

2 Getting Started on Your Research

Getting started on your research can be the most difficult part of the research process. This chapter guides you from your very first thought about undertaking research to developing your research aims, questions and objectives.

As health professionals we are often motivated to undertake research by our experiences in clinical practice. We identify an issue that troubles us and we want to investigate it so we can make it better in some way. In our clinical practice we aim to improve the health of our patients and this same motivation inspires our research. Our research can be very relevant for health care because it tackles issues we have identified in our day-to-day work. The close tie between our clinical practice and our research is important, but equally important is our ability to step back from the issue we have identified, reflect on it, ask questions about it and try and look at it in as many different ways as possible. We can use our familiarity with our clinical setting to advantage in our research as we know a great deal about what happens and why, but we need to notice when we are making assumptions, for example about what people think or do, and ask ourselves whether we have checked these assumptions out. Our enthusiasm for improving health care gives us the energy to carry us through the sometimes difficult research process, but we need to harness it into a questioning approach.

One of our functions as health professionals is to help solve problems, including our patients' health problems and problems of service provision in our local context. When there is an issue that troubles us, we quite naturally start thinking of how to solve it. If the solution is very obvious, we do not need to do research. Considering whether there is an obvious solution or not is important and may involve talking to colleagues and reading about health care policy and practice. If the solution is not obvious, we may want to undertake research. Although we may have some good ideas about how to solve the problem, we need to stop ourselves thinking of solutions and instead try to open our mind to what our research will tell us.

This chapter will help you get started on research by taking you through the process of identifying a research issue, reflecting on it, asking questions

about it and thinking about it in different ways. These early steps in our research take time and care but need to be undertaken thoroughly to ensure that our research is successful. The different steps are laid out in sequence through the chapter for clarity (see also Table 0.3), but in reality different stages may be undertaken at the same time. For example, the reflective processes of examining our motivations and clarifying our aims may be undertaken at the same time. The exploratory processes of taking a critical approach to our observation of difference and change and of clarifying the focus and **frame** of our research issue could be undertaken at the same time, or at least inform each other.

It may feel that the process of getting started on research seems to go round and round. We reflect on our research issue, then explore it further, then return to reflect on it before continuing. This is how it should be, but there should also be movement forward, like a spiral, as we develop and refine our ideas. Keeping notes of our reflection and exploration in a research diary helps to clarify this forward movement as we can look back and see where we were before.

As we get started on our research as described in this chapter we also need to involve users in our research and consider any ethical issues. These issues are very important and warrant separate chapters (3 and 4). However, considering these issues should be integrated with the process of getting started on your own research.

Examining our motivations for research

Motivation for research in health care practice often comes from our own experience of providing clinical care, not infrequently because of our frustration with the difficulty of providing what we think would be the best possible health care. Our motivation gives us energy for research. However, our first step should be to examine our motivations carefully, as they will shape our future research. This includes considering why we want to do research on this issue at this time and in this place.

To explore the influence of time and place on our desire to undertake research, let us consider the example below.

A doctor undertaking her specialist training in dermatology. She feels some frustration at seeing so many patients concerned about skin moles that are quite harmless. She thinks there must be some way of reducing the number of people attending the clinic with skin moles that do not need specialist treatment.

Let us pause and consider this issue. Why does it interest this doctor? I have made a list of possible reasons in Box 2.1.

Box 2.1	Possible motivations for research on patient attendance at dermatology clinic with normal skin moles
<p>Reasons why a doctor working in a dermatology clinic may be interested in reducing the number of people attending the clinic with normal skin moles could include:</p> <ul style="list-style-type: none"> • The doctor is not seeing interesting patients for her training. • There is a new piece of technology that makes it much easier to know if a skin mole is normal or not. • She is concerned about the anxiety for patients in going to see a specialist. • Many patients live a long way from her clinic, making it difficult for them to get there. • Resources used in seeing patients with normal skin moles could be better spent on treatments of more serious problems. • She thinks general practitioners should be more selective about whom they refer for specialist advice. 	

There may be many other reasons for the doctor's interest in this issue and which may shape her research. It is important that the doctor herself is aware of what prompts her interest and that the reasons are clear to the audience for the research. For all of us engaged in research it is good to write down, as honestly as possible, our reasons for being interested in a particular issue. These notes are an important document for our research both at the time of writing and later on. They help us to reflect on our motivations, consider how they will influence our research and how we can open our minds to possibilities that are beyond our immediate motivations. This helps us avoid setting out to prove what we want to prove, or even setting out to prove our own worth as health professionals. Research is about finding out new knowledge, so we need to be receptive to what is new or unexpected.

