Person-centred intelligence: Selecting a methodology for a new data collection

The Strategy Unit and Ipsos MORI

About this guide

- This guide forms part of the Strategy Unit and Ipsos MORI's series about person-centred intelligence.
- It is aimed at those who have developed their thinking about what they want to measure and why, and have identified that existing data do not provide the information required.
- It outlines the different approaches to collecting data, their pros and cons, along with a set of practical considerations when selecting a methodology.
- Having worked through this guide, readers who are considering implementing a new data collection should have an idea of the different approaches that are available. They should be able to weigh up the advantages and disadvantages of each, depending on what they are looking to achieve.

Contents

Considerations when selecting an approach

Considerations when selecting an approach (Part I)

When selecting an approach for a new data collection, there are two main considerations:

How the data are collected (i.e. the mode and whether feedback is collected at the service, or once the patient/carer has returned home)

Whose responsibility it is to manage the data collection (in-house or outsourced)

These considerations are inter-connected – one cannot be decided upon without consideration of the other. When making these decisions, consider the following:

1. What contact details are available for the target population?
The methodology will partly be determined by the contact details held; both in terms of the type of contact details, their comprehensiveness and their accuracy. For example, you may not currently hold email addresses for all patients, or you may not hold any contact details for carers. It is also important to ensure that contact details are up-to-date.

Considerations when selecting an approach (Part II)

2. What resources are available to support the delivery of the data collection?
Different approaches to collecting feedback will demand differences in staff time and financial resource. For example, a methodology administered by staff in-house will be time-intensive, so it is important to consider whether this is a realistic expectation. Where staff time is limited, it may be more practical for the survey to be centrally coordinated (which may involve outsourcing), despite it being costlier. Achieving the right balance between these types of resource is crucial to ensuring a sustainable approach.

3. How quickly do you need to receive the data?
Some approaches require a longer data collection period and/or more time for processing the data, which won't deliver real-time data.

4. Should all eligible people be asked for feedback?
A data collection that is centrally organised gives a greater likelihood that eligible people are asked for feedback. In contrast, one that relies on staff members is at risk of some eligible people not being asked (for a range of reasons, including how busy staff are in the collection setting, lack of buy-in, forgetting, it being deemed not appropriate for the patient/carer/staff member and so on).

Considerations when selecting an approach (Part III)

5. Which mode is most appropriate for the target population?
The methodology used to collect feedback data should also take into account the requirements of those who will be providing feedback.

For example, older populations are less likely to have access to the internet, or to be comfortable with its use. It may not therefore be appropriate to use an online-only methodology for collecting feedback from this population. In contrast, younger populations such as recent mothers, are more likely to appreciate the convenience that an online survey offers compared with a postal survey.

6. When is it appropriate to ask participants for feedback?
For patients and carers, the timing must consider vulnerability and the nature of the experience they have just had. For example, it is often not appropriate to ask for feedback from a woman who has very recently given birth.

Similarly, for people with mental health conditions, it is often not appropriate to collect data early in their treatment, depending on what is being asked and how.

For staff as participants, the collection needs to be as easy and quick as possible for them to fit it around their roles.

Considerations when selecting an approach (Part IV)

7. When is it most useful to ask participants for feedback? Consider the following:

- ***Bias towards positive results*** – if patients or carers are asked for feedback while using a service (e.g. while on a ward or in an appointment with a clinician) there is evidence that responses are more positive than if a patient or carer has returned home and had a chance to reflect. This is due to a combination of 'gratitude bias' and concern that negative responses may affect their care.

- ***Richness of the data*** – when patients or carers have returned home and had time to reflect on their experiences, the data generated are likely to be richer, more reflective and more detailed.

- ***Covering the full experience*** – if patients or carers are asked about their experiences or outcomes while they are using a service, some elements of their experiences will be missed. For example, inpatients cannot comment on the discharge process and patients and carers may not know the outcome of their care for some time after it has finished. For an inpatient remaining at a service for a long time, depending on the purpose of collecting data, it is worth considering gathering data during their stay and not just at the end.

