

# **Quality improvement intervention using social prescribing at discharge time in a University Hospital in France: a quasi-experimental study**

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# Quality improvement intervention using social prescribing at discharge time in a University Hospital in France: a quasi-experimental study

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## Abstract

**Background:** Social prescription is seen as a tool with the potential to mitigate social determinants of health. Social prescription is not yet well developed in France, where social needs are usually attended by social workers, in a historical context of a deep divide between the health sector and the social sector. On the other side, discharge coordination is gaining attention in France, as a critical tool to improve the quality of care, assessed indirectly using readmission rates.

**Objective:** The objective of this study was to combine social prescription and discharge coordination in order to assess the needs for social prescription and its effect on unplanned re-hospitalization rates.

**Methods:** We conducted a quasi-experimental study in 2 departments of Medicine of a French University-Hospital, in a disadvantaged suburb of Paris.

A discharge coordinator screened patients for social prescribing needs and provided services on the spot, or referred the patient to the appropriate service when needed.

Primary outcome was the description of the services delivered by the discharge coordinator and of its process and the characteristics of the patients in terms of social needs.

The secondary outcome was the comparison of unplanned re-hospitalization rates.

**Results:** 223 patients were included in the intervention arm.

44% of the patients seen by the discharge coordinator needed social prescribing, revealing the breadth of patient's barriers to health care, encompassing language, housing, health literacy and financial issues.

No difference was found in readmission rates between patients who benefited from the intervention versus patients who did not (3.1% versus 2.6%;  $p=1$ ).

Ethnic data collection was not legally permitted, but for 81% of the patients, French was not the mother tongue.

**Conclusions:** Given the low uptake of social prescribing in France in general, hospital discharge could be used as an opportunity in disadvantaged settings. Other indicators should be devised to evaluate the effect of social prescribing at discharge coordination.

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## Abstract

### Background

Social prescription is seen as a public health intervention tool with the potential to mitigate social determinants of health. On one side, social prescription is not yet well developed in France, where social needs are usually attended by social workers, in a historical context of a deep divide between health and social sectors. On the other side, discharge coordination is gaining attention in France, as a critical tool to improve the quality of care, assessed indirectly using unplanned re-hospitalization rates.

### Objectives

The objective of this study was to combine social prescription and discharge coordination in order to assess the needs for social prescription and its effect on unplanned re-hospitalization rates.

### Methods

We conducted a quasi-experimental study in 2 departments of Medicine of a French University-Hospital, in a disadvantaged suburb of Paris, over a two-year period (October 2019-October 2021).

A discharge coordinator screened patients for social prescribing needs and provided services on the spot, and / or referred the patient to the appropriate service when needed.

The primary outcome was the description of the services delivered by the discharge coordinator and of its process, as well as the characteristics of the patients in terms of social needs.

The secondary outcome was the comparison of unplanned re-hospitalization rates, after data chaining.

### Results

223 patients were included in the intervention arm, the pace of inclusion being disrupted by the Covid-19 pandemic.

More than two thirds of patients (67.1%) needed help to understand discharge information. Slightly

less than half of the patients seen by the discharge coordinator needed social prescribing (43.9%), encompassing language, housing, health literacy and financial issues. The social prescribing covered a large range of services, categorized into finding a general practitioner/private sector nurse, including language-matching; referral to a social worker; referral to non-governmental organization / group activities; support for transportation issue; support for health-related administrative procedure; support for additional appointment with non-medical clinicians. All supports were delivered in a highly personalized way.

Ethnic data collection was not legally permitted, but for 81% of the patients, French was not the mother tongue.

After data chaining, re-hospitalization rates were compared between 203 patients who received the intervention (3.1%), versus 2095 patients who did not (2.6%), and there was no statistical difference.

## Conclusions

First, our study revealed the breadth of patient's unmet social needs, in our University-Hospital, catering an area where immigrant population is high. The study also revealed the 'devil's in the details' of the work of the discharge coordinator, who provided highly personalized supports and managed to gain trust. Hospital discharge could be used in France as an opportunity in disadvantaged settings. Eventually, indicators other than the rehospitalization rate should be devised to evaluate the effect of social prescribing at discharge coordination.



