Health Innovation South West

Evaluation & Learning Health Innovation South West

MySunrise Pre-assessment Tools for streamlining Systemic Anti-Cancer Therapy (SACT): Learnings from the South West (Torbay spotlight)

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1 Summary

1.1 Context

Every one to two minutes, someone in the UK is diagnosed with cancer, and new cases are projected to increase from 385,000 per year (2017-2019) to around 506,000 per year by 2038-2040 (1). Around 2 in 3 cancer patients require Systemic Anti-Cancer Therapy (SACT), and demand for SACT is increasing by ~6-8% per year due to increases in cancer diagnoses and new treatment options available (2). Depending on the service, there is often no increase in support or funding to meet increased patient demands and new treatment offerings (2). This puts additional pressure each year on the workforce.

Pre-assessments, or new patient talks, are an important part of SACT. They help to ensure the patient is ready for their treatment. In-person new patient talks take over an hour of nursing time per patient, are inefficient (due to repeated generic content and the need to have patients visiting the hospital), and the one-off session format means that information is easily forgotten by patients and their families when treatment starts. This is time-consuming and stressful for both patients and clinicians. In addition, completing new patient talks at in-person clinics means patients spend time and money traveling and parking, waiting in waiting rooms and risking exposure to hospital-borne illnesses.

National NHS priorities (2024) include moving care out of hospitals where possible to reduce pressures and making better use of technology (3). The Royal College of Radiologists has been vocal about the SACT capacity crisis and in 2024 recommended to the Health Minister to increase the use of technology, citing online clinics and patient information videos as examples (4).

1.2 MySunrise

The MySunrise pre-assessment tools digitise the SACT pre-assessment process and provide patients with standardised pre-assessment information, videos, contact information and checklists that they can consume in their own time, come back to when they want, and involve family members with. The content is locally configured and designed in collaboration with the hospital staff. New patient talks with nurses can then take a much shorter time for clinicians, as patients attend the virtual session more informed and generic information does not need to be repeated.

The goals for the MySunrise pre-assessment tools are to reduce the time required for staff per patient compared to in-person pre-assessments, reduce footfall in hospitals, reallocate clinical capacity, reduce pressure on services, and improve patient information, empowerment, experience and treatment outcomes.

1.3 This report

This report, produced by Health Innovation South West, provides an early assessment of the implementation of the MySunrise pre-assessment tools to understand what has worked well, for whom, and where the challenges are. The focus is on Torbay cancer services (part of Torbay and South Devon NHS Foundation Trust), drawing from insights across the South West where relevant.

With a comprehensive data collection plan provided in this report for robust future evaluation, this early assessment draws largely from a range of pre-existing evidence such as pilot results and pre-

collected patient surveys. In some cases this includes patient sentiments from other services and from before the pre-assessment tools were rolled out. Such details are specified where applicable.

Learnings have been consolidated to support the roll-out and evaluation of MySunrise at Torbay and other services.

1.4 Emerging impact areas

Initial evidence suggests that MySunrise pre-assessment tools are supporting outcomes across three levels: patients and their families; staff and services; and the wider system.

These three levels are not separate - the benefits realised on one level can be mutually beneficial on another.

For example, patients attending their new patient talk more prepared than they would be without having used MySunrise is of benefit to patients (who feel more confident and reassured) and staff (who get through appointments quicker and can conduct more in a shorter time).

Providing a mutual benefit to both staff and patients is a key reason for uptake of MySunrise. When patients see the benefits, they are more likely to choose it, and when staff can see the benefits to both them and their patients, they are more likely to promote it.

For patients and their families:

- **Flexible access to information**. Information delivered at in-person appointments is easily lost and forgotten, but with MySunrise, patients and their families can revisit key information at their convenience.
- **Consistency and quality of information.** With MySunrise, people can see all of the information relevant to their particular cancer centre, cancer team, cancer type and planned treatment. The same information is available to all people accessing the app (supporting consistency of information), and has been co-created and validated by clinical staff in each pathway or site.
- **Family member involvement.** Family members can download and explore the app themselves, with 18% of MySunrise users identifying as a family member (17%) or friend (1%).
- **Reduced travel and costs.** The first seven months in Torbay (Nov 2023 to May 2024) saw 138 patients opt for the virtual pre-assessment, saving an estimated 92 hours of travel time (40 minutes per patient) and an estimated 2,760 miles (20 miles per patient) and the associated fuel and parking costs.
- **Overall patient satisfaction and experience.** Patients have reported improved ease of contacting NHS cancer teams when needed (due to phone numbers and advice provided in the app) compared to before they were using the app, and confidence or reassurance before starting treatment.

For staff and services:

- **Releasing clinical capacity**. With shorter, more efficient new patient talks, roughly an hour of clinical time per patient is saved (around 138 hours total in the first seven months at Torbay).
- **Better able to manage the rising demand for SACT.** Staff were in agreement that the saved time goes back into meeting the rising demands.
- **More appropriate patient enquiries about treatment**. From the information provided in the app, staff reported that users are less likely to call in when not clinically necessary, and more likely to call when clinically necessary.
- **Patients are more prepared for treatment.** This is a likely flow-on effect of patients being better informed, reassured and confident before treatment, therefore creating efficiencies for staff, but could be further tested.

"I used to have to allocate 3.5 - 4 days for New Patient Talks (per week) and now I am only doing 2.5 days." (Stakeholder, Torbay)

"It just means we are able to sustain the service. As a [specific type of] chemo team we would not have been able to sustain the workload without using MySunrise." (Stakeholder, Torbay)

"They are decreasing the length of wait because, even though not all of them (nurses) are giving SACT, it's freeing up a nurse to do more NPTs, so that the chemo can start earlier (than it would without MySunrise)" (Stakeholder, Torbay)

For the wider system:

- **Net zero, traffic and congestion benefits.** The first seven months in Torbay (with 138 patients opting for the virtual pre-assessment) saved an estimated 602kg of Carbon Dioxide from reduced patient travel (4.36kg per patient) and an estimated 2760 miles (20 miles per patient).
- **Reduced burden on primary care.** Patient survey results suggest that the information provided in MySunrise is preventing some GP visits following side effects of treatment due to reassurance from information provided in the app.
- **Opportunities to spread and improve access to information.** The benefits described here represent an opportunity for other cancer services to improve delivery of pre-assessment and preparation for treatment.

1.5 Challenges and barriers to implementing

Challenges and barriers to implementing MySunrise pre-assessment tools include the following.

- Awareness and uptake among staff can vary.
- Patient uptake can vary and not all patients want to take the virtual option.
- Integrating MySunrise into the IT infrastructure may pose challenges.
- Integrating smoothly into existing clinical workflows without creating additional work for staff is important.
- Some smaller cancer pathways may not be covered in the app content.

- Competing priorities and projects within the service, e.g., Electronic Patient Record (EPR) systems such as Epic, can affect prioritisation at an organisational level.

1.6 Next steps

Integrating MySunrise into existing IT systems may become more of a barrier as services look to roll out centralised Electronic Patient Record (EPR) systems. MySunrise has the opportunity to continue to focus on the offerings that make it distinct as a locally-configured patient information and pathway optimisation service. As indicated by Torbay staff, these aspects provide value beyond patient management, and are considered as separate.

Full recommendations have been provided in sections 8 (implementation) and 0 (evaluation). Overall, the findings have been very positive about the role that digital pre-assessment can play in streamlining SACT processes for both staff and patients, but further evidence is needed to prove the impact on key areas such as patient wait times.

2 Background

2.1 Context

- Every one to two minutes, someone in the UK is diagnosed with cancer, and new cases are projected to increase from 385,000 per year (2017-2019) to around 506,000 per year by 2038-2040 (1).
- Around 2 in 3 cancer patients require Systemic Anti-Cancer Therapy (SACT) (2).
- Patient **demand for SACT is increasing by ~6-8% per year** (2), due to:
    - more people having cancer
    - advances in detection/diagnoses picking up more people earlier
    - new SACT treatments available and increasing complexity of treatments (including for conditions that couldn't previously be treated).
- Services are regularly **required to expand treatment offerings**, e.g., setting up additional clinics, in response to new treatments available (2).
- There's usually **no increase in support/funding** provided to meet these additional treatment requirements and increasing patient numbers (2).
- Pre-assessments, or new patient talks, are an important part of SACT, but **they take around 1.5 hours per patient**, are inefficient (due to repeated generic content and the need to have patients visiting the hospital), and the one-off session format means that information is easily forgotten by patients and their families when treatment starts (5). This is time-consuming and stressful for both patients and clinicians.
- This puts **further pressure and time requirements** onto an already strained workforce, with the Royal College of Radiologists (RCR) releasing a statement (May 2023) raising serious concerns about a critical lack of capacity to meet the demands (2). This increase in pressure has negative impacts on staff and patients. As articulated by RCR:
    - To meet the increased demand for SACT treatments, oncology departments are having to compromise patient safety and increase pressure on overworked staff.
    - Some departments are having to make difficult decisions over whether to withdraw access to approved treatments or prioritise which patients can receive treatment within an optimal timescale.
- As a result of this, **staff experience more stress, pressure and burnout**, and patients and their families have a **poor experience in their cancer journey.**
- In addition, completing pre-assessment and preparation for treatment at in-person clinics **forces patients to spend time and money** traveling & parking, waiting in waiting rooms and risking exposure to hospital-borne illnesses.

2.2 MySunrise – digitising the pre-assessment process

MySunrise (Technical Health Ltd.) aims to address this by streamlining the cancer pre-assessment process for oncology staff and patients requiring Systemic Anti-Cancer Therapy (SACT). It does this

by providing a suite of digital tools available through the MySunrise app to support pre-assessment (or 'new patient talks') for patients including standardised resources, checklists, forms and integrated video conferencing.

The content is locally configured to each site and treatment pathway and is developed in collaboration with hospital staff. The MySunrise team works with clinical staff, bookings staff and management to understand the pathways and sites, develop scripts, film videos, and other things, to ensure the content is relevant, complete and fit-for-purpose.

Patients can use the resources in their own time away from a clinical setting.

