

A Pilot Study

Community Triage Intervention and Support for Patients with Substance Use Disorders

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Abstract

Background: Frequent hospital admissions are common among patients with substance use disorders (SUD). In many cases, long-term outpatient treatment is preferable over inpatient care. Triage interventions have been found useful to improve care planning in other medical settings. To improve treatment adherence, patients need ongoing support during waiting times for hospital admission or outpatient care. In the specialised addiction unit of a large university hospital, a newly implemented team evaluated patients prior to admission and offered community interventions, so-called pre-admission community triage (PACT).

Objectives: The aim of this pilot study was to assess the interventions' feasibility and impact for patients with SUD on the rate of admissions as well as to examine the admission requests, duration of intervention and time until admission.

Method: All demands for voluntary inpatient treatment were evaluated over a seven-month period. Data concerning hospital admission, provenance of admission request, referring practitioner, duration of intervention and time until admission was systematically collected. The triage intervention consisted of an evaluation of the admission request and discussion of alternative treatment options. Patients not admitted immediately to inpatient treatment received ongoing support, including community visits, until hospitalisation or integration in an outpatient program.

Results: Among the 95 admission requests only 50 patients (53%) were hospitalised after evaluation. Mean time between request and admission was nine days (0–43 days). The mean time spent per patient was 3.57 hours.

Conclusions: The PACT intervention was found feasible and acceptable for patients with SUD. Many hospital admissions were avoided after the evaluation. The results are promising and indicate that for a number of patients with SUD alternative treatment options in an outpatient setting can replace hospitalisation.

Keywords: Triage; co-ordination; substance use disorder; addiction; hospital use; addiction services; service use

cio-economic, problems which are common among patients with SUD [7], have also been found to increase the risk of recurrent hospital use [8, 9]. However, inpatient treatment is rarely necessary for patients with SUD. Generally, long-term outpatient treatment is preferable for these chronic disorders, still patients with SUD seek hospitalisation for withdrawal in many cases. Withdrawal can usually be treated in outpatient settings [10–12] with more or less intensive care, depending on the severity of the SUD and mental disorder as well as patients' available social support. A review comparing intensive outpatient programs for SUD to inpatient treatment found both these programs equally effective regarding various outcome measures, including reduction of substance use [13]. Patients with SUD often have co-occurring mental disorders and hospitalisation demands can be due to worsening symptoms of those. Concerning general psychiatric disorders, hospitalisations can, in many cases be replaced by alternative outpatient care, such as day hospitals or crisis intervention teams, which have led to positive patient outcomes [14]. Psychiatric hospitalisations can be counterproductive, possibly leading to institutionalisation, stigma and unhelpful coping mechanisms [15] as well as disrupting healthy social activities, such as work or family life. Furthermore, there is an increase of relapse risk and overdose at discharge [16]. Alternatives to inpatient treatment in psychiatry are being developed in many countries [15] due to costs and patients' preferences for outpatient or community treatment and gradually, different crisis care models are being offered.

List of Abbreviations

SUD Substance use disorders
PACT Pre-admission community triage

Introduction

Frequent hospital admissions are a well-known problem among patients with substance use disorders (SUD) [1–4]. This is partly due to specific characteristics of the disorders such as its chronicity and recurrent relapses [5, 6]. So-

As readmissions are partly responsible for high costs in mental health care [17], different strategies have been developed to reduce hospital use and improve care planning. Triage instruments are mainly implemented in emergency medicine [18] and in psychiatry, triage instruments are similarly used in emergency settings to determine treatment urgency especially for risk of self-harm [19–21]. However, patients with mental disorders, including SUD, are often referred to psychiatric hospitals for inpatient treatment without evaluation at an emergency department. Evaluating these patients prior to admission by a specialised service to determine their need of inpatient care or if there are more adequate treatment options, could be a useful means to reduce unnecessary hospitalisations. It has been found, that short waiting times are important to improve treatment adherence for patients seeking help for SUD [22]. Offering triage services may facilitate faster access to appropriate care facilities. Care planning and coordination have been found to be an important factor to improve access to care and treatment engagement [23, 24]. Various community-based programs, such as assertive community treatment and (transition) case management have been adapted for patients with SUD over the last years [23, 25–27].

