



Uptake of a preventive care consultation offered to clients of a community mental health service

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ABSTRACT

Preventive care to address client chronic disease risks is not frequently provided in community mental health services. Offering clients an additional preventive care consultation has been shown to increase client receipt of such care. The ability of this approach to have a beneficial impact at the population level is however dependent on its level of acceptability and uptake among clients. No studies have previously reported these outcomes when the additional consultation is universally offered to all clients of a community mental health service. To address this evidence gap, this descriptive study was undertaken to determine community mental health clients' (1) reported acceptability, in principle, of such a model of care, (2) of those who were offered the additional consultation, the level of uptake, and (3) clinical and socio-demographic characteristics associated with uptake. Participants were clients of one community mental health service in Australia. Data were collected in 2017 by telephone interviews and study records. Data from three distinct participant sub-groups are reported. In response to a hypothetical question, 79.3% of participants ($n = 157$) agreed that an offer of an additional preventive care consultation would be acceptable (Aim 1). Of the participants who were offered such a consultation ($n = 264$), 37.8% took up the offer (Aim 2); and no clinical or sociodemographic characteristics were significantly associated with uptake (Aim 3). Findings support the feasibility of this model of care. However, further research is needed to identify barriers to uptake, and effective strategies to enhance consultation uptake.

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1. Introduction

Internationally, people with a mental illness die a median of ten years earlier than the general population, largely due to chronic disease (Walker et al., 2015). A key contributor to this inequity is a higher prevalence of modifiable risk behaviours including: tobacco smoking, inadequate fruit and vegetable consumption, alcohol overconsumption, and physical inactivity (Bartlem et al., 2015). For example, smoking rates are up to three times higher than the general population (Cooper et al., 2012). Moreover, risk for two or more behaviours is more prevalent among clients of Australian community mental health (78%) (Bartlem et al., 2015), than general health services (31%) (McElwaine et al., 2013). The importance of routine assessment and management of

risk behaviours for clients of mental health services is acknowledged in international clinical practice guidelines (World Health Organisation, 2018). However, infrequent provision of such 'preventive care' is reported (Bartlem et al., 2014); with barriers including insufficient time and low clinician confidence (Happell et al., 2012).

One strategy with the potential to overcome these barriers is dedicating a clinical position to the role of providing preventive care in an additional consultation. Previous research reported that offering clients such an additional consultation in a community mental health service significantly increased client receipt of preventive care (Fehily et al., 2018, in press). However, if this model of preventive care delivery were implemented, its ability to have an impact at the population level would be critically dependent on clients perceiving it as acceptable and

Abbreviation: CATI, computer assisted telephone interview

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taking up the additional consultation.

Two previous studies reported the uptake of such an additional consultation in a community mental health service as 75% (Rogers et al., 2016) and 67% (Fraser et al., 2018). However, neither study reported uptake when the consultation was offered universally to all service clients, rather than those selected on the basis of either client expressed interest or clinician assessment of need. Nor did the studies examine characteristics associated with uptake; necessary information to ensure equity of access to care and identify strategies to optimise uptake.

This study aimed to determine: 1) the acceptability, in principle, of offering clients of a community mental health service an additional consultation with a specialist preventive care clinician; 2) client uptake of the consultation; and 3) client characteristics associated with uptake.

2. Methods

2.1. Design and setting

A descriptive study was undertaken in the context of a randomised controlled trial, which examined the effectiveness of a specialist clinician in increasing provision of preventive care in one large community mental health service in regional NSW, Australia (Fehily et al., 2017). Outcomes of the trial indicated significant increases in client receipt of assessment, advice, and referral; relative to usual care (Fehily et al., 2018, in press).

A specialist preventive care clinician (an occupational therapist) was embedded in the service and allocated to the role of providing preventive care between March and September 2017. All clients over 18 and not identified by their treating clinician as too unwell to participate were randomly allocated (1:1 ratio) to receive usual care (preventive care in routine consultations) or intervention (usual care plus one additional face-to-face consultation and one telephone follow-up with the specialist clinician). This paper reports data collected from participants allocated to receive the intervention ($n = 394$).

2.2. Participant samples

Different participant samples were used to answer each of the study aims (Fig. 1). For Aim 1, community mental health clients' reported acceptability, in principle, of such a model of care. For Aim 2, data were obtained for those participants who were offered the additional consultation regarding their level of uptake. For Aim 3, socio-demographic and clinical characteristics were compared between participants who took up the consultation and those who did not.

