

MEDICATION ADHERENCE: THE UGLY TRUTH

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Speaker Disclosure

I have no conflict of interest to disclose in relation to this presentation.

Learning Objectives

- Review the prevalence of medication nonadherence
 - Regional, provincial, national, and international
- Identify the five dimensions of medication adherence and recognize the complexity surrounding this fundamental aspect of care
- Consider strategies and interventions for each dimension to improve medication adherence
- Understand a multi-level approach is needed to improve adherence

What is adherence?

“The extent to which a person’s behaviour – taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider.”

- World Health Organization

CDC PUBLIC HEALTH GRAND ROUNDS: Overcoming Barriers to Medication Adherence for Chronic Diseases

For every 100 prescriptions written:

100



Filled by the pharmacy

50-70



Picked up from the pharmacy

48-66



Taken properly

25-30



Refilled as prescribed

15-20

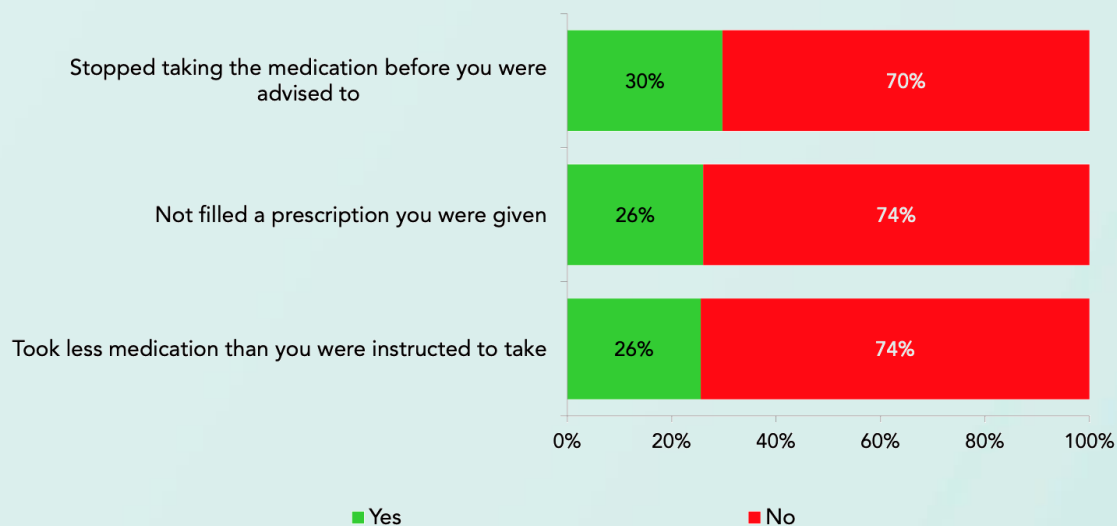


At any given time
~50% of patients are non-adherent

CPhA: Canadians' Medication Adherence

Not Taken Medication

Have you ever been prescribed a medication for a medical condition or illness that you have either not filled, not taken as your were directed, or stopped taking?



Survey was conducted online with a representative sample of Canadians from Research Now's online panel.

Sample size: 2,937

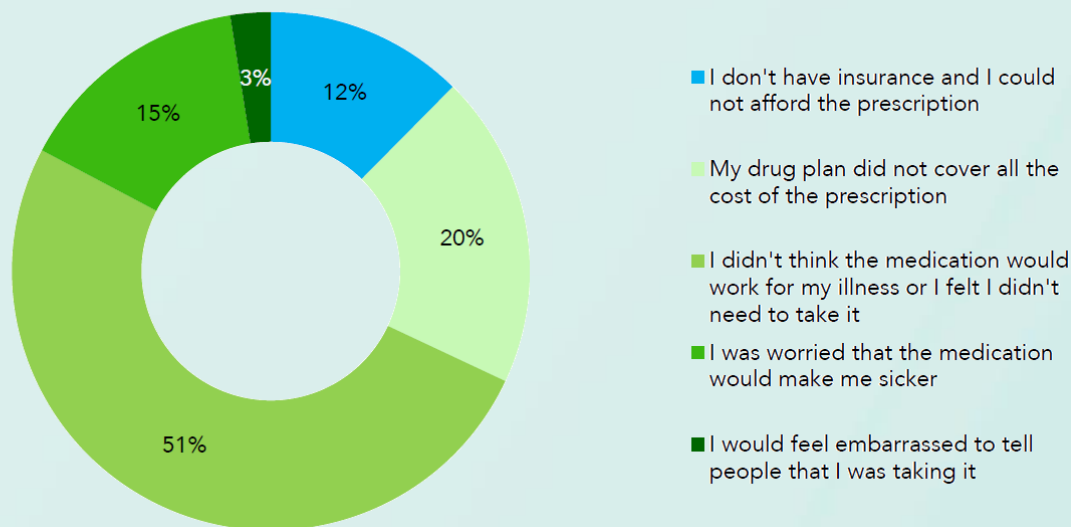
Field dates: February 14 to 22, 2015

Data was weighted by age, gender, education, and region. In Quebec, results were also weighted by official language.

CPhA: Canadians' Medication Adherence

Why Did Not Fill

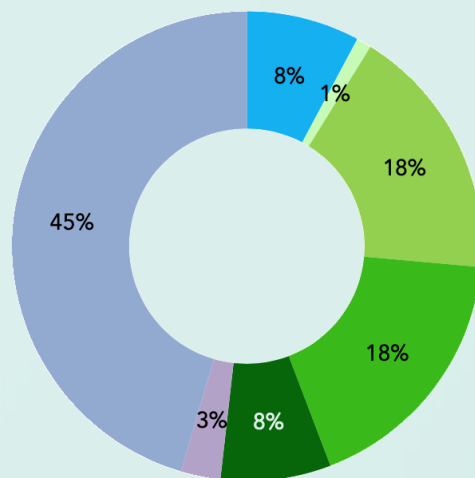
Thinking of the medication(s) that you have been prescribed but did not fill at a pharmacy, which of the following best describes the reason for not filling the prescription you were prescribed?



CPhA: Canadians' Medication Adherence

Why Did Not Take as Prescribed

Thinking of the medication(s) that you have been prescribed but did not take as directed, which of the following best describes the reason for not taking the amount of medication as prescribed or for stopping the use of it?



