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Regional Use of Open Notes via Nationwide Web-Based MyKanta Patient Portal in 2017–2024 in Finland

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Abstract. When a healthcare professional shares their documentation with a patient, it becomes an ‘open note’. In Europe and elsewhere, open notes are already available nationwide in a few countries. Country comparisons have been assessed but only a few studies have focused regional use of open notes. The study objective was to measure use of nationally accessible open notes via nationwide MyKanta patient portal by region before, during and after the COVID-19 epidemic in Finland in 2017–2024. Our nationwide register study material consisted of MyKanta monthly logins from May 2010 to June 2024 and annual municipality level logins in 2017–2024. A third (34%) of inhabitants in Finland in 2017 had at least once logged into the web-based MyKanta and its open notes, the proportions increased to over two thirds (71%) in 2021 during the COVID-19 epidemic and decreased to over half (56%) in 2023. We observed regional variation in proportions. Also, the 6-month time series in 2017–2024 showed increasing trends in use of MyKanta and its open notes in 2020–2022.

Keywords. Open notes, patient portal use, regional variation, My Kanta, COVID-19

1. Introduction

When a doctor or other healthcare professional shares their documentation with a patient, it becomes an ‘open note’ [1–3]. In Europe and elsewhere, open notes as parts of patient accessible electronic health records that are already available nationwide in Australia, Canada, Denmark, Estonia, Finland, France, Iceland, New Zealand, Norway, Scotland, Singapore, and Sweden [4]. Patients’ access to their medical records is under discussion in several countries [5–7]. Only a few studies that focus regional use of open notes, since studies mainly investigate portals administered by an organization or patients with a particular disease [8–13].

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In the Nordic countries, a recent series of standardized nationwide surveys has characterized users of national patient portals [14]. Most citizens in Nordic countries are willing to share their health data with healthcare providers and for research purposes [15]. Particularly in Finland, half of the population had used the national open notes before the COVID-19 epidemic with considerable variation between public hospital districts, primary healthcare centres and municipalities [11,16].

The Kanta Services is a unique nationwide, centralized, shared and interoperable solution in Finland for social welfare, healthcare and wellbeing data between service provision organizations and users [16]. The study objective was to measure use of nationally accessible MyKanta patient portal and its open notes among regional users in Finland in 2017–2024.

2. Material and Methods

The Kanta Services of the Social Insurance Institution of Finland released aggregated MyKanta national level monthly logins frequencies [17] from May 2010 to June 2024 in excel format in late August 2024. We also aggregated data in 6-months for trend analyses in 2017–2024. Annual municipality level logins frequencies in 2017–2024 were transformed to the current regions also retrospectively in 2017–2022.

In this study, a calendar year logins data include one user's personal unique identification code only once. We compare use of MyKanta and its open notes regionally by dividing number of users' personal unique identification codes by number of inhabitants in a calendar year. We report results as annual proportions and indexes (we set year 2017=1.00). Indexes were calculated by dividing calendar year figures by the year 2017 figures.

3. Results

In 2017–2023, a third (34%) of inhabitants in Finland in 2017 had at least once logged into the web-based MyKanta patient portal and its open notes, whereas the proportions increased to 2-fold to over two thirds (71%) in 2021 and decreased to over half (56%) in 2023, still higher than in the COVID-19 epidemic years 2020–2021 (Table 1). In Mainland Finland (i.e., excluding Åland Islands), range of proportions in 2017 varied between 27–38% (difference: 11% units) among regions, and variation was largest 61–77% (difference: 16% units) in 2021 and smallest 51–59% (difference: 8% units) in 2023. National level indexes (2017=1.00) increased to highest over 2.1-fold in 2021, and it decreased to 1.7 in 2023. Among the regions in Mainland Finland, indexes increased to 2.4-fold in 2021 and have decreased thereafter.

In 2021, the proportion increased the highest in the City of Helsinki (77%), and other capitul Uusimaa area (70–74%), which were the epidemic centres during the COVID-19 epidemic in Finland.

Before COVID-19 epidemic in Finland (2017–2019), 6-month MyKanta logins were on increasing trend. The logins in January–June period increased from 6.3 million in 2017 to the highest 3.2-fold in 2022 and it decreased to 3-fold in 2024. The number of logins increased considerably in the latter half of 2020, stayed high to the first half of 2022, and decreased thereafter.

Table 1. Annual proportion (%) of MyKanta logins and its open notes users (at least one user login) by regions and their collaborative areas (c.a.) as organized around the university hospitals in Mainland Finland (excluding Åland) and nationally (Åland included) in 2017–2023 in Finland.

