

# Case Study



Cancer Care Ontario

## Affinity Systems Leverages InRule® for Cancer Care Ontario

*Overhauls New Drug Funding Program (NDFP) Service Application for Cancer Care Ontario and Wins Microsoft Award*

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**SOLUTION**

As CCO's trusted software and services provider, Affinity created a new, centralized, web-based portal. Implementing business logic as rules using InRule will allow CCO to change rules for NDFP quickly and easily without software and deployment changes.

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**BENEFITS**

- » Single, centralized web-based user interface
- » An agile, adaptable environment that can easily support new policies
- » The InRule business rule management solution:
  - » Gives business users ownership of rule changes within the application
  - » Provides a customizable, project specific vocabulary
  - » Offers integrated testing
  - » Can be used in other applications outside of NDFP

## CANCER CARE ONTARIO

The Ontario Government's cancer advisor, Cancer Care Ontario (CCO) is the provincial agency responsible for continually improving cancer services within Ontario. CCO works with cancer care professionals and organizations to develop and implement quality improvements and standards. Using electronic information and technology, CCO supports health professionals and patient self-care by continually improving the safety, quality, efficiency, accessibility, and accountability of cancer services.

## PROJECT OVERVIEW

One of the strategic services that CCO administers is the New Drug Funding Program (NDFP), which ensures that all Ontario cancer patients have equitable access to expensive, injectable cancer treatments. In operation for more than 17 years, this program now encompasses 31 drugs and 65 disease indications in 103 hospitals across the province. The current annual budget is approximately \$225 million.

An Oracle Forms-based system was originally built to manage NDFP, with functionality to support eligibility and processing claims. Over time, the system could not keep up with the increasing complexity of funding criteria, additional government reporting requirements, and a larger number of drugs and eligible

patients. For every new drug introduced, the effort to create new forms, implement rules, and modify the database schema to support the existing application required significant software effort. With limited resources, IT was not able to keep pace resulting in new drugs not being available to patients through the program. The current system used eligibility and claim form data from antiquated feeds or via hand-entered data from faxes. CCO desired a web-based system that would eliminate paperwork and streamline operations for its limited administration staff.

CCO decided to replace the existing system with a single, centralized, web-based portal, with functionality to optimize business processes for adjudicating eligibility and claim reimbursements. There were a number of requirements:

- Have the ability to add new drug policies without requiring software changes and deployment.
- Develop reusable components and offer a loosely-coupled service-oriented architecture.
- Ensure the system is extendable to support additional program and drug policies.
- Allow efficient communication with oncology patient information systems and other physical order entry systems running at the hospitals.

To meet the needs of NDFP, Affinity Systems designed a solution that included a Business Rules Management System (BRMS) where non-technical policy administrators have the freedom to quickly define, test, and deploy rules for a policy—all without a new software release. What was required was a BRMS that had sufficient end-user capabilities and a powerful SDK to integrate the rules into the NDFP system.

For the critical BRMS component, Affinity selected InRule, the premier Business Rule Technology for the Microsoft platform. InRule is a perfect fit for NDFP, offering many powerful features, including:

- Authoring for Business Users
  - o irAuthor® – comprehensive rule authoring environment for defining and maintaining business rule applications
  - o irVerify® – integrated test environment to run and debug rule applications
  - o irWord™ – author executable rules and calculations in Microsoft® Word
- Storage and Management of rule applications with irCatalog®—a database-backed service that provides a variety of rule management capabilities
- Advanced Integration Tools
  - o irSDK® – InRule's Software Development Kit (SDK) provides developers with the capability to easily integrate InRule into an end business application
  - o irStudio® – lets .NET developers set up authoring domains for other users (e.g., business users) and to create, edit and manage rules and rule sets, all within Microsoft Visual Studio 2008
- Integration and interoperability with various Microsoft technologies: Azure, BizTalk Server, SharePoint 2010, Silverlight, Windows Workflow Foundation
- The high performance business rule engine known as irServer®

InRule Technology also provided training for developers and rule authors as well as best practices guidance around rule engine design, integration, and performance.

As a result of the successful integration of InRule in the NDFP system, CCO now includes InRule in its Centre of Excellence software suite, making InRule available to other systems when complex rule development and management is required.