## Introduction

Worldwide, social inequalities are increasing, as well as the weight of the social and economic determinants on health outcomes[1]. Social prescribing (SP) has been proposed as a public health intervention to tackle social determinants of health in a pragmatic way [2], [3]. SP is defined as a link worker providing a set of non-clinical services. First implemented in UK in primary health care, SP has expanded to other countries [3]–[6], and is being increasingly experimented, but not yet to France. In UK, SP link workers were integrated into the National Health System since 2019 [7]. Other countries, such as Canada, are also implementing SP in their primary health care system, whose actors call for an increased uptake [8]. SP is seen as a model integrating social and health sectors, and builds on the trust of the “prescription”-based relationship [9]. So far, evaluation of SP impact on population health have shown mixed results, and have fueled hot debates on which outcomes to measure[6], [10]–[12]. There seem to be a consensus that evaluations should use both quantitative and qualitative methods, assessing process, experience as well as outcomes[6], [10], [13]. Outcomes considered health but more broadly well-being, and were related to patients but also to health systems [12]. Since SP goal is to favor well-being without focusing on a specific health outcome, the time scale for evaluation might also be much longer than usual[14]. Eventually, a scoping review conducted in Wales revealed a lack of consensus on the terminology used in social prescription practice, leading to miscommunication, both among professionals, public health decision-makers and public [15].

In parallel to primary health care, another entry point of SP could be hospital discharge time. Hospital discharge is a transition period of paramount importance, both in terms of hospital efficiency/effectiveness [16] and in terms of quality of care [17]. Discharge coordination (DC) has been tested since years, especially in North America and Japan, in the search for within 30 days readmission rate reduction, also with mixed results [18]–[20]. In Europe, concerns over readmission

rates are less of a financial concern, but the same issue of lack of coordination at discharge remains [21]. Patients have more and more complex diseases and related treatments, and their multi-morbid feature represents a challenge in terms of coordination.

This study hence sought to combine SP and DC in France, for the first time, and describe its operationalization. A personalized SP/DC intervention was implemented in 2 departments of Medicine of a University-Hospital. The intervention consisted of coordinating discharge, screening and, when needed, tackling some of the unmet social needs related to health. We also measured the impact of the combined SP/DC intervention on re-admission rates.

## Methods

The SQUIRE guidelines were followed in order to describe the intervention and to write the article.

## Context

Avicenne University Hospital, located in an underserved suburb of Paris (Seine Saint Denis department), caters for a disadvantaged population comprising the highest proportion of migrants in mainland France. Two departments of medicine were included in this study, one with a chronic disease profile (diabetology department-DD), and one with an acute care profile (infectious diseases department-IDD). The IDD manages a variety of infections such as community infections (pneumonia, upper urinary tract infections...), as well as immunodepression related infections. In both units, inpatients suffered from many comorbidities, including a high prevalence of mental health conditions. For non-transmissible as well as non-transmissible diseases, there is a well-known link between deprivation and a higher risk of complications, also known as syndemics [22], [23]. Rates of readmission within 30 days, for inpatients of these 2 departments, as of 2017, year of project conception, were respectively 5.9 and 1.3%, in IDD and DD units.

## The intervention

An intervention was defined as a discharge coordinator (DCo) visiting a patient at the time of discharge; delivering a set of non-clinical services tailored to improve patient discharge instructions understanding / uptake (DC); screening the social needs; and setting personalized goals to meet some of the patient's social needs which could undermine care (SP). Care was defined in a holistic way, including its social determinants.

The intervention was delivered in a quasi-experimental way, in order to reduce inclusion bias: the intervention was delivered the same day of the week in each department. Patients who were discharged all the other days from the 2 departments, or those not interested by the intervention were automatically attributed to the non-intervention group.

