crothall
healthcare

RE-INVESTING
THE BENEFITS
OF WORKFORCE
AUTOMATION

"Virtual Manager's HealthClean software has made a tremendous impact on real time performance outcomes driven by validated metrics. In addition, shifting documentation from hard copies to tablet technology further demonstrates our commitment to more sustainable operations."

Rich Feczko, National Director, Standards & Innovation

EXECUTIVE SUMMARY

Workforce management is a priority for hospitals and health care networks to reduce costs and/ or re-assign staff to other functions. Automating workforce management has proven to drive efficiencies as well as improve patient satisfaction. Virtual Manager's HealthClean automation platform was installed in three Crothall Environmental Service (EVS) locations. While the locations were diverse in geography, demographics and size, the combined results netted an FTE reduction of 14.6%.

The HealthClean FTE reduction returned over $550,000 annually for location priorities. Some Clients invested in additional hardware and programs while others were able to re-assign Staff to other areas in need of additional help. Of course, the option to return some or all of the savings to the Operating Budget stands.

14.6% FTE
Reduction over
3 diverse sites

INSIDE THE PROBLEM:
WORKFORCE MANAGEMENT

Support services are essential to success in healthcare environments. Environmental services work to ensure clean surfaces and support efforts to mitigate infectious transmission that may impact hospital-acquired infections (HAIs). Since these resources are required, workforce management can optimize this investment.

Switching from paper forms to electronic spreadsheets was the first step in elevating task management efficiency. Earlier improvements often addressed single aspects of managing the workforce, such as payroll or task assignment. Now, it is possible to streamline all aspects of workforce management automation in a single application.

Benefits of Automation

Automation software can simplify scheduling shifts, paid time off (PTO) and timesheet management. Directors and supervisors can confirm proper staffing levels for units and shifts with a single look. Of course, time savings and overhead cuts come with automating workforce management.

Labor productivity improves as down time between and after tasks drops with automated monitoring. Data and metrics on staff is available immediately by individual or team with the right application. This information can also help hospitals adjust staffing levels, other resources and save on costs immediately.

INSIDE THE PRODUCT:
HEALTHCLEAN BY VIRTUAL MANAGER

Crothall Healthcare partnered with Virtual Manager to provide the HealthClean program. It is a software platform that unifies operations management duties and metrics in a single digital home. Staff at facilities or in departments using HealthClean can address chronic issues related to efficiency as well as act faster in the moment to address high-priority tasks. Response to issues that arise improve as each Associate has immediate access to management for assistance when needed.

Regulatory Technology (RegTech) Application

RegTech provides technologically advanced solutions to the demands of compliance. RegTech software can bring real-time insights, predictive analysis, and automation of processes protecting sensitive patient data. Benefits include regulatory reporting, risk management, compliance and identity management/control driving increased efficiencies, cost savings and visibility under frequent regulatory changes.

The HealthClean platform offers RegTech solutions. Documentation of cleaning and disinfecting work is accessible to any and all Regulatory Agencies. Frequency of cleaning, complete coverage, time spent and other data is available by patient room and Crothall EVS Associate over any time period needed for analysis or review.

Pandemic Application

Verification of cleaning is critical in controlling infection transmission. HealthClean software confirms task completion by room and by Staff member. Cluster mitigation can be achieved by verifying that Impression Areas (lobby, public restrooms, cafeterias, etc.) are properly disinfected as required by CDC Guidelines.

The HealthClean platform offers Contact-Tracing capabilities. The platform can identify all movements of a single Staff Member that may have become infected. The software clearly shows where the Employee worked and who they may have come in contact with during their work period.