The tools can benefit:

- **patients** by improving accessibility and consistency of information, preparedness for treatment, reduced travel time and cost, involvement of family, and general convenience/user experience
- **patients' families, friends and carers** (referred to as 'families' or 'family members' hereafter) who can download and use the tools and become more involved in their loved one's cancer journey
- **staff and services** who can reduce appointment times, reduce in-person footfall, free up clinical resources and better meet a growing public demand for SACT
- **the wider system** which may benefit from net zero benefits (e.g., reduced travel) and a solution that could potentially be scaled across further regions to maximise impact.

The initial pilots of the MySunrise Pre-Assessment Tools in Cornwall and Torbay collected data (unrelated to this report) that demonstrated significant time savings, improved patient satisfaction, and enhanced clinical efficiency. Building on this success, it is currently expanding to other NHS trusts across the country.

3 This report

This report has been developed by Health Innovation South West and brings together evidence from feedback sought across the South-West, with a focus on Torbay Hospital (part of Torbay & South Devon NHS Foundation Trust), referred to here as 'Torbay'.

It provides an early assessment of the implementation of the MySunrise pre-assessment tools to understand what has worked well, for whom, and where the challenges are.

3.1 Aims

This report aims to:

- **Assess the value** or potential value of the MySunrise pre-assessment tools for patients, their families, staff, services and the wider system
- Understand and describe any **areas for improvement, challenges or concerns**
- Provide **recommendations for implementing** MySunrise into cancer services
- Provide **recommendations for evaluating** MySunrise at cancer services
- Recommend **actions for MySunrise** to continue improving its services.

3.2 Methods and approach

Methods include:

- Logic model workshop and evaluation planning
- Interviews with staff at Torbay (n=8)
- Review of literature
- Review of existing testing and piloting results (especially at Cornwall and Torbay)
- Review of survey responses collected by MySunrise (from different surveys)
- Review of MySunrise user demographic information.

With a comprehensive data collection plan provided in this report for robust future evaluation, this early assessment draws largely from a range of pre-existing evidence such as pilot results and pre-collected patient surveys.

A logic model has been developed that maps out the main areas of impact - whether proven, intended or potential. Where there is evidence to support MySunrise's contribution to the impact areas, the report describes this, along with any challenges, areas for improvement and recommendations for implementing MySunrise in Torbay or other services.

Where evidence is not available, this is noted in the recommendations for further evaluation along with a framework for collecting such evidence.

3.3 Time periods and sites

This assessment of the MySunrise pre-assessment tools focuses, where possible, on:

- **Torbay hospital** cancer services as the implementation site
- **Since November 2023**, when the pre-assessment tools were launched in Torbay.

MySunrise existed as an app before the pre-assessment tools were launched, providing information to cancer patients in services, but without the video call functionality to complete new patient talks and accompanying information relevant to pre-assessment.

Given the broad range of evidence reviewed as part of this assessment, some relates to different NHS trusts and services in the South West, different time periods and before any pre-assessment tools were launched (15). Where these evidence sources have been referenced, this is mentioned.

3.4 Interpreting this report

Throughout this report the following visual cues are used to draw attention to different sources of evidence for different outcomes and impact areas.

Patient perspectives: Text next to this colour and icon will report any evidence coming directly from patients (in this case, surveys and results from pilots)

Staff perspectives: Text next to this colour and icon will report any evidence coming directly from staff (conversations and interviews with staff at Torbay)

From the data: Next to this colour and icon, any evidence coming from data collected within the service or app will be discussed

4 MySunrise pre-assessment tools in cancer pathways

From March 2024 to February 2025, there were 333 unique users of MySunrise at Torbay. Following the Torbay pilot (6 months) there were 116 (47% of pre-assessment patients) using MySunrise and doing their pre-assessment online as opposed to in-clinic.

Figure 1 below shows a diagram of how MySunrise pre-assessment tools factor into a generic cancer pathway in Torbay hospital.

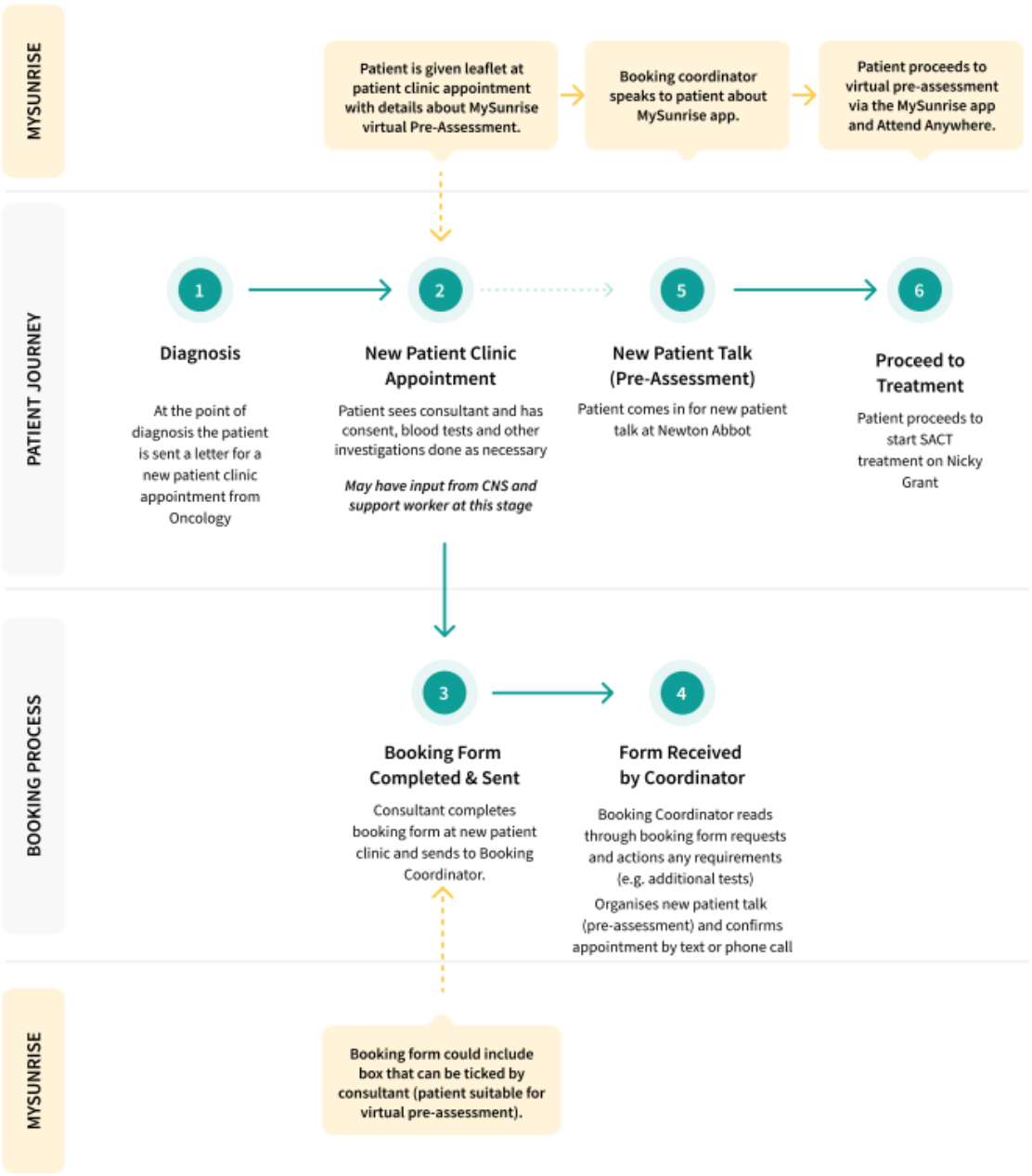

Figure 1 MySunrise pre-assessment tools as part of cancer pathway

5 Logic model

A logic model was developed (Figure 2) in September 2024 in collaboration between Health Innovation South West and MySunrise, to summarise the way in which MySunrise works within services and adds value to patients, staff and systems. Included in this model are the realised, intended and potential impacts, some of which require further testing and may vary by service.

This can be used as a foundation for evaluation (see Section 0). Some areas identified in this logic model are explored further in Section 6 (Emerging impact areas).