The details of the intervention delivered by the DCo consisted of the following, which were labeled 'basic DC', 'DC', 'SP' or both 'SP/DC':

- Reviewing diagnosis and post-discharge instructions' understanding, and providing explanations if necessary (basic DC)
- Checking whether the patient had a general practitioner, and if not, helping him with identifying one (DC)
- Checking whether the patient had financial constraints with following medical prescription, and more generally, if there were any social deprivation, delivering support services (SP)
- Inquiring how the patient would attend post-discharge hospital visits and prescribed examinations, and, if any constraint was identified, helping the patient (SP)
- Checking living conditions (housing, loneliness), substance abuse, mental health and other

perceived needs related to health, and referring patients according to goals set (SP)

- Checking the feasibility of the treatment on a practical level, and if needed, delivering support services (SP/DC)
- Communicating DCOs' own contact information to the patient, for him to call the DCo if needed (SP/DC)

If the patient was not fluent in French, the DCo used a translator over the phone, and identified together with the patient a trusted person, to whom important discharge information would be passed, with patient's approval.

The DCo was recruited on a part-time basis for the purpose of the study. She was a graduated nurse, with long experience in patient's support in the oncology unit of the same hospital. She was knowledgeable on the hospital patients' context. She also followed a post-graduate university diploma on health navigation in 2020. She was under the supervision of 2 medical doctors (one specialized in public health / infectious diseases and one in endocrinology) for her interventions.

## Data and population

### Eligibility to the DCo intervention

All eligible patients discharged on Wednesday/ Friday in the DD/ IDD from 1<sup>st</sup> October 2019 to 30<sup>th</sup> of June 2021, and on Monday / Thursday for DD / IDD from 1<sup>st</sup> of July 2021 to 30<sup>th</sup> October 2021. The day changed once during the period of intervention, due to changes in units' organization.

### DCo intervention exclusion criteria

Patients who refused

Patients already seen

## Data

- SP needs: a paper-based questionnaire on socio-demographics and literacy items was provided at the beginning of the DCo visit (see supplementary material); a paper-based record was kept on the type of support(s) provided by the DCo, as well as on the type and duration of follow-up when needed; data were then entered in an excel spreadsheet by the DCo.
- Data on SP/DC process was collected through regular follow-up meetings held between the DCo and the 2 medical doctors in charge of the study;
- Unplanned readmission rates < 30 days after discharge: list of all patients hospitalized in the 2 units during the study period was extracted from the hospital database, with the variable unplanned hospitalization; only the first hospitalization (non-intervention group), or the hospitalization during which the intervention occurred (intervention group) was kept if several hospitalizations occurred for the same patient; the dataset of all patients was chained with the dataset of patients who received the SP/DC intervention, using the patient unique identifier number.

## Analysis

The design of our study being quasi-experimental, any difference in outcome is inferable only to the intervention.

The sample initially computed for the protocol was 380 patients in the intervention group in order to be able to show a 5% decrease in readmission rate in the IDD.

Readmission rate was calculated for all patients hospitalized in DD or IDD, for more than 1 night, between 01/10/2019 and 30/10/2021 and who were discharged to home. Outcome was compared between patients in the intervention group versus those who did not receive an intervention.

Patients transferred to another facility during or at the end of their stay and patients previously seen

by the DCo, in case of readmission, were not included in the sample.

Characteristics of patients included in the intervention group and typology of support services provided were described using descriptive statistics and chi-square tests were used to run all comparative statistics. The software used was R Studio (2021.09.01), and P-value was considered significant if below the threshold of 0.05. The process of the interventions, including reflexivity, was analyzed continuously during the study, via regular meetings, between the 2 supervisors and the DCo, and other health professionals involved in the patients' care when needed.

### Ethical issue

The Ethical Review Board of the French National Institute for Health and Medical Research (INSERM) reviewed and approved the protocol (IRB00003888, approval number 18-534, November 2018).

Patients were proposed the intervention by the DCo, gave their informed consent or not, orally. They were all informed about the possibility to not receive the intervention, or to halt it, without any consequence on further care. The questionnaire and patient information sheet are presented in appendixes 1 and 2, respectively.

### Patient and public involvement

The selecting committee of the funding agency (Agence Régionale de Santé) comprised representatives of the public.