Considerations when selecting an approach (Part V)

8. What quality of feedback data is required?
An approach where staff members can provide guidance means that patients and carers are more likely to complete the data collection accurately, in comparison to an approach whereby participants receive a feedback request at their homes without a staff members being available to answer any questions.

In addition, paper questionnaires are more prone to error than electronic versions (e.g. online, tablet or kiosk) which can include some basic programming to minimise error (e.g. only be able to select one box where required, or only showing questions that are relevant to that participant).

Potential data collection approaches for patients and carers

Collecting data at the service

There are two broad methodologies suitable for patients and carers:

Option 1: Completion while still at the service

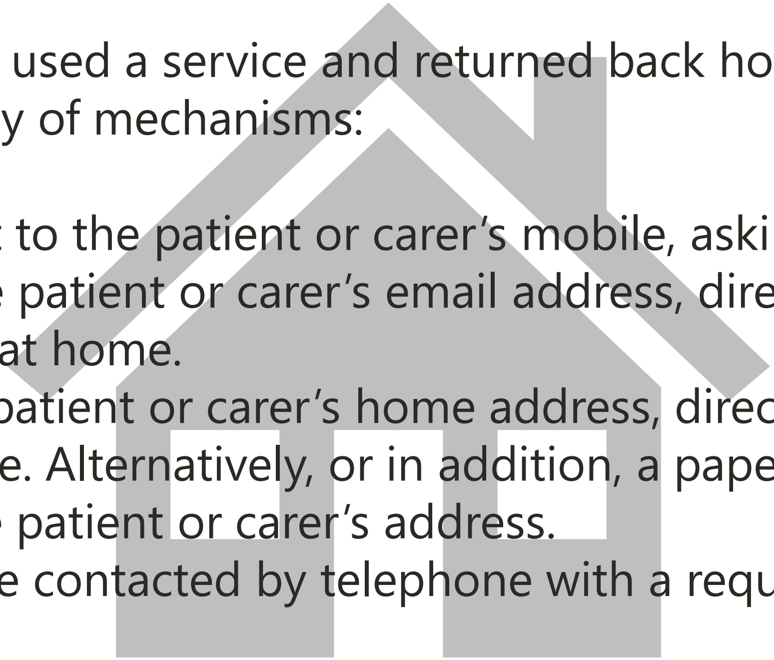
Before patients or carers leave the service, they could be asked to complete a data collection.

This could be done by:

- A staff member at the service asking patients or carers to answer the measures and recording the responses.
- A staff member at the service giving the patient or carer the measures on a paper questionnaire.
- A staff member at the service asking the patient or carer to complete the measures on a tablet or kiosk.

Collecting data once participants are at home

Option 2: For patients and carers, completion after they have used a service and returned home



Once patients or carers have used a service and returned back home, they can be asked to provide feedback via a variety of mechanisms:

- A text message sent to the patient or carer's mobile, asking them reply with feedback.
- An email sent to the patient or carer's email address, directing them to an online survey to complete at home.
- A letter sent to the patient or carer's home address, directing them to an online survey to complete at home. Alternatively, or in addition, a paper copy of the questionnaire could be sent to the patient or carer's address.
- Patients or carers are contacted by telephone with a request to complete the measures via the phone.

In cases where it is not appropriate to ask or feasible to collect feedback from patients or carers, an alternative option is to collect proxy data from staff.

Summary of approaches for collecting data from patients and carers

The following table outlines the extent to which each approach fulfils the considerations outlined at the beginning of this guide:

- A **green** rating indicates that the approach is likely to meet **all** of the requirements relating to that consideration.
- An **orange** rating indicates that the approach is likely to meet **most, but not all**, requirements relating to that consideration.
- A **red** rating implies that the methodology is **limited** in its ability to fulfil the requirements relating to that consideration.

