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Continued Dispensing: What medications do patients believe should be available?

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Keywords

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Abstract

Background. Continued Dispensing (CD) is a new medication supply method for certain medications in Australia. It aims to prevent treatment interruption as a result of patients' inability to obtain a new valid prescription. The only currently eligible patients for this service are statin and/ oral contraceptive users who are: using these medications for 6 months or more, did not utilise the CD method during the last 12 months, and cannot obtain an immediate appointment with the prescriber in order to get a new prescription. This study aimed to investigate patients' attitudes towards potential extension and expansion of this medication supply method.

Methods. A randomly selected 301 users of these medications from all Australian States were recruited using Computer Assisted Telephone Interview (CATI).

Result. The majority of the participants (73.3%) did not agree with current restriction on CD utilisation frequency. They also supported, to varying degrees, inclusion of all the proposed medications (support ranged from 44.2 - 78.4%). Participants who suffered from a specific disease did not differ significantly from those without the disease except in case of patients with depression ($p=0.001$).

Conclusions. Participants of this study strongly supported both CD extension and expansion. A critical review of the current version of CD is highly recommended in order to enhance CD capability to achieve its goals.

Additional Information

Competing Interests

Authors declare no relevant competing interests related to this work.

Human Ethics

The following information was supplied relating to ethical approvals (i.e., approving body and any reference numbers):

Ethics approval for the study was obtained from The Human Research Ethics Committee of Curtin University (Approval number: PH-06-13).

Funding

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Introduction

Recently in Australia a new method of medications supply, Continued Dispensing (CD), has been implemented to provide patients with a convenient way to obtain their medications. Patients who run out of statins or oral contraceptives are no longer required to present a valid prescription to request these medications under the following conditions: they are unable to obtain an immediate appointment with their doctors, they have been using the medication for more than 6 months, and have not utilised the CD method during the last 12 months.(5th Community Pharmacy Agreement 2013) This system was originally proposed to minimise the risk of patients running out of their medication between doctors' visits.(Bessell et al. 2005)

Medications in Australia are available as: Prescription only medications (S4, and S8 for controlled drugs), and Non-prescription medications, which include: Pharmacist Only (S3) which can be prescribed by a pharmacist, Pharmacy Only (S2) which can be prescribed by other pharmacy staff under pharmacists' supervision, and other over the counter medications (OTCs) which are available for general sale. Statins and oral contraceptives (except for the emergency contraceptive pill) are S4 medications, (i.e. a prescription is required for dispensing). However, pharmacists are authorised to dispense these two and other types of prescription medications without a prescription in certain circumstances: as an emergency supply if the patient is a regular user of the requested medication, has no access to the medication and lacks a prescription for any valid reason, e.g. traveling or out of date prescription. In such situations, the pharmacist may offer a three day supply.(Bessell et al. 2005) Another method to dispense statins or oral contraceptives without a prescription is according to the recently introduced CD. In this method pharmacists can dispense one additional supply (i.e. one standard pack) of the medicine, which is generally enough for one month. Previous literature data suggests that CD eligible patients strongly supported this method.(Abukres et al. 2014)

The CD method currently may provide limited benefit to chronic disease sufferers as they are often on multiple medications.(Hughes 2005) Consequently, they may present to a pharmacy requesting a statin or an oral contraceptive as well as other medications which are currently not eligible for supply under the CD model. In these situations conducting CD may confuse the patient who can, for instance, obtain their statin without a prescription but cannot obtain their antihypertensive medication. In this situation, CD may not be an appropriate service to offer.

