infections among elderly

OM NVHAP VAP CAP	Otitis media (OM) $14,599-$16,341 for hospitalized cases Non-ventilator hospital-acquired pneumonia (NVHAP) 2.63/1,000 patient days, & mortality 7.76%, with an excess cost/NVHAP of $20,189. Ventilator-Associated Pneumonia (VAP)- $19,325–$80,013; average $47,238 $179,572 per VAP case avoided Community-acquired pneumonia (CAP)- average $33,380 for hospitalization	hospitalized patients in the US. *Clinical Infectious Diseases*, 74(6), 1070-1080. https://dx.doi.org/10.1093/cid/ciab696 Averin A, Weycker D, Lapidot R, Rozenbaum M, Huang L, Vietri J, Pelton S, (2025). Cost of invasive pneumococcal disease, all-cause pneumonia, and all-cause otitis media among commercial-insured US children. *J of Medical Economics,* 28(1), 517-523. https://dx.doi.org/10.1080/13696998.2025.2484919 Giuliano K, Baker D, Thakkar-Samtani M, Glick M, Restrepo M, Scannapieco F, Frantsve-Hawley J (2023). Incidence, mortality, and cost trends in non-ventilator hospital-acquired pneumonia in Medicaid beneficiaries, 2015-2019. *American J of Infection Control,* 51(2), 227-230. https://dx.doi.org/10.1016/j.ajic.2022.06.016 AHRQ Agency for Healthcare Research and Quality. (2017). Estimating the additional hospital inpatient cost and mortality associated with selected hospital-

		acquired conditions. From https://www.ahrq.gov/hai/pfp/haccost2017.html Robinson, C, Hoze, M, Hevener, S, & Nichols, A, (2018). Development of an RN Champion Model to Improve the Outcomes of Ventilator-Associated Pneumonia Patients in the Intensive Care Unit. *The J of Nursing Administration*, *48*(2), 79–84. https://doi.org/10.1097/NNA.0000000000000578 Weycker D, Moynahan A, Silvia A & Sato R (2021). Attributable cost of adult hospitalized pneumonia beyond the acute phase. *PharmacoEconomics* Open, 5(2), 275-284. https://dx.doi.org/10.1007/s41669-020-00240-9
Mental Health: Pediatric Average Annual Healthcare Expenditures	Cost increase from 2017-2021: Any mental health condition: $3,074.50 ADHD $2,475.30 Anxiety $ 2,311.50 Depression $2,283.60 Outpatient visits: $1,143/child. Inpatient visits: $12,126/child. Medications: $966/child. Emergency department visits: $1,020/child.	Loo T, Altman M, Bravata D, Whaley C. Medical Spending Among US Households With Children With a Mental Health Condition Between 2017 and 2021. *JAMA Netw* Open. 2024 Mar 4;7(3):e241860. https://doi.org/10.1001/jamanetworkopen.2024.1860

		AHRQ Agency for Healthcare Research and Quality. (2018). Medical Expenditure Panel Survey. Table 3a: Mean expenses per person for selected conditions by type of service: United States, 2014. From https://meps.ahrq.gov/data_stats/tables_compendia_hh_interactive.jsp?_SERVICE=MEPSSocket0&_PROGRAM=MEPSPGM.TC.SAS&File=HCFY2014&Table=HCFY2014_CNDXP_CA&_Debug=
Personnel: Absenteeism RN Turnover RN Burnout Medical Assistant (MA) turnover	Absenteeism: $520/employee/year (11% of total health-related costs) Presenteeism: $3,055/employee/year (64%) Average cost of turnover for RN is $61,110 (range $49,500-$72,700); For every 20 travel RNs eliminated, an average hospital can save $1,581,800 Average cost of turnover for RN is $40,038. Each % change in RN turnover costs/saves average hospital $270,800/year. Each % change in nurse turnover costs/saves the hospital $328,400. Hospitals spend $16,736/nurse/year on burnout-attributed turnover costs. Burnout reduction program costs $11,592/nurse/year. The per-MA cost of turnover was $14,200	Nagata, T, Mori, K, Ohtani, M, et al, (2018). Total health-related costs due to absenteeism, presenteeism, and medical and pharmaceutical expenses in Japanese employers. *J of Occupational and Environmental Medicine*, 60(3), e273–e280. https://doi.org/10.1097/JOM.0000000000001291 NSI Nursing Solutions, Inc. (2025). 2025 NSI national health care retention & RN Staffing Report. Plescia, M. (2021). The cost of nurse turnover by the numbers. Becker's Hospital Review.

