A review of the requirement for a MIQUEST like tool

Introduction

This paper is the output of discussions at the British Computer Society Primary Health Care Specialist Group (BCS PHCSG) on the requirements of those in primary care for a standard method of extracting data from primary care systems. These requirements have historically been met by MIQUEST however given the forthcoming implementation of SNOMED CT (SNOMED), the future of MIQUEST is in doubt, investment in both and time and money will be required to make it SNOMED compliant. Two of the contributors to this paper work for PRIMIS at University of Nottingham and declare a potential conflict of interest.

Pragmatically there appear to be four options:

1. Do nothing
2. Convert the current MIQUEST to work with SNOMED. Either to a minimum specification or to enhance and fix known issues with the current version.
3. Develop a query interface to work on a central database, (NHS or other)
4. Put all requests through GPES process.

Introducing MIQUEST

MIQUEST is crown copyright and has been in use since 1992. It provides a standard method of extracting **consistent, meaningful** data from the four GP systems. Queries can be distributed in a **human readable** form. It uses Health Query Language(HQL) to extract data and has a degree of Information Governance(IG) compliance. It is free to use and is mandated by the GP System of Choice(GP SOC) contract (Previously Requirements for Accreditation (RFA) 99).

How it is being used

MIQUEST is used by thousands of practices, CCGs, CSUs, researchers, Academia and others throughout the NHS family to develop queries and extract patient data to support improved patient care. Examples of this include:

- National validation audits such as the vaccination programme for Public Health England;
- More than 2,600 practices that have downloaded the NHS E sponsored GRASP AF tool during 2016;
- National audits such as the National Diabetes Audit (NDA);
- Extensive use by CSU's to develop local queries to support local incentive schemes, research projects and other local requirements such as the development of shared records;
- Practices who develop extraction routines for specific clinical purposes and adjust patient care as a result;

- Most academic organisations completing research in primary care e.g. University of Nottingham, Surrey University, Newcastle University, to name but a few;
- Small and medium sized organisations that support the NHS family to identify patients and provide focused clinical support, writing tools to support clinical audit and quality improvement work. Evidence suggests that several thousand practices are using these tools.
- There are over 500 licensed holders of the enquiry software.

MIQUEST provides local control allowing queries to be shared quickly and simply amongst practices using different systems thus allowing practices to benchmark their clinical performance across a patch and nationally. There are many examples where the use of these tools has supported clinical conversations not only within practices but also across a local system thus improving patient care and in some instances saving costs. Local ownership is key to develop a culture of data stewardship, which is becoming more important with the move to SNOMED.

Risks of MIQUEST or similar tool not being available

There are many tools and audits dependent on MIQUEST, in regular use in general practice that will require transitioning to another extraction routine as part of the move to SNOMED. It is unclear how that would be completed and /or would be funded and by whom, should MIQUEST not continue to be available.

There are many risks to be managed as part of the SNOMED transition and these will be further compounded by removing access to a tool that provides, consistent access across the multiple systems in operation.

There are no other standardised freely available, extraction routines, available across all systems, thus making it difficult for many programmes nationwide to function. In a non MIQUEST world national programmes would need to use GPES or commission extraction routines from each GP system supplier.

Other extraction methods usually come at a cost and in some instances a significant one, adding to overall NHS expense.

Although data can be extracted using systems reports, these cannot be easily shared across localities and regions. This is further compounded if there are multiple systems in operation.

NHS Digital could develop a central database and a query interface to replace MIQUEST. This would be at significantly more cost that just modifying MIQUEST to work with SNOMED, but could have the potential to provide a modern interface and solve many of the problems of the current tool. It would take some time to develop and leave a period without access to any tooling. It would also seem unlikely that such a new investment would be provided free of charge. It is unclear how such a service could replicate the granularity of data available to practices using MIQUEST.

It is of significant concern that the demand for data extractions, as evidenced by current MIQUEST usage, could not be met in a timely manner by a central extraction mechanism. We understand that design constraints will prevent GPES being used for local queries, thereby removing it as an option to replace MIQUEST. This would have a major impact on primary care, CCGs, CSUs and research organisations.

If MIQUEST fails to be updated for SNOMED, it could impact on longitudinal research programmes possibly invalidating results.

Small Medium Enterprises (SMEs) exist that provide niche support for primary care and many of them use MIQUEST to extract GP Practice data for the surgery to review. They keep their costs down as MIQUEST is free to use. Should these organisations be obliged to pay for extraction services, these additional costs would need to be passed onto an already struggling NHS. This could have knock on economic impacts on this industry.

The shared data model in MIQUEST supports the production of consistent results across multiple practices. This is very important for validating data extracted from clinical systems in another manner. There is a risk that the migration to SNOMED will change the data structures in existing GP clinical systems, which may increase the risk of extracting inconsistent data from practices using different systems.

MIQUEST provides an Information Governance wrapper, differentiating local and remote queries and preventing identifiable fields being extracted in the latter. Although not perfect it is well understood. If a similar, freely available tool is not available, practices and others will find 'work arounds' to extract data. This in our opinion will **increase the likelihood of an accidental release of data.**

Using tools such as MIQUEST, provides local visibility of data in systems engendering a level of ownership and responsibility to ensure it is of good quality. One can envisage a situation where data quality will decline further should access to, and control of, practice data be removed. Echoes of this behaviour can be seen in some of the national audits where data is provided to the centre and then played back to practices months later; there is little ownership of that data locally. Bad data leads to bad decisions impacting on patient care eventually.

Should MIQUEST or a similar tool be unavailable, the data controller can only access their practice data using system reports increasing reliance on the GP System Suppliers tools.

In summary, the risks of not providing a tool similar to MIQUEST and/or updating MIQUEST include:

- Major disruption to practices, CCGs, CSUs, research projects;
- Increased costs to general practice, NHS organisations and Academia;

- Reduced data quality over time with the associated risk to patients; and
- GP systems suppliers not delivering their contractual obligations under GP SOC.

Requirements

Whilst the BCS PHCSG understands that there may be a need for a central database to support management information, it is the view of the BCS PHCSG that it is a professional requirement for primary care to continue to have a, free to use, data extraction mechanism that provides consistent access to data across practices.
Such a tool should:

- Work across all the GP systems in a standard manner;
- Uphold IG principles;
- Provide an HQL(or similar) editor;
- Allow access to drug information(drug, dose etc) from all systems;
- Be available to all CSU, CCGs and general practices as per the principles of GP SOC;
- Enable queries to be easily shared for all GP systems in the group.
- Continue to be Crown Copyright and free to use.

Practices expect to be able to access the data in their clinical systems without additional expense, in order to complete clinical audit, searches in support of re-validation and in preparation for CQC inspections.

The benefits of providing such a tool include:

- Reducing the costs of the SNOMED transition
- Minimising the impact on research and longitudinal studies
- Continued focus by general practice on patient care using currently available audits and extraction routines
- Maintaining the sense of local ownership of data
- Avoiding a further degradation in primary care data
- Avoiding the future continuing cost of providing a similar service centrally.

Summary

The best option appears to be updating the existing MIQUEST tool. We would advocate taking the opportunity to fix known issues at the same time. This is likely to be the lowest cost option for the NHS and be most likely to reduce the disruption to service. Time is short and we urge a speedy resolution to the issue.