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## Improving outcomes with data: Developing an orthopedic trauma registry in Pakistan

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Objective: The objective of this study was to establish an orthopedic trauma registry at Aga Khan University as a model system of objective, reliable assessment of injuries, recording of management and analysis of outcomes.

**Methods:** Consensus was developed among all orthopedic surgeons about the need for an orthopedic trauma registry. Internationally validated injury-specific scoring scales enabling objective assessment of functional, clinical and radiological outcomes were selected. The study was approved by the Departmental Research Committee and Institutional Ethical Review Committee. After obtaining informed consent from eligible patients, data was collected from the patient's medical records. Injury-specific outcomes were assessed at multiple time points and reports were generated about injuries, hospital care provided, and outcome.

**Results:** Over a 19-month period, 350 patients were enrolled. There were 123 patients with upper limb injuries, 200 with lower limb injuries and 27 with poly trauma involving both upper and lower limbs. Road traffic accidents, falls and firearm injuries accounted for the top three commonest causes of orthopedic trauma. Outcome assessment was completed in about one half, a third had stopped following up, while is ongoing in the remaining patients.

**Conclusion:** Robust methods of trauma data capture and analysis are fundamental requirements for improvement in management outcomes in patients with orthopedic trauma. Through the registry data, a system of outcome monitoring and peer-review to enable early identification of complications and need for re-intervention can be developed. Registry data also permits comparison of outcomes with international benchmarks. We plan to expand the scope of the registry within the city, and across the country for a uniform, comprehensive system of data capturing, management and analysis, enabling evidence-based decisions. Six-monthly and annual reviews will enable exploration of possible areas for improvement in the infrastructure and process, thus improving the quality of orthopedic trauma care, and outcomes.

## Speaker Biography

Zehra Abdul Muhammad has completed her Master's in Medical and Pharmaceutical Research from Vrije University of Brussels and conducted her basic research in the field of Molecular Biology. She has been involved with multidisciplinary research areas and has seven years of experience working in clinical research setting. Currently, she is working as a Research Associate at Aga Khan University Hospital, Karachi, Pakistan and is committed to assist in providing highest quality of care to trauma victims and promote her city a center of excellence for trauma care and trauma research.

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