What is the eMeasures system?

eMeasures is a web-based psychiatric research instrument, hosted by the Center for Developmental Epidemiology (CDE) at the Duke University School of Medicine in Durham, North Carolina (USA). Researchers all over the world connect to the server using web-deployed thin-client software on their Windows tablet computers. Interviewers input interview data online or offline and then upload it to the Duke servers whenever an Internet connection is available. CDE staff compiles the datasets and run diagnostic algorithms on the data. We then make the results available to the researchers.

This Software-as-a-Service (SaaS) model has the advantage that software integration and maintenance are simple and automated for the researchers who use our system. They do not have to set up or maintain any data entry systems or worry about storage. The entire core infrastructure is maintained by the staff of the CDE. We worry about security and regulatory compliance (according to U.S. requirements). This means infrastructure cost is spread over many studies, which allows us to scale your cost to the needs of your study.

The back-end systems for eMeasures are hosted on state-of-the-art hardware and software at the newest datacenter on the campus of Duke University. The systems and databases are updated and backed up regularly. eMeasures complies with Duke computer security policies as well as United States and North Carolina data security regulations.

Hardware and Software Requirements for using the eMeasures

To conduct interviews on eMeasures, interviewers need a Windows Tablet PC that supports stylus input. We recommend at least a 12-inch screen and enough processing power and memory that would allow you to watch a YouTube video full screen on the device.

eMeasures has been tested on Windows 7, and you'll need Internet Explorer 7 or later for the On-click deployment of the client. That process will install Microsoft's .Net Framework if it's not yet installed. Of course the device has to be networked (WLAN is fine) and it has to support SSL encryption for secure connections to the eMeasures server.

The eMeasures system is currently comprised of two tools: the eMeasures interview and the eMeasures coding tool. A third tool, the eMeasures report, is not yet developed. A Windows Tablet PC that supports stylus input enables the interviewer to take handwritten descriptions of symptoms during the interview, which is a key aspect of the CDE interview schedules.

CLICK HERE FOR YOUTUBE DEMO OF EMEASURES 2.0

Available eMeasures Interview Schedules:

Preschool Age Psychiatric Assessment (PAPA): Parent interview schedule originally developed for use with preschoolers up to 6 years old. However, we provide full assurance that it is appropriate to use the PAPA with 8 year old children for the diagnosis of the full range of common psychiatric disorders.
**Child and Adolescent Psychiatric Assessment (CAPA):** Parent and Child interview schedule designed for use with children 9 to 17 years old. The CAPA is used for the diagnosis of the full range of common psychiatric disorders.

**Young Adult Psychiatric Assessment (YAPA):** Child interview schedule is designed for use with young adults 18 years or older. There is no parent interview schedule for the YAPA. The YAPA is used for the diagnosis of the full range of common psychiatric disorders.

**I am interested in using eMeasures. What information will you need to decide if this is the right tool for me?**

1. Is this for a clinical or research use?
2. What is the N for your study (the number of interviews you plan to conduct across the entire study and number per year?)
3. What is the timeline of the study?
4. Where will the children and their families be recruited from (e.g. clinical or community population?)
5. What is the age range of the children?
6. How many interviewers do you plan to train?
7. Will the interviews be conducted in English?

**What is the cost of training for eMeasures and what does it include?**

Interview training takes four (4) didactic days. We send our trainer, Brian Small, to train on site. The measures, like all structured interviews, are fairly intensive with a fairly steep learning curve but the outcome being rich data. There are also core measures that have been developed that include diagnostic criteria available.

**eMeasures Training Costs**

Interview training with Brian Small:

1. $500 per day, including travel days.
2. Airfare (business class if possible for a very long trip) and accommodations during visit (plus the cost of food and transportation).
3. **Optional Service:** Brian will thoroughly check an interview and provide a written feedback report for $250 per checked interview. Depending on the size of your group, it is beneficial to receive this feedback on 1-2 interviews per interviewer.

