

PRE-ASSESSMENT FOR PRE-APPROVALS TOOL FOR A CHEMOTHERAPY OUTPATIENT CENTRE

Alison Reavell-Roy

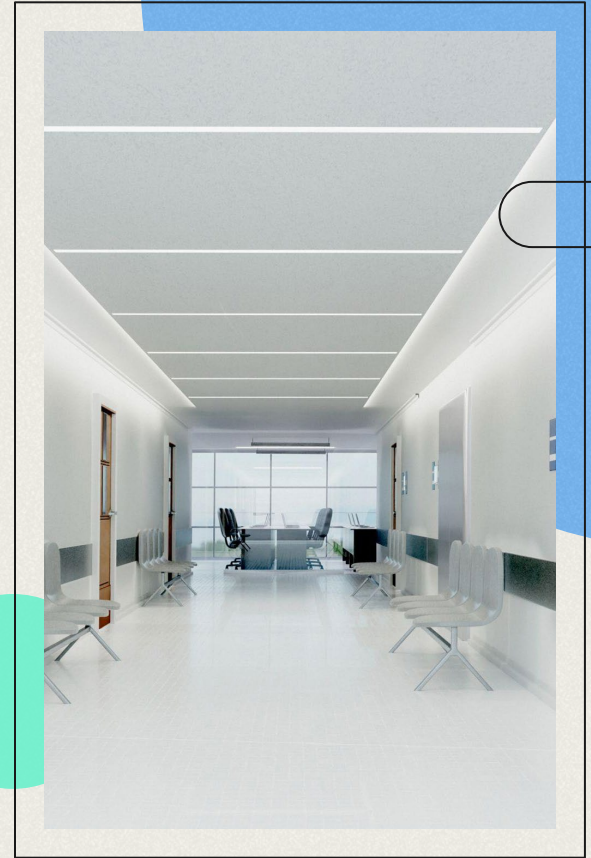


TABLE OF CONTENTS

01

Introduction

02

Business Case

03

Current state
workflow & analysis

04

Future state
workflow & analysis

05

Stakeholder
engagement
strategy

06

Next steps and
Conclusion



01

Introduction

Introduction

- Clinical decision support system (CDSS) supports healthcare delivery by using patient information to improve medical decisions (Sutton et al., 2020).
- Assessments and treatment tasks were the most time-consuming aspects of work for nurses.
- As the nursing profession evolves to involve more extensive utilization of electronic information, a CDSS may become vital rather than a supplementary tool (Cornell et al., 2010).
- The proposed CDS tool will help to improve workflow processes for nurses in a Chemotherapy Centre.



Systemic Therapy

Systemic therapy refers to medications administered through the circulatory system to find and destroy cancer cells in the body (Alberta Health Services, 2023).

Examples of systemic therapies are:

- Chemotherapy
- Hormonal therapy
- Targeted therapy
- Biotherapy

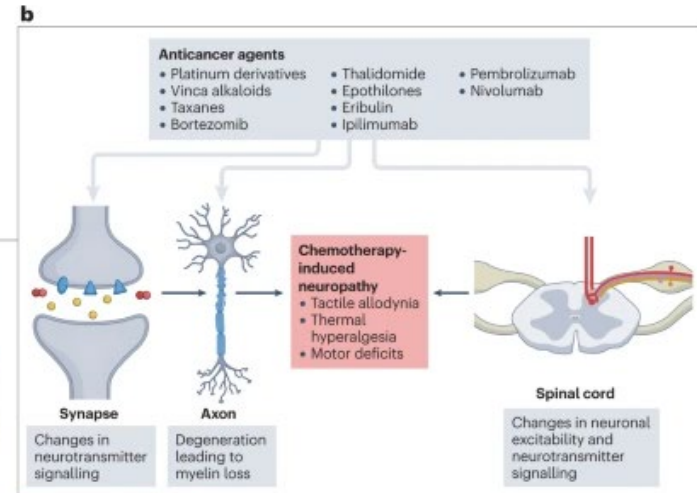
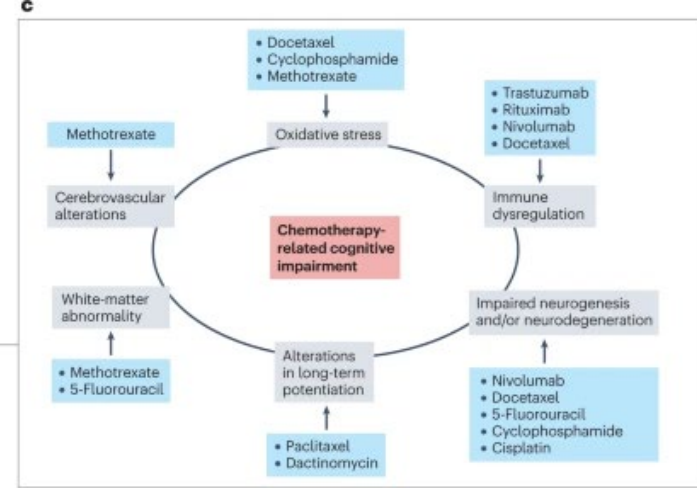
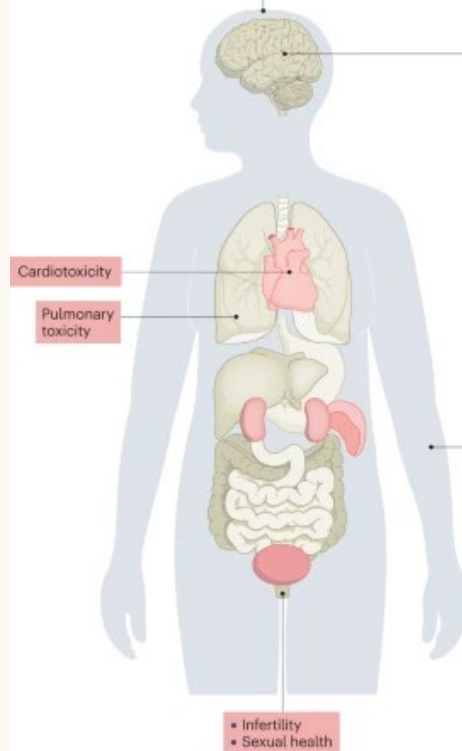
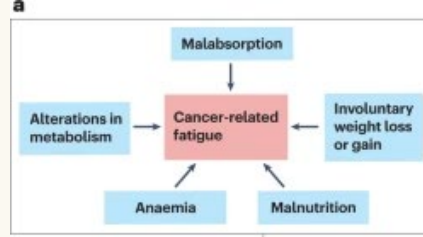
Pre-approvals

