ONTARIO CASE COSTING FACILITIES

Ontario Case Costing Facilities (OCC) Generate $17 Billion in Detailed Cost Data in Affinity Decision Support (ADS)

There are 66 healthcare facilities who currently use Affinity Decision Support (ADS) and submit their patient data for use in the Canadian healthcare system. The facilities use activity-based costing methods and annually submit approximately $17 billion in cost data. The activity-based costing data is used by the Ontario Ministry of Health and a national healthcare research organization, the Canadian Institute for Health information, to create funding formulae and models that are used for healthcare funding across Canada. In addition, this data is widely used by researchers for all types of healthcare analysis as well as creating the Canadian case mix groups (like DRGs).

In addition to providing patient data, the facilities use ADS information to manage their healthcare organizations and improve patient care. Facilities such as the University Health Network have incorporated the use of ADS information throughout the organization from financial management and patient care improvement initiatives to healthcare research.

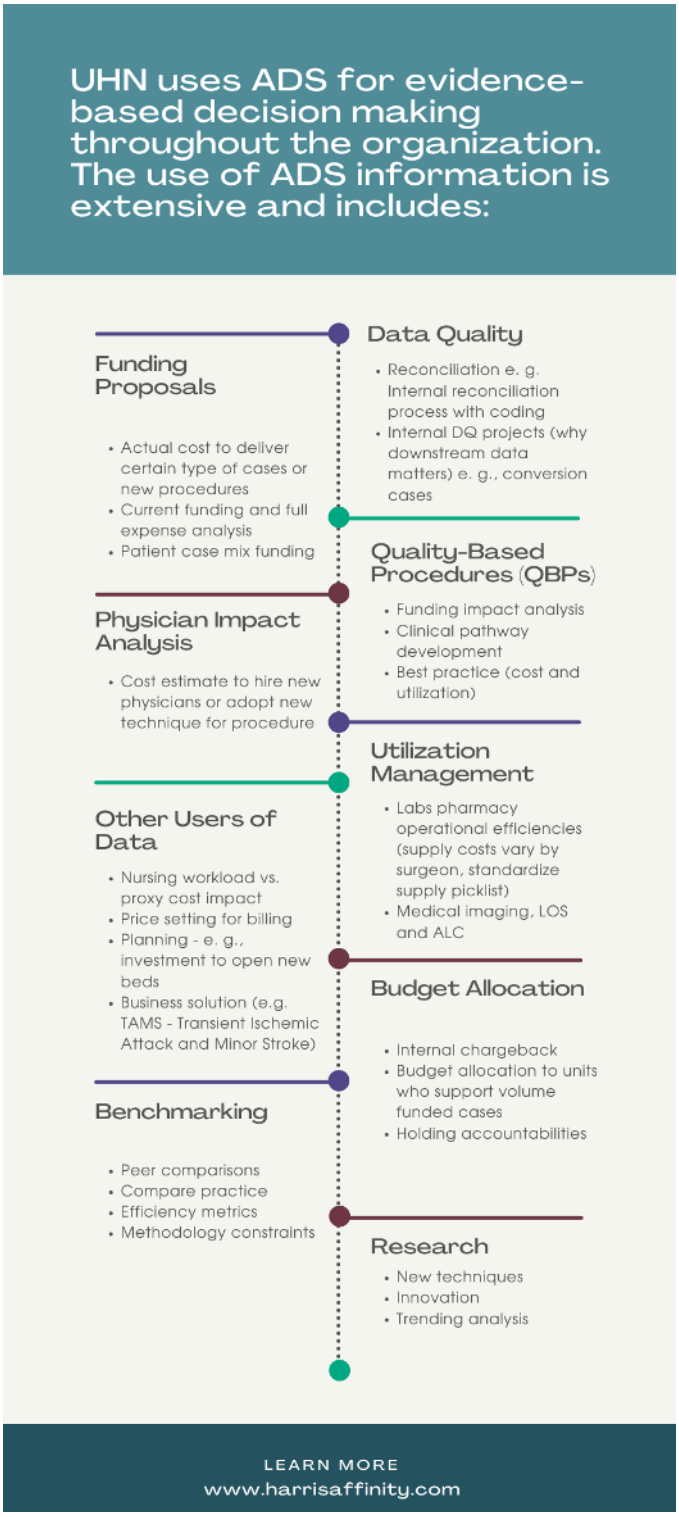
University Health Network

University Health Network (UHN) is a public research and teaching hospital network in Toronto, Ontario, Canada. It is the largest health research organization in North America and ranks first in Canada for total research funding.