At the University-Hospital level, the project implementation was monitored by a pilot committee, constituted of, *inter alia*, patients' representatives.

### Results

## 1. Characteristics of intervention group patients (Tables 1 and 2)

A total of 228 patients were eligible to the intervention group, five patients refused to be included, amounting to 223 included patients. Reasons for non-inclusion consisted of one patient stating that he had no need and 4 who had to leave since the transportation taking them home had arrived by the time the DCo went to see them.

Socio—economic and demographic characteristics are presented in Table 1.

Table 1 Socio-economic characteristics (N = 223)

	N		N	%
Education level	223	none	36	16.1
		primary	39	17.5
		secondary	104	46.6
		tertiary	44	19.7
Income level <950euros	223	Yes	104	47.5
		No	115	52.5
Housing conditions	211	Tenant	111	52.3
		Hosted (by family, friends or other)	51	24
		Owner	45	21.2
		Homeless	5	2.3
One or more children to support	201	Yes	77	38.3
		No	124	61.7
Living alone	212	Yes	53	25
		No	159	75
Complementary health coverage	189	none	13	6.9
		Mutuelle	136	72
		Solidarity	40	21.1
		insurance		
Source of income	202	Employment	81	40.1

Retirement	55	27.2
pension		
Unemployment	32	15.8
benefit		
Disability	25	12.4
allowance		
Other	9	4.5

Health literacy, access to care and perceived needs are presented in Table 2.

Table 2 Perceived health related needs and health literacy characteristics (N = 223)

	N		N	%
Need help to understand medical prescription	223	Yes	154	69.1
		No	69	30.9
Need any type of support at discharge to improve health management	223	Yes	88	39.4
		No	135	60.6
Fluent in French	223	Yes	140	62.8
		No	83	37.2
French is the mother tongue	223	Yes	41	18.4
		No	182	81.6
Need help to collect medical prescription at pharmacy	207	Yes	101	48.2
		No	106	51.9
Perception of financial hardship	199	Yes	87	43.7
		No	112	56.3
Transportation issues with attending the next medical visit (mobility, financial...)	214	Yes	17	7.9
		No	197	92.1

Regarding language characteristics (figures 1 and 2), most frequent mother tongues were Arabic, French, Tamil and Bambara. Other mother tongues were scattered between 36 different languages or dialects. When considering patients whose mother language was not French, the proportion of those



not fluent in French raised to 45.6%.

Figure 1: distribution of mother tongues

Figure 2: distribution of mother tongues amongst those not fluent in French

## 2. DC and SP process analysis

At the beginning of the study, the DCo was challenged in obtaining the list of patients who were being discharged from the 2 departments. The staff responsible for making this list available to the DCo was not fully cooperative, especially in the DD. However, after the 2 supervisors intervened to re-explain the DCo role and trust-building between the staff and the DCo, the situation improved.

The DCo managed to establish an empathic relationship with patients at their discharge time. Her presenting as a nurse, but acting as a discharge coordinator, facilitated the relationship. The DCo felt that patients were satisfied to meet her and to review whether all discharge information. The DCo felt that she was always welcome, as if she filled in a *vacuum*, taking up a role that was missing. She felt useful each time she met a patient.

The DCo shared an ethnic background with a large proportion of patients, which also increased her trustworthiness [24], [25]. Again, her training as a nurse, enabled her to discuss with physicians, when she faced uncomplete medical prescriptions. She liaised with a wide range of actors: social workers, as well as clinicians and administrative staff at hospital-level; at community level, with social workers of the patients' home towns; nurses providing home visits; patients' general practitioner (GP); numerous local non-governmental organizations (NGOs); and administrative staff. The DCo accompanied each referral to a support service with a cover letter introducing the patient and its needs, and pinpointed at the facility/NGO the most likely to meet patient's needs. She ended her support once the goal was reached, yet patients were free to call her in case another need

emerged. The DCo had to adapt her support services across time, depending on the changing span of hospital social worker duties and their availability.

Finally, on a financial side, the intervention costed a total of 35,000 euros (31,000 euros for a part-time discharge coordinator during the 2 years period, and 4000 euros for medical supervision time).