To date, only a few examples of triage programs for patients with mental disorders exist. A Swiss study [28] which examined an evaluation system for all emergency psychiatric inpatient admission requests found that at least 17% of referrals did not require hospitalisation. By referring these patients to alternative care programs, such as outpatient centres, they demonstrated large savings in healthcare costs. Therefore, such central triage programs examining all referrals to psychiatric hospitals could reduce the number of unnecessary admissions. Another Swiss study [29] evaluated the impact of an emergency hotline which assessed psychiatric hospital admissions requests by private practitioners. Of these referrals 44% were not hospitalised and an alternative treatment was suggested.

To our knowledge, no studies have examined triage interventions for patients with SUD, who are at particular risk for frequent admissions. For the present study a combination of triage and community support program was evaluated, which aimed to reduce unnecessary hospitalisations by linking patients to different treatment programs as indicated. The feasibility and impact of the newly implemented team of specialised nurses (“coordinateurs mobiles”) evaluating patients referred to a specialised addiction inpatient unit by a prior to admission, also called pre-admission

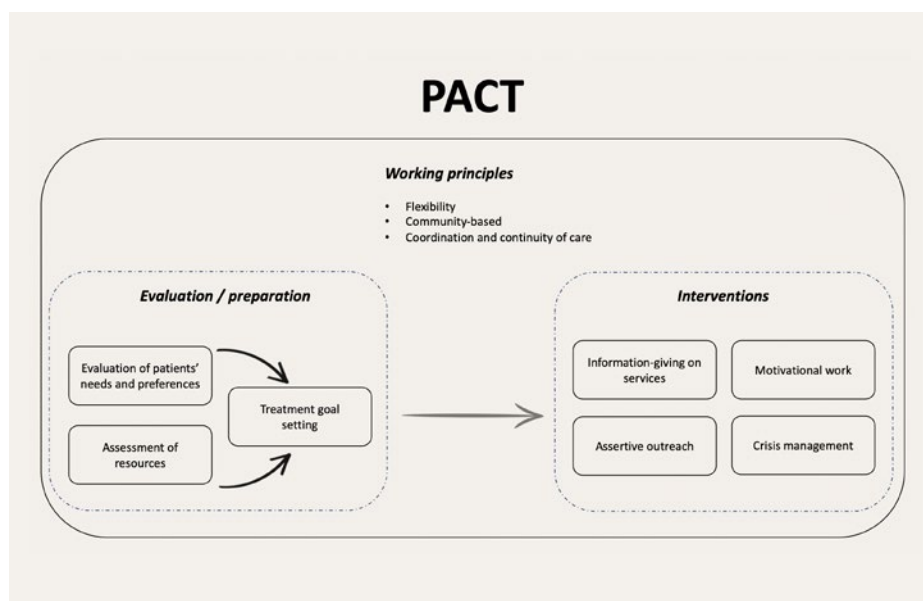


Figure 1: Main components of PACT.

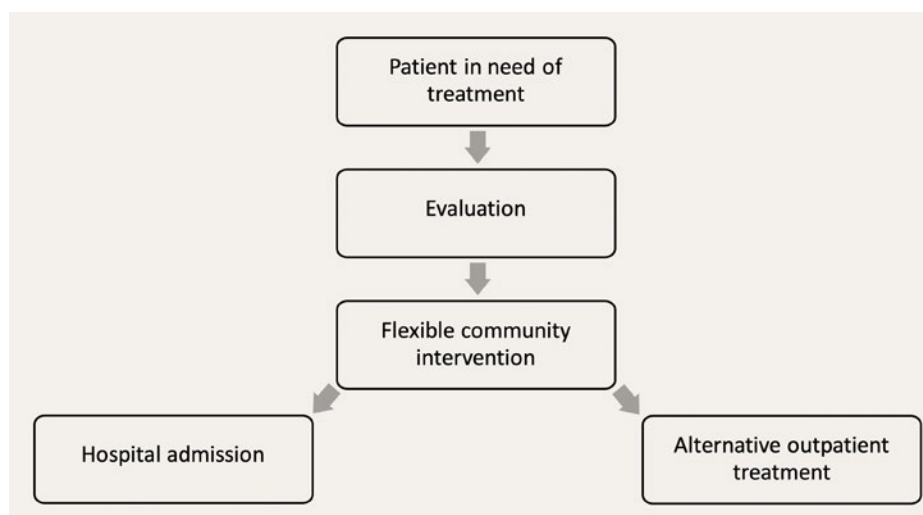


Figure 2: Triage and intervention process.

sion community triage (PACT), was analysed. The team additionally offered community interventions while patients awaited further treatment. The aim of this pilot study was to assess the interventions' impact on the rate of admissions as well as to examine the admission requests, duration of intervention and time until admission.