Regions	2017	2018	2019	2020	2021	2022	2023
<i>Southern Finland c.a.</i>	35	41	45	51	73	66	56
East Uusimaa	31	37	42	48	70	63	54
Central Uusimaa	37	43	47	52	72	66	58
West Uusimaa	34	40	45	50	73	66	56
Vantaa and Kerava	38	43	47	52	74	66	53
City of Helsinki	37	43	47	52	77	68	56
South Karelia	29	36	41	49	70	62	54
Kymenlaakso	32	38	43	50	69	64	58
Päijät-Häme	34	40	44	52	70	64	57
<i>Western Finland c.a.</i>	32	37	42	50	70	62	55
Southwest Finland	33	39	44	52	72	64	57
Satakunta	32	38	42	49	67	60	55
Ostrobothnia	27	32	37	44	65	59	51
<i>Inland Finland c.a.</i>	32	38	43	50	69	62	57
Kanta-Häme	31	37	42	50	70	62	55
Pirkanmaa	33	39	44	51	71	64	58
South Ostrobothnia	31	36	42	49	64	58	54
<i>Eastern Finland c.a.</i>	35	40	45	52	66	63	58
South Savo	33	39	44	51	64	61	56
North Savo	37	42	46	52	66	63	59
North Karelia	35	40	46	53	65	64	59
Central Finland	35	40	45	51	68	63	59
<i>Northern Finland c.a.</i>	35	40	44	52	67	62	57
Central Ostrobothnia	35	40	45	52	66	62	57
North Ostrobothnia	36	41	44	51	68	62	57
Kainuu	37	41	45	51	61	59	53
Lapland	34	39	44	53	69	64	58
Mainland Finland	34	40	44	51	71	64	56
Finland	34	40	44	51	71	64	56

4. Discussion and Conclusions

In this comprehensive nationwide registry study, a third (34%) of inhabitants in Finland in 2017 had at least once logged into the web-based nationwide MyKanta patient portal and its open notes, the proportions increased to over two thirds (71%) in 2021 during the COVID-19 epidemic and decreased to over half (56%) in 2023. We observed variation in proportions between the current regions and their collaborative areas. In addition, the 6-month time series in 2017–2024 showed increasing logins to the MyKanta and its open notes use trends in 2020–2022.

We excluded data on the Åland islands (between Sweden and Finland) since the current legislation demands Åland to share electronic prescription data, but no other health data. Electronic prescribing became mandatory in January 2017 in Finland.

Patient portals are no longer a tool for motivated and engaged patients [18]. Despite widespread patient portal interest and adoption, no review had systematically assessed measurements for patient portal utilization until 2021 [17]. Frequency metric chosen for this study involve count variables per time unit or within a study window.

In current healthcare environment, it is crucial that patients have tools to self-manage their health as effective as possible. Patients already know that they want full interactive access to their medical records through well-designed apps or portals [7,19].

Approaches to sharing records and open notes differ internationally [4,6,20,21]. Our study shows that use of open notes via a nationwide patient portal varies by calendar year, region and on national level, and within regions and nationwide. A limitation of our current study is that we did not have data on gender, age, or other relevant population characteristics on the user populations.

In Finland, nationwide web-based questionnaire studies in 2011, 2014, 2017 and 2020 in Finland show an increasing trend in patients' access to personal health data through organizations' own data systems, especially among private healthcare service providers [13]. The results from 2020 show availability and its considerable variation of e-health services other than MyKanta and its open notes between hospital districts. The availability of e-health services was most extensive in Northern and Southern Karelia, and Central Ostrobothnia.

In spring 2019 in a questionnaire study among pharmacy customers, 83% of the respondents had already used MyKanta and its open notes, but 15% had never used it [12]. Compared to Southern Finland, respondents from sparsely populated Eastern Finland and Northern Finland were more likely to use MyKanta. However, customers, gender, age, education, and the existence of long-term diseases were not associated with use of MyKanta and its open notes.

MyKanta and its open notes shows an overview of the user's electronic prescriptions and health data. Users can request a prescription renewal, print out a summary of their electronic prescriptions, consent to or limit disclosure of personal data, record living wills and organ donation testaments, and view in which healthcare units and community pharmacies has viewed or processed [22]. The most-used nationwide MyKanta web-based patient portal functions among pharmacy customers were browsing prescription information (97%), records of healthcare visits (96%), and results of laboratory tests and x-ray examinations (90%). Majority of MyKanta users (89%) were satisfied with the service overall.

Monthly and annual monitoring of MyKanta logins has already provided important insights on regional and national levels for research, healthcare and pharmacy service providers, and users. In Finland in January 2023, the responsibilities for organizing healthcare, social welfare and rescue services were transferred from municipalities and joint municipal authorities to wellbeing services counties [23]. It is imperative to continue monitoring and do more research on effects of MyKanta nationwide patient portal logins and its open notes use nationally and regionally in registry analyses in future months and years for evaluation the service system's transformation towards its set objectives.

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