- I couldn't afford to keep taking the drug
- It was removed from my drug plan
- I didn't think it was working well
- It made me sick
- There was an interaction with the other medications I was taking
- I felt embarrassed to tell people I was taking it
- I felt that that I no longer needed to take it

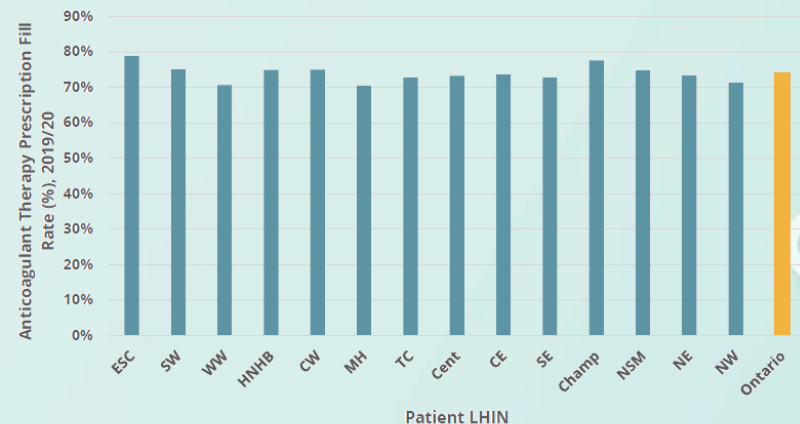
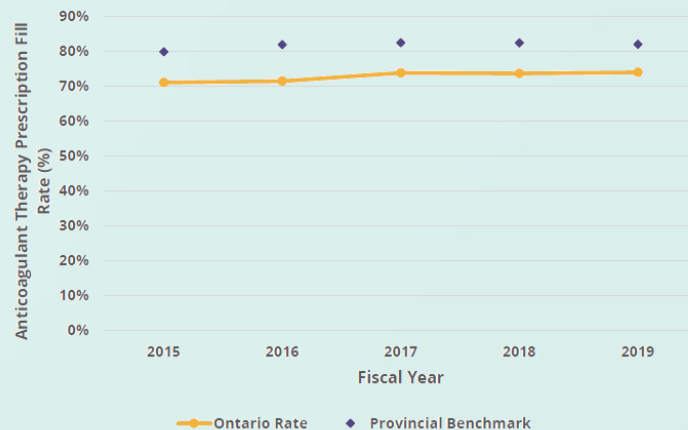
Ontario Stroke Report FY 2019-20

Chapter 1: Prevention and Public Awareness of Stroke and TIA in Ontario

Indicator 1.3: Proportion of Ischemic stroke/TIA inpatients aged 65+ with Atrial Fibrillation who Filled a Prescription for Anticoagulant Therapy within 90 days of Discharge from Acute Care, FY 2019/20

Indicator Description:

For long-term stroke prevention, most people with atrial fibrillation should be treated with an anticoagulant. This indicator focuses on the population age 65 and older with atrial fibrillation who filled a prescription for an oral anticoagulant therapy within 90 days of discharge from acute stroke care. The cohort focuses on patients with a history of atrial fibrillation (in the past three years) and does not capture patients with a diagnosis of atrial fibrillation after discharge.

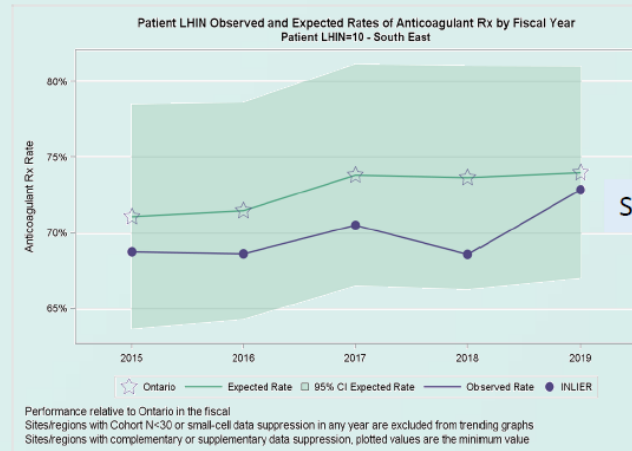


Interpretation Consideration:

Desired directionality is higher. The rate of filling a prescription for anticoagulant therapy has remained steady for the last three fiscal years. Prescription drug information data are only available for those 65 years and older and who filled the prescription using the Ontario Drug Benefit plan. An integrated care approach that focuses on diagnosis, education and behaviour modification with health care providers and patients is required to optimize anticoagulant use as a prevention strategy for stroke.

Ontario Stroke Report FY 2019-20

1-3 Anticoagulant Rx within 90 days rate for ischemic stroke/TIA patients 65+ with Hx of Atrial Fibrillation - FY 2019-20



South East

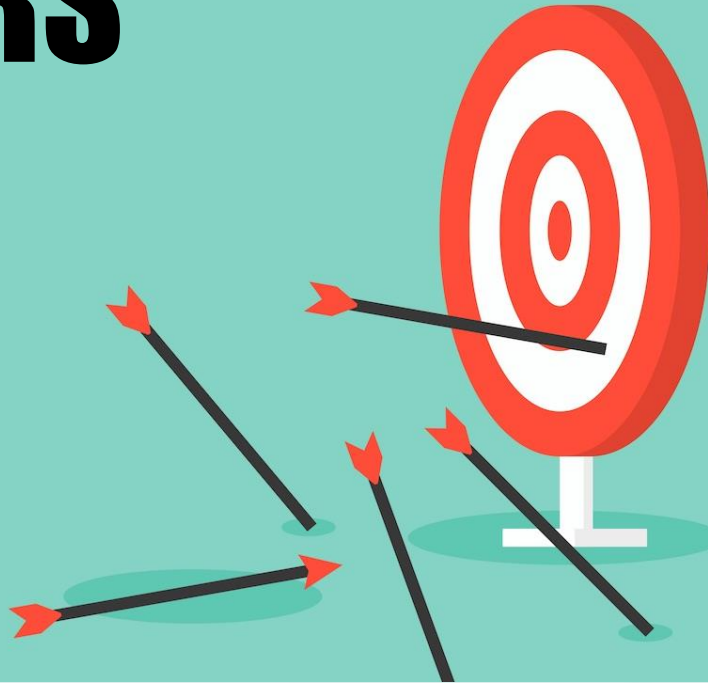
Rates hospital current year (last year)

- KHSC-General 73.4% (72.7%)
- QHC – Belleville – 80.4% (67.8%)
- Brockville General – 54.5% (66.7%)
- PSFDH – Not reportable (suppressed)

