

Chemotherapy service pathway and provision for Systemic anti-cancer therapies (Review of the current SACT) across Lancashire and South Cumbria Cancer Alliance

Project Outcomes Report

1.0 Project Aim

The project aims were to:

- Define the Optimum Pathway for Chemotherapy treatment reflecting end to end improvements (as required) and where applicable, treatment closer to home with a focus on addressing areas of unwarranted variation.
- Review and enhance the delivery of treatment across Lancashire and South Cumbria, exploring opportunities for a system wide, standardised operating model.

2.0 Project Objectives

The project objectives were:

1. To conduct a service evaluation to see how patients are accessing the service, the time they are waiting at each stage of the pathway especially in terms of receiving treatment and at which NHS organisation they are receiving consultations versus where they live
2. To ensure equity of pathway access, provision, and experience for patients in Lancashire and South Cumbria through reductions in unwarranted variations in care.
3. Look at potential improvements to the pathway to improve the experience and care received by the patient.
4. Look at potential improvements to the pathway to improve system capacity and reduce the amount of time patients are spending in hospital to receive their treatment
5. Develop an options appraisal for trust partners to ensure that the service is prepared for new and future demands.

We assessed the effectiveness and impact of this project through the measurement of the following.

- Distance and travel time by patients for appointments and treatment from a specialist.
- Where patients are being consulted and treated in terms of NHS organisation.
- The time which a patient is spending in the pathway compared to the baseline.
- The time patients are spending in hospital, to receive treatment.
- Waiting times for patients to be prescribed and initiated on SACT therapy.
- How and where patients are receiving treatment in relation to where they live.
- Patient satisfaction based on their service experience.

3.0 Project Outcomes and Benefits

The expected outcomes and benefits of the project were:

For Patients:

- Patients might expect more equitable and consistent care as well as improved and quicker access to care.
- Patients can expect to spend less time in hospital.
- Patients will have better access to treatment options with the appropriate treatments being made more convenient for patients.
- Better experience of the system and overall, better patient experience.
- We would expect patients to be treated at the most appropriate centre that is closest to their place of residence.

For Lancashire Teaching Hospital NHS Foundation Trust / local CCGs:

- Better and more efficient patient pathway for SACT administration across the Lancashire and South Cumbria area
- Reduced wait times and increased capacity within the Chemotherapy, therapy pathway.
- Potentially, increased number of patients assessed and potentially treated in a timelier manner.
- Better understanding and knowledge of SACT treatment among local HCPs
- Ensure processes in chemotherapy are standardised and safe.
- Increased engagements with appropriate patients to provide additional support and education.

For Sanofi:

- A better understanding of the chemotherapy service and pathway across the Lancashire and South Cumbria area
- Greater understanding of the needs of the customer in chemotherapy
- Improved reputation with relevant NHS organisations across the Lancashire and South Cumbria area
- As Sanofi produce medicines in this area, if overall patient care is optimised there may be an increase in the usage of these in line with local and national guidance.

4.0 Project Implementation

The Joint Working Project commenced in February 2022. The key milestones delivered in implementation of the Project are as follows:

- February 2022- Developed Project Plan to set out and monitor delivery of the aims and objectives of the Project.
- February 2022 - Established Project Steering Group to oversee delivery of the project and agree project plan. Monthly meetings of Project Steering Group were held to review project delivery.
- March 2022 – interviews undertaken with staff to gather insights into the service and identify issues.
- March/April 2022 – Mapped the patient pathway process at high level & detailed level.
- April 2022 – Sourced data report from chemotherapy database to review current activity and identify unwarranted variation.
- May 2022 – Co-ordinated audits on bloods, pre-assessment, Immuno-Oncology (IO) telephone clinic & proactive patient wait times.
- May 2022 - Shared initial findings with the Steering Group which supported the submission of applications for additional funding from the Cancer Alliance for additional staff.
- June 2022 – Identified SACT treatments that could be outsourced (e.g., Bisphosphonate bone strengtheners) freeing up chair capacity.
- July 2022 - Service Manager in process of developing business case to secure on-going funding from the Hospital Trust for the Phlebotomist role.
- July 2022 – Patient survey conducted, and results analysed.
- July 2022 – Staff survey conducted, and results analysed.
- August 2022 – Project closed, and Project Update and Options Appraisal shared with the Chemo Group.