Patients on qualifying pre-approval systemic therapy undergo a pre-assessment before receiving treatment.

Assessment

Patients require to be assessed for any therapy related side effects before each treatment. Each treatment has different side effects and therefore assessments are tailored to the therapy regimen they receive.

Understanding the side-effects of systemic therapy



- Other adverse events**
- Secondary malignancies
 - Financial toxicity
 - Psychosocial needs

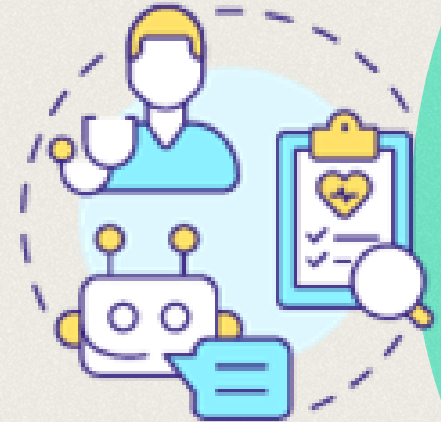
Pre-assessment for Pre-approvals Workflow



- The **pre-approval process** is done to get ahead of work the day before the patient's treatment so that on the day of treatment there is less time involved for the patient's visit.
- A systemic therapy that meets the criteria of a pre-approval is a treatment made in the pharmacy the day before and stored overnight in the fridge once a nurse has approved a patient's assessment. Examples of current therapies that meet the pre-approval qualifications are:
 - Cisplatin for cervical patients
 - Trastuzumab for breast and GI patients
 - Bortezomib for multiple myeloma patients

Pre-assessment for Pre-approvals Tool (PRAPT)

- A semi-active CDS tool is proposed to decrease workflow inefficiencies and improve communication between nurses and patients in an outpatient chemotherapy clinic.
- A semi-active CDSS triggers automatically and provides the user with an alert of a clinical situation or a decision as opposed to an active CDSS that is based on rules or probability (Fraccaro, 2015).
- PRAPT will eliminate the need for nurses to make phone calls to patients prior to their visit for treatments that can be pre-approved. The tool will also assist the nurse in interpreting patient's responses.