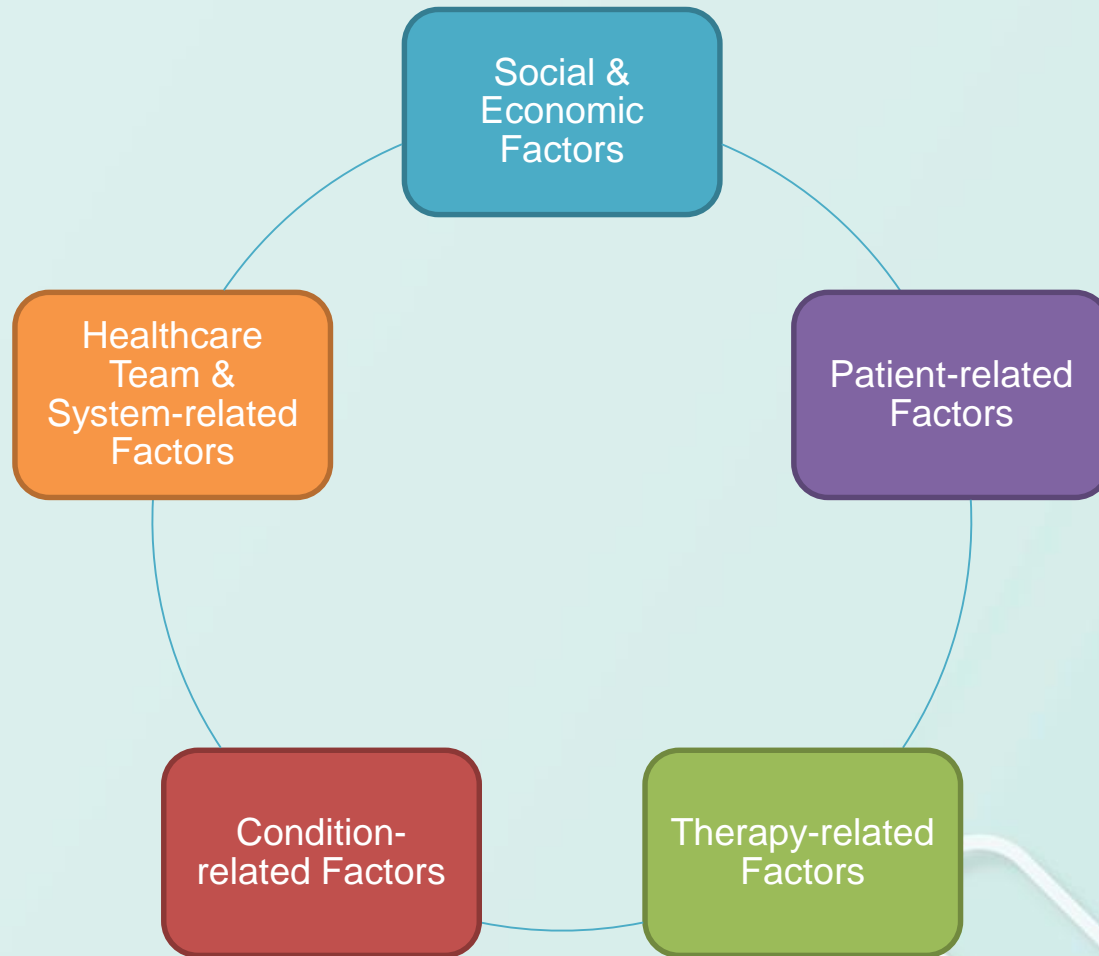
Rates for sub-region current year (last year)

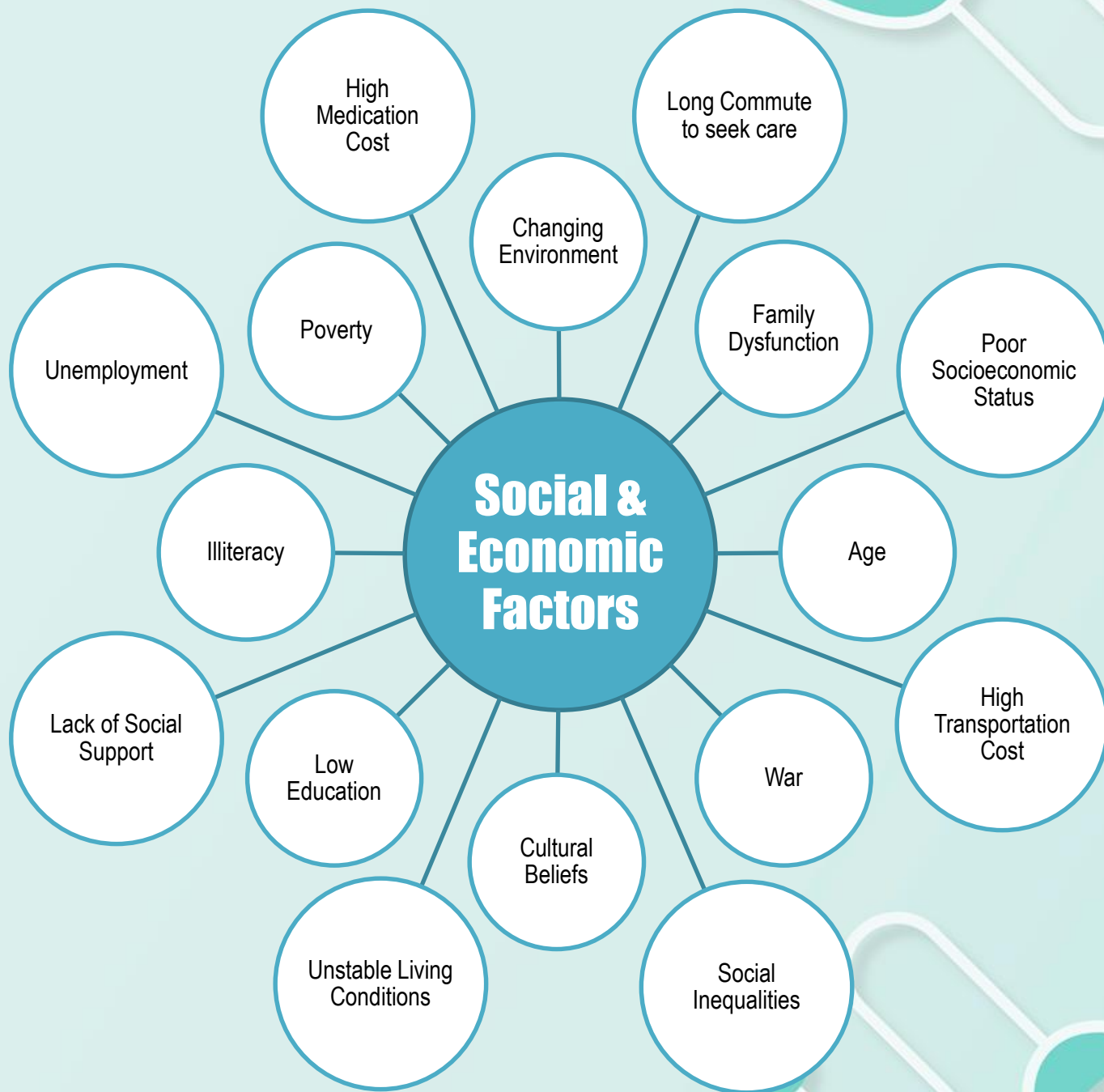
- Kingston sub-region 84.4 to 96.9% (76.9%)
- Rural FLA – 57.1% (54.5 to 90.9%)
- Quinte sub-region 78.8% (65%)
- Rural Hastings sub-region 58.3 to 91.7% (62.5%)
- LLG sub-region – 58.5% (61.3%)

