Outpatient Mental Health Care During the First Three High Incidence Phases of the COVID-19 Pandemic in Germany - Results from the COVID-Ψ Outpatient Survey

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Research Article

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Abstract

Background

Internationally, the COVID-19 pandemic went along with significant shifts in utilization of mental healthcare inpatient and outpatient offerings. As only a few studies have examined the situation of the mental health outpatient systems in Europe so far, the COVID Ψ Outpatient Survey surveyed outpatient providers in Germany regarding changes in utilization; associated problems, challenges and contributing factors; telemedicine services; interactions with inpatient mental health and nursing home services; and experiences with post-COVID syndromes.

Methods

N = 105 outpatient mental health specialists of all regions of Germany took part in the online survey. It consisted of a combination of pre-formulated and free text responses.

Results

For the first high incidence phase (HIP) of the COVID-19 pandemic in spring 2020, 31% of the survey participants reported a decrease > 20% and 5% an increase > 20% of contacts. For the third HIP in spring 2021, 4% reported a decrease > 20% in the number of contacts, while 30% indicated an increase > 20%.

Often suggested reasons for initial decreases were patients fears of infection and providers protection measures, and for later increases pandemic and lockdown-related anxieties and economic stressors, and capacity reductions of the inpatient system. The participants related the initial capacity reductions of both inpatient and outpatient system to multiple complications. Telemedicine offerings were introduced by many providers and already in summer 2021 a majority reported consultations for post-COVID syndromes.

Conclusions

The survey hints at changes in utilization, multiple problems but as well good-practice-solutions in the mental health outpatient system during the COVID-19 pandemic. For future crises a better surveillance is recommended.

INTRODUCTION

The COVID-19 pandemic was a major challenge for mental healthcare systems. Internationally, during the first high incidence phase (HIP) in spring 2020 emergency mental and inpatient mental health services showed large reductions of utilization [1–14]. Notably, several studies observed a concurrent increase in acute and involuntary inpatient admissions [1, 3, 6, 8, 15]. For the German inpatient mental health care
similar patterns were found: For the first HIP in spring 2020 both survey and routine data studies found decreases in hospital admissions [16–18] but a relative increase in involuntary and urgent admissions [19, 20]. In a survey of department heads of German psychiatric inpatient institutions, similar reductions to 80% of pre-pandemic utilization were reported for the second HIP in winter 2020/2021. Problems resulting from these reduced inpatient capacities were a lack of integration of patients into their living environment, disease exacerbations, loss of contact, suicide attempts, and insufficient outpatient treatment alternatives [19].

Studies on mental health outpatient services, nearly all from the UK, consistently showed significant reductions of referrals to primary and secondary mental health services and of incidence diagnoses of mental disorders during the first HIP [21–27] but some studies showed increases in referrals after this period [21, 23, 24]. One routine data report from Germany showed a decrease in the number of individual and group psychotherapy cases and the number of psychiatric treatment cases in spring 2020 [28]. Not many studies from other regions of Europe exist so far and no study examined so far, which further challenges occurred to mental health outpatient providers in Europe during the COVID-19 pandemic.

Changes in utilization of the outpatient mental healthcare system might have been due to changes in inpatient treatment capacities and utilization, but other factors like fears of infection might have kept patients from on-site consultations, non-essential contacts might have been reduced as an infection protection measure [19] and the enabling of telemedicine consultations. Furthermore, several reports suggested an increasing burden of mental disorders in the general population over the course of the COVID-19 pandemic due to side effects of lock-down measures and economic hardships [29–35]. Additionally, post-COVID syndromes often comprise psychological symptoms that might lead to consultations of outpatient mental health specialists [36–41]. In addition, some populations of people with pre-existing mental disorders seemed to be especially vulnerable for worsening of their mental health [42, 43].