5.0 Project Outputs and Outcomes

The table below outlines the key objectives and outcomes the project set out to achieve and provides a summary of how the project has performed against these.

Mapping the Pathway

Interviews were held with 15+ Healthcare Professionals and other stakeholders involved in the delivery of the service and pathway. These were aimed at building an accurate description of the pathway and an exploration of the steps within the pathway.

The findings from the interviews were reported to the Chemotherapy Group. The key findings were:

- Discussions have highlighted opportunities in the service – particularly the underutilisation of other sites in the trust. However, staff to cover both sites is an ongoing issue.
- It is not possible to increase the capacity levels within certain services and this is primarily due to a shortage of experienced specialist personnel.
- They have also highlighted a need for standardisation & simplification.
- There is a variation in patient experience and management and the level of this variation needs to be assessed.
- For the pathway to operate more efficiently and in a timely manner pressure needs to be relieved via improvements in initial patient entry and flow. This is where the greatest variation and opportunity lies.

General areas to explore further are the following based on the pathway mapping:

- Patient treated in the service overall in terms of travel time to access the service.
- Pre-assessment
- Bloods
- Variation in patient care e.g., only 60% of urgent patients seen over 4-week audit period.
- Telephone IO clinic
- Bisphosphonate bone strengtheners, an opportunity to deliver to patients in another way.

Patients treated in the service overall:

Jan-Mar 2022 - 1496 patients treated in Preston & Chorley

324 patients (20%) are from outside Preston & Chorley

178 patients on greater than cycle 3

44 patients are on single agent IO.

Of which **35** are Melanoma patients (mainly from Morecambe area)

****Options appraisal suggestion –***

- *explore the possibility of treating patients closer to home based on the individual patient case and concurrent treatments. Start with the 44 patients.*
- *Can an alert be set to flag what stage the patient is at in the cycles?*
- *An alert system? Ability to flag breaches for urgent, soon & routine?*
- *Melanoma patients are a big cohort that are travelling from outside the area, this also came out from the patient survey, can these patients be treated more locally?*

Pre-assessment:

An audit was carried over a 4-week period 20th June 2022 onwards showed the following key findings:

9 - Patients received a formal pre-assessment

92 - Patients received no official pre-assessment so extra time required on day of treatment.

Analysis of nurse time:

Total additional time associated with unarranged pre-assessment over the 4 - week audit period (hours)	46 hours
Additional nurse workdays used because of unarranged pre-assessment (full nurse working day assumed as 12-hours) during the 4-week audit period*	3.8 days
Total potential unused chair time because of unarranged pre-assessment (hours) during the 4-week audit period	46 hours
Cost of unarranged pre-assessment based on band 6 hourly rate per year	£14,968 (46 hours per month)
Cost of unarranged pre-assessment based on band 5 hourly rate per year	£12,020 (46 hours per month)

	Minutes	Hours	Patients per Month	Patients per Year	Hours per Year	Annual Cost	Hourly cost	Total cost of Pre-Assessment Clinics
Band 5	50	0.833333	92	1,104	920	£39,200	£20.10	£18,494
Band 3	40	0.666667	92	1,104	736	£26,693	£13.69	£10,075
					1656			£28,569
Band 6	30	0.5	92	1,104	552	£48,804	£25.03	£13,815

* Almost 1 week in every month is utilised with staff compensating for patients who have not had a dedicated pre-assessment slot. Therefore, taking up chair time. In, addition this will lead to deferrals and loss of chair time.

