

# Medical Equipment Service Contract Review Process

TAP TO GO BACK  
TO KIOSK MENU

Authors: Ahmad Ateyat, Will Balhorn, Bokang Motlote, Avinash Konkani, Jeff Smith

## Introduction/Opportunity

BIDMC spends \$12.5M annually on medical equipment service contracts. Based on an analysis done by an outside consultant, Clinical Engineering can potentially identify savings of up to 2-4% annually through better management of vendors and bringing medical device repairs in house. When the Clinical Engineering team was formed, one of the founding goals was to capitalize on those potential savings by reducing service contract costs while maintaining or improving quality of care. Clinical Engineering developed a standard process to collaborate with Contracting and clinical users to analyze service contracts and identify opportunities for savings. This process directly relates to most of the IOM Dimensions of Quality Care because the contracts in place to ensure effective, efficient, and timely, service for medical equipment so that we can provide high level quality of care and safety.

## Aim/Goal

**Goal: To provide the most economical service support while maintaining the appropriate level of service for medical equipment at BIDMC.**

Examples of Opportunities for Savings:

- Beginning to service equipment in house
- Removing contracts for devices that are no longer in use
- Aligning coverage times to clinical operation times
- Removing unnecessary or unused contract options

## The Team



Top (left to right): Patrick Thomas, Capital Contract Manager;  
Matt Wheeler, Director of Clinical Engineering;  
April Palmquist, Contract Specialist;  
Jeff Smith, CE Project and Resource Specialist;  
Avinash Konkani, Sr. Clinical Engineer;  
Bottom (left to right): Ahmad Ateyat, Clinical Engineer;  
Bokang Motlote, Sr. CE Manager  
Will Balhorn, Clinical Engineer;  
Juan DeJesus, CE Manager (not pictured);  
Pam Dicapua, Technology Coordinator (not pictured)  
Shellise Solomon, IS Admin Assistant (not pictured)

