A Schematic Representation Of A Patient Concept Map.

While electronic records of patient information and care are now prevalent throughout health centers across the United States, such as basic information (e.g., phone numbers or email addresses), to more involved information (e.g., family history and procedure records), there is no centralized mechanism by which data entered by health care staff can be checked for completeness and validity. Furthermore, there are no centralized mechanisms by which various health care software database packages and health center record-keeping measures can be compared to determine advantages and disadvantages of different systems. Without having this mechanism that can identify strengths and shortcomings in record-keeping procedures, it becomes more difficult to ensure the highest standard of care across health care centers. Most importantly, these problems are being uncovered at a time where data accuracy in health care is becoming a cornerstone for the burgeoning field of health informatics as well as a fundamental part of new models of health care practice. UCF researchers have developed a tool, the Data Completeness Analysis Package (DCAP), which evaluates the strength of patient data stored in health care databases using concept maps and statistical analysis that is used to determine the completeness of individual patient data as well as the general thoroughness of record-keeping in a medical database.

### Technical Details

DCAP uses the generated concept maps in conjunction with statistical analysis to identify the lack of pertinent and necessary patient data by analyzing the patient’s record holistically. The result is a Record Score Strength (RSS) that is based upon the care provider’s input of Importance Weights (IW), along with a Patient Database Score (PDS) that defines the overall strength of the records. Individual fields can also be verified for completeness across the entire database. The DCAP software provides comparisons across databases and subgroups to further verify proper record keeping and data completeness.

### Benefits

- Strengthens patient data quality
- Improves patient quality of care

### Applications

- Hospitals
- Health care centers
- Medical clinics
- Private practices and medical groups

### Technology #33323

- US Patent Pending

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