The four hospitals which are part of the network include Toronto General Hospital, Toronto Western Hospital, Princess Margaret Cancer Centre, and Toronto Rehabilitation Institute. UHN also operates The Michener Institute, a post-secondary institution granting diplomas and certificates in health sciences and leadership.

UHN uses ADS for evidence-based decision making throughout the organization. The use of ADS information is extensive and includes everything from funding proposals to quality-based procedures to physician impact analysis.

The following are specific examples of the use of ADS data for cost and care improvements at the Ottawa General Hospital and the Niagara Health System.



The Ottawa General Hospital (TOH)

TOH is one of the largest teaching hospitals in Canada and uses decision support information for financial management and clinical improvements.

At TOH, cross-functional teams analyzed clinical pathways to align cost with clinical best practices. The teams included decision support, financial and clinical representatives, including physicians. The teams began their analysis with high-cost, high-volume cases including neonatal jaundice, pneumonia, endoscopy, hips & knees, hip fractures and cataracts. ADS data would be the basis for all decision making.

Hip Fracture Review

Analysis revealed several potential clinical practice improvements within lab, pharmacy, OR and imaging.

Goal: Analyze clinical pathways to align cost with clinical best practices.

Result: Clinical practice improvements within lab, pharmacy, and imaging with cost reductions and reduced length of stay.

Cost Reduction

- Lab test reduction from daily blood work to one CBC on day two. **Cost reduction of 90%.**
- Drug costs lowered by using an oral anticoagulant versus an injection. **Cost reduction of 3.6% in pharmacy labor.**
- **Imaging costs reduced 25%** by using a one-view X-ray versus two-view X-ray.
- Overall Length of Stay (LOS) reduction of 1-2 days per case with an approximate **nursing cost reduction of 20%.**

The average hip fracture case was reduced in total by 11%, approximately $700,000 based on a volume of 410 cases.

Improved Care: Patients were discharged sooner, blood tests were reduced and oral drugs were administered instead of injectables, resulting in better patient experience during their hospital stay.

Niagara Health System

Niagara Health System is one of the largest community hospitals in Ontario and is an advanced user of ADS information for healthcare management.

Niagara Health was an early adopter in the Provincial Order Set Project in 2016 using digital order sets and provincial standards. A clinical order set is a pre-defined template that provides support in making clinical decisions for a specific condition or medical procedure. The expected outcome was better inventory control and utilization. However, ADS data indicated higher costs after the first few months using the Provincial Order Set.

Goal: Decision support and clinicians analyzed ADS data to understand increased costs and identify cost-reduction opportunities. The Order Set Project was suspected as the cause of increased costs.

Change Initiative

- Duplication of testing was evident on the day of admission in acute inpatient from emergency department. The same tests had been conducted in the emergency department
- FY 17/18 - $32K in potential duplicate lab test costs, not including the cost of supplies, were identified
- Focused on the general internal medicine and CHF order sets (high volumes)

Result

- Changed the pre-selected tests to unchecked boxes on the order sets in both acute inpatient and emergency department
- Overall **reduction in lab duplication of 14.0%**
- The site with the highest reduction (24.6%) went from 40.5% to 15.9% duplication
- The site with the lowest reduction (5.3%) went from 34.1% to 28.8% duplication

Improved Care: The health system was able to reduce duplicate tests for patients, saving costs, while providing better patient care by eliminating unnecessary or invasive tests.

Imaging Duplication in Stroke

In FY17/18, 65% of patients (post-thrombolytic) with stroke receiving tPA had the "carotid doppler" option checked on admission, even though they already had a CT angiogram as part of the code stroke protocol.

Change Initiative

- The option to order CT angiogram and carotid doppler was removed from the post-thrombolytic order set
- The option to order CT angiogram on the non-thrombolytic order set was also removed

Result: The Niagara Falls site of the Niagara Health System, a stroke excellence centre, experienced a significant reduction in imaging duplication from 21.3% of patients at Q3 YTD and a further reduction to 8.0% in Q4. In non-thrombolytic cases, the proportion of patients receiving carotid doppler showed only a decrease of 5%.

HARRIS Affinity

About Harris Affinity: Harris Affinity Decision Support (ADS) combines financial, clinical and patient activity information to help healthcare administrators understand patient costs and reimbursement. As a result, they're able to identify and take action on the paths of improvement for both financial performance and patient outcomes.