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ARTICLE

Belle's Therapeutic-as-a-Service (TaaS) Preventive Model on Par with Blockbuster Drugs

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Abstract

Preventable complications of chronic conditions (e.g., diabetes, chronic kidney disease, peripheral vascular disease) impose massive costs and degrade quality of life. Belle has developed a holistic chronic care management program around its in-home medical pedicure, which identifies and mitigates emerging health risks often missed by standard primary care. Rigorous retrospective analyses confirm Belle reduces critical clinical events and high-cost care utilization, comparable to blockbuster drugs.

Please note: Belle is not a drug and we make no claims to that effect. Rather, Belle may best be described as a *therapeutic-as-a-service*, as it is administered in regular "doses". Its comparison to a pharmacological agent is offered for its intriguing and useful implications.

Keywords: preventive healthcare, Belle, in-home care, cost-effectiveness, Medicare Advantage, value-based care

1. Introduction

Millions of Americans suffer with chronic diseases, such as diabetes (38.4 million), chronic kidney disease (35.5 million), peripheral vascular disease (8.5 million), neuropathy (10.8 million), and peripheral artery disease (12 million) (CDC 2023b; Hicks and Selvin 2019; Swenty and Hall 2020; Aalaa et al. 2012). Chronic disease complications account for a significant portion of the nation's healthcare spending (Hacker 2024). Diabetic foot complications *alone* drive $52.8 billion annually out of the $176 billion spent on diabetes care, despite that 85% are preventable with timely intervention (Aalaa et al. 2012).

Delivering timely interventions in preventive care is a significant challenge. Traditional primary care remains reactive, prioritizing acute care over proactive, long-term prevention strategies. Barriers such as time-constrained visits, limited provider training in preventive care, and inconsistent patient adherence, or inability to adhere, add further complexity.

Insights from over 300,000 Belle in-home visits reveal that nearly one-third of seniors report being unable to perform basic self-care tasks, like trimming nails or washing feet. Social determinants of health (SDoH)—including transportation barriers, financial insecurity, and lack of caregiving support—further limit access to consistent, comprehensive care. Consequently, early warning signs *visible in-home* are often *missed in-clinic*, and complications are detected and managed only when costly, high-acuity interventions are required.

Belle was designed as a patient-centered solution to address these challenges. Belle offers up to 12 in-home visits annually, combining preventive foot care, before-and-after imaging, clinical screenings, SDoH assessments, and fall risk evaluations into a service perceived as a *luxury* rather than *healthcare*. By creating a ritual of joy in the home for at-risk patients, Belle identifies and closes care gaps that traditional primary care providers cannot see or address. Belle nurse chart reviews are conducted within hours, enabling immediate care coordination with primary and specialty providers. This proactive approach not only builds trust and service loyalty, demonstrated by Belle's Net Promoter Score (NPS) of 98, but also reduces downstream costs by preventing critical complications.

Statins and GLP-1 receptor agonists are cornerstones of pharmaceutical management for preventing cardiovascular and metabolic complications. These drugs demonstrate proven clinical efficacy, but rarely achieve outright cost savings (Palmer et al. 2003; Johansen et al. 2019; Sanchez et al. 2024). Given that the Belle experience is regularly dosed like a pharmacological agent, *how does Belle's effectiveness compare to the healthcare industry's gold standard for chronic disease management, blockbuster drugs?*

This paper explores how Belle achieves clinical and economic outcomes that rival that of leading drug therapies. By reducing high-cost healthcare utilization and improving patient outcomes, Belle redefines value-based care delivery in ways that blockbuster drugs cannot.

1.1 Drugs: Often Cost-Effective, Rarely Cost-Saving

Statins and GLP-1 receptor agonists deliver significant *cost-effectiveness* by reducing hospitalizations and emergency visits. However, they have not been shown to achieve true *cost savings*.

Statins, a cornerstone in coronary heart disease prevention, effectively reduce major coronary events but still result in higher net costs. In the early 2000s, for individuals with Type 2 Diabetes, annual statin expenses range from *$600–$1,000*

for patients with LDL levels of 100–129 mg/dL and *$700–$2,100* for those with LDL ≥130 mg/dL (Palmer et al. 2003). Even after factoring in the prevention of heart attacks, the net costs remained substantial, at *$480–$950* and *$590–$1,920*, respectively, and Palmer et al. (2003) found that "*...statin therapy for primary prevention of major coronary events in subjects with type 2 diabetes is not cost saving regardless of the baseline LDL cholesterol level*".

