Specialised Healthcare Alliance

FOR EVERYONE WITH RARE AND COMPLEX CONDITIONS

Registries Guide
2011

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Contents

Introduction

This guide has been produced in pursuance of the recommendation in the Alliance's report *Leaving No One Behind* (January 2011) about the central importance of patient registries in specialised care, with more sharply focused datasets helping to keep down costs. It is intended for use by patient organisations, particularly those representing people with rare and complex conditions. It seeks to help in answering two key questions:

Question 1: Would it be useful and practicable for us to set up a registry?

Question 2: What are the key issues that we must take into account when setting up a registry?

The guide also includes tips, case studies and useful links.

What is a registry?

Strictly speaking a 'register', a 'registry' and a' database' are different things. A register is a record of a set of data items for a number of entries, which is usually stored in and managed using a database; while a registry houses the register and uses the data in some way.

Although different, it is however clear that these terms have become relatively interchangeable. 'Registry' is used throughout this guide (excluding the case studies), since this document aims to support patient organisations, not only in establishing a formalised record, but also in using the data collected for some beneficial end.

There are three main types of registry used in healthcare, which record data on:

- Disease area
- Treatment
- Medical device.

Throughout much of this guide it will be assumed that a registry of patients based on a disease area is being set up. However, many of the questions and issues discussed apply to all three types of registry.

Registries can be particularly beneficial for conditions with smaller patient populations. For example, they can help to address the fact that traditional data sources are often inadequate for rare and complex conditions, or that randomised clinical trials might not be possible for the treatments of such conditions.

What is the use of a registry?

The uses of registries can be divided intro three categories:

1) **Searchable log of cases**

   At its most basic, a registry may take the form of a list of patients that can be searched to retrieve information (particularly where this information is not available elsewhere). This could be about individual patients or about the patient population as a whole, as represented on the registry. This type of registry may be used by researchers to search for appropriate participants for clinical studies and clinical trials.

2) **Clinical audit**

The data held in a registry may be used to carry out a clinical audit of the quality of a service provided to patients. In this way, the registry can contribute to driving quality improvements.

3) **Research**

A registry may be used in research, meaning that the data itself is used to obtain new knowledge.

The three categories of registry will require increasing levels of detail regarding the data collected, as well as increasing levels of maintenance and quality assurance.

What are the benefits of a registry?

The benefits/outcomes of a registry may be divided into two categories: those which are identified during the design stage of a registry (and as such are fundamental to its running), and those which may be secondary or perhaps longer-term.

The first category of benefits may include:

- Better understanding of the progression of a condition across patients' lifespans
- Better understanding of what effective patient management looks like
- Ability to compare the severity, progression, or treatment of a disease across the condition population
- Better understanding of the benefits of, or adverse events connected with, certain treatment regimes (particularly where small patient populations make clinical trials impossible)
- Better understanding of the effects of treatments in a representative patient population (clinical trials have many exclusions so they often are only treating an unrepresentative population).

The secondary/added benefits may include:

- Informing service provision/best practice/commissioning
- Raising awareness of a condition
- Acting as a communication hub for patient populations and/or clinicians
- Reporting back to patients.

Question 1: Would it be useful and practicable for us to set up a registry?

Would a registry be useful?

- It will be important to look at the **mechanisms that already exist** for collecting data on patients – both nationally and internationally. This is vital in ensuring that your registry does not replicate work already carried out, and may also provide the opportunity to learn from international examples.

- From the outset, it is also vital to think about the **potential benefits** that a registry might have.

  Tip: Asking questions such as 'what do we want this registry for?' and 'will the registry be used to answer specific question(s) about a condition or treatment?' may prove useful.

Would a registry be practicable?

- **Funding**: both start-up and longer-term funding needs to be secured or planned for. There are various routes that could be explored, including: fundraising by the patient organisation; a number of patient organisations working across a broader condition area; government funding; commercial funding; and applying to HQIP (the Healthcare Quality Improvement Partnership). It may also be possible for patient organisations to work with commissioners so that setting up and running a registry becomes part of the service cost given to relevant providers. In the longer term, it might prove beneficial to charge researchers or commercial organisations for use of the registry, although it will be vital for the patient organisation to retain overall ownership of the data.

- **Identification of patients**: it is possible, particularly in rare disease areas, that a patient organisation may be unaware of where patients live or are treated. A first step will therefore be to identify patients. (See the AKU Society case study below for examples of how this can be achieved.)

