

# Empower and enable residents with hypertension to self-manage effectively in the community via remote Vital Signs Monitoring (VSM)



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## BACKGROUND

SingHealth Community Nurses (CMNs) manage about 60 residents with hypertension per Community Nurse Post (CNP). Residents rely on CMNs to measure their blood pressure (BP) during consultation and advise them on the next intervention. BP readings are transcribed from EMR, which disallows result trending.

VSM Kiosk is a sustainable BP monitoring care model that transits from nurse-assisted to resident-initiated by using a VSM apps. Residents can self-measure their BP at VSM Kiosk and adhere to pre-programmed message displayed based on their BP readings.

## AIM

1. Enhance residents' positive health seeking behaviour with better-controlled hypertension.
2. Free up Community Nurses' time to focus on cases requiring closer support.
3. Encourage shared care with community partners.

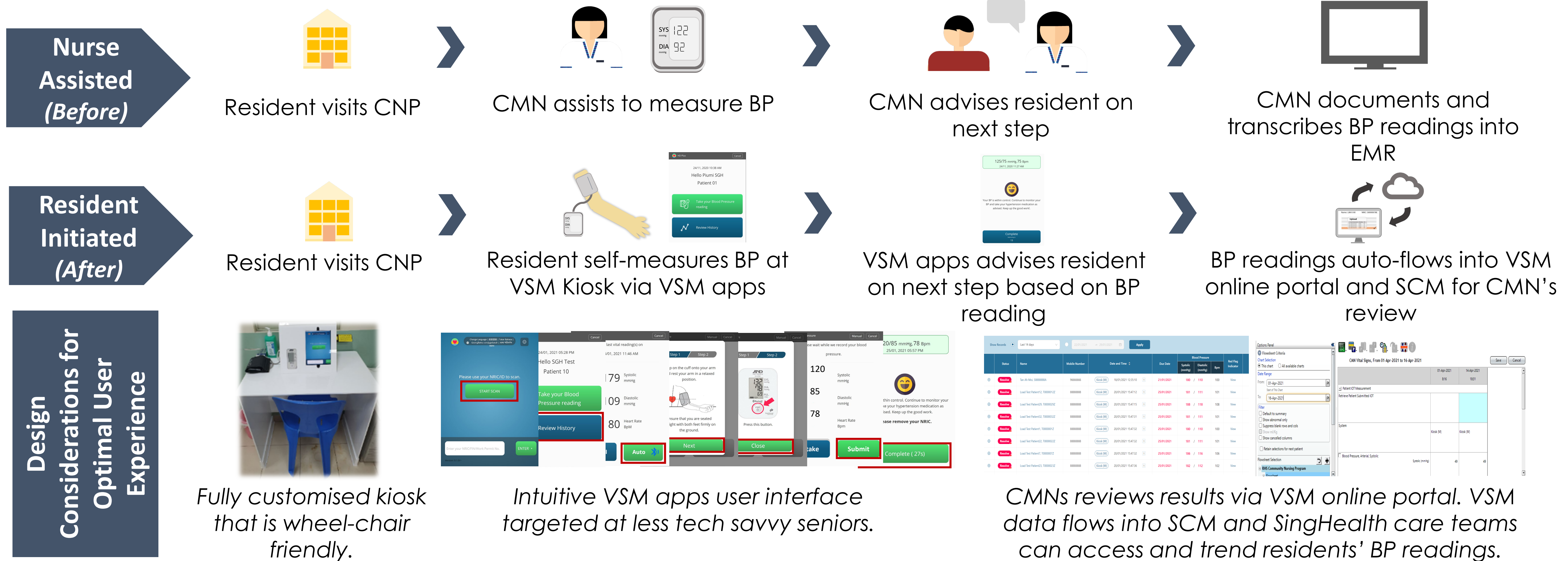
## TARGET GROUP



Residents who are motivated, but do not own a BP monitoring set and require support to self-monitor and self-manage BP.

## METHODOLOGY

A VSM Kiosk comprises of customised table, BP monitor and tablet is placed at Senior Activity Centre (SAC) to allow residents to measure their BP. CMNs educate residents on hypertension self-management and prescribe BP monitoring frequency according to their needs. Community partners are also trained to assist residents if needed.



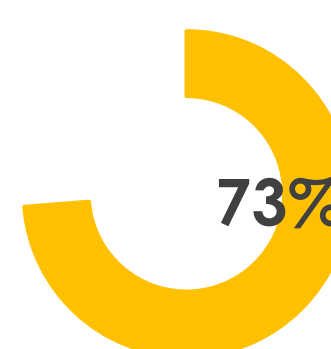
## RESULTS



VSM Kiosks deployed to **20 CNPs** since February 2021 and more than **130 residents** enrolled.



**All residents (100%) complied with prescribed frequency of BP monitoring of at least once a week.**



Out of the 33 residents surveyed, **73% felt that VSM Kiosk helped them to manage their hypertension.**



**Community partners** participated in residents' care journey.



**\*Reduction in systolic BP** ( $Z = -2.527, p = .012$ ) for 53 residents who completed 1-month duration of self-monitoring. Baseline and at 1-month median systolic BP: 132mmHg and 128mmHg respectively

\*Wilcoxon Signed-Rank Test

## CONCLUSION

- Resident-initiated remote VSM at CNPs has empowered residents to take control of their health and better manage hypertension in the community.
- Enabled physicians to provide realistic treatment based on trending of residents' BP readings.
- Improved overall care experience and more time for CMNs to focus on residents who require closer monitoring.
- Enhanced greater collaboration with community partners on residents' shared care.

## FUTURE PLANS

- Pilot expansion to the remaining 24 SACs, including those in the Northeast.
- Explore inclusion of other vital signs (e.g. CBG and SpO2) for residents who require frequent monitoring.
- Incorporate teleconsultation (video consultation) into remote VSM Kiosk at the next phase for seamless and value based care.
- Extend collaborative partnerships on shared care to primary providers such as General Practitioners (GPs) and polyclinic physicians.

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