Press Release: New Study Finds that Antimicrobial Resistance (AMR) could cost the U.S. $655 billion by 2045.[1]

Study finds:

- *Annual costs to treat AMR are projected to rise from $31B per year in 2025, to $52B by 2045*
- *AMR-associated hospital bed utilization is projected to increase 68% by 2045 from approximately 2.1 million additional U.S. bed-days annually to 3.5 million.[2]*
- *Resistant infections were associated with four additional hospital days and $21,453 in additional costs per infection, after adjusting for patients' pre-existing health conditions*

Washington, DC – October 23rd, 2026.

In a first of its kind analysis, Vital Transformation has conducted a study showing that antimicrobial resistance (AMR) could cost the U.S. economy $655 billion by 2045 if new treatments and policies are not enacted — its cost impact is growing at 3% per year. Using a novel approach that combines patient-level health data, billing-derived cost estimates, and statistical adjustments for pre-existing health conditions, the study provides a more precise assessment of the additional hospital costs and resource utilization associated with AMR. The study's findings were presented today in a podium presentation at the ID Week conference held in Washington, DC.

A retrospective analysis conducted by Vital Transformation assessed the direct clinical and economic impact of AMR among hospitalized patients with **sepsis, hospital acquired pneumonia, and complicated urinary tract infection (cUTI)**. The analysis used longitudinal electronic health records from Vanderbilt University Medical Center (2016–2024), covering a cohort of **50,189 patients**. The patient-level findings reflect observed and adjusted outcomes from the Vanderbilt cohort, while the national cost and hospital utilization figures are modeled U.S. estimates and projections derived from the study. Vanderbilt's catchment area reflects a broad section of the southern U.S., with a mix of urban and rural populations, making it unique in being demographically representative of the U.S. at large.

According to Vital Transformation CEO Duane Schulthess, who gave today's presentation, "There have been many studies published from a public health standpoint that have presented the overall impact of AMR and its increasing frequency, but this is the first study which we're aware of that

[1] Calculated as the net present value, with a 10% cost of capital.
[2] 95% CI [38%, 105%].

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quantifies with such clarity the incredibly huge impact AMR is having on the cost of treatment, and the fact those costs are growing at 3% per year."

AMR substantially increases resource utilization. Across the three infections studied, AMR is associated with longer hospital stays, higher costs, and increased readmissions. Hospital stays account for approximately **83% of the additional costs** associated with AMR in the adjusted analysis. The study estimates that AMR-related infections account for approximately **2.1 million hospital bed-days annually in the U.S.**, potentially increasing to **3.5 million by 2045**.

As well, mortality remains substantial across all indications:

- **Sepsis:** ~34% mortality
- **Hospital Acquired Pneumonia:** ~33% mortality
- **cUTI:** ~24% mortality

A significant proportion of deaths occur within the first two weeks of infection, highlighting the importance of early and effective treatment.

AMR was also associated with approximately 1/3 (33%) higher hospital readmission rates compared with non-AMR infections (28% versus 21% respectively). This means that Hospital Readmission Rates increase by roughly 7%-points due to AMR alone.

These findings also highlight the disconnect between the economic benefits of addressing AMR and the financial incentives for developing new antimicrobials. The PASTEUR Act seeks to address this challenge through a contracting mechanism that reduces reliance on sales volumes while supporting appropriate antimicrobial stewardship.

The PPT of the results which was presented at today's ID Week podium session will be made available at Vital Transformation when released by the conference organizers. The sponsors of the study included The Biotechnology Innovation Organization (BIO), Pfizer Inc., Merck & Co., GSK, The Alliance for Aging Research, and the Pharmaceutical Research and Manufacturers of America (PhRMA).

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About Vital Transformation

Vital Transformation understands the implications of new medical procedures, technologies, and policies. We measure their impact on current clinical practices in close collaboration with health care professionals, researchers, and regulators. Through our web platform, client network and Vital Health Podcast series, we communicate our findings with international decision makers and stakeholders.

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