2.3. Intervention

Clients were telephoned by the specialist clinician to schedule one additional face-to-face consultation. Clients were ineligible for the intervention if they were: in hospital or gaol, no longer an active client, or too physically or mentally unwell as determined by the treating clinician. All remaining clients were offered the consultation.

The consultation was delivered in accordance with a manual, which aimed to motivate clients to modify their risk behaviours and accept referrals for ongoing, specialised behaviour change support. In line with clinical practice guidelines (Schroeder, 2005) and the service policy (Hunter New England Local Health District, 2010), the specialist clinician: *assessed* current tobacco smoking, fruit and vegetable consumption, alcohol consumption, and physical activity; *advised* clients regarding how their risk behaviours compared with national guidelines, using motivational interviewing techniques to enhance motivation for change; and *referred* clients to free state-level telephone coaching services, according to the risks identified (smoking: NSW Quitline; poor nutrition/harmful alcohol consumption/physical activity: NSW Get Healthy Information and Coaching service). The specialist clinician

attempted to phone all clients who attended the consultation two-weeks later to provide an intervention follow-up call, to offer additional encouragement.

2.4. Data collection procedures and measures

Data collection procedures and measures are described in a study protocol (Fehily et al., 2017) and summarised in Fig. 1. Data were collected from three sources: electronic service records, intervention delivery records, and computer assisted telephone interviews (CATI) undertaken by trained interviewers with participants at baseline and a one-month follow-up.

2.4.1. Sociodemographics and clinical characteristics

Collected from electronic service records and the baseline CATI (Fig. 1).

2.4.2. Acceptability

During the baseline CATI, participants were asked whether: "it would be acceptable for the service to arrange an extra appointment with a specialist clinician within the service who would help me to improve my health and lifestyle behaviours" (strongly disagree, disagree, unsure, agree, strongly agree) ($n = 198$).

2.4.3. Uptake

For clients randomised to receive the intervention ($n = 394$), the specialist clinician recorded client uptake of the face-to-face consultation (client attended, declined, did not attend scheduled consultation (s), unable to contact, not eligible); and, among those who attended ($n = 100$), completion of the intervention follow-up call (completed, declined, unable to contact).

2.4.4. Reasons for declining the consultation

Recorded by the specialist clinician (open ended response; $n = 139$).

2.4.5. Satisfaction

During the 1-month CATI, participants who reported taking up the additional consultation ($n = 50$) were asked: "how satisfied are you overall with the extra support you received from the specialist clinician" (very, mostly, somewhat, not at all, don't know) and "did the specialist clinician understand your needs and concerns?" (very much, mostly, somewhat, not at all, don't know).

2.5. Analysis

Descriptive statistics were used to analyse acceptability (baseline CATI), uptake (intervention records), and satisfaction (1-month CATI).

Chi-squares and t-tests assessed univariate associations with consultation uptake (took up the consultation offer vs declined/scheduling of consultation attempted; $n = 154$; data merged between baseline CATI, electronic service records, and intervention records). Variables assessed were clinical and sociodemographic characteristics, and baseline risk behaviours (meeting Australian national guidelines vs. 'at-risk' (Royal Australian College of General Practitioners, 2015)). Characteristics associated at $p < .25$ were entered into a multivariate logistic regression model, using a backward elimination method until all variables in the model were significant (p for removal = 0.05) (Hosmer and Lemeshow, 2000).

Reasons for not taking up the consultation offer (intervention records) were qualitatively analysed for common responses and themes.