In order to learn more about utilization and problems in the mental health outpatient system in the different phases of the COVID-19 pandemic, we initiated the COVID Ψ Outpatient Survey that aimed at surveying outpatient mental health specialists. We chose a survey format as routine data sources for research purposes are only available with a delay of several years and in order to learn about the challenges experienced by the outpatient specialists. The survey aimed at examining utilization during and in-between the first three HIPs in Germany in spring 2020, winter 2020/2021 and spring 2021; problems, challenges and contributing factors associated with changes in utilization; experiences with telemedicine services, problems in interactions with inpatient mental health facilities and changes in psychiatric care in the nursing homes and assisted living sectors; and experiences with demand from patients suffering from post-COVID syndromes.

METHODS

Study design and participants
Between July and September 2021, we used the websites of the Association of Statutory Health Insurance Physicians (Kassenärztliche Vereinigung) of the different federal states in Germany to find contact details of outpatient specialists for psychiatry and psychotherapy ("Facharzt für Psychiatrie und Psychotherapie"), psychiatry and neurology ("Facharzt für Nervenheilkunde", "Nervenarzt") and psychosomatic medicine and psychotherapy ("Facharzt für psychosomatische Medizin und Psychotherapie"). Of those we randomly selected n = 351 and invited them by email to participate in an online survey. A prerequisite for the selection was the existence of a valid e-mail address. Additionally, the BVDP (Bundesverband Deutscher Psychiater) and BVDN (Bundesverband Deutscher Nervenärzte), professional associations of mental health specialist physicians in Germany, invited their members by email to take part in the survey. Mental health specialists from all postal code regions in Germany (1–9) were included. The questionnaire was anonymous. The survey was realized in LymeSurvey® on the data-protected servers of the University Medical Center Mainz. An English translation of the original German questions of the survey is provided in Supplementary File 1.

Indicators and outcomes

The questions of the survey were based upon the results of a first survey which was conducted right after the start of the pandemic, a screening of the international literature and structured discussions between the authors, which have different backgrounds in psychiatric outpatient (C.R.S., S.K.), psychiatric inpatient (O.T., K.L., K.A., H.F.W.), private psychiatric inpatient with focus on psychotherapy (L.P.H.) and geriatric psychiatry (K.G.) services. The survey covered the topics changes in service utilization, problems by changes in utilization, use of telemedicine, referrals to inpatient institutions, medical attendance in nursing homes and assisted living institutions, and post-COVID-syndromes in outpatient psychiatry.

Analysis

The results (percentages) of each of the pre-formulated responses refer to the total number of participants that responded to it, if not otherwise indicated. Free text responses were examined by qualitative content analysis following Mayring [44]. The answers were discussed together and grouped into main groups according to their content context. The answers were then further categorized independently by two authors (M.F. and L.P.H.). Conflicting categorizations were discussed and jointly resolved by three authors (M.F., L.P.H. and H.F.W.). For better clarity we only show the main categories as results in this paper, the detailed results and analysis can be found at (Fehr et al. in preparation).

RESULTS

Profile of the participating mental health specialists

A total of n = 105 outpatient specialists for psychiatry and psychotherapy ("Facharzt für Psychiatrie und Psychotherapie"), psychiatry and neurology ("Facharzt für Nervenheilkunde", "Nervenarzt") and psychosomatic medicine and psychotherapy ("Facharzt für psychosomatische Medizin und Psychotherapie") took part in the survey. Table 1 shows their specialization.
Table 1
Characteristics of the survey’s participants