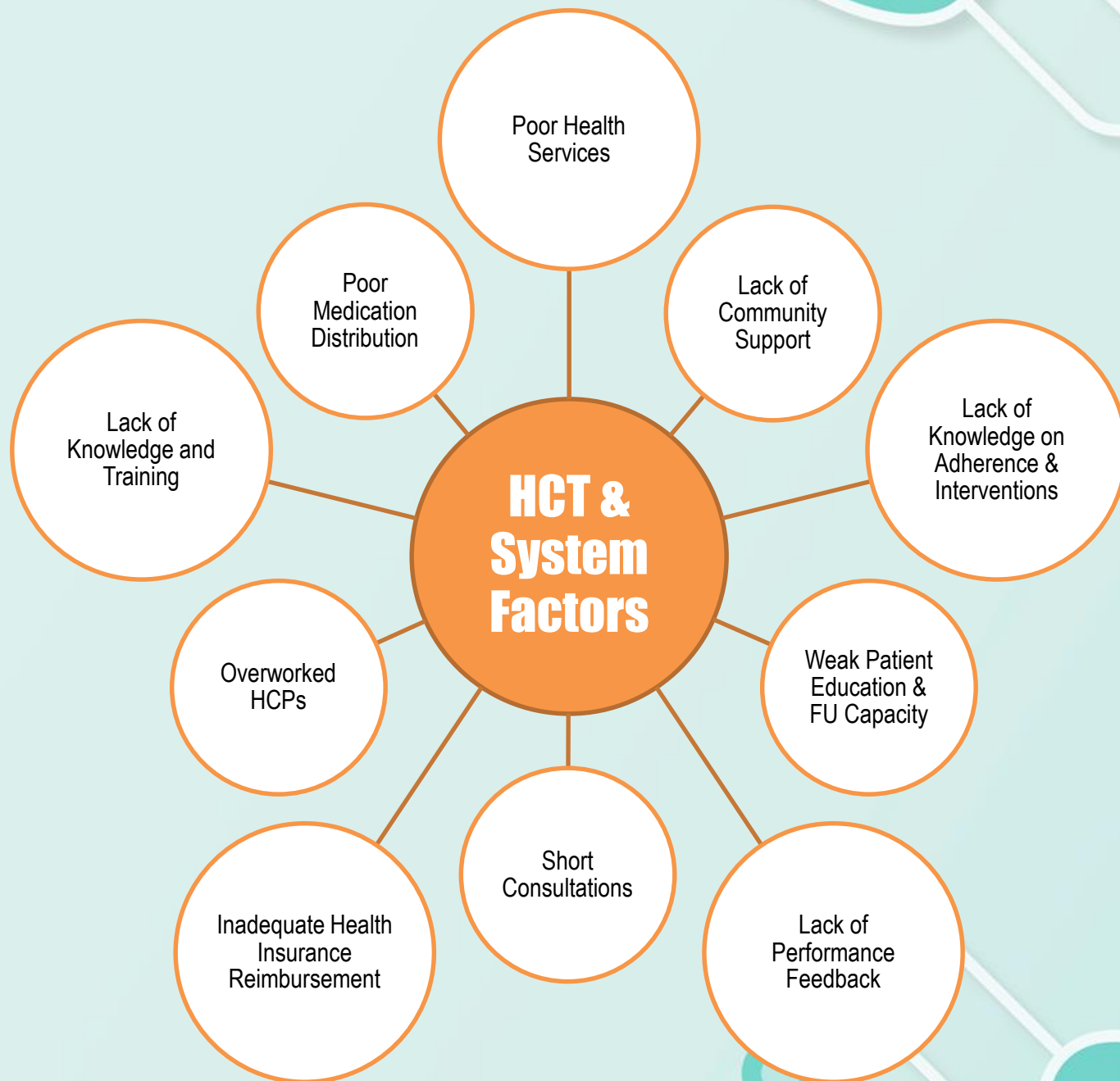
BARRIERS

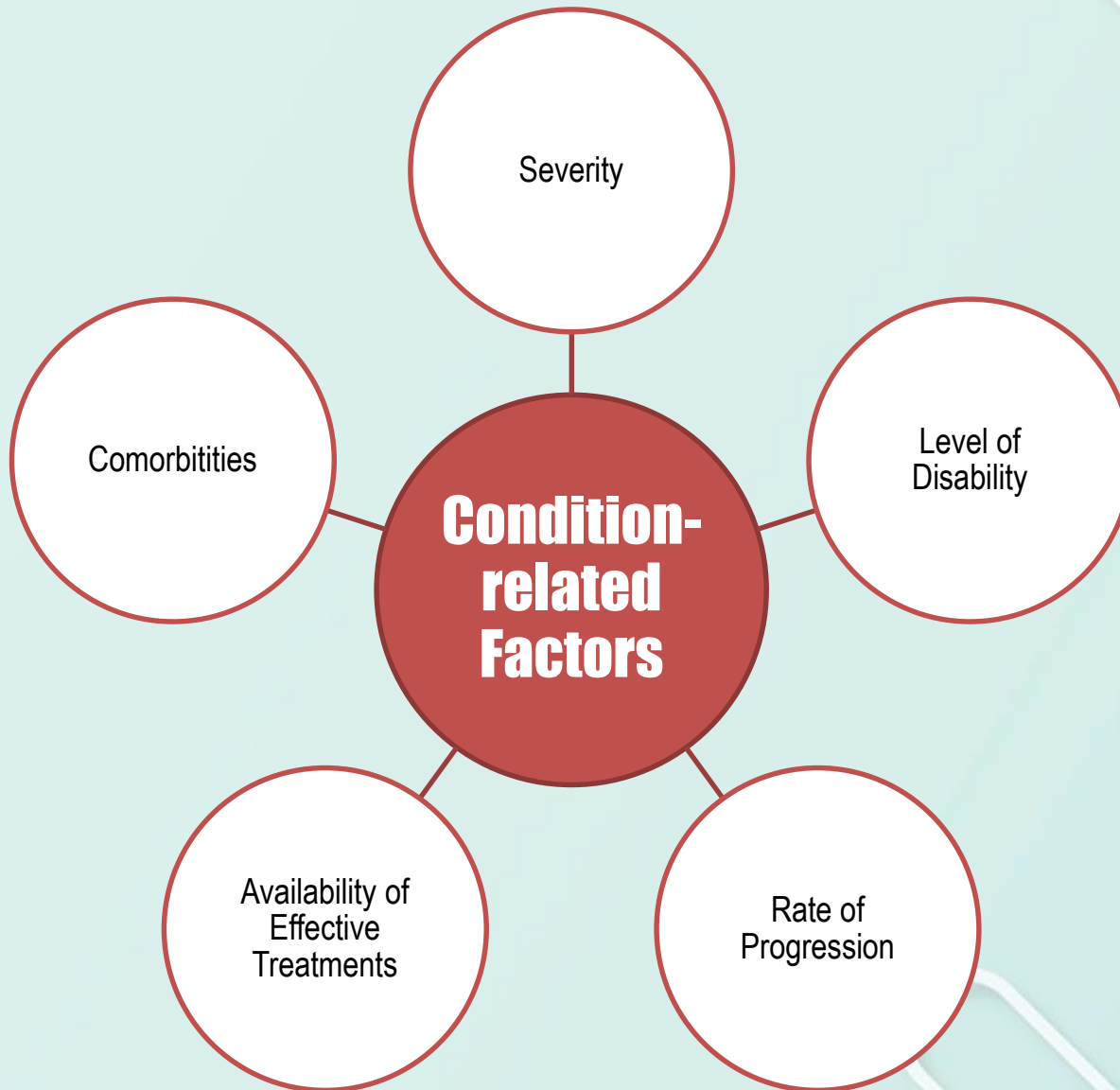


The Five Dimensions of Adherence

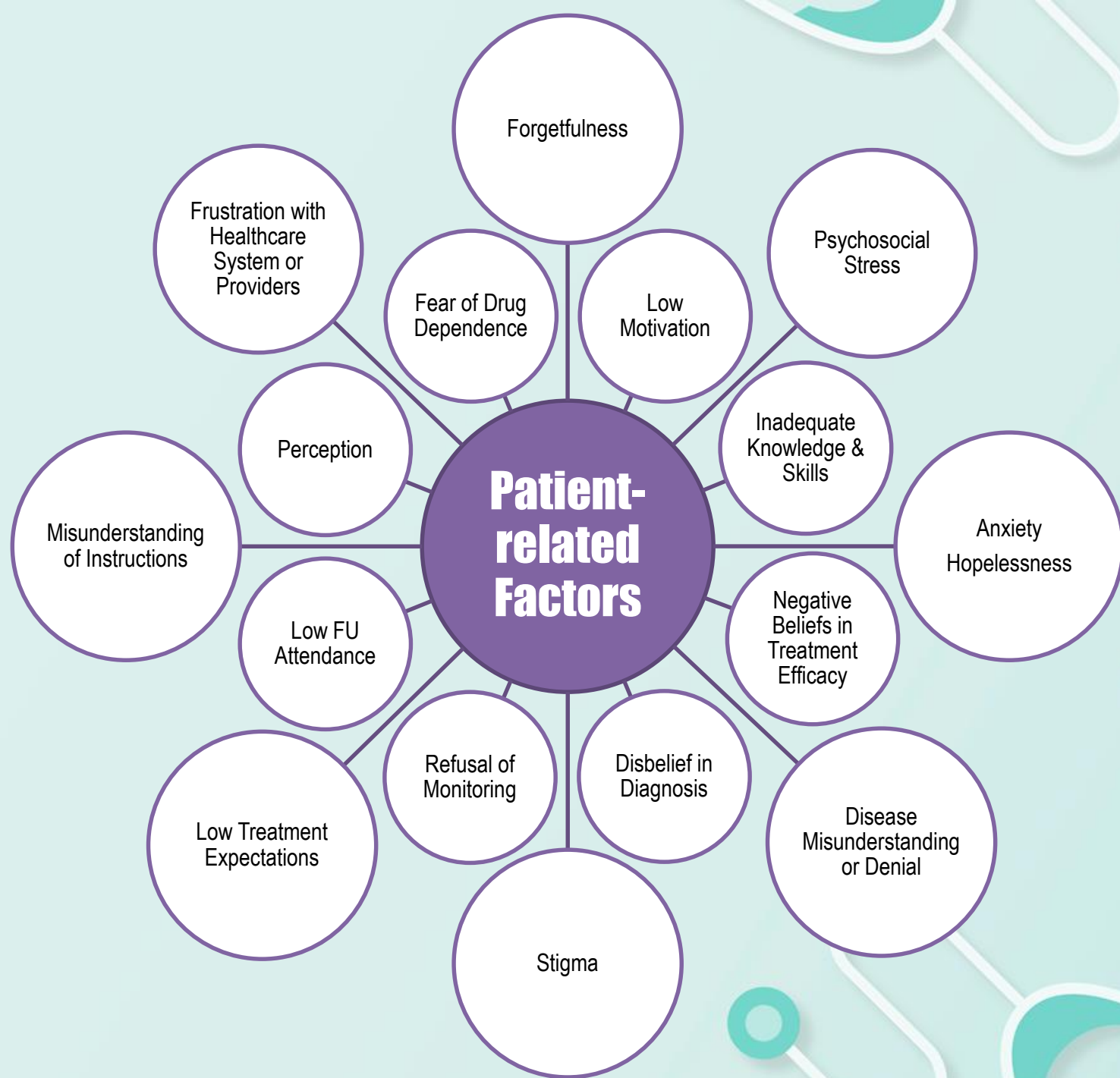








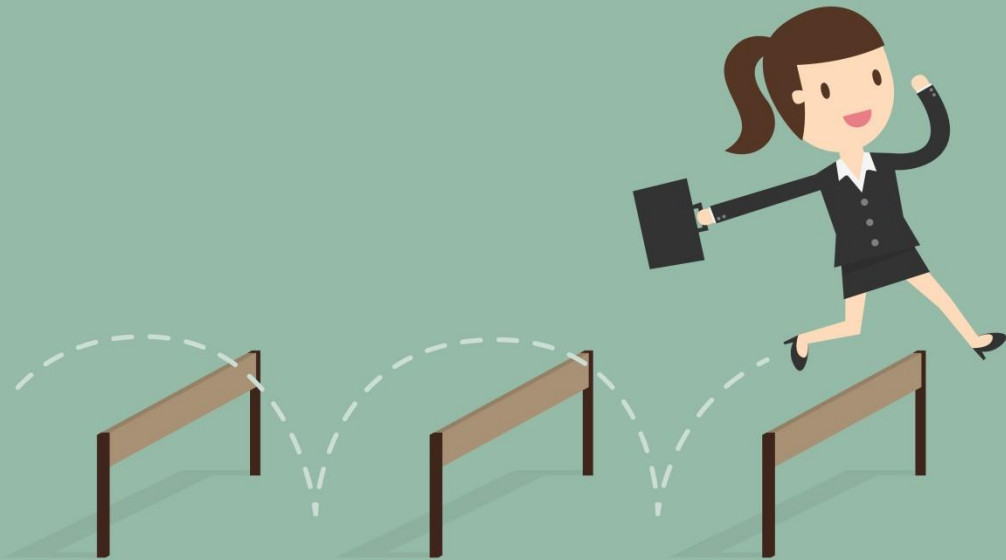




Why Nonadherence Persists

- 💊 Adherence is often overestimated
- 💊 Intangible patient benefits for treatments aimed at prevention
- 💊 Presence of more than one barrier
- 💊 Unidimensional thinking
- 💊 Single interventional approach
- 💊 Mismatch between patient's readiness and provider's interventional attempts
- 💊 Little to no incentive for services aiming to improve adherence

INTERVENTIONS



Social & Economic Interventions

💊 Food programs

- Good Food Box
 - Less costly than grocery stores
 - Offering delivery
- Seniors Food Box
 - 55+ struggling financially can receive a free box of fresh produce and dry goods
 - Offering delivery
 - Waitlist?

💊 Self-management programs

- Living Well workshops
- HCPs workshops
- Online group workshops
- One-on-one web based health coaching

Rx Cost

Drug Plan

Public

Be mindful of LU
criteria & expiration

Copay

Refill 3 months instead of 1 month at
a time

Adherence packaging may be more
costly due to more frequent
dispensing

Qualify for copay reduction?