The summary table is followed by practical examples of where, given these considerations, each methodology might be applied.

Further detail on how each approach does and does not fulfil each requirement is provided at the end of this guide.

Summary of approaches for collecting data from patients and carers

Requirements	(1) Contact details	(2) Resources (financial/ staff time)	(3) Quick data receipt	(4) Consistency of approaching patients	(5)Appropriate mode for population	(6)Appropriate time for population	(7) Useful time for data collection	(8) Quality of data
Completion while still at the service								
Recorded on the system	🟩	🟨	🟩	🟨	🟩	🟨	🟥	🟩
Paper questionnaire	🟩	🟨	🟨	🟨	🟩	🟨	🟥	🟩
Tablet or kiosk	🟩	🟩	🟩	🟨	🟨	🟨	🟥	🟩
Completion after they have used a service and returned home								
Text message	🟨	🟨	🟩	🟩	🟨	🟨	🟨	🟨
Email	🟨	🟨	🟨	🟩	🟨	🟨	🟩	🟨
Letter linking to online survey/paper questionnaire	🟨	🟨	🟥	🟩	🟨	🟨	🟩	🟥
Phone	🟨	🟥	🟨	🟨	🟩	🟨	🟨	🟩

Patients and Carers – Worked Example #1

A commissioner wants to implement outcomes-based commissioning for inpatient services, with one element being based on good patient experience and a requirement for each ward to reach a minimum standard. To implement this, it requires the trust to collect data from patients.

(1) Contact details available

The patient contact details that inpatient services hold vary across the Trust. All services hold postal addresses and telephone numbers (in some cases mobile) while only some hold email address.

(2) Resources (financial and/or staff time)

Some budget available, but little administrative staff time within services.

(3) Quick data receipts

The commissioner requires the data to be collected and provided by services regularly, but does not require it in real-time or near real-time.

(4) Consistency of approaching patients

Given that the data will be used for payment, it is important that patients are approached systematically and consistently across inpatient services.

Patients and Carers – Worked Example #1

(5) Appropriate mode for population

A high proportion of inpatients are older and therefore less likely to be comfortable using technology such as the internet and smart phones.

(6) Appropriate time for population

Given the likely severity of some inpatients’ conditions (which are likely to include those with mental health issues), it is most appropriate to approach them for feedback once they have been discharged from the inpatient service.

(7) Useful time for data collection

One of the indicators the commissioner is interested in is inpatients' experiences of the discharge process. It is therefore necessary to conduct data collection after patients have used the service and returned home.

(8) Quality of data

Given that the data will be used for payment, it is important that patients are approached systematically and consistently across inpatient services.

Patients and Carers – Worked Example #1

Suggested Approach…

As the data are going to be used for payment, it is important that the data collection approach is consistent across the trust.

Given this, and the available budget, **a centrally coordinated (outsourced) approach to data collection is likely to be most appropriate.**

All services hold patients' postal addresses, and it is important that patients are contacted once they're home, so it is most appropriate and feasible to contact patients by post.

Given the high proportion of inpatients who are older, provision of a paper questionnaire is appropriate. However, a link to an online version of the survey could also be provided for those who prefer its convenience.

The downside of this approach is that data collected in-home, via a paper questionnaire is likely to contain a relatively high level of error. The level of error across services would need to be monitored, to ensure that it was not disadvantaging some more than others.

Patients and Carers – Worked Example #2

When an ICS looks at data from a range of different sources, both anecdotal and more formal, it shows that carers of frail older people are not feeling very supported.

There is a view that this might impact on patient outcomes. A community health trust decides to pilot a new approach to supporting carers in one of its services and wishes to measure its impact.

(1) Contact details available

The service holds no systematic data about which older patients have a carer, or contact details for carers.

(2) Resources (financial and/or staff time)

There is no budget available, however the reception and administrative staff within the service are willing and able to spend some time administering the survey and analysing the data.