<table>
<thead>
<tr>
<th>Health insurance accreditation</th>
<th>% oft the participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>psychiatry</td>
<td>70.5%</td>
</tr>
<tr>
<td>psychosomatic medicine</td>
<td>4.8%</td>
</tr>
<tr>
<td>psychiatry and neurology („Nervenheilkunde“)</td>
<td>33.3%</td>
</tr>
<tr>
<td>neurology</td>
<td>29.5%</td>
</tr>
<tr>
<td>psychotherapy</td>
<td>54.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of psychotherapy of participants with health insurance accreditation for psychotherapy</th>
<th>% oft the participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>cognitive behavioral therapy</td>
<td>43.9%</td>
</tr>
<tr>
<td>brief psychodynamic therapy</td>
<td>64.9%</td>
</tr>
<tr>
<td>psychoanalysis</td>
<td>3.5%</td>
</tr>
<tr>
<td>systemic therapy</td>
<td>5.3%</td>
</tr>
<tr>
<td>other forms of psychotherapy</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Offer of individual and/or group therapy</th>
<th>% oft the participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>individual therapy</td>
<td>98.2%</td>
</tr>
<tr>
<td>group therapy</td>
<td>15.8%</td>
</tr>
</tbody>
</table>

Service utilization

First, we asked if the amount of contacts to patients changed in the three HIPs during the COVID-19 pandemic compared to 2019. 30.5% (n = 32) indicated a relevant decrease of more than 20% in the number of contacts during the first HIP, while 4.8% (n = 5) indicated a relevant increase (> 20%). During the second HIP 8.6% (n = 9) indicated a relevant decrease (> 20%) in the number of contacts, while 17.1% (n = 18) indicated a relevant increase (> 20%). During the third HIP 3.8% (n = 4) indicated a relevant decrease (> 20%) in the number of contacts, while 29.5% (n = 31) indicated a relevant increase (> 20%). See Fig. 1a for the detailed results.

Subsequently, we evaluated possible causes of the decrease of contacts for each HIP separately. Participants that indicated a decrease of contacts in a HIP could select pre-formulated responses or enter additional free text: “Patient demand decreased due to fears of becoming infected with SARS-CoV-2 in practice/therapy”, “Patient demand was reduced due to reduced stress during lockdown”, “The offer was reduced for patients as a protective measure to minimize contacts”, “The offer was reduced for new patients”, “The offer was reduced because staff was absent”. During the first HIP 78.1% (n = 25) attributed
the decrease to a reduced demand from patients due to fears of becoming infected with SARS-CoV-2 in practice/therapy and 59.4% (n = 19) to a reduced offer as a protective measure to minimize contacts. See Fig. 1b for the detailed results.

Next, we asked for reasons of increasing number of contacts. Participants that indicated increases in contacts could select again pre-formulated responses or enter additional free text: “Demand increased due to pandemic-related fears and stress”, “Demand increased because of economic concerns and stress”, “Demand increased as a consequence of Lockdown-measures” and “Demand increased due to pandemic-related restrictions on admissions by the local inpatient departments/clinics”. Most frequently selected responses during the third HIP were an increase in demand because of Lockdown measures (93.5%; n = 29), due to pandemic-related fears and stress (90.3%; n = 28) and due to economic concerns and stress (67.7%; n = 21). See Fig. 1c for the detailed results.

From all participants (n = 105), 41.9% (n = 44) reported a change in service utilization amongst certain patient groups (both previously known and previously unknown) during or after the first HIP, 29.5% (n = 31) during or after the second HIP and 36.2% (n = 38) during or after the third HIP. In free text answers, less contacts were mentioned especially for the first and second HIP for patients with addiction disorders, depression and anxiety disorders, previously known patients, those of higher age and those living in retirement homes. More contacts were reported especially for the second and third HIP for patients with depressive and anxiety disorders, previously unknown patients, patients of younger age, certain groups like (especially single) parents (for a detailed analysis see Fehr et al. in preparation), socially isolated persons and those with post-COVID-syndromes.