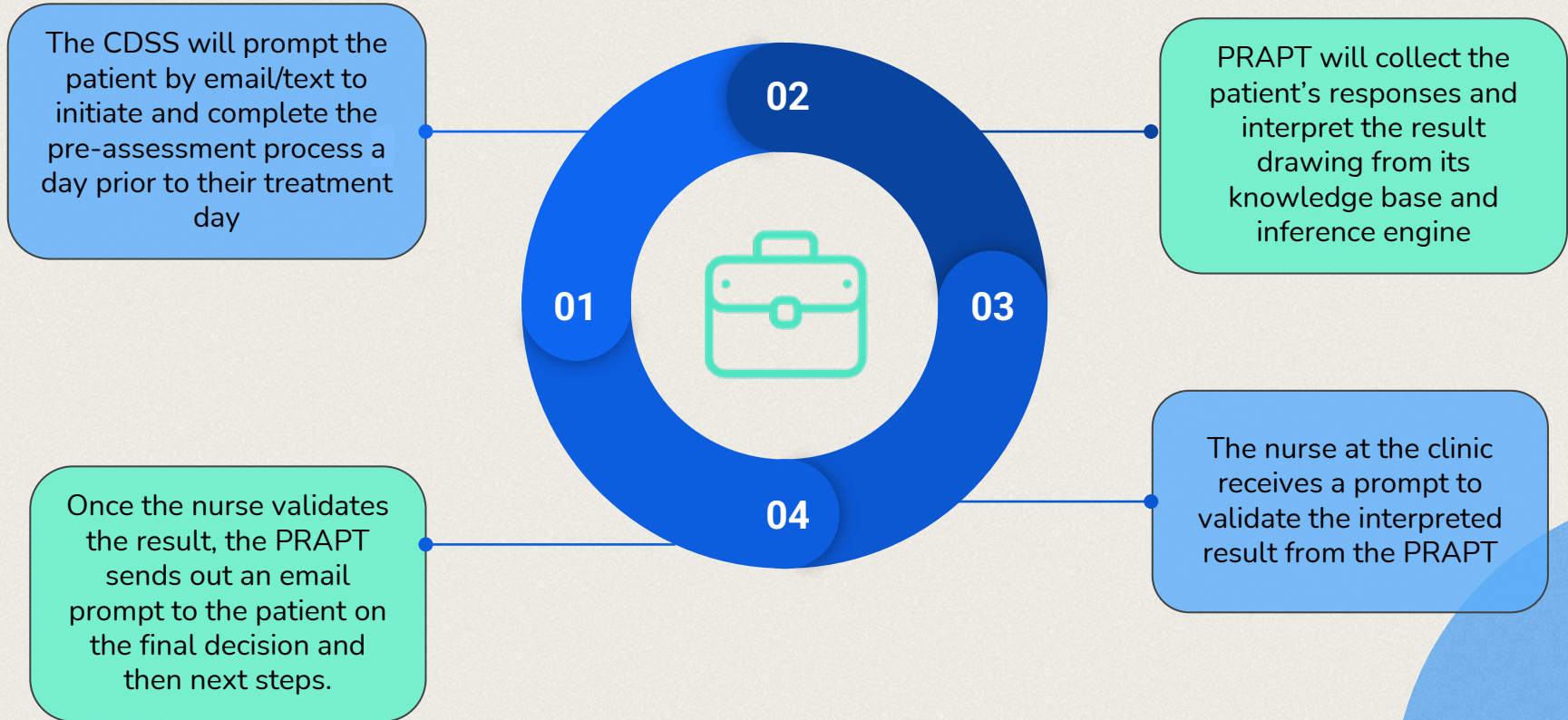




02

Business Case

Business Case



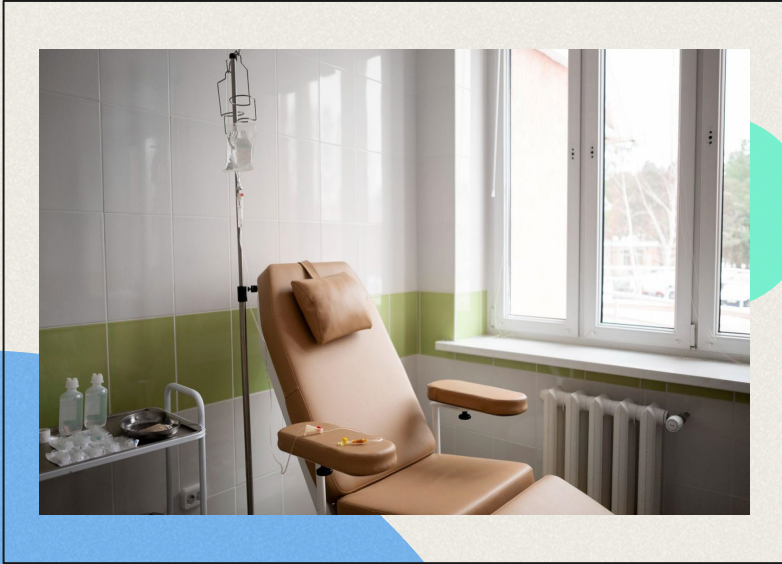
Benefits



- Quicker turnaround time for pre-assessment for pre-approvals process.
- Easily integrated into existing EHR
- Reduced patient wait time
- Convenient for both patients and nurses
- Improved patient care experience
- Respects privacy laws

- Cost of implementation.
- EHR Limitations
- Poor acceptance of the tool by both patients and nurses.
- Continuous use of the tool.

