

# Cost Reduction Initiative on Cardiac Rhythm Management (CRM) Supplies via Device Selection Tool and Utilization Dashboard

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## Introduction/Problem

Starting 2017 January, BIDMC supply chain negotiated improved contract pricing with vendors on pacemakers and defibrillators. The contract cycle is two years with spend commitment with vendors. There are three vendors in the space with various pricings. For instance, a pacemaker from vendor A costs \$2,000, but a similar counterpart costs \$4,000 from vendor B. Similarly, a defibrillator costs \$11,000 from vendor A and B, but could cost \$13,000 from vendor C. The medical center spends about 8 million a year on pacemaker and defibrillator implants for about 600 cases. Comparing the devices to make the most cost effective choice would generate sizeable savings for the medical center and reduce patient chargeables.

The problem is that there was no mechanism to empower our Cardiologists in the electrophysiology lab with data needed to make the mindful device selection. They were not aware of the pricing difference. The cost variation of physician utilization presented a significant saving opportunity by optimizing the device selection.

## Aim/Goal

We set a saving goal of \$400,000 on pacemakers and defibrillators for calendar year 2017.

## The Team

- Peter J. Zimetbaum, MD, Associate Chief and Director, Clinical Cardiology and Electrophysiology
- Daniel Kramer, MD, Director, Pacemaker and ICD Service, Cardiac Electrophysiology
- Chip McIntosh, PhD, NP, Sr. Director ,Supply Chain Department
- Yan Hao, MHA, MEd, Value Analysis Manager, Supply Chain Department
- Eric Brown, MBA, CMRP, Contract Manager, Supply Chain Department

## The Interventions

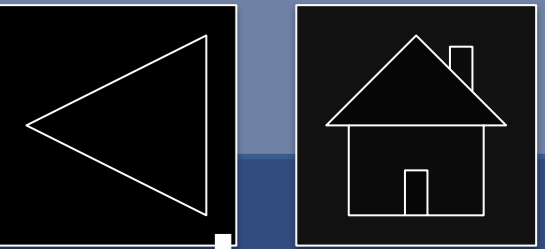
- Collected 2016 device usage data as baseline and presented utilization opportunity;
- Obtained support from hospital executive leadership and Cardiology leadership;
- Physician champions and value analysis manager co-designed a product selection tool which lists each device's key features in decision making process, such as battery life, MRI compatibility, unique features, size, mass, volume, and price. The device selection tool is updated when needed.
- The value analysis manager designed and maintains a monthly utilization dashboard to track usage and savings. The dashboard is communicated monthly with physician champions and Cardiology administrators.

## Results/Progress to Date

| CY2017 CRM Cost Reduction Tracking                                     |             |       |                              |                                     |
|--|-------------|-------|------------------------------|-------------------------------------|
| (For this product selection project, only CRM generators are included) |             |       |                              |                                     |
| Year   | Spend       | Cases | CY2016 Volume Adjusted Spend | CY2017 spend without price decrease |
| CY2016   | \$4,824,015 | 606   | \$4,712,569                  |                                     |
| CY2017   | \$4,135,960 | 592   |                              | \$4,322,079                         |
| Total Cost Reduction (volume adjusted)                                 | \$576,609   |       |                              |                                     |
| Cost Reduction Contribution Factors:                                   |             |       |                              |                                     |
| 1. Contract price decrease   |             |       | \$202,365                    |                                     |
| 2. Physicians' mindful device selection                                |             |       | \$374,244                    |                                     |

We achieved \$576,609 total saving in 2017 in CRM devices. \$374,244 of it derives from physicians' mindful device selection. \$202,365 derives from better contract pricing.

