

# Online Appointment at Public Primary Health Care (PHC) Facilities in Malaysia: A Perspective from the Demand-side Strategy

Noor Haslinda I.<sup>1</sup>, Wan Nur Nabilah S.<sup>1</sup>, Rima Marhayu A.R.<sup>1</sup>, Lee Wei Jia<sup>2</sup>, Maheshwara Rao Appannan<sup>2</sup>, Nasrul Muhaimin M.<sup>1</sup>, Mastura I.<sup>1</sup> & Safiee I.<sup>1</sup>

<sup>1</sup>Family Health Development Division, Ministry of Health Malaysia

<sup>2</sup>Digital Public Health Division, Ministry of Health Malaysia



Kementerian Kesihatan Malaysia

## Introduction

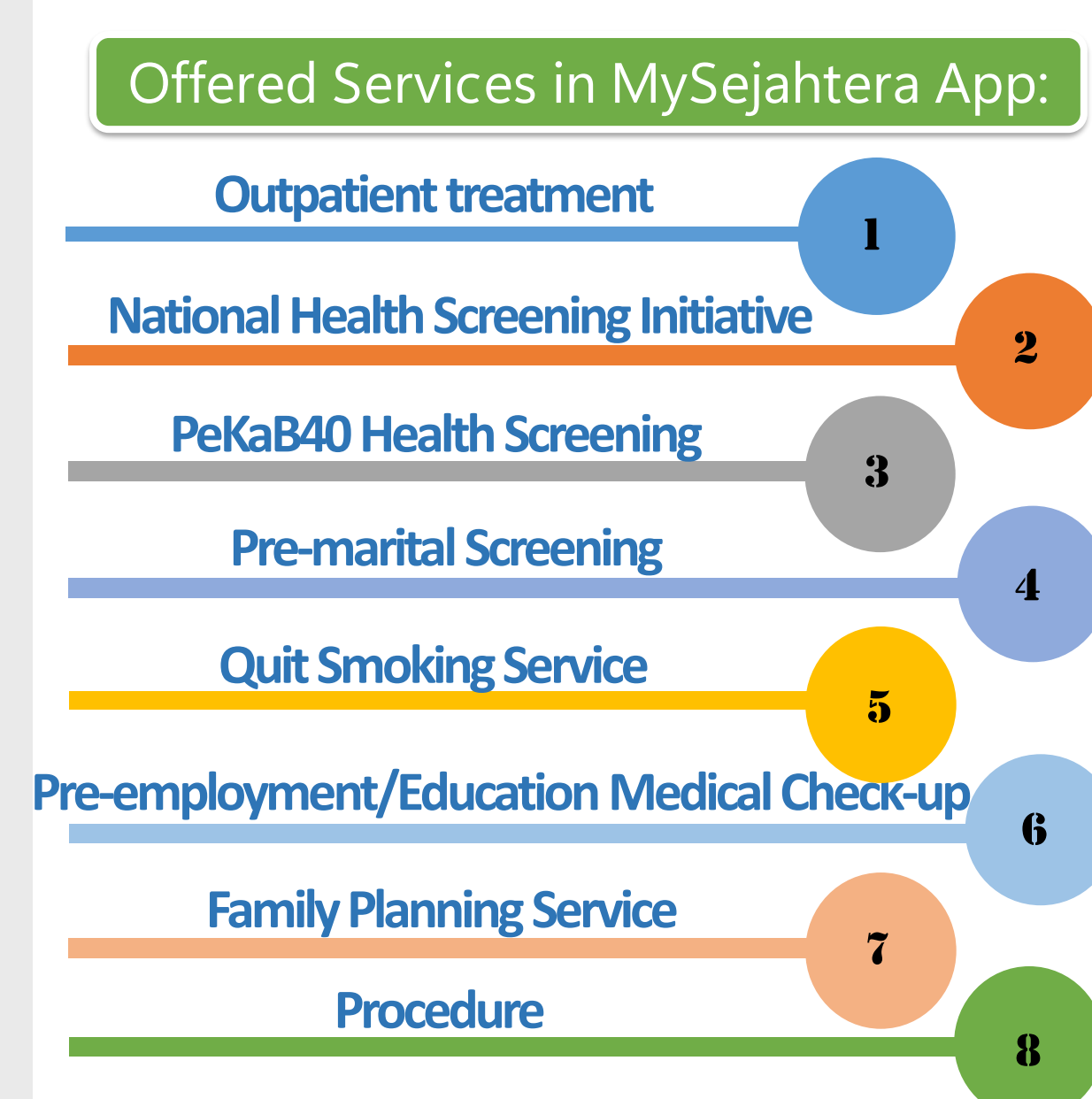
- PHC is the thrust of the healthcare system, thus it is important to ensure that PHC is accessible and attractive to clients with the provision of quality healthcare services.
- Digitalisation has the potential as a demand-side strategy to improve health services utilisation by improving community's health seeking behaviour.
- Ministry of Health Malaysia (MOH) has included an online appointment module in MySejahtera application that enable clients to select their desired clinic appointment service and time.
- The appointment slots are based on the availability of services according to the capacity of the respective PHC facilities.
- Data on the utilisation of appointment slots is updated and accessible via the Malaysian Health Data Warehouse (MyHDW).