(3) Quick data receipts

The ICS would like to measure the experiences of carers before and after the new approach is implemented, and have access to the data quickly to ensure that the new approach is not having adverse effects.

Patients and Carers – Worked Example #2

(4) Consistency of approaching patients

It will be necessary to collect data from as many carers as possible in the fieldwork periods before and after the new approach is implemented.

(5) Appropriate mode for population

A high proportion of carers will be older, and therefore they may need support using technology such as tablets or kiosks to complete surveys.

(6) Appropriate time for population

As the data are being collected from the carer, rather than the patient themselves, it will generally be appropriate to ask for feedback while they are still at the service.

(7) Useful time for data collection

There are benefits of collecting data once carers have returned home, and had a chance to reflect on their experiences of using the service.

(8) Quality of data

High quality data is more likely to show the impact of the new approach (if any), so it is important that the data collected is accurate.

Patients and Carers – Worked Example #2

Suggested Approach…

Given that the survey is only being conducted within one service, and that staff are able to support its administration, the optimal approach would be **for a survey to be coordinated in-house by the service.**

Staff would be responsible for identifying carers of older patients who attend the service, and inviting them to complete the survey. To ensure consistency, a definition of a 'carer' will be agreed with the ICS and communicated to staff administering the survey.

The survey could be completed by carers while at the service, using one of the service’s tablets. Staff would be available to support any carers who need assistance, ensuring a high quality of data.

The drawbacks of this approach are that carers would not have had a chance to reflect on their experiences before completing the survey. Given that they are completing the survey while still at the service, and in some cases with support from staff, there is a chance of bias towards positive results. However, this bias should be consistent before and after the new approach is introduced still allowing valid comparisons, and the data can be interpreted knowing that this is likely to be the case.

Potential data collection approaches for staff

Approaches for collecting data from staff

Data can be collected from staff during working hours via one of the following:

1. Completion directly onto the system
2. Completion via an online survey
3. Completion via a paper form

The following table outlines the extent to which each approach fulfils the considerations outlined at the beginning of this guide:

- A **green** rating indicates that the approach is likely to meet **all** of the requirements relating to that consideration.
- An **orange** rating indicates that the approach is likely to meet **most, but not all**, requirements relating to that consideration.
- A **red** rating implies that the methodology is **limited** in its ability to fulfil the requirements relating to that consideration.

The summary table is followed by practical examples of where, given these considerations, each methodology might be applied.

Further detail on how each approach does and does not fulfil each requirement is provided at the end of the guide.

Summary of approaches for collecting data from staff

Requirements	(1) Contact details	(2) Resources (financial/ staff time)	(3) Quick data receipt	(4) Consistency of approaching patients	(5)Appropriate mode for population	(6)Appropriate time for population	(7) Useful time for data collection	(8) Quality of data
Recorded on the system	🟫	🟨	🟩	🟨	🟩	🟩	🟫	🟩
Online survey	🟨	🟨	🟨	🟩	🟩	🟨	🟫	🟩
Paper form	🟩	🟥	🟥	🟩	🟩	🟨	🟫	🟨

Staff – Worked Example

An ICS is embarking on a system-wide transformation that ultimately aims to improve patient outcomes.

It will also have an impact of the day-to-day work of staff, and so the ICS wants to monitor job satisfaction as the transformation is rolled out and the extent to which it enables staff to provide better care for patients.

(1) Contact details available

Organisations within the ICS hold work email addresses for all staff. Due to GDPR, it is not possible for them to pass these email addresses to the ICS team.

(2) Resources (financial and/or staff time)

There is no budget available, but there is staff time within the ICS and its constituent organisations available to administer the survey and analyse the data.

(3) Quick data receipts

The ICS would like to monitor staff satisfaction in near real-time so that it can respond to any issues as they emerge.

Staff – Worked Example

(4) Consistency of approaching patients

It is important that all staff are approached for feedback, to ensure that they all have the opportunity to share their experiences and views.

