

Genetic Testing Utilization Management: Saving Time, Saving Money, and Maximizing Clinical Utility for Patients - A Commercial Lab Experience

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BACKGROUND

- Utilization management (UM) is a topic of increasing importance in the genetics field
- Genetic counselor (GC) review of genetic testing orders has previously been shown to:
 - Decrease cost
 - Increase clinical utility
 - Increase lab efficiency
 - Decrease time to reporting^{1,2}
- Various organizations have developed a UM process to promote cost-containment through appropriate allocation of healthcare dollars^{1,2}
- Limited information is available from a commercial genetic testing laboratory setting²
- This study reports UM data collected at our high throughput commercial genetic testing laboratory, from a broad-based testing menu and patient population

METHODS

Team of accessioning GCs:

- Reviewed 41 data points per case from the test requisition form and supporting documents after sample receipt and initial order entry
- Prospectively curated modifications made to each order
- Modification types include: updated test status, corrected demographics, clarified test orders, canceled redundant/duplicate orders, etc.
- Categorized modifications based on impact on the case:
 - Test/report accuracy, billing, clinical utility, lab compliance, & lab efficiency
- Estimated laboratory cost savings from each type of modification
- Compared clarity, completeness, efficiency, and appropriateness of orders regarding these parameters based on ordering provider type

RESULTS

- Of the 207,578 cases reviewed, 61% (n=126,622) required modifications
- Correcting patient details and obtaining accurate and complete clinical information were the most common modifications
 - These resulted in improvements across multiple aspects of cases (Fig. 1)
- Canceling test orders with redundant gene content reduced average cost by 42.5-65.2%, depending on the testing ordered (Fig. 2)
- 7,050 modifications were required to ensure proper test was run and reported
- 4,010 orders required communication with the client to incorporate past test results, STAT requests, and information pertaining to specific site analyses
- 11,863 cases were designated to have results reviewed by a reporting GC for additional data check, tailored reporting and more
- In total, case reviews resulted in an estimated cost savings of \$242,593 (Fig. 3)
- Orders without a clinical GC involved were 1.87 times more likely to require test clarification

