Streamlining Cancer Service Capacity

Systemic Anti-Cancer Therapies Case Study Report

Systemic anti-cancer therapies (SACT) are treatments patients receive for their cancer, including chemotherapy and immunotherapy.[1] The National Disease Registration Service (NRDRS) maintains a dashboard for England which reports the total number of patients being treated with SACT, the number of new patients being treated with SACT, and overall administrations of SACT.

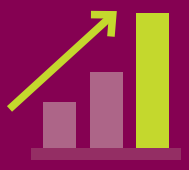


These datasets are showing rising demand for SACT in England, driven both by growing diagnoses and an increase in treatment options available to patients.[2] While this is a good challenge to have, it is still a source of pressure for cancer services and patients alike.

This report was was initiated, funded and developed by AstraZeneca. A draft of Case Study 1 was shared with MySunrise for input and review, however editorial control of the document remained with AstraZeneca. The report explores the impact of rising SACT demand in England, outlines current initiatives focused on creating further capacity in the system and highlights two case studies covering initiatives in practice.

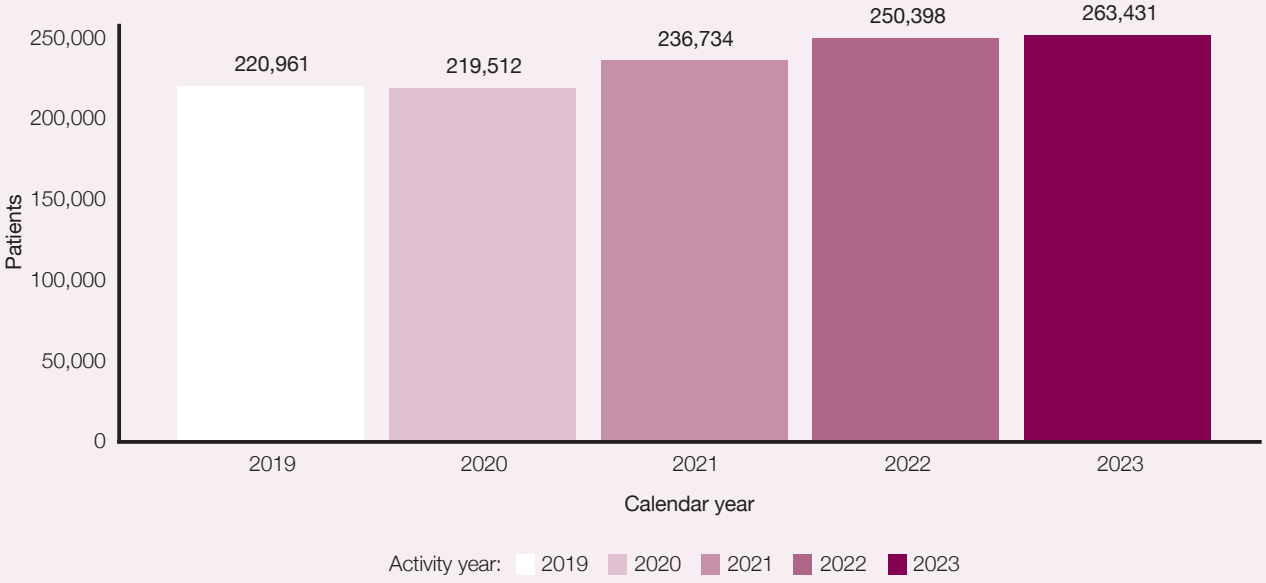
The challenge

There has been a significant rise in demand for SACT in recent years. In England, the number of unique patients treated by calendar year with SACT has steadily increased from 220,961 in 2019 to 263,431 in 2023, a total increase of 14%, averaging 3.4% annually.[2]