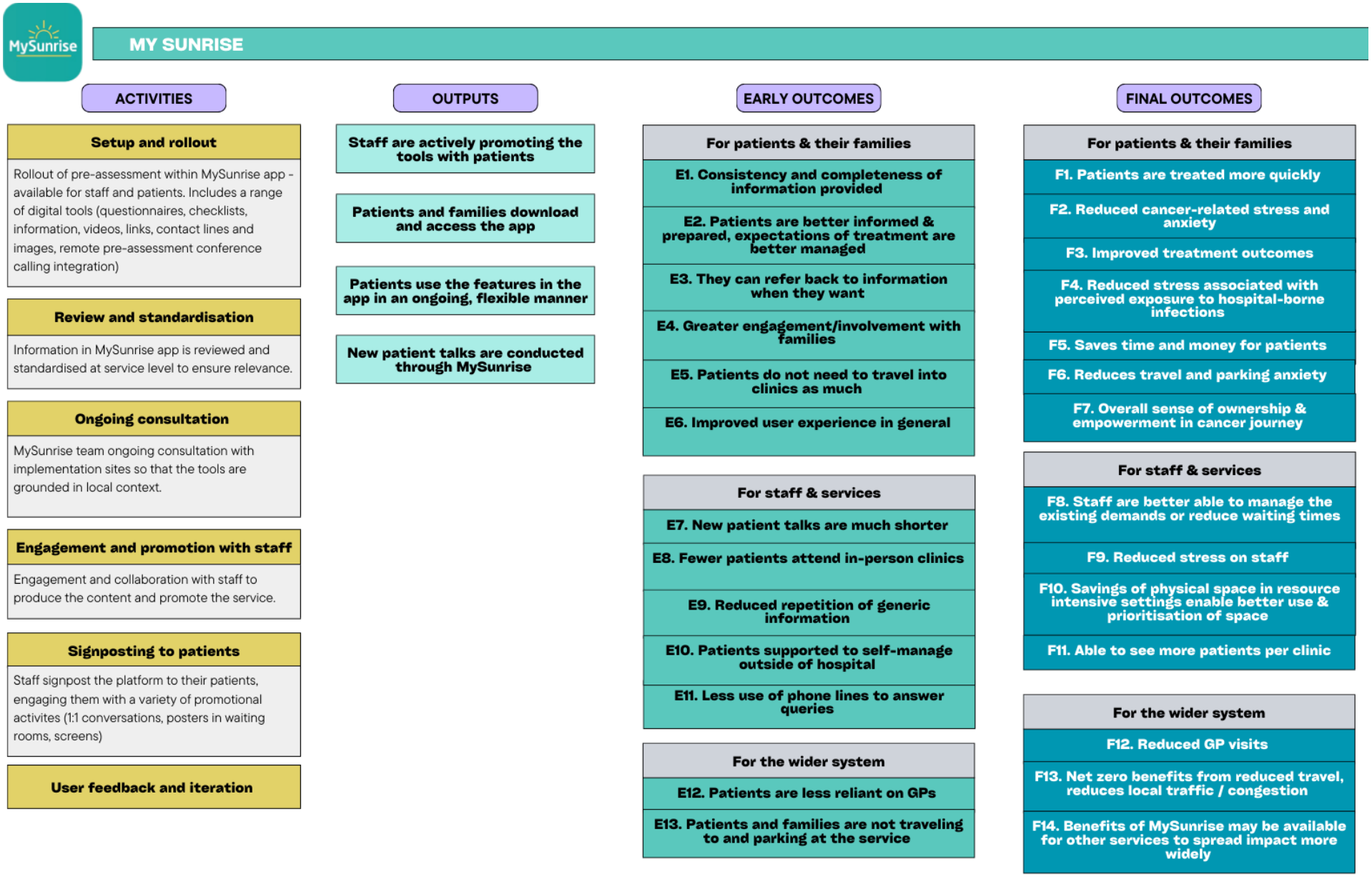

Figure 2 Logic model (activities, outputs and outcomes) for MySunrise pre-assessment tools

6 Emerging impact areas

6.1 Mutually beneficial approach for staff and patients as key to success

A key factor in MySunrise's success is that it delivers reciprocal benefits for both staff and patients. Many of the advantages identified for patients and their families—such as greater efficiency, better preparation for treatment, and an improved experience through reduced travel and increased hospital space—have also been seen to benefit staff and the wider service. This mutual value is crucial not only for the overall impact created but also for the successful implementation of the innovation itself: if either staff or patients are not fully engaged, the innovation is unlikely to gain momentum.

Innovations demonstrating a clear and unambiguous advantage—whether in effectiveness or cost-effectiveness—are more likely to be adopted and successfully implemented (6). Crucially, these benefits must be recognised and acknowledged by all key stakeholders. In the case of MySunrise, the visible and tangible advantages for both staff and patients enhance its perceived value, potentially reinforcing stakeholder buy-in. When adopters clearly see how the innovation improves their experience or outcomes, integration into routine practice becomes more feasible.

The following sections go into detail around the emerging impact areas for:

- Patients and their families
- Staff and services
- The wider system.

Codes provided in the subheadings refer back to the particular outcomes from the logic model (Figure 2) – with any that are not covered here addressed in Section 0.

6.2 Emerging impact areas: Patients and their families

Flexible access to information (E3)

When pre-assessment appointments are only available in-clinic, patients and their families have one session to absorb as much verbal information as possible when many are still in shock from the diagnosis and not processing information as they otherwise would, so information is easily lost or forgotten.

With MySunrise, they have all the information relevant to their treatment when they need it, and can access it, revisit it and remind themselves of missed or forgotten content, at times that suit them and their families.

Patient perspectives: *"I really like it as a patient. It would have really helped when I first started treatment. A lot of the stress is not understanding how the system works, i.e., getting a blood test, collecting additional medicines. Having all the info in [one] place is great." (Patient)*

Staff perspectives: *"For the patient, you've not just sat and listened and forgotten about it, you've got it there (to go back to)." (Stakeholder, Torbay)*

Consistency and quality of information (E1)

Conducting pre-assessments via in-person clinics requires nursing staff to deliver important information verbally to each patient and any family members attending the session. Information is generic and relates to their treatments, where to go, what to expect, and when to contact cancer services. Periods of high pressure within services (for example, high demand, critical incident declarations and staffing shortages) can lead to a reduction in capacity within staff teams, sometimes affecting delivery of information.

With MySunrise, people can see all of the information relevant to their particular trust, cancer centre, cancer team, cancer type and planned treatment. The same information is available to all people accessing the app (supporting **consistency** of information provided to patients), and has been co-created and validated by clinical staff in each pathway or site (supporting **high quality** of information).

Patient perspectives: 76% to 81% of patients (in 2021-2022, before pre-assessment tools were rolled out, and across different centres) selected 6 or 7 out of 7 for satisfaction with different statements about the quality and quantity of information they received through MySunrise.

Staff perspectives: *"What they've (MySunrise) done so far is great, especially around personalised care – the support and the videos. It's a depository where (if we have some information) we can go 'That's great, put it on MySunrise'. We've done some sleep videos, videos around access and support, and it can all go on MySunrise, which is great because it's the same whether you live in Truro or Barnstaple."* (Stakeholder, Torbay)

"It is pretty comprehensive what's on there. I haven't heard 'Oh I wish this was on there' (Stakeholder, Torbay)

Family member involvement (E4)

Cancer experiences and outcomes are often better when family members and loved ones are supporting the patient. Families can support in emotional ways, helping the patient to feel more supported with what is happening to them. They can also support patients in practical ways, for example, driving to the hospital and sharing the information load that can often be overwhelming following a diagnosis. (7, 8). Close family and friends may also have their own questions about their loved one's diagnosis and journey.

Family members and friends often accompany patients for in-person clinic appointments, so this is not new. However, 18% of MySunrise users are a family member or friend, suggesting the tools are supporting family engagement.

Staff perspectives: *"We've had family members attend the video calls (new patient talks), they might not come if in person. Friends and family can download the app also and support the person (outside of the new patient talks)."* (Stakeholder, Torbay)

From the data: 18% of MySunrise app users at Torbay (Feb 2024 to Mar 2025) were family members (17%) or friends (1%). This does not reflect the total engagement from family and friends, who may also support the patient when the app is downloaded by the patient themselves.

Reduced travel and costs (E5, F5, F6)

Although patient feedback since pre-assessment tools have been rolled out is limited, earlier patient engagement indicated that reducing travel time and parking costs was a key motivation for people to consider using MySunrise for their pre-assessment. For some patients, transport was a barrier to accessing services.

From the data: The first seven months in Torbay (Nov 2023 to May 2024) saw 138 patients opt for the virtual pre-assessment, saving an estimated 92 hours of travel time (40 minutes per patient) and an estimated 2760 miles (20 miles per patient) and the associated fuel costs. Hospital parking costs were also reduced.

Overall patient satisfaction and experience (E6)

Satisfaction with care provided has been shown to be linked with better clinical outcomes (9). With MySunrise, the patient experience has been improved in several ways (in addition to flexibility, consistency and quality of information, family member involvement and reduced travel and costs which are detailed above):

- Ease of contacting NHS cancer team when needed
- Improved confidence or reassurance
- Usefulness of specific features of the app (videos, contact details, information about support services, cancer centre information, lifestyle advice)
- Perceived reduction of risk of hospital-borne infections from in-person pre-assessments.

Patient perspectives: When MySunrise was piloted in Cornwall before the pre-assessment tools were rolled out, 100% of users were satisfied with the digital approach, compared with in-person. Combined pilot scores from multiple services showed substantial proportions reporting improved ease of contacting their cancer team when they needed to (54%) and improved confidence or reassurance (50%) compared to the prior in-person format.

Staff perspectives: Staff were quick to point out the benefits that patients experience. *"For the patient, you've not just sat and listened and forgotten about it, you've got it there (to go back to)." (Stakeholder, Torbay)*

"Also the patient benefits - it reduces their visits to hospital, they can come back to the content, and friends and family can also access (the information)".

Patients more prepared for treatment (E2)

The impact of MySunrise on patient preparedness for treatment and likelihood to continue with their treatment could be assessed further. Patients experience side effects resulting from their treatment. If patients and their families are better informed around what to expect in their treatment, as staff comments and patient survey results have suggested so far, then it follows that patients may present to treatment better prepared and more likely to stay the course, although this requires testing.

Patient perspectives: Patient survey responses (in 2021-2022, before pre-assessment tools were rolled out, and across different centres) indicated that large proportions of MySunrise users felt better informed about their treatment options, better informed about possible symptoms and better informed about treatment side effects as a result of using the app. They also indicated strong levels of satisfaction with and usefulness of this information.

6.3 Emerging impact areas: staff and services

Releasing clinical capacity (E7, F8)

One of the most significant impacts of MySunrise is the release of clinical capacity. By allowing patients and their families to access pre-assessment information via the app at their convenience, nursing staff are no longer required to deliver this content during new patient consultations. As a result, the duration of new patient talks has been reduced from 90-minute in-person sessions to 30-minute virtual appointments. This change saved approximately 138 hours of nursing time at Torbay between November 2023 and May 2024.

Staff perspectives: *"It's great for us, we're at a point where we need more capacity, so its increased our capacity." (Stakeholder, Torbay)*

"I used to have to allocate 3.5 - 4 days for New Patient Talks (per week) and now I am only doing 2.5 days." (Stakeholder, Torbay)

"You know, if you were taking an hour or an hour and a half to do the talks, you could do 6 in a day maximum, whereas with back-to-back video calls for half an hour each, you can get loads done. We've been consistently over capacity - that's a national problem. It (MySunrise) has helped with that, and particularly with those [specific types of] clinics which are huge. It's helped release time with those. (Stakeholder, Torbay)

From the data: The pilot found that new patient talks have decreased from being scheduled at 90 minutes (in-person) to being scheduled at 30 minutes (virtual) per patient, saving around 138 hours of nursing time in the first seven months at Torbay (November 2023 to May 2024).

Demand better able to be met (F9)

With an ongoing staff capacity crisis and ever-increasing demands for SACT, the time saved for nurses goes back into meeting the demand.

From the data: A saving of 138 hours is equivalent to being able to provide 92 additional in-person sessions or 276 additional virtual sessions.

