

Old Tools - New Tricks? iGuidance As A Decision Support Tool In Prescribing COVID Antivirals

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INTRODUCTION

The COVID-19 pandemic saw rapid development of new anti-viral treatments for the management of mild COVID-19; including Paxlovid[®] (nirmatrelvir/ritonavir), Lagevrio[®] (molnupiravir) and Veklury[®] (remdesivir).

Ensuring patients met the National Medical Stockpile (NMS) criteria and received individualised medication treatments was time sensitive to ensure efficacious treatment. However, it was a time intensive process for the Infectious Diseases (ID) and pharmacy teams.

The development of a custom, in-house approval pathway using the antimicrobial stewardship program, iGuidance, aimed to streamline the process at Northern Health.

OBJECTIVES

- 1) Assess the use of iGuidance as a decision support tool
- 2) Provide decision support for appropriate choice of treatment
- 3) Reduce the number of ID consultations for mild COVID-19 treatment

ACTION

Pharmacists developed an approval pathway for “COVID-19 Early Therapy” with two arms to guide the eligibility and treatment choice for patients with mild COVID:

- (1) Ensures patient suitability according to NMS criteria at the time of prescribing
- (2) Provides the most suitable medication recommendation based on individual patient parameters.

Education was provided to the medical and pharmacy teams on using iGuidance as a decision support tool, and the guidance system was implemented in November 2022.

RESULTS

156 patients approved for early-COVID therapy using iGuidance February - April 2023

93.6% of patients met NMS criteria
(n=146)

6.4% did not meet NMS criteria
(n=10)