More recently, the Heart Protection Study Collaborative Group (2009) found that for high-risk individuals (42% 5-year MVE risk), simvastatin therapy delivers an annual benefit of $267 per person ($1,300 savings over 5 years divided by 5 years). With an annual cost of $365 ($1 per day for 40 mg generic simvastatin), this yields an annual ROI of ca. 0.73x ($267 benefit per $365 cost).

In contrast, for low-risk individuals (12% 5-year MVE risk), simvastatin therapy results in an annual benefit of $43.60 per person ($216,500 cost per vascular death avoided divided by 5 years and 1,000 individuals, assuming a rate of 1 death avoided per 1,000 treated). With the same annual cost of $365, the ROI for this population is ca. 0.12x ($43.60 benefit per $365 cost), indicating that the therapy does not produce net savings at lower risk levels (Heart Protection Study Collaborative Group 2009).

GLP-1 receptor agonists, widely used for obesity and type 2 diabetes, deliver notable clinical benefits: reductions in HbA1c, weight loss, and lower cardiovascular risk (Sanchez et al. 2024; Staff 2024). However, their widespread clinical use poses an economic dilemma as two in five Medicare-aged adults are obese, and one in four have diabetes (CDC 2023a). Due to massive demand, Medicare Part D spending on GLP-1 therapies skyrocketed from **$57 million** to over **$5.5 billion** between 2018 and 2022, prompting insurers to restrict coverage (KFF 2024).

GLP-1 treatments, such as semaglutide, cost $9,515–$11,628 annually (Johansen et al. 2019; Sanchez et al. 2024; AbuHasan et al. 2024). Several studies in employer-sponsored health plans have found that GLP-1s are prohibitively expensive relative to their medical cost savings (S. Atlas et al. 2022; Lincoff et al. 2023; Steven J Atlas et al. 2023). On average, Medicare beneficiaries for which GLP-1s reduced their BMI by 15% saved $3,512 (95% CI, $3,389–$3,634) (Thorpe and Joski 2024). For 100,000 beneficiaries, that's $351M in savings, but $951M in annual drug spend, yielding an ROI ($\delta_{benefit}/\ \delta_{cost}$) of 0.37x (Thorpe and Joski 2024). This highlights a critical tension: while GLP-1 therapies are clinically effective, their economic sustainability as a frontline obesity treatment remains uncertain.

2. Belle as a Drug: Pharmaceutical Efficacy, Nail Technician Price

Belle's clinical and economic impacts have been rigorously validated through large-scale retrospective analyses and causal analysis techniques in partnership with three major health plans. The studies analyzed over 40,000 unique Belle patients against a control population of 350,000. Figure 1 demonstrates statistically significant relative reductions in (a): emergency room and inpatient hospital utilization (13.8% and 6.8%, respectively, $p < 0.05$), and skilled nursing facility utilization (47.7%, $p < 0.05$) (c) fall-related episodes (52.1%, $p < 0.05$), and other costly events, such as major depressive episodes (-40%) and diabetes-related complications (-8.2%, $p < 0.05$). N.b., that Belle's home-based care utilization increased by 61.1% ($p < 0.001$), highlighting a deliberate shift toward lower-acuity, cost-effective care.

Belle leverages licensed nail technicians certified as community health workers (CHWs), resulting in average treatment costs between $620 and $930 per member per year. These costs are dramatically lower than both Statins and GLP-1s, a stark contrast made even more significant by the billions in R&D, grants, and government-funded research, such as the $37 billion annually provided by the NIH, that subsidize drug development (U.S. Government Accountability Office (GAO) 2023).

Retrospective studies indicate that 40% of the Medicare population meets criteria for clinical benefit and net financial savings through Belle's program. This proportion is comparable to those indicated for obesity and diabetes drugs. Nationally, this translates to $63.4 billion in healthcare savings, with a global savings potential of $467.7 billion.

Table 1 summarizes the relative cost and cost savings between statin, GLP-1, and Belle. These outcomes position Belle as a non-drug-based intervention with comparable impact to widely prescribed drug therapies, such as statins and GLP-1 receptor agonists.

