

INTRODUCTION

- Digital health is a broad, multidisciplinary concept that includes concepts from the intersection of technology and healthcare that applies digital transformation to the healthcare field, incorporating software, hardware, and services.
- The instrumented endeavor to effectively integrate new digital information and communication technology, as well as matching new processes, into the healthcare industry is known as the "digital transformation."
- Due to their respective governments progressive stances on the usefulness of digital health technology, Singapore, South Korea, and Australia are typically regarded as the top three role models for the sector in the APAC region.

OBJECTIVE

- This review aims to identify the implementation of DHI in APAC region through a targeted literature search.

METHODOLOGY

- Literature searches were conducted using PubMed and grey literature (online reports, presentations)
- Comprehensive searches were conducted in peer-reviewed publications platforms PubMed and Google scholar to identify the studies assessing digital transformation of healthcare and its implementation.
- The key search terms used (alone or in combination) included "Digital technology", "Digital transformation", "Digital health innovations", "Health care", etc. between 2000 and 2022.
- To compliment the database search results, the searches were expanded to include non-academic articles, conference abstracts, and case reports.

RESULTS

- A total of 24 articles met the inclusion criteria and included in final analysis (Australia, n=10; India, n=4; Singapore, China, and Taiwan, n=2 each; Japan, South Korea, Thailand, and Malaysia, n=1 each) (Figure 1).