Risks

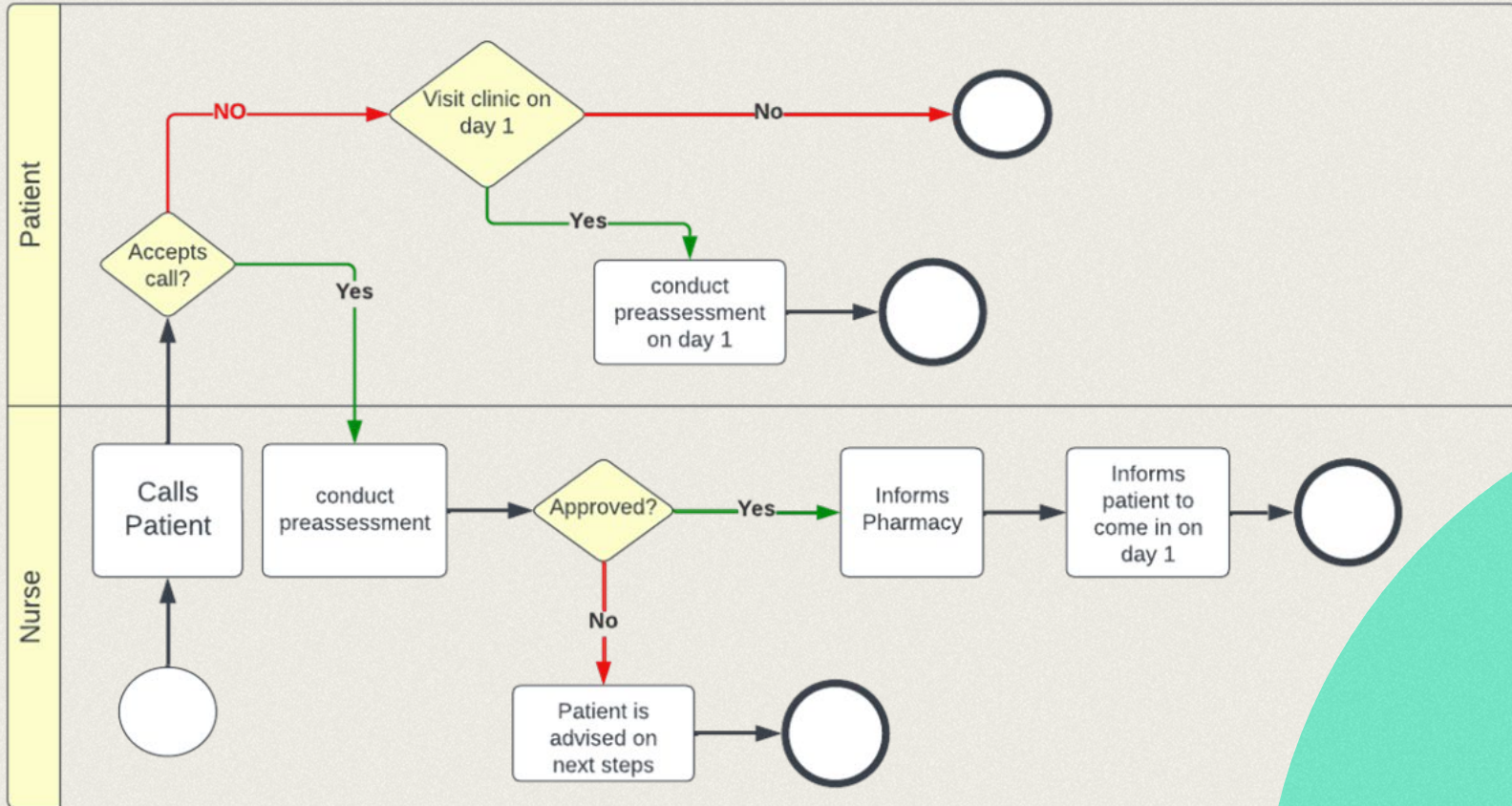


03

Current state
workflow &
analysis

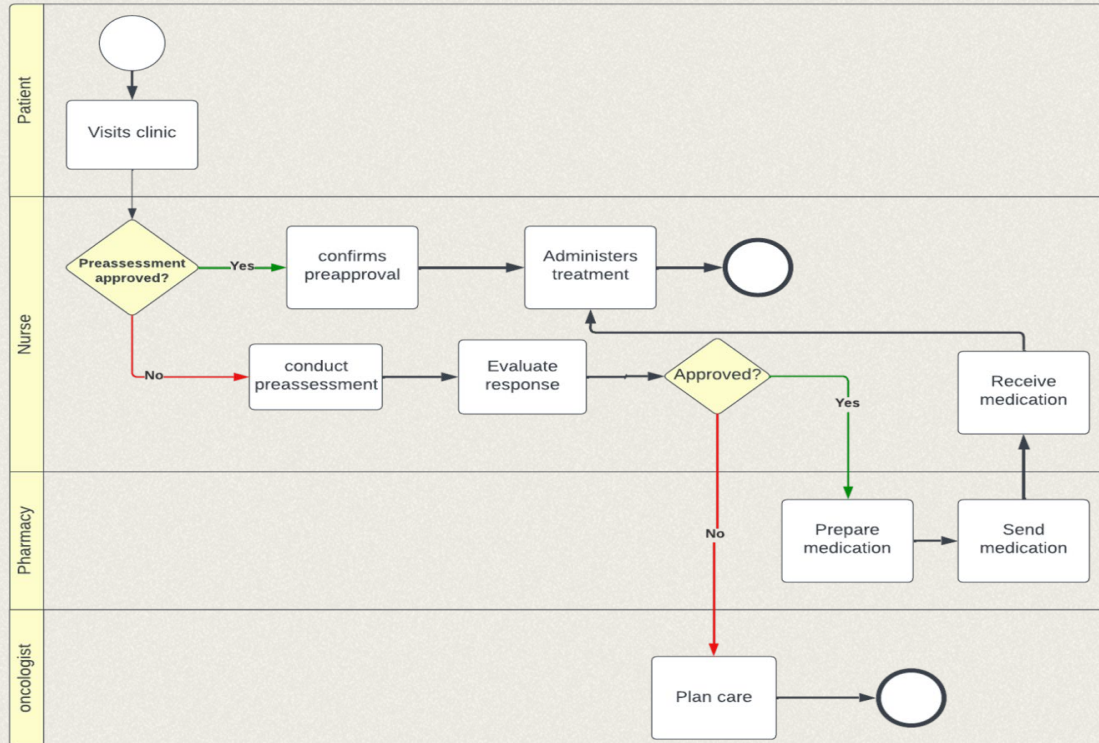
Current State Workflow

Day 0(Phone call)



Current State Workflow Analysis

Day 1 (in person)



Issues

- Rushed calls or missed calls
- Poor engagement with patients
- Poor analysis of patients' responses due to overwhelming workload
- Time-consuming and resource intensive

What exists



Canadian Distress Assessment and Response Tool (DART).

DART is an electronic screening tool that collects and measures cancer patients' responses on their **physical distress levels, anxiety levels, depression and any social difficulty** in a patient-centered, standardized, and validated format.

DART is comprised of the following validated patient-reported outcome measures (PROMs):

- **Edmonton Symptom Assessment System-revised (ESAS-r);**
- Patient-Reported Functional Status (PRFS);
- Canadian Problem Checklist (CPC);
- Patient Health Questionnaire (PHQ-9);
- Generalized Anxiety Disorder (GAD-7);
- Social Difficulties Inventory (SDI-21). (Sergey, 2021).



PRAPT will **incorporate** the DART and ESAS-r screening tools; to improve workflow for chemotherapy nurses and reduce wait times for patients visiting outpatient chemotherapy clinics.

