

Global Trade Shocks and Exchange Rate Effects on Pharmaceutical Reference Pricing: Implications of EU Stimulus for U.S. MFN Policy

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INTRODUCTION

- U.S. "Liberation Day" tariffs (April 2025): 10% baseline + 20% on EU, affecting \$380B in EU exports (70% of total)
- Anomalous currency response:** EUR appreciated 12.3% vs. USD in 2025 (1.02→1.16), contrary to typical tariff impacts
- U.S. MFN policy (EO 14297, May 2025) references lowest prices from OECD countries with GDP per capita ≥60% of U.S.
- Reference basket:** 16-25 predominantly EU countries (12 of 16 use EUR; 15 of 20 with PPP adjustment use EUR)
- Current price differential:** U.S. pharmaceutical prices are 278% of OECD comparator countries (322% for brand-name drugs)
- Existing MFN analyses assume stable exchange rates and static EU pricing—assumptions challenged by 2025 events
- Research gap:** Intersection of tariffs, EU fiscal responses, and currency dynamics creates unexplored policy feedback loops

METHODS

- Conceptual framework:** GDP identity ($GDP = C + I + G + [X - M]$) to trace EU compensation for export losses
- Three-layer analysis:**
 - Layer 1: Documented EU fiscal stimulus measures (focus: Germany's €1T package)
 - Layer 2: Dual pharmaceutical pricing pressures (demand expansion vs. cost containment)
 - Layer 3: Exchange rate transmission effects on USD-equivalent reference prices
- Evaluated new EU HTA Regulation (effective January 2025) with JCAs impacting pricing harmonization
- Calculated USD-equivalent prices under EUR appreciation scenarios to model MFN benchmark impacts
- Data sources:** U.S. CBP/White House (tariffs), OECD/RAND/IQVIA (pricing), European Commission (fiscal policy), HHS/CMS (MFN policy)
- Key limitation:** Net prices not systematically available; analysis uses list prices as proxy
- Dynamic policy environment limits long-term projection certainty

RESULTS

- Germany's fiscal response:** €500B infrastructure fund (12 years) + €120B/year defense, with explicit healthcare/hospital allocations
- EU-wide impact:** Defense spending increase from 1.4%→3% GDP by 2030 (~€250B/year), creating budgetary trade-offs
- Dual pricing pressures identified:**
 - Upward: Fiscal stimulus, healthcare expansion, increased access/demand
 - Downward: EU HTA Regulation (JCAs starting Jan 2025), centralized procurement, stricter cost containment
- Q1 2025 pricing data:** 19.8% increase in EU price changes vs. Q1 2024; France & Germany account for 91% (both link prices to HTA)
- Currency amplification effect:** 12.3% EUR appreciation means EUR prices must decline >12.3% just to maintain USD-equivalent stability
- Critical threshold:** Stable EUR pricing = +13.7% USD-equivalent increase; modest +5% EUR increase = +19.9% USD increase
- MFN basket concentration:** 75% of reference countries experiencing currency appreciation vs. USD (Eurozone, Norway, Sweden, Switzerland)