Staff perspectives: *"It just means we are able to sustain the service. As a [specific type of] chemo team we would not have been able to sustain the workload without using MySunrise." (Stakeholder, Torbay)*

"We have saved around 160 hours so far (of nursing time). It's all gone back into meeting the demand." (Stakeholder, Torbay)

"Torbay have a crisis on SACT nursing, so you won't see a benefit or reduction in wait times. What you might find is that it hasn't got worse." (Stakeholder, Torbay)

There is a sense that, although wait times may not be reducing compared to before MySunrise virtual pre-assessment tools were rolled out, they are still shorter than they otherwise would be if the tools were not in use.

"They are decreasing the length of wait because, even though not all of them (nurses) are giving SACT, it's freeing up a nurse to do more NPTs, so that the chemo can start earlier (than it would without MySunrise)" (Stakeholder, Torbay)

These assumptions and qualitative perceptions can be tested quantitatively. Advice for evaluating the impact of MySunrise pre-assessment tools on reducing wait times is provided in Section 0.

More appropriate patient inquiries about treatment (E12)

Some staff at Torbay commented on the impact of patients and their families having flexible access to the right information, for example about side effects from their treatment and what to expect. This has meant that in some cases telephone help lines to services are utilised more appropriately.

Staff perspectives: *"Friends and families are always phoning in, it can be really tiring talking to lots of concerned family members, so if they have this information at their fingertips they are less likely to call. And conversely they will ring when appropriate. It (the app) prompts them to ring when it's something serious. It does have a positive impact on telephone triage services. You get less worried well calls and more calls from patients that should be ringing you." (Stakeholder, Torbay)*

This can be assessed quantitatively and advice is provided in Section 0.

6.4 Emerging impact areas: the wider system

Net zero and congestion benefits (E14, F16)

During the pilot in Torbay, work was conducted to understand the reduced travel mileage and CO2 emissions from conducting new patient talks virtually as opposed to in-clinic.

From the data: The first seven months in Torbay (Nov 2023 to May 2024) saw 138 patients opt for the virtual pre-assessment, saving an estimated 602kg of Carbon Dioxide from reduced patient travel (4.36kg per patient) and an estimated 2760 miles (20 miles per patient).

Reduced burden on primary care (E13, F15)

With patients better informed about their treatment, symptoms and side effects, it has been suggested that not only does this improve the appropriateness of calls to the cancer team following treatment, but potentially reduces visits to patients' GPs.

Patient perspectives: 12% of patients in a pilot of MySunrise across the South West (2021-2022) before the roll-out of the pre-assessment tools, indicated they would have visited the GP but didn't because of the information provided in MySunrise.

Opportunity to improve access to pre-assessment elsewhere (F17)

Stakeholder engagement on opportunities to improve access to pre-assessment was limited, however, it is recognised that different SACT treatment pathways in different services have different protocols for pre-assessment. Some services may not conduct new patient talks for some SACT medicines as standard. Introducing MySunrise pre-assessment tools into services where this is the

case may help to increase access to generic and standardised information for cancer types and groups that would not otherwise have had access to it via an in-person pre-assessment appointment.

7 Barriers, challenges and concerns

7.1 Awareness and uptake among staff

Due to the variety of cancer pathways, treatments and sites, the patient load, and the number of staff involved, not all staff are familiar with and recommending MySunrise at all times, despite the benefits to both staff and patients. Momentum can be hard to maintain and uptake can vary.

"We have months where we are really great at it. And months where we do more face to face" (Stakeholder, Torbay)

Sometimes services are too busy to introduce the app to patients.

"It's predominantly nursing staff (that use MySunrise). We do have other staff that assist with implementation: admin staff, clinicians. Some engage and some don't - it's a work in progress. There are some tumor sites where it (MySunrise) is under-established for consultants, they've got very big, very heavy clinics, it is less likely to be discussed because of the time required to run through it/talk about it." (Stakeholder, Torbay)

To maximise uptake among staff, it is important that the tools integrate smoothly with existing clinical workflows and do not create additional work for staff.

7.2 Patient uptake

Patient uptake can be strong when patients are signposted (almost half of patients in the first six months at Torbay opted for virtual pre-assessment). However, several key factors can affect variation in patient uptake:

- **Patient willingness.** Some opt for in-person pre-assessment due to preference.

"We have patients that struggle with downloading the app. Biggest problem we have is getting people to get the app (to want to get it). Our booking team talk to them (the patient), they can usually tell how tech savvy they are, and a lot will opt for face to face" (Stakeholder, Torbay)

- **Uptake from staff.** As detailed above, if staff are too busy to talk to patients about MySunrise, patients won't know about it.
- **Staff resourcing for raising patient awareness.** In Torbay when cancer services have had staff on loan they have posted them into the waiting rooms to signpost people to MySunrise.

"At one point we did have a member of staff down there (in the waiting room) doing it (signposting) on loan from [department] and we saw a large increase in MySunrise virtual new patient talks. It was clear that was driving it." (Stakeholder, Torbay)

I've noticed this month's enrolment has dropped off so I need to go and look at that and find out why. The theory is there was someone in the waiting room who was helping patients download and onboard, this wasn't a permanent thing, so maybe that's why." (Stakeholder, Torbay)

- **Willingness and ability to download an app.** MySunrise are currently developing a website/web page that contains all of the content as an alternative to downloading the app. This would still need to be accessed via the internet but not by downloading an app.

- **Speaking a language other than English.** MySunrise are currently developing translations for the most common languages in sites where there is patient diversity.

7.3 Integrating with other IT systems

As more services, including Torbay, deploy service-level Electronic Patient Record (EPR) systems such as Epic, there is a growing concern about the risk of incompatibility, causing workflow issues.

"Some trusts have 4 or 5 systems they are working with. They've then got to remember to go to the MySunrise dashboard and monitor that if anyone has any concerns. MySunrise currently doesn't link with patient hospital records, so it's an extra IT system for staff to deal with." (Stakeholder, Torbay)

However, other staff noted that in the case of MySunrise, it was not a major issue at Torbay and that the value of using it exceeded the burden of it being an extra IT platform.

"I don't think it needs to link in with our main electronic patient system. If they did link I don't think it would save a huge amount of work. You're talking seconds to save so wouldn't make much difference. I know with Epic there's a cancer bolt-on that you might be able to get new patient talks with, but there's a lot of ifs and buts. Using MySunrise as it is works at the moment." (Stakeholder, Torbay)

7.4 Completeness of pathways in the app

Some of the less common pathways are not included in the app. Most are, including bladder, breast, colorectal, endometrial, haematological, head and neck, lung, oesophagus/stomach, pancreas/gallbladder, and prostate. Staff were understanding that not all pathways are possible to include.

"It's still missing things, for example, some pathways are not on there, such as Glaucoma but you can't have everything." (Stakeholder, Torbay)

"Not all pathways are on the app, I don't think brain or leukaemia are covered as a pathway. But all sites are on. There is a brain site." (Stakeholder, Torbay)

7.5 Prioritisation at the service level

If a service is undergoing a major transformation (such as installing a new EPR system), critical incident or other significant resourcing demand, then they may not have the staffing, IT or governance capacity to consider integrating MySunrise. Although this was not the case at Torbay (MySunrise has been successfully implemented), it is understood this has been an issue at other sites considering MySunrise. Health Innovation South West's experience of implementing innovations suggests that organisational capacity, when affected in this way, can affect ability to adopt new innovations.

8 Implementing at new trusts, services and sites

The general approach of MySunrise is that, despite being an app providing generic information for patients, it is not an 'off-the-shelf' product. It requires collaboration between the MySunrise team and the participating services to produce content (e.g., videos, information, contact channels) that is specific to pathways within services. Given that these vary within and between cancer services, a consultative approach is taken by MySunrise to ensure the content is relevant, appropriate and helpful within the given context.

However, a lot of the content relating to treatments, national support lines and pathway information is generic across sites. This has led to efficiencies in rolling out MySunrise as new trusts deploy it.

8.1 Specific recommendations for implementing MySunrise at new trusts

- **Understand if there are any competing systems** (e.g., Epic) installed or likely to be installed and what the implication of this would be on using MySunrise. From speaking with staff at Torbay, it appears that whilst a service-level EPR system provides one central platform and reduces the problem of multiple IT systems, the content provided in the MySunrise app is bespoke and customised to each service and pathway, providing a different service – one around patient information and pathway optimisation.
- **Consider the languages** used by patients in the area, any that MySunrise currently support and any that would need to be translated for.
- Consider how the platform will be **promoted among staff**. As mentioned previously, when an initiative benefits patients, staff and services simultaneously, this should aid uptake, but in the reality of busy clinics these initiatives may not be the priority. Communicating regularly at team meetings, putting posters up, sending emails and messages, and being clear about the benefits to both patients and staff, will be important. Creating champions or super users can also be a useful way to promote continued uptake.
- **Make it easy to signpost and distribute the platform** to patients – automations can include text links in SMS and QR codes on physical letters and this can help when staff uptake is low.
- **Promoting the app to patients and their families** will take some consideration and resourcing. Ideas mentioned by staff at Torbay include:
    - Having an extra staff member (e.g., someone on loan from another department, a volunteer, or dedicated staff) in the waiting rooms signposting people to the app
    - Putting up posters in waiting rooms
    - Showing QR codes on TV screens in waiting rooms
    - Giving out cards with QR codes
    - Sending letters with QR codes/links
- The information provided in the MySunrise app is considered to be of a high quality in part because of the extent to which it reflects the specific cancer services, teams and pathways. This requires a **bespoke approach** from the MySunrise team and **time and resourcing from both MySunrise and the trust** to ensure content is relevant, complete and of a high quality.
- **Embed evaluation** from the outset. The data collection plan in Section 0 details what data can be collected to quantitatively measure the impact of MySunrise on pathway wait times, health inequalities, staff capacity, and other key aspects.

8.2 General recommendations based on key principles for implementation

Greenhalgh et al (6) conducted an influential review of the key factors for implementation and adoption of innovations in healthcare settings. This section gives examples of where some of its recommendations could be considered to improve implementation of MySunrise.