(5) Appropriate mode for population

Staff are all confident using email and the internet and would prefer a mode of completion that is as convenient as possible.

(6) Appropriate time for population

It is appropriate to contact staff while at work, using their work email addresses.

(7) Useful time for data collection

N/A

(8) Quality of data

It is important that the data is of high quality, as it will need to be analysed quickly, with little time for data cleaning.

Staff – Worked Example

Suggested Approach…

The ICS will provide a URL to an online survey to a lead within each organisation within the ICS. The ICS will also provide email text explaining the purpose of the survey.

Each organisation will then send their staff the email containing the URL to the online survey. Each service would be responsible for sending reminders to staff to complete the survey.

The benefits of this approach are that the online survey ensures that all staff are invited to complete the survey, that the resultant data is of high quality, and available quickly.

However, it will require persistent communication – to assure staff of its importance and persuade them to complete it.

Detailed information about the approaches

Information about the approaches

The following tables outline the pros and cons of each of these approaches, mapped against the considerations described at the beginning of this section.

Option 1: For patients and carers, completion while still at the service

Option 2: Staff members asking patients or carers to answer the measures and record the responses

Option 3: For staff, completion during working hours

Option 1 for patients/ carers: Completion at the service – on the system via staff

Option 1a: The staff member asks patients or carers to answer the measures and record the responses on the system	
Availability of contact details	Not applicable.
Availability of resources	Very time intensive from a staff time point of view, but low cost – assuming system amendment is straightforward and not costly.
Time to receive data	Very quick, possibly real-time or near real-time data.
Likelihood of being invited to take part	Variable, depends on staff.
Likelihood of responding	Very likely.
Considering the needs of the participant	Depends on the patient/carer population and may not be appropriate where patients/carers are more vulnerable; though has the advantage that staff can be given freedom to judge where this is not appropriate.
Bias towards positive results	Bias very likely as patient/carer provides responses directly to staff members.
Richness of data	Less good, as patients/carers have not had a chance to reflect on their experience.
Covering a full experience	Cannot include discharge (if relevant) and recovery.
Quality of data	Very good.

Option 1 for patients/ carers: Completion at the service – on a paper questionnaire

Option 1b: The staff member gives the patient or carer a paper questionnaire on which to capture their responses before they leave	
Availability of contact details	Not applicable.
Availability of resources	Fairly time intensive for staff, albeit less so than entering directly onto a system. Fairly low cost to print and then process completed questionnaires.
Time to receive data	Fairly quick, as completed at the service, but will take a little longer to process returns.
Likelihood of being invited to take part	Variable, depends on staff.
Likelihood of responding	Fairly likely, depending on how paper questionnaires are handed back (i.e. at exit, or to the staff member having been completed while they wait).
Considering the needs of the participant	Depends on the patient/carer population and may not be appropriate where patients/carers are more vulnerable; though has the advantage that staff can be given freedom to judge where this is not appropriate.
Bias towards positive results	Bias likely, as completed at the point of service and potentially with staff assistance.
Richness of data	Less good, as patients/carers have not had a chance to reflect on their experience.
Covering a full experience	Cannot include discharge (if relevant) and recovery.
Quality of data	Good – no electronic checks, but staff members there to provide guidance.

Option 1 for patients/ carers: Completion at the service – on a tablet or kiosk

Option 1c: The staff member asking the patient or carer to provide responses on a tablet or kiosk before they leave	
Availability of contact details	Not applicable.
Availability of resources	Fairly time intensive for staff, albeit less so than entering directly onto a system. Variable cost, depends on whether the organisation already owns tablets or kiosks and the costs of programming them, may require outsourcing some functions.
Time to receive data	Very quick.
Likelihood of being invited to take part	Variable, depends on staff.
Likelihood of responding	Fairly likely, depending on how they are asked to complete it (i.e. at exit or while they wait) and level of comfort completing electronically.
Considering the needs of the participant	Depends on the patient/carer population and may not be appropriate where patients/carers are more vulnerable; though has the advantage that staff can be given freedom to judge where this is not appropriate; also less appropriate where patient/carer population are not comfortable with tablets or kiosks.
Bias towards positive results	Bias likely, as completed at the point of service and potentially with staff assistance.
Richness of data	Less good, as patients/carers have not had a chance to reflect on their experience.
Covering a full experience	Cannot include discharge (if relevant) and recovery.
Quality of data	Very good – electronic checks feasible and staff members there to provide guidance.

