

HEALTH HUB

**A MODERN SOLUTION TO CARING FOR
COMPLEX NEEDS**

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HLTH 5300: Integrating Information Technology in Healthcare

LAND ACKNOWLEDGEMENT

I respectfully acknowledge that I reside in Edmonton, Alberta located on Treaty 6 Territory.

A traditional gathering place for many Indigenous people including the Cree, Metis, Blackfoot, Dene, Saulteaux, and Nakota Sioux

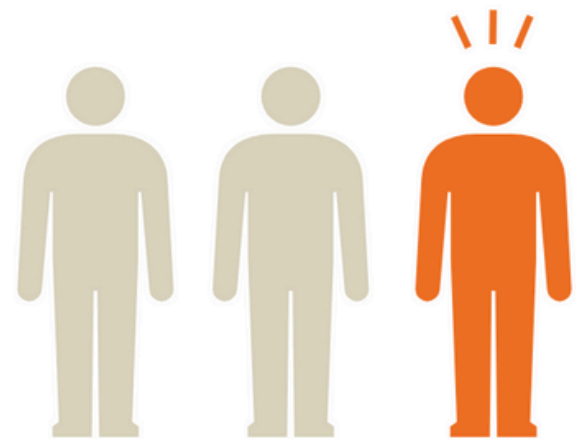


1,280 × 720

(Campus Tower, n.d)

“HOW DO PEOPLE MANAGE IF THEIR DAUGHTER ISN'T A NURSE?”

96% of individuals receiving long-term home care have an **unpaid caregiver**



More **than 1 in 3** of these caregivers **are distressed**

Individuals with chronic disease and complex care needs require extensive supports.

Unfortunately, due to the constraints of the healthcare system, informal caregivers such as friends and family are required to take on much of the responsibilities.

(Canadian Institute for Health Information, 2020)

SOME OF THE DATA



- Medication management is one of the top stressors reported by caregivers supporting a palliative patient at home (Pollock, et al., 2021)
- Studies on household caregiving reveal that 73.1% of adults receiving care experience a medication error annually. (Gil-Hernandez, et al., 2024)
- 5% of these with errors result in serious consequence (Gil-Hernandez, et al., 2024)

CASE STUDY

Carter is caring for his dad who has a terminal cancer diagnosis, it is his dad's wish to remain at home.

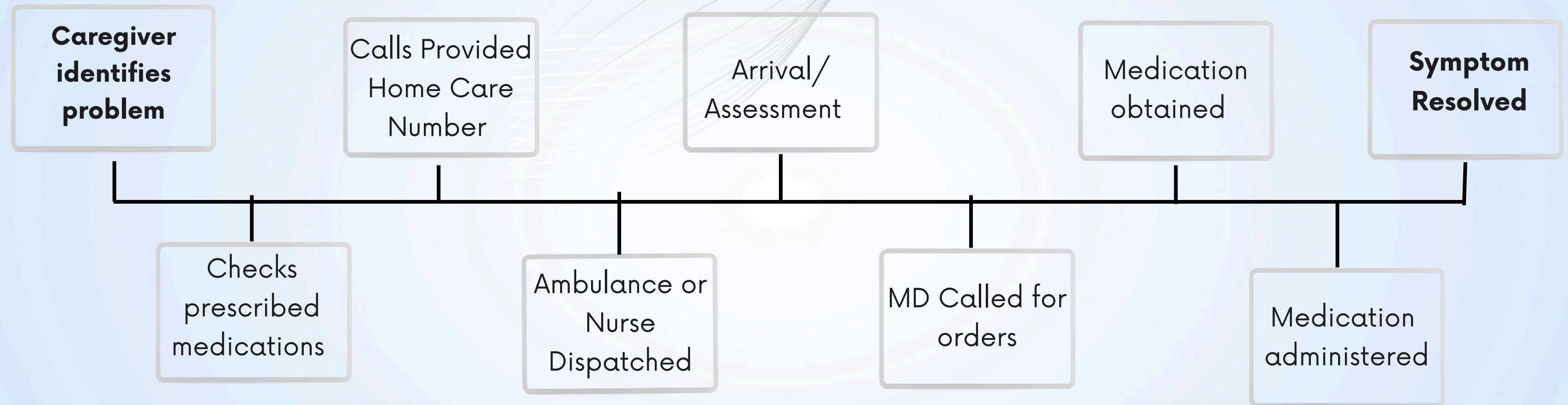
His dad is reporting more pain and nausea this morning.
He has already received his scheduled medications

**Carter administers his dad's PRN (as needed) medications.
He has a small amount of emesis prior to them taking effect**

An hour later his dad is still reporting pain and nausea. Carter has no more medications left to administer

What does he do?

CURRENTLY...



How Can Technology Help This Scenario?

INTRODUCING



HEALTH HUB

An at home vending machine that provides patients and caregivers access to a variety of necessary medications, including primed fluid lines and subcutaneous injections.

KEY BENEFITS



Improved Access to Medication

- Secure storage with refrigeration
- Increases utilization of anticipatory prescribing



Access to subcutaneous medications

- Access to fluids and non-oral medication
- Reduces errors associated with incorrect dosing in syringes and sterility

KEY BENEFITS



Increasing Safety and Communication

- Automatically syncs to patient Electronic Health Record (EHR)
- Alerts for potential errors and missed medications



Increasing Caregiver Decision Making

- Access to medication information
- Guidance for the use of Pro Re Nata (PRN) medication

CASE STUDY



- Carter is able to use the database to identify his father's symptoms and see other available medications to administer
- When Carter calls home care his team is able to see the doses dispensed and confirm the administration
- The doctor can release the anticipatory medications from the vending machine for administration

The background features a light blue gradient with a series of concentric, slightly offset circles in shades of blue, green, and yellow. Overlaid on these are several sets of thin, curved lines in grey and gold that flow from the left and right edges towards the center, creating a sense of movement and depth.

THANK YOU

FOR YOUR ATTENTION

REFERENCES

Canadian Institute for Health Information., 1 in 3 unpaid caregivers in Canada are distressed. CIHI. (2020, August 6). <https://www.cihi.ca/en/1-in-3-unpaid-caregivers-in-canada-are-distressed>

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Pollock, K., Wilson, E., Caswell, G., Latif, A., Caswell, A., Avery, A., Anderson, C., Crosby, V., & Faull, C. (2021). Family and health-care professionals managing medicines for patients with serious and terminal illness at home: A qualitative study. *Health Services and Delivery Research*, 9(14), 1–162. <https://doi.org/10.3310/hsdr09140>