If we consider the list of motivations in Box 2.1, we can see that they are all tied in with where and when the doctor is working:

- The doctor is in training as a specialist.
- A new piece of technology has been developed.
- A locality where some patients live at a distance from the clinic.
- An established health service with specialist dermatology clinics, where general practitioners act as gate-keepers to specialist services.

The research issue, that of skin moles, cannot be considered outside of a particular context. Where and when an issue becomes the focus of our interest for

research both **frames** it and shapes the issue itself. Thus the context or frame of the 21st century is very different to that of the 19th century. We have different technology for examining skin moles; treatments for skin cancers are different; the epidemiology of skin moles has changed; our health services are very different; skin moles are discussed in our media; fashions in relation to exposure to sunlight are different. For an individual with a skin mole, the experience will be shaped by time and place and the biology of the skin mole itself may well be different from a century earlier. Being clear about the particular time and place of research, how this motivates us in our research and frames and shapes the research is important, both for the researcher in developing clear thinking about what is new knowledge and for the audience of the research to understand why it was done and how the knowledge gained may be useful in other times and places. This careful consideration of the effect on our research of who we are, where, when, how and why we undertake research is known as **reflexivity**. The frame within which we undertake research is discussed further throughout this book.

Underlying our motivation for research is our experience of working in health care and the observations we make in the course of our daily work. We observe and compare. For example, we notice how we provide health care and compare it with how we would like to provide it or how we have seen it done elsewhere. Through observation and **comparison** we note what is different or what has changed over time and this gives us clues for understanding what is happening and why. Observation and comparison underpin the research described in this book, and is introduced in the next section.

Observation of difference and change underpins our research

Noticing difference and change gives us clues as to what is happening in the world and why, and underpins research. Throughout the book I will talk about ways we can observe and assess difference and change. This section briefly introduces how we notice difference and change and the ways in which this is talked about in research.

Difference is noted through comparison; for example, comparing two patients, two communities, two hospitals, or comparing what we observe with what we expect to observe. Differences may be noticed at a particular time; for example, differences between two hospitals in a particular year, or what I expect to observe now and what I actually observe now. A comparison may also be undertaken at the same point in a particular **timeframe**; for example, comparing two patients six weeks after completing a treatment, or comparing medical students' skills at the end of their medical training. Although the time as described by clock or calendar will be different for each

patient or medical student, the time relative to the identified event (end of treatment or end of medical training) is the same.

If we compare lots of different people or several different hospitals we may find they are all slightly different: there is **diversity**. For example, there is diversity in how people experience medication. If we ask 20 different people how they feel when they take a particular antibiotic we are likely to get 20 different accounts, which may include similar themes such as abdominal pain or a metallic taste in the mouth, but each account will be slightly different. If we ask 20 people to measure their blood glucose after taking a glucose drink, each measurement is likely to be slightly different. This diversity can also be called **variation**. If diversity or variation is assessed focusing on certain aspects of a person, hospital or community, these aspects are known as **variables**. In the examples above the variables are: level of pain, whether they have or do not have a metallic taste, and blood glucose level.

Variation can also refer to change over time, for example, blood glucose levels change over time, hospital activity changes over time. The comparison is between the blood glucose or hospital activity at one point in time and the blood glucose of the same patient or activity of the same hospital at a different point in time.

Difference, diversity, variation or change may suggest what is happening in the world that is not obvious. However, we need to be critical of what we mean by change. Is what we notice reflecting a change in the world we observe? This is familiar to us; for example, we ensure that equipment we use for measurement is **standardised** and checked regularly so we know any change is in what we are measuring and not due to a problem with the equipment, such as when measuring weight, blood pressure or blood glucose. This same critical approach to change is used for all observation whether or not measuring equipment is used, and considered further in the next section.

Taking a critical approach to observation of difference and change

When we notice difference, diversity, variation or change, we need to check whether what we have noticed is because the thing itself has changed or whether how we observe or understand it has changed. Making this distinction may sometimes be easy, but often it needs careful consideration. We also need to be aware that we are more likely to notice a change that impacts on us in some way and may miss other important changes.