## Objective

- The objective of this paper is to determine the sociodemographic profile of clients assessing the online appointment system via this demand-side strategy at the PHC setting.

## Materials and Methods

- Analysis was done using secondary data retrieved from daily appointment line listing provided by the system developer.
- Inclusion: All appointment slots booked by MySejahtera users for the offered services from 1st January 2023, until 31st March 2023, and clients who registered with the Malaysian Identification Card Number were included in analysis.
- Exclusion: Clients who cancelled their appointments.



## Results and Discussion

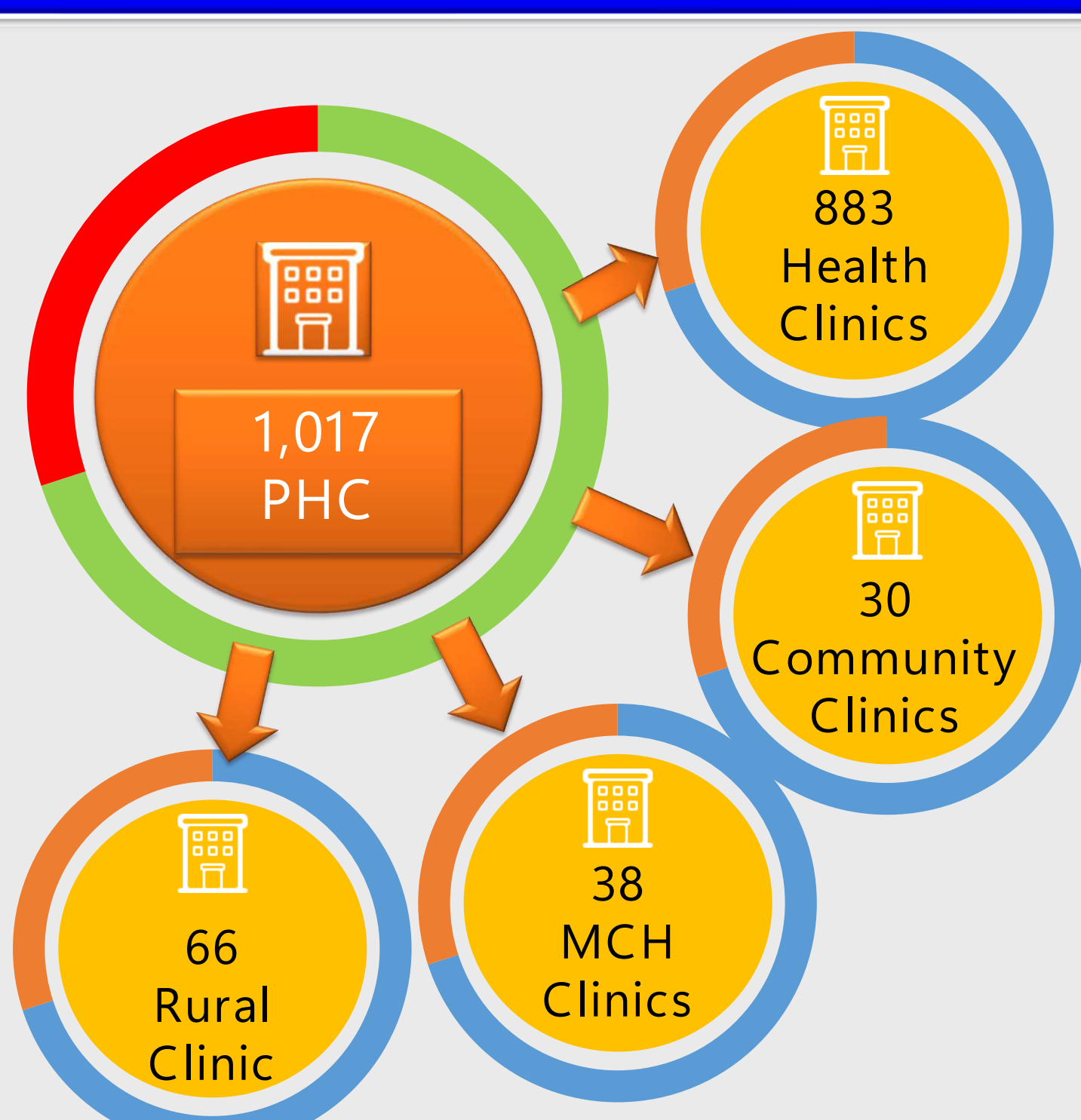