Problems related to changes in utilization

We additionally asked about perceived difficulties of the patients due to the pandemic-related adjustments in the outpatient and inpatient mental health care system. Overall, 78.1% (n = 82) of the participants reported difficulties. Participants that indicated difficulties in a HIP could select the following pre-formulated responses or enter additional free text: “increased demand from patients”, “increased exacerbations”, “deteriorations and relapses”, “treatment discontinuations and loss of contact” and “increases in suicide attempts and suicides”. Most frequently reported difficulties were an increased demand from patients (1st HIP 32.9%, n = 27; 2nd HIP 42.7%, n = 35; 3rd HIP 50%, n = 41) and increased exacerbations (1st HIP 23.2%, n = 19; 2nd HIP 48.8%, n = 40; 3rd HIP 61%, n = 50). See Fig. 1d for the results. In free text answers the outpatient specialists marked that there were difficulties to transfer patients to inpatient and day-clinic institutions, an increase of the already before existing difficulties to find psychotherapy offerings, closures of psychosocial and self-help offers but as well a deterioration of the doctor-patient relationship due to the hygiene measures (for the detailed free text analysis see Fehr et al. in preparation).

Telemedicine

Regarding telemedicine use before, during and (planned) after the pandemic out of the n = 99 participants, telephone consultation services were used by 37.1% (n = 37) before the pandemic, 55.6% (n
= 55) newly introduced them during the pandemic, 27,3% (n = 27) planned to further use them after the pandemic and 9,1% (n = 9) did not use them at all. Video consultation services were used by 3% (n = 3) before the pandemic, 49,5% (n = 49) newly introduced them during the pandemic, 22,2% (n = 22) planned to use them further after the pandemic and 47,5% (n = 47) did not use them at all. Self-help apps for the patients were used by 5,1% (n = 5) before the pandemic, 14,1% (n = 14) newly introduced them during the pandemic, 12,1% (n = 12) indicated a further planned use after the pandemic and 78,8% (n = 78) did not use them at all. Results on the use and experiences of telemedicine services for specific diagnostic groups (n = 94 participants) are shown in Fig. 2.

**Referrals to inpatient institutions**

Asked how transfers from the outpatient specialists to mental health inpatient institutions changed during the pandemic, out of the n = 96 participants a reduction in transfers was reported by 61,5% (n = 59) for the first HIP, by 54,2% (n = 52) for the second HIP, and 38,5% (n = 37) for the third HIP. No participants reported increases in transfers for the first HIP, but 2,1% (n = 2) and 8,3% (n = 8) for the second and third HIP.

We additionally asked the participants which indicated a reduction in transfers to hospitals about possible reasons for these changes with pre-formulated responses: 87,1% (n = 54) of the participants (n = 62) reduced offer by the hospitals as a reason for fewer admissions, 67,7% (n = 42) less demand from patients because of fear of getting infected with SARS-CoV-2 in the hospital and 66,1% (n = 41) less demand from patients due to restrictions during inpatient treatment (e.g. because of hygiene measures). 24,2% (n = 15) reported having been reluctant themselves to initiate transfers due to restrictions of inpatient treatment (e.g. due to hygiene measures), 12,9% (n = 8) reported having been reluctant themselves out of concern for patient infections in the hospital, and 9,7% (n = 6) reported less demand due to a lower burden of disease.

**Medical attendance in nursing homes and assisted living institutions**

Out of the n = 96 participants, 66,7% (n = 64) reported that they provided mental health care for old people’s homes, nursing homes or complementary facilities such as assisted living for people with mental illness. Asked how their provision of mental health care for those institutions had changed during the pandemic, 45,3% (n = 29) reported no change, 50% (n = 32) fewer medical visits and 4,7% (n = 3) more medical visits. When asked why there had been fewer medical visits, the participants could select out of pre-formulated responses. 75% (n = 24) of the participants reported that the facilities did not want visits as a COVID-19 protective measure, 59,4% (n = 19) that they had visited as few facilities as possible as a self-initiated COVID-19 protective measure, and 9,4% (n = 3) each stated less demand from patients due to COVID-19 outbreaks, less demand because patients were in inpatient treatment due to COVID-19 and less demand from patients because they died from COVID-19. 6,3% (n = 2) reported less demand from
patients due to fear of SARS-CoV-2 infection and 3.1% (n = 1) less demand due to a decrease in mental illnesses or exacerbations.