*Options appraisal suggestion –

- **a dedicated team to ensure pre-assessment takes place with a structured booking system and a dedicated scheduler.**

Additional recommendations around pre-assessment:

- **Patients should be having a pre-assessment with time specifically for that and not on the day of starting chemotherapy which is what is happening currently. The biggest impact the wait times because the chair is being taken up by a patient having a pre-assessment on the treating floor.**
- **The waiting times is the impact, inefficient use of space and chair time.**
- **Time taken for a pre-assessment should be given further consideration to look at how this could be made more efficient to support patients through the system in a timely manner.**
- **Staff are under pressure and there is a potential link with moving patients out of the service (bisphosphonate bone strengtheners and single agents as an example). This could free up capacity and resource to improve the pre-assessment service.**

- *Continue the audit on pre-assessment numbers to track what is happening, review 3- and 6-month intervals. To measure an improvement and decline, see if any changes are having an improvement.*
- *The booking in for pre-assessment is still paper based – can this be made electronic? If its electronic there will be less errors and potential for less patients turning up.*
- *An alert to say when a patient due to start treatment – have they had a pre-assessment? This could help to quickly identify patients that are coming through the chemotherapy unit and have they had a pre-assessment.*
- *This above shows 46 hours' time taken up that could be used delivering chemotherapy.*
 - *This is costing £14,968 of band 6 time.*
 - *Cost of employing one full time band 5 and one full time band 3 would be £28,569, almost equivalent to the time being spent inappropriately by the band 6 team doing un-prearranged pre-assessment.*

Bloods

Audit carried out over a 4-week period showed issues with bloods which is having huge ongoing implications in the ongoing scheduling of chair time.

Preston - **35** patients had bloods done the same day. **40** patients had bloods repeated. Total of **75** patients

Chorley - **20** patients had bloods done the same day. **14** patients had bloods repeated. Total of **34** patients

In total across both sites in the 4-week period **109** patients needed bloods doing the same day or repeating.

The patient survey showed most patients did not have a problem with getting bloods done, but interviews with staff have identified this as a problem which impacts on patients by causing delays in starting or continuing treatment.

Most patients have bloods done in hospital, where do the results go? This needs further exploring.

**Options appraisal suggestion:*

- *Employ dedicated Phlebotomist on the chemo unit?*
- *They do have a weekend phlebotomy service that is just used for inpatients. Can they explore an expansion of this service to offer this for outpatient care at the weekend?*
- *Patients are not always aware they need bloods repeating for the second cycle - better education needs to be in place to ensure bloods are taken for the second cycle and beyond.*

Patient variation in care:

The initial findings showed that there was a variation in the amount of time patients are seen when looking at national guidance.

Urgent - **60%** of patient received their chemo within 7 days.

Range - 1-10 days Median - 7

Soon - **78%** of patient received SACT within 14 days.

Range – 5 - 16 days Median - 13

Routine - **81%** of patients received SACT within 21 days.

Range 10 – 47 days Median - 19

Therefore, exact date on prescription - **89%** of patient received SACT within 21 days.

Staff felt that this is insufficient, patients need to be seen in a timelier manner.

****Options appraisal –***

- ***This linked to capacity, changing where patients receive their treatments and what type of treatments are given (e.g., Bisphosphonate bone strengtheners) should free up the capacity to solve this issue.***

Telephone IO clinic:

The IO telephone follow up clinic is every Tuesday and there are 15 slots available from 10.00am – 13.30pm (every 15mins). The following data demonstrates how this is being underutilized as a service and could help reduce patients having to visit hospital.

Between 31st May 2022 and 30th June 2022 – Only 8 calls were taken on the phonenumber.

Options appraisal suggestion –

- ***The team to gather further insights and look to make a member of the chemo team accountable for the referrals and criteria of patients eligible for this service.***
- ***Is the current process fit for purpose?***
- ***Better awareness and communication of the service?***

Patients on Bisphosphonate bone strengtheners:

Jan - March 2022 - **294** patients treated in Preston & Chorley

180 patients on greater than third treatment cycle

9 patients on greater than 10th treatment

258 adjuvant breast patients as a single agent post or without chemotherapy.