## The Process



## Results/Progress to Date

### FY'17-19 Contracts Reviewed vs Savings Identified

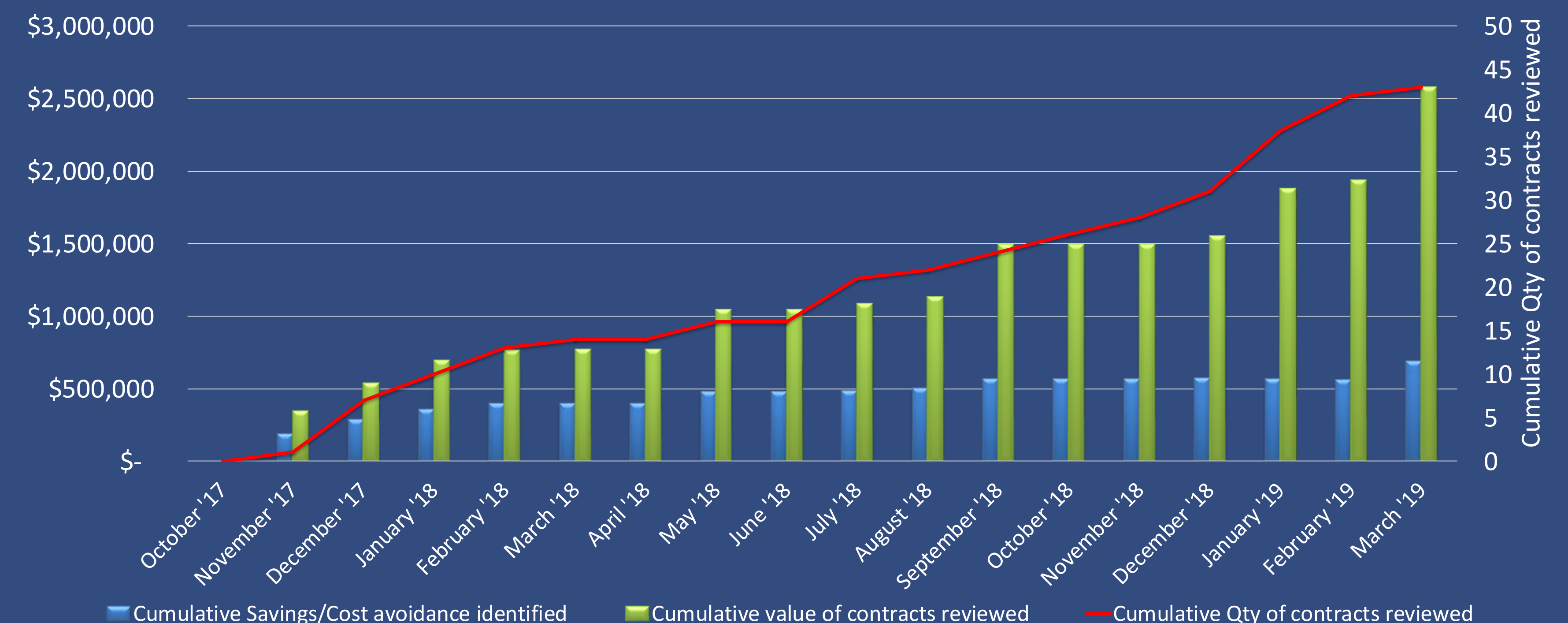


Figure 1: The results show a steady increase in the quantity of the contracts reviewed, cumulative value of contracts reviewed, and savings realized overall. Substantial savings were realized in late 2017 as these contracts were owned and managed by Clinical Engineering. Savings have increased at a slower but still significant rate as Clinical Engineering reviews contracts owned by other departments.

**For more information, contact:**  
**Bokang Motlote, Clinical Engineering**



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## Case Study

### Opportunity

Five separate service contracts under a single vendor and across multiple departments were expiring at approximately the same time. Clinical Engineering and Contracting identified this as an opportunity to reduce costs by:

1. Adjusting service contract coverage to better fit user needs. This being the focus of this case study. (Clinical Engineering)
2. Consolidating the five contracts under a single Master Agreement. (Contracting)

Description	Annual Contract Price
Contract A	\$121,992
Contract B	\$202,174
Contract C	\$85,062
Contract D	\$120,804
Contract E	\$113,506

Total = \$643,539

Table 1: Annual prices for the five contracts included in this analysis.

### Discovery

Clinical Engineering collected information from:

- Contracting’s Comply Track Database: Information on contract coverage, pricing, and terms/conditions.
- The Vendor: Five years of service history data and coverage offerings for all equipment.
- Clinical Users: Interviewed user departments to understand service needs and past satisfaction.