Furthermore, we evaluated the need for inpatient admission of inhabitants of nursing homes and assisted living facilities. 20.3% (n = 13) reported a change in the need for inpatient admission for psychiatric patients, 71.9% (n = 46) stated no difference in the need of inpatient admission, and 7.8% (n = 5) did not know if there was a change.

**Post-COVID Syndromes**

55% (n = 55) of the responding participants (n = 100) affirmed that they had treated patients whose mental illness could be classified as a result of a confirmed SARS-CoV-2-infection (post-COVID syndrome). The most observed psychopathology was fatigue (91%, n = 49), depressed mood (67%, n = 36) and sleep disorders (64%, n = 35), for further results see supplementary Fig. 1. Asked about the treatment of their post-COVID patients, 90.9% (n = 50) stated that they offered supportive conversations, 69.1% (n = 38) used both antidepressants as well as psychotherapeutic interventions, 58.2% (n = 32) reported transfers to rehabilitation treatments, 40% (n = 22) transfers to complementary treatments, 16.4% (n = 9) used sedative medication, and 5.5% (n = 3) high potency neuroleptics. 7.3% (n = 4) reported that they filed out retirement applications for their patients.

**DISCUSSION**

The COVID Ψ outpatient Survey identifies several important mental healthcare challenges during the first three HIPs of the COVID-19 pandemic in Germany in a regionally diverse sample of psychiatric specialists.

**Changes in utilization**

Overall, the results suggest a stay the same of contacts and therefore continuity of care for psychiatric outpatient consultations. However, the second most selected answer was a decrease of contacts during the initial HIP. Reasons for initial decreases indicated both in the default as well as in the free text answers were fear of infection by the patients as well as reduced offerings by outpatient providers. During the second and third HIP, some specialists reported an increase in contacts. Reasons indicated most frequently by the participants were worries because of the pandemic itself, stress related to economic worries and related to lockdown measures, like e.g. social isolation. The free text answers (for a detailed analyses see Fehr et al., in preparation) identified certain groups with a higher demand, e.g. (single) parents due to closure of childcare institutions, students because of a lack of real-life contacts, people with pre-existing mental disorders affected by the closure of psychosocial and self-help institutions and a reduced offer of inpatient mental healthcare intuitions. The outpatient specialists also reported to be more reluctant with transfers to inpatient institutions mainly due to the reduced offer of these institutions and patients fears of infection during inpatient treatment. These results are mainly in line with the evolution of mental health care utilization in other regions in Europe [45]. Going along with
these changes in utilization, an increase of problems was perceived due to reduced services over the course of the pandemic: Whereas for the first HIP only a quarter of the participants reported exacerbations and 3% suicide attempts, these statements were endorsed by 60% and 13%, respectively for the third HIP. Interestingly, the number of participants reporting cases of treatment discontinuation decreased over the course of the pandemic. Apparently, the system adapted to the circumstances.

Overall, the reported problems like treatment discontinuations and suicide attempts, increases in demand due to reduced inpatient capacities but at the same time no increase in outpatient capacities are in line with the results of a survey of inpatient institutions [19]. These complications highlight the lack of regional oversight, coordination and integration between inpatient and outpatient system as one of the central structural problems of (mental) health care in Germany that was aggravated by the crisis of the COVID-19 pandemic.

**Telemedicine**

A majority of outpatient providers flexibly introduced or expanded telemedicine offerings and reported mostly good experiences for e.g. affective and anxiety disorders. However, experiences seemed to have been mixed for patients with e.g. psychoses or organic mental disorders. Interestingly, despite the positive experiences many providers do not plan to continue their telemedicine offerings. Reasons were not asked in this survey and can only be assumed. A user-friendly infrastructure and low bureaucracy refunding seems to be central. Furthermore, on-site (and home-treatment) offers for patient groups with limited financial and technical resources remain important [46–52].