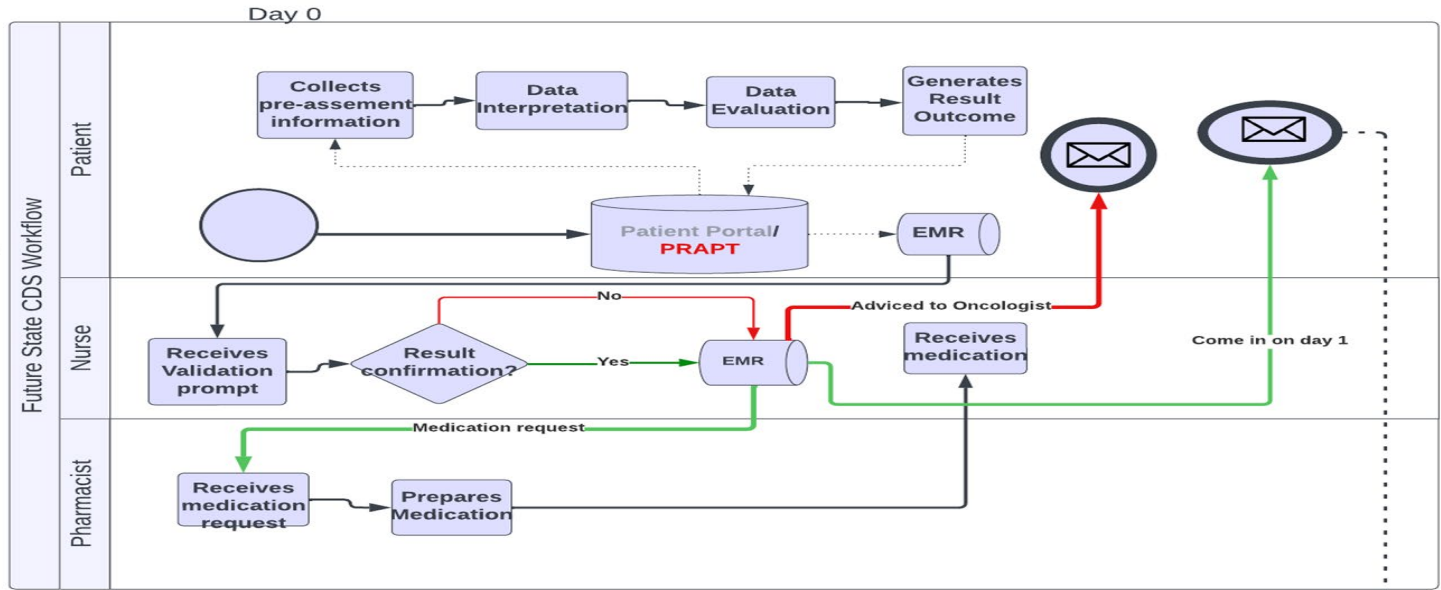


04

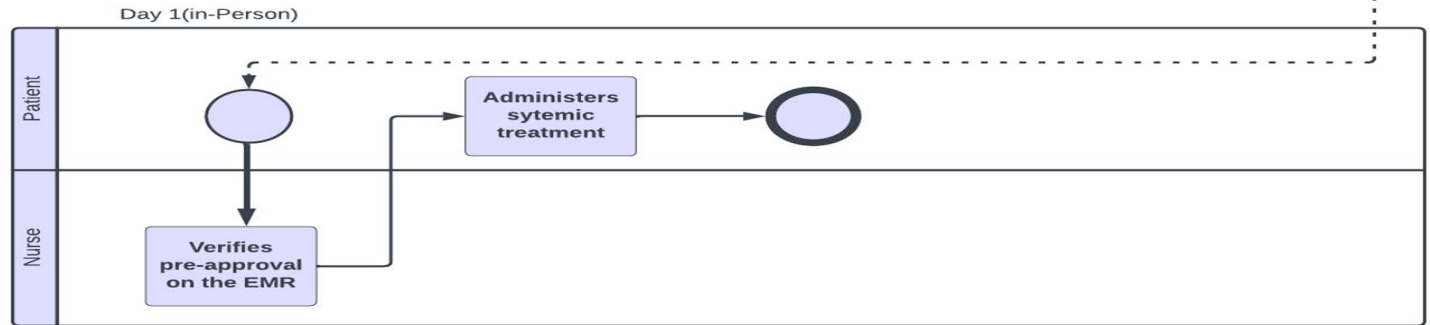
Future State
workflow &
Analysis

Future State Workflow

- Patient is prompted by text/email to initiate the pre-assessment process eliminating the need for the nurse to place the call.



- Patient arrives at the clinic for systemic treatment



Pre-assessment for Pre-approvals Tool (PRAPT) for a Chemotherapy Outpatient Centre.

PRAPT is built to improve workflow for pre-assessment and pre-approvals of systemic treatment by reducing the manual workload on nurses in the clinic and reduce the time patients spend during this process.



Systemic therapy workflow using PRAPT



PRAPT prompts patient to complete pre-assessment form



Nurse receives a notification of results



PRAPT interprets the patient's responses drawing from knowledge base & inference engine



Patient fills out the pre-assessment form



Nurse validates interpreted result from PRAPT

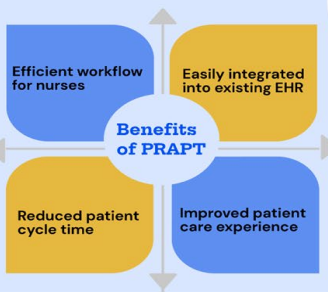


PRAPT notifies patient on the final decision & next steps



Patient visits the clinic and receives therapy if approved.