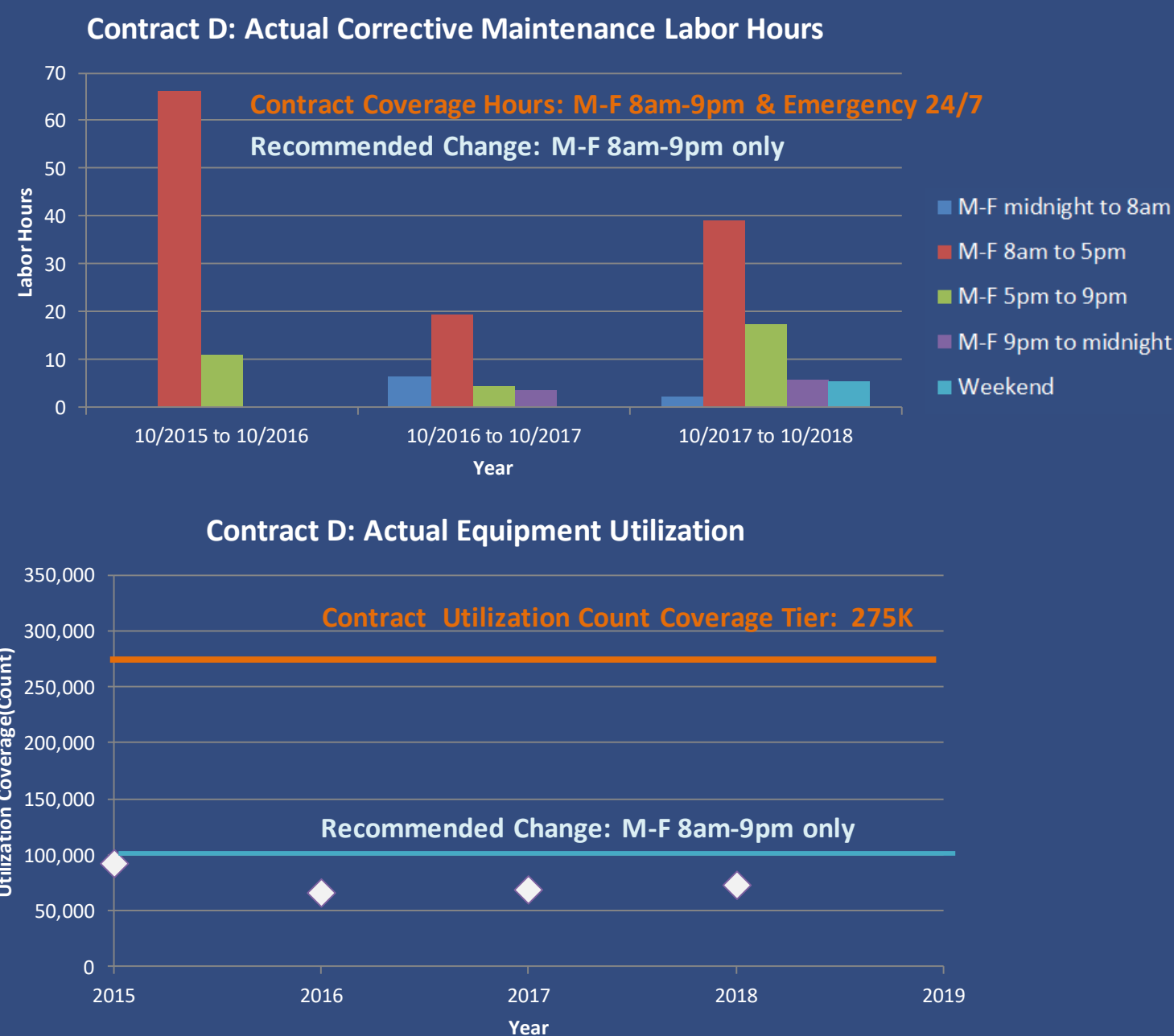
### Analysis

Clinical Engineering analyzed the information above while targeting potential savings opportunities. This included:

- Validating inventories.
- Projecting future service costs and needs.
- Matching service coverage hours to operational hours.
- Matching utilization coverage to department needs.
- Reviewing costs incurred outside of coverage.

Clinical Engineering created coverage recommendations and reviewed these with user department leadership and Contracting.

Figure 2: Graphs on the right compare one contract’s service data to current coverage.



### Results

Coverage changes and the consolidation of the five contracts resulted in \$128,872 in annual savings (20% of the previous total cost). Overall, Clinical Engineering identified coverage changes in two areas.

1. Coverage hours - General repair, PM, and emergency coverage hours can be reduced/increased to better fit clinical needs and realize savings.
2. Estimated utilization coverage - The estimated utilization coverage of equipment can be decreased/increased to better fit predicted clinical use.

Description	Current Coverage	Coverage Changes	Previous Annual Cost	New Annual Cost	Cost Impact (+/-)
Contract A	Emergency 24/7 Coverage	Remove 24/7 Emergency Coverage	\$121,992	\$76,412	-\$45,580
	General Coverage: M-F 8am-9pm	No Change			
	PM Coverage: M-F 8am-9pm	No Change			
	Estimated Utilization Count: 150k	No Change			
Contract B	General Coverage: M-F 8am-9pm	No Change	\$202,174	\$178,720	-\$23,454
	PM Coverage: M-F 4am-8am, Sat 8am-5pm	PM Coverage: M-F 4am-8am			
	Estimated Utilization Count: Unlimited	Estimated Utilization Count: 250k			
	General Coverage: M-F 8am-5pm	No Change			
Contract C	PM Coverage: M-F 8am-5pm	PM Coverage: M-F 4am-8am	\$85,062	\$85,053	-\$9
	Estimated Utilization Count: 250k	No Change			
	Emergency 24/7 Coverage	Remove 24/7 Emergency Coverage			
	General Coverage: M-F 8am-9pm	No Change			
Contract D	PM Coverage: M-F 4am-8am, Sat 8am-5pm	PM Coverage: M-F 4am-8am	\$120,804	\$90,004	-\$30,800
	Estimated Utilization Count: 275k	Estimated Utilization Count: 100k			
	General Coverage: M-F 8am-9pm	General Coverage: M-F 8am-5pm			
	PM Coverage: M-Sat 8am-9pm	PM Coverage: M-Sat 8am-5pm			
Contract E			\$113,506	\$84,477	-\$29,029
Totals			\$643,539	\$514,666	-\$128,872