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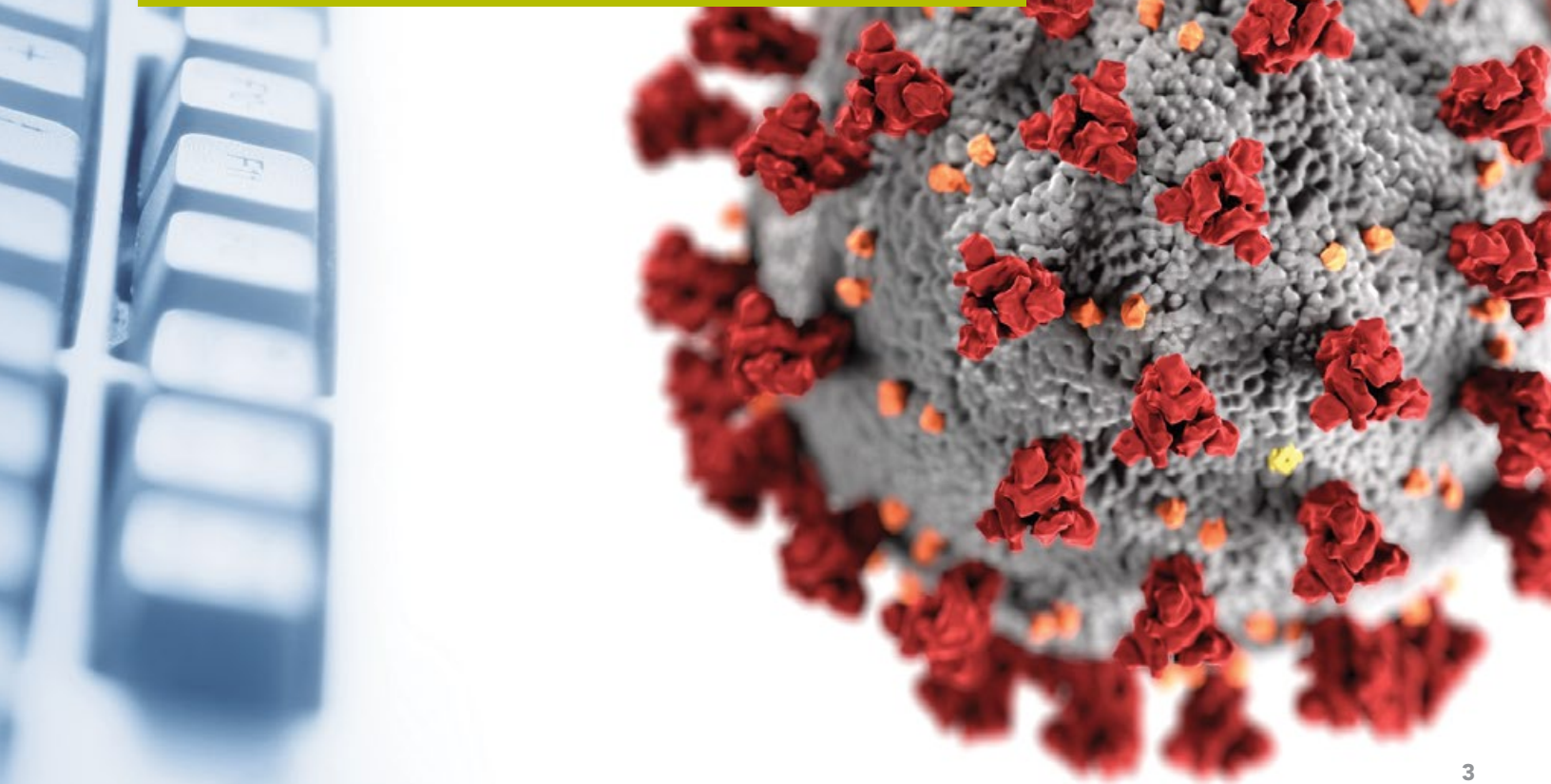
CROTHALL'S HEALTHCLEAN PROGRAM

Crothall brought the HealthClean program to three hospitals: University of Virginia Medical Center, University of Kentucky Medical Center and MedStar Harbor Hospital. The ease of scheduling, managing and studying the efficiency of environmental service professionals resulted in more than $550,000 annual savings across the three platforms and numerous other benefits that made support services more productive.

Medical Center now expects a 25% reduction in duration of tasks handled by the HealthClean.

UNIVERSITY OF VIRGINIA MEDICAL CENTER

Background: UVA

UVA Medical Center is a general hospital and Level I trauma center with more than 500 patient beds serving Charlottesville and the western Virginia region. Crothall has been managing EVS since 2007 and chose the campus as part of the HealthClean program in 2018. UVA Medical Center utilizes more than 300 full-time employees (FTEs) in EVS, managed by Crothall.