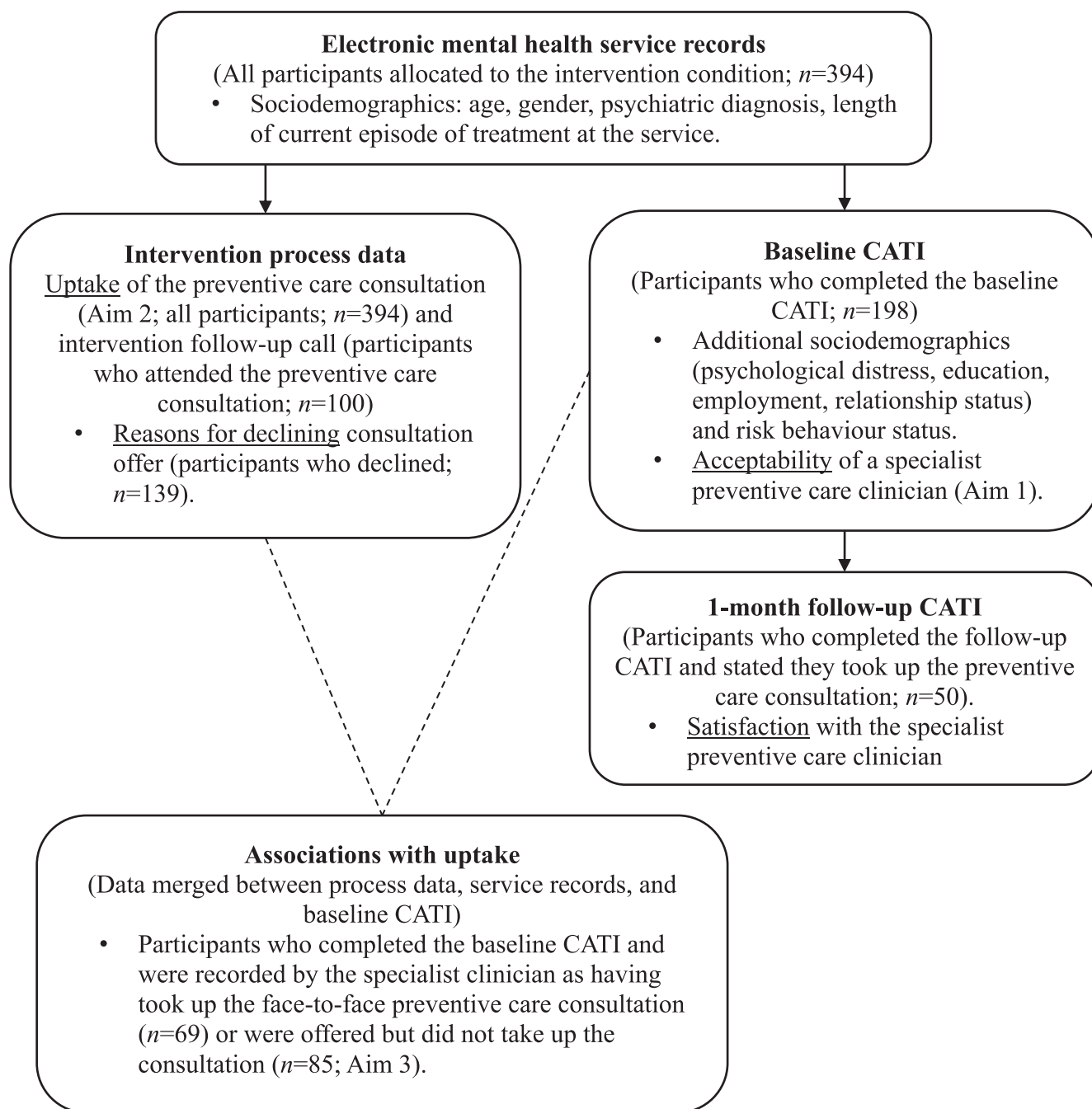


Fig. 1. Participants and data collection. Note. CATI = computer assisted telephone interview.

3. Results

3.1. Sample

Characteristics of the study samples to assess acceptability, uptake, and associations with uptake are presented in Table 1.

3.2. Acceptability

At baseline, 79.3% ($n = 157$) of participants 'agreed' or 'strongly agreed' that it would be acceptable, in principle, for the service to arrange an extra preventive care consultation.

3.3. Uptake

The specialist clinician was unable to contact 22.8% ($n = 90$) of participants, and 10.2% ($n = 40$) were ineligible. Of the remaining 264 participants who were offered the consultation, 52.7% ($n = 139$) declined, 9.5% ($n = 25$) scheduled a consultation but did not attend, and 37.8% ($n = 100$) took up the offer. Of those who took up the consultation, 78% completed the intervention follow-up call.

3.4. Associations with uptake

No variables were significantly associated with uptake (p -values greater than 0.05).

Table 1

Sample characteristics and results of the univariate associational analysis; presented across the different samples providing data to assess: (1) acceptability, (2) uptake of the preventive care consultation, and (3) associations with uptake.