Table 1 Table of recommendations based on Greenhalgh et al (6) principles

Principle (Greenhalgh et al) (6) that makes innovation adoption more likely or easy	MySunrise context or theme (where applicable)	Recommendation
Relative advantage, Observability, Meaning (perceiving clear advantages in terms of effectiveness or cost-effectiveness, and being able to observe these advantages, and holding meaning in the innovation)	There are clear advantages to implementing MySunrise for staff, for example 138 hours of clinical time saved at Torbay in the first 7 months, and one staff member stating their pre-assessment days had reduced from 3.5 to 4 days per week to 2.5) and patients (about xx saved in travel and parking costs per person).	To support with staff buy-in, ensure **easy to remember stats and facts are core to any communications** (for example, about benefits to practice and managing demand). For patients the key benefits are around having ongoing access to the information, enabling families to support, and not having to travel into the hospital.
Trialability, Reinvention (allowing staff to trial or experiment with the innovation, and adapt, refine or modify to their needs)	The flexibility of MySunrise to adapt to user needs is a strength, with a small and responsive MySunrise team offering custom solutions that are specific to individual services and pathways	This **bespoke approach should continue** to be a focus with **clear feedback mechanisms** for staff back to the MySunrise team.
Divisibility (ability for the innovation to break down into more manageable parts and adopted incrementally).	Torbay staff indicated that particularly busy cancer sites, teams or pathways may be less likely to adopt MySunrise because it is an additional thing to talk to patients about.	MySunrise adoption does not need to be an **'event'** but rather a **'process'** where teams with capacity to use MySunrise can start the process, and implementation can diffuse to other teams as the benefits are reported. Utilising **automated signposting channels** (e.g., through SMS text messages) could support staff and teams with less capacity to verbally signpost.
Concerns (addressing concerns among staff in different stages: pre-adoption, early use, and established use)	As identified in Section 7, there were some minor concerns around implementation of MySunrise.	Clear and continuing **information, support and feedback mechanisms**, for staff, at different stages of implementation should continue to be provided by MySunrise

Staff involvement and commitment (early and widespread involvement of staff at all levels and in particular top management support and advocacy).	Different staff at Torbay champion the MySunrise pre-assessment tools, and staff engagement can vary by team or site.	Ensure early and widespread **engagement with staff** who will be implementing the tools. Among staff that are not engaging, building in ways of distributing the service to patients and their families via automated systems (SMS, etc.) may help to ensure patients are offered it consistently.
Support and advocacy, Champions, Opinion leaders, Boundary spanners (key individuals with good internal relationships are championing the innovation, when people with strong external links are willing and able to link the innovation to the outside world, and when adopters outnumber and are more strategically placed than opponents).	Different staff at Torbay champion the MySunrise pre-assessment tools, and staff engagement can vary by team or site.	**Identify staff in the service who have a strong interest/need** that MySunrise can support with, are well connected and influential internally, and/or are well connected externally to champion MySunrise and influence adoption.
Formal dissemination programmes (communicating evaluation results appropriately to different stakeholders)	There was agreement among staff that digital pre-assessment was impacting positively overall on the service's ability to meet SACT demands. *"They are decreasing the length of wait because, even though not all of them (nurses) are giving SACT, it's freeing up a nurse to do more NPTs, so that the chemo can start earlier (than it would without MySunrise)"* (Stakeholder, Torbay)	**Evaluation of routine quantitative data** from hospital systems (as advised in this report) and qualitative data, **disseminated** in formats appropriate to different audiences needs and interests.
Innovation-system fit (an innovation that fits within the system and supporting technology is more likely to succeed)	MySunrise operates as a standalone app, set of tools, or websites, outside of electronic patient records (EPR) systems.	Ongoing consideration should be made to whether it would be helpful and/or possible to have the MySunrise tools **better integrate with wider systems** that staff use – this will vary by service, team and individual but could be asked of staff providing feedback.

Dedicated time and resources, Capacity to evaluate the innovation (among staff and teams at the service, to support adoption)	The approach of MySunrise is bespoke, with MySunrise development team working with clinicians and staff at the service before implementation to ensure the information provided is relevant and meaningful to the service.	This is an important feature of success for MySunrise staff and users, and trusts and services need to allow for **adequate staff resourcing** to support this process during setup.
Informal inter-organisational network (learning from other organisations to influence decisions to adopt a new innovation)	MySunrise is implemented in five trusts throughout the South West and more nationally. With each new trust the deployment becomes more efficient.	As well as learning from each deployment, MySunrise could **broker connections between trusts** that are considering or setting up implementation of MySunrise and those that have already implemented it to address concerns, overcome barriers and discuss benefits.
Political directives (external mandates increase the motivation of an organisation to adopt an innovation)	MySunrise aligns with and helps to progress the NHS's current priorities (14) including moving care away from hospitals (shift 1 of 3) and making better use of digital technology (shift 2 of 3).	Alignment with, and importance of, the **Government priorities** that MySunrise supports, along with any evidence, can be included in any communications with staff
Intra-organisational networks (effective communications across internal structural boundaries – sharing successes and stories)	Some teams are closely connect and others, due to circumstances, are not.	**Sharing positive stories and learnings** from MySunrise across the organisation (or department, site, etc.) via staff newsletters, emails, work comms platforms, wider meetings.

9 Evaluating at new trusts, services and sites

This section and the linked appendices provide an evaluation framework that trusts can use to help evaluate the use of the MySunrise pre-assessment tools.

A detailed measurement plan for all the outcomes in the logic model including those listed above and discussed in Section 6 are is provided in Appendix A. Appendices B to E provide detailed instructions on data collection approaches.

9.1 Evaluation questions

The three main stakeholder groups for evaluation are:

1. Patients (and their families)
2. Staff and services
3. The wider system(s), including environment, other regions, etc.

Evaluation questions include:

1. **What is the impact of MySunrise on patients (and their families), staff and services, and wider systems?**

   > Including impact on wait times and/or ability to manage SACT demands

   > Including any flow on effects e.g., if time has been saved, how does this benefit workers or services?

2. **What are the success factors and barriers for successful implementation of MySunrise?**

   > Including how these might vary between services/sites

3. **How can the configuration and implementation of MySunrise be optimised to deliver the maximum benefit for patients, staff and systems?**

9.2 Evaluation design

The below table details what data sources could be used to address each evaluation question.

Evaluation question	Supporting data sources
1. What is the impact of MySunrise on patients (and their families), staff and services, and wider systems?	▪ Impact evaluation using quantitative data pulled from the trust's systems ▪ Surveys with patients and staff
2. What are the success factors and barriers for successful implementation of MySunrise?	Process evaluation using qualitative data (staff interviews) and surveys carried out in the trust.
3. How can the configuration and implementation of MySunrise be optimised to deliver the maximum benefit for patients, staff and systems?	Triangulating from above data

Evaluation data to collect:

- **Quantitative routine data** collected by the trust's systems that provides information on pathway times before and after implementation of MySunrise, demographic information, and whether patients opted for virtual (MySunrise) or in-person pre-assessments.
- **Anonymous surveys** to be sent to patients who use(d) MySunrise and staff members who are involved in implementation of MySunrise. Cover questions on how MySunrise Pre-assessment Tools has been implemented and barriers and enablers on its use.
- **Interviews with staff** who operate on different parts of the pathway. This will include detailed questions on the implementation MySunrise, how staff have adapted behaviours to incorporate MySunrise, how radiologists use MySunrise, and the benefits and challenges of including MySunrise in the pathway.

Analyses can include:

1. **Visual pathway diagram** showing the duration of each individual pathway from referral to diagnosis to highlight bottlenecks.
2. **Pathway duration comparison** between the intervention and control period. Consider and calculate statistically significant differences ($p<0.05$) in mean, median, UQ and maximum. Where relevant, carry out adjusted analyses to compare outcomes for different clinicians, months and types of cancer.
3. **Description of barriers and enablers** to implementing MySunrise in practice, to inform a blueprint for future implementation.
4. **Description of how MySunrise is used in practice** by different clinicians, and its benefits and downsides.

9.3 Considerations

Priority outcomes to measure

In Section 6, emerging evidence for a number of the early and final outcomes from the logic model (Figure 2) were discussed: E1 to E7, E12 to E14, F5, F6, F8, F9, F15, F16, F17 (refer back to Figure 2 for information about these).

Outcomes that are important to measure but need further evidence include:

- Staff resourcing and wait times:
  - F1: Patients are treated more quickly
  - F8: Clinical time saved/released
  - F9: Demand better able to be met and/or pathway times reduced
- Patient preparedness and treatment outcomes:
  - E2: Patients are better informed and prepared for treatment
  - F3: Improved treatment compliance and outcomes
- Patient experience:
  - E6: Improved user experience
  - F2: Reduced cancer-related stress and anxiety
  - F7: Sense of ownership & empowerment in cancer journey
  - F4. Reduced stress associated with perceived exposure to hospital-borne infections
- Staff experience:
  - F10: Reduced stress on staff
- Hospital footfall and space

- E8: Fewer patients attend in-person clinics
- E10: Patients supported to self-manage outside of hospital
- F11: Savings of physical space in resource intensive settings enable better use & prioritisation of space.

A detailed measurement plan for all the outcomes in the logic model including those listed above and discussed in Section 6 are is provided in Appendix A. Appendices B to E provide detailed instructions on data collection approaches.

Health inequalities

People in certain demographic groups (for example, more deprived areas) are more likely to be negatively affected by cancer – both in terms of getting cancer and in terms of being diagnosed late (10). There are arguments that MySunrise helps to tackle health inequalities by broadening access to people that cannot travel into clinics, are frail or live in remote settings. On the other hand, there have been concerns raised around digital exclusion. Care should be taken to understand the impact of MySunrise on health inequalities by including cancer stage, Indices of Multiple Deprivation (IMD), ethnicity, level of education and age in any analyses.

10 Actions for MySunrise

Feedback about the MySunrise app and the digitisation of the pre-assesment process has been very positive overall. Barriers and challenges detailed in Section 7 are listed in the table below along with any recommendations for MySunrise and/or progress against these challenges.

