

# Making HIMRs Happen!

## Providing Hospital Initiated Medication Reviews (HIMRs) for High-Risk Patients Early Post-Discharge

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### Introduction

Vulnerability in the 10 days after hospital discharge highlights the need to target those most at risk of medication-related problems. A change in business rules for Home Medicine Reviews (HMRs) in 2020 prompted publication of HIMR Pathways<sup>1</sup> to increase referral opportunities for at-risk patients being discharged from hospital settings. Few hospitals have implemented this initiative.

### Aim

To conduct a feasibility pilot using HIMR Pathways to risk stratify patients and facilitate early post-discharge medication review for patients identified as being at high-risk of readmission.

Primary endpoint was provision of a medicines review for patients screened as high-risk for readmission within 10 days of discharge. Secondary endpoint was time to unplanned readmission or representation to an Emergency Department (ED).

### Methods

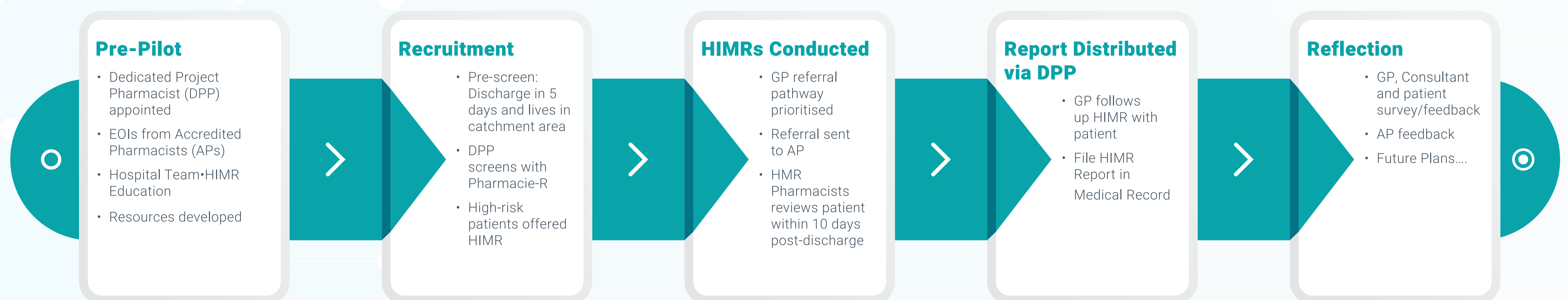


Figure 1: HIMR Process

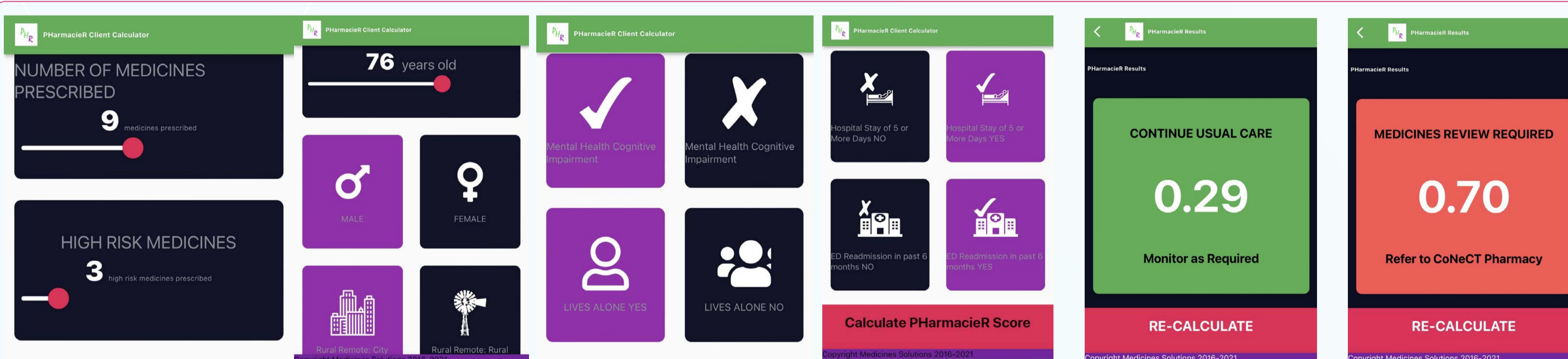


Figure 2: Screening Tool: PHarmacie-R App

Pharmacie-R is a tool developed, trialed and validated at SCGH,<sup>2</sup> which screens for readmission risk, not necessarily clinical risk.