	Acceptability (Aim 1) ¹ (n = 198)	Uptake (Aim 2) ² (n = 394)	Associations with uptake (Aim 3) ³ (n = 114)		
			Offered, took up consultation (n = 69)	Offered, did not take up ⁴ (n = 85)	p-value (univariate associations)
Gender (%)					
Male	53.5 (106)	55.8 (220)	49.3 (34)	50.6 (43)	0.898
Female	46.5 (92)	44.2 (174)	50.7 (35)	49.4 (42)	
Age (years)*					
Mean (SD)	40.5 (13.0)	40.7 (12.6)	42.4 (12.4)	38.9 (13.6)	0.060
Median (range)	40 (18–66)	41 (18–70)	42 (21–66)	37 (18–65)	
Diagnosis Type (%)					
Psychotic/Schizophrenia	35.4 (70)	48.0 (189)	37.7 (26)	32.9 (28)	0.520
Mood Disorders	37.9 (75)	30.2 (119)	31.9 (22)	42.4 (36)	
Anxiety and Stress Related Disorders	16.2 (32)	12.2 (48)	15.9 (11)	14.1 (12)	
Other	10.6 (21)	9.6 (38)	14.5 (10)	10.6 (9)	
Length of time at the service (months)*					
Mean (SD)	31.7 (55.4)	39.5 (63.1)	37.2 (60.1)	30.2 (54.1)	0.246
Median (range)	8 (1–258)	10 (1–301)	11 (1–257)	6 (1–230)	
Psychological distress (K6: probable serious mental illness)	36.9 (73)	–	39.1 (27)	35.7 (30)	0.791
Relationship status (%)					
Single	58.1 (115)	–	55.1 (38)	63.5 (54)	0.765
Married/De facto	22.2 (44)	–	23.2 (16)	21.2 (18)	
Separated/Divorced/Widowed	19.7 (39)	–	21.7 (15)	15.3 (13)	
Identified as Aboriginal and/or Torres Strait Islander (%)					
Yes	11.6 (23)	–	11.6 (8)	15.3 (13)	0.386
No	88.4 (175)	–	88.4 (61)	84.7 (72)	
Employment Status (%)					
Full time	11.1 (22)	–	15.9 (11)	9.4 (8)	0.347
Part time or casual	13.1 (26)	–	13.0 (9)	12.9 (11)	
Household Duties/Student	32.3 (64)	–	30.4 (21)	34.1 (29)	
Unemployed	33.8 (67)	–	29.0 (20)	35.3 (30)	
Retired	4.5 (9)	–	4.3 (3)	4.7 (4)	
Other	5.1 (10)	–	7.2 (5)	3.5 (3)	
Highest education level achieved (%)					
Less than school certificate	16.2 (32)	–	11.6 (8)	17.6 (15)	0.349
School certificate	22.7 (45)	–	18.8 (13)	21.2 (18)	
Higher school certificate	19.2 (38)	–	18.8 (13)	23.5 (20)	
TAFE or Diploma	30.3 (60)	–	39.1 (27)	24.7 (21)	
Bachelor/Post Graduate Degree	11.6 (23)	–	11.6 (8)	12.9 (11)	
Risk status					
Current tobacco smoking*	48.0 (95)	–	36.2 (25)	49.4 (42)	0.108
Insufficient nutrition (< 2 serves of fruit and/or 5 serves of vegetables per day)	92.8 (181/195)	–	89.9 (62)	94.0 (79/84)	0.502
Harmful alcohol consumption (more than 2 standard drinks on an average day or more than 4 in one occasion)	40.4 (80)	–	34.8 (24)	37.6 (32)	0.605
Physical inactivity* (less than 150 min of moderate or 75 min of vigorous intensity physical activity, or an equivalent combination each week)	47.8 (89/186)	–	52.2 (36)	38.8 (33)	0.102

Notes. The following variables were transformed for the purpose of associational analyses: psychiatric diagnosis (schizophrenia/psychosis vs other diagnosis); length of time at the service (log transformation due to positive skewing); psychological distress (no probable serious mental illness [scores 6–18] vs probable serious mental illness [scores 19–30]); relationship status (currently partnered vs not); employment status (currently employed vs not); and education level (up to school certificate vs higher school certificate vs tertiary). Appropriate denominators are indicated where there are missing data.

Data were collected in 2017 from clients of one Australian community mental health service.

¹ data are not available for the whole sample as this variable was collected in CATI interviews.

* Variable was entered into the regression model (univariate association $p < .25$).

¹ Data collected via baseline CATI; $n = 203$ intervention participants completed or partially completed the baseline CATI with acceptability data being missing for $n = 5$.

² Data collected from intervention records.

³ Data merged between baseline CATI and intervention records.

⁴ Includes those who declined the consultation offer ($n = 66$) or had a consultation scheduled but did not attend ($n = 19$). Clients who were ineligible for the consultation ($n = 14$) or who the specialist clinician was unable to contact ($n = 30$) are not included in this analysis.