No Copay

No additional cost for adherence
packaging

May be limited to a 35-day max
dispense depending on the type of
plan

Private

Most Rx meds
are covered

Watch out for
when patient
turns **65**

Out-of-pocket

Rx meds
with generic
options

Encourage ↑
quantity per
refill

Compare
dispensing
fees

Seek patient
assistance
programs

Split tablets

Social & Economic Interventions

- 💊 Free Rx delivery
 - Most pharmacies deliver at least once a day and at least 5 days a week
 - Request for the pharmacy to pick up, modify, then redeliver an existing pack in need of an adjustment
- 💊 Video appointments and telemedicine consults
- 💊 Community Paramedicine Home Visit program
 - Diagnostic and vital sign monitoring
 - Chronic disease management and education
 - Wellness checks
 - Home safety scans
 - Fall risk assessment
 - General mental health assessment
 - Assessment of caregiver strain and support
 - Medication adherence and review
 - COVID-19 testing
 - Ongoing monitoring
 - Vaccinations
 - Urine dip

HCT & System-related Interventions

- Access to training
 - Knowledge: Information on adherence
 - Thinking: The clinical decision-making process
 - How will you effectively interview your patient to detect nonadherence?
 - What are all the barriers identified?
 - What would be the best intervention for each barrier?
 - Will you need to prioritize one barrier or can they all be intervened at the same time?
 - How do you plan to follow up with your patient to monitor progress?
 - Action: Behavioural tools for creating and maintaining habits
 - Training HCPs to perform patient-tailored interventions effectively
 - Gauge the patient's level of readiness
 - A combination of cognitive, behavioural, and motivational interventions are more effective than single-focus interventions

When Interviewing Your Patient

- 💊 Ask blame-free, open-ended questions
 - *“Tell me how you take each of your pills.”*
 - *“Most patients don’t take their pills exactly as prescribed. In the last week, how many days have you been taking them?”*
 - *“What problems get in the way of you taking your meds as prescribed?”*
 - *“Is it easier for you to remember your meds in the morning or at night?”*
- 💊 Listen, empathize, reassure, and praise

HCT & System-related Interventions

- Collaborate with community pharmacists
 - Recommendation acceptance in the community: 42 to 60%
 - Recommendation acceptance in the clinical setting: 70 to 90%
- Community pharmacists can help you
 - Identify medication nonadherence
 - Monitor and intervene
 - Find cost-saving alternatives
 - Simplify complex regimens
 - Provide patient education
 - Spot drug interactions
 - Prevent medication errors

Condition-related Interventions

💊 Identify and treat comorbidities

- Depression
- Drug and alcohol abuse
- Dementia

💊 Target disease-specific demands, symptoms, and impairments

- PD > Tremor > Snap cap vials, peel-open blister packs, automated dispenser

💊 Early management approach

- Rheumatoid arthritis
- Multiple sclerosis

Therapy-related Interventions

💊 Simplify regimen

- Choose once-daily formulations
- Choose combo pills
- Choose meds that can be taken with or without food
- Choose meds requiring minimal lab monitoring
 - Lithium vs. quetiapine for bipolar disorder
 - DOACs vs. warfarin for stroke prevention
 - DOACs are generally preferred over warfarin with a few exceptions:
 - » Patient is on carbamazepine
 - » Medication adherence is problematic and unlikely to be corrected
 - » Patients with mechanical heart valves
 - » Patients with severe renal impairment ($\text{CrCl} < 15\text{-}30 \text{ mL/min}$ depending on the DOAC)

Therapy-related Interventions

Deprescribe

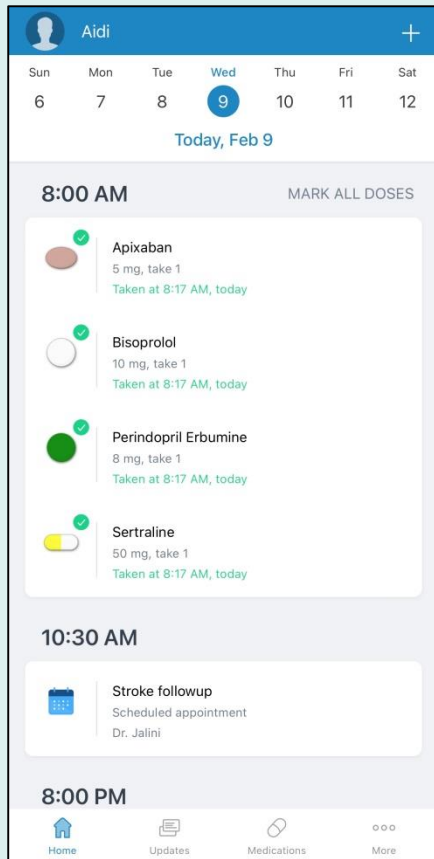
- Prescribing cascades
 - HTN > Amlodipine > Edema > Furosemide > Hypokalemia > Potassium supplements
- Meds with low benefit/risk ratios
 - Meds that are not evidence-based
- Meds with unknown indications
 - Why has this patient been taking OTC ASA 81 mg for over 10 years?
- Meds with expired indications
 - PPI: Most indications recommend <8 weeks of treatment
 - Iron: Corrected IDA source and restored level > 4 months?
- Meds with subjective outcomes
 - Analgesics
 - Hypnotics
- Meds with similar mechanisms of action
 - SGLT2 inhibitors for DM2 and thiazide diuretics for HTN

Patient-related Interventions

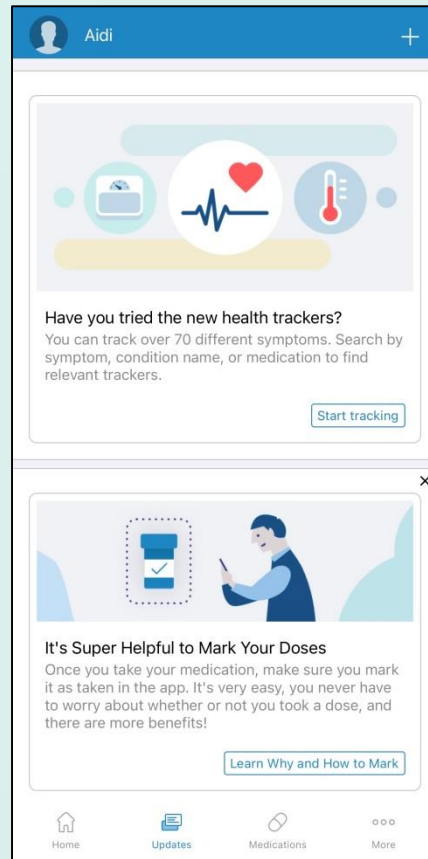
- 💊 Offer tools to help patients remember
 - Medication adherence apps
 - Handle complex regimens
 - Alert patient or caregiver of due or missed doses
 - Provide refill reminders
 - Store additional data such as notes, S&S, lab values, provider contact info, appointments, etc.
 - Track adherence
 - Spencer dispenser

Patient & Caregiver Features	Provider Features
Dispenses due meds only	Provides medication adherence reports
Displays calendars, reminders, and pill images	Allows video appointment scheduling
Dispenses meds in advance for travel	Generates patient surveys to be completed on touchscreen
Sets reminders for non-oral meds	
Connects other medical devices via Bluetooth	Shares data gathered through Bluetooth-enabled devices
Involves caregivers through the app	