An observed difference or change may come about because of change in the meaning of the issue we are interested in or because of a change in what is happening in the world around us.

Examples of change in meaning underlying observed change in clinical practice	Box 2.2
<p>Rectal bleeding</p> <p><i>Observation:</i> Increasing number of referrals to specialists of patients with rectal bleeding.</p> <p><i>Change in meaning:</i> For the people in the community, rectal bleeding used to be thought of as 'something everyone gets occasionally' but now means 'sign of cancer and always needs checking'.</p> <p>There may be no change in the number of people developing a disease.</p> <p>Miscarriage</p> <p><i>Observation:</i> Increasing number of women experiencing miscarriage.</p> <p><i>Change in meaning:</i> With more sophisticated pregnancy tests, more women are aware of being pregnant earlier and so more are aware of losing a pregnancy.</p> <p>The number of miscarriages in one sense may not have changed, as we are detecting miscarriages of which we were previously unaware. However, the women experience it as a miscarriage, and so in another sense the number of miscarriages has increased.</p>	

Examples of how change in the understanding of issues can lead to observing change in health care practice are given in Box 2.2. To understand the meaning of what we want to study we can read other people's research (see Chapter 6), but it may also be important to check meaning for our own particular research context. This may be undertaken through the involvement of users in our research (see Chapter 4) or through undertaking observation, interviews or focus groups (see Chapter 7).

Examples of change observed in clinical practice and possible causes	Box 2.3
<p>Hay fever</p> <p><i>Observation:</i> Increasing number of people attending general practice about hay fever.</p> <p style="text-align: right;"><i>(Continued)</i></p>	

(Continued)

Possible reasons for the observation:

- Increase in number of people developing hay fever in the community (**incidence**).
- Increase in number of people suffering from hay fever in the community (**prevalence**).
- Increase in size of population served by the general practice but same prevalence of hay fever.
- A new treatment is more expensive to buy from the pharmacy than it is if prescribed, but no change in prevalence of hay fever.
- Weather conditions increase pollen count so people who may only suffer mild symptoms most years suffer more severe symptoms and so seek help from their GP.

Leukaemia

Observation: Increase in number of children seeing a general practitioner who have a diagnosis of leukaemia.

Possible reasons for the observation:

- An increase in number of children developing leukaemia in the community (**incidence**).
- An increase in the number of children living with leukaemia in the community as treatments improve outcome (**prevalence**).
- An increase in size of the population of children served by the general practice but no increase in prevalence of leukaemia.
- Families where a child has leukaemia may get to know each other in hospital and share experiences of their GPs. This could result in families changing their GP to one they hear is very supportive.

Difference or change we observe in clinical practice may be due to change in the world around us (see Box 2.3). The research approach discussed in this book enables us as health professionals to clarify what is happening in the world, begin to explore the reasons why, and contribute to the global research effort to understand these health issues. Some reasons for an observed change suggested in Box 2.3 may need very little work to uncover; for example, an increase in the size of the population served by the general practice is something that most practice managers would know about. Other reasons for the change, such as families sharing experiences of health care, may not be obvious to health professionals and may need some investigation. Observing and investigating change may leave us with more questions; for example, finding an increase in incidence of a health problem leaves us with the question why: why do more people suffer hay fever: why is the incidence of leukaemia increasing?

We may perceive difference or change when there is none because of the way our memory tends to select certain experiences. For example, a general practitioner is unlikely to forget looking after families where a child develops leukaemia as it is not very common and can be distressing. If he recalls caring for a number of families where a child has leukaemia, he may wonder if there is an increase in incidence of leukaemia.

A particular GP can, by chance, look after several families in the same locality where a child has leukaemia even though there is no increase in incidence locally and no pattern underlying the observation. This is due to coincidence. Even when there is overall no particular pattern to events or variation, what we call **random variation**, there can appear to be patterns within a particular place or over a short period. Throughout our research we need to check whether what we are observing is such a local pattern. This sometimes can be tricky and needs careful statistical assessment.

Noticing difference, diversity, variation and change, and checking the nature of what we notice, is a vital first step in research. You will notice at the start of this section I refer to 'the thing itself', that is what we are particularly interested in, and whether it has changed (Boxes 2.2 and 2.3 discuss the examples of rectal bleeding, miscarriage, hay fever and leukaemia). As discussed in Chapter 1, the research approach considered in this book assumes it is, at least to some degree, possible to identify and define the aspects of the world that we are interested in, that they are really there, although accepting that their nature may change even as we undertake our research.

