

Kumudini Welfare Trust in collaboration with Child Health Research Foundation (CHRF) had established a modern laboratory inside Kumudini Complex in February 2012. CHRF-Kumudini Hospital Laboratory is recognized as a sentinel site for the World Health Organization (WHO) for the Invasive Bacterial - Vaccine preventable Disease (IB- VPD). This laboratory has not only the advanced diagnostic capacity but also the ability of conduct high quality research.

### **Resources**

CHRF- Kumudini lab is a well-equipped state of the art laboratory in rural Bangladesh with most modern equipment. The laboratory has diagnostic and service departments such as Biochemistry and Immunology, Clinical Pathology, Hematology, Microbiology, Histopathology, and Blood Bank. A band of highly skilled, dedicated and experienced biochemist, microbiologist and medical technologists are working in this laboratory around the clock. The laboratory has the capacity to handle any kind of emergency. In 2018, it had served more than 1.2 lakh patients and the number is gradually increasing. The laboratory is still developing and the team members are improving to bring out the best for the betterment of the patients.

CHRF have renovated and modernized the children computerized outpatient department and linked it with our research-based field site covering 77,000 households. The lab has 7 dedicated and highly experienced physicians who are continuously providing medical care to pediatric department in both indoor and outdoor patient department.

### **Research wings**

CHRF runs a demographic surveillance system (DSS) which monitors the demographic data of most of the unions of Mirzapur. A total of 130 village health workers (VHW) are working for this surveillance. Tab-based data collectors are currently working on Demographic Surveillance System (DSS) to monitor the findings on real time. They are exploring each house of Mirzapur checking the health status, in migration, out migration, male female ratio, educational status, pregnancy, pregnancy outcome, etc. A group of

VHW is working under IB- VPD surveillance. Our field team is referring patient to Kumudini Hospital in case of any medical attention. CHRf is dedicated to focus solely on pediatric infectious diseases with specific emphasis on pneumonia, typhoid and meningitis and all life-threatening diseases.

### **Our contribution from research works**

- CHRf is currently performing free blood cultures and cerebrospinal fluid analysis as well as culture and sensitivity tests for the children less than 5 years of age coming from most of the unions of Mirzapur.
- During the Microbiome and BARNARDS study neonates who have been enrolled in the study received free medicines for as long as they were admitted in the hospital and also from the outdoor patient department.
- We are also observing the post PCV (Pneumococcal Conjugated Vaccine) impact on children in the local communities of Mirzapur. This data will help us to determine the need of further development of this vaccine.
- We are also creating public awareness to prevent the misuse of antibiotics, precautions required by pregnant women and conveying various public health related messages to the local community.

We have performed several research in Kumudini Hospital and in field level such as:

<b>S.I.</b>	<b>Study Name</b>	<b>Collaborators</b>
1	Invasive Bacterial Disease (IBD)	World Health Organization (WHO)
2	Group B Streptococcus colonization in mother-newborn dyads and association with serotype-specific capsular antibodies in low and middle income South Asian and African countries (GBS-MCS)	Bill & Melinda Gates Foundation (BMGF)
3	Burden of antibiotic resistance in neonates in developing societies (BARNARDS)	Cardiff University (UK)
4	Enteric Fever	World Health Organization (WHO)
5	Vaccination and Pediatric Microbiome Study	Bill & Melinda Gates Foundation (BMGF)

6	Nasopharyngeal Pneumococcal Carriage Study	Institute for Health Metrics and Evaluation (IHME) and Sanofi Pasteur
7	Respiratory Syncytial Virus (RSV) Study	Child Health Research Foundation (CHRF)
8	** Some new studies are in pipeline	

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Please visit our website [www.chrfd.org](http://www.chrfd.org) for detail information.