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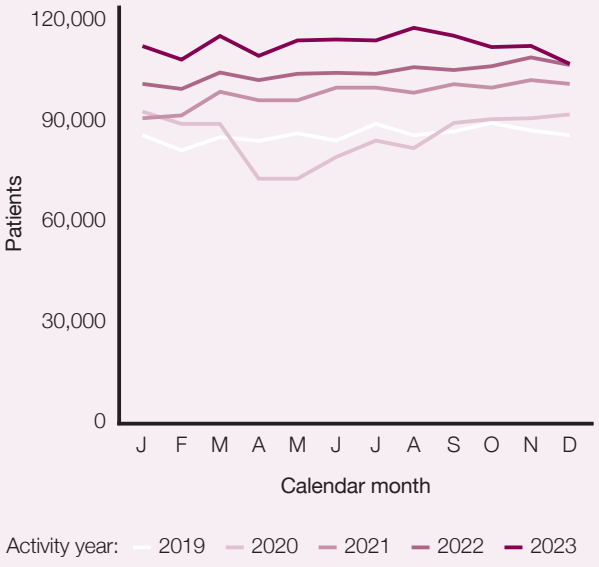
Figure 1:
Activity totals in England by calendar year



SOURCE: National Disease Registration Service, NHS England

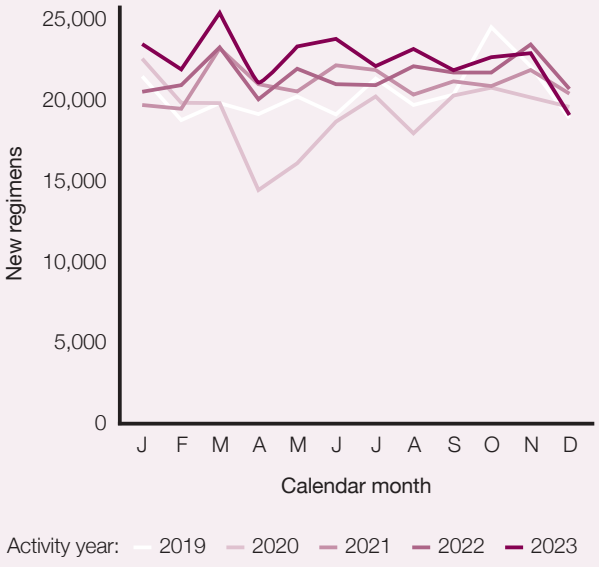
Delivery of doses is increasing at 6-8% per annum,[3] which is not exclusively driven by new diagnoses but also by patients who are living longer on more lines of treatment. Comparing month to month activity totals by unique patients and new regimens, each calendar month from February 2021 has set a new record for unique patients on SACT, but the monthly count of new regimens varies significantly over the same period:

Figure 2:
Total unique patients by month and year



SOURCE: National Disease Registration Service, NHS England

Figure 3:
Total unique new regimens by month and year



SOURCE: National Disease Registration Service, NHS England

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This demonstrates that the increasing demand – and therefore growing pressure on capacity – is being driven by two factors. Firstly, record numbers of patients are being treated for cancer, with over 1,400 patients starting cancer treatment per working day.[4] This trend is expected to continue – cancer diagnoses are projected to rise by one third by 2040, driven by an ageing population and a higher cancer incidence due to lifestyle factors.[5]

Secondly, the treatments available for cancer today are more effective than ever. Increasing survival rates are very welcome news, as patients have more time with their family and loved ones, and an increasing number are able to return to their pre-diagnosis lives. These more effective treatments mean that patients are remaining well enough to continue to be treated for longer than before, and are able to move on to more lines of subsequent therapy if their cancer does return.[6]

Increasing SACT activity can therefore act as a barometer for the NHS's overall performance on cancer diagnosis and treatment. However, we need to ensure the system is properly equipped to deal with this increased demand and treat patients in a timely manner. A recent survey of specialist cancer centres across the UK found that nearly half of centres (47%) had weekly delays in administering SACT in 2023, compared to 28% in the previous year.[7] The Royal College of Radiologists (RCR) recently investigated the challenges oncology departments are facing in delivering SACT to patients, and found the following challenges, amongst others, are leading to delays for patients:[8]

- **Workforce shortages** – Vacancies for qualified staff, particularly pharmacy, nursing and medical, are restricting oncology departments' ability to deliver treatment within the recommended timeframe. 88% of cancer centre heads of service are concerned about workforce shortages delaying patients starting treatment