In the next section we consider the aim of our research and in the section following we learn how to explore our research issue.

Establishing the overall aim of our research

We often have some idea of what we want to achieve through undertaking research, such as improving the experience of health care for our patients or reducing the variation in health outcome among our patients. Writing down our **aim** is important as it obliges us to make clear what we hope to achieve, and forms an important document for our research, just as writing down our motivations is important. The aim of our research is often much broader than what we can achieve with one research project. Take for example the nurse described in Box 2.4. His aim, to improve the provision of information for people with renal failure, could lead to several research projects; for example, identifying the information needs of patients, analysing communication issues between health professionals and patients, and evaluating the impact of a new way of providing information. Some of us may be able to undertake a whole programme of research involving many projects, but mostly we undertake just one project contributing to a wider aim, and leave the other aspects of the research to others (see Chapter 1). Even though we may only

contribute part of the research needed to achieve our aim, we need to be clear about our aim for those that read about our research need to understand this. When I write a research proposal I often describe the overall aim for the research, then specify the aim for the particular project.

Box 2.4	Getting started on research to improve the provision of information for people living with renal failure
<p><i>Health care professional role:</i> Nurse working with people living with renal failure.</p> <p><i>Motivation:</i> Improving experience of health care for patients; increasing patient self-reliance; reducing patient reliance on health care professionals.</p> <p><i>Observation of difference or change:</i> Many patients and their families understand very little about renal failure, but when he takes time to give them information and explain about it they are more able to manage their treatments.</p> <p><i>Overall aim:</i> To improve the provision of information for people living with renal failure.</p> <p><i>Research issue:</i> Information and renal failure.</p>	

Within our aim we describe the research issue in which we are interested. For the nurse described in Box 2.4, this is information and renal failure. It may seem straightforward to then develop the **research question**. However, before that, further exploration is needed to ensure that the issue is what we really want to investigate. To do this we unpack or explode the issue, as described in the next section, to clarify the **focus** of our research and what is the frame for the research.

Clarifying the focus and frame of our research

When working as health professionals we are used to rapidly focusing in on problems in order to solve them. When getting started on research we may feel we know exactly what we want to research and want to get on with it. However, it is important to explore the issue to check that when we do our research it is focused on the issue we really want to investigate. We do this by pulling the issue apart, or exploding it. I describe it as ‘exploding the issue’ as when going through this process, it can feel as though our precious research idea has been blown apart, that it is no longer something contained and manageable but something that has exploded into unmanageable fragments. This can be uncomfortable, but research is uncomfortable as it involves constantly challenging ourselves, particularly our

habitual patterns of thinking. To undertake robust research we need to work with this discomfort, as it is all part of the process of exploration. I will take you through some examples of exploding research issues to clarify the focus and frame of the research.

We start with the example from Box 2.4. The research issue is information and renal failure. Let us consider the different perspective on this issue, first by asking questions such as who needs information, how does information spread between people and what are the various sources of information? Box 2.5 is a brainstorm on these questions; it may not cover every possible perspective, but brainstorming in this way opens our minds to the many different perspectives on the research issue.

<p>Brainstorm answers to questions that help identify the many different perspectives on information and renal failure</p>	<p>Box 2.5</p>
<p><i>Who may have a need for information about renal failure?</i></p> <ul style="list-style-type: none"> • People living with renal failure. • Families of people living with renal failure, including those living with them in their households as well as those living elsewhere. • Friends, neighbours, work colleagues and others who encounter people living with renal failure in their daily lives. • Employing organisations, trades unions and other work-related groups, particularly about implications for the work context. <p><i>How is information spread about renal failure?</i></p> <ul style="list-style-type: none"> • Stories people tell each other in families and other social contexts. • The media (newspapers, TV, radio and the Internet). • Experts such as professionals, professional groups, expert patients, advocacy groups. <p><i>What are the sources of information about renal failure?</i></p> <ul style="list-style-type: none"> • Patient experience and the experience of those that engage with them. • Health care professionals such as doctors, nurses, dieticians, psychologists and pharmacists. • Complementary and alternative therapy practitioners. • Researchers in hospitals, universities, pharmaceutical companies, health technology companies. 	