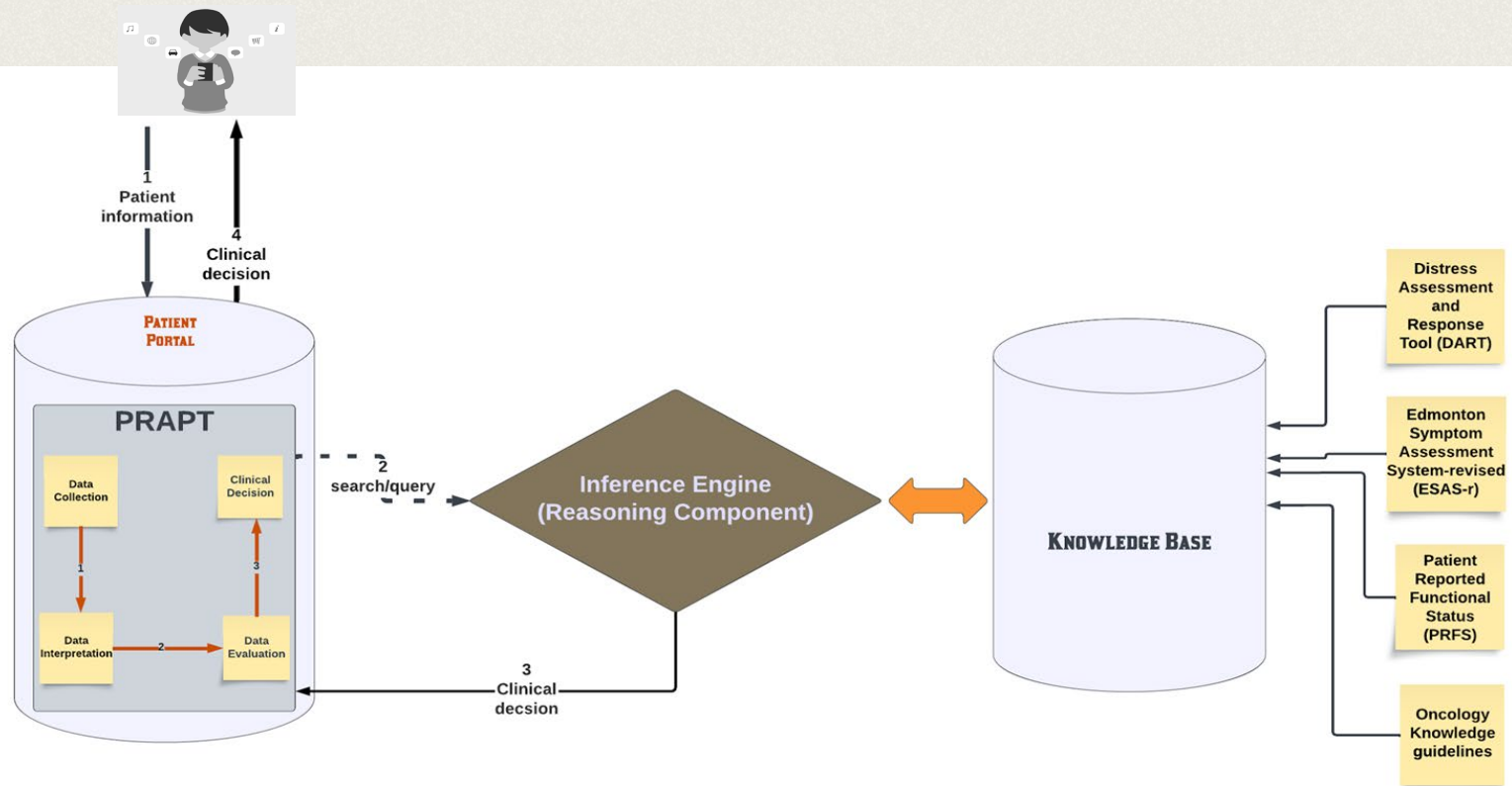
Infographic



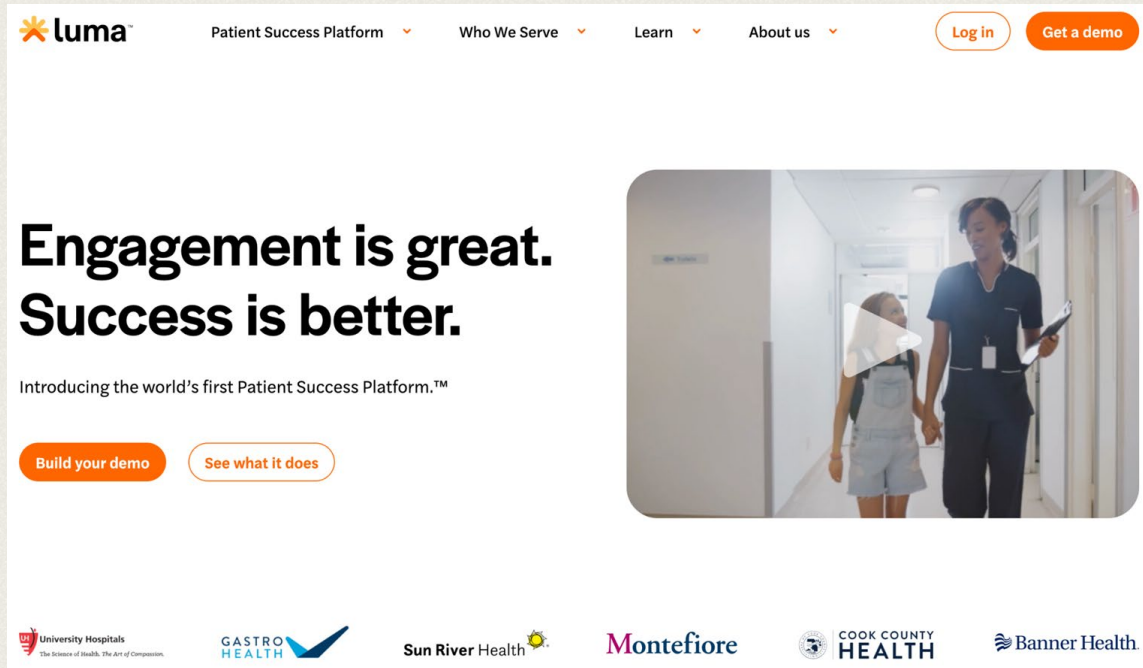
By focusing on the enhancement of workflows, nurses are equipped with tools and resources they need to provide high-quality care.