Pharmacie-R algorithm considers: patient age, gender, polypharmacy, prescription of high-risk medications, living alone, cognitive impairment or mental illness, hospital admission in the previous 6 months, indigenous Australian, language barrier, number of comorbidities, place of residence (city or rural), length of hospital stay.

### Results

**53 patients** (38%) High Risk patients identified

**19 patients** (35%) accepted HIMR referral

**14 patients** (74%) had a HIMR

**13 patients** had HIMR < 10 days of discharge

**Mean time to HIMR = 7 days (SD ± 2.23)**

**Median time to readmission\***

**10 days** (IQR 6,14) usual care

**27 days** (IQR 12, 29) HIMR (p=0.11)

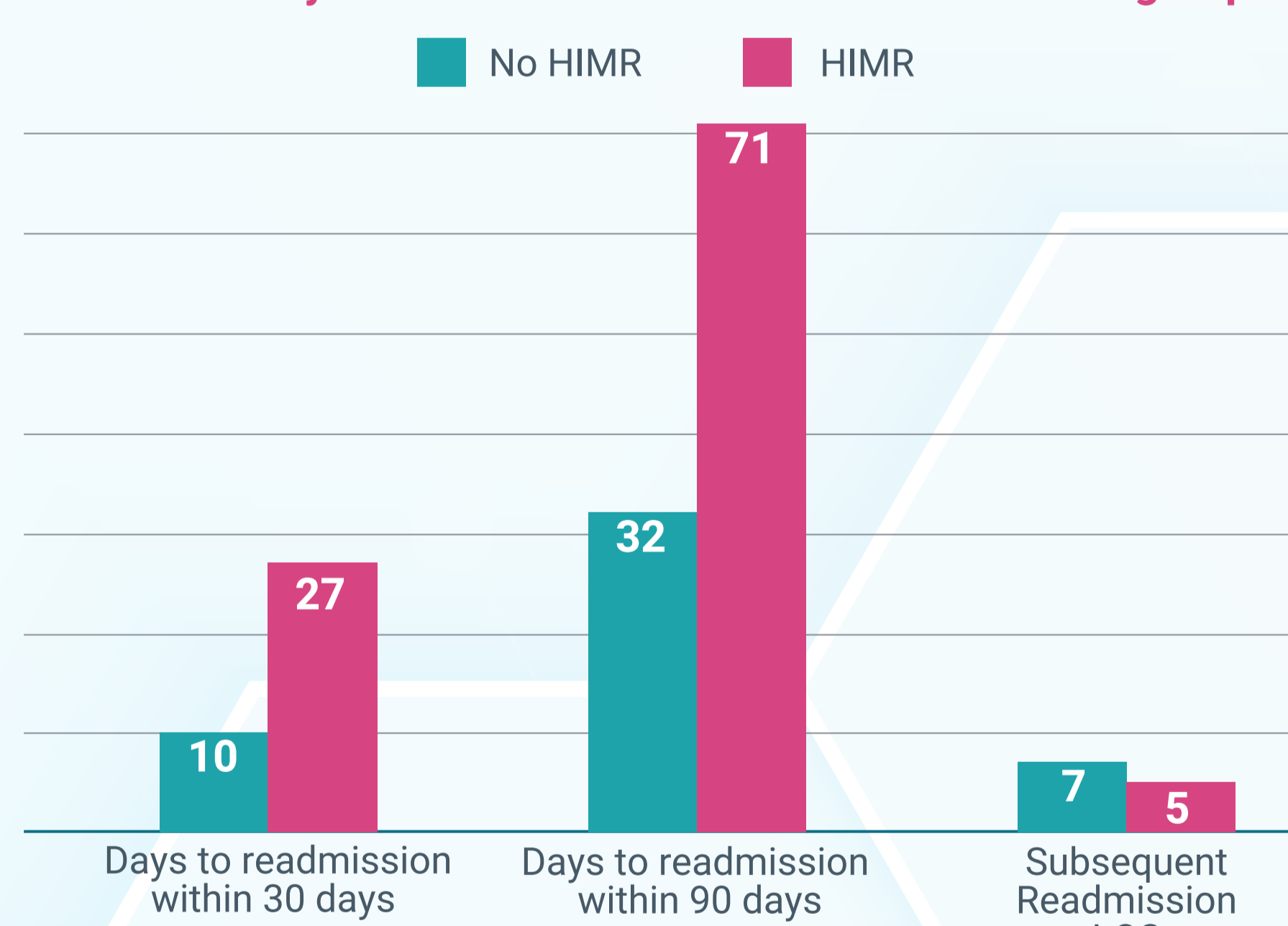
\*within 30 days

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Median days to readmission for HIMR vs Non-HIMR group



Graph 1: Median days to readmission for HIMR vs Non-HIMR group

Abbreviations: Male = M, Female = F (IQR), LOS = Length of Stay  
\*within 30 days, # (min, max)

	Non intervention (N=35)	Intervention (N=18)	P-value
Gender	M = 65.7% F = 34.3%	M = 61.1% F = 38.9%	0.74
Age (Years)	81	79	0.81
Previous hospital admission <6 months	18 (51.4%)	10 (55.6%)	0.776
Lives Alone	15 (42.9%)	13 (72.2%)	0.04
Pharmacie-R Scores High	35 (100%)	18 (100%)	
Days post discharge for HIMR (Median)	n/a	7.0 (4,12) <sup>#</sup>	
Days to readmission* (Median)	10 (6,14) N=7	27 (12,9) N=4	0.11
Readmission LOS (days)	7 (2,35)	5 (2,11)	0.41

Table 1: Patient demographics and findings