Method

The data for this pilot study was collected at a specialised addiction unit of a large psychiatric university hospital in Switzerland consisting of twenty beds. All patients referred to the unit for voluntary inpatient treatment over a seven-month period (June to December 2021) were evaluated by two triage nurses. During this pilot period only referrals during weekday working hours were evaluated.

Data concerning hospital admission, provenance of admission request, referring practitioner, duration of intervention and time until admission was systematically collected by the triage nurses for all referrals evaluated.

Pre-admission Community Triage (PACT)

The intervention consisted of an evaluation and triage of all patients referred for inpatient treatment by third parties and a very flexible community intervention, which aimed to support patients during the interval between referral and admission or start of an alternative treatment. Patients referred to the clinic typically presented co-occurring mental disorders and requested withdrawal in an inpatient setting. The admission requests were received by two triage nurses specialised in mental health and addiction treatment. The nurses had for-

merly worked in the inpatient unit, but were solely responsible for the new program in order to be able to respond rapidly to referral requests and provide continuous support if needed. The target of PACT was to avoid unnecessary hospitalisations, facilitate access to alternative care and support patients during the time to treatment initiation. The main components of PACT can be found in figure 1. The triage intervention consisted of four stages (see fig. 2).

1. Evaluation of the admission request

The nurses discussed the request with the referring caregiver to better understand the reasons for the demand of inpatient treatment. All patients were evaluated in person or if necessary, by telephone. The evaluation generally took place in person in the addiction unit of the psychiatric hospital. It was also possible to visit patients in the community at the patient's home or the referring doctor's practice. During this phase, patients' needs and preferences as well as their motivation for substance withdrawal.

2. Discussion of admission or alternative options

Patients' admission requests were either accepted or alternative treatment options were suggested and discussed with the patients and their referring caregivers. The aim of the intervention was to suggest alternative treatment whenever possible and ultimately reduce admissions. In case of hospitalisation, admission was planned according to bed availability and urgency of treatment needs. Objectives for inpatient treatment, possible problems, patients' needs and resources were discussed prior to admission. Alternatives to hospitalisation generally included referral to the outpatient treatment centres of the Addiction Division and organisation of a first appointment.

3. Community intervention

Patients received intermediate care by the evaluating nurses pending admission or outpatient care. This allowed for immediate crisis intervention, in-vivo evaluation of patients' resources and support network, motivational work as well as defining treatment objectives prior to admission. The model followed an assertive outreach approach to increase engagement, including flexible treatment intensity with contacts ranging from one meeting before follow-up treatment to daily contacts in person or by phone. Meetings took place at the hospital or in the community, including patients' home and outpatient care facilities. To facilitate access to care, patients could be ac-

companied to their first outpatient appointment.

4. Admission or alternative care

Ultimately, patients were admitted for inpatient treatment or an alternative care, which was organised with the help of the PACT-team, was initiated.

Result

In total, 95 patients were evaluated by the triage nurses. Most patients were met face-to-

face and a small number only received a phone call. Provenance of admission requests can be found in figure 3. Among the 95 admission requests 50 patients (53%) were hospitalised. Further details on hospitalisation rates can be found in figure 4.

In general, admissions were organised at a later stage and preparatory sessions were set up to define the patients' aims and needs during the hospital treatment. Only two patients were admitted on the same day of the evaluation. The mean time between request and admission was nine days (0–43 days).