- **Data sources**: it is important to decide whether it will be possible to collect data for all patients, or from all centres/clinicians working in the area.

  Tip: support from the relevant professional organisation (if one exists) would help with this.

  Tip: a successful registry is likely to be one that is set up with the intention/capacity to collect data from all patients covered by the scope of the registry.

- **Day-to-day running**: will the registry be run by the patient organisation on a daily basis, perhaps as an extension of the organisation's contact database? Or, alternatively, will it be run by an external organisation, such as a university? The latter carries initial cost and planning implications, but could represent a more sustainable long-term model.

- **Ownership:** who will 'own' the registry? It is possible that this will be the patient organisation, but equally another body, such as the professional organisation, could be suitable. Ownership may be separate to the day-to-day running of the registry.

Question 2: What are the key issues that we must take into account when setting up a registry?

What type of registry should you set up?

- What **form** will the registry take? The three categories of registry set out above (searchable log of cases/clinical audit/research) may provide a useful template for making this decision.

  Tip: a registry is much more likely to be successful if it is designed and run so that it fits into just one of these categories.

- Who will have **access** to the data? This may include: the patient organisation; an external team; patients; clinicians, or a combination of these. This will be closely linked to where the registry is based - on or offline, for example - and to the level of anonymity of the data, as well as the security of the registry or of different sections of the registry.

- Who will be able to **update** the registry or add new data?

What data will be collected?

- Various **types of data** may be collected, including: clinical; patient-reported; data collected by the patient organisation, and routine NHS data.

- Various **levels of data** may also be collected, which will be closely linked to the type of registry that you are planning to set up.

  Tip: It may be useful to set up a gold/silver/bronze system of data collection. Gold data is that which must always be collected for every patient, and with which alone the registry can fulfil its intended function. Silver data is that which is useful but not essential, as is bronze data, but to a lesser degree.

  Tip: Keep your data set to the necessary minimum and, regarding clinical/NHS data, only collect that which is already being collected.

  Tip: It is important to have a clear, consistent idea of the information that you wish to record, which will need to be relevant over a long period of time.

  Tip: Data should be recorded in a form that is sustainable, for example, recording someone's date of birth rather than their age. It should also be recorded in a form that is clear and useful in aggregate, for example, to show how an intervention works across the entire patient population.

  Tip: It is extremely useful if the data collected can be easily exported to Excel.

How will the data be collected?

- **Various methods** of data collection exist. For example, clinical data could be submitted by a centre and re-entered into the registry. Alternatively, it could be assimilated from various existing clinical data sources, such as through a quarterly data extract, as in the MS Society case study, below. Similarly, patient-reported data could be entered via the patient organisation or through an online system.

Tip: You may need to consider how best to incentivise the collection of data, particularly in a clinical setting. One method for patient organisations may involve working with commissioners so that the collection of data is incentivised as part of the payment system, such as CQIN (Commissioning for Quality and Innovation).

Tip: Ensuring that those collecting the data have a sense of ownership over the registry, even if they do not 'own' it, will aid the sustainable and timely collection of data.

Who will run the registry on a day-to-day basis?

- This is discussed briefly above. It is important to note that day-to-day running of the registry should include some method by which the data can be managed and its **quality** can be checked and validated.

How will you ensure that issues of data protection are addressed?

There are two main ways in which issues of data protection can be addressed:

- **Anonymising the data**
- **Gaining patient consent.**

Tip: Gaining patient consent is likely to be the preferable option for a patient organisation. This is because it is important that data in a registry can be validated, which would involve looking at patient-identifiable data. Therefore, if anonymisation is chosen, the data will need to be validated before being anonymised, and retain some link to patient-identifiable data, which is usually achieved through robust processes involving external parties. This is more expensive and complicated than retaining the link to patients that can be achieved through gaining patient consent before the data is collected.

How will the data be used?

- As discussed above, it is vital to consider from the outset how the data in your registry will be used and the benefits the registry will bring. However, it will also be important to set out **formal objectives** for the registry before it is set up. This will also be important if patient consent is being sought.

How will you market the registry?

- You may need to market your registry to **centres** or **patients**, encouraging them to join the registry, or to **researchers** who might use the registry to find appropriate participants for projects.

