

Institute of Applied Health Sciences

University of Aberdeen

DATABASE REVIEW

Department of General Practice

& Primary Care

University of Aberdeen

PRIMARY CARE CLINICAL
INFORMATICS UNIT DATABASE

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Introduction

History

The General Practice Administration System for Scotland (**Gpass**) Data Evaluation Project (**GDEP**) was initiated in 1988 in order to extract information from **Gpass** practices and to provide national and individual practice feedback on clinical management of patients and to aid planning for population care. Initially, data was collected from **Gpass** practices via an Electronic Questionnaire (**EQ**), but later in 1994, additional software was developed to extract registration data, encounter data, referral data and drug and Read code data expressed as a series of Date, Age, Sex and Postcode (**DASP**) for each drug or Read code found. **DASP** data was used to collect anonymous morbidity and drug data at patient and postcode level for a sub-set of participating practices across Scotland. **DASP** data is anonymous and patients can only be re-identified via their **Gpass** system identifier in the computer of the originating practice. The original **GDEP** project has now evolved to deliver data for the Scottish Programme for Improving Clinical Effectiveness in Primary Care (**SPICE-PC**) under the auspices of the Primary Care Clinical Informatics Unit (**PCCIU**). Similar data sets are extracted for **SPICE-PC**, but the postcode field has been restricted to postcode sector to reduce the possibility of inadvertent patient identification.

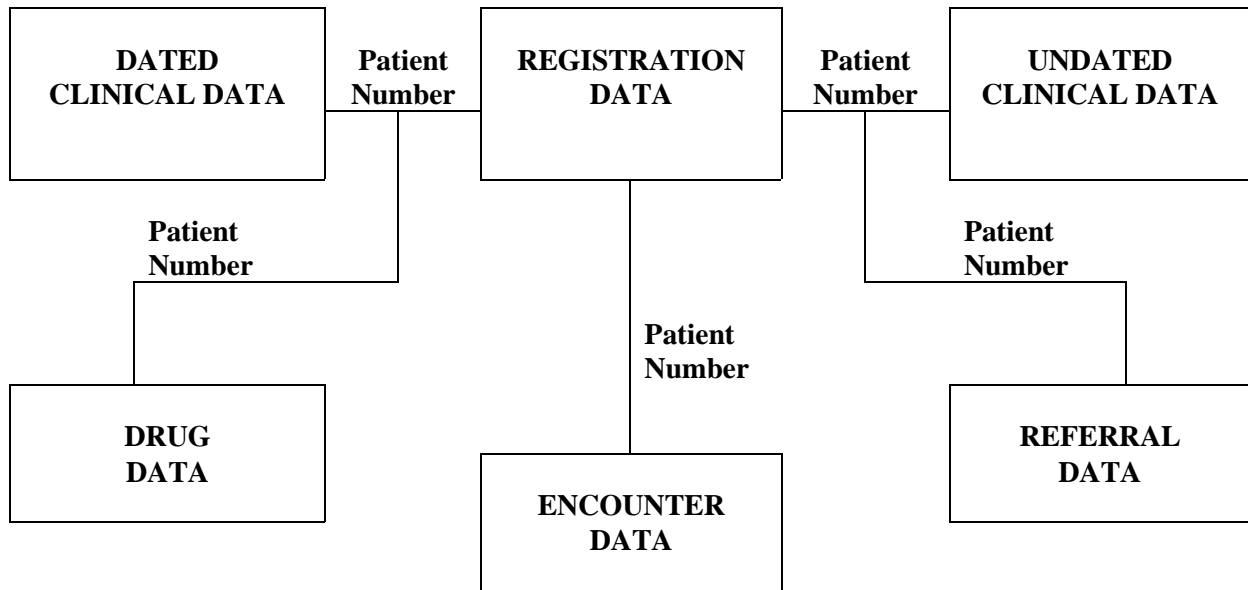
Overview of Database

The Primary Care Clinical Informatics Unit extracts data from **Gpass** in the form of an Electronic Questionnaire (**EQ**). This data is held on a SQL Server Relational Database, within the Department of General Practice and Primary Care at the Foresterhill Health Centre. The database has been developed to receive data downloads from selected **Gpass** practices in the form of **DASP** files containing registration data, patient morbidity summaries for major diseases, health promotion information, and screening, immunisation, prescribing and administrative information for approximately 460 practices (2.8 million patients) across Scotland. This data is used to produce biennial reports on a regional and national basis allowing comparisons between practices and providing feedback to individual practices. The feedback is designed to allow practices to examine clinical behaviour, clinical governance and to identify areas of patient care for further examination and improvement.

Data is extracted for every patient on the **Gpass** database and transferred to SQL tables for analysis. These tables are detailed in the Main Table Definitions Section.