The hospital is a Lean organization. It is based on a system designed to help teams of various skill sets deliver results with speed and efficiency. Many Crothall EVS managers are working towards certifications related to this working culture, which brings HealthClean in line with the hospital's processes and strategies.

Action

HealthClean was rolled out in three floors of the campus with stable HCAHPS score history and high discharge counts per day. Floors contain five or six units, often hosting up to 30 patients at any given time. Efficiencies driven by HealthClean reduced the required FTEs from 18 to 15 for these three floors.

The time required for complete cleaning of a room was reduced by 25-30%. While each room and situation is unique, the reduction % between discharge and admission held steady across the units. The HealthClean software handled checklist distribution and task recording.

The change with checklists alone saved EVS operations costs immediately. Each Housekeeping Associate requires one shift task assignment daily that seamlessly transitioned to tablet technology. The stress of managing the flow of paperwork has also been eliminated from EVS managers' life.

This improvement was steady and incremental with consistent focus on process and efficiency trends tied to cleaning times since the pilot began. UVA Medical Center now expects a 25% reduction in duration of tasks handled by the HealthClean.

Benefits

The savings of 3.0 FTEs is more than $100,000 annually. The budget for the FTE complement dropped by 16%. The reduction did not affect turnaround time in patient rooms or HCAHPS ratings related to cleanliness and patient satisfaction.

UVA EVS HCAHPS Comparisons: VM Floors vs. Non-VM Floors
October 2018 - December 2019 (by Discharge Date)
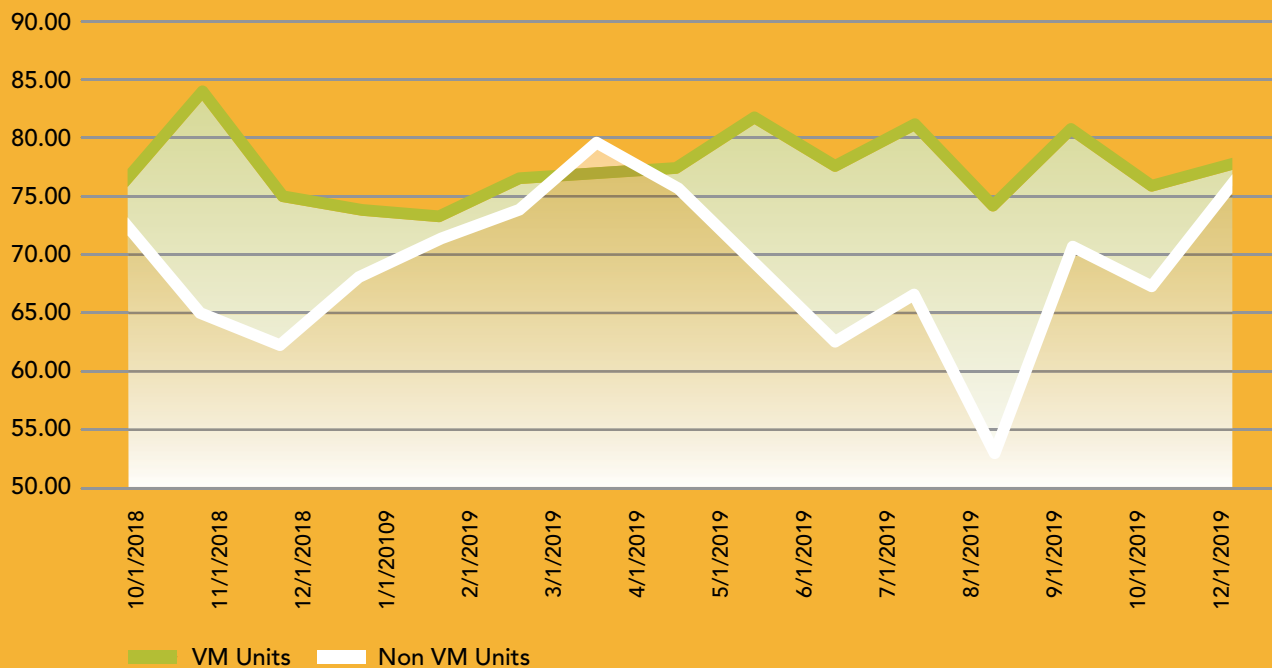
The savings allowed them to expand their UV program. The hospital uses ultraviolet light cleaning technology to reduce the incidence of hospital-acquired infections (HAIs). The hospital was able to include all high-isolation and C. diff. infection treatment rooms for 24-hour coverage for the first time for potential HAI reduction.