Figure 1: Geographical distribution of studies

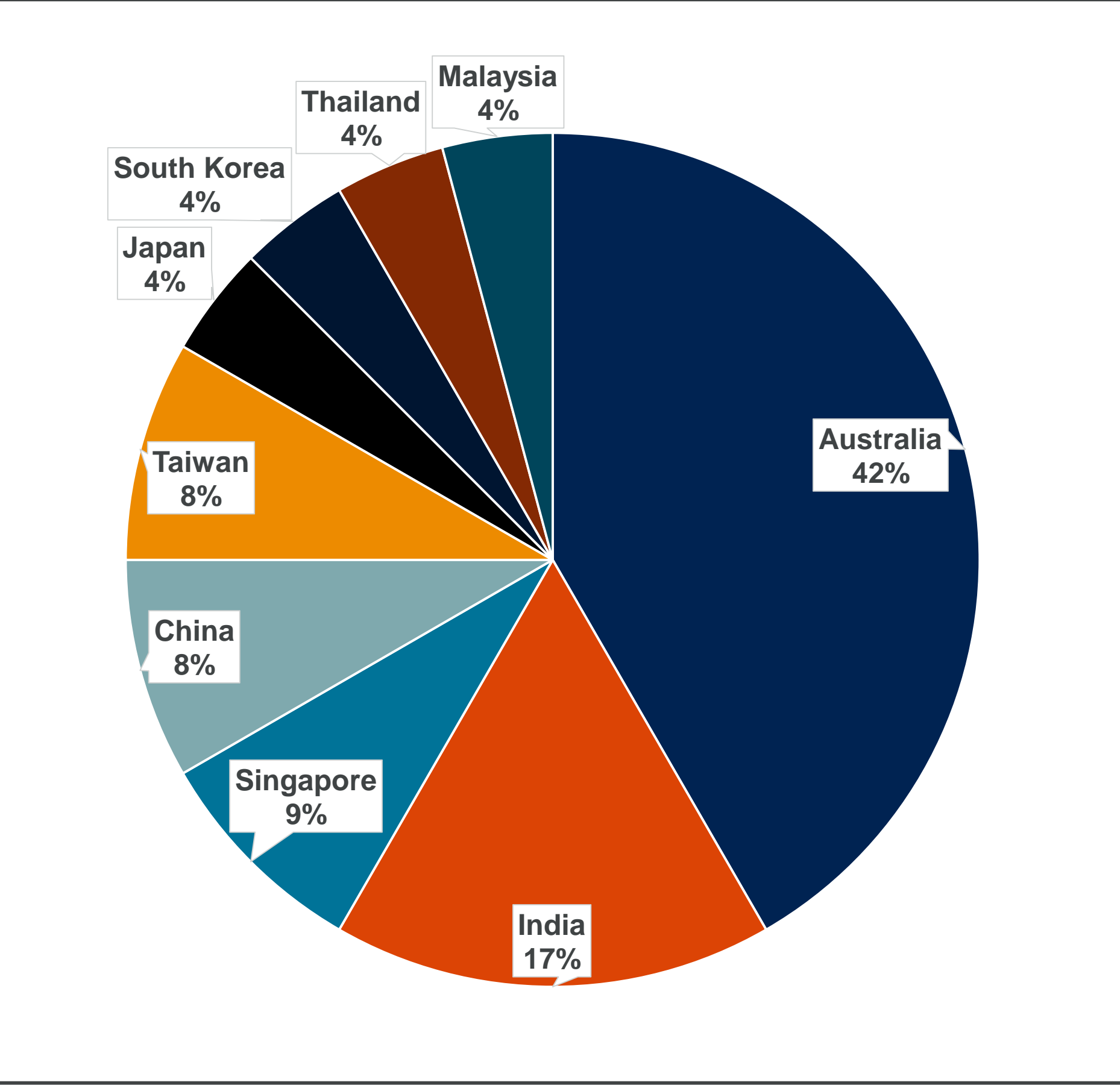
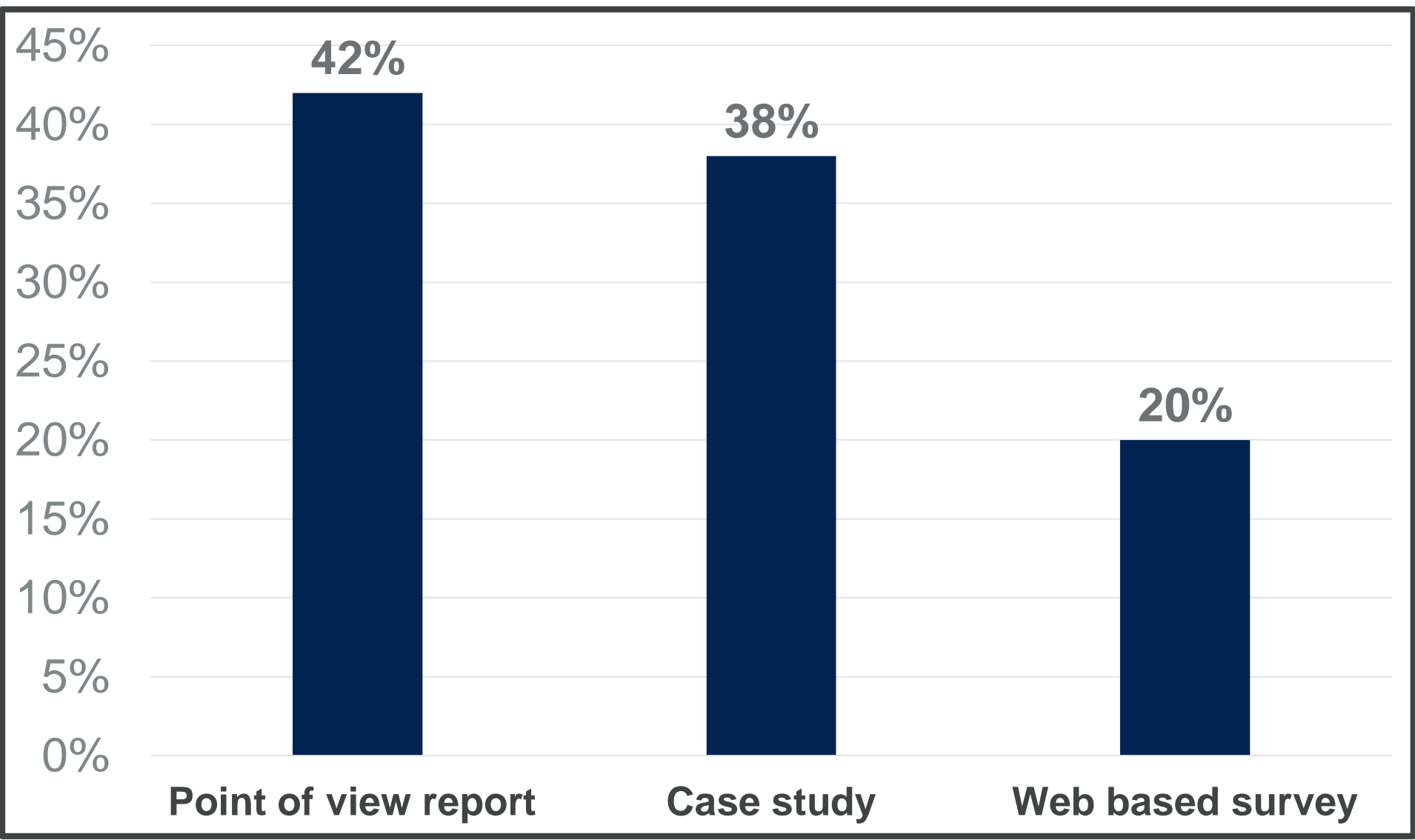