Option 2 for patients/ carers: Completion once at home – via text message

Option 2a: A text message is sent to the patient or carer's mobile, asking them reply with feedback	
Availability of contact details	Variable, depends on how many patients or carers mobile phone numbers are held.
Availability of resources	Variable, depending on the level of automation that is in place. If fully automated (i.e. text messages are automatically sent to patients a set time period after each appointment) then the burden on staff time will be low. However, to achieve this, it is likely to be necessary to outsource the process, which will be costlier.
Time to receive data	Patients are likely to respond to the text message quickly or not at all. Once patient/carer has responded, the data would be available quickly.
Likelihood of being invited to take part	High (where mobile number is available).
Likelihood of responding	Potentially fairly low.
Considering the needs of the participant	Enables patients/carers to complete at a time and location that is convenient for them. However, it is not feasible where the patient/carer does not have a mobile phone and is less appropriate where the patient/carer population is not comfortable sending text messages.
Bias towards positive results	Less likely to be biased, as point of completion is removed from the point of service.
Richness of data	Less good, as only limited data can be collected by text. However, patients/carers will have had to opportunity to reflect on their experience.
Covering a full experience	Full experience, including discharge and recovery, can be covered.
Quality of data	Likely to be mixed – although electronic checks are feasible, staff are not able to provide individuals with guidance.

Option 2 for patients/ carers: Completion once at home – via online survey

Option 2b: An email is sent to the patient or carer's email address, directing them to an online survey to complete at home	
Availability of contact details	Variable, depends on how many patients or carers email addresses are held.
Availability of resources	Variable, depending on the level of automation in place. If fully automated (i.e. email invitations are automatically sent to patients a set time period after each appointment) then the burden on staff time will be low. However, to achieve this, it is may be necessary to outsource the process which will be costlier.
Time to receive data	Necessary to allow a sufficient time-period for patients to complete the survey. Once completed however, the data would be available quickly.
Likelihood of being invited to take part	High (where email addresses are available).
Likelihood of responding	Fairly low.
Considering the needs of the participant	Enables patients/carers to complete measures at a time and location that is convenient for them. However, it is not feasible where the patient/carer does not have an email address and is less appropriate where the patient/carer population is not comfortable using email or the internet.
Bias towards positive results	Less likely to be biased, as point of completion is removed from the point of service.
Richness of data	Good, as detailed data can be collected and patients/carers will have had to opportunity to reflect on their experience before completing measures.
Covering a full experience	Full experience, including discharge and recovery, can be covered.
Quality of data	Likely to be mixed – although electronic checks are feasible, staff are not able to provide individuals with guidance.

Option 2 for patients/ carers: Completion once at home – via letter or paper form