The above suggests that the list of CD eligible medications may need to be expanded to cover a wider range of common diseases as is the case with pharmacist supplementary prescribing model in other countries. Pharmacists prescribing model is a partnership between doctors and pharmacists where doctors retain their diagnostic role.(Hoti et al. 2011a) Patients who experienced supplementary prescribing have shown their support for pharmacists to prescribe a variety of medications such as, but not limited to, medications to treat diabetes, epilepsy, cancer, cardiovascular, respiratory, renal, skin, gastrointestinal, thyroid and blood coagulation diseases.(Lloyd et al. 2010) Furthermore, pharmacist interventions with treatment of chronic diseases have been proven to be effective.(Fikri-Benbrahim et al. 2013; George et al. 2010; Smith et al. 2010) Therefore, applying more responsibility to pharmacists through an expanded version of CD may assist in achieving CD's goals; i.e. a more convenient way for patients to obtain their medication in a timely manner, prevent treatment interruptions, utilise pharmacists' skills and decrease overload on doctors. Although the Australian Medical Association (AMA),(Australian Medical Association 2012) has described the current (limited) CD as unsafe and inappropriate, this was not supported by the results of a survey of statin and oral

contraceptive users, where the majority of the respondents did not perceive CD would pose any risks.(Abukres et al. 2014) They also trusted their pharmacists to conduct CD only when it was safe to do so and that they would refer them to their doctor when needed. Furthermore, they thought pharmacists are more easily accessible than doctors; that CD would save their and their doctors' time, and it would help them to not miss any doses of their medications.(Abukres et al. 2014) It is worth mentioning that the patients surveyed had no personal experience with CD as the study was conducted before the actual implementation of CD in Australia, so the results represent participants' perceptions rather than their actual experience.

Another limitation of the CD is its restriction to be conducted only once in any 12 month period. This timeframe has been proposed to prevent patients avoiding doctors' visits.(Bessell et al. 2005) It may lead, however, to treatment interruptions in two ways; if the additional supply is not enough until the next available appointment with the doctor,(Grudzen et al. 2011; Viberg et al. 2013) and/ or if the patient runs out of valid prescriptions for their medication more than once in a 12 month period, that may occur as a result of 6 months coverage of chronic medication prescriptions.(Britt 2012)

In this study we sought to explore patients' attitudes towards expansion of CD to include a broader range of medications and hence increasing the access to the service. The study was conducted in July 2013 before the actual implementation of CD on September 1, 2013. In doing so we were able to assess respondents' attitudes before they had experienced the service, and hence without any bias of personal experience.

Methods

Study design

A more detailed methodology of this study has been reported elsewhere.(Abukres et al. 2014) Computer-assisted telephone interviewing (CATI) was used. Participants were interviewed using a questionnaire consisting of 38 closed ended questions, with the option 'other: please specify' for some questions. The questionnaire was developed through a literature review, and experience from a previous study.(Hoti et al. 2011b) The study tool was validated by staff members within the pharmacy practice group at Curtin University and by the telecom company group. Participants were considered consented if they agreed to participate. Ethics approval for the study was obtained from The Human Research Ethics Committee of Curtin University (Approval number: PH-06-13).

Statistical analysis

The Statistical Package for the Social Sciences (SPSS™) version 22 (IBM Corp., Armonk, NY, USA) was used for statistical analysis using Chi square test. Answers were collected on a 6 point Likert scale (where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4. = Agree, 5 = Strongly agree, and 6 = Prefer not to disclose). For the analysis purposes the scale was collapsed to two items: Agreed, which included options 4 and 5, and Did Not Agreed, which included options 1, 2, 3 and 6.

Results

Sample demographic characteristics

Sample demographic characteristics have been published in detail elsewhere.(Abukres et al. 2014) In brief, the sample included 301 participants predominately female (80.1%; n=241), the main age group

was aged 31-40 years (17.3%; n= 52) and the smallest age group was 18-20 years (4.7 %; n= 14). Approximately, half of the sample were from the state of New South Wales (NSW) in Australia (50.5%; n= 152).

Participants' attitudes towards expansion of CD

A. CD extension: Increased access to CD

Participants were asked how many times they thought CD should be allowed within a 12 month period. The majority of participants (73.3%; n= 222) disagreed with the current CD limitation and selected more than one CD within a 12 month period. There were 51.1% of the participants who would prefer to utilise CD on more than one occasion if necessary to allow them to see their regular doctor.

