

# **Lecture #1 - Blood Pressure Measurement Problem Solving**

**CKiD Blood Pressure Training**



## **Blood Pressure Assessment**

- **Correct standardized measurement of blood pressure is of the utmost importance to the success of the study**
- **Precision is essential for valid blood pressure measurement since the aim of CKiD is to prospectively examine the influence of blood pressure and other CVD risk factors on the progression of CKD in children**



## **Blood Pressure Measurement- Problems and Solutions**

- **Random variation within each subject—we will obtain multiple readings on different occasions and use the average**
- **Systematic variation—use proper cuff size, control measurement & biological variables**
- **Observer differences—sometimes as large as 15mmHg & terminal digit preference, which is the unconscious tendency to choose one digit over others -**



## **Solution to Measurement Problems**

- **TRAINING**
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## Measurement Variables

- **Incorrect cuff size**
- **Rates of inflation & deflation of the cuff**
- **Observer bias**
- **Digit Preference**
- **Mental concentration or reaction time**
- **Hearing acuity**
- **Confusion of auditory or visual cues**



## Biological Variables

- **Position of participant**
- **Time of Day**
- **Rest vs. Exercise**
- **Medication Use**
- **Full Bladder**
- **Room Temperature**