### Discussion

In 2021, a HIMR referral process was successfully developed at OPH. A hospital pharmacist (DPP) screened for risk of readmission, using a bedside risk tool and prepared HIMR referrals with the patient's GP or Hospital Consultant. The DPP engaged hospital clinicians and sought out early adopter accredited pharmacists via an expression of interest application. Five pharmacists were deemed suitably qualified for post-discharge HIMRs. This pilot demonstrated the feasibility of engaging pharmacists to improve care across the care continuum to reduce medication related harm. HIMRs at OPH had positive outcomes primarily due to having a dedicated HIMR pharmacist who coordinated the HIMR process.

### Recommendations

- Appoint a designated HIMR pharmacist
- Use an appropriate risk screening tool for patient cohort
- Educate and collaborate with GP's, Hospital Consultants and Accredited Pharmacists
- Recruit appropriately trained Accredited Pharmacists to conduct HIMRs

### Conclusions

Placing a dedicated resource across the care continuum enabled timely targeted medication reviews to be provided in the early post-discharge period.

The positive trend to prevent early readmission and subsequent length of stay reduction has emboldened plans to embed HIMR's for high-risk patients into daily practice.

### Acknowledgements

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### References

1. SHPA Transitions of Care and Primary Care Leadership Committee. SHPA- Hospital Initiated Medication Reviews: Hospital Pharmacy Practice Update. SHPA 2020.
2. Criddle DT, Devine B, Murray K, et al. Developing PHarmacie-R: A bedside risk prediction tool with a medicines management focus to identify risk of hospital readmission Res Social Adm Pharm 2021 Sep 3;S1551-7411(21)00318-1 doi: 10.1016/j.sapharm.2021.08.014.