We also need to consider diversity in relation to the research issue. For example, each person living with renal failure will have a view on what they want to know and what they want other people to know. They will encounter many different

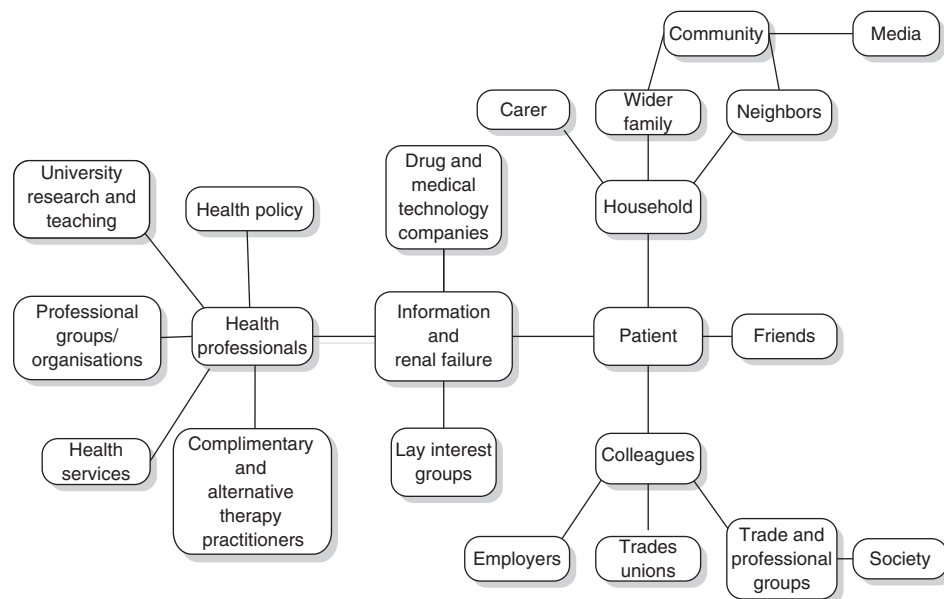


Figure 2.1 Charting the different perspectives on the research issue: information and renal failure

health professionals, each with their own expertise and opinion. Different people will have different severity of renal failure and need different treatments. Availability of treatments may vary according to the health care system.

In Box 2.4 we have identified a range of people, organisations and aspects of life which have some link with the issue of renal failure and information. Figure 2.1 charts the different perspectives we identified. The links indicate connections I made during the brainstorm, for example, thinking about work colleagues led me to note down ‘employing organisations’. Writing out such a chart can be useful in exploding the research issue.

To continue with example, after exploding the research issue, the nurse can then decide on what to focus on and what to leave for others to research. He may want to research information needs and preferences of patients. He may not want to study the media or health professionals but keep them in background. This background forms the frames for the focus of the research, just as a picture is framed by the picture frame, the wall where it is hanging, the room and the building it is in. The frame affects how we perceive and understand the focus. Rather than focusing on patients, the nurse may decide to focus on how renal failure is represented in the media, as patients have mentioned what they have read and heard and how this has led to misunderstandings. Alternatively, the researcher may focus on what doctors and nurses who are not specialists in renal failure know about the condition, in order to help design an educational package for their continuing professional development.

Deciding on his focus helps the nurse identify who would be able to advise him about his research. For example, for a focus on patient information needs and preferences, he may discuss the research with a social scientist with experience of research on understanding patient perceptions of health and health information. To study media representations of renal failure, he would seek advice from an academic in media studies and to study health professional knowledge, and to develop an educational package he would seek help from an educationalist.

<p style="text-align: center;">Getting started on research exploring the use of e-mail for follow-up consultations in general practice</p>	<p style="text-align: center;">Box 2.6</p>
<p><i>Health professional role:</i> Manager of a general medical practice.</p> <p><i>Motivation:</i> Increase patient convenience and reduce doctor time. For follow-up consultations in general practice.</p> <p><i>Observation of difference or change:</i> Reports of use of e-mail for consultations in family medicine in North America.</p> <p><i>Overall aim:</i> To improve the efficiency of general practice, particularly for those needing follow-up for chronic health conditions.</p> <p><i>Research issue:</i> Follow-up consultations and e-mail.</p>	

Another example of exploding a research issue, illustrated in Box 2.6, is about health care organisation rather than direct patient care. To stimulate her thinking around the issue, the manager can ask who may have something to say about e-mail follow up. Some answers are presented in Box 2.7 but these do not cover every possibility.