Table 2: The contract coverage changes and the savings associated.

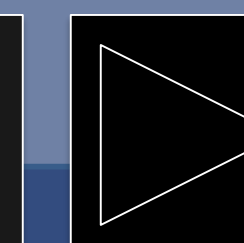
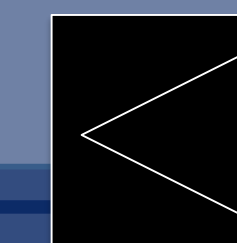
### Conclusion

Clinical Engineering and Contracting worked closely together with user departments to realize \$128,872 in total annual savings across these five contracts.

- Clinical Engineering made recommendations to users on more efficient coverage options.
- Contracting consolidated these contracts and negotiated higher discounts.

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Bokang Motlote, Clinical Engineering





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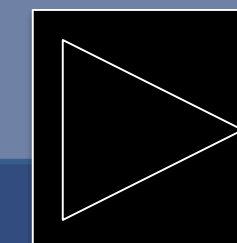
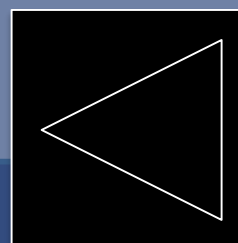
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## Lessons Learned

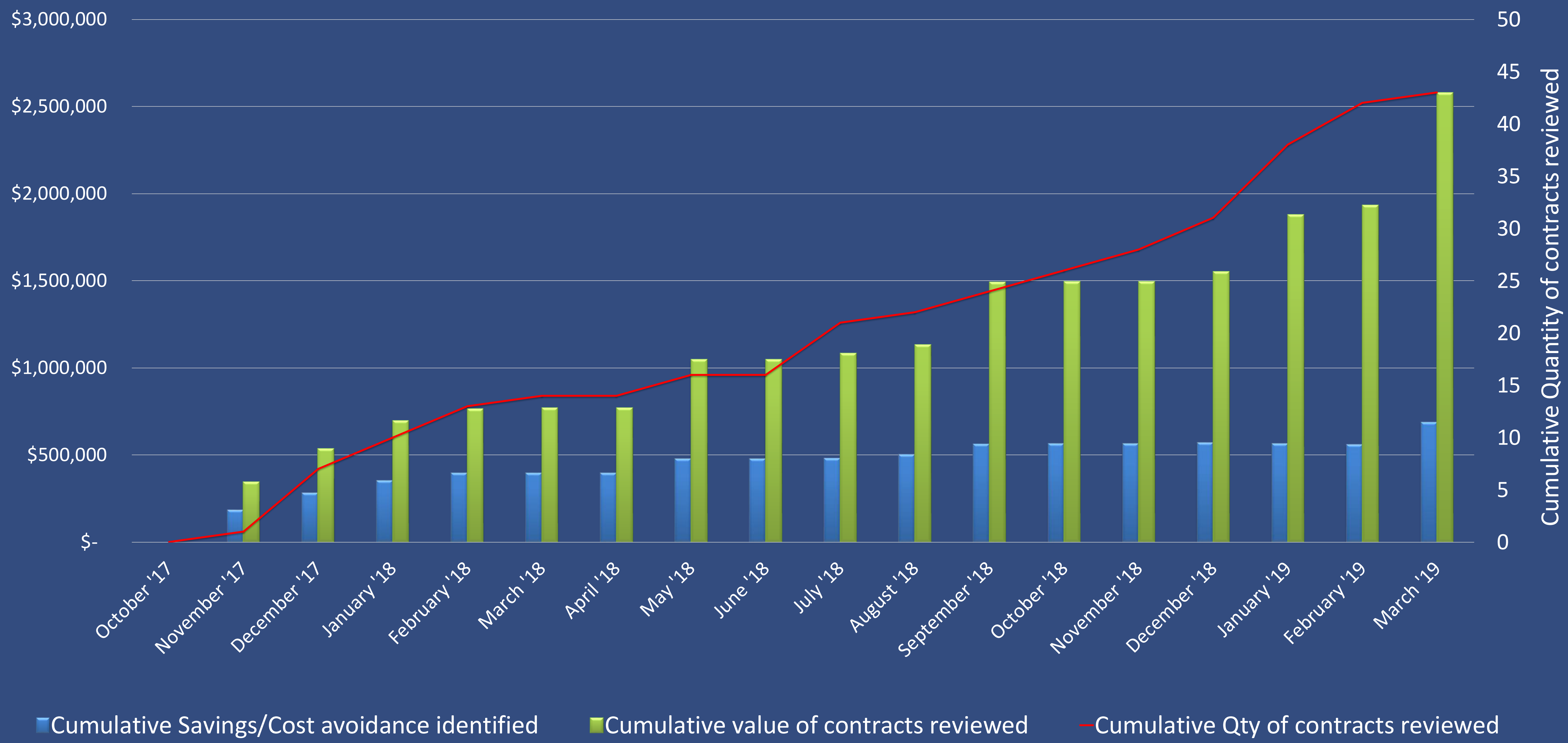
- Challenging to keep equipment inventories and contracting information databases up to date.
