

MyWebDesk®

A collection of scalable applications that are designed to allow any authorized investigator global, interconnected access to secure research information.

MyWebDesk® *DataSpan*

ITBC Data Management for Junior Level Investigators:

Features:

- Secure, global access to structured and unstructured information
- Enforcement of the one database rule (one database that has correct and current information is used for the study and can be used for any follow-up study)
- Clinical informatics assessment of research design
- Data are normalized, a data structure is designed, ranges are developed, default values are assigned and missing values are defined (data dictionary is produced)
- Global storage and retrieval of research information through secure upload and download programs (statistical, references, executable and large files)
- Data acquisition methods are discussed and/or developed
- Information version control through weekly DVD backups
- Data backup and disaster recovery
- HIPAA compliance maintained and monitored
- Tracking of all information access
- Data repository

Steps for ITBC Assistance with Research Project:

1. Advisory Committee approval
2. Researcher meets with Co-Director of the Information Technology Biostatistics Center (ITBC) to discuss overall design (1 hour)
3. Clinical and or research designs discussed with Clinical Informatics manager (1.5 hours)
4. Database design and considerations discussed with Database Administrator (2.0 hours)
5. Website and forms development (see below) and data manipulation discussed with programmer and website designer (3.0 hours)
6. Old data converted to web-based format (1.25 hours)
7. All information is burned to DVD for presentation to researcher (.25 hour)
8. Letter of satisfaction is submitted from researcher to GCRC ITBC

Screen shot of input and display screen:

| ID | Patient | Test | Day | MODS | MOF |
|----|---------|------|-----|------|-----|
| 1 | 1 | 1 | 2 | 2 | 1 |
| 2 | 1 | 2 | 10 | 1 | 0 |
| 3 | 2 | 1 | 5 | 0 | 0 |
| 4 | 3 | 1 | 4 | 14 | 3 |
| 5 | 3 | 2 | 11 | 12 | 7 |
| 6 | 3 | 3 | 18 | 6 | 2 |
| 7 | 3 | 4 | 28 | 1 | 1 |
| 8 | 4 | 1 | 7 | 8 | 3 |
| 9 | 5 | 1 | 5 | 5 | 1 |
| 10 | 5 | 2 | 13 | 6 | 1 |
| 11 | 5 | 3 | 23 | | |
| 12 | 6 | 1 | 5 | 6 | 3 |
| 13 | 6 | 2 | 11 | | |
| 14 | 7 | 1 | 6 | 4 | 3 |
| 15 | 7 | 2 | 13 | 4 | 2 |

Screen shot of edit/modify screen:

ID: 5
 Patient: 3
 Test: 2
 Day: 11
 MODS: 12
 MOF: 7
 A3: 50
 TBili: 5.8
 Chlorzox: 54.6
 Mephen: 6.7
 Dapsone: 0.722
 Flur:
 Caffeine: 0.193

Website Design & Development:

The purpose of a website is to facilitate the research efforts of the study team and to communicate with the project's user groups and stakeholders. The website is used primarily for information sharing, but can be expanded to include data sharing and decision support, as well as biological sample tracking and storage.

Assistance is offered to junior investigators in creating a customized website that is responsive to investigator needs and study organization.

The website is structured as a central repository, is developed for easy navigation and is customized to include multi-site information, if appropriate. The site may include such features as a discussion board, announcements area, archive area, and an upload feature. A preliminary website structure is developed and approved in advance.

- Intended Audience

The primary users of the site are investigators and support staff involved in the project. Such users may also include governmental agency representatives, such as NIH personnel, or other participants outside of the University of Pittsburgh.

- Type of Content

Typical content may include MSWord documents (e.g., minutes, grant text, proposals), presentations (e.g., PowerPoint, videos, photographs, etc.), graphs and charts, Internet links, scrolling text and animation. Information available from the website may include areas such as documents, facilities, schedule, member project descriptions, references, links, resources, stakeholder information, etc. Web-based input forms may also be offered to the principal investigator.