<p style="text-align: center;">Brainstorm answers to a question that helps identify the many different perspectives on e-mail follow-up</p>	<p style="text-align: center;">Box 2.7</p>
<p><i>Who may have something to say about e-mail follow up?</i></p> <p>People who would have immediate contact with e-mail follow-up:</p> <ul style="list-style-type: none"> • Doctors, nurses • Patients <p style="text-align: right;"><i>(Continued)</i></p>	

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- Those who live with the patient or care for the patient in relation to their health (family, friends, neighbours, people employed to care for them).
- Those responsible for looking after the information technology, for the practice and for the patient (if it is not the patient themselves).
- Practice receptionists and practice manager.

Organisations providing:

- information technology for health care
- education and training of health care professionals, particularly in communication skills.
- Health policy makers – resources implications, confidentiality and record keeping.

The manager may also think about wider social issues, such as the potential exclusion of those unable to use e-mail and how e-mail follow-up may change expectations of access to health care.

By exploding the issue we are able to make explicit decisions about what our research will focus on and what forms the frame or background of the research. For the same issue, the focus and frame may be different at different times or places. For example, social policy on confidentiality and the archiving of clinical records may currently all form part of the frame for this research issue. However, in the past these were the focus of research.

The practice manager may decide she wants to focus on the doctors' perspective on using e-mail to follow up patients. This may be fine, but she needs to be very clear about why she is focusing on the doctors and not patients, and why she is setting aside wider social issues such as inequalities of access. Thinking this through may lead her to conclude that her research should include the patient perspective. However, she may then find there is research in the literature on this, so she can remain focused on the doctors framed by the patient perspective.

Through this process of exploding our research issue, blowing it apart to see the different perspectives on the issue and how it relates to other aspects of life, we are able to clarify the focus of our research and identify what frames our research. Now we are clear what it is we are really interested in, we can start to formulate our research question. However, getting started on our research involves reviewing what we are doing several times each in a slightly different way, so we will return to considering the focus of our research in later chapters of this book.

Developing the research aim, questions and objectives

Developing the research question is often considered the first task in undertaking research. It certainly comes in the early stages of research but, as indicated in this chapter and Chapters 3, 4 and 5, there is a great deal of thinking, exploring issues, reading and consulting with others that takes place first. Before developing our research question we need to be clear about the overall aim for our research and the particular aspect of our research issue that we want to research (described above). We can then clarify the aim for our research project and the research question.

From our experience of working as health professionals, we may find it easier to clarify our project aim before turning it into a question as we are used to planning ahead for a specific purpose, for example, making a treatment plan. The nurse working with people living with renal failure (introduced in Box 2.4) has the aim of improving the provision of information for his patients. Through the process of exploding the research issue described above, he decided to focus on the patient perspective (see Box 2.8). His aim is to understand their information needs and preferences.

Developing the research aim for the issue of information and renal failure

Box 2.8

Health care professional role: Nurse working with people living with renal failure.

Motivation: Improving experience of health care for patients; increasing patient self-reliance; reducing patient reliance on health care professionals.

Observation of difference or change: Many patients and their families understand very little about renal failure, but when he takes time to give them information and explain about it they are more able to manage their treatments.

Overall aim: To improve the provision of information for people living with renal failure.

Research issue: Information and renal failure.



Research focus: Patients living with renal failure.

Research aim: To understand the information needs and preferences of patients living with renal failure.

Moving from an aim to questions requires adding question words: what, where, when, how, why, who. It may involve more than one question. A useful exercise is to consider using all six question words and phase as many questions as possible even if they seem to be similar. Examples are given in Box 2.9. If we imagine having a conversation about information with a patient living with renal failure, the conversation may well range over many or all of these questions. However, we need to be clear which questions are priority for the research project and which, although interesting, are not currently our priority. This is important, as we need to ensure that we collect all the data to answer our priority questions and not get distracted by other questions. The data we collect may well give us hints about the answers to other questions but not be sufficient to provide a robust answer. Our decision about which questions have priority influences our whole project, from data collection through to analysis and dissemination of our results. Taking time to explore all the questions that could be asked and considering our priorities is of great benefit later in our research.