3.5. Reasons for declining

When asked by the specialist clinician, 82.7% ($n = 115$) of participants who declined the consultation offer provided a reason; most commonly not being interested in extra support and/or feeling like they could make changes themselves (31.3%), and not perceiving a need to

make any lifestyle changes (31.3%). Other reasons included: commitments such as work or studying (27.0%), too physically or mentally unwell (7.8%), and other (2.6%).

3.6. Satisfaction

Of participants who completed the 1-month CATI and reported that they took up the additional consultation ($n = 50$), 80.0% ($n = 40$) stated being 'very' or 'mostly' satisfied with the extra support they received and 80.0% ($n = 40$) said that the specialist clinician 'very much' or 'mostly' understood their needs and concerns.

4. Discussion

This is the first study to examine uptake of an additional preventive care consultation when offered universally to all clients of a community mental health service, finding 38% of clients took up the consultation. Clients' positive perceptions regarding acceptability and satisfaction support its potential as a means of increasing access to preventive care for people with a mental illness. While the findings suggest clients may be receptive to the additional consultation, regardless of their clinical and sociodemographic characteristics, research is required to examine strategies that may encourage further client uptake overall.

While uptake was lower compared to previous research (Fraser et al., 2018; Rogers et al., 2016), this might be anticipated, as the offer was made universally to all eligible clients regardless of factors such as client risk behaviours or interest in receiving the intervention; or clinician assessment of suitability. This universal approach to care-delivery was designed to optimise access to preventive care and hence to contribute to both individual and population-level health improvements. Further research is required to identify barriers to consultation uptake and explore strategies to optimise uptake. For example, *how* the consultation is offered may be modified to include additional techniques to increase interest in uptake. For example, motivational interviewing could enhance client desire to change risk behaviours and therefore address the most commonly reported reasons for declining the consultation: not perceiving a need and not being interested in behaviour change. Within general health services, the uptake of an additional consultation for cardiovascular and diabetes risk screening was significantly increased by implementing simple changes to written invitation letters, such as increased personal salience (e.g. you are 'due' rather than 'invited' to attend) and specificity regarding required actions (Sallis et al., 2016). Additionally, electronic and organisational strategies could be utilised to support consultation scheduling as a standard component of care.

The lack of factors associated with uptake signifies a strength of this model of care, suggesting that the preventive care consultation may be equally appealing to clients regardless of clinical and sociodemographic characteristics or presence of risk behaviours. This is in contrast with research in the general population reporting that clients who do not take up coronary heart disease screening in general practice are significantly more likely to need such care (i.e. to smoke and have other risks) (Jones et al., 1993). This finding supports the benefits of proactively offering this additional consultation to all clients of a community mental health service, producing greater equity of access to health and lifestyle support. This approach is of particular importance given the high prevalence of risk behaviours identified in the study sample (up to 94% for insufficient nutrition) and in previous research among people with a mental illness (Bartlem et al., 2015).

Study limitations include not assessing client motivation to change or chronic disease diagnosis, which have been previously reported to be associated with uptake of preventive care services (Schuck et al., 2016; Shin et al., 2018). Clients motivated to change may have been more likely to take up the additional consultation, thus leading to a selection bias. The conduct of the study in one community mental health service may limit generalisability.

5. Conclusion

A considerable proportion of clients of a community mental health

service will take up an additional consultation with a preventive care clinician when an offer to do so is universally made, regardless of clinical and sociodemographic characteristics. Clients perceive this model of care as acceptable. Further research is required to identify barriers and effective strategies to optimise uptake.

Author contributions

Authors CF, KB, JW, and JB contributed to the concept and design of the study. CF led the manuscript development. LG contributed to data entry and management of study records. Authors CF and NH contributed to the analysis of the data. All authors contributed to the editing and critical revision of the manuscript. All authors read and approved the final manuscript.

CRediT authorship contribution statement

Caitlin M.C. Fehily: Conceptualization, Methodology, Formal analysis, Data curation, Writing - original draft, Visualization, Project administration. **Kate M. Bartlem:** Conceptualization, Methodology, Writing - review & editing, Visualization, Supervision, Project administration, Funding acquisition. **John H. Wiggers:** Conceptualization, Methodology, Writing - review & editing, Visualization, Supervision, Project administration, Funding acquisition. **Rebecca K. Hodder:** Writing - review & editing, Visualization, Supervision. **Lauren K. Gibson:** Formal analysis, Data curation, Writing - review & editing. **Natalie Hancox:** Formal analysis, Data curation, Writing - review & editing, Visualization. **Jenny A. Bowman:** Conceptualization, Methodology, Writing - review & editing, Supervision, Project administration, Funding acquisition.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

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