**eMeasures Licensing Costs**

The yearly license fee is based on the number of projected interviews to be collected per year.
eMEASURES 2.0 FAQs & COSTS

Licensing covers:

1. Access to agreed number of interviews as well as unlimited number of practice interviews
2. Management and maintenance of eMeasures server
3. Data storage
4. Dataset deliverables of every six (6) months which includes taking the raw data, running algorithms, and delivery of a SAS dataset along with all the raw/diagnostic/risk factor variables.
5. Delivery of a dataset faster than every six (6) months incurs an additional charge of $2,000.

eMeasures Development Costs
All eMeasures interview schedules (PAPA, CAPA, and YAPA) are immediately available for use. You may use the “complete” version of the interview, or you may elect to select certain modules that fit your study needs, provided deleted modules are not necessary for diagnosis. Upon your request modifications to the interview schedule can be completed at programming cost of $40 per hour.

eMeasures Translation Costs
The measures can be translated into any language where we retain the copyright but the translators are credited on the authorship page of the translated versions. The PAPA is copyrighted by Duke Center of Epidemiology. Translation of the measures incurs programming costs to fit the needs of your study.

Entering translated text into the eMeasures authoring system takes anywhere from 4-12 weeks depending on the amount of text. As such, this time consuming process can cost from $2,000 to $10,000. Please keep in mind that we are not a software company with the available resources to have a quick and cheap translation turnaround. This cost covers the loss of productivity of the staff involved in the project.

Advantages of the eMeasures System over Paper Assessments
Electronic assessments have many advantages over the paper assessments. Electronic assessments are far more efficient than the paper. Below are just a few of the advantages of the eMeasures system for data collection.

1. Electronic assessments are environmentally friendlier. The paperless format means fewer trees are cut down.
2. You don't have to carry around a big book which is often 500 or more pages!
3. Long-term storage of paper instruments costs money. This is an often overlooked, hidden cost of paper assessments. Institutional Review Boards (IRB) requires you to keep data after your study ends. Duke University’s IRB requirements state that research records are to be kept “for six years after the study is completed or until the child reaches the age of 21, whichever is longer.” Storing our paper assessments costs more than $10,000 a year. There is the additional hidden cost for the destruction or shredding of paper assessments 6 years after the study has concluded.
eMEASURES 2.0 FAQs & COSTS

4. There are no printing costs associated with using the eMeasures system.
5. There is no need to create a data entry system for the eMeasures system is the data entry system. You will not have to hire data entry personnel to “double enter” the data. Data entry is completed as the interviewer codes the interview.
6. Because skip instructions are built into the electronic assessment, the interviewer is easily guided through the assessment. This can reduce administration time, but interviewing time is determined by many factors:
7. Coding electronically is MUCH faster than coding paper. Coding time is about half the time it takes to code a paper version of the PAPA, CAPA, or YAPA. Skip instructions are
8. Validation for coding is completed at the interview level.
9. Whereas it used to take years to enter data from paper assessments (depending on the number of interviews completed), data is uploaded as soon as the interview is coded and saved to our server. Data analysis is completed using our DSM-IV/DC: 0-3R/RDC-PA diagnostic algorithms. Datasets are available to you at 6 month intervals throughout your study. You can, however, request more frequent analysis for a fee.

Licensing Costs per Database*

<table>
<thead>
<tr>
<th>Estimated Number of Interviews per Year</th>
<th>Cost of License per Year</th>
<th>eMeasures: Cost per PAPA, CAPA or YAPA</th>
<th>Paper: Estimated at $125 per Interview**</th>
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<td>751-1000</td>
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</table>

*If using CAPA to interview parent and child, you will need 2 separate databases: 1) Parent CAPA Database; 2) Child CAPA Database. There is a license fee for each parent and child CAPA database.

** Paper interview cost is estimated at $125 per paper interview. This includes the cost of paper, printing, interviewing, database development, data entry personnel, double entry, and long term storage.