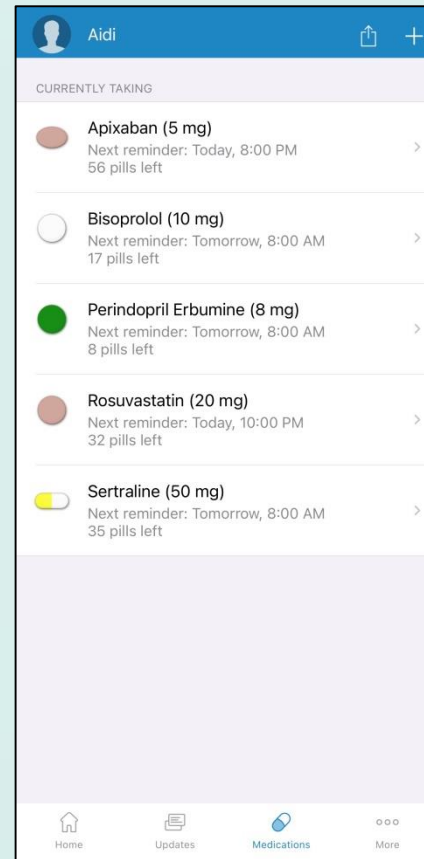
Medisafe Pill Reminder



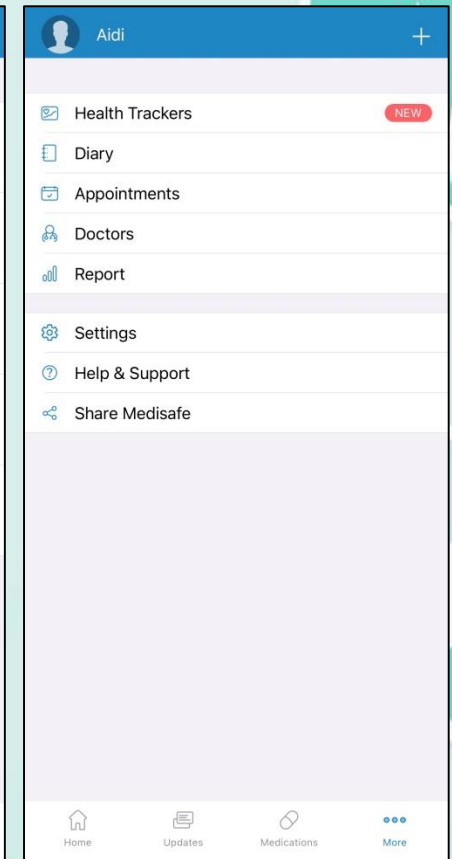
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Home



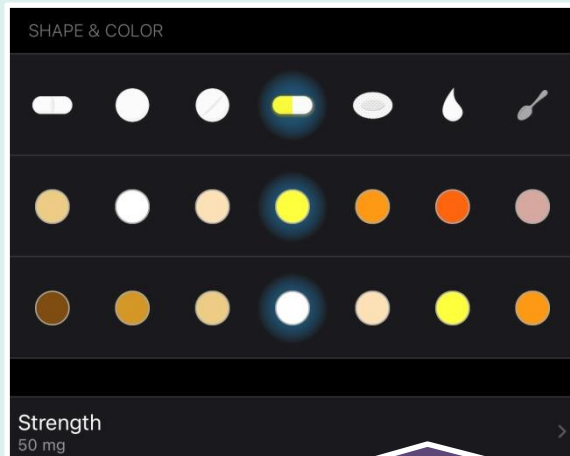
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Updates



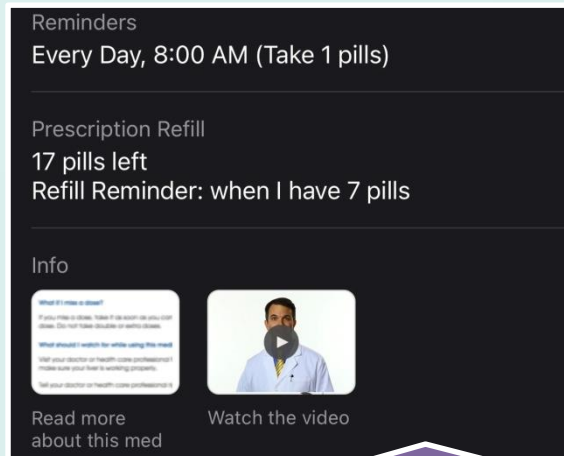
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Medications



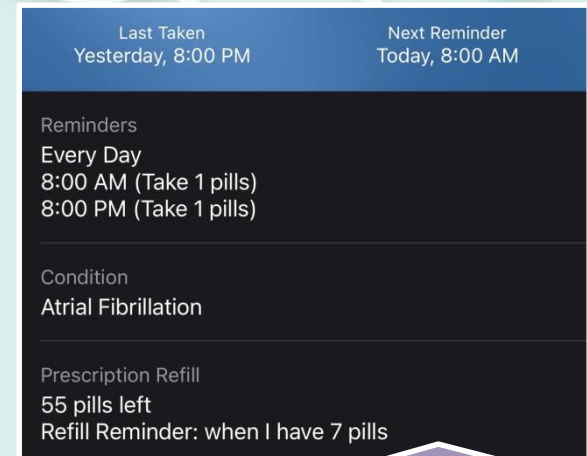
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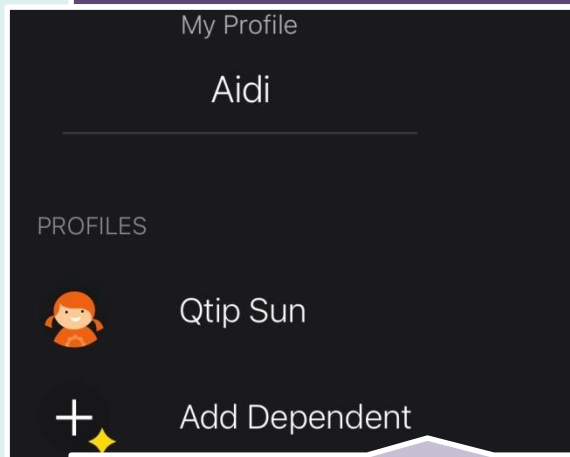
Customize appearance