### 3. Typology of the support provided by the DCo

Among the 223 patients included in the intervention group, 43.9% needed a SP/DC support service (N = 98), and 125 had only basic DC services. Among the 98 patients, 77 needed a post-discharge follow up. The median follow-up duration was 8 days. The duration of Dco intervention, at the time of discharge, was more than one hour for 30% of patients, and between 30 and 60 minutes for 49.2% of patients.

The DCo delivered a total of 119 support services, either the day of discharge and/or during the following days. These support services were roughly categorized between DC (N = 22), mixed (N = 25) and SP (N = 72): finding a GP/private sector nurse (DC, N = 12/10); referral to a social worker (SP, N = 24); referral to NGO / group activities (SP, N = 19); support for transportation issue (DC or SP, N = 18); support for health-related administrative procedure (SP, N = 10); support for additional appointment with non-medical clinicians (SP, N = 19). The referrals to a social worker included addressing health coverage issues, allowing patients to access to medications which were otherwise unaffordable. Each service was personalized (e.g. for association referral looking at the right association near the patient home, checking if it was still receiving new beneficiary and writing a referral letter; applying for a complementary health insurance; applying for a health-related residence permit; seeking a GP speaking the same language...). Support for administrative procedure meant that the DCo would at times physically accompany the patient to the appropriate facility.

#### 4. Comparison between DCo and non-DCo groups

We monitored implementation of other interventions on SP and DC in the 2 departments during the study period, and identified one specific DC intervention for COVID19 diagnosed patients from May 2020. This implied excluding 496 patients with COVID19 diagnosis from our study. After excluding them, a total of 2706 patients were extracted for the study period, amongst those there were 408 multiple hospitalizations, which were excluded. Amongst the remaining, 203 who received the DCo intervention could be identified via datasets chaining, leaving 2095 who did not receive the DCo intervention.

The characteristics of patients in these 2 groups were compared according to their age, gender, residential area, vulnerability score, duration of hospitalization. No significant difference was found (Table 3, appendix 1).

Table 3: comparison of characteristics between intervention group (N = 203) versus non-intervention (N = 2095) group

		Intervention N (%)	Absence of intervention (%)	P-value
Hospitalization department	Endocrinology	135 (66.5)	1465 (70.0)	0.35
	Infectious diseases	68 (33.5)	630 (30.0)	
Age categories	16-24	12 (5.9)	109 (5.2)	0.47
	25-45	48 (23.6)	495 (23.6)	
	46-65	90 (44.3)	839 (40.0)	
	>65	53 (26.2)	652 (31.2)	
Gender	Female	87 (42.9)	870 (41.5)	0.77
	Male	116 (57.1)	1225 (58.5)	
Social deprivation*	Yes	133 (65.5)	1450 (69.2)	0.31
	No	70 (34.5)	645 (30.8)	
Living in Seine Saint Denis	Yes	180 (88.7)	1776 (84.8)	0.16
	No	23 (11.3)	319 (15.2)	
Length of hospitalization	<10days	157 (77.3)	1667 (79.6)	0.70
	11-30 days	41 (20.2)	374 (17.9)	

>30 days	5 (2.4)	54 (2.5)
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\*if patients declared a specific health assistance coverage

Rates of re-hospitalization were 3.1% (5/203) in the intervention group and 2.6% (51/2095) in the non-intervention group respectively, with no significant difference ( $P = .99$ ).

The 5 cases of rehospitalization among the patients who received the intervention were reviewed: all of them were related to drugs severe side effects ( $N = 2$ ), complications of their chronic illness after discharge - unrelated to adherence - ( $N = 2$ ), and one Covid-19 infection. We also reviewed 5 random patients hospitalized in the non-intervention arm, and 3 pertained to complications of chronic illnesses unrelated to adherence, one to drug side effects and one initial medical diagnosis error. Hence, causes of rehospitalization did not differ between the 2 groups.