- Assistance was needed to submit initial RFI documentation to vendor/service provider
- Receiving quality RFI responses on time can be challenging
- Importance of having an analysis tool and standardizing the contract analysis process.
- Identifying opportunities where in-house maintenance will be more cost effective and this will reduce the downtime.

## Next Steps

- Creating long-term business cases to bring service contracts in house.
- Data integrity through inventory verification and tying contracts to asset management tool.
- Continue bi-weekly review meeting with Contracting Department and update our progress of contract analysis.
- Requested a resource to assist with sending and receiving the RFI documents.
- Need to build and maintain the professional relationship with the manufacturers/vendors.

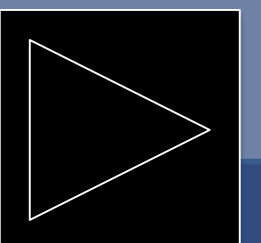
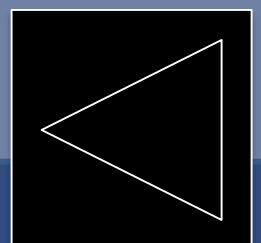


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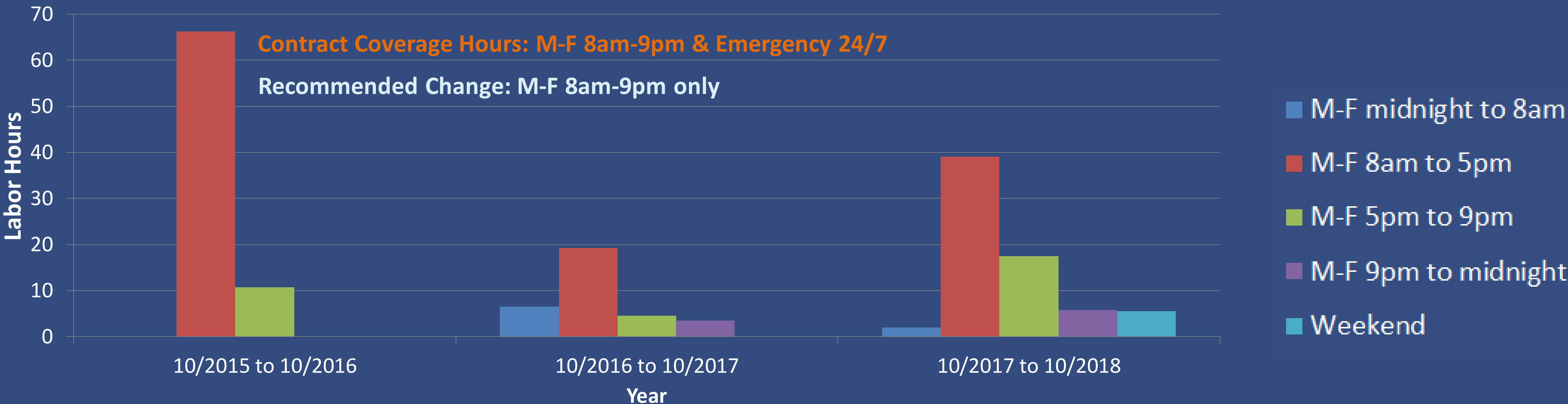