For more information, contact:  
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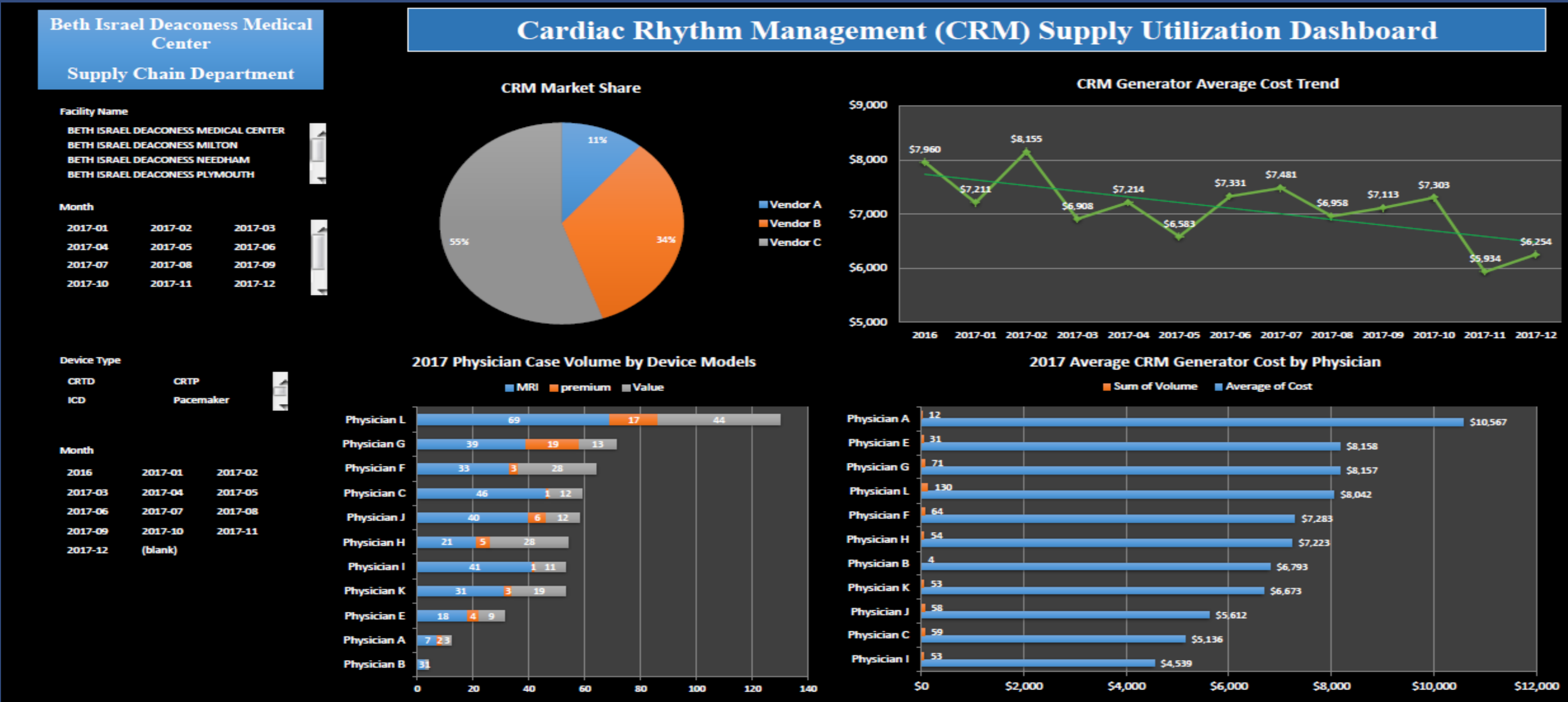