PRAPT Architecture



Watch our Demo using the CDS for the assessment for pre-approval. Powered by luma™









The screenshot shows the Luma Patient Success Platform website. At the top, there is a navigation bar with the Luma logo on the left, followed by menu items: "Patient Success Platform", "Who We Serve", "Learn", and "About us". On the right side of the navigation bar are two buttons: "Log in" and "Get a demo". The main content area features a large heading: "Engagement is great. Success is better." Below this heading is the text "Introducing the world's first Patient Success Platform.™". There are two buttons: "Build your demo" and "See what it does". To the right of the text is a video player showing a healthcare professional in a hallway with a patient, with a play button overlay. At the bottom of the page, there are logos for several partner organizations: University Hospitals, Gastro Health, Sun River Health, Montefiore, Cook County Health, and Banner Health.

 Patient Success Platform ▼ Who We Serve ▼ Learn ▼ About us ▼ [Log in](#) [Get a demo](#)

Engagement is great. Success is better.

Introducing the world's first Patient Success Platform.™

[Build your demo](#) [See what it does](#)

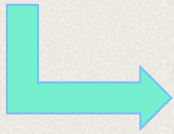
Step 1: Patient Experience

EO Omoruyi, Egharevba
DOB: 01/01/1990 - Last seen: never logged in
+1 (647) 201-4436 - Updated on Nov 29, 2023 11:30 AM

CHAT JOURNEY **APPOINTMENTS** WAITLISTS FINANCIAL OFFERS REMINDERS

Upcoming Appointments

DATE	FACILITY	PROVIDER	TYPE	STATUS
November 30, 2023 11:39 AM	Luma Mock Facility East	Dr. Bob	Follow Up	Unconfirmed

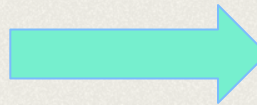


4080 Hospital: Hey Mr, please fill out the form before your appointment. <https://lumalk.com/lKQCT6sc8ag>

To protect your privacy, visit our secure portal: <https://lumalk.com/cxfn7x40frl>

4080 Hospital: Hey Mr, please fill out the form before your appointment. <https://lumalk.com/jqhJfkNNSAi>

To protect your privacy, visit our secure portal: <https://lumalk.com/3811W7jpoBF>

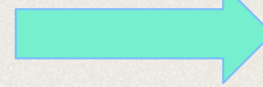
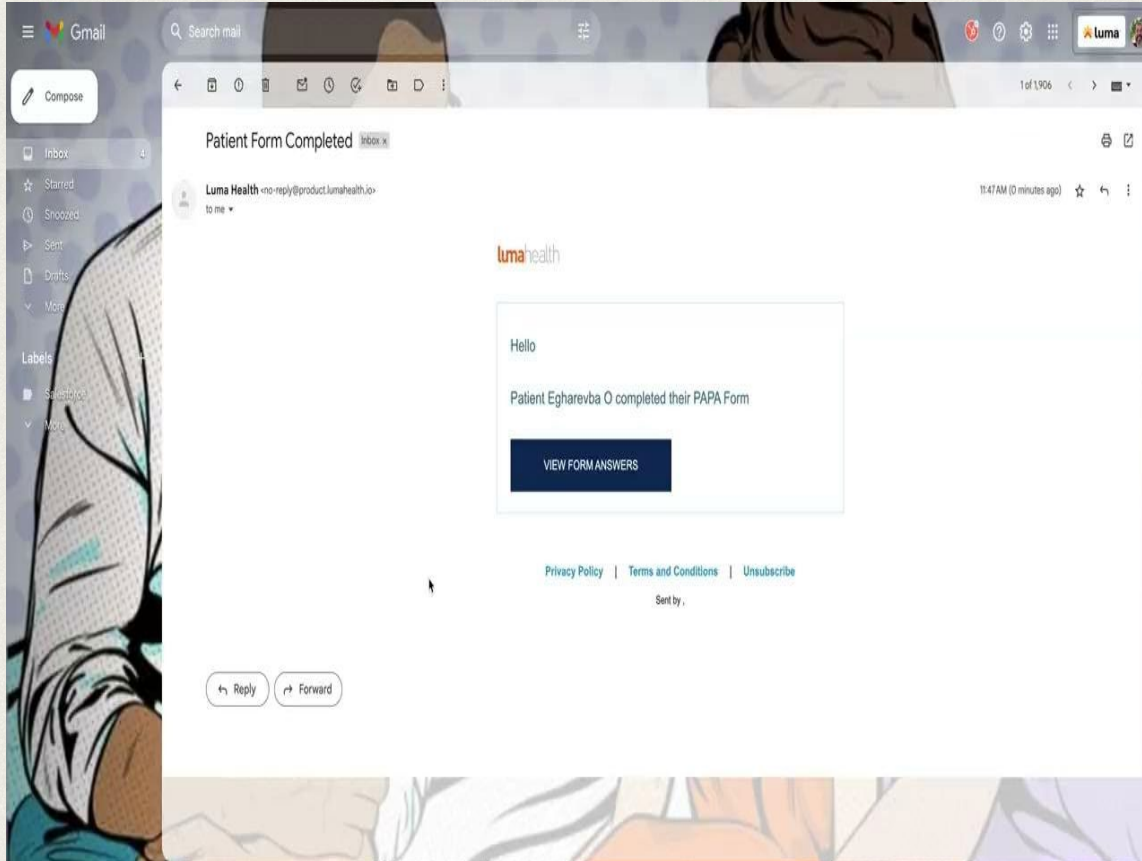


English

Welcome!

START

Step 2: Nurse Experience



4080 Hospital: You have a new message in your inbox. Please visit our secure portal to read and reply: <https://lumalk.com/jFn2o478AJw>. This link will expire in seven days.