B. CD expansion: Addition of more medications to the current CD list

Participants were asked about their thoughts (or agreement) on expanding the current list of eligible medications. Table 1 shows the proportion of participants who agreed with inclusion of medications for specific diseases/disorders. All other answers were considered as Did Not Agree (i.e. Disagreed, Neutral and Prefer not to disclose).

Table 1: Respondents' preferences for medications to be covered under CD

| Disease/Disorder/Medication | Agreed n(%) | Disease/Disorder/Medication | Agreed n(%) |
|-----------------------------|-------------|-----------------------------|-------------|
| Asthma | 236 (78.4) | Emphysema | 175 (58.1) |
| Arthritis | 227 (75.4) | Chronic pain | 161 (53.5) |
| Chronic skin disorders | 222 (73.8) | Coagulation | 153 (51.2) |
| Indigestion | 219 (72.8) | Thyroid | 150 (49.8) |
| Hypertension | 213 (70.8) | Glaucoma | 150 (49.8) |
| Type 2 Diabetes | 202 (67.1) | Anxiety | 145 (48.2) |
| Chronic bronchitis | 188 (62.5) | Depression | 133 (44.2) |

Respondents' support to include particular medications was affected by the condition to be treated. For example (78.4%; n= 236) of the participants agreed to the inclusion of asthma medications, however only (44.2%; n= 133) agreed to the inclusion of antidepressants. The participants' support for the inclusion of different medications can be divided into 3 levels. Level 1: which included medications to treat asthma, arthritis, chronic skin problems, reflux or indigestion, hypertension, diabetes (oral hypoglycemic) and chronic bronchitis, where over 60% of the participants supported their inclusion within the CD provision. Level 2: which included emphysema medications, chronic pain

medications, and anticoagulants where more than 50% (but less than 60%) of the participants agreed to their inclusion, and Level 3: included medications for thyroid disorders, glaucoma, anxiety and depression which were supported by less than 50% (Table 1).

Views of other disease sufferers

More than one third of participants suffered from other chronic diseases (38.8%; n= 116). The most prevalent co-morbidities were hypertension, type 2 diabetes mellitus, arthritis, depression, asthma, indigestion, and thromboembolic disorders requiring anticoagulation. Table 2 compares the views of participants with these particular diseases with those without. Generally, in all diseases except type 2 diabetes and indigestion, the proportion of disease sufferers who agreed with their medication's inclusion into the CD provisions was higher than the proportion of the total study cohort. However, the only statically significant difference was between participants supporting inclusion of antidepressants within CD provision, where participants with depression supported inclusion of these medications more than participants without this disorder (92.8 vs 41.8%, $p=0.001$).

Table 2: Influence of experience with the disease on respondents' attitudes to the inclusion of particular medications in CD

| Disease | Agreed participants without the disease n (%) | Agreed participants with the disease n (%) | P value |
|-------------------|-----------------------------------------------|--------------------------------------------|---------|
| Hypertension | 180(68.7) | 33 (84.6) | 0.06 |
| Diabetes mellitus | 186 (67.4) | 16 (64.0) | 0.91 |
| Arthritis | 222 (79.0) | 14 (70.0) | 0.51 |
| Depression | 120 (41.8) | 13 (92.8) | 0.001 |
| Asthma | 225 (77.8) | 11 (91.7) | 0.23 |
| Indigestion | 214 (72.8) | 5 (71.4) | 0.61 |
| Blood clotting | 154 (50.8) | 4 (66.7) | 0.36 |

Discussion

This study explored Australian patients' views on potential extension and expansion of the CD system, namely their support to increase the maximum number of times CD can be utilised within a 12 month period (i.e. CD extension) and to expand the range of medications to be dispensed under CD (i.e. CD expansion). Regarding CD extension, the majority of the participants disagreed with the current restriction of CD to once every a 12 month period, and preferred the option of using it more frequently. Interestingly, more than half of the participants wanted CD to be available until it was possible for them to see their doctors. This may indicate that patients required more flexibility to avoid

unnecessary treatment interruption if, for any reason, an appointment with their doctