



## Overview

### Customer Name

NHS Greater Glasgow and Clyde

### City, Country

Glasgow, Scotland

### Website

[www.nhsggc.scot](http://www.nhsggc.scot)

### Solution

Patient Pathway Plus – Cancer Pathway Management (PP+ CPM)

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For accurate next step management and shorter waiting times

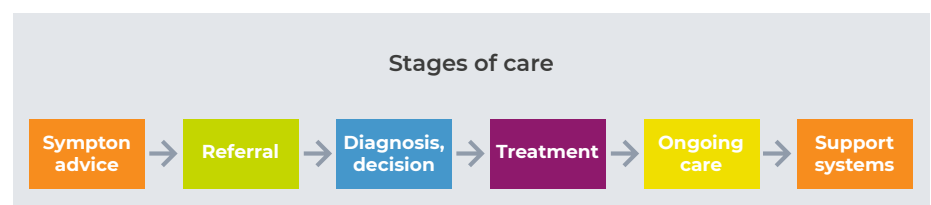
Cancer pathways are both complex and time critical, with patients crossing multiple professions and departments even in a single day. The Scottish Government has a strategy to move away from the legacy data and cancer tracking systems that NHS Boards have separately developed.

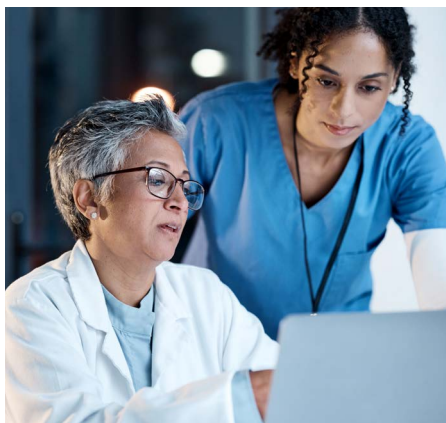
NHS Boards are required to manage every cancer patient actively every day, as they move along their agreed pathways within the required time limits. If any patient's pathway moves off-track, or if service pressures are identified, this must be escalated with enough information to ensure that the right action can be taken to avoid any future breach.

In addition to the above, the national Framework for Effective Cancer Management requires every Board to submit daily cancer tracking and weekly reporting.

### Cancer Care

Cancer care is complex, time critical, and requires specialised input from multiple clinical professions, departments and even hospitals along the cancer pathway. The illustration below is a high level summary, and the process of diagnosis alone will typically involve multiple cycles of test and review.





Because so many stages of care need to be completed in a short period of time, cancer services cannot allow significant backlogs to build up at any stage. Short-term interruptions to capacity, and frictions caused by fragmented data, create more significant risks in cancer services than in routine elective care.

With patients crossing multiple clinical departments and multiple IT systems, even in a single day, it is difficult and time consuming to track patients accurately and proactively. Data goes out of date within hours after being linked and extracted into a static report.

## National

Cancer remains the largest burden of disease across Scotland and has seen an ongoing increase in incidence. Scotland is focusing on improving cancer outcomes through better prevention and diagnosis. Demand has risen following the COVID-19 pandemic, with incidental cancer detections increasing alongside lengthening waiting times.

There are two national cancer waiting times standards:

- 95% of eligible patients should wait no longer than 62 days from urgent suspicion of cancer referral to first cancer treatment (not met by any NHS Board in Q1 2024); and
- 95% of eligible patients should wait no longer than 31 days from decision to treat to first cancer treatment (met by 10 of the 15 NHS Boards in Q1 2024).

The supporting data infrastructure is poor, resting on legacy cancer tracking systems created separately by each Health Board. Mandatory national reports to the Scottish Government are onerous to produce. The position is widely recognised to be unsustainable.

In response, the Scottish Government's ten year improvement strategy<sup>[1]</sup> promises "a more integrated cancer intelligence platform along the full cancer pathway." The supporting cancer action plan<sup>[2]</sup> commits, by March 2026, to enhance this Cancer Intelligence Platform (CIP). The objective<sup>[3]</sup> is "a single point of access to linkable national cancer data regardless of where these data are held."

## Regional

Cancer services for the West of Scotland are provided at The Beatson, which is the second largest cancer centre in the UK. It has clinical links through service delivery with 16 West of Scotland hospitals, and 4 West of Scotland Health Boards (NHS Ayrshire & Arran, NHS Dumfries and Galloway, NHS Forth Valley, NHS Lanarkshire, NHS Greater Glasgow & Clyde).

The Beatson delivers all the radiotherapy and much of the chemotherapy to the population of the West of Scotland, with a catchment area of 2.5 million people, which is around 50% of Scotland's population. Each year The Beatson<sup>[4]</sup> sees more than 8,000 new outpatients and delivers more than 25,000 courses of chemotherapy and 6,500 courses of radiotherapy.