UNIVERSITY OF KENTUCKY MEDICAL CENTER

Background: UK

UK HealthCare, the University of Kentucky's hospital system, instituted HealthClean in late 2019. The project blended perfectly with UK HealthCare's own home-grown initiative to bring digital management to their internal tasks. Two units trained and instituted the software each week. Crothall manages a total of 330 Associates at UK.

Process validation is a large part of UK HealthCare's work culture. The institution has the goal of improving the speed and quality of environmental services for the satisfaction of patients as well as the inherent value of improved cleaning procedures.

UK HealthCare saved $325,000 annually, HCAHPS scores improved and HAI incidence dropped with specific reduction in C Diff.
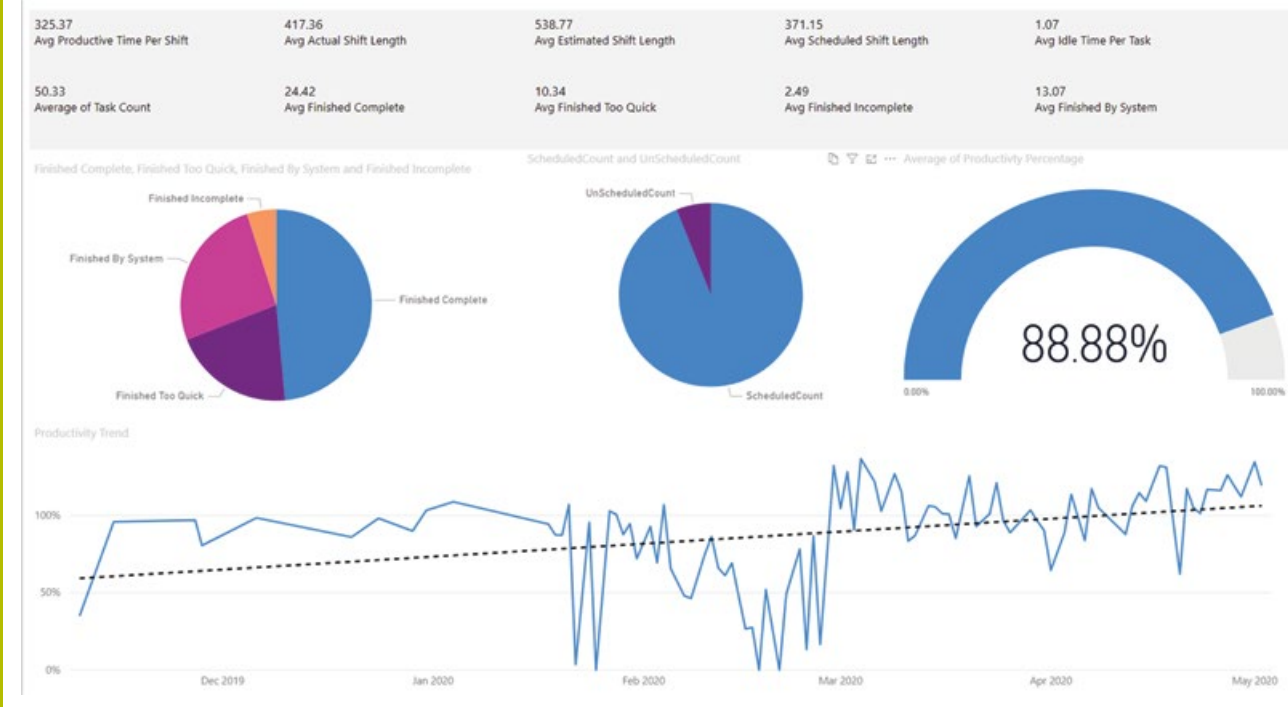
Action

HealthClean brought the power of knowledge to a team eager to analyze it. Crothall managers were concerned about the potential gap between the time that EVS tasks take and the time that nurses notice a clean room. Analysis of room turnaround flagged issues like employees habitually spending more than the standards set for High Profile Cleaning. Those Associates were identified for additional training and coaching.