## Discussion

### Findings Synthesis

Combining SP needs screening and DC at discharge time, identified that more than one third of our sample needed SP. DCo managed to set goals with patients according to perceived priorities, in a highly personalized way. Needs were heterogeneous in nature, combining wider social needs, which *in fine* impact on the access to and quality of care, with low health literacy levels and a high proportion of language issues. Our study did not show any difference in readmission rates between DCo and non DCo groups.

SP at discharge: for whom?

The sample of our study, which is representative of the 2 departments patients, is extremely socially deprived. In France in 2021, 8% of the population lived below the poverty threshold (set at 50% of median income, i.e. 950 euros per month)[26], whereas the proportion in our sample reached 47.5%. Similarly, the proportion of property owners in France was 58% in 2018[27], whereas this proportion was only 21.2% in our sample. Eventually, the proportion of French population using the solidarity-based insurance was 10.6% in 2021 (rapport DRESS ACS 2021), and in our sample this proportion was 21.1%. The level of social deprivation of our hospital area population, explains the breadth of needs that they face and the proportion needing SP, in addition to basic DC that everyone received. The high proportion of immigrants (around 30% of the department population), accounts also for the high proportion of patients whose mother tongue is not French. A cost-effectiveness evaluation conducted in a disadvantaged North England area, among type 2 Diabetes patients, showed that the highest benefit was seen amongst the most disadvantaged population[28]. This result shows that SP/DC intervention in our university-hospital could be similarly cost-effective, given the deprivation level. Moreover, some communities seem to struggle more for French understanding than others, such as those coming from Asia. Standardized screening tools could be applied at hospital entry, in order to help distinguishing patients with complex social needs who require a more intensive support from those having “only” a language issue. Some tools have been validated abroad [29] or in France[30] and could be tested in France.

#### DC/SP: by whom?

A number of DC initiatives have flourished worldwide, but their effectiveness tends to be limited or limited to very specific categories of patients [31][32]. In France, some public hospitals outsource private companies for DC nurses in order to facilitate certain types service delivery around patient discharge[33]. However, those private companies provide only a limited and standardized set of services, and do not provide SP. Also, such standardization of DC might not be adapted to all, and

especially to some fringe of the population such as those most deprived, who are not eligible to these private companies' services. SP has not been implemented as such in France, and is rolled out under other naming, by health navigators, or health mediators. Their entry point is via a specific disease (HIV, diabetes...)[34], [35] or via a category of population (LGBTQ+, Roma...)[36]. One of the reasons might be the structural divide between the social and health sectors in France. The consequence is a lack of holistic and comprehensive care, each worker attending only to limited part of the needs. The question of the nature of the worker comes next, and questions the training background, gender, ethnicity among others, of the DCo, link worker of SP, whatever we name them. In the USA, Kahn et al[37] described diverse missions of a nurse case management and reported also the complex needs of patients with diabetes and mental illness, as in our study. Is it important that the link worker or the DCo is trained as a clinician? From our study, the DCo used her experience as nurse at times, more as a leverage to talk with physicians and analyze prescriptions. This could be categorized as a medication reconciliation, which is generally provided by a pharmacist. Her knowledge of patients' context and her professional networks were essential to find the best way to support/empower patients. The DCo missions tended to overlap those of health navigator[38], discharge or care coordinator, and link worker.

DC/SP : which indicators for measurable impact?

In the published literature, SP has been evaluated using a range of indicators, e.g. health-related, satisfaction, knowledge, use of services [5], [12], [13], [39]. Mixed methods protocols, considering process and outcomes, qualitative and quantitative data, are now increasingly being invoked, making justice to a highly-personalized and person-centered nature of the practice [6], [10]. In our study, readmission rates were not different in our 2 groups. We could have missed readmissions which occurred in other hospitals, but those would have been equally distributed across the 2 groups. The absence of difference is due either to low statistical power, or to a real absence of difference. Many

studies failed as well to show any difference in readmission rates, either for SP or for DC interventions, questioning the relevance of this indicator [40], [41]. Moreover, the extreme wide scope of social needs addressed by SP leads to a very heterogenous set of outcomes, which participates to the difficulty to structure the practice of SP. Other indicators, such as resilience, well-being [42] and social reconnection were proposed [43].