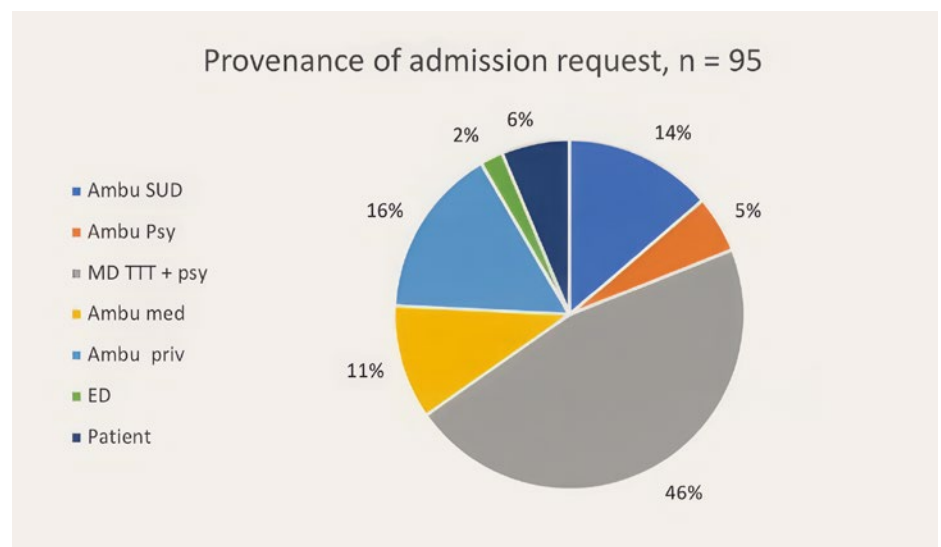


Figure 3: Provenance of admission requests.

Ambu SUD, n = 13: Outpatient centres of Addiction Division University Hospital Geneva; Ambu Psy, n = 5: General psychiatric outpatient treatment centres; MD TTT + psy, n = 44: Private practitioners and psychiatrists; Ambu med, n = 10: Medical outpatient centres; Ambu priv, n = 15: Private addiction treatment centres; ED, n = 2: Emergency department; Patient, n = 6: Direct patient request.

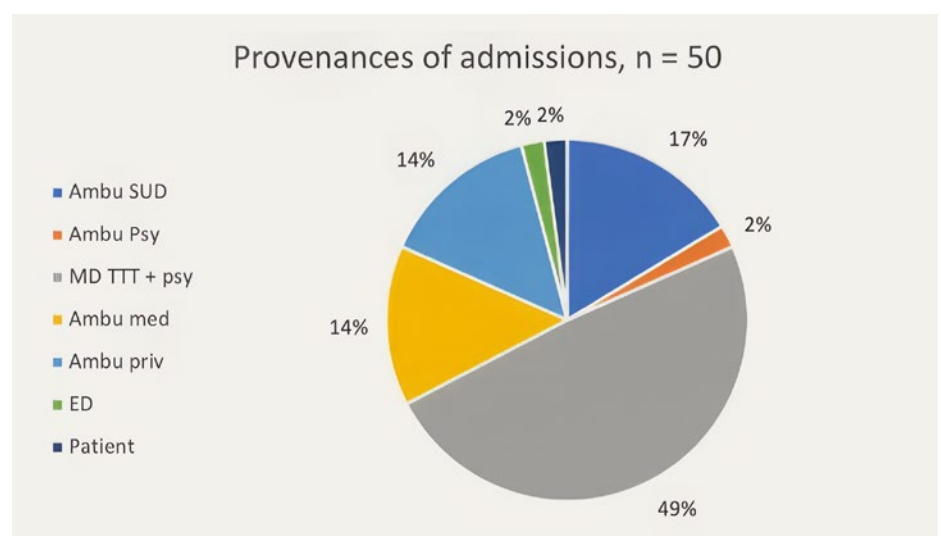


Figure 4: Provenance of admissions.

Ambu SUD, n = 8: Outpatient centres of Addiction Division University Hospital Geneva; Ambu Psy, n = 1: General psychiatric outpatient treatment centres; MD TTT + psy, n = 24: Private practitioners and psychiatrists; Ambu med, n = 7: Medical outpatient centres; Ambu priv, n = 7: Private addiction treatment centres; ED, n = 1: Emergency department; Patient, n = 1: Direct patient request.