## NHS Health Board

NHS Greater Glasgow and Clyde (NHSGGC) is by far the largest NHS Board in Scotland. In common with many Scottish NHS Boards, NHSGGC has been falling below the required performance against the national cancer targets. In Q1 of 2024, NHSGGC treated 68.3% within 62 days of referral, and 93.5% within 31 days of decision to treat, compared with the 95% target. Published data for June 2024 shows that NHSGGC 31 day performance was 95.8%.

Within NHSGGC there are dozens of cancer trackers responsible for tracking 10 cancer pathways, as well as numerous general managers, clinical service managers and administrative staff and managers involved in administering cancer care.

Staff have been managing cancer pathways through a legacy system known as CWT, which is reaching end of life and needed to be replaced.

Mandatory national reports to the Scottish Government have been taking a long time to produce and require a significant amount of manual intervention.

In addition, considerable staff time is taken up responding to multiple ad-hoc requests for data analysis and performance trends. These requests were managed via the use of BOXI reports and requests to the BI Team, and staff have often had to work out of routine hours to deliver them without excessive delay. Even so, the reports generated were static and already out of date by the time they were used.



[1] <https://www.gov.scot/publications/cancer-strategy-scotland-2023-2033/pages/4/>

[2] <https://www.gov.scot/publications/cancer-action-plan-scotland-2023-2026/pages/3/>

[3] <https://publichealthscotland.scot/media/22394/scris-newsletter-september-2023.pdf?ref=email>

[4] <https://www.nhsggc.scot/hospitals-services/main-hospitals/beatson-west-of-scotland-cancer-centre/>

## Requirements

- NHSGGC wanted real time visibility of patient pathway information on all patient treatments, tests and care across all services which support patient care in all hospitals.
- This would enable prospective action by cancer trackers, to ensure patients receive the right care at the right time in compliance with clinical guidelines.
- For managers this would consolidate breach analysis and pathway performance against all clinical pathways.

## Solution

NHSGGC adopted the Insource Ltd: Patient Pathway Plus – Cancer Pathway Management solution (PP+ CPM).



## Data management

PP+ CPM automates the acquisition and standardisation of data from disparate sources in near real time, creating an auditable Unified Data Layer (UDL) with tools for accurate cancer pathway tracking.

The UDL is consistent across every implementation, supporting regional and national reporting, data sharing to the national Cancer Intelligence Platform and local business intelligence, and data continuity if source systems are upgraded or replaced.

Regular data processing is undertaken to generate the cancer pathways, by identifying patients with an urgent suspicion of cancer (USOC) from TrakCare PMS and then updating the record with subsequent vetting outcomes, appointment types, and associated outcomes.

## Pathway Management

The use of PP+ CPM supports efficient tracking, workflow management, and provides a complete audit trail of work in progress.

The solution supports dynamic patient list generation by multiple data points, including those required to identify patients at risk of breaching or experiencing the longest waits. These include:

- Referral Date
- Days Elapsed
- Cancer Type
- Diagnosis Date
- Date Decision to Treat
- First Treatment Dates.

Having generated the right list, for each patient it provides the recorded planned Next Event for a patient. This is achieved regardless of system source, using pre-configured options. This change in focus from past to future, combined with powerful filtering, means trackers can quickly identify the patients who need

action to help prevent bottlenecks or breaches. All actions are visible in real time to avoid duplication of effort by colleagues.

In case any patient actions might be missed in the worklists, highly configurable alerts – such as escalations and simple check notifications – are there to ensure that no patient is missed by users, teams, or their managers, even in small volume pathways.

Where data and status updates are unavailable from core IT systems, PP+ CPM allows users to make up for the missing data by entering directly via the user interface.

## Summary of pathway management capabilities

1. Role specific configuration
2. Dynamic patient list generation
3. Alerts – potential breachers, tasks etc.
4. Auditable action list
5. Cancer configured waiting times adjustments
6. Visual monitoring of compliance with clinical guidelines

## Reporting

PP+ CPM automates national and local reporting, to deliver immediate and quantifiable time savings.

NHSGGC have identified considerable time savings in the production of national and local reports alone, within the first month of going live with the PP+ Cancer Pathway Management (PP+ CPM) solution. The table below estimates that for the cancer teams in NHSGGC the saving is 76 hours per week.

