

On the Frontlines of COVID-19 with Biomed / Clinical Engineering (Story No 2)

The Covid-19 Pandemic has created one of the most disruptive events in modern history, affecting healthcare as it spreads across the globe. I spoke recently to several clinical engineers/biomed techs from around the state of Washington to learn more about their experiences in dealing with this fast-changing phenomenon. They were from different healthcare organizations, all large in size. They had many similarities and common situations as you might expect, here is an overview:

My contacts all found themselves in fast moving situations as they prepared for an expected large number of corona virus patients to inundate their facilities. One hospital converted offices that formerly had housed an ER into a ward for Covid-19 patients. This involved moving the offices to another location, finding spare monitoring equipment, fashioning a network for central monitoring and bringing in the monitoring manufacturer's service rep to assist with final network set up. Then making sure the area had negative pressure characteristics to keep contaminated air from gaining access outside their space. The air would be routed outside the facility and away from staff, visitors and other patients. Ultimately, this location has not been utilized yet as the virus patient load did not reach a level necessitating its use. But it is still ready for use if circumstances call for it. It took the Biomed staff about a week to set up this area, increasing the number of beds for Covid19 patients by more than a dozen.

Another facility, in this case a hospital, realized that some of the Personal Protection Equipment or PPE was running low early in the epidemic stages in late February and early March. Face shields were being used up at an alarming rate. It was determined that the equipment could be cleaned and reused thus staving off running out of this vital accessory. That location did not run out of face shields. However, some clinics affiliated with this healthcare facility did not use the same approach with their face shields and did run out of them a while later after strict precautions were put in place for using PPE. It was pointed out that if the hospital had done a better job of directing efforts to clean and reuse this type of PPE then its likely none of their clinics would have run out of face shields. A lesson in clear communication.

Another example of breakdown in communication occurred when early in the epidemic an administrator ordered extra ventilators from a source but neglected to include Biomed in the planning. The ventilators showed up but important accessories such as hoses and connectors were not ordered and without them, the ventilators could not be used. This caused a significant delay in getting this equipment into use when needed most.

But there were plenty of shining examples of teams pulling together, planning clear courses of action, splitting teams up to preclude if one or more technicians came down with the virus that the whole team would not be affected. There were stories of planning and setting up tents to house patients or provide temporary testing sites to separate possible virus patients from the main facility. In one case this required finding monitoring equipment for use, setting up wi-fi and temporary power for an exterior tent triage site.

One question that has come up is how PM's have been affected by the pandemic. One engineer mentioned that in the lead up to the first patients hospitalized for corona virus, patient loads were much diminished, so equipment was generally available at their location and PM inspections did not lag. Each

facility has found that its own PM schedule will be affected differently depending on resources available and PM loads.

I want to share one heartfelt observation by a long-time acquaintance who has worked in the Biomed field for over 30 years in Western Washington. He told me a few weeks ago that in all the time he has worked in the profession, the previous month had been his “shining moment”. He described this as a time of unparalleled frenzied activity, figuring out how to accommodate an influx of patients with a potentially lethal disease, limited resources and repairing equipment vital to keeping healthcare staff safe. There were some broken items that had no parts available; if it broke, it would normally be replaced. But now, even replacement was not an option, there were none available for purchase. And still, he and his coworkers found a way to fix those items in many cases. I could hear the sense of accomplishment in his voice, not an ounce of bragging, just the satisfaction that he and others found a way to make a difference. And that’s what BMET’s do, they are given challenges everyday and make a difference in the big scheme of things.

Overall my Biomed/CE sources in Western Washington told me that the Covid-19 pandemic has been an unprecedented situation, calling on all their resources and ingenuity to find ways to allow staff to care for the patients coming to their facilities, create appropriate environments, keep equipment available and running in the most challenging circumstances. And it appears that they have met those challenges with flying colors.

Dedication, resourcefulness and going the extra mile has made a difference and will continue to make a difference in this ongoing situation. If you have a story to tell of how your Biomed/Clinical Engineering Department has dealt with the ongoing pandemic, how it has met the challenge or if you have words of advice or insights for overcoming obstacles or solving problems, would you share them with the WSBA and our wider audience? We would like to hear from you. Contact Jim Kenyon, CBET at jimkenyon123@yahoo.com or text 253 307-9257 to share your story. It will make a difference. We would like to make those stories available on our website, www.bmet.org under the heading of **Making A Difference!**

Thank you.

Jim

Jim Kenyon, CBET

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