FIGURE 1 Timeline of Tariffs, Currency Appreciation, and MFN Policy

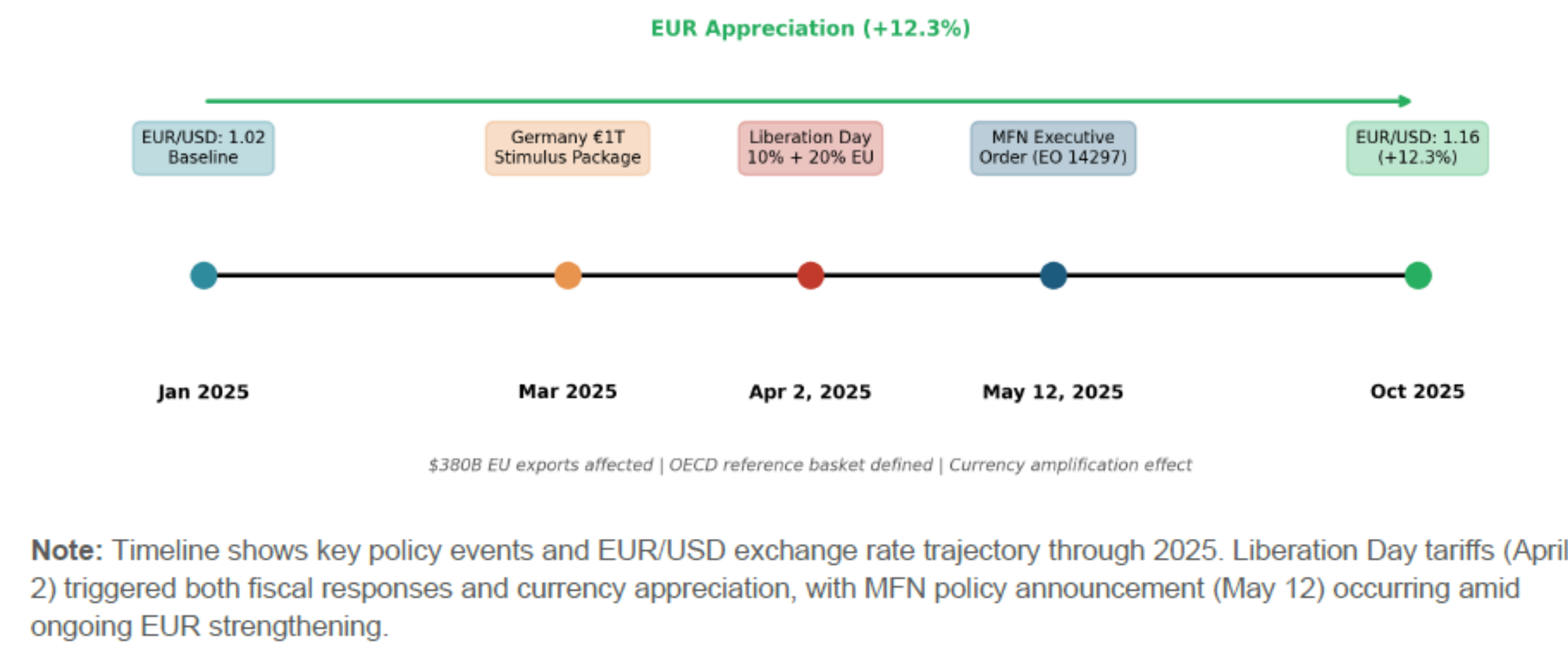


FIGURE 2 MFN Reference Basket Currency Exposure

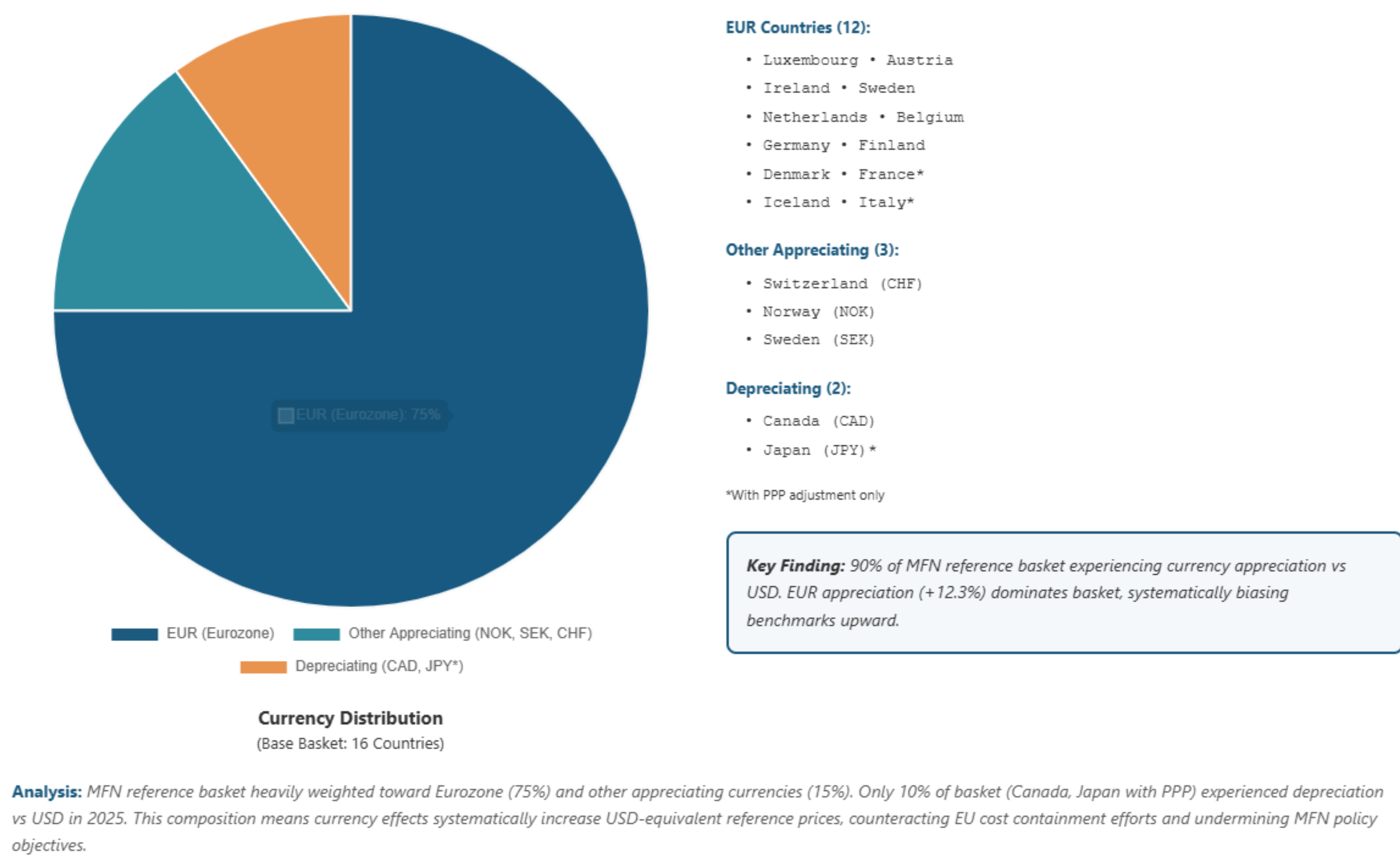


TABLE 1 Currency Amplification Effect on MFN Reference Prices

Scenario	EU Policy Response	EUR Price Change	EUR/USD Rate	USD-Equivalent Change	MFN Impact
Baseline 2024	Pre-tariff	0%	1.02	Baseline (100)	Reference
Strong Containment	Cost controls	-10%	1.16	+2.0% (102)	Minimal ↓
Moderate Containment	Balanced	-5%	1.16	+7.8% (108)	Net ↑
Status Quo	No change	0%	1.16	+13.7% (114)	Substantial ↑
Stimulus-Driven	Demand expansion	+5%	1.16	+19.9% (120)	Major ↑

Key Insight: EUR prices must decline > 12.3% to achieve any USD-equivalent reduction in MFN reference benchmarks. Currency appreciation amplifies all EUR price movements when converted to USD.

CONCLUSION

- Complex dynamics:** Tariff policy + EU fiscal responses + currency appreciation create non-linear effects that challenge MFN policy assumptions
- Currency as critical multiplier:** EUR appreciation creates powerful headwind—expected 30-80% U.S. price reductions may be substantially diminished or reversed
- Government-specific heterogeneity:** EUR drug price trajectories depend on each nation's balance of healthcare expansion vs. cost containment priorities
- MFN effectiveness at risk:** USD-equivalent reference prices may increase despite EU cost containment, as currency effects dominate
- Policy implications:** U.S. MFN policy requires currency adjustment mechanisms; simple international price comparisons insufficient without macroeconomic context
- EU positioning:** Currency appreciation may temporarily shield EU from U.S. pressure to raise prices, but creates pricing complexity
- Need for integrated modeling:** Effective pharmaceutical pricing policy must simultaneously consider macroeconomic, regulatory, financial, and strategic factors

Declarations
NP is an employee of Bayer Pharmaceuticals, Basel, Switzerland

Abbreviations: MFN: Most Favored Nation, GDP: Gross Domestic Product, EU: European Union, JCA: Joint Clinical Assessment, OECD: Organization for Economic Co-operation and Development, PPP: Purchasing Power Parity, CBP: Customers and Border Protection, HTA: Health Technology Assessment, CMS: Centers for Medicare & Medicaid Services, HHS: Health and Human Services, RAND: Research AND Development