On Time Amikacin Level !!

Timely Amikacin Monitoring for Paediatric Haematology and Oncology patients

Khalid Shedeed, Great Ormond Street Hospital

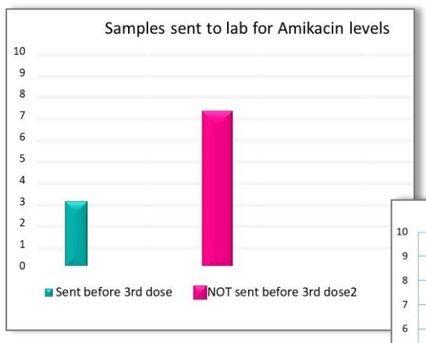
Great Ormond Street Hospital for Children NHS Foundation Trust

Children with cancer need frequent treatment with antibiotics such as Amikacin which is toxic at high levels. Giving doses without timely results can cause permanent damage to their kidneys and hearing..

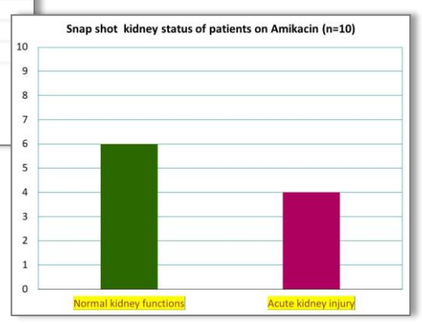


Patient admitted And culture sent → *Start Amikacin* → ***Send the 1st level before the 2nd dose*** → *Waiting the cultures and fever to settle* → ***Monitoring Amikacin Levels before every 3rd dose**, Monitor the renal functions and adjust the doses* → *Stop Amikacin when afebrile for 48 h and cultures negative* → *Patient Discharged*

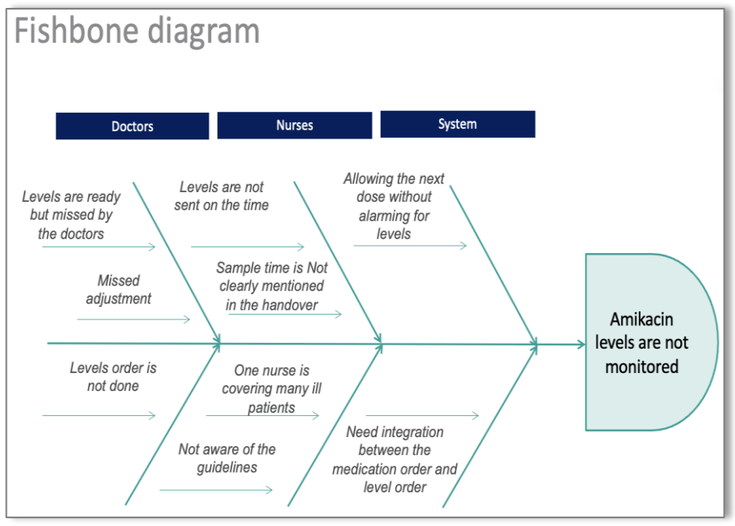
Bar Charts







Fishbone diagram



AIM

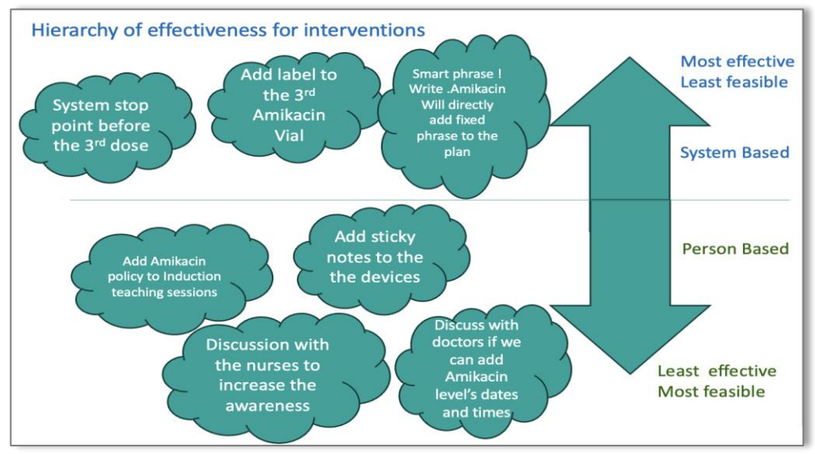
To Increase the number of the children on the Haematology and oncology wards receiving Amikacin, having timely level sent and checked from of (3/10) to (10/10) by September 2024

