

# Beyond the Screen: A Financial Comparison of Virtual Labs and Conventional Methods of Simulation

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## ABSTRACT

Operating a healthcare simulation program with limited resources presents unique challenges, yet it remains essential for fostering clinical competencies and enhancing patient safety. This abstract explores effective strategies for maximizing the impact of simulation training despite financial and material constraints. Resource limitations can hinder access to high-fidelity manikins, advanced technology, and dedicated facilities; however, innovative solutions can mitigate these challenges. This paper discusses alternative approaches, including the use of low-fidelity simulation tools, scenario-based training with standardized patients, and the integration of virtual simulation technologies that require fewer physical resources. Additionally, it emphasizes the importance of community partnerships, collaboration with local healthcare facilities, and the utilization of existing educational resources to enrich simulation experiences. By prioritizing faculty training and employing creative debriefing techniques, programs can enhance learning outcomes even in resource-limited settings. Case studies of successful healthcare simulation programs operating on minimal budgets illustrate the potential for effective training that prioritizes safety and competency development. Ultimately, this paper advocates for a shift in mindset, encouraging healthcare educators to leverage ingenuity and collaboration to create impactful simulation experiences, thereby preparing future professionals to deliver high-quality care in diverse settings.

## INTRODUCTION

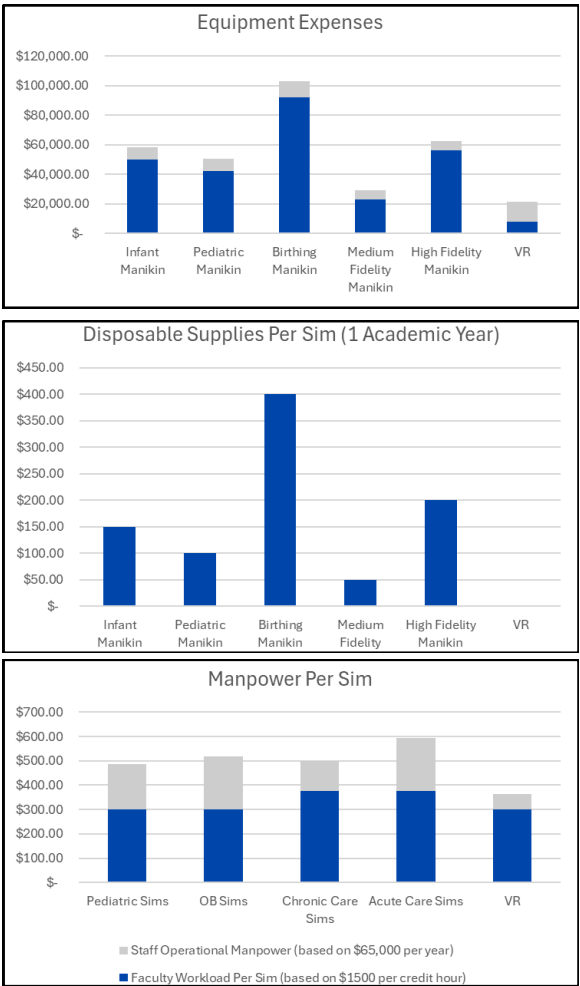
Many nursing programs face financial and logistical limitations yet are still expected to deliver high-quality clinical training. Lower admission numbers are affecting institutions everywhere. This project aims to shift the narrative from what programs lack to what they can achieve through innovation, collaboration, and intentional instructional design using virtual reality simulation in addition to traditional simulation.

## DATA

Data was compiled by assessing startup costs, hardware, software licenses, warranties, supply costs, and manpower for operations. Comparisons were made between standard high fidelity simulation costs and virtual reality simulation costs.



## RESULTS



## DISCUSSION

This work attempts to demonstrate that impactful healthcare simulation is possible even with limited resources. By using available tools, traditional simulations and virtual simulations, nursing programs can deliver effective training without relying on costly technology. This study specifically attempted to compare the investment into virtual simulation as an addition to traditional simulation. Additionally, investing in faculty development and creative debriefing techniques can significantly enhance learner outcomes. These findings highlight the importance of flexibility, collaboration, and innovation in sustaining high-quality simulation experiences regardless of budget constraints. This approach challenges the common belief that virtual reality is too expensive to incorporate into training programs. It's important to recognize that in-person clinical education must be enhanced in order to better align with evolving competency-based learning models. As both learning styles and technologies continue to evolve, educators must adapt their instructional methods to stay current and effective.

## CONCLUSIONS

Healthcare simulation programs under resource constraints demand a paradigm shift from traditional, high-cost models to more adaptable and innovative strategies. The value of simulation lies in the intentionality of its design and the quality of its execution. Virtual simulation technologies present a promising avenue for expanding access to simulation-based education without incurring significant infrastructure costs. Web-based platforms and virtual reality modules can bridge geographical and financial gaps, particularly for institutions in rural or underserved areas. To maximize these tools, faculty development becomes critical. Instructors must be equipped to use these technologies. Faculty and program leaders must remain open to rethinking traditional methods and embracing novel solutions to evolving challenges.



## REFERENCES