Option 2c: A letter is sent to the patient or carer's home address, directing them to an online survey to complete at home. Alternatively, or in addition, a paper copy of the questionnaire could be sent to the patient or carer's address	
Availability of contact details	Variable – very good for patients as addresses likely to be held on the system. However, addresses may not be held for carers.
Availability of resources	Time intensive if staff are responsible for printing and mailing and processing questionnaires (if provided). Less so if these processes are outsourced. The cost of printing and postage (and return postage if a paper questionnaire is provided) makes this more costly than email or text options, but it is far less costly than telephone completion.
Time to receive data	Fairly slow. There is a lead-in time for printing and postage. In addition, it is necessary to allow a sufficient time-period for patients to complete the survey. Once completed, online data would be available quickly whereas data collected by paper questionnaires (if provided) will take time to process.
Likelihood of being invited to take part	High (where home address is available).
Likelihood of responding	Fairly low if only online survey is provided. Higher if paper questionnaire is also provided.
Considering the needs of the participant	Enables patients/carers to complete measures at a time and location that is convenient for them. Provision of an online questionnaire is less appropriate where the patient/carer population is not comfortable using the internet. This can be overcome by the additional provision of a paper questionnaire.
Bias towards positive results	Less likely to be biased as point of completion is removed from the point of service.
Richness of data	Good, as detailed data can be collected and patients/carers will have had to opportunity to reflect on their experience before completing.
Covering a full experience	Full experience, including discharge and recovery, can be covered.
Quality of data	Likely to be mixed – although electronic checks are feasible for an online survey, checks are not possible on paper questionnaires and staff are not able to provide individuals with guidance.

Option 3 for staff: Completion directly onto the system

Option 3a: Completion directly onto the system	
Availability of contact details	Not applicable.
Availability of resources	Variable – depends on staff resource and cost to set up the system. However, direct completion may mean less resource to process the data.
Time to receive data	Very quick, possibly real-time or near real-time data.
Likelihood of being invited to take part	Variable – depends on how the system is set up.
Likelihood of responding	Variable – depends on how the system is set up, but probably more likely to complete than a survey-based approach if prompts given and incorporated into system.
Considering the needs of the participant	If it can be incorporated into current system and process, minimal additional effort is required.
Bias towards positive results	Not applicable for staff.
Richness of data	Not applicable for staff.
Covering a full experience	Not applicable for staff.
Quality of data	Very good.

Option 3 for staff: Completion via an online survey

Option 3b: Completion via an online survey	
Availability of contact details	Variable, depends on how many email addresses the organisation holds and how accurate they are.
Availability of resources	Variable. Some limited staff resource required to compile email addresses and potentially prepare the online survey. Cost depends on whether outsourcing required.
Time to receive data	Medium. Will need to leave staff some time to complete, but processing is quick.
Likelihood of being invited to take part	High (where email addresses are available).
Likelihood of responding	Variable – depends on how quick and easy the survey is to complete and level of staff buy-in.
Considering the needs of the participant	If time can be made within role, impact on staff will be limited.
Bias towards positive results	Not applicable for staff.
Richness of data	Not applicable for staff.
Covering a full experience	Not applicable for staff.
Quality of data	Very good.

Option 3 for staff: Completion via a paper-based form

Option 3c: Completion via a paper form	
Availability of contact details	Excellent.
Availability of resources	Fairly resource and cost intensive. Requirement to distribute paper forms and then resource required to process them. Cost for printing forms.
Time to receive data	Fairly slow. There is a lead-in time for printing and postage. In addition, it is necessary to allow a sufficient time-period for staff to complete the survey. Once completed, it will take time to process.
Likelihood of being invited to take part	High (assuming good distribution within organisation).
Likelihood of responding	Variable – depends on how quick and easy the survey is to complete and level of staff buy-in.
Considering the needs of the participant	If time can be made within role, impact on staff will be limited.
Bias towards positive results	Not applicable for staff.
Richness of data	Not applicable for staff.
Covering a full experience	Not applicable for staff.
Quality of data	Fairly good, but no electronic checks .

Ready to move on?

Selecting an approach to data collection:

You should now be able to weigh up the advantages and disadvantages of different approaches, to decide:

- ☑ **How to collect the data** (i.e. whether collection via staff or administered by paper, online, telephone, SMS or in another way).
- ☑ **For patients and carers, when to collect the data** (i.e. whether they are collected while patients or carers are at the service or once that have returned home).
- ☑ **Whose responsibility it is to manage the data collection** (in-house or outsourced).

These decisions are linked to both the purpose of the data collection, and the target population that is being surveyed.

These factors are important to consider when weighting up the various pros and cons of the different options.