Table 2 Recommendations for MySunrise based on barriers, challenges and concerns

Challenge or barrier (from Section 7)	Recommendation and/or progress against challenge
Awareness and uptake among staff (7.1)	Some particularly busy pathways and clinics do not use MySunrise due to the lack of time available to discuss it with patients. And even when embedded, uptake can vary among staff due to fluctuations in workload and capacity. Although verbal signposting from hospital staff is likely to generate the best patient uptake, any ways to automate the promotion of the tools in routine communications could help when verbal staff signposting is low. For example, supporting services with what they might need to automatically send out a link to the app via SMS/text message and/or including QR codes as standard at the bottom of physical letters. ➢ MySunrise have been developing these capabilities and should offer as standard for any onboarding trusts. ➢ Use analytics to understand the channels new users are coming from – staff referrals, posters, SMS, physical letters. This can feed into a greater understanding of what does and doesn't work.
Patient uptake (7.2)	Barriers to patient uptake include a general preference among some patients to stick with in-person pre-assessment (as opposed to digital), but also a reluctance or inability to download and navigate a new app and, in linguistically diverse areas, access in different languages. ➢ MySunrise are developing its content into a web page/website that can be distributed as a single link and does not require the user to download an app. This should be shared easily with participating trusts for patient distribution. ➢ The content should be available in a range of different languages, covering the main languages spoken within each local area.
Integrating with other IT systems (7.3) and prioritisation at the service level (7.5)	With more trusts moving their patient management processes into a single unified Electronic Patient Record (EPR) system (e.g., Epic) and often having a preference to run any IT services through it, MySunrise can do two things: ➢ Work on making its app and content compatible with leading EPRs (although the integration process and costs may be a further barrier). ➢ Continue to focus on the offerings that make MySunrise distinct as a locally configured patient information and pathway optimisation service. As indicated by Torbay staff, these aspects provide value beyond patient management, and can be considered as separate.

Conclusion

Overall, the learnings have been very positive about the role that digital pre-assessment can play in streamlining SACT processes for staff and improving experiences for patients. Moreover, the benefits to both staff and patients are mutually reinforcing, which serves as a 'win-win' for both parties and a positive mechanism for implementation.

For staff, being able to run clinics digitally with patients and their families that have been able to digest the relevant information beforehand reduces pre-assessment nursing time from roughly 1.5 hours per patient to 0.5 hours (a saving of one hour per patient), which has enabled staff to reallocate time and better meet the growing numbers of patients requiring SACT.

For patients and their families, having access to the information they need at their fingertips, improving their confidence and reassurance around their treatment, and not needing to attend the hospital for their pre-assessment has improved their overall experiences (compared to if they hadn't used MySunrise).

Further evidence is needed to demonstrate the impact on key areas such as patient wait times and this report provides a detailed framework for this.

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Appendix A: Detailed measurement approach

The outcomes in the first column are from the logic model (Figure 2) with data sources and indicators added here in subsequent columns.

Outcomes (short/medium term)	Data source	Indicator
For patients & their families		
E1. Consistency and completeness of information provided	Patient survey Staff survey / interviews	% patients who felt the information was complete / enough for them Did staff feel they had to provide any information that could have been in the app?
E2. Patients are better informed & prepared for treatment	Patient survey	% of patients who felt MySunrise contributed to them feeling better informed and prepared, knew what to expect
	Staff survey / interviews	% staff who feel their patients are better informed after using MySunrise
E3. They can refer back to information when they want	Patient survey	% who value referring back to information when needed
E4. Greater engagement/involvement with families	Patient survey MySunrise App	% whose families were involved in completing the information % breakdown of user type from question in app
E5. Patients do not need to travel into clinics as much	Patient survey	% patients who felt they didn't go into the clinic as much as they would otherwise
	Systems data	% consultations shifted to digital x estimated travel costs
E6. Improved user experience in general	Patient survey	% patients who had a good experience of the pathway and their pre-assessment, satisfaction scores.
For staff & services		
E7. New patient talks are much shorter	Systems data	Difference in avg duration of virtual pre-assessment consultations (using MySunrise) vs in-person
E8. Fewer patients attend in-person clinics	Systems data	Proportion of people attending virtual clinics in intervention period
E9. Reduced repetition of generic information	Staff survey / interviews	Staff report less need to provide generic information to virtual pre-assessment patients
E10. Patients supported to self-manage outside of hospital	Staff survey / interviews	Staff report patients have used MySunrise to self-manage outside of hospital
E11. Less use of phone lines to answer queries	Systems data Patient survey	Reduction in unneccessary calls made (if recorded) Proportion of patients who would have phoned the hospital without the MySunrise App information
For the wider system		
E12. With more information and support provided through the app, patients are less reliant on GPs	Patient survey	% patients who would have consulted their GP without the MySunrise App information
E13. Patients and families are not traveling to and parking at the service	Systems data	# consultations shifted to digital x estimated proportion who drive to hospital

Outcomes (longer term)	Data source	Indicator
For patients & their families		
F1. Patients are treated more quickly	Systems data	Avg pathway time in control period vs intervention period. Avg times disaggregated by urgency of case / stage of diagnosis. Avg times disaggregated by virtual vs in-person pre-assessment
F2. Reduced cancer-related stress and anxiety	Patient survey	% patients who feel the pre-assessment process reduced their stress and anxiety
F3. Improved treatment outcomes (through better compliance as a result of managed expectations and/or reduced wait times)		*(May not be measurable, if it is, measures may vary by trust or service)*
F4. Reduced stress associated with perceived exposure to hospital-borne infections	Patient survey	% patients who selected remote because of perceived exposure to hospital infections
F5. Saves time and money	Patient survey/ calculations	Fuel costs of number of miles not driven + parking costs Average time driving to and from hospital + time parking and waiting
F6. Reduces travel and parking anxiety	Patient survey	% patients who felt the virtual format reduced their travel and parking anxiety
F7. Overall sense of ownership & empowerment in cancer journey	Patient survey	"As a result of using mySunrise I feel I have greater control over my cancer journey" (agreement scale)
For staff & services		
F8. Staff are better able to manage the existing demands or reduce waiting times	Staff survey / interviews Systems data	% staff who feel better able to manage existing demands as a result of MySunrise Proportion of people meeting 31 day target in control period (Nov-22 - Oct-23) vs intervention period (Nov-23 - Oct-24) Average time between decision to treat and treatment for all patient and urgent patient. Comparison between control and intervention.
F9. Reduced stress on staff	Staff survey / interviews	% staff who feel less stressed as a result of MySunrise
F10. Savings of physical space in resource intensive settings (clinical 'real estate') enable better use & prioritisation of space	Internal audit	*(Service audit)*
F11. Able to see more patients per clinic (as a result of fewer & shorter appointments)	Systems data	Difference in number of consultations in control period vs intervention period controlled for staff (supply) and decisions to treat (demand) if needed
For the wider system		
F12. Reduced GP visits	Use patient surveys as proxy	% who didn't go to GP due to MySunrise info, when they otherwise would have done.
F13. Net zero benefits from reduced travel, reduced local traffic / congestion	Calculate based on existing data / patient surveys	CO2 emissions saved from avoided miles driven
F14. Benefits of MySunrise may be available for other services to spread impact more widely		*(Triangulation from above)*

Appendix B: Quantitative data capture and analysis

Quantitative data

To measure the impact on wait times and times of the new patient talks, the following patient-level data can be used (green.

Data field	***Analysis type***	***Description (may vary by trust)***
Decision to treat date (or earliest appropriate clinical date for SACT following previous treatment).	Core analysis	The date at which there was a decision to treat and this was agreed by the patient (start of 31 day pathway)
Subsequent treatment for this cancer?	Supporting analysis	Y/N field to flag those patients where this is the second 31-day pathway (e.g. patients who received surgery before chemo will be "Y")
First oncology outpatient appointment date	Core analysis	Normally = decision to treat date. 1st meeting with consultant prior to NPT for SACT.
First oncology outpatient appointment duration	Supporting analysis	Allocated appointment duration of the first oncology outpatient appointment
First oncology outpatient appointment start time	Supporting analysis	Start time of the first oncology outpatient appointment
New patient talk (NPT) date	Core analysis	Date of the new patient talk
NPT appointment duration	Core analysis	Allocated appointment duration of the first new patient talk
NPT start time	Supporting analysis	Start time of the new patient talk appointment
NPT modality	Core analysis	Whether the NPT was virtual or F2F. Assumed that virtual use MySunrise pre-assessment and F2F do not.
NPT clinic code	Supporting analysis	Unique code for each clinic/session if available?
NPT responsible clinician (anonymised)	Supporting analysis	Clinician responsible for the NPT clinic. This should be an anonymised code.
First SACT treatment date	Core analysis	The date at which the first SACT treatment was received (end of 31 day pathway)
Treatment type	Core analysis	Type of treatment: e.g.: Chemo, IO, Chemo+IO, Chemo+targeted, targeted
Total SACT treatments	Supporting analysis	Total number of SACT treatments that were received (if available)
Treatment end date	Supporting analysis	End date of SACT treatment (if available)

Cancer type	Supporting analysis	What type of cancer the patient has (e.g. breast, head and neck). If there is a sub-type, provide this also.
Cancer stage	Supporting analysis	Stage of cancer at diagnosis.
Patient age bracket*	Supporting analysis	Age brackets in 10-year slots
Patient ethnicity	Supporting analysis	Ethnicity
Patient IMD (Indices of Multiple Deprivation) decile or quintile	Supporting analysis	Decile (or quintile) of the IMD of the postcode of the patient address

Notes on analysing this data:

- Compare two periods: a control period (before MySunrise pre-assessment tools were launched) and a test period (since MySunrise pre-assessment tools were launched).
- Within the test period, also separate out the data for those opting for virtual pre-assessment (using MySunrise) and those opting for it as in-person (or refusing MySunrise). Compare both groups to the control period. If either group has a significantly worse outcome (e.g., longer wait times) than the control group, consider whether the demographic composition of the two groups implies that any health inequalities may be present, and what can be done to address this.
- Understand any key differences between the control and test groups that might contribute to the outcomes being measured. For example, pathway wait times could be affected by an increase in referrals/demand or a change in staff numbers.
- Use the bottom four rows (cancer stage, age, ethnicity and IMD) to understand any impacts (positive or negative) on health inequalities.

Contacts data

To measure the total number of phone calls received by patients receiving SACT (and therefore any reductions to, or improved appropriateness of, incoming phone calls - as indicated in staff interviews).