243 Preston patients

15 Patients out of area

****Options appraisal suggestion:***

- ***Potential options to treat elsewhere – community, home delivery options?***
- ***Any other treatments taking up chair time that could be outsourced?***
- ***Can this help address the urgent referrals and capacity issues?***
- ***Can an oral alternative be used?***

Staff Survey – Difficult to extract any clear findings from this due to the low response (6 responses)

****Options appraisal suggestion –***

- ***conduct a further staff survey in 3 months when staff numbers have increased.***
- ***Additionally, make it clearer that engaging with the surveys will encourage collaborative decision making.***

Patient Survey – key findings:

- Nearly 50% patients treated who travelled from non-Preston post codes – this was within the last 4 weeks. Previous data taken from the chemotherapy database report was Jan – March.
- Only 3 patients said they have forgotten to get bloods taken which contradicts the audit data from the chemotherapy unit.
- 4 patients said the reason for blood repeats is due to abnormal bloods results.
- The results of the patient survey do not reflect the operational issues within the service around bloods.
- Some patients misunderstood the question around when treatment should start. They interpreted it as from arriving in hospital not from diagnosis or referral. Rewording of the question may gather a better understanding of the patient's thoughts if the survey is to be carried out in the future.

7.0 Challenges and Issues:

The project identified the following challenges and issues in the delivery of the SACT service:

- Staff turnover and retention
- Not having a dedicated scheduler on the chemotherapy unit which means that staff are using time to do this job that could more valuably spend doing other tasks.
- Blood monitoring causes ongoing problems such as an increase in deferral of treatment which leads to patients not receiving chemotherapy as planned or subsequent appointments being delayed or missed.

8.0 Key findings from the project:

Several key findings from the project were learned in relation to the SACT service that would be valuable for other hospitals to know if they were to explore a similar pathway transformation:

- The importance of having dedicated scheduler on the chemotherapy unit with time devoted to co-ordinating bloods, chair time and pre-assessment.
- Pre-assessment and implications on staffing and resource this leads to 'burn out' and maybe contributing to the high staff turnover.
- Utilisation of the IO Telephone clinic – further exploration as to why this has not been utilised effectively.
- The issues of bloods either being repeated or not being taken causes huge ongoing implications in the service.
- Bisphosphonate bone strengtheners patients and potential options to treat elsewhere in community or home delivery options.
- Are there any other treatments taking up chair time that could be outsourced?
- Inefficiency of current processes such as pre-assessments and bloods were having an impact on capacity within the service.
- There are certainly strains on the unit to handle the volume of patients particularly at the front end of the pathway and there are delays in the flow of patients through the pathway particularly for "Urgent" patients. It is

unlikely that capacity issues can be resolved quickly without a major input of resource and expertise. In the absence of this Urgent, Soon and Routine patients should be the focus of attention.

9.0 Next Steps:

An Options Appraisal has been produced setting out recommendations to improve the service. A key next step is to agree to recommendations to and to put in place the required actions to implement the following recommendations:

- Establish a dedicated pre-assessment service.
- Development of a system to improve the co-ordination of appointments for bloods and patient review.
- Develop business case to employ a dedicated Phlebotomist to ensure the completion of bloods prior to scheduled treatments.
- Exploring opportunities to reduce the variation in care and travel time by repatriating appropriate patients to Trusts closer to home.
- Transfer bisphosphonate bone strengtheners patients to free up capacity and chair time within the Chemotherapy Unit.
- Reviewing existing information systems used and developing these further so that they communicate better with each other e.g., ICE and chemotherapy database.
- Develop a pilot to test changes to the delivery model.
- Evaluate the pilot and agree options appraisal for future service model.
- To consider the need for a contingency / back up plan if staff move on or go off sick to try and minimise the impact of staff members being off.

10.0 Follow up – Implemented changes (6 month after finish)

A review was undertaken 6 months after the project was completed to identify what changes had been made to the service because of the project. The changes and improvements that were made are as follows:

- Extra staff resource dedicated to preassessment has been implemented.
- Pharmacy Phlebotomist dedicated to Chemotherapy Unit.
- Significant improvement in hitting the urgent treatment target.
- Telephone clinic utilisation much improved.
- Repatriation of patients to other hospital trusts needs more thought as service contracts mean it is not a straightforward process.