Case studies

Below are a number of case studies that help to illustrate the different forms and uses that registries may take. They are drawn primarily from the Specialised Healthcare Alliance's members.

AKU Society

In 2008 the AKU Society set up a UK-wide registry for people with Alkaptonuria (AKU). AKU is a rare genetic disease characterised by the loss of an enzyme in the tyrosine breakdown pathway. AKU affects around 1 in 500,000 people.

How does it work?

In order to set up the registry, the AKU Society, in collaboration with the University of Liverpool, put together a project to identify as many patients as possible with the disease. Strategies included a questionnaire survey of GPs, a website and patient network contact, targeted family screening and medical conference targeting. This resulted in the AKU Society making contact with 75 AKU patients in the UK and more than 650 AKU patients worldwide.

Using this information, a registry was created, housed at the Royal Liverpool University Hospital. The registry collects data about patients, including their medical histories; drug treatments; information about the onset of AKU, and a degree of severity.

The registry is currently manually inputted and hosted on a single computer. For every patient, appropriate consent has been obtained – this means that patients agree for their details to be collected, recorded and used in clinical research.

What are the objectives for the registry?

The primary objectives for the registry are to:

- Describe the progression of AKU through a patient's lifespan;
- Compare the severity of disease across the AKU population;
- Keep patients informed of the latest relevant information;
- Aid the planning stage of clinical trials;
- Facilitate clinical trials by locating potential research participants quickly and efficiently.

Looking to the future, the AKU Society is working towards transforming the current registry into an online programme that both patients and their clinicians can access.

AMEND

AMEND (the Association for Multiple Endocrine Neoplasia Disorders) runs a small research registry of patients as an extension of its everyday contact management system.

How does it work?

The AMEND Research Registry mainly collects patient contact information, but also gathers a limited amount of clinical data (as reported by the patient) such as type of MEN, which tumours and surgeries the patient has had, current medication and details of

family members also affected by the disease (where appropriate). AMEND seeks each patient's consent before adding their details to the registry, usually through a check box on the organisation's membership registration form.

When AMEND is contacted by a researcher, the registry is scanned for registered patients according to the criteria stipulated by the researcher. AMEND contacts relevant patients by email, post or telephone to gauge interest. The patient is then given the researcher's contact details in order to communicate with them directly. AMEND also arranges opportunities for patients and researchers to meet in person, if appropriate.

The AMEND Research Registry can also be described as using a 'bottom-up' approach, whereby patients who have been informed by AMEND of multi-centre clinical research projects taking place are given the confidence to request that their physician submit their clinical data for use in such projects.

Updates to the registry are recorded either as a result of notification by patients or following periodic update requests.

The Research Registry is marketed regularly to registered members of AMEND, particularly with a view to involving other family members. It is also marketed publicly on the AMEND website and on occasion with relevant medical societies.

What are the objectives for the registry?

At present the registry holds the details of just over 200 patients of all ages and types. The registry has already been used to identify a small number of participants for a research project on medullary thyroid cancer. The intention is that once the Registry has grown further, it will be marketed more widely to relevant researchers as a tool for identifying suitable patients to participate in their projects.

BSR Biologics Register

Launched in 2001, the British Society for Rheumatology Biologics Register (BSRBR) tracks the progress of patients with severe rheumatoid arthritis who are receiving biologic agents, monitoring the safety and effectiveness of these treatments over the long term. In February 2011, the 20,000th patient was recruited to the register.

How does it work?

The BSRBR has participation from all consultant rheumatologists supported by allied health professionals across the UK, their patients who are receiving biologics, and a control group of patients receiving conventional disease-modifying drugs.

The register is funded by the pharmaceutical companies producing the biologics and is supported by a team of people based at the Arthritis Research UK Epidemiology Unit at the University of Manchester. The team provides a range of services including local investigator liaison, data management, pharmacovigilance, analyses and reports.

Patients are registered and followed-up to assess their response to treatment and to capture detailed information about any adverse events. For the first three years following prescription, relevant data for all patients with rheumatoid arthritis treated with a biologic is transmitted to the register at 6-monthly intervals. Thereafter, data is transmitted annually. Patients are flagged with the Office for National Statistics to notify BSRBR of any cases of cancer or deaths and their cause. Data is also collected for a control cohort of

patients who are receiving conventional disease-modifying drugs.