		https://www.beckershospitalreview.com/finance/the-cost-of-nurse-turnover-by-the-numbers/ Shaffer, F, & Curtin, L, (2020). Nurse turnover: Understand it, reduce it. *American Nurse*, 15(8), 57-59. https://www.myamericannurse.com/nurse-turnover-understand-it-reduce-it/ Muir K, Wanchek T, Lobo J & Keim-Malpass J (2022). Evaluating costs of nurse burnout-attributed turnover: a Markov modeling approach. *J of Patient Safety*, 18(4), 351-357. https://dx.doi.org/10.1097/PTS.0000000000000920 Friedman, J. L., & Neutze, D. (2020). The Financial Cost of Medical Assistant Turnover in an Academic Family Medicine Center. *Journal of the American Board of Family Medicine : JABFM*, *33*(3), 426–430. https://doi.org/10.3122/jabfm.2020.03.190119

Patient Fall Education Programs	Average cost/non-injurious fall: $35,365 Cost savings from prevention programs: $14,600/1,000 patient days Program Net Avoided Costs: $14,600/1,000 patient days. Average total cost/fall: $62,521; Net Avoided Costs: $14,600/1,000 patient days	Wong, C, Recktenwald, A, Jones, M, Waterman, B, Bollini, M. & Dunagan, W. (2023). The cost of serious fall-related injuries at three Midwestern hospitals. *JAMA Network* Open, 6(5), e2312345. https://pmc.ncbi.nlm.nih.gov/articles/PMC9860521/ Baris, V, & Intepeler, S, (2023). Evaluation of the cost-effectiveness of a multicomponent fall prevention program in hospitalized patients. *Nursing & Health Sciences,* 25(4), 585-596. https://doi.org/10.1111/nhs.13051 Dykes, P, et al. (2023). Cost of inpatient falls and cost-benefit analysis of implementation of an evidence-based fall prevention program. *JAMA Health Forum*, 4(1), e225125. https://doi.org/10.1001/jamahealthforum.2022.5125
Remote Patient Monitoring (RPM)	Avg cost of RPM-HTN- $330/patient; annual program cost of $33,000 for 100 patients. Key expenses: data review by nurse practitioners ($172/patient), B/P device ($48/patient), nurse-patient communication ($36/patient). ROI average 22% at 55% patient compliance with the program	Zhang D, Millet L, Bellows B, Lee S & Mann D (2025). Program cost and return on investment of a remote patient monitoring program for hypertension management. *MedRxiv: the Preprint Server for Health Sciences*, https://dx.doi.org/10.1101/2025.01.29.25321334

