

# MSF FIELD SIMULATION - INCORPORATING SIMULATION INTO THE PLAN-DO-STUDY-ACT CYCLE FOR AN INTEGRATIVE IMPROVEMENT OF THE OPD TRIAGE SYSTEM, PULKA, NIGERIA.

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**Abstract language:** English

**Topic:** General paediatrics

**Background and aims:** Simulation in healthcare education is well known, but the role of simulation in quality improvement (QI) processes is less recognised. MSF Field Simulation developed a pilot using simulation to understand and address the problem of late detection of critically ill paediatric and adult patients presenting to a hospital-level OPD, in Pulka, Nigeria, after staff raised concerns that 'red' cases were frequently missed at triage. We aimed to show the value of incorporating simulation into the Plan-Do-Study-Act (PDSA) cycle in the analysis and redesign of the existing triage system.

**Methods:** Simulation was incorporated into each stage of the PDSA-cycle. PLAN: a tabletop simulation exercise was used to identify areas for improvement and potential solutions, completing the cause-and-effect diagram. DO: 6 practical simulations were carried out for 21 staff on a new triage protocol, the Interagency Integrated Triage tool. STUDY: a tally sheet and observation checklist were implemented, and 2 structured debriefings took place. ACT: The new triage system was established and tested using a walk-through simulation.

**Results:** Simulation deepened the problem analysis and helped define improvement plans in: space design; processes; team composition; task distribution; material; and staff competencies. Although no baseline data was available, post-intervention data showed a highly functional triage system: from 4331 OPD-triaged patients over 30 days there were 59 red cases, 96.6% of whom were identified at triage. From a 25-point observation checklist, staff completed 96-100% of all steps in repeated observations. The team chose to use the same methodology to adapt the triage process for the upcoming malaria peak, even including the community for walk-through simulations and feedback..

**Conclusions:** Simulation is a powerful tool that can be used to drive QI processes. Incorporating simulation into the Plan-Do-Study-Act (PDSA) cycle allowed greater participation and depth of analysis by staff and helped to redesign, test and adapt a new triage system.

**This study is:** Meets the exemption criteria for ERB review. It was conducted with permission from:

**Details:** This abstract has been exempted from Ethics review by MSF OCBA Medical Director

**1. I confirm that the abstract and that all information is correct:** Yes

**2. I confirm that the abstract constitutes consent to publication:** Yes

**3. I confirm that I submit this abstract on behalf of all authors.:** Yes

**4. Selected for either oral or poster presentation.:** Yes

**Conflict of interest to declare?:** No