HealthClean made it easier for Crothall to correct problem processes. Overnight shift freshen and removal of trash was estimated at 90 seconds per room, but the results were not bearing that assumption out. The software helped to determine that glove processes and other delays were adding another 60 seconds per room, which amounted to the time of two full-time employees per shift. Crothall managers were able to divert resources to compensate.

Bed throughput is a rapidly changing constant throughout the UK HealthCare system. This automation tool allowed Crothall managers to reassign technicians who are ahead of schedule by watching their work in real time. The ability to move Staff based on need improved efficiencies as well as Clinical Staff satisfaction levels.

325.37	417.36	538.77	371.15	1.07
Avg Productive Time Per Shift	Avg Actual Shift Length	Avg Estimated Shift Length	Avg Scheduled Shift Length	Avg Idle Time Per Task
50.33	24.42	10.34	2.49	13.07
Average of Task Count	Avg Finished Complete	Avg Finished Too Quick	Avg Finished Incomplete	Avg Finished By System

88.88%

The Employee Analysis tab provides detailed analytics to determine how much time is spent per shift in productive tasks. The analytics focus is to bring visibility to the average idle time per task and the average number of tasks completed per day, reviewing individual performance over a period of time. The graph at the bottom shows productivity trending positively over time

Benefits

HealthClean efficiencies reduced 17 FTE's of the 98 FTE's. UK HealthCare saved $325,000 annually, HCAHPS scores improved and HAI incidence dropped with specific reduction in C Diff. In addition, the Patient Experience team was able to identify rooms not cleaned and when they were cleaned as might impact visitation.

These EVS Teams complete around 180 assignments per day. Previously all communications were documented or transmitted by paper and each was accompanied with a one-page checklist. Now all Task Lists and recordkeeping are recorded electronically, saving paper, time and waste.

MEDSTAR HARBOR HOSPITAL

Background: MedStar

MedStar Harbor Hospital is a 150-bed acute care hospital in Baltimore, MD. The hospital became the nation's first full campus automated Workforce Management run by Virtual Manager 24 hours a day. Their three-shift system required a week of training and preparation for managers and front-line associates.

Action

HealthClean identified efficiencies available in both room and discharge cleaning. Cleaning time standards had been unitized based on traditional task assignments for an occupied room and discharge cleaning. HealthClean analysis allowed Crothall Management to reduce standard room cleaning by 20% and discharge cleaning by 25% with full compliance to room quality standards and no interruptions in quality expectations.
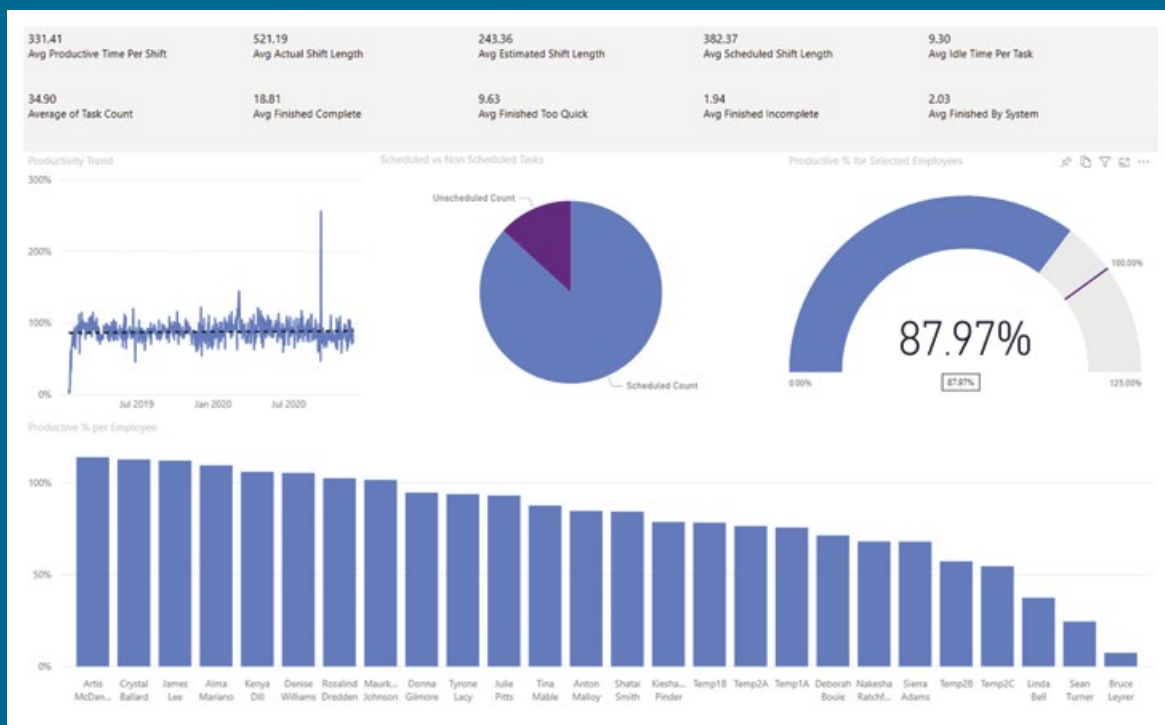
The Monthly Team Analysis tab provides analytics to identify the most productive employees and those that need additional support. Additionally, information on average number of tasks completed per employee and idle times per task is also provided