Total time spent for PACT varied from 40 to 1255 minutes per patient, according to the number of meetings and the complexity of the situation. The mean time spent per patient was 3.57 hours, which refers to 93 patients only, as data was missing in two cases. Some patients were seen at their homes or at their private practitioner's office, though most patients were seen at the hospital where they had the possibility to visit the unit. Different alternatives to inpatient treatment were suggested, such as treatment at the outpatient centre of the addiction division of the university hospital or its community care team. Some patients were offered intensified treatment while waiting for admission to hospital or to another treatment centre. For patients from other psychiatric units, the triage team was often able to offer support to patients and caregivers in the unit. Therefore, patients could generally continue being treated in the psychiatric hospital unit. Some patients proceeded treatment with their private practitioner or the psychiatric outpatient unit. In total, eleven patients were not evaluated because they could not be contacted, they changed their mind about wanting to be admitted or refused further treatment.

Discussion

This pilot study analysed feasibility and impact of a recently introduced PACT for patients referred to the specialised addiction inpatient unit of a large university hospital. To our knowledge, this is the first report on a triage intervention specifically for patients with SUD, a group which is known to be at risk of frequent hospital use [1, 30]. The patients addressed for referral to the specialised unit generally requested inpatient withdrawal at a moment of crisis or worsening mental health state. Only about half (53%) of the referred patients were admitted after evaluation. This is an important finding, as reducing hospitalisations and offering alternative outpatient treatments is not only preferable from a clinical point of view [14, 15], but has also been shown to reduce healthcare costs [31].

In the following we bear on the literature on triage from general psychiatry, for lack of respective studies in addictology. Overall, research on triage found that numbers of admissions were lower than those of referrals.

The results vary as interventions took place in different settings and health care systems vary, especially in number of beds per inhabitants. One study found that 83% of emergency psychiatric inpatient admission requests needed to be treated in a hospital [28]. However, unlike our sample, the mentioned study did not include patients with SUD, re-

questing non-urgent hospitalisation for withdrawal, as they were not evaluated by the triage team. This may explain the higher number of hospitalisations which were avoided in our group. It is well known that inpatient treatment is rarely necessary for withdrawal only unless patients present severe co-occurring disorders and psychosocial problems [12]. Another study [29], in which psychiatric admission requests were evaluated by contacting the referring psychiatrist, found that 44% of patients were not hospitalised. As before, the number of patients admitted with SUD may be lower than comparable interventions in general psychiatry as many requests are for substance withdrawal. Patients addressed to general psychiatric units are likely to be so for acuter and more urgent reasons. Studies postulate that admission requests in general psychiatry are mainly initiated due to suicidal ideation or worsening of pre-existing mental disorders [32, 33]. Another possible reason for fewer hospitalisations in our study may be the direct contact between the evaluation nurse and the patient. When offered alternative treatment, they may prefer these options while some physicians might be more reluctant to consider these for their patients. When examining psychiatric emergency department settings, one study found that around half of the patients evaluated were hospitalised [33]. It is important to keep in mind that patients visiting the emergency department often do so out of their own initiative or are encouraged by their family. They may not have been seen by their regular caregivers who could have been able to adapt their treatment to respond to patients' symptoms. Interestingly, in our sample, fewer patients were admitted after the intervention even though, in most situations, the referral came from their regular physicians. Since hospitalisation was ultimately avoided in many cases, the question may arise as to why referring physicians requested hospitalisation. In addition to a lack of experience with SUD, this may be due to a lack of time, pressure from the patient's social environment and insufficient knowledge of local outpatient alternatives. A proactive offer of flexible alternatives in outpatient and community care may thus be a simple method to reduce nonessential hospitalisations. Such flexible community treatment offers were available within the Addiction Division in form of a flexible assertive community program for patients with SUD. Patients were regularly referred to this program instead of inpatient treatment. A study from colleagues in Lausanne has shown, that this type of treatment can improve overall symptoms and functioning of patients with SUD as well as reduce emergency department use [25].

When examining the provenance of referrals and the percentage of patients hospitalised, it is interesting that about half of those addressed by addiction centres and private practitioners were admitted. It is likely that the referring specialists had already tried various more intensive treatment options before contacting the hospital. In general, PACT was well received by patients and referring health care professionals. It is important to mention, that before the implementation of PACT, patient referrals were also examined by the receiving unit and waiting times for admission were frequent. As PACT offered additional support and a personal meeting with each patient, the intervention was very positively received and no patient or referring specialist refused the intervention.