### Study limitations

The study started in October 2019, and was soon disrupted by the COVID-19 pandemic. Subsequent activities were again interrupted by successive pandemic waves. Since Covid19 diagnosed patients received specific DC, the total number of patients included in the DCo group, was lower than expected. Although, the readmission rate decreased due to the decrease in bed availability. Due to the end of funding for the DCo after 2 years, the study ended prematurely. Therefore, our statistical power might be lower than planned. Finally, the two units have different pathways for patient's care, between acute or chronic disease.

Nonetheless, our study is the first study measuring systematic needs for SP in a University Hospital in France. The quasi-experimental design provides rigor to our study. Patients receiving the DC intervention might thus be considered as representative of the patients of the 2 departments, revealing the depth of their unmet needs. The relationship between DCo and the patient was facilitated by the fact that the patient has been hospitalized and gained trust in the hospital, enabling to collect social needs data in detail and without raising ethical issues, since a subsequent support service was provided.

Overall our study provided a thorough analysis of the process of SP implementation at discharge

time, and contributed to the question of which outcome to measure. Our findings will enrich the current discussion on the structuration of social prescription.

## Conclusions

Social prescribing is gaining importance in Europe, and is considered as an innovative tool to switch from a biomedical care to bio-psycho-social model of care, with potential for alleviating social determinants of health. Past evaluations brought only low levels of effectiveness of SP with regard to health care utilization. Some studies started to show the complexity of services provided by DCo who also act as social prescribers [44]. Engaging patients in their own discharge coordination could also contribute empowering them[21]. More studies are needed in a longitudinal way, to measure other indicators such as well-being, social connectedness, against costs, in order to guide policy makers more effectively. Combining SP in hospital setting, and more generally during health care could be a way to close the gap between health and social sectors in France. More generally, social prescription at different levels of healthcare, including in hospital setting, could be a tool to address social inequalities, globally on the rise.



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**Competing interests statement :** all authors declare no competing interest

**Data sharing statement:** the dataset is included in Appendix 1

**Generative AI:** We did not use any generative AI for manuscript writing.

## Author contributions:

JC conceptualized the study, supervised the DCo, analyzed the data and wrote the paper

AB acted as DCo throughout the study, read the draft and contributed to significantly improve the manuscript

HB supervised the DCo, analyzed the data and contributed to significantly improve the manuscript