**Reduced visits in nursing homes and assisted living institutions**

Reports suggest that inhabitants of nursing homes were one of the neglected groups of the pandemic, with high COVID-19-associated mortality and social isolation rates [53–55]. The indicated reductions in on-site visits of inhabitants of nursing homes and assisted living institutions hint at a reduced quality of psychiatric care. In future crises, the necessities of infection control and psychiatric care of these vulnerable populations should be better balanced.

**Post-COVID syndromes in psychiatric care**

Already at the time of the survey in summer 2021, more than 55% of the participants reported consultations for post-COVID syndromes. The most often reported symptoms like fatigue, depressed mood, or sleep deficits are in line with what is known about post-viral infection syndromes. The most used interventions were supportive counseling, antidepressant medications, psychotherapeutic interventions, and transfers to rehabilitation and complimentary treatments. These treatments seem largely adequate, but an evidence base for both diagnosis and treatment sequences of these syndromes is urgently needed. As psychiatrists seem to be an important resource for patients with these syndromes, they should be included in the establishment of evaluation and care standards for these syndromes.

**Limitations**
This survey has several limitations. The relatively moderate response rate (n = 105 of 351 contacted personally via mail and more via a newsletter) opens the possibility of response bias (e.g. only those with less demand took part in the survey). However, participants from all regions of the country took part, so that regions with high incidence numbers and strict regional regulations were represented in the survey. The survey can provide just estimates of utilization rates and thereby should be complemented by routine data studies. But as routine data is only available with significant delays the survey format was the only option to gather information on changes in a timely manner.

Conclusions

Taken together, the COVID Ψ Outpatient Survey results show that outpatient providers managed to maintain continuity of care with trends towards a decrease of utilization in the pandemics initial phase but later increases in demand. They show a difficult interplay between inpatient, outpatient and assisted living sectors and problems for specific patient groups as well as providers resulting from these changes. They also show positive trends like the fast and flexible system wide introduction of telemedicine offerings by outpatient specialists. The outpatient provider's views expressed in the survey are an important perspective of the systems burdens in times of crisis. The most important task for better managing future crises seems to establish structures for regional surveillance and coordination so that changes can be detected and regional solutions developed in a more timely manner.

Declarations

Ethics approval and consent to participate

The Data Protection Officer at University Medical Center Mainz confirmed that no data protection vote was required because no personal data were processed. The ethics commission of the Ludwig Maximilians University Munich had already approved the first study [16], i.e., the anonymous survey of mental healthcare institutions, as no personal or individual patient data were collected. Therefore, no additional vote was gathered for this second survey. Informed consent was obtained from all participants included in the survey.

Consent for publication

Not applicable as no individual data was published.

Availability of data and materials

The raw data supporting the conclusions of this article can be found here: https://github.com/haukefelixwiegand/COVID-Psy-outpatient-survey.git

Competing interests

All authors have no conflicts of interest to declare.
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Authors' contributions

MF, SK, CRS, KG, OT, KA, KL, LPH, and HFW designed the study. MF, SK, CRS, KG, OT, KA, KL, LPH, and HFW contributed and corrected the manuscript. MF, LH, and HFW wrote the manuscript. MF, LH, and HFW analyzed the data. MF, KG, LPH, and HFW designed the LymeSurvey and invited to the survey. All authors contributed to the article and approved the submitted version.

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References


Figures

Figure 1

[Diagrams and figures related to the studies mentioned above]
a. changes in the amount of contacts compared to 2019  
b. reasons for a decreasing amount of contacts  
c. reasons for an increasing amount of contacts  
d. difficulties for patients during the three HIP

Figure 2

Experiences with telemedicine for specific ICD-10 groups

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- COVIDPsyoutpatientSupplemenatryFigure1.pdf
- COVIDPsyoutpatientSupplementaryFile1.pdf