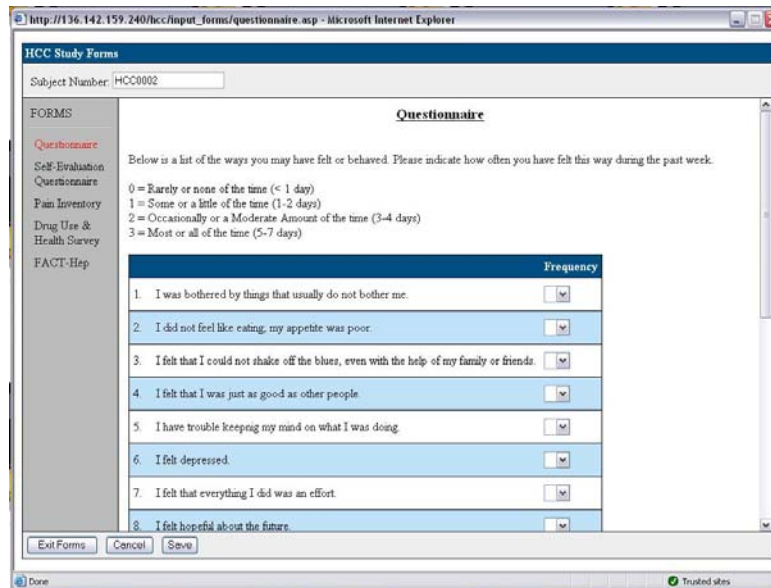
Sample of Project Website Home Page for a Network



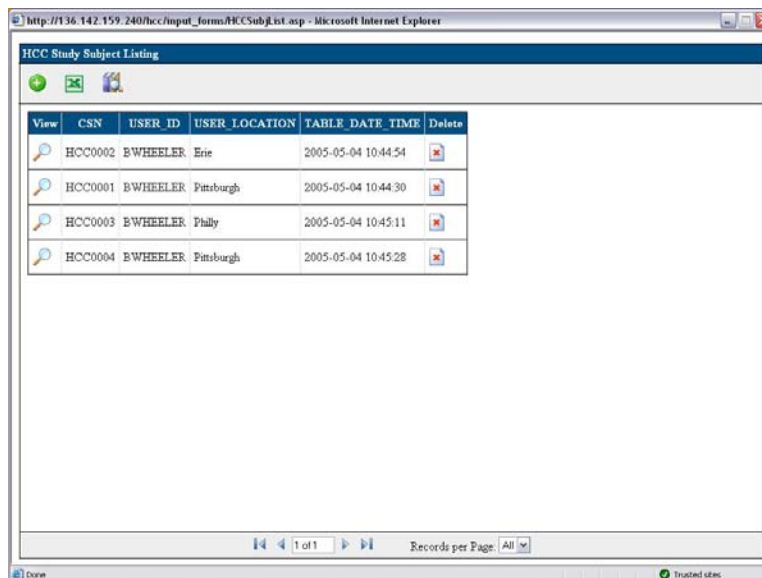
Custom-designed Forms:

The system made for handling forms allows for a good deal of flexibility and offers some powerful features. It provides a standard template to use for form-based systems and allows room for many paper-based forms to be easily inserted into the system. This flexibility along with the provided features allows for an elegant design that is easy to use and offers the tools necessary to perform many tasks.

One feature that was stressed with this system is expandability. The template allows for an almost unlimited number of forms and participants while keeping everything in a structured space. This offers an environment that remains fairly static from system to system and allows for an easy transition from one set of forms to another. Plus, since size and number are not a big issue it provides the flexibility needed to use it in many projects.



The main features included in this system all make navigation and finding data easier. Sorting the participants by a particular field can now be done by simply single clicking on the column heading in the participant listing page. Filtering can be done on any field as well by double clicking on the column heading. The number of participants that appear on the page can be fixed by selecting a number from the drop down menu "Records per page." Then navigation of the pages can be done with the arrows to the left of that drop down menu. Adding, deleting, and viewing participant's information can all be done by single clicking on the appropriate icons. Once in the participant's forms, one can easily navigate to different forms by using the navigation on the left of the screen.



The features provided in this system, along with the general flexibility and expandability of the system, offer a quick and elegant way to store and retrieve information. It offers similar features to competitive systems that are currently on the web, and can be expanded to fit the specific needs of groups or individuals.