**Cancer Care Ontario**  
Action Cancer Ontario
eClaims

Home
Patients
Resource Library
Communications
Mass Email
Admin
Reporting
Invoices

**Patient Profile: Adandy, Suthant (7566098484)**

**General Patient Information**

Rule Exception:

OHIN #: 7566098484

Date Of Birth: 1926-06-02

Gender: O

Postal Code: A1B2C3

Charts:

| Site                | Chart #    |
|---------------------|------------|
| Sunnybrook Hospital | SH-6487860 |

**Enrolments**

| Policy Name  | Height (cm)           | Weight (kg)          | BSA                 | Status              | Submission          |      |                       |                      |                     |   |            |            |            |  |              |  |  |     |      |      |      |      |                     |   |            |       |      |                     |              |
|--|-----------------------|----------------------|---------------------|---------------------|---------------------|------|-----------------------|----------------------|---------------------|---|------------|------------|------------|--|--------------|--|--|-----|------|------|------|------|---------------------|---|------------|-------|------|---------------------|--------------|
| <span style="color: blue;">[-]</span> Docetaxel - Hormone Refractory Prostate Cancer (6528)  | 185.00                | 150.00               | 2.00                | Approved            | 2012-11-04          |      |                       |                      |                     |   |            |            |            |  |              |  |  |     |      |      |      |      |                     |   |            |       |      |                     |              |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Drug</th> <th>Total # of Treatments</th> <th>First Treatment Date</th> <th>Last Treatment Date</th> </tr> </thead> <tbody> <tr> <td><span style="color: blue;">[-]</span> Docetaxel</td> <td>1</td> <td>2012-11-07</td> <td>2012-11-07</td> </tr> <tr> <td colspan="4"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Row</th> <th>Date</th> <th>Dose</th> <th>Cost</th> <th>Site</th> <th>Attending Physician</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2012-11-07</td> <td>43.00</td> <td>3.08</td> <td>Sunnybrook Hospital</td> <td>Derek Archer</td> </tr> </tbody> </table> </td> </tr> </tbody> </table> |                       |                      |                     |                     |                     | Drug | Total # of Treatments | First Treatment Date | Last Treatment Date | <span style="color: blue;">[-]</span> Docetaxel | 1          | 2012-11-07 | 2012-11-07 | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Row</th> <th>Date</th> <th>Dose</th> <th>Cost</th> <th>Site</th> <th>Attending Physician</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2012-11-07</td> <td>43.00</td> <td>3.08</td> <td>Sunnybrook Hospital</td> <td>Derek Archer</td> </tr> </tbody> </table> |              |  |  | Row | Date | Dose | Cost | Site | Attending Physician | 1 | 2012-11-07 | 43.00 | 3.08 | Sunnybrook Hospital | Derek Archer |
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| 1  | 2012-11-07            | 43.00                | 3.08                | Sunnybrook Hospital | Derek Archer        |      |                       |                      |                     |   |            |            |            |  |              |  |  |     |      |      |      |      |                     |   |            |       |      |                     |              |
| <span style="color: blue;">[+]</span> Liposomal Doxorubicin - HIV - positive Kaposi's Sarcoma (6527)   | 185.00                | 150.00               | 2.00                | Approved            | 2012-11-04          |      |                       |                      |                     |   |            |            |            |  |              |  |  |     |      |      |      |      |                     |   |            |       |      |                     |              |
| <span style="color: blue;">[+]</span> Liposomal Doxorubicin - Platinum - Resistant Ovarian Cancer (6526)   | 185.00                | 150.00               | 2.00                | Approved            | 2012-11-04          |      |                       |                      |                     |   |            |            |            |  |              |  |  |     |      |      |      |      |                     |   |            |       |      |                     |              |

**Patient Functions**

[Patient Search](#)

[Enrol in a New Policy](#)

[Prior Approval Request](#)

[Update Profile](#)

**Patient History**

Created: August 21, 2012

Modified: August 21, 2012 10:10

95% of InRule customers would recommend InRule to a colleague.

This organization is one of hundreds of successful InRule User Community Members. Learn more about how InRule saves its customers an average of \$1,485,150 and why 95% would recommend us to a colleague. Visit <https://www.inrule.com/resource/value-of-inrule>.

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