Figure 2: Study distribution by design

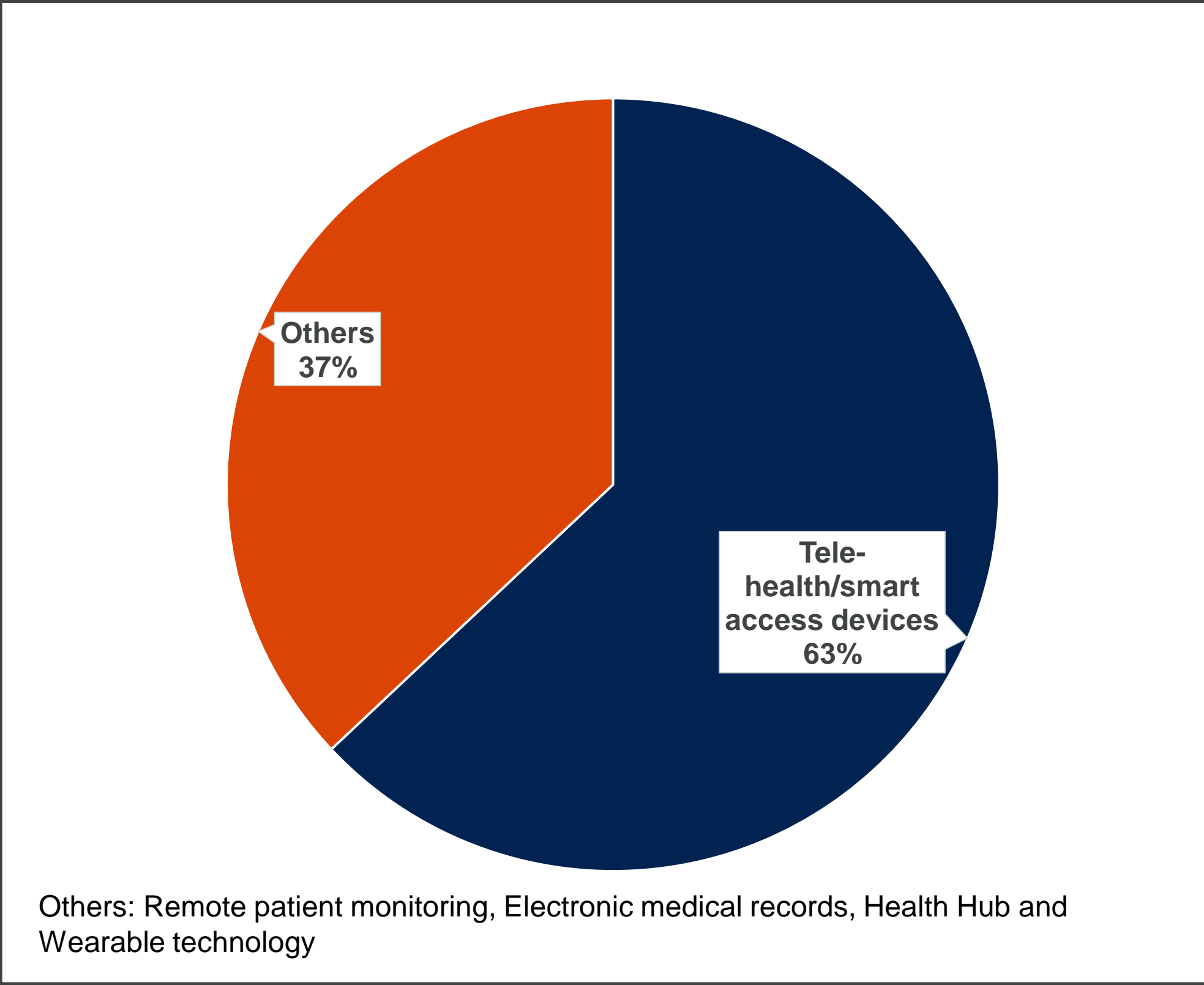


- Study designs included perspective/point of view report (42%), case study (38%), and web-based survey (20%) (Figure 2).

Table 1: DHI case study in APAC region

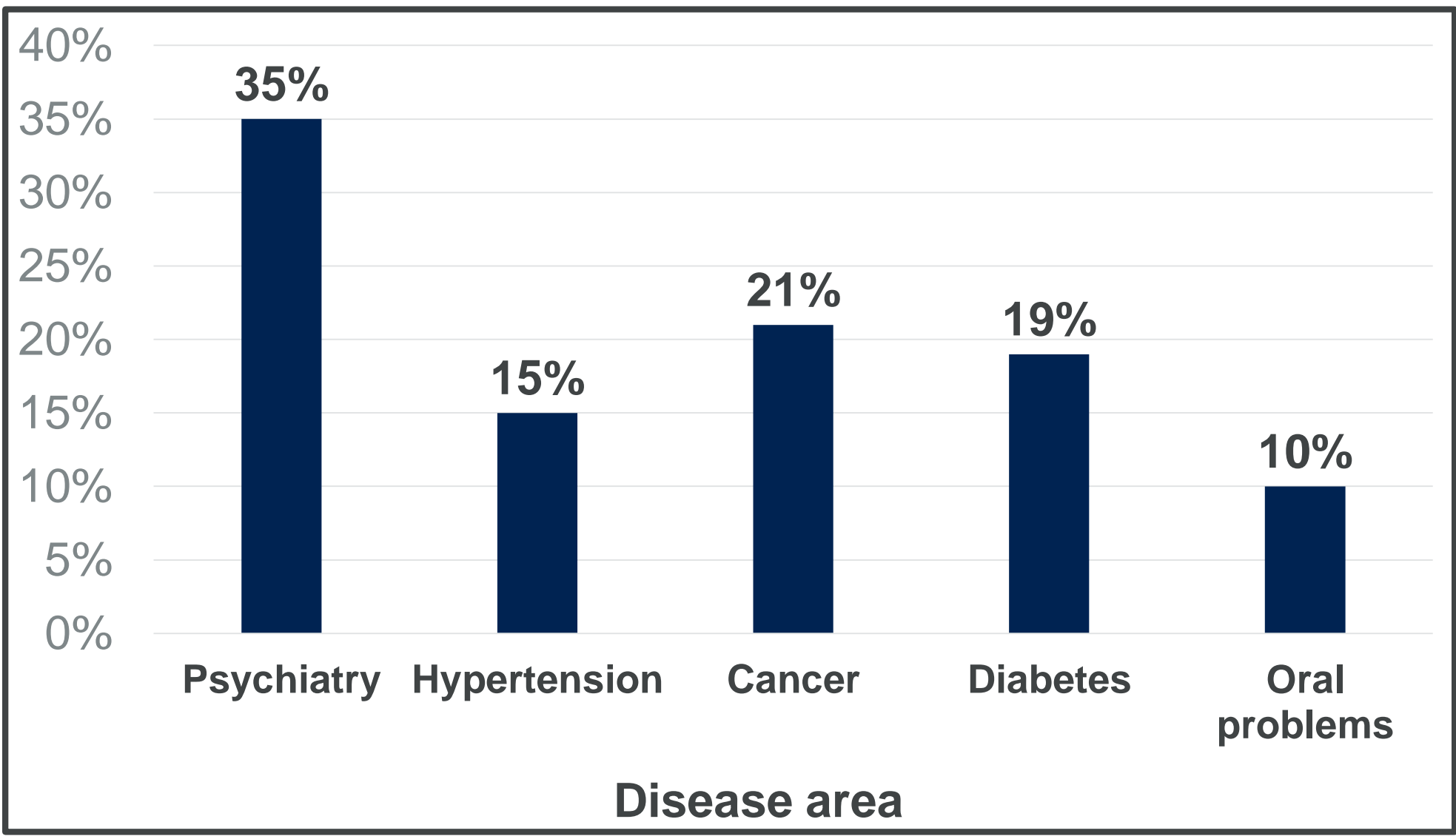
Study name	Country	Population/ Disease area	Study design	Type of technology	Outcome
Heynsbergh et al. 2019	Australia	Cancer	Qualitative study	Digital technology in supporting carers	Digital technologies may represent an opportunity to overcome the barriers and to effectively support carers
Xia M et al. 2015	China	NA	Online	Mobile and Internet-based technologies	Digital health care is ramping up rapidly and will transform the business of all players across the value chain
Kanuri N et al. 2020	India	Generalized anxiety disorder	Perspective, digital anxiety program	Digital mental health intervention	The benefits of offering digital resources that circumvent barriers associated with accessing traditional services
Triton Market Research. 2021	Japan	Geriatric population	Online book	Telemedicine	Telemedicine and mobile applications are observed as major components for digital health across the country
Sharon A. 2021	Malaysia	NA	Online	Tele-health, Smart access, Remote patient monitoring	The rising incidence of these and other lifestyle-associated and chronic diseases will propel the global telemedicine market to \$144.2 billion by 2030 from \$27.8 billion in 2019, at a 15.8% CAGR during 2020–2030, according to P&S Intelligence
Low STH et al. 2021	Singapore	Geriatric population	Qualitative study	Healthcare technology	Social support, education on the use of healthcare technology and ensuring new healthcare technologies are tailored to meet the varying needs of older adults