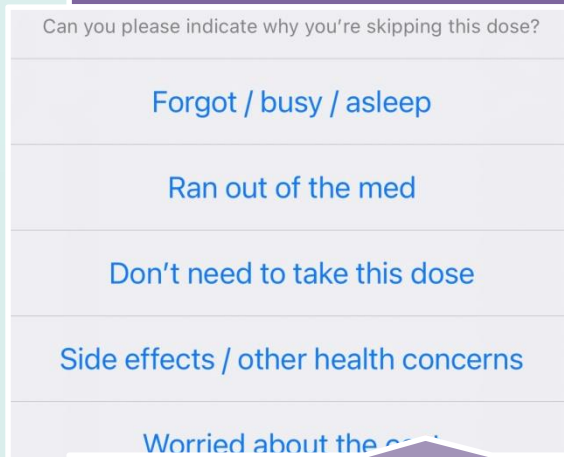
Drug monograph & video counseling



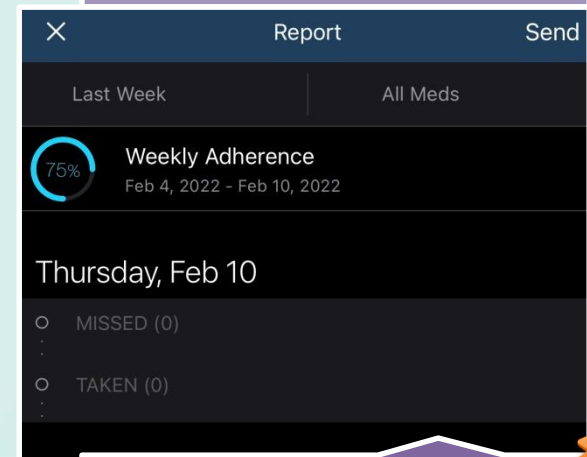
Indication & refill reminder



Add dependents



Reason for nonadherence



Email adherence report or convert to Excel

Medication Status Report

Feb 02, 2022 - Feb 09, 2022

Feb 02, 2022 - Feb 09, 2022

Adherence

Feb 02, 2022 - Feb 09, 2022

02 03 04 05 06 07 08 09
W T F S S M T W

Apixaban
take(-1) 8:00 am 8:00 pm X X ✓ ✓

Bisoprolol
10 mg
take(-1) 8:00 am X ✓ X ✓

Perindopril
Erbumine
8 mg
take(-1) 8:00 am X ✓ X ✓

Rosuvastatin
20 mg
take(-1) 10:00 pm ✓ ✓ ✓

Sertraline
50 mg
take(-1) 8:00 am X ✓ X ✓

✓ - taken X - missed/skipped

02 03 04 05 06 07 08 09
W T F S S M T W

Apixaban
take(-1) 8:00 am 8:00 pm X ✓ X ✓
X ✓ ✓

Patient-related Interventions

- 💊 More tools to help patients remember
 - Pharmacy refill reminders and automatic refill programs
 - Associate pill administration with daily activities
- 💊 Face-to-face interactions are more effective
- 💊 Motivate
 - Effective but difficult to maintain
 - Motivational talk at every visit
- 💊 Ongoing communication
 - Regular follow-ups
- 💊 Involve family, friends, and community

Patient-related Interventions

- 💊 Consistent messaging
- 💊 Repetitive counseling
 - During admission: Start counseling
 - Upon discharge: Repeat counseling
 - Pharmacy Rx pickup: Repeat counseling
 - Family provider FU: Repeat counseling
- 💊 Offer facts from the start
 - Provide a list of reliable websites for patients who wish to self educate after discharge
- 💊 Utilize objective measures to monitor adherence
 - Check drug levels (Trough: 8-12 hours after the last dose)
 - Order lab tests (TSH, 25(OH)D, CBC, INR, etc.)
 - Rely more on Rx refill histories than self reports
 - ConnectingOntario ClinicalViewer
 - Faxed medication list from pharmacy

Patient education alone is a weak intervention.

Intentional Nonadherence

Some patients may feel that the benefit to a treatment is not worth the burden.

SHARE Approach

S	Seek your patient's participation
H	Help your patient explore & compare treatment options
A	Assess your patient's values and preferences
R	Reach a decision with your patient
E	Evaluate your patient's decision

Take-home Messages

- 💊 Medication adherence is frequently compromised by more than one barrier.
- 💊 Patient-related factors comprise just one aspect of the problem. There are four other dimensions of equal magnitude requiring attention.
- 💊 Resolving the barriers within each dimension is necessary to improve overall adherence.
- 💊 There is no one-size-fits-all approach. Interventions must be tailored to the patient, conditions, and setting.
- 💊 Multi-level interventions aimed at improving adherence would yield a significant positive return on healthcare cost and patient outcomes.

Contact

aidis@kchc.ca



Kingston Community
Health Centres

Centres de santé
communautaire de Kingston

Toolkit

Food	www.goodfoodboxkingston.com https://www.unitedwaykfla.ca/help-for-low-income-seniors-through-grocery-and-meal-programs/
Self-management	https://livingwellseontario.ca
Deprescribing	https://deprescribing.org
Medication Adherence App	https://www.medisafeapp.com
Spencer dispenser	Regional supplier: Pharmasave Loyalist Pharmacy (613-507-5800) Monthly rental fee: \$50* Free delivery to Kingston *Rental fee can be lowered or waived depending on the patient's financial situation
Pharmacy Dispensing Fees	Costco - \$4.49 Walmart - \$9.97 Metro - \$10.99 Loblaws - \$10.99 Shoppers Drug Mart - \$11.99 Rexall - \$12.99
Community Paramedics	613-548-9400 x 429
Mental Health Apps	https://www.camh.ca/en/health-info/mental-health-and-covid-19/information-for-professionals/apps-for-mental-health

References

- Adherence To Long-term Therapies: Evidence for action. World Health Organization. https://www.who.int/chp/knowledge/publications/adherence_full_report.pdf?ua=1. Published 2003.
- Clinical Resource, *Medication Adherence Strategies. Pharmacist's Letter/Prescriber's Letter*. March 2018.
- Medisafe Project LTD, 2020. Medisafe Pill Reminder. Mobile app. Version 7.3.30. Available from: <https://apps.apple.com/ca/app/medisafe-pill-reminder/id573916946>. Accessed 04 February 2022.
- Kim J, Kelsy C, Downs J, Tillman F. Medication adherence: The elephant in the room. *U.S. Pharmacist – The Leading Journal in Pharmacy*. <https://www.uspharmacist.com/article/medication-adherence-the-elephant-in-the-room>. Published January 19, 2018.
- Therapeutics Letter. Therapeutics Initiative. <https://www.ti.ubc.ca/2021/09/08/132-rethinking-medication-adherence>. Published September 8, 2021.
- Khettar S, Jacquin Courtois S, Luaute J, et al Multiprofessional intervention to improve adherence to medication in stroke patients: a study protocol for a randomised controlled trial (ADMED AVC study) *European Journal of Hospital Pharmacy* Published Online First: 25 September 2020. doi: 10.1136/ejhp-2020-002425
- Wilhelmsen NC, Eriksson T Medication adherence interventions and outcomes: an overview of systematic reviews *European Journal of Hospital Pharmacy* 2019;26:187-192.
- Butterworth JE, Hays R, McDonagh STJ, Richards SH, Bower P, Campbell J. Interventions for involving older patients with multi-morbidity in decision-making during primary care consultations. *Cochrane Database of Systematic Reviews* 2019, Issue 10. Art. No.: CD013124. DOI: 10.1002/14651858.CD013124.pub2.
- Fryer CE, Luker JA, McDonnell MN, Hillier SL. Self management programmes for quality of life in people with stroke. *Cochrane Database of Systematic Reviews* 2016, Issue 8. Art. No.: CD010442. DOI: 10.1002/14651858.CD010442.pub2.
- Zaugg V, Korb-Savoldelli V, Durieux P, Sabatier B. Providing physicians with feedback on medication adherence for people with chronic diseases taking long-term medication. *Cochrane Database of Systematic Reviews* 2018, Issue 1. Art. No.: CD012042. DOI: 10.1002/14651858.CD012042.pub2.
- Clinical Resource, Medication Adherence Apps. *Pharmacist's Letter/Prescriber's Letter*. July 2019.