



Enhancing Safety & Quality in the Clinical Learning Environment 2nd ACGME Workshop

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Background

Blood gas measurements are common practice in the pediatric department and important assessment tool for patients' clinical status. •Standard practice in our hospital entails that blood gas samples be taken by junior physicians to blood gas machines in other departments with no dedicated machine in the pediatric department.

Aims

Our aim was to assess the number of blood gas samples done per month and assess the time, number sample errors as well as stress and physical burden of handling the samples on junior physicians.

If results of those measures showed cost effectiveness as well as significant time and effort, a plan would be set to bring a blood gas machine to the pediatric department to reduce the time needed to obtain results for our samples, reduce sample errors and sample clotting by reducing travel distance and prevent a possible second prick to the child thus improving patient care as well as reduce the physical burden on the junior physicians in the department.

Methods

An assessment of the number of blood gas samples ordered for patients in the pediatric wards in Mafraq Hospital for the period from January 1st, 2016 and October 1st, 2016 was done by checking the medical records for that time.

A survey was handed to the pediatric residents (junior staff) where they were asked about the time required to deliver blood samples to the machines in different departments, number of error samples encountered as well as stress caused by handling samples.

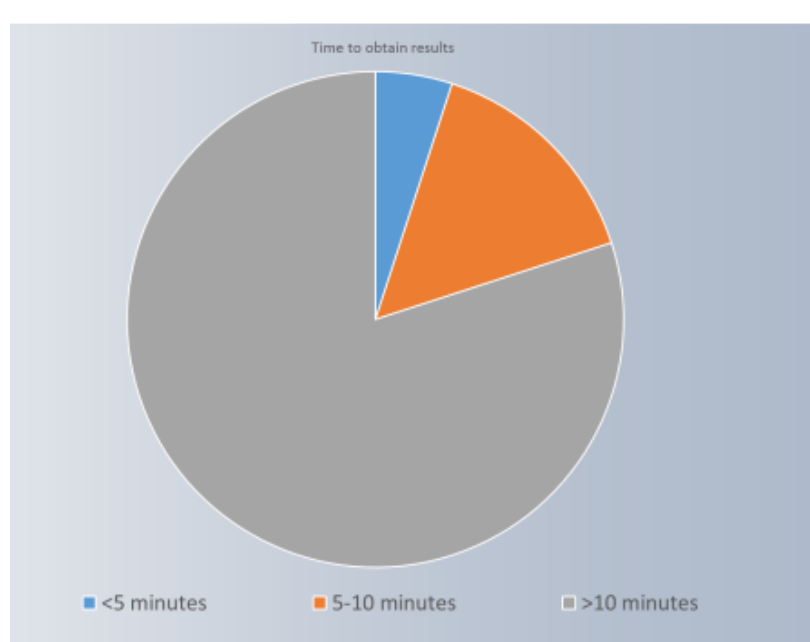
Results

Medical record assessment showed that in the period between January, 2016 and October, 2016, the average blood gas orders made for patients in the pediatric ward was 100 samples per month.

- Twenty pediatric residents participated in the survey anonymously where 80% of them reported that delivering blood gas samples took more than 10 minutes of their time away from

the patients and 50% reported having at least 1 sample per week with error result requiring a repeat test.

- All residents answering the survey reported dealing with samples as both tiresome and stressful.
- In light of the high number of samples and the time and effort required to obtain results, a formal request was made with the approval of the chief of department and in collaboration with the nursing team to install a blood gas machine in the pediatric department.
- Approval from the finance department for installing and maintaining the machine was obtained and the machine was installed.



Conclusion

The installed machine dedicated to the pediatric department would improve patient care and reduce burden on junior physicians handling the samples.

We plan to take another survey from pediatric residents 3 months after the installation of the blood gas machine to assess for improvements in reducing the time and effort needed to obtain results as well as reducing physician burden and stress.