Figure 1. No. of PHC facilities provided MySejahtera online appointment module

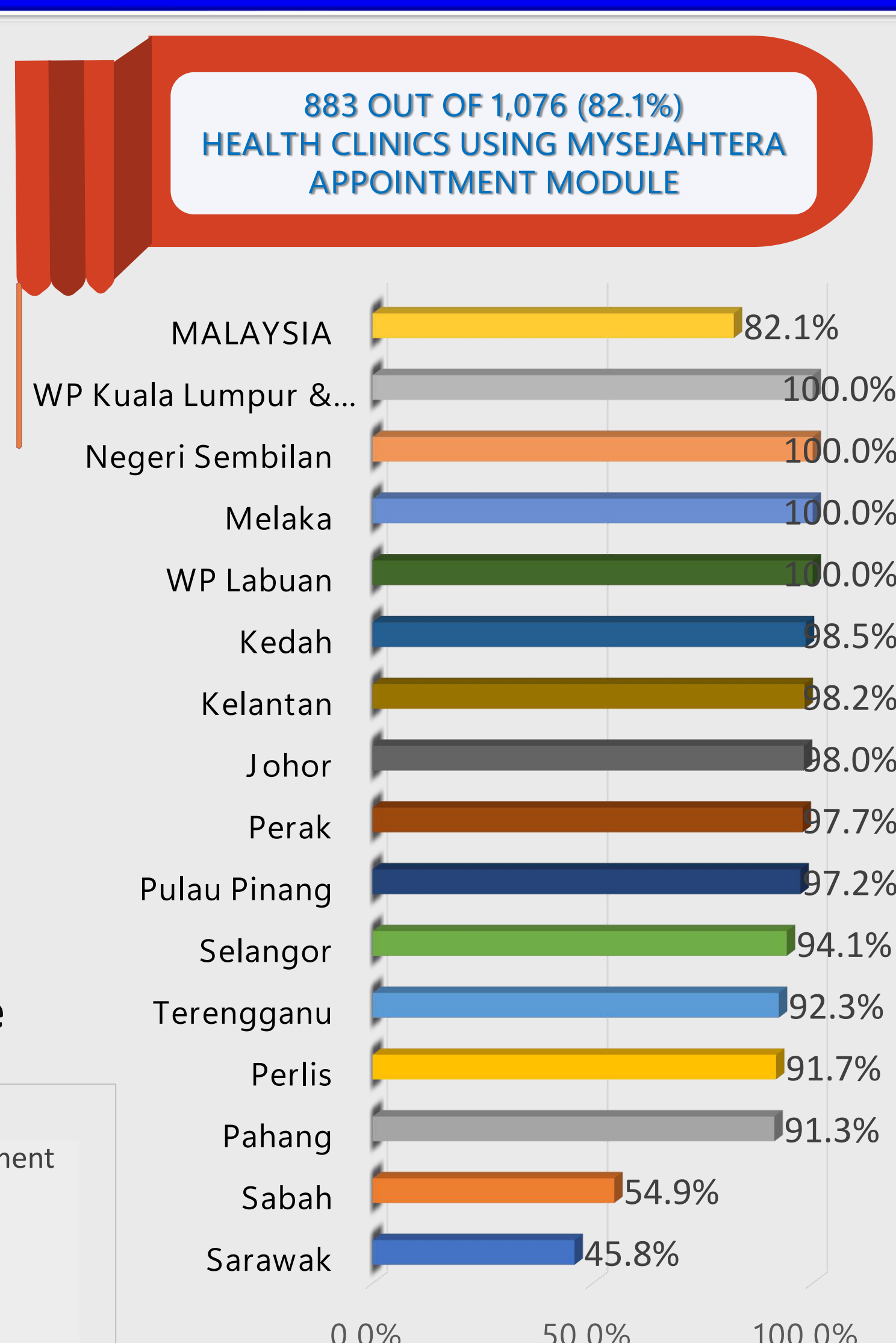


Figure 2. Percentage of Health Clinics involved by state

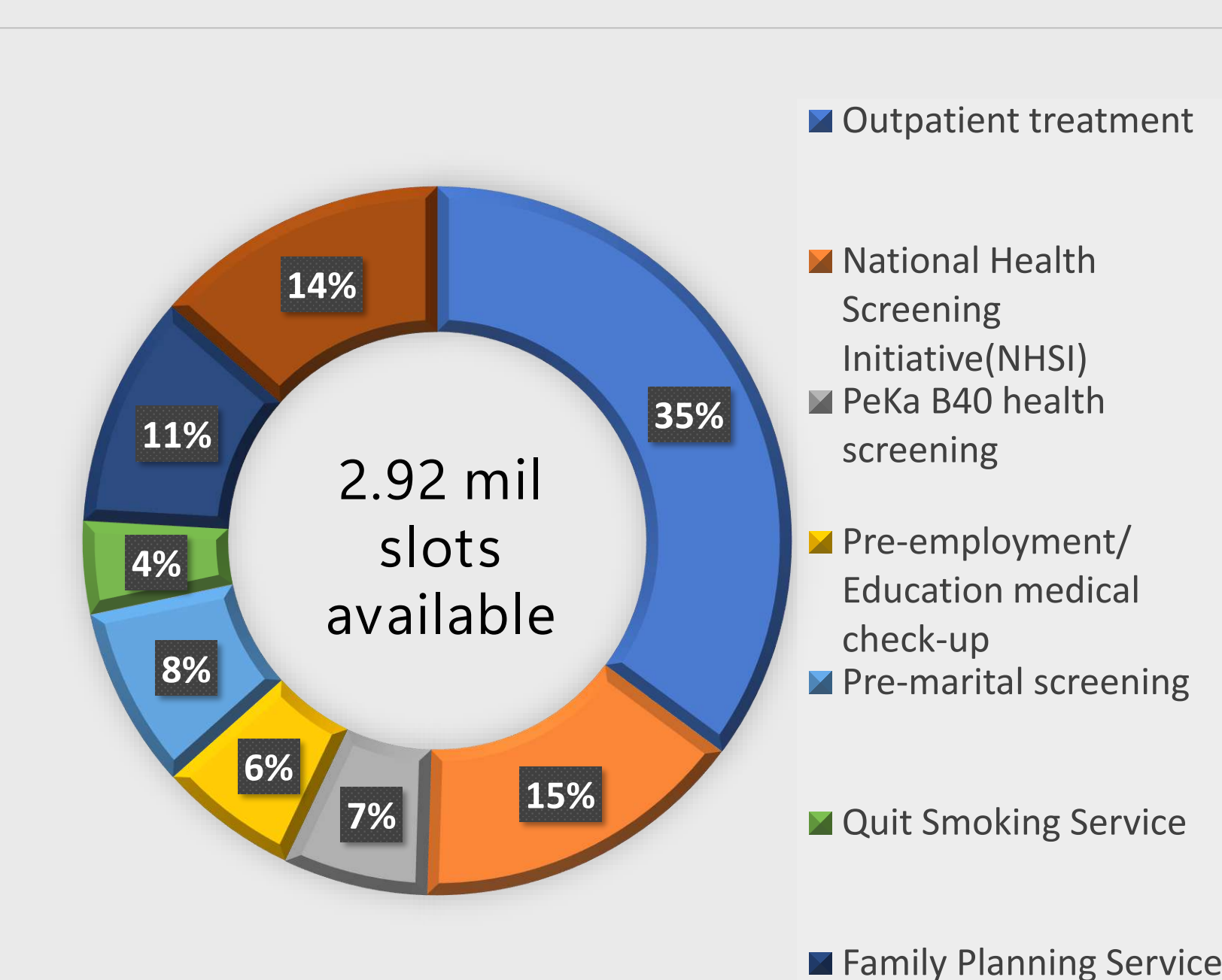
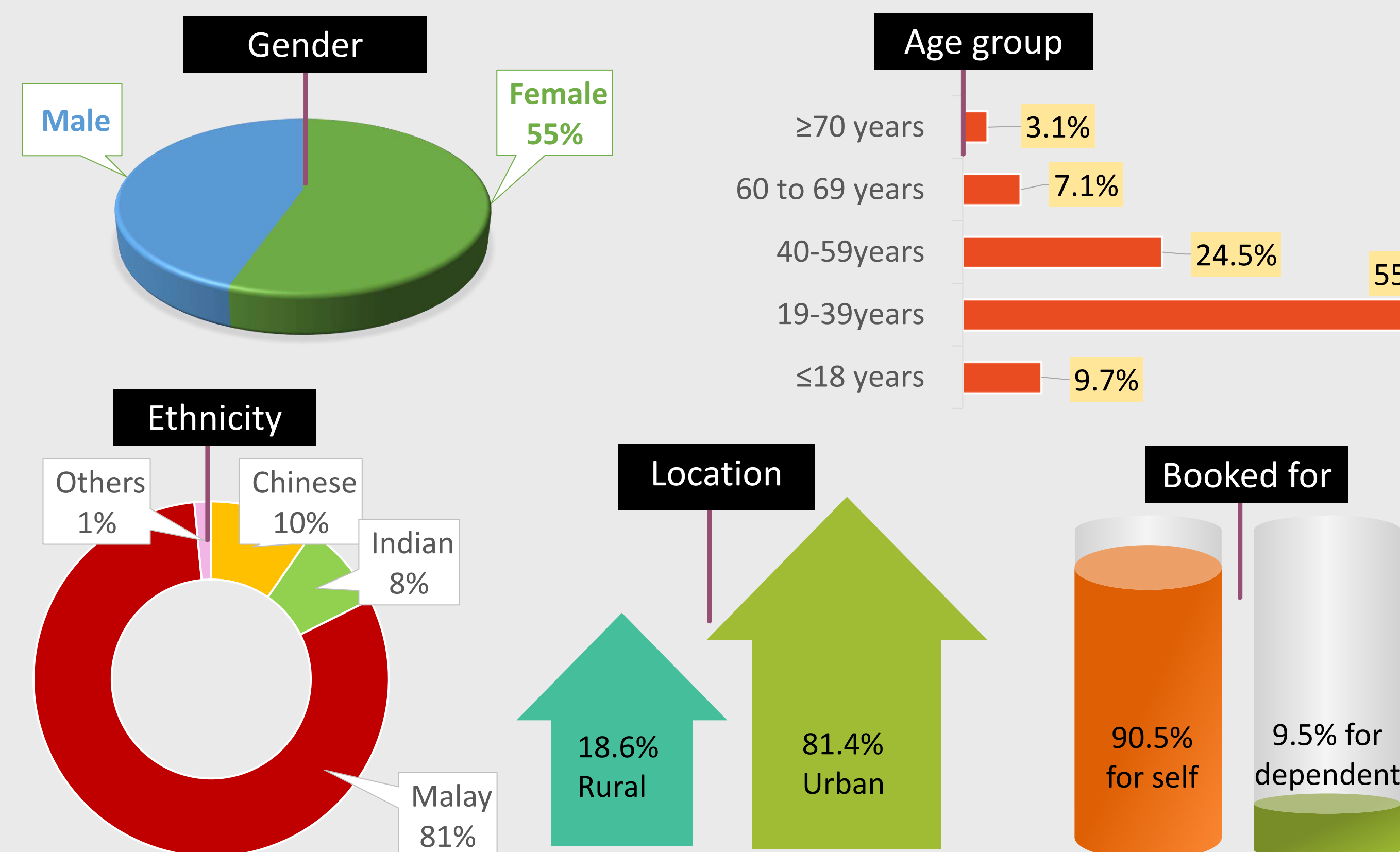