Report	Freq	Time to collate in CWT (hours)	Comments	Time in PP+ CPM	Est time saved (hours per week)
Weekly local tracking reports and MDT Lists to services	Weekly	3	3 hours due to running time on BOXI downloading the reports	One click (1 hour to set up, never need to retouch)	3
Weekly CPG papers to teams' site 14-day USOC Position 31-day forecast 31-day, 21-31 days and >31 days report >62-days >100 days	Weekly	3	Will not need to run on BOXI 31-day forecast not currently available 21-31 and 31> will be instant on PP+ CPM (maybe 1 hour setting up view)	Instant (except 31 day forecast)	2
Weekly 62-day report	Weekly	29	No need to copy comments from CWT as this will be viewable to all	Instant	29
Weekly 31-day report	Weekly	0.5		Instant	0.5
Weekly WMI report	Weekly	4		Instant	4
<b>Weekly total</b>		<b>39.5</b>			<b>38.5</b>
Monthly PHS submission (including validation)	Monthly	37.5	No need to wait on BOXI "re-run" reports not required changes made in PP+ auto pull	Instant	<b>7.5</b>
Breach Analysis (excluding report writing)	Monthly	25	Pulling from BOXI, going through cases, uploading to teams, sharing to services	Not measured yet	<b>tbd</b>
National Referral Data	Monthly	37.5	This includes time validating	Instant	<b>17.5</b>
<b>Monthly total</b>		<b>100</b>			<b>25</b>
31 and 62- summary for GM/director	Quarterly	3	Includes formatting time	Instant from Dashboard	<b>2</b>
Submission to PHS	Quarterly	37.5	This includes time validating	Instant from Report	<b>7.5</b>
<b>Quarterly total</b>		<b>40.5</b>			<b>9.5</b>
Ad hoc		5	Data at a much higher level	No BI turnaround time (10 days)	<b>3</b>
Ad hoc total		5			<b>3</b>
<b>Total</b>		<b>185</b>			<b>76</b>

## Next Steps

When most pre-existing patient pathways have completed on CWT, any remaining patients will be migrated to PP+ CPM, and CWT decommissioned. This will end dual running.

At that point BOXI and the legacy NHSGGC Cancer Waiting Times Reporting systems can also be removed. The time released can be redeployed to improving performance.



Work is already underway to ensure HL7 messaging between TrakCare PMS and the PP+ CPM solution, to further enhance the benefits that can be realised from the application. HL7 messaging provides close to real time transfer of information about a particular event such as a patient referral or admission.

This is the first of a series of case studies planned to examine the benefits that NHSGGC will derive from PP+ CPM. Planned future case studies will examine the effect on our People, Patients, Performance and Pathway management.

Further opportunities to work with primary care and other healthcare professionals are being explored. This will include providing a report that shows the number of referrals by cancer type by GP cluster, enabling quality improvement work around referral management, guidelines, and ultimately effective performance. Options are being explored so that primary care clinicians will be able to view individual patient journeys improving communication between the sectors and with the patient.

Enterprise licences can ensure that as many staff as required can access the system and patient pathway information.

Discussions are underway around additional functionality, which is likely to include:

- Acquisition and visibility of radiology information to enhance the events list, enabling staff to identify patients with investigations requested but not booked.
- Direct access to Diary Actions entries by staff outside the cancer tracking team. This will allow more rapid action to be taken to book appointments and apply waiting times adjustments to individual patient pathways.
- Improved highlighting of outstanding actions – including breaches – so that staff can add information. For instance, a patient may have a Next Event of surgery, but a Diary Action flags that a diagnostic test is needed first, and this would be highlighted to allow the 'next event' to be checked and changed.

PP+ CPM was procured and implemented in only 7 months. Procurement was via the G-Cloud Framework.

Rapid implementation was achieved with a collaborative project management approach between NHSGGC and Insource Ltd.

### For more information please contact:

#### Dennis Betts

eHealth Regional Shared Services  
Programme Manager  
NHS GG&C  
Dennis.Betts@ggc.scot.nhs.uk

#### Donna Smith

Director of Strategic Solutions  
(Scotland)  
Insource Ltd  
Donna.Smith@insource.co.uk

#### Nadine Carey-Whitehead

Commercial Director  
Insource Ltd  
Nadine.Carey-Whitehead@insource.co.uk

## About Insource

For decades, Insource have supported NHS and other healthcare providers with advanced data and pathway management services. We are an SME with presence in England and Scotland, and dozens of expert staff across a range of fields. We are proud that hospitals and other healthcare organisations across the UK have chosen to rely on our technology every day.



T. 0203 727 4200  
0141 611 8257  
E. [contact@insource.co.uk](mailto:contact@insource.co.uk)  
[scotland@insource.co.uk](mailto:scotland@insource.co.uk)  
[www.insource.co.uk](http://www.insource.co.uk)