The software helped redistribute workloads throughout teams. Some full-time employees were three to four hours ahead of others on completing checklists. This information incentivized the other employees and allowed Crothall EVS managers to move the more productive Staff to needed locations and tasks.

Start times no longer involved guesswork for managers. HealthClean records tasks with timestamps so gaps in productivity can be spotted. Problems can also be identified as employee problems or allocation issues with the available data.

Benefits

HealthClean helped trim the department by 10 percent. With just over 65 FTE's before the introduction of the software, Crothall was able to reduce headcount by 6.5 FTE's. Three of these positions received new duty lists to serve MedStar Harbor Hospital elsewhere – the other 3.5 FTE positions were removed saving $133,000 annually.

Employee engagement has also improved with a data-driven approach. Managers can now make connections between EVS productivity and client-valued metrics such as HCAHPS scores by comparing time frames. All types of staff members receive recognition and performance-based rewards with their work records available at a glance.

> Managers can now make connections between EVS productivity and client-valued metrics such as HCAHPS scores by comparing time frames.

HCAHPS Score for the higher productivity housekeeper by quarter

	Q3	Q4	Q1	Q2
A113	74.07%	78.95%	81.25%	87.5%
A10A	57.89%	80.77%	81.48%	87.50%

Score 57.89%   100.00%
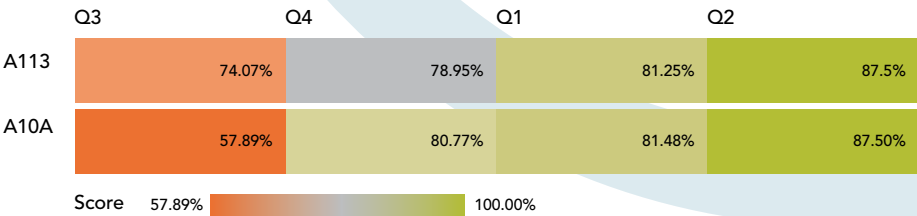
HCAHPS Score for the higher productivity housekeeper

Name	Always		Q3	Q4	Q1	Q2
Name	Always	3LDR	100.00%	100.00%	75.00%	100.00%
		30B	83.02%	71.79%	61.11%	76.47%
Name	Always	A113	74.07%	78.95%	81.25%	87.50%
Name	Always	A10A	57.89%	80.77%	81.48%	87.5%

CONCLUSION

Workforce management automation is an obvious choice for administrators looking to save staffing costs, re-invest those savings and improve operations. As healthcare costs climb, hospitals and other healthcare providers are looking for new ways to make quality clinical services more efficient. Virtual Manager's HealthClean is one of the first all-inclusive healthcare workforce management software platforms that unites all the disparate elements of workforce management.