FIGURE 1. IMPACT OF MODIFICATIONS MADE TO ORDER BY TYPE

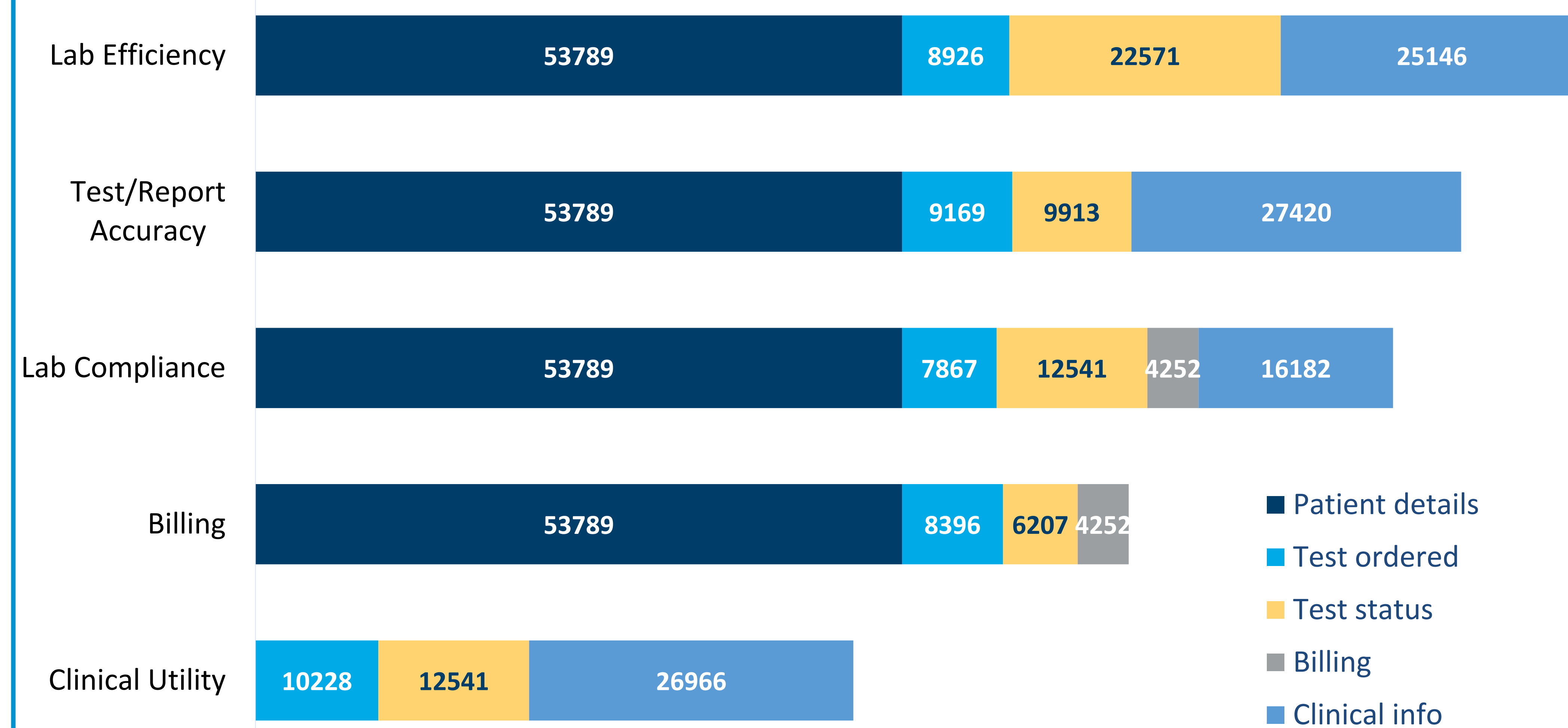


FIGURE 2: COST COMPARISON FOR COMMON REDUNDANT TEST ORDERS

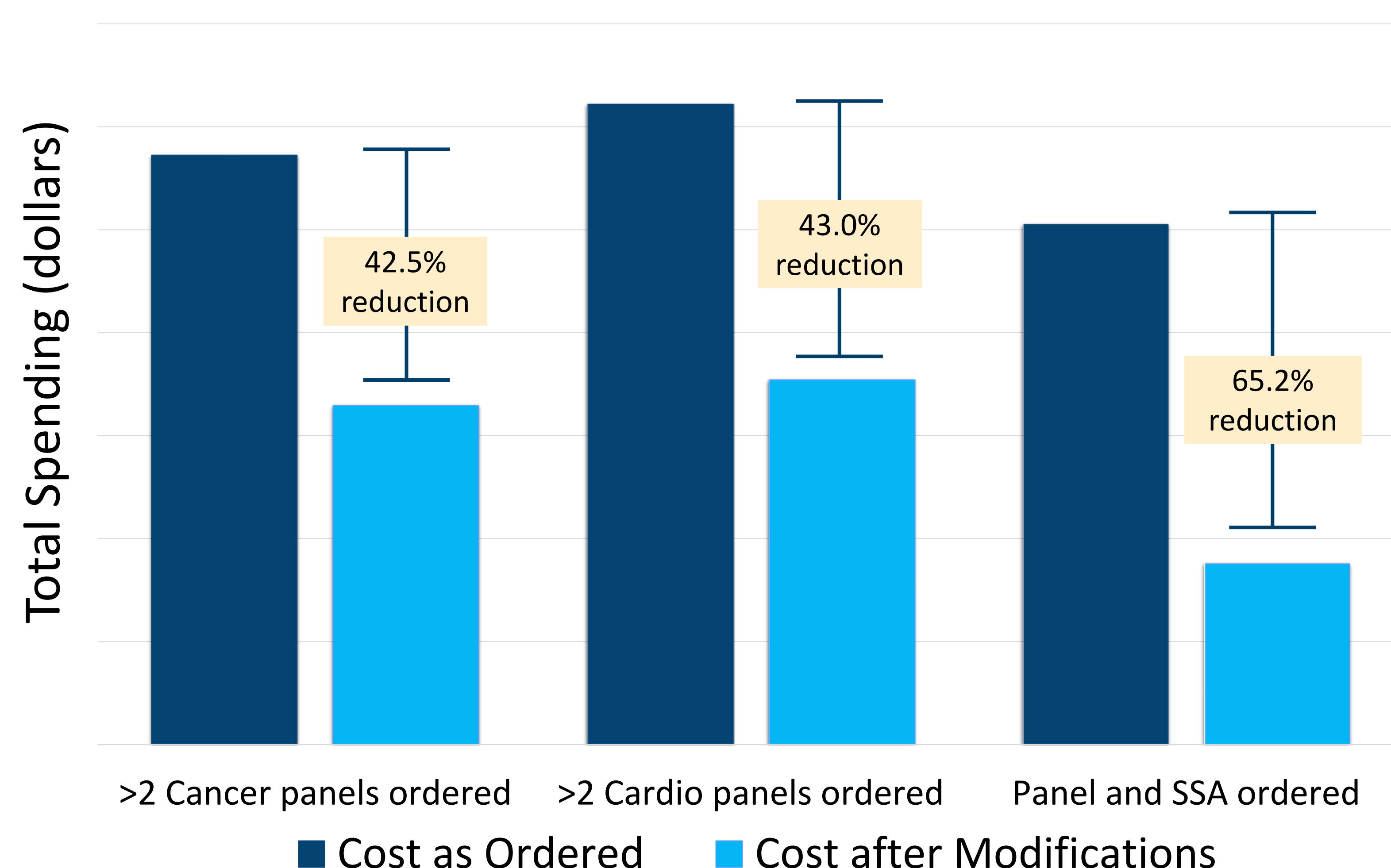
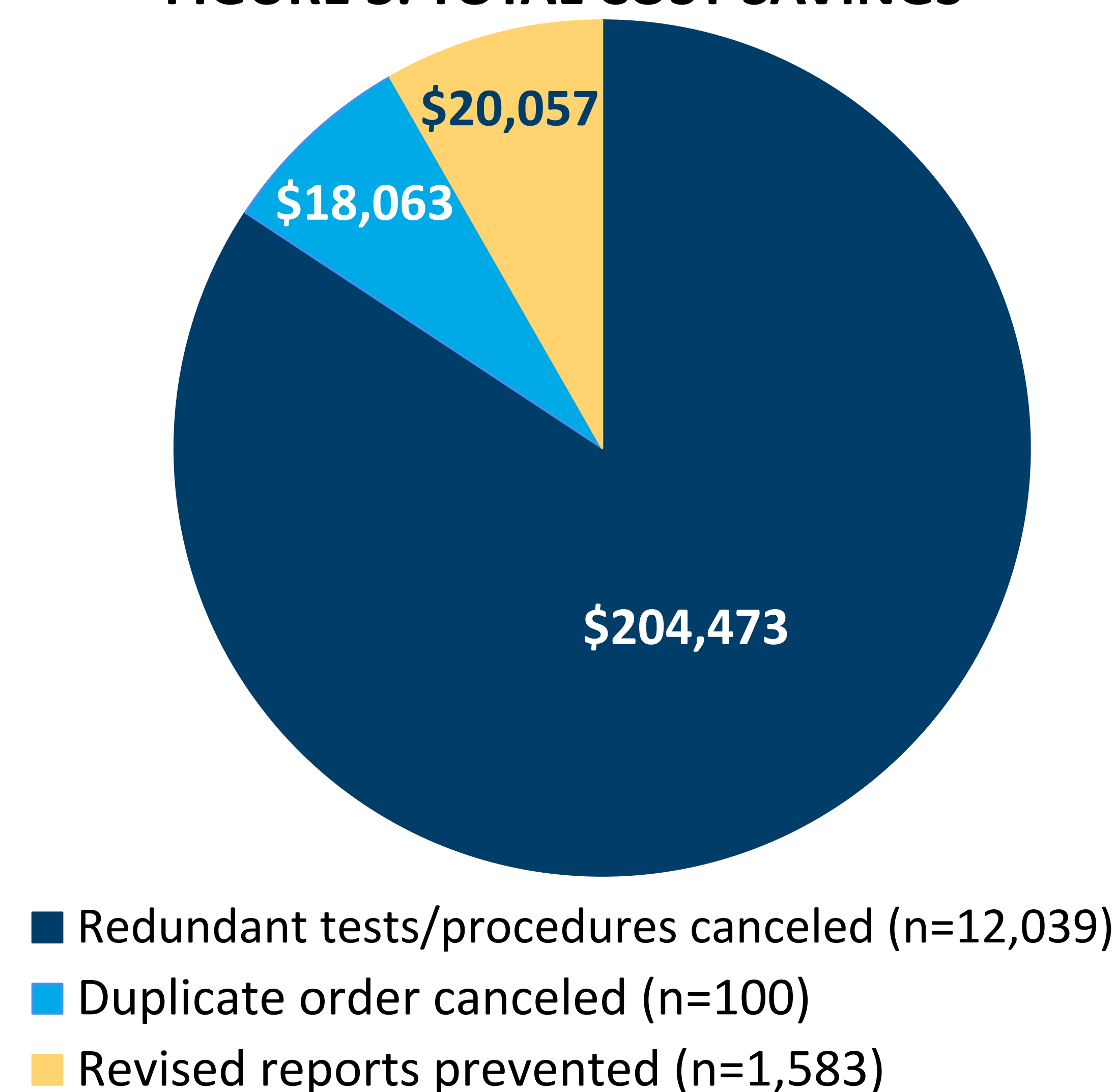


FIGURE 3. TOTAL COST SAVINGS



TAKE-HOME POINTS

- The UM program carried out by GCs improves clinical utility by assuring the right test is ordered based on patient's clinical information and provides significant financial benefit
- Cases without a clinical GC involved in the ordering process were nearly twice as likely to need modification
- Commercial labs can play a crucial role in promoting cost savings and reducing waste in medical spending

REFERENCES

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