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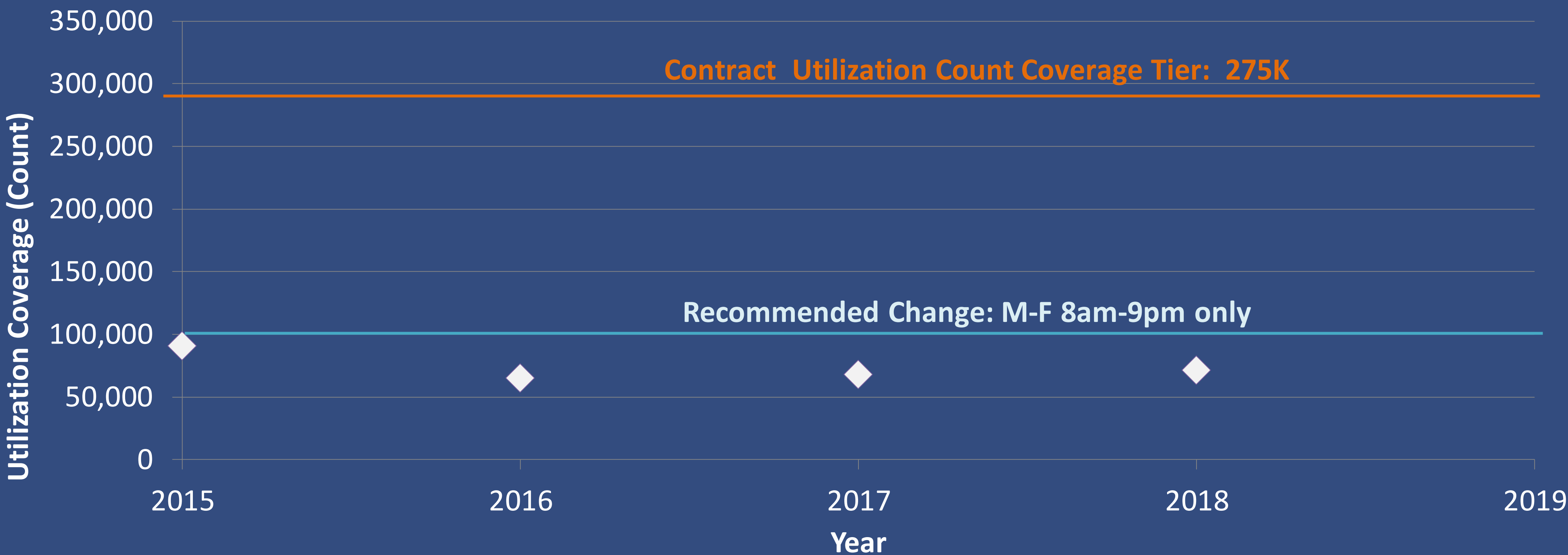
**For more information, contact:**  
**Bokang Motlotle, Clinical Engineering**



## Contract D: Actual Corrective Maintenance Labor Hours



## Contract D: Actual Equipment Utilization



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*For more information, contact:*  
**Bokang Motlotle, Clinical Engineering**



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