Box 2.9	Potential research questions for the research aim of understanding the information needs and preferences of people living with renal failure
<p>What are the information needs of people with renal failure? What effect does receiving information have on the patient? What information do people living with renal failure pass on to their families/carers? What influences peoples' information needs and preferences? Where, when, how is information already available? Where, when and how would people prefer information to be conveyed? When is information needed (e.g. time after diagnosis, stage of illness, timing in relation to treatment)? How much information is needed and how fast? How do they use information to manage their illness? How do information needs and preferences change over time? Why is the information needed? Why do patients use and/or trust some information sources and not others? Who conveys information and to whom?</p>	

Let us continue by considering the example of the practice manager introduced in Box 2.6, who has decided to focus her research on the doctors' perspective on e-mail consultations. Her aim is to understand the potential for e-mail follow-up consultations from the perspective of doctors. A list of potential questions for her research is presented in Box 2.10.

<p style="text-align: center;">Potential research questions for the research aim of understanding the potential for e-mail follow-up consultations from the perspective of doctors</p>	<p style="text-align: center;">Box 2.10</p>
<p>What questions do doctors ask in follow-up consultations? What questions do patients ask in follow-up consultations? What is the standard of skill in using e-mail among the doctors? What are the doctors' attitudes to e-mail consultation? Where would doctors be when undertaking the e-mail consultations, and would the technology available work in different locations? When would e-mail consultations be scheduled for the doctor? How many appointments in a week are for following-up patients? How many of these appointments require a clinical examination? Why are some doctors keen on e-mail consultation and not others? Who do doctors consider suitable for e-mail follow up and why?</p>	

Reviewing her potential research questions, the practice manager may decide that she needs to start with the ones that will provide her with a description of what happens now in follow-up consultations so she can then consider how much of this activity could take place by e-mail (see research questions in Box 2.11). Although interested in doctors' attitudes, opinions and skills, she is putting this to one side for now and focusing on describing what they do in follow up consultations, what actually happens. We explore further how to decide on which research questions to give priority in Chapter 5.

When we write a plan for our research, it is normal practice to write a set of objectives. This is straightforward if we have clear research questions as they directly reflect the questions as shown in Box 2.11.

<p style="text-align: center;">Developing the research aim, questions and objectives for research exploring the use of e-mail for follow-up consultations in general practice</p>	<p style="text-align: center;">Box 2.11</p>
<p><i>Health professional role:</i> Manager of a general medical practice.</p> <p><i>Motivation:</i> For follow-up consultations in general practice, increase patient convenience and reduce doctor time.</p> <p style="text-align: right;"><i>(Continued)</i></p>	

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Observation of difference or change: Reports of use of e-mail for consultations in family medicine in North America.

Overall aim: To improve the efficiency of general practice, particularly for those needing follow-up for chronic health conditions.

Research issue: Follow-up consultations and e-mail.



Research focus: Doctor's perspective on e-mail for follow-up consultations.

Research aim: To understand the potential for e-mail follow-up consultations from the doctor's perspective.

Research questions

How many appointments in a week are for following up patients?

How many of these appointments require a clinical examination?

What questions do doctors ask in follow-up consultations?

What questions do patients ask in follow-up consultations?

Research objectives:

- To estimate the number of follow-up appointments per week.
- To estimate the number of follow-up appointments per week when a clinical examination is performed.
- To describe the type of questions asked by doctors in follow-up consultations.
- To describe the type of questions asked by patients in follow-up consultations.

Development of research: an iterative process

Most of us need many attempts at deciding on our priorities and refining our research questions before they are clear. This is quite normal and it is good practice to revisit each stage of the process of developing research questions, including going back to examine our motivations and assumptions, re-examining the different perspectives on an issue and the many different questions that can be asked. This process of moving forward then going back to an earlier step to move forward again is known as *iteratiar*. The research questions continue to be refined as we continue the preparation for our research by reading research literature and considering the range of research approaches we could use. These issues are discussed in Chapter 5 on preparation for designing research. The next two chapters consider the ethics of your research (Chapter 3) and involving users in your research (Chapter 4) as these are important for getting started on your research and are also revisited many times during the iterative process of developing research.

Further reading



Read examples of research which relate to your area of interest and for each example note and reflect on the following:

- Health professional role(s) of research team members
- Motivation for research
- Observation of difference or change that underpins the research
- Overall aim to which the research project contributes
- Research issue
- Research focus
- Research aim
- Research questions
- Research objectives