BSR was helped in its bid to recruit patients to the register by the fact that NICE made approval of biologic therapies for use in rheumatoid arthritis patients conditional on the registration of patients on the register. In addition, the register is on the National Institute for Health Research (NIHR) portfolio, meaning that a hospital can get funding from NIHR for patients registered.

What has the register achieved?

The analysis of BSRBR data has enabled the accumulation of new data on drug safety that is superior to data from randomised clinical trials, post-marketing surveillance and observational cohorts. The key message from these analyses is that, so far, biologic therapies appear safe and effective in rheumatoid arthritis with no marked difference between biologic treatments. The register has also demonstrated the positive impact of anti-TNF therapy on cardiovascular disease, its safety in pregnancy, the implications of switching anti-TNF agents and aspects of cost-effectiveness.

Further details of the register can be found on the BSR website: (http://www.rheumatology.org.uk/bsr_biologics_register/default.aspx)

MS Society

The MS Society recently launched a pilot of the UK's first MS register.

How does it work?

The pilot programme is running in five MS centres, based in Belfast, Edinburgh, Swansea, Nottingham and London. Neurologists in these centres will, with the consent of their patients, provide basic clinical information for the register. The register will only store clinical data that is already being collected by the centres – this includes date of diagnosis, details of treatment, and dates and treatment of relapses. The data will be uploaded by each centre on a quarterly basis, and all non-anonymised information will remain within NHS IT systems. The register is run by a team at Swansea University, who will only receive the anonymised data. Health Services Wales, part of the NHS, are responsible for anonymising the data sent to them, while also giving each patient's information a unique identifier to facilitate information linkage.

At the same time, patients from across the UK are able to answer a series of questionnaires about their condition and their experiences via an online portal. The unique patient identifier allows for patient-reported and clinical data to be linked for patients in the pilot sites.

The register will also include relevant data already collected by the NHS. For example, data related to primary care and hospital admissions.

What are the objectives for the register?

The MS Society envisages three main, long-term uses for the register:

- **Clinical trials**: the register would be used by researchers to recruit suitable patients to clinical trials. This includes conducting feasibility studies on the likely number of patients within potential trial sites, or recruiting patients who meet particular criteria via their neurologist.

- **Service planning**: the register would be used by commissioners and others to understand the needs of the people with MS in their area. For example, the register could be used to show the number of patients in the commissioner's area who would potentially benefit from a certain service.
- **Other research**: The register will provide a platform for further specific research studies which require longitudinal data from patients and/or clinicians. This might include health economics studies, or work examining prognostic indicators.

UKHCDO National Haemophilia Database

The National Haemophilia Database (NHD) is a register of patients with bleeding disorders living in the UK, which was originally established in Oxford in 1968. The database collects data from all haemophilia centres as required by the Department of Health and commissioners and is run by the UKHCDO (the United Kingdom Haemophilia Centre Doctors' Organisation).

How does it work?

The NHD is managed by the Data Management Working Party of UKHCDO. Information is collected on patients' diagnosis; date of birth; GP code; NHS number; the types and amounts of treatment used; the risk-factors for some complications of treatment; causes of death; HIV infection; and, more recently, on potential exposure to vCJD.

In the future, more detailed information will be kept on basic treatment, treatment outcomes, the natural history of the condition and the treatment of people with inhibitors and those with hepatitis C.

'Named' data is stored in a secure office in the Manchester Royal Infirmary – named data is only shared with the patient's own haemophilia centre, while reports from the database always use anonymous data. Storing named data helps to avoid double counting of patients attending more than one centre and allows UKHCDO to provide patients with extracts of their own data. The data is collected electronically from haemophilia centres using an encrypted link within the NHS network.

How is the database used?

A national audit report is produced annually which summarises national trends on bleeding disorders, treatments and complications.

The information collected is used to negotiate improvements in haemophilia services which, in turn, lead to improvements in patient care. The data is also essential for healthcare planning and useful for national audit and research (but not clinical trials).

Useful links

Orphanet list of registries/biobanks:

http://www.orpha.net/consor/cgi-bin/ResearchTrials_RegistriesMaterials.php?lng=EN

HQIP:

http://www.hqip.org.uk/national-clinical-audit-registries/

The Specialised Healthcare Alliance is a coalition of 68 patient-related groups supported by 10 corporate members which campaigns on behalf of people with rare and complex conditions in need of specialised care. *www.shca.info*

We wish to thank everyone who has contributed to the making of this guide.

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