MEASURE

0 - levels not taken before 3rd dose
1 = levels taken before 3rd dose
2 = levels taken and dose OK or adjusted if indicated

Inclusions
All neutropenic children on the inpatient ward started on Amikacin
Exclusions
All children who received less than 4 doses of Amikacin
All children who started Amikacin before admission



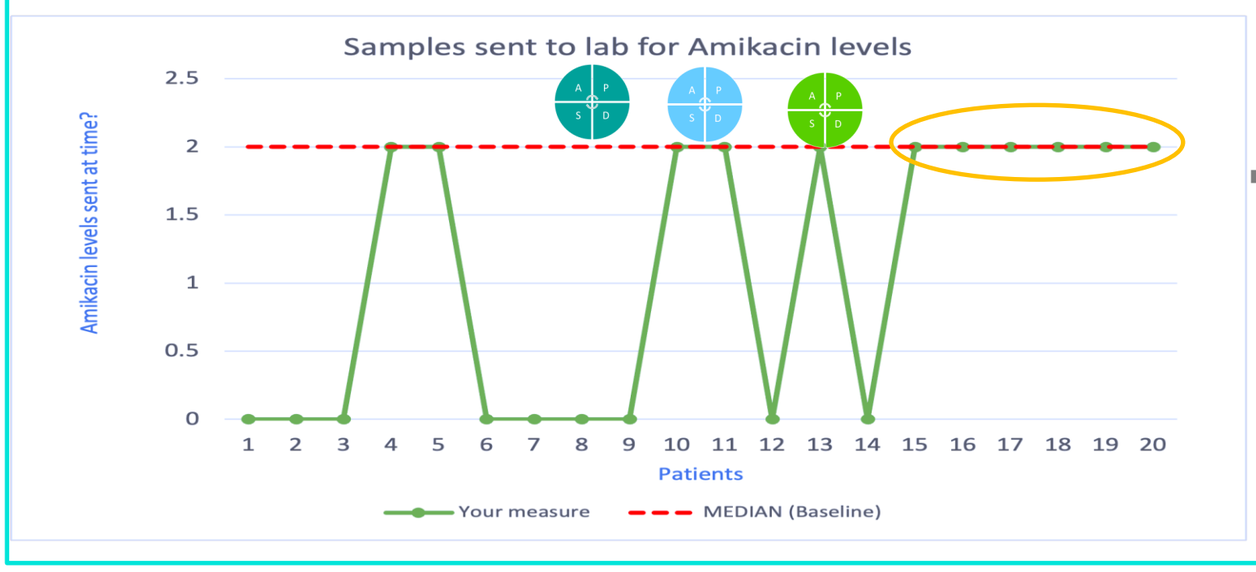


PDSA Test #	PLAN	DO	STUDY	ACT
1	Teaching the nurses about how efficiently we can monitor Amikacin level and what is the risk of not managing the high levels.	I looked into two patients records to see if Amikacin level collected on the time or not	It was surprising that the policy is not known to all the staff and some of them mentioned it is the first time to know that	Will see another simple way to communicate the information for all the staff simply
2	Discussion with doctors about need to add the Amikacin level's dates on the doctor's handover	Follow one patient levels	Still, I can see delay in sending the levels on time	Need easier and faster method
3	I created SMART PHRASE on the system. So, any doctor can just write .AMIKACIN on the plan. Will directly add to the note how we should monitor the level.	I recorded the findings on the run chart to see if there is any difference.	I can see that nurses usually follow the plan on the doctor's note so I can see that sending the samples correctly improved	I started to inform other doctors and will add the different types of doses and how can be written quickly. Also, will liaise with EPIC team to add an 'alert message' before Amikacin administration

Please Send Amikacin Level Before 2nd dose and before Every 3rd dose

RUN CHART

0 - levels not taken before 3rd dose
1 = levels taken before 3rd dose
2 = levels taken and dose OK or adjusted if indicated



CONCLUSION & REFLECTIONS

Engaging the stakeholders by sharing the problem was key to generating change ideas and to implementing them.

Using a 'SMARTPHRASE' to remind the team when levels were needed was such a simple idea but had the greatest impact.

The run chart shows that I achieved my aim for 6 consecutive children. Ideally, I would be able to continue this project to see if the improvement is sustained. My challenges included being able to check whether a level sent had actually had the result checked and trying to make larger scale changes with the EPIC system, which could embed safety checks within the Amikacin prescription.'

Overall, I found that this project taught me a structured approach to QI which I will apply to future projects, and I really enjoyed my QI journey!

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Richa Ajitsaria

Change CHAMPION