Jamnadass R. 2017	South Korea	NA	News	Telemedicine	TELUS Health have partnered with Babylon, an app for patient triage and virtual consultations with clinicians, to enable patients in Canada to consult with a doctor for non-emergency conditions.
Chiang R. 2021	Taiwan	NA	Online	Electronic Medical Records	Taiwan achieved close to 90% adoption of its Electronic Medical Records System in its medical facilities and managed to transition from Stage 6 to Stage 7
Tungsuwan P. 2022	Thailand	NA	Report	Telemedicine	The Thai FDA has presently implemented seven flagship projects, and a few of them are those which will transform the organization into a digital organization.

Figure 4: Study distribution by modality



- Tele-health/smart access devices (63%) were the most common modalities used. Others (37%) included remote patient monitoring, electronic medical records, etc. (Figure 4)
- The observations showed that developed markets like Singapore, South Korea, Australia, Taiwan, and Japan are considered advanced markets for DHT because of their governments' progressive approaches towards the use of DHTs.
- Analyses have shown that APAC digital health market is projected to grow by 34.2% CAGR over the next 5 years (2020-2026). Geriatric health was observed to be the key driver of DHI in APAC region

Figure 3: Study distribution by specialty



- Psychiatry (35%) was the discipline with most topics being reviewed for digital health, followed by cancer care (21%), diabetes (19%), hypertension (15%), and oral problems (10%) (Figure 3).

CONCLUSION

- In APAC countries, there has been a surge in interest in using DHTs mostly focused on mental health and cancer care.
- However, there is need for more studies to investigate the impact of the use of DHTs/DHI in the improvement of patient outcomes in real-world clinical practice.

CONFLICT OF INTEREST

- Manupati R, Verma A, Gautam R, Prasanna R, Rai MK are employees of EVERSANA India..

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