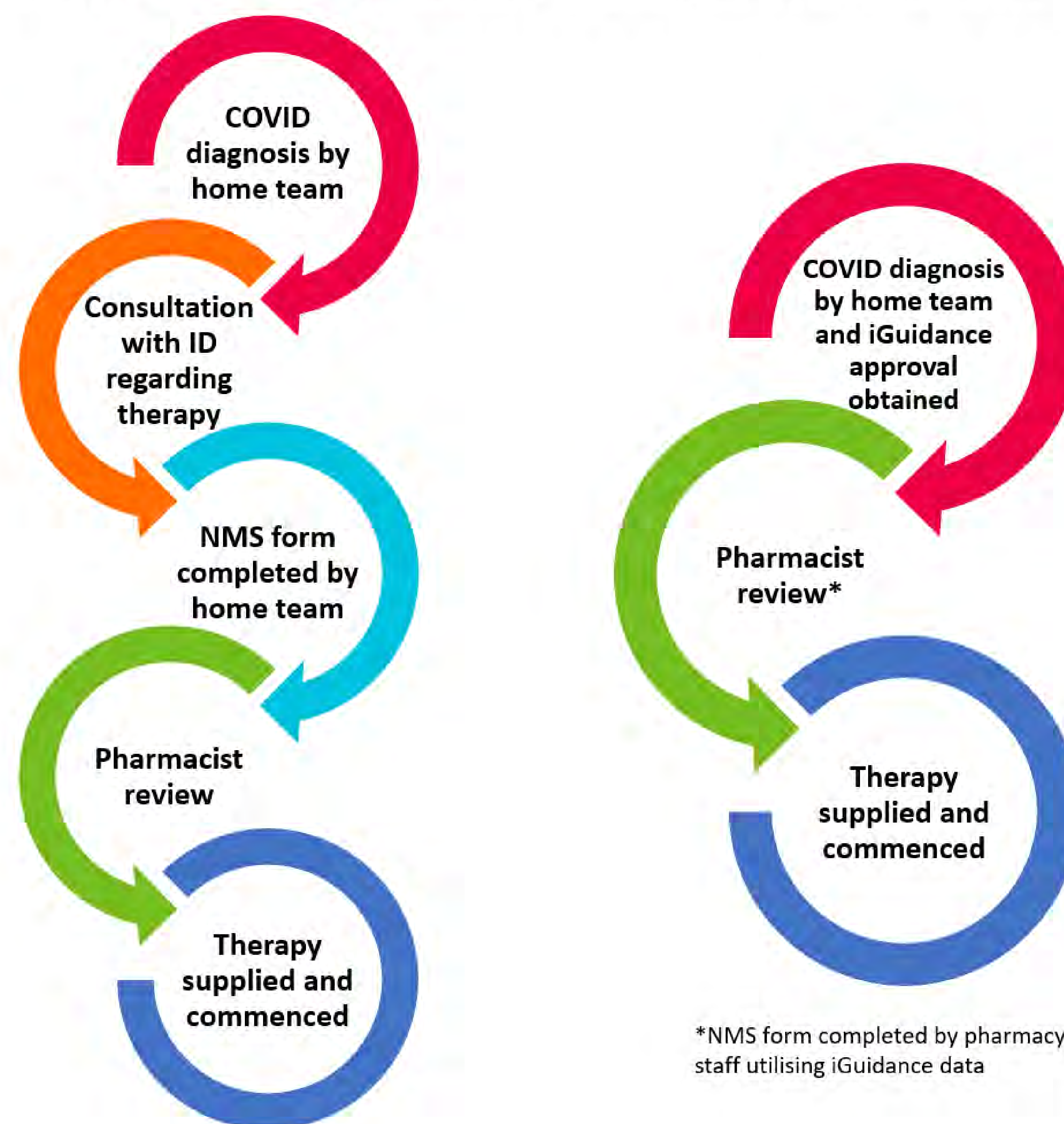
92% received an appropriate therapy

50% had an oxygen requirement to exclude them from early therapy NMS criteria

An independent retrospective analysis of patients approved for early-COVID therapy was conducted over a three month period.

Patient medical records were assessed for suitability to NMS criteria and clinically reviewed for most suitable therapy choice. Paxlovid[®] and remdesivir were considered equal therapeutic options, while molnupiravir was considered third line.

Figure 1: COVID early therapy process pre- and post- iGuidance implementation



DISCUSSION & LIMITATIONS

Among the 10 patients that did not meet criteria, the prevailing factor was oxygen requirement (50%). For 2 patients, the criteria “high risk co-morbidity” was indicated, however, no criteria could be identified. A total of 3 patients had poorly defined disease timelines or mis-recorded positive tests.

Molnupiravir was considered the third line option of Early-COVID therapy by our infectious diseases team due to reduced efficacy in comparison to other treatments. During the three month period, 18 patients classified as mild-disease were recommended molnupiravir following the guidance sequencing, with 3 considered appropriate. Following pharmacist review, 3 were changed to alternative therapies prior to commencing molnupiravir. The remaining 12 patients were administered molnupiravir, however, on retrospective review were considered suitable to receive Paxlovid[®] or remdesivir. The significance of medication interactions appears to be the most difficult criteria for clinicians to assess, leading to prescribing of the less efficacious molnupiravir.

iGuidance provided automatic approval for 156 patients during this 3-month period without the need for an ID consult, compared with 310 consults for treatments in a 3-month period prior to implementation.

Figure 2: Examples of information gathered to confirm NMS criteria and provide recommendation on therapy

Please confirm your patient is:	Please confirm that your patient is:
<ul style="list-style-type: none">• Symptomatic and within 5 days of symptom onset• Over 18 years old• Has ONE or more high risk comorbidities• Has no history of acute or chronic Hepatic and/or Renal Dysfunction• Can swallow tablets• Does NOT take any medicines that cannot be withheld or washed out• CrCl > 60mL/min	<ul style="list-style-type: none">• Symptomatic and within 5 days of symptoms• Over 70 years old• Has no acute or chronic Hepatic and/or Renal dysfunction <p>AND</p> <ul style="list-style-type: none">• Cannot swallow whole tablets <p>and/or</p> <ul style="list-style-type: none">• Takes medicines that cannot be withheld or washed out

CONCLUSION

iGuidance provides a decision support tool for COVID-19 early therapies to ensure patients meet NMS criteria for treatment, ensuring timely access to treatment and reducing ID consult time at Northern Health. However, pharmacist review is essential to ensure appropriate medication selection, dosing, and management of potential interactions.