Phone calls to include: phone calls after decision to treat on SACT (regardless of prior pathways/treatments), and before discharge.

Data field	***Description***
Contact modality	How the contact was received (filter only those that are phone calls or video calls)
Month	Month call was received
Number of contacts	Total number of contacts

This data could be appended to the patient level data (e.g., a field for number of phone calls made).

Controlling for variables that could effect outcomes

Staff on shift

Numbers of staff on shift may vary between periods and may lead to different productivity levels. Analysis of wait times across the two periods may need to be controlled for numbers of staff on shift to improve confidence that any differences observed between the two periods are not attributable to staffing fluctuations.

Data on the number of full-time-equivalent staff employed in SACT cost centres each month can be used to adjust analyses for the number of staff available each month.

Data field	***Analysis type***	***Description***
Staff group	Supporting analysis	Type of staff member (e.g. doctor, nurse)
Staff band	Supporting analysis	Bank of staff member (e.g. band 4)
Cost centre	Supporting analysis	Include and flag only cost centres related to SACT.
Month	Supporting analysis	Month of staff count
Total FTE	Supporting analysis	Total FTE on the payroll in the respective cost centre, staff group, staff band and month.

Patient demand for SACT

Numbers of patients treated may be impacted also by the patient demand, i.e., patients being referred and diagnosed with having cancer and needing treatment. This may be covered by differences in staffing but measures of demand (for example, monthly number with a 'decision to treat') should be reviewed to assess whether this needs controlling for separately.

Appendix C: Questionnaire for MySunrise users

The below questionnaire serves as a foundation but can be adapted to serve the needs and interests of those evaluating. If using this questionnaire, bear in mind the following advice.

- Review the logic model for priority outcomes and indicators and edit the questionnaire as needed, as this questionnaire does not capture all of them.
- Review for service specific questions and adapt if needed
- Text in *italics* is information for the evaluator, not to be included in the survey

Introduction

Before we begin, have you used the MySunrise Cancer Companion app?

MySunrise
Cancer Companion

- Yes
- No (SCREEN OUT)
- Not sure (SCREEN OUT)

(Ask if multi-service, site or centre) Which NHS service are you at? *(Or cancer centre, site, team, pathway)*

- *(List relevant options)*

Which of the following best describes your usage of the MySunrise?

- I have used MySunrise as a patient
- I am a family member of a patient
- I am a friend of a patient
- I am a healthcare worker of a patient
- Other (please specify)

Which of the following best describes your (or your loved one's) usage of the MySunrise app so far?

- Have just downloaded it and not used it much yet
- Used it a little bit so far
- Used it a moderate amount
- Used it a lot
- Not sure/hard to say

And where are you (or your loved one) in your treatment journey?

- Just recently received diagnosis
- Awaiting new patient talk / pre-assessment with clinical staff
- Have had new patient talk / pre-assessment with clinical staff
- Approaching treatment
- Have had treatment
- Not sure/hard to say

Did you require any help to download the app?

- No
- Yes – from friends or family
- Yes – from a member of staff
- Yes – from someone else
- Not applicable to me
- Not sure/hard to say

Did you require any help to access the information you needed in the app?

- No
- Yes – from friends or family
- Yes – from a member of staff
- Yes – from someone else
- Not applicable to me
- Not sure/hard to say

Please note

Some questions in this survey assume a certain level of progress through your cancer journey and/or use of the MySunrise app. If you are at the beginning of your journey, or a question does not feel appropriate to where you are at, feel free to select 'Not applicable to me' to any of these questions.

Reasons for using MySunrise

When you (or your loved one) decided to use MySunrise for your pre-assessment for cancer treatment outside of hospital, how ***important*** were the following factors in your decision to use the app?

COLUMNS:

- Not at all important
- Somewhat important
- Moderately important
- Very important
- Essential
- Not applicable to me

ROWS:

- Not having to travel to and/or park at the hospital
- Avoiding exposure to potential infections at the hospital
- The general ease/convenience
- Receiving standardised information
- Accessing information I could come back to
- Wanting to get the best out of my treatment
- Not being able to come into hospital
- Recommendations from my cancer team

Were there any other reasons for deciding to use MySunrise for your (or your loved one's) pre-assessment? Please specify. *(OPEN-END)*

And now, on reflection, to what extent did using MySunrise meet these needs you identified above?

- Not at all
- Somewhat
- To a moderate extent
- To a great extent
- Completely
- Not applicable to me
- Not sure

And specifically, how ***beneficial*** were each of these aspects for you (or your loved one) in your pre-assessment and/or cancer journey?

COLUMNS:

- Not at all beneficial
- Somewhat beneficial
- Moderately beneficial
- Very beneficial
- Extremely beneficial
- Not applicable to me
- Not sure

ROWS:

- Not having to travel and/or park
- Not having to come into the clinic
- The general ease/convenience
- The quality of information provided in the app
- Being able to come back to information as I wanted

In your own words, what have been the main benefits for you (or your loved one), as a result of using MySunrise? *(OPEN-END)*

Has anything negative happened for you (or your loved one), as a result of using MySunrise? *(OPEN-END)*

Satisfaction with MySunrise

Overall how satisfied are you with using MySunrise for preparing for treatment?

- Completely dissatisfied
- Dissatisfied
- No opinion
- Satisfied
- Completely satisfied
- Not applicable to me
- Not sure

What has gone well about using MySunrise for preparing for treatment? (OPEN END)

What could have been better about your experience using MySunrise? (OPEN END)

How helpful were the following aspects of the app in preparing for treatment? Please select 'Not applicable to me' or 'Not sure' for any you don't recall.

COLUMNS: Very unhelpful, Unhelpful, Neutral, Helpful, Very helpful, Not applicable to me, Not sure.

ROWS:

- The checklist for treatment
- Videos
- Telephone numbers
- Information about symptoms and side effects
- The remote video consultation or follow-up phone call

What was the most helpful aspect of the app in preparing for treatment? (OPEN END)

Impacts of using MySunrise

Is this your (or your loved one's) first treatment for this cancer?

- Yes – first treatment
- No - there have been other treatments for this cancer before this one
- Not sure

To what extent has the information in the app stopped you from doing any of the following?

COLUMNS: Not at all, Somewhat, Moderately, A lot, To a great extent, Not applicable to me

ROWS:

The information in the app stopped me from:

- Searching online for information (outside of the MySunrise app)
- Visiting the hospital for pre-assessment/new patient talks

- Calling or visiting the hospital for any other reason
- Calling or visiting my GP
- Calling 111 or 999 or going to the emergency department

To what extent do you agree or disagree with the following statements?

COLUMNS: Strongly disagree, Disagree, No opinion, Agree, Strongly agree, Not applicable to me, Not sure

- The app provided me with enough information for my (or my loved one's) treatment
- Because of the content in the app, I (or my loved one) feel ready for treatment
- Because of the content in the app, I know what to expect regarding side effects of the treatment

Because of using the app…

COLUMNS: Strongly disagree, Disagree, No opinion, Agree, Strongly agree, Not applicable to me, Not sure

ROWS:

- I am able to read information about the treatment at my own pace
- I feel more in control of the process
- I am able to involve others in the treatment journey
- I feel better prepared for my treatment

How, if at all, has using MySunrise impacted your cancer-related stress or anxiety?

- A lot more stressed or anxious (as a result of MySunrise)
- More stressed or anxious
- No impact
- Less stressed or anxious
- A lot less stressed or anxious
- Not applicable to me
- Not sure

Acceptability of MySunrise

These questions are from a theoretical framework (Theoretical Framework of Acceptability), which helps us to understand how acceptable an intervention is (in this case, the MySunrise app).

Did you like or dislike using the MySunrise app to prepare for your (or your loved one's) treatment?

- Strongly dislike
- Dislike
- Neutral
- Like
- Strongly like
- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

How comfortable was it for you (or your loved one) doing the pre-assessment consultation via remote/video call (as opposed to in-person)?

- Very uncomfortable
- Uncomfortable
- Neutral
- Comfortable
- Very comfortable
- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

How difficult or easy was it for you to download and use the MySunrise app for your preparation for cancer treatment?

- Very difficult
- Difficult
- Neutral
- Easy
- Very easy
- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

How difficult or easy was it for you to do your pre-assessment or new patient talk (video or telephone call) using the app?

- Very difficult
- Difficult
- Neutral
- Easy
- Very easy
- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

Using MySunrise has improved my experience (or that of my loved one) in the cancer pathway, compared to coming into hospital.

- Strongly disagree
- Disagree
- No opinion
- Agree
- Strongly agree

- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

How confident did/do you feel about the content in the MySunrise app?

- Very unconfident
- Unconfident
- No opinion
- Confident
- Very confident
- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

Using MySunrise to help prepare for treatment interfered with other priorities.

- Strongly disagree
- Disagree
- No opinion
- Agree
- Strongly agree
- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

Overall, how acceptable to you was using MySunrise for preparing for treatment?

- Completely unacceptable
- Unacceptable
- No opinion
- Acceptable
- Completely acceptable
- Not applicable to me
- Not sure/hard to say

Comments (optional): *(OPEN END)*

About you

The next questions are about you. We are not looking to identify anyone, rather your responses will help us to analyse and understand the aggregated results.

Which of the following best describes you?

- Female
- Male
- Non-binary

- Prefer to self-describe
- Prefer not to say

What is your age range?

- Under 30
- 31-44
- 45-60
- 61-74
- 75-84
- 85+

What is your ethnic group?

- Mixed or Multiple Ethnic Groups
- Asian or Asian British
- Black, Black British, Caribbean or African
- White
- Other (please specify)

Is English your first language?

- Yes
- No (please specify)

Any closing comments: *(OPEN END)*-

Appendix D: Questionnaire for staff

The below questionnaire serves as a foundation but can be adapted to serve the needs and interests of those evaluating. If using this questionnaire, bear in mind the following advice.

- Review the logic model for priority outcomes and indicators and edit the questionnaire as needed, as this questionnaire does not capture all of them.
- Review for service specific questions and adapt if needed
- Text in *italics* is information for the evaluator, not to be included in the survey

About you

Responses to these questions will not be used to identify anyone, but will help us to understand and analyse the aggregated survey results.