- **Inadequate planning tools** – There is an absence of a publicised process to alert trusts to new treatments, and capacity planning tools that would assist them in managing resources to support the delivery of new innovations to patients

- **Data quality** – SACT waiting time data is not granular enough to inform capacity planning. It could, for instance, break down curative and palliative treatment and reporting time from surgery to SACT for adjuvant therapies. Better data quality would allow for better benchmarking and sharing of good practice

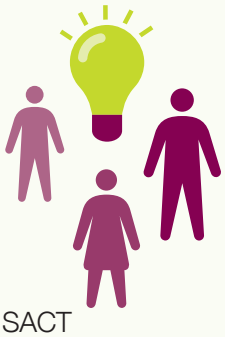
- **Funding arrangements** – New treatments are not supplied with an equivalent funding package for services to expand capacity accordingly. NHS England has now returned to pre-COVID funding arrangements, which are based on the volume of treatment delivered by services. This should, in theory, mean an increase in activity should attract additional funding. In practice, however, this is not being felt on the frontline and there continues to be a mismatch between funding and demand

In some cases, heads of service have reported that capacity challenges have led to difficult decisions over whether to withdraw access to Cancer Drugs Fund-approved treatments, or prioritise which patients can receive treatment within optimal timescales.[9] Action therefore needs to be prioritised to manage the impact of increasing demands on SACT capacity, ensure that services can meet patients' needs and end the postcode lottery in access to SACT.



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Current initiatives focused on increasing capacity



In recognition of these challenges, there are a variety of initiatives underway, both nationally and in local areas, to reduce the short to medium term impact of growing demands on SACT services:

1. **SACT dashboard data –** The NHS, through the NRDS, collects and publishes SACT activity data covering hospitals in England,[2] and Public Health Scotland also maintains a dashboard of SACT data covering Scotland.[10] In addition to a count of SACT activity by patients, regimens and drug administrations that are viewable at England, Cancer Alliance and Integrated Care Board (ICB) level, the dashboard allows breakdowns on tumour and treatment characteristics, as well as patient demographics. Updated on a monthly basis, the publication of this data is intended to support the planning and commissioning of cancer services, while also assisting in highlighting any areas of potential concern

2. **National SACT protocols –** SACT protocols provide guidance on the prescribing and administration of treatments for healthcare professionals (HCPs). HCPs use these protocols to ensure treatments can be safely delivered to patients. Though consent forms have already been standardised at a national level, protocols have not, meaning work has to be duplicated across across the country, leading to an estimated cost of £1.1 million to £1.8 million in staff time annually.[11] The NHSE SACT Capacity Task and Finish group is exploring the development of national protocols, meaning that when new drugs are approved, off the shelf protocols would be made available rather than centres being required to use time and resources to write up their own

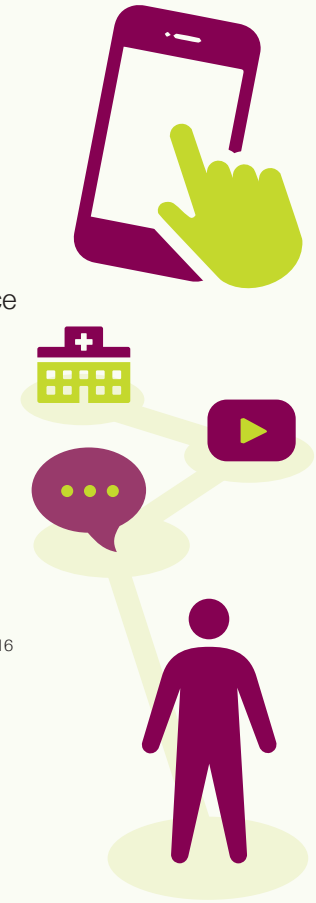
3. **NICE resource impact modelling –** NICE publishes, on a monthly basis, a resource planner covering all guidance that it is due to publish, including links to resource impact estimates associated with implementation. Recently, these estimates have included the capacity impact that could be associated with the updated guidelines, including modelling the impact on diagnostic, pathology and pharmacy colleagues – setting out both the time and financial impact over five years of future practice. Service leaders have described these tools as important for enabling systems to adopt proactive approaches to forthcoming guidance[12]