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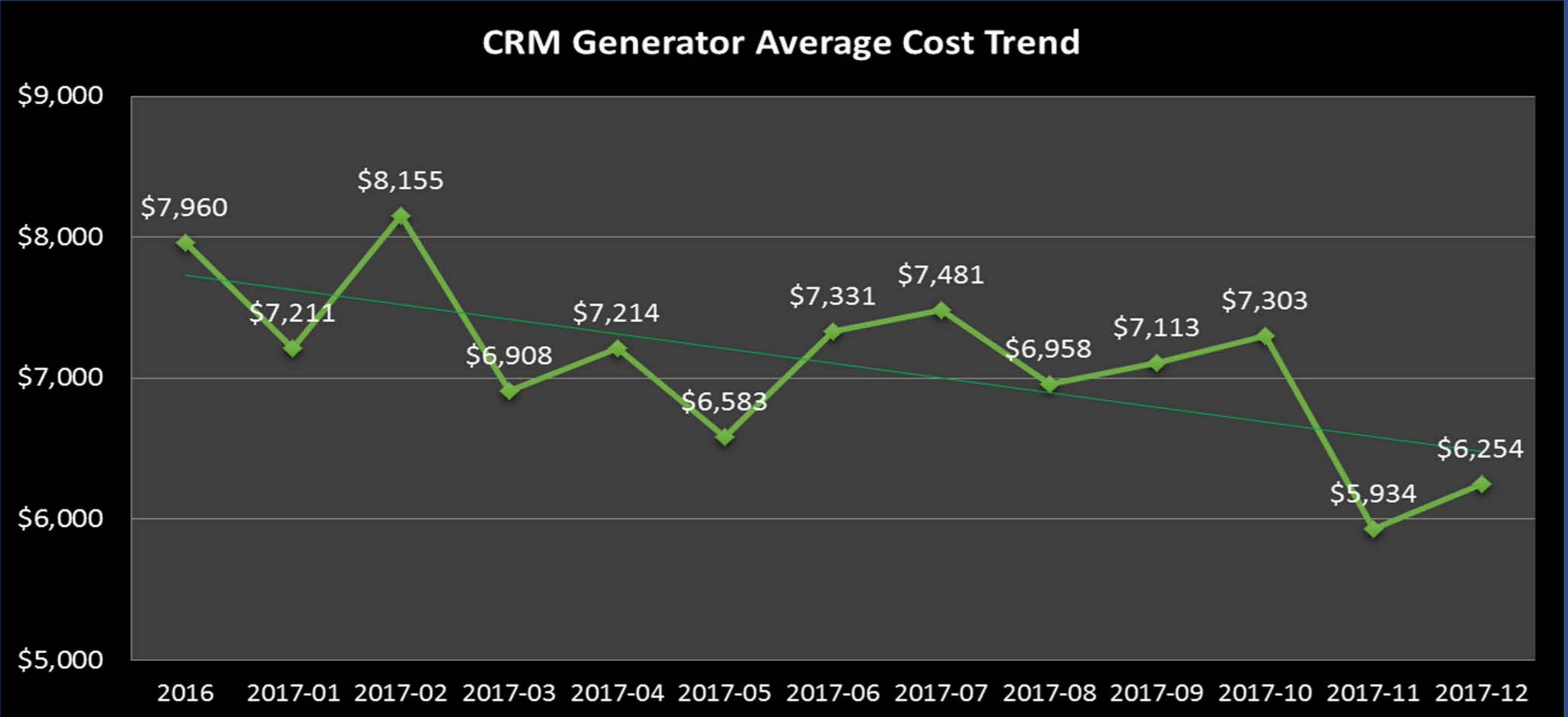
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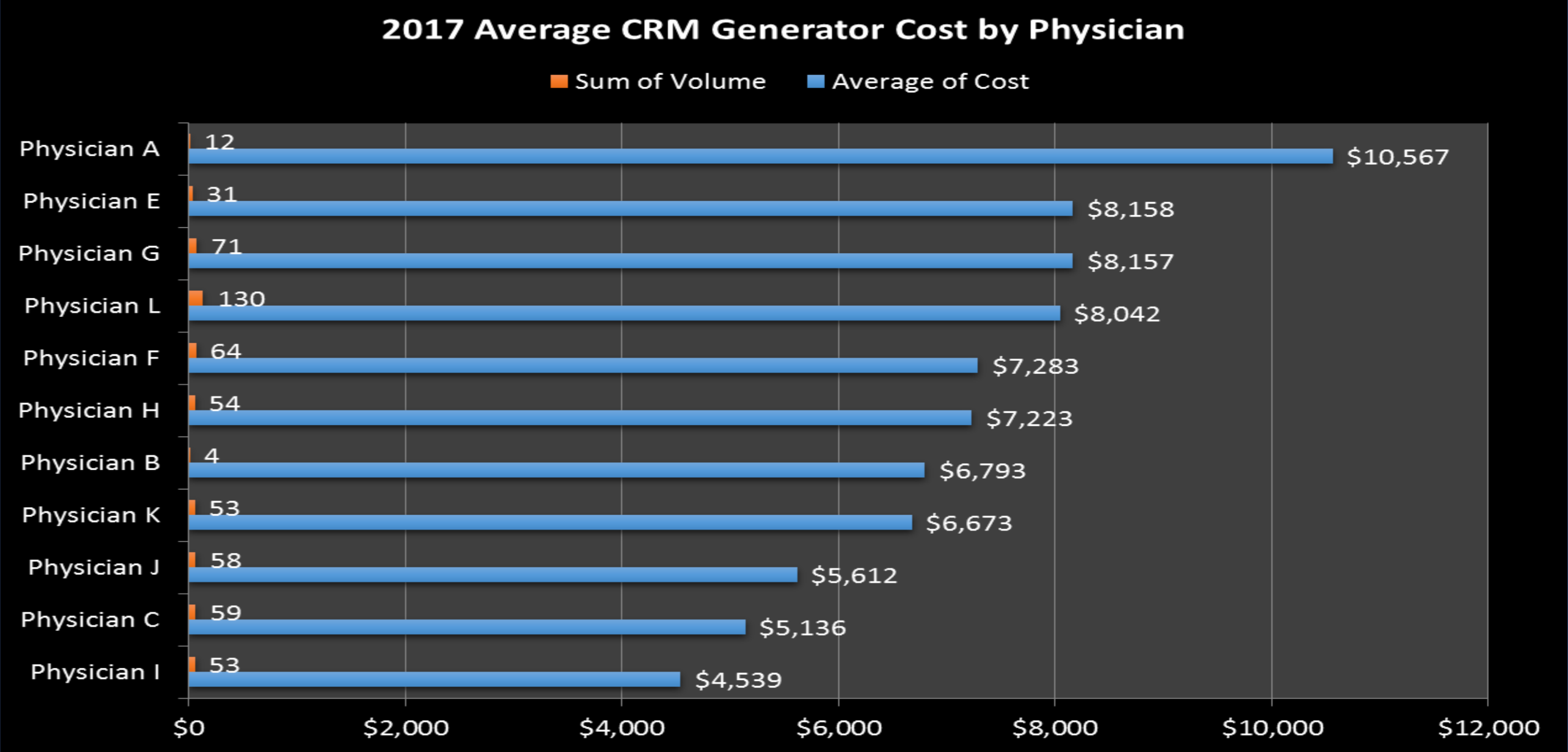
## More Results/Progress to Date



Monthly CRM spend and utilization dashboard overview.



There is a trend of decreasing average device cost in 2017.



## Lessons Learned

- The initial plan of the device selection tool was to develop a mobile App that is easier to deploy. But it didn't happen and caused a few months' delay of the initiative rollout date. Then, we implemented an Excel spreadsheet tool as the alternative. The physician champion showed his peers how to use the tool which turns out to be quite effective. Lesson learned is to use the alternative timely to avoid delay.
- Hospital and physician leaderships' support is critical.

## Next Steps

- Continue the project to sustain savings in 2018;
- Expand this initiative to our owned affiliates;
- Start conversations with physician leaders for next contract strategy;
- Explore App developing options from outside vendors.

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