CD analyzed the data and contributed to significantly improve the manuscript

CBZ analyzed the data and contributed to significantly improve the manuscript

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## List of abbreviations

DC: discharge coordination

DCo: discharge coordinator

DD: diabetology department

IDD: infectious diseases department

GP: general practitioner

NGO: non-governmental organization

SP: social prescription

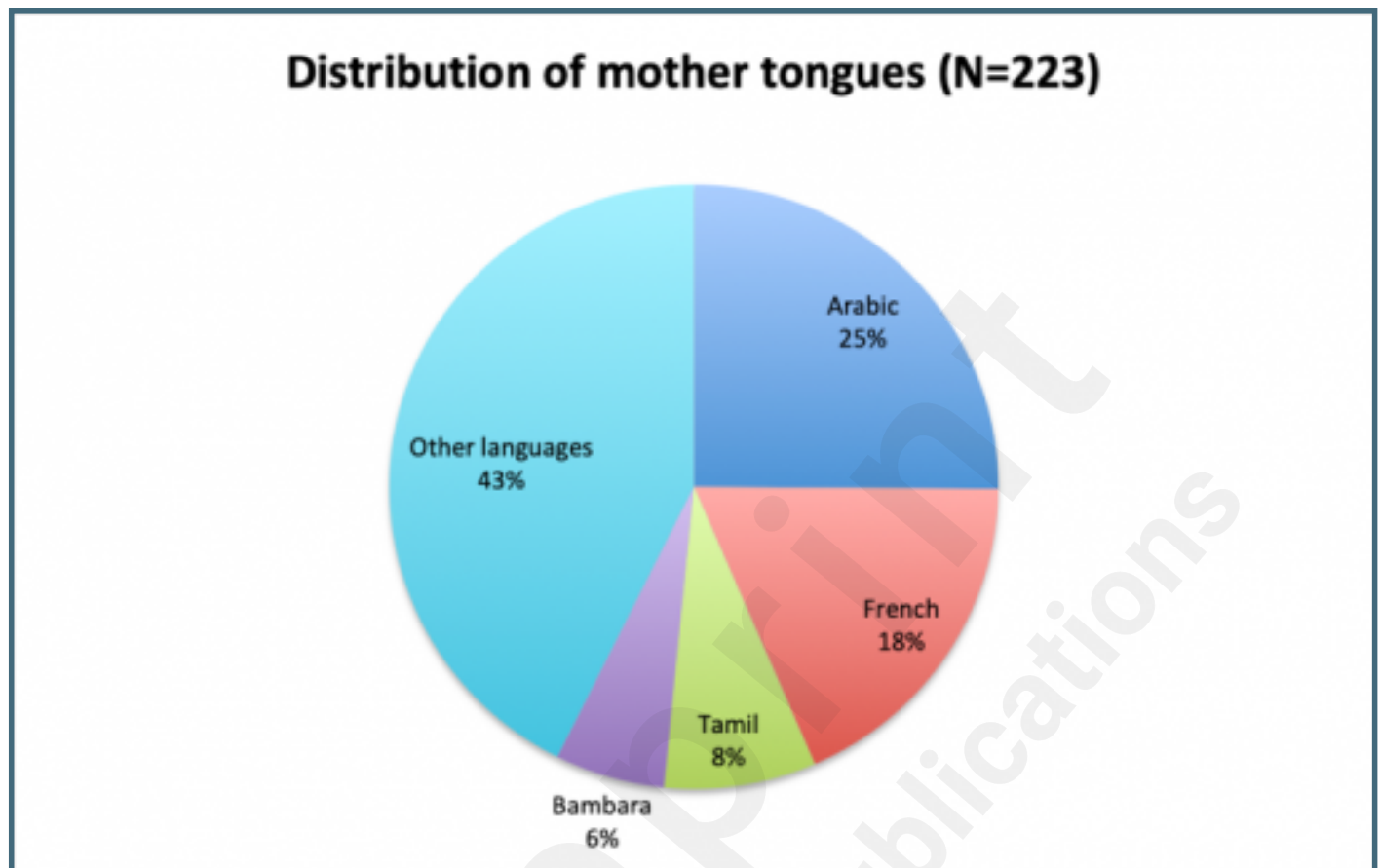
## Supplementary Files

Untitled.

URL: <http://asset.jmir.pub/assets/6fd2807066b5a9aeefbb9760dcc48820.xlsx>

## Figures

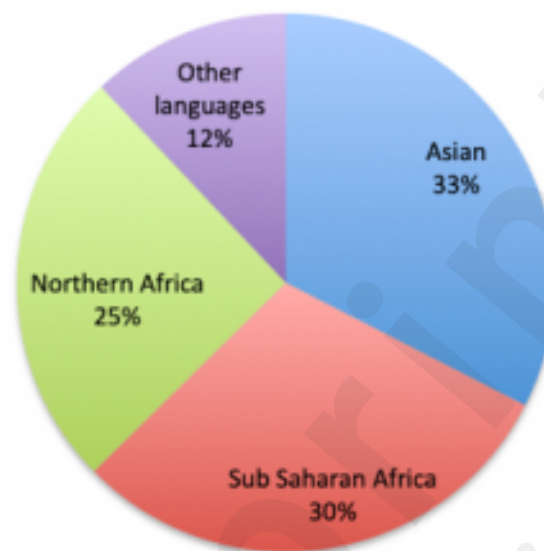
Distribution of mother tongues (N = 223).





Distribution of mother tongues among those not fluent in French (N = 83).

**Distribution of mother tongues among those not fluent in French (N = 83)**



## Multimedia Appendixes

Information sheet.

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Questionnaire.

URL: <http://asset.jmir.pub/assets/a8ba7ca8c2f238f90ac9cd0732e85c75.docx>