4. **Cancer Alliance SACT demand modelling –** Cancer Alliances are undertaking modelling to better understand how growing demand is impacting on SACT services within their local areas, in an effort to make effective recommendations to improve services. For example, Wessex Cancer Alliance – with the support of a pharmaceutical company's Capacity Insight Tool[13] – undertook such an analysis, collecting data from six SACT units covering SACT activity, patient treatment profiles, workforce data and existing resource. The project found that all six SACT units would not have enough capacity or workforce in 12 months' time to meet demand, with half of them already at maximum capacity. As a result of these findings, the Cancer Alliance is working to facilitate a proof-of-concept project for an end-to-end SACT service that incorporates pharmacy aseptics and SACT nursing support[14]

Given the extent of the pressures facing services, its vital that good practice being deployed in local areas is identified, and scalable solutions are rolled out nationally. Below are two case studies of solutions being implemented by Cancer Alliances to improve capacity in their areas.

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Case study 1
MySunrise



MySunrise is a cancer companion app, developed in partnership with the NHS, that is designed to support patients throughout each step of treatment at their respective local NHS cancer centre. MySunrise was initially launched as a pilot in 2018 at Royal Cornwall Hospital, before being rolled out to all cancer centres across Devon and Cornwall in 2020 in a partnership with Peninsula Cancer Alliance and now being more widely adopted in the West Midlands.

The app, provided to cancer patients and their families for free at the beginning of treatment, supports patients throughout treatment while reducing the need for patients to contact or visit unnecessarily. Information from national resources on what treatments involve, side effects and symptom support is curated with information relevant to the patient's individual treatment and local cancer centre, providing a one-stop shop of videos, relevant links and resources specific to their own experiences.[15] This support includes information on prehabilitation and types of treatments, while also reducing the length of time spent to start drug therapies,[16] freeing up capacity in the service. MySunrise also supports access to virtual consultations, and further digital support.

Case study capacity impact

In addition to reducing anxiety for patients by helping them to feel more in control throughout treatment, the app's digital first approach has reduced the strain on resources across cancer services – information as granular as directions to local buses that serve the cancer centre is included in content, reducing the need for patients to contact centres directly and freeing up staff time for other duties. It is estimated the use of the app can realise £156,000 potential annual benefits for an NHS Trust, per 1000 patients.[17]

A recent assessment of a project[18] utilising MySunrise for SACT pre-assessment – developed as part of a collaborative working agreement between Peninsula Cancer Alliance and a pharmaceutical company[18] – found that a total of 116 hours of nurse time (60 minutes per virtual appointment) were saved over the project's initial six months. This nursing time saving was reinvested into other parts of the pathway to reduce SACT waiting times, releasing capacity and pressure on workforce. The assessment found that patients, and their families and caregivers, were better informed when receiving SACT pre-assessment with MySunrise, improving engagements with nurses. The out of hospital digital approach during the project also reduced travel costs for patients and exposure to airborne infections by helping to keep vulnerable patients out of acute hospital.



