Patient Records Enhancement Project (PREP)
Working Together for Excellence in Primary Care
Wednesday 23rd September 2008

For more details see:
http://www.infomatics.sussex.ac.uk/research/projects/PREP
Or contact us: lavelrod@sussex.ac.uk 01273 872 778

Our Interests

The PREP team is interested in electronic health records.
This project aims to make data in records more usable for researchers.
There is potential that our findings will lead to other work that
might directly impact on patient care.

We are exploring secondary uses of health records for research
and the need to ensure that data is valid for this purpose.
We hope to enhance how the information contained in electronic
patient records can best be exploited for health services research.

In three simultaneous strands of work we aim to:
- better understand how and why primary care patient records are created as they are;
- build natural language processing tools to enhance usable data;
- build visualisation tools to make it easier to use records;
- compare results of epidemiological studies that do or don't use
our new tools.

The research team

The core team is from the University of Sussex and Brighton and
Sussex Medical School.

Our collaborators include the General Practice Research Database
(GPRD), Medical Research Council, General Practice Research
Framework (MRC GPRF), University College London (UCL) and
Brighton University.

Our team has a wide range of experience in health and technology
including clinical backgrounds as doctors, nurses or other allied
health professions, computer science, technology design and
engineering and health researchers and epidemiologists.

This project is funded by a Wellcome Trust grant.

We are recruiting GP surgeries for this phase at the moment.
Please email Lavel Rod on laxelrod@sussex.ac.uk
or ring 01273 872 778 if you would like more information.

Strand One
User Centred Studies

a) Data Recording in Primary Care
We are carrying out field studies to help understand how and why data in
records is assembled as it is. We plan a series of case studies to see
how different primary care staff enter data and use the electronic health
record. It is important to understand who enters the data, what is
entered, where, when and why. We are making observations and interviewing
staff in GP surgeries.

b) Visualisation Tools for Health Researchers
We are studying how researchers look through large numbers of records and
we are helping to build and evaluate tools to help researchers to see the
patterns in the data more easily and clearly.

Strand Two
Natural Language Processing and Computer Science

We are exploring how we can use natural language processing to enrich parts
of the data in records so that it is more usable for secondary researchers.
We are developing algorithms to search through archived records for
recognisable information that is currently not easily available to secondary r
searchers because it is not in a coded format. Our tools transform those parts
of the information and so enhance the record for researchers to use.

We are building visualisation tools to make it easier to view the data in large
numbers of records.

These tools improve ease and accuracy, for example in studies of estimates
of disease or patterns of care.

Strand Three
Epidemiology Studies

We are exploring the use of different natural language processing tools and
visualisation tools to improve our practice and outcomes.

We are using ovarian cancer and rheumatoid arthritis as exemplar diseases
and we are making two studies of each to compare outcomes:
a) using the data that is already readily available from GPRD records
b) using the same data but after it is enhanced by our natural language
processing and visualisation tools.