Sepsis	Average ALL sepsis stays $24,600; i.e. Adult (65+) $21,700; Pediatric $38,200	Owens P, Miller M, Barrett M, Hensche M. Overview of Outcomes for Inpatient Stays Involving Sepsis, 2016–2021. HCUP Statistical Brief #306. April 2024. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/reports/statbriefs/sb306.pdf
Stroke	Average annual healthcare expenditure among stroke patients was $16,979 (comparable control patients $5,039.70)	Ramamoorthy, V, Chan, K, Roy, M, Saxena, A. Ahmed, M, Zhang, Z, Appunni, S, Thomas, R, McGranaghan, P, McDermott, M, La Rosa, FLR, & Rubens, M (2023). Healthcare expenditure trends among adult stroke patients in US, 2011-2020. *J of Stroke and Cerebrovascular Diseases: the official J of National Stroke Association*, 32(10), 107333. https://doi.org/10.1016/j.jstrokecerebrovasdis.2023.107333
Substance Use: Alcohol Smoking Opioid Treatment	Outpatient alcohol detox ranges from $250 to $800 per day. Inpatient care ranges from $5,000 to $80,000. Vaping – Annual expenditures to all e-cigarette $2024/user, exclusive e-cigarette use $1796/user, dual/poly e-cigarette use $2050/user Narcan $44.99 per dose; Methadone treatment: annual cost/patient =$6,552, Buprenorphine treatment: annual cost/patient =$5,980,	National Institute on Drug Abuse. (2018). Principles of drug addiction treatment: A research-based guide (third edition)- Types of treatment programs. https://nida.nih.gov/sites/default/files/podat-3rdEd-508.pdf Wang, Y, Sung, H, Lightwood, J, Yao, T, & Max, W. (2023).

		Healthcare utilisation & expenditures attributable to current e-cigarette use among US adults.*Tobacco Control*, 32(6), 723–728. https://doi.org/10.1136/tobaccocontrol-2021-057058 National Institute on Drug Abuse. (2018). How much does opioid treatment cost?. Retrieved from https://nida.nih.gov/publications/research-reports/medications-to-treat-opioid-addiction/how-much-does-opioid-treatment-cost
Surgical Site Infections (SSI) Hospital-onset bacteremia and fungemia (HOB)	SSI cost of $30,689, and length of stay (LOS) was 11.6 days higher. HOB added $28,049 to cost of care and 6.5 days to the LOS SSI cases cost 8 X more than noninfected controls over the 2-yr follow-up period ($29,965 vs $3,685) for a net difference of $26,279 SSI after coronary artery bypass graft, bariatric surgery, & certain orthopedic procedures→1-yr total medical cost $40,606- $68,101/person	Ai C, Jung M, Bastow S, Adjaoute G, Bostick D & Yu KC (2025). Clinical outcomes and hospital-reported cost associated with Surgical Site Infections and the co-occurrence of hospital-onset bacteremia and fungemia across US hospitals. *Infection Control & Hospital Epidemiology*, 1-7. https://dx.doi.org/10.1017/ice.2025.13 Lethbridge L, Richardson C, & Dunbar M (2020). Total cost of SSI in the two years following primary knee replacement surgery. *Infection Control & Hospital Epidemiology*, 41(8), 938-942.

		https://dx.doi.org/10.1017/ice.2020.198 Shambhu S, Gordon A, Liu Y, Pany M, Padula W, Pronovost P & Hsu E (2024). The burden of health care utilization, cost, and mortality associated with select surgical site infections. *Joint Commission J on Quality & Patient Safety*, 50(12), 857-866. https://dx.doi.org/10.1016/j.jcjq.2024.08.005
Venous thromboembolism (VTE)	$11,011–$31,687; average of $17,367	AHRQ Agency for Healthcare Research and Quality. (2017). Estimating the additional hospital inpatient cost and mortality associated with selected hospital-acquired conditions. From https://www.ahrq.gov/hai/pfp/haccost2017.html
Virtual reality (VR) simulation	VR simulation = $2.22 -$14.38 per use, Traditional physical simulations = $28.38-$394.95 per use	Oxford Medical Simulation. (2024). Simulation and Your Return on Investment. Oxford Medical Simulation. From: https://oxfordmedicalsimulation.com/simulation-and-your-return-on-investment/
Workplace Violence program	Average cost/participant: $10,800 Average medical cost per assault-related gun injury =$37,435 per case	Everytown for Gun Safety Support Fund & The Health Alliance for Violence Intervention (HAVI). (2024). Hospital-based violence intervention programs (HVIP)

		costing guide: A resource for hospitals and funders. Retrieved from https://everytownresearch.org/wp-content/uploads/sites/4/2024/03/Everytown-HAVI-HVIP-Costing-Guide-2024-1.pdf