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Case study 2

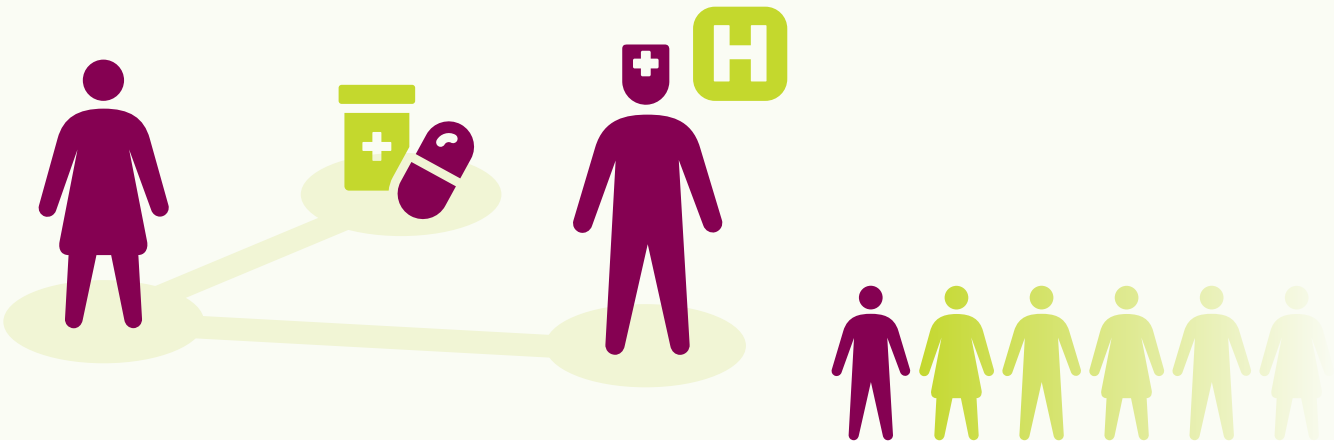
East of England Cancer Alliance SACT delivery projects

In 2022, East of England Cancer Alliance warned that there was a significant risk to the ongoing provision of oncology services to patients – oncologists, pharmacists and nurses were reporting that cancer services were struggling to keep pace with the increasing number of, and demand for, new treatments.[19] An audit of tumour site specific leads found that breast services were particularly exposed to capacity constraints, and consultants at one service warned they were vulnerable to ethical and legal consequences in the event they were unable to offer NICE approved therapies.[19]

Given these findings, the Alliance adopted new ways of working, to mitigate the impact of increasing demand for SACT across providers. The new ways of working recommended new pathways focused on capacity saving initiatives in the delivery of SACT, including:[20]

- **Patient self-administration of appropriate SACT –** The vast majority of SACT used in East of England Cancer Alliance is initiated and prescribed in outpatient clinics. While oral SACT is self-administered by patients at home, subcutaneous treatments were mostly delivered as day case treatments through a 'two-stop model': patients would attend clinic for review and return the following day for treatment.[20] The Alliance identified in its ways of working review that exploring patient self-administration at home of appropriate subcutaneous treatments could reduce these visits and create greater flexibility in staff time. East & North Hertfordshire NHS Trust implemented a new framework for the self-administration of subcutaneous SACT by patients or carers in their home – patients fulfilling clinical treatment regime and logistical requirements are eligible for training on the self-administration of their treatment.[21] In addition to the capacity saving benefits for the system, patients benefit from being able to undertake their treatment in a familiar and comfortable setting

- **Nursing and pharmacist-led clinics –** Optimisation of the existing nurse and pharmacist workforce was identified as a priority area to mitigate the short-term impact of workforce shortages – it was estimated that approximately 50% of total SACT prescribing activity could be undertaken by these professionals, reducing clinician workload.[20] The Princess Alexandra Hospital – located within the East of England Cancer Alliance footprint – has since implemented a nursing and pharmacist led clinic for patients with ER positive HER2 negative metastatic and adjuvant breast cancer patients receiving SACT.[22] These clinics replaced the monthly to three-monthly consultant clinics patients would attend to review their treatment, and are delivered by the Lead SACT Nurse. Moving to a nursing-led clinic approach in this instance frees up consultant time to review more complex cases in a timelier fashion, and release clinic slots for new patients to be reviewed[22]



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Recommendations

1. Good practice is being demonstrated by local systems – national action, for example through the NHSE SACT Task and Finish Group, should match this effort by enabling the roll-out of off-the-shelf solutions that unlock capacity savings
2. NHSE should establish a clear framework for partnerships between NHS and the life sciences industry to facilitate system preparedness for new SACT innovations, complementing the work being done by NICE
3. Further opportunities for staff, such as nurses and pharmacists, to deliver more aspects of cancer treatment should be evaluated and implemented across the country
4. To address current challenges, and future proof SACT capacity against the projected continued rising demand, the Department of Health and Social Care should assess current SACT assessment – both revenue and capital spending – to ensure that the resources required to deliver ambitions to transform cancer outcomes are available now and going forward





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