4080 Hospital: Hi Omos, your treatment has been approved. Please come in for your scheduled time

To protect your privacy, visit our secure portal: <https://lumalk.com/kcvxvpEsFyz>

Stakeholder Engagement Strategy

Stakeholder Name	Responsibility	Role	Strategy
Oncology Nurse	Validate the findings from the PRAPT	Ensure that the findings from the PRAPT are accurate and reliable	Keep Involved/Active engagement
Pharmacist	Prepares the medication to be used for systemic treatment	Ensure that the prescribed medication is available and stored appropriately	Keep Informed
Patient	Beneficiaries of health care services at the chemotherapy clinic	Receive systemic treatment	Keep Involved/Active Engagement

Stakeholder Engagement Strategy Cont'd

Stakeholder Name	Responsibility	Role	Strategy
Health IT Staff (Health Informatician)	Responsible for maintaining the EHR/Patient Portal	Act as a liaison between the IT Vendor and the Patient while maintaining the EHR/Patient Portal to allow for continuous usability	Keep Involved/Active Engagement
Patient Care Manager	Report any issues with the patient portal and PRAPT	Acts as the liaison between the Health IT staff and issues that occur while implementing PRAPT	Keep Involved/Active Engagement
IT Vendor	Responsible for maintaining the EHR/ Patient Portal	Maintaining the backend of the EHR/Patient Portal	Keep Involved/Active Engagement

Future Scope

PRAPT can be implemented not just in the clinic of study, but across other outpatient chemotherapy clinics where similar challenges are faced.

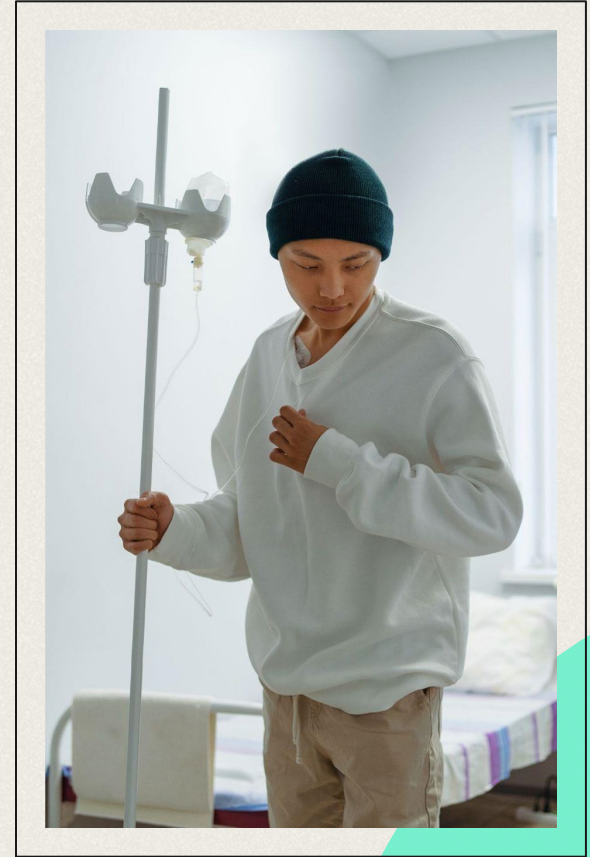
The future for the PRAPT holds great promise as we implement it effectively and obtain feedback which will serve as a key input resource for future improvement initiatives.

More research can be done to keep the knowledge base constantly updated in order for the PRAPT to generate findings that are valid and reliable.



Conclusion

- The PRAPT CDS is a critical tool for validating patients for pre-approvals.
- It can also be enhanced to integrate more medical guidelines and provide quality decisions appropriate for other specialty areas such as cardiology and endocrinology.
- Lastly, it can also be optimized to include more features that provide health educational content for patients taking into consideration the patients context.



References

- Alberta Health Service. (2023). *Systemic treatment*. <https://www.albertahealthservices.ca/cancer/Page16320.aspx>
- Cornell, P., Herrin-Griffith, D., Keim, C., Petschonek, S., Sanders, A. M., D'Mello, S., Golden, T. W., & Shepherd, G. (2010). Transforming Nursing Workflow, Part 1. *JONA: The Journal of Nursing Administration*, 40(9), 366-373. doi: 10.1097/NNA.0b013e3181ee4261.
- Fraccaro, P., Plastiras, P., Dentone, C., Di Biagio, A., & Weller, P. (2015). Behind the screens: Clinical decision support methodologies—A review. *Health Policy and Technology*, 4(1), 29-38.
- Lustberg, M. B., Kuderer, N. M., Desai, A., Bergerot, C., & Lyman, G. H. (2023). Mitigating long-term and delayed adverse events associated with cancer treatment: implications for survivorship. *Nature Reviews Clinical Oncology*, 1-16.
- Noel, C. W., Forner, D., Chepeha, D. B., Baran, E., Chan, K. K., Parmar, A., ... & Eskander, A. (2021). The Edmonton Symptom Assessment System: A narrative review of a standardized symptom assessment tool in head and neck oncology. *Oral Oncology*, 123, 105595.
- Sergey, A. (October, 29). *Digital solutions in cancer care: Part two*. <https://www.forbes.com/sites/forbesbusinessdevelopmentcouncil/2021/10/29/digital-solutions-in-cancer-care-part-two/?sh=4e5255963c8a>
- Subbiah, I. M., Charone, M. M., Roszik, J., Haider, A., Vidal, M., Wong, A., & Bruera, E. (2021). Association of Edmonton symptom assessment system global distress score with overall survival in patients with advanced cancer. *JAMA Network Open*, 4(7), e2117295-e2117295.
- Sutton, R. T., Pincock, D., Baumgart, D. C., Sadowski, D. C., Fedorak, R. N., & Kroeker, K. I. (2020). An overview of clinical decision support systems: benefits, risks, and strategies for success. *NPJ Digital Medicine*, 3(1), 17-17. <https://doi.org/10.1038/s41746-020-0221-y>
- Techna Institute. (2022). DART. <https://technainstitute.com/dart/>

THANK YOU!