Time to admission amounted to nine days with a large variability from immediate admission to a waiting time of up to 43 days. Patients were rarely hospitalised immediately partly due to a lack of capacity. Treatment was organised according to urgency, with shorter admission times indicating more severe symptoms generally due to co-occurring disorders. The opposite phenomenon can be explained by patients' ambivalence regarding withdrawal. Even if abstinence-based approaches are not the main treatment goal in this specific hospital unit, inpatient stays are often requested for substance withdrawal. The longer waiting times may be explained by the fact that SUD is a chronic disorder with long periods of harmful substance use and withdrawal is not an acute treatment requirement in general. It is important for patients to have time to reflect and prepare for withdrawal by putting certain relapse strategies in place to see long-term benefits. The intervention offered by the specialised team was able to prepare patients for their inpatient stay by clarifying and elaborating treatment goals while awaiting admission. It is possible that this preparation may improve treatment outcomes and therefore improve patient satisfaction. Further studies are necessary to examine these hypotheses.

Overall, PACT was able to reduce the number of patients eventually hospitalised. The specialised nurses were able to evaluate patients and make decisions about admissions without consulting a psychiatrist in most cases. Nurses' competence for this kind of intervention was also confirmed by another study [32]. Even though, the nurses involved in our study were experienced in addiction and mental health care in general, only the latter has been found to be important for effective triage in mental health care [34].

Other than avoiding unnecessary hospitalisations, the aim of PACT was also to increase

linkage to the suggested outpatient treatment facilities or community programs. To achieve this, the team informed and supported patients about various treatment offers and were able to accompany them to first meetings if needed. In terms of care coordination and community support, PACT has similarities with Transition Case Management (“case management de transition”) which accompanies patients after inpatient treatment and has been found to improve short-term treatment engagement for patients with mental disorders [26, 35]. PACT however takes place before inpatient treatment, is generally less time intensive and of shorter duration.

Often hospitalisation is seen as the only option for withdrawal and crisis intervention, but research has shown that intensive outpatient programs have comparable outcomes regarding reduction of substance use [13]. Another study found that acute day hospitals could significantly reduce psychopathological symptoms and improve functioning for psychiatric patients with varying symptom severity while reducing health care costs [31]. It is likely that admission requests by private practitioners and other health care providers are partly due to lack of knowledge about existing programs. It is therefore important to improve communication and collaboration between health care providers which can eventually alter admission decisions [36].

Our study contains various limitations, the main one being the small sample size. Further shortcomings are the non-controlled design and short observation period due to the preliminary character of our study on feasibility. We also lack information on patients' further developments. It is possible that short term reduction in hospital use may not have prevented admissions at a later stage or, although unlikely, even have had a negative impact on the course of illness. Also, due to the routinely collected data we do not have measurements of

addiction severity or other factors which may impact the decision on hospital admission, such as co-occurring diagnosis or patients' support network among other resources. It is important to mention that Switzerland has well-developed outpatient programs for SUD and psychiatric disorders. Therefore, the results may not apply in other health care settings.

Further studies need to examine long-term outcomes as well as measure to what extent the addition of community interventions by such evaluation teams increases the acceptance of alternative treatment options by caregivers and patients. Despite these limitations, the preliminary results of this intervention are especially encouraging and interesting since to our knowledge, no specific triage evaluation for patients with SUD has been studied.

Conclusions

The PACT intervention was found feasible and acceptable for patients with SUD. Many hospital admissions were avoided due to the evaluation. The results are promising and indicate that for several patients with SUD, alternative treatment options in outpatient setting can replace hospitalisations. Care coordination and communication with referring physicians are necessary to reduce high hospital use among patients with SUD. The community intervention while awaiting possible hospitalisation may further help patients define treatment goals and improve outcomes.

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Statements

Ethics Statement

This study used routinely collected anonymised hospital data and therefore did not require approval from the local Ethics Committee. The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

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Conflict of Interest Statement

No financial support and no other potential conflict of interest relevant to this article was reported.

Author Contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by L.P. The first draft of the manuscript was written by L.P. and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Data Availability Statement

Data can be made available by the corresponding author upon request.



References

You will find the full list of references online at <https://sanp.swisshealthweb.ch/en/article/doi/sanp.2023.1264758935/>.



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