Table 1. Annual cost, savings, percent of the population indicated, and ROI for each treatment. ROI is defined as $\frac{\delta \text{Benefit}}{\delta \text{Cost}}$.

Treatment	Avg. Annual Cost[a]	Savings	% Indicated	ROI
GLP-1s	$9.5k–$11.6k	$1.3k–$5.4k[b]	>40%	0.13–0.57x
Statins	$365	$43–$267	>40%	0.12–0.73x
Belle	$0.63k–$0.93k	$1.35k	40%	1.45–2.16x

a Costs and savings reflect data from individuals with a 12%–42% 5-year risk of major vascular events for statins (Heart Protection Study Collaborative Group 2009); Table 2. Statin costs are averaged to be ca. $1 per day; GLP-1-related costs are based on BMI reduction studies (Thorpe and Joski 2024).

b The reduction in annual total health care spending as a function of BMI decrease (Thorpe and Joski 2024). The average reduction in spend above is provided for 5%–25% BMI decrease. The average is taken to be ca. 15% reduction – $3,512 (95% CI, $3,389–$3,634), which is referenced in the section, above.

3. Conclusion

Belle's in-home, preventive approach rivals the clinical and economic outcomes of leading pharmaceuticals used for chronic disease management. With early detection and targeted care, Belle reduces costs and improves outcomes for a wide array of patients on par with a blockbuster drug.

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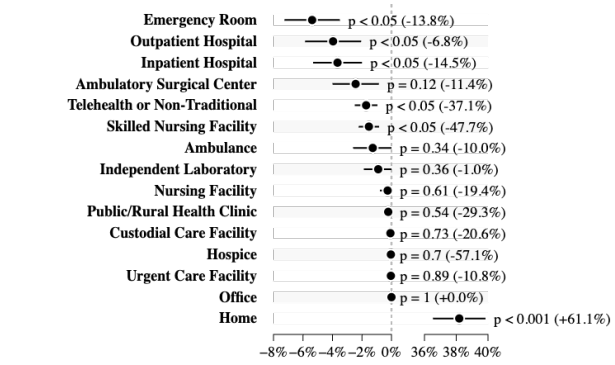
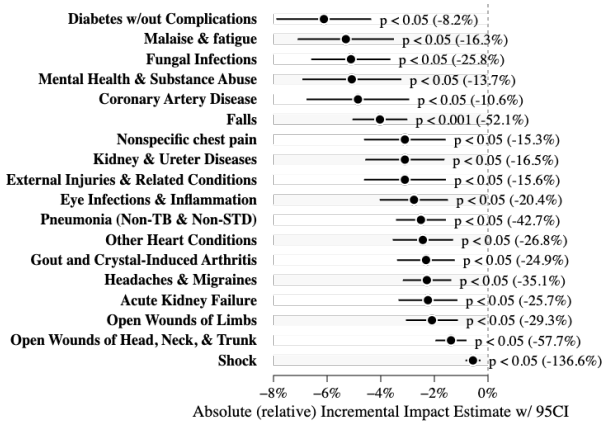
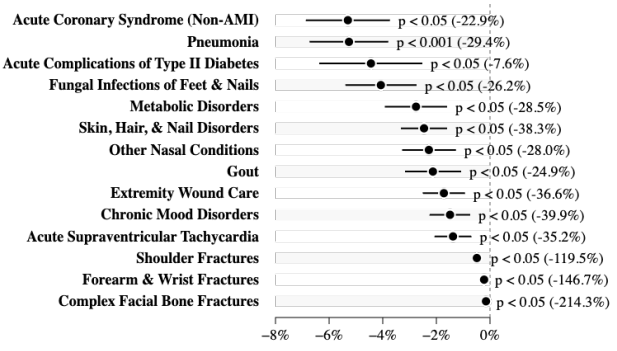


(a) Site of Care Impacts.



(b) Clinical Episode Impacts.



(c) HCUP CCS Impacts

Figure 1. Belle's incremental absolute and (relative) impact on (a) site of care utilization, (b) PACES episodes , and (c) HCUP CCS episodes demonstrates efficacy comparable to statins, GLP-1 agonists, and SGLT2 inhibitors. PACES (PACES 2024), developed by the Center for Value in Healthcare, categorizes episodes to advance value-based care, while HCUP CCS (AHRQ 2024), created by AHRQ, provides systematic episode classification for health policy analysis and clinical decision-making.

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