Figure 3. Available slots for public booking from 1st Jan 2023 until 31st Mar 2023

8.4% slots were taken & highest is Outpatient Treatment Service (14.5%)

Sociodemographic profile of users for appointment slots booked in the MySejahtera application from 1st January 2023, until 31st March 2023 (N=246,531)



- Most users were from Selangor (37.9%).
- IT savvy users, younger age & urban residents were more attuned to using the application to book appointments.<sup>3</sup>
- Top 3 services booked were outpatient treatment (60.3%), pre-marital screening (17.2%), and pre-employment/education medical check-up (9.8%).
- Further analysis on appointment booking outcome status revealed that only 45.5% clients showed up during scheduled appointment day.
- Non-attendance could be overestimated as it may also represent those who default the appointments, and those whose arrivals were not properly recorded in the system by the clinics, especially in the early development phase.
- A significant number of Health Clinics in remote areas in Sabah and Sarawak were unable to utilize the online appointment system due to poor ICT infrastructure and internet access.
- The uptake of appointment slots was relatively low as this feature is still new at the point when this data was obtained.
- A study among staff & student in University of Technology, Jamaica have showed that, majority of the respondents preferred online appointment system and found it to be user-friendly as compared to conventional walk-in method because it minimize waiting time, being able to schedule the appointment & getting reminder.<sup>1</sup>
- Various interventions such as promotional activities at all levels are needed to increase the public and providers' awareness for this new feature.<sup>2</sup>

## Conclusion

- The online appointment system showed a positive response and acceptability among MySejahtera application users, especially among younger age group & those who reside in urban areas.
- Analytics from this platform can be combined with operational knowledge for efficient healthcare service delivery, aside from overcoming healthcare capacity-demand mismatches.<sup>4</sup>

## Limitation

- The findings may not be generalized as analysis is limited to Malaysian with ID & the determination of user's characteristic is based on the users' input during registration for MySejahtera application in their phone.
- Low uptake may not truly represent the real situation as the data was collected immediately after the launching of the online appointment system.

## References

- Onyefulu, C., Gyles, M.P. and Meade, L. (2018) Users' Views on the Online Appointment System and Services Rendered at the Health Centre of the University of Technology, Jamaica. *Open Access Library Journal*, 5: e4903. <https://doi.org/10.4236/oalib.1104903>
- Bagheri F., Behnam, F., Galavi, Z. et al (2022). The use of various appointment systems among patients visiting academic outpatient centers in Kerman and the evaluation of patients' perspective and satisfaction. *BMC Health Serv Res* 22, 1344 (2022). <https://doi.org/10.1186/s12913-022-08635-6>
- <https://www.greystone.net/>. Younger consumers prefer online appointment scheduling options (2018)
- Demand and capacity - a comprehensive guide Online library of Quality, Service Improvement and Redesign tools NHS England and NHS Improvement. (n.d.). Available at: <https://www.england.nhs.uk/wp-content/uploads/2022/01/qsir-demand-and-capacity-a-comprehensive-guide.pdf>.