(Ask if multi-service, site or centre) Which service do you work at? *(Or cancer centre, site, team, pathway)*

- *(List relevant options)*

What is your role in the cancer/SACT pathway?

- Administration/bookings
- Nursing staff
- Oncologist
- Management
- Other (specify)

(Show if nursing staff, oncologist or other) Are you involved in delivering SACT?

- Yes
- No

(Show if nursing staff, oncologist or other) Do you complete new patient talks/pre-assessment with patients? (These are talks held with patients before they begin their treatment).

- Yes
- No

Overall perceptions of MySunrise Pre-assessment Tools

If any questions do not apply to your role, please select 'Not applicable to me'.

These questions are adapted from the Theoretical Framework of Acceptability (TFA) that, when all responses are viewed together, will help us understand how acceptable MySunrise Pre-assessment Tools are to staff in your service.

How comfortable do you feel using, promoting or talking to patients about the digital MySunrise Pre-assessment Tools?

- Very uncomfortable
- Uncomfortable
- Neutral

- Comfortable
- Very comfortable
- Not applicable to me
- Not sure

How much effort does (or did) it take to use, promote or talk to patients about the digital MySunrise Pre-assessment Tools?

- Huge effort
- A lot of effort
- Neutral
- A little effort
- No effort at all
- Not applicable to me
- Not sure

In your opinion, to what extent do the digital MySunrise Pre-assessment Tools impact on health inequalities for patients?

- Strong negative impact (using the tools risks excluding people)
- Negative impact
- Neutral
- Positive impact
- Strong positive impact (using the tools helps reduce inequalities)
- Not applicable to me
- Not sure

Comments (optional): *(OPEN END)*

The MySunrise Pre-assessment Tools improve outcomes and experiences of people with cancer.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Not applicable to me
- Not sure

How confident do you feel about the content included in the digital MySunrise Pre-assessment Tools people with cancer and their families?

- Very unconfident
- Unconfident
- Neutral
- Confident
- Very confident
- Not applicable to me
- Not sure

Implementing the MySunrise Pre-assessment tools has interfered with my other priorities

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Not applicable to me
- Not sure

How acceptable is the program to you?

- Completely unacceptable
- Unacceptable
- Neutral
- Acceptable
- Completely acceptable
- Not applicable to me
- Not sure

Please share more about your answers *(OPEN END)*.

Implementing MySunrise Pre-assessment Tools into practice

When you use, promote or talk about MySunrise Pre-assessment Tools, how familiar does it feel?

- Not at all
- Not a lot
- Somewhat
- Moderately
- Completely
- Not applicable to me
- Not sure

Do you feel MySunrise Pre-assessment Tools are currently a normal part of work?

- Not at all
- Not a lot
- Somewhat
- Moderately
- Completely
- Not applicable to me
- Not sure

Do you feel MySunrise Pre-assessment Tools will become a normal part of work?

- Not at all
- Not a lot
- Somewhat
- Moderately
- Completely
- Not applicable to me
- Not sure

What has gone well about the implementation of MySunrise Pre-assessment Tools? *(OPEN END)*

What could have gone better? *(OPEN END)*

Impact on patients

What impact has MySunrise Pre-assessment Tools had on **patients** that have used it? Please select the extent to which you agree or disagree with the following statements.

If you don't feel you can answer, please select 'Not applicable to me' or 'Not sure'.

COLUMNS: Strongly disagree, Disagree, No opinion, Agree, Strongly agree, Not applicable to me, Not sure

ROWS:

As a result of using MySunrise Pre-assessment Tools:

- Patients are better informed about their treatment
- Patients come to treatment better prepared
- Patients are better able to self-manage outside of hospital
- Patients are better able to involve their family members in their treatment journey
- Patients have a better understanding of how to access the service

Please share more about your answers *(OPEN END)*

Impact on you and your practice

What impact has MySunrise Pre-assessment Tools had on **you and your practice?** Please select the extent to which you agree or disagree with the following statements.

If you don't feel you can answer, please select 'Not applicable to me' or 'Not sure'.

COLUMNS: Strongly disagree, Disagree, No opinion, Agree, Strongly agree, Not applicable to me, Not sure

ROWS:

As a result of the MySunrise Pre-assessment Tools:

- I am better able to manage the demands of SACT pre-assessment / new patient talks
- MySunrise Pre-assessment Tools have helped my practice
- MySunrise is another thing to think about (adds time)

Please share more about your answers *(OPEN END)*

Impact on your team or service

What impact has MySunrise Pre-assessment Tools had on **your team or service?** Please select the extent to which you agree or disagree with the following statements.

If you don't feel you can answer, please select 'Not applicable to me' or 'Not sure'.

COLUMNS: Strongly disagree, Disagree, No opinion, Agree, Strongly agree, Not applicable to me, Not sure

ROWS:

As a result of the MySunrise Pre-assessment Tools:

- As a team we are better able to meet the patient demand (numbers) requiring SACT
- We are able to make patient information more standardised and consistent
- We can save and reallocate time within the team(s)
- We are able to allocate tasks more effectively among staff

Please share more about your answers. *(OPEN END)*

General feedback

What have been the main benefits of using MySunrise Pre-assessment Tools, for patients, their families and staff?

- Patients *(OPEN END)*
- Family members and loved ones *(OPEN END)*
- Staff *(OPEN END)*

Have there been any drawbacks of using MySunrise Pre-assessment Tools, ethical concerns or other unintended negative consequences? Please describe if so. *(OPEN END)*

How could the implementation of MySunrise in your service better support positive outcomes? *(OPEN END)*

Thank you

Thank you for your time. Any final reflections (optional): *(OPEN END)*

Appendix E: Staff discussion guide

The below discussion guide serves as a foundation for semi-structured interviews, but can be adapted to serve the needs and interests of those evaluating. Bear in mind the following advice.

- Review the logic model for priority outcomes and indicators and edit the guide as needed
- Review for service specific questions and adapt if needed
- Text in *italics* is information for the evaluator

Staff can include:

- Oncologists
- Nursing staff
- Admin booking staff

Not all questions will be asked – semi-structured interviews are flexible and the discussion can go in different directions.

Section 1: opening questions and background

- Tell me about your role - at work and within SACT
    - *Do they work in chemo/Immuno/non discriminative?*
    - *How does their team work with/across the other SACT teams?*
    - *How long they have been there*

We'll go into detail about the way MySunrise Pre-assessment Tools are used, any benefits it has brought and any areas for improvement. But first...

- Can you tell me from your perspective why MySunrise Pre-assessment Tools were originally brought into your service? *Probes:*
    - Was there a burning need for change?
    - What context were you operating in at that time? (workload, casemix)
    - What was MySunrise Pre-assessment Tools intended to change?
    - Were you / Do you feel the team was in agreement with the vision?
- Can you tell me about how MySunrise Pre-assessment Tools work from your perspective – in your role? *Probes:*
    - What do you use it for?
    - How often/much?
    - When did you start using it?
    - To what extent do you rely on it for certain parts of your role? Which parts?
- Can you tell me about how MySunrise Pre-asessment Tools work – within your team, pathway, treatment? *Probes:*
    - What is different about SACT pathway now?
    - How does it work within your team?
    - How do different teams within your service work together to deliver SACT?
    - Do colleagues use it consistently?

At the end of this section, if not already clear, get a sense of what parts of MySunrise they are familiar with / will be talking about for remainder of the interview. In any following questions, clarify which of these aspects they are talking about if not clear. Probe around either aspect if missing from their response.

Section 2: Implementation of MySunrise Pre-assessment Tools

- How do you feel the implementation of MySunrise Pre-assessment Tools has gone at your service?

Probes: What went well? What went not so well? *Probe in more detail as to why this is the case.*

- What barriers or problems did you face in implementing, promoting or using MySunrise Pre-assessment Tools?

Probes: Were there any barriers to specific elements? *(Raise elements described earlier if applicable)*

- What are the key things that contributed to MySunrise Pre-assessment Tools working and/or being implemented, promoted or used successfully?

Probes: Remind about any specific elements? (raise elements described earlier if applicable)

- Did you receive any support or training to implement, promote or use it? *Probes:*
    - Support received by, or given to, others in your service
    - Support received by MySunrise or others externally
- Did you provide any (training or support)?
- Have you had to adapt how you implement, promote or use MySunrise, as you have become more familiar with it?
    - Why did you make this adaptation? What were the consequences?
- Has using MySunrise Pre-assessment Tools affected your working practice? If so, how?

Probe: Has your decision-making in your role changed because of using MySunrise Pre-assessment Tools? If so, how?

- Do you have any concerns about patient safety or patient experience when promoting or using MySunrise Pre-assessment Tools? *Probes:*
    - If so, how do these influence care delivery and safety?
    - Do your colleagues share these concerns?
- Has anything else that we have not discussed made a difference to how you and your colleagues have used MySunrise Pre-assessment Tools?

Probe: E.g., time, resources, clinical governance, wider NHS governance, IT governance

- What would it take for MySunrise Pre-assessment Tools to become business as usual at your service? (if it isn't already)
- When you are adopting a new service in cancer service delivery, what processes do you use to help it become business as usual? (*Probes:* evaluation, business case)
- What would help you to continue (or start) to use MySunrise Pre-assessment Tools effectively?

Section 3: Impact

- In your opinion, has MySunrise Pre-assessment Tools generated any benefits for:
    - Patients (and/or their families or loved ones)
    - Staff
    - Cancer services
    - Anyone else?

Probes: for each outcome raised, probe as to how MySunrise Pre-assessment tools supported this to occur

- In your opinion, has MySunrise Pre-assessment Tools had any negative consequences for:
    - Patients (and/or their families or loved ones)
    - Staff
    - Cancer services
    - Anyone else?

Probes: for each outcome raised, probe as to how MySunrise Pre-assessment tools supported this to occur

- How does it compare to what it was like before using these tools?
- Would you like to continue to use MySunrise Pre-assessment Tools? Why?

Thank you. Is there anything else you would like to add? Or any recommendations you would like to make that could help to successfully implement MySunrise Pre-assessment Tools? This could be about how it has gone, the future of the service, or anything else.

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