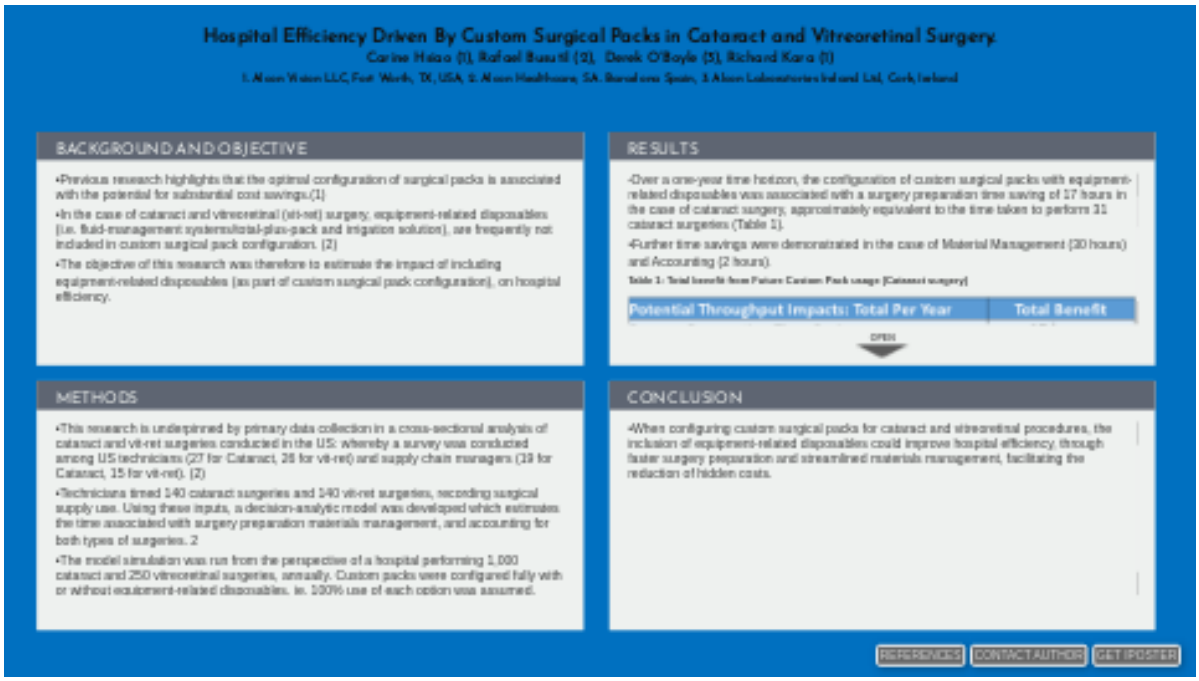
Hospital Efficiency Driven By Custom Surgical Packs in Cataract and Vitreoretinal Surgery.



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PRESENTED AT:

BACKGROUND AND OBJECTIVE

•Previous research highlights that the optimal configuration of surgical packs is associated with the potential for substantial cost savings.(1)

•In the case of cataract and vitreoretinal (vit-ret) surgery, equipment-related disposables (i.e. fluid-management systems/total-plus-pack and irrigation solution), are frequently not included in custom surgical pack configuration. (2)

•The objective of this research was therefore to estimate the impact of including equipment-related disposables (as part of custom surgical pack configuration), on hospital efficiency.

METHODS

•This research is underpinned by primary data collection in a cross-sectional analysis of cataract and vit-ret surgeries conducted in the US: whereby a survey was conducted among US technicians (27 for Cataract, 26 for vit-ret) and supply chain managers (19 for Cataract, 15 for vit-ret). (2)

•Technicians timed 140 cataract surgeries and 140 vit-ret surgeries, recording surgical supply use. Using these inputs, a decision-analytic model was developed which estimates the time associated with surgery preparation materials management, and accounting for both types of surgeries. 2

•The model simulation was run from the perspective of a hospital performing 1,000 cataract and 250 vitreoretinal surgeries, annually. Custom packs were configured fully with or without equipment-related disposables, ie. 100% use of each option was assumed.

RESULTS

•Over a one-year time horizon, the configuration of custom surgical packs with equipment-related disposables was associated with a surgery preparation time saving of 17 hours in the case of cataract surgery, approximately equivalent to the time taken to perform 31 cataract surgeries (Table 1).

•Further time savings were demonstrated in the case of Material Management (30 hours) and Accounting (2 hours).

Table 1: Total benefit from Future Custom Pack usage (Cataract surgery)

Potential Throughput Impacts: Total Per Year	Total Benefit
Surgery Preparation Time Savings	**17 hours**
Potential Additional Cataract Procedures	**31**
Potential Time Savings: Total Per Year	
Materials Management Department	**30 hours**
Accounting Department	**2 hours**

•Considering the same time-horizon (one-year) and for vit-ret surgery, the estimates are as follows: surgery preparation time saving of 4 hours, approximately equivalent to 3 vit-ret procedures.

•Further time savings were demonstrated in the case of Material Management (7 hours)

Table 2 : Total benefit from Future Custom Pack usage (Vit-ret surgery)

Potential Throughput Impacts: Total Per Year	Total Benefit
Surgery Preparation Time Savings	**4 hours**
Potential Additional Vit-ret Procedures	**3**
Potential Time Savings: Total Per Year	
Materials Management Department	**7 hours**

CONCLUSION

•When configuring custom surgical packs for cataract and vitreoretinal procedures, the inclusion of equipment-related disposables could improve hospital efficiency, through faster surgery preparation and streamlined materials management, facilitating the reduction of hidden costs.

REFERENCES

References

1. Lafuma, A., and A. Smith. Value in Health 7.6 (2004).

2. Di Simplicio , S et al. Free Paper presented at the EURETINA annual meeting; October 2020; Virtual Congress.