The stored data is suitable for collaborative research and development exercises with academic units throughout Scotland.

Database Structure



Main Table Summary

Registration Data

- GPASS Patient Sequence Number
- Date of Birth / Sex / Postcode / Current Status
- Height / Weight / Blood Pressure Readings
- GPASS Doctor Identification / Registered GPASS Doctor

Dated Clinical Data

- GPASS Patient Sequence Number
- Diagnosis Date
- Clinical Classification / Context
- Patient / Doctor Consultation Number

Undated Clinical Data

- GPASS Patient Sequence Number
- Clinical Classification / Frequency

Drug Data

- GPASS Patient Sequence Number
- Drug Name
- Prescription Details / Dates
- Patient / Doctor Consultation Number

Referral Data

- GPASS Patient Sequence Number
- Doctor Identification Code
- Date and Category of Referral
- Hospital Specialty
- Referral – InPatients / OutPatients

Encounter Data

- GPASS Patient Sequence Number
- Patient / Doctor Consultation Number
- Date and Time of Consultation
- Doctor Responsible for Consultation

Associated Publications

Taylor MW, Ritchie LD, Taylor RJ et al.
General Practice computing in Scotland.
Br Med. J. 1990, **300**: 170-2

Taylor MW, Ritchie LD, Taylor RJ.
Complete audit of practice computer databases the megapractice.
Br Med. J. 1990, **301**: 181

Ritchie LD, Watt A, Taylor MW.
Computer databases in General Practice
Br Med. J. 1991, **302**: 108

Taylor MW, Milne RM, Duncan R..
The state of general practice computing in Scotland and the characteristics of computerised practices –
A survey of 948 practices.
Health Bulletin (Edinburgh) 1991, **49**: 245-53

Milne RM, Taylor MW, Duncan R.
An assessment of computing activity by Gpass users in Scottish general practice.
Health Bulletin (Edinburgh) 1991, **49**: 151-60

Taylor MW, Milne RM, Duncan R, MacDonald I.
The National use of an Electronic Questionnaire to interrogate General Practice based computer data
sets.
*Proceedings of the Annual Conference of the Primary Health Care Specialist Group of the British
Computer Society, Gateshead* 1991, 94-102

Taylor MW, Milne RM, Taylor RJ, Duncan R, MacDonald I.
The state of general practice computing in Scotland and the characteristics of computerised practices –
a survey of 963 practices.
Department of General Practice, Aberdeen 1992

Ritchie LD, Taylor MW, Milne RM, Duncan R.
Computer virus infection : a new public health hazard.
The Lancet 1992, (letter)

Duncan R.
The electronic questionnaire – a software utility for both practice audit and National epidemiological
studies.
Primary Health Care Specialist Group Journal 1992, 20-22

Henderson BS, Taylor MW, Milne RJ, Begg A, McEwan S, Irving M.
Health promotion and the use of Gpass in Scotland.
Health Bulletin (Edinburgh) 1995, **53**: 253-60
Henderson BS, Taylor MW, Milne RM, Taylor RJ, Ritchie LD, Begg A, McEwan S.
General practice blood pressure recording in Scotland : variations in the classification of hypertension.
Scot Med. J. 1996, 108-9

Whitelaw FG, Taylor RJ, Nevin SL, Taylor MW, Milne RM, Watt AH.
Completeness and accuracy of morbidity and repeat prescribing records held on general practice computers in Scotland.

Br. J. of General Practice 1996, **46**: 181-86

Taylor MW.

A practical method for the extraction and utilisation of Scottish general practice prescribing and morbidity.

Databases for Pharmakovigilance – what can we do? 1996, (MBRF proceedings) Ed. Walker SR. pp 5-15. Centre for Medicines Research London

Milne RM, Taylor MW, Taylor RJ.

Audit of populations in general practice : the creation of a national resource for the study of morbidity in Scottish general practice.

Journal of Epidemiology and Community Health 1998, **52**: (suppl. 1) 20S-24S

Simpson CR, Helms PJ, Taylor MW, Baxter-Jones ADG.

Respiratory morbidity in Primary Care. A population based study, using practices from the Scottish Continuous Morbidity Recording Research Database.

Health Bulletin (Edinburgh) 2000, **60**: 489-496

Simpson CR, Helms PJ, Taylor MW, Baxter-Jones ADG.

Changing asthma prescribing in primary care 1995 – 1998.

Primary Care Respiratory Journal 2001,

Simpson CR, Anderson WJA, Helms PJ, Taylor MW, Watson L, Prescott GJ, Godden DJ, Barker RN.
Coincidence of immune-mediated diseases driven by Th1 and Th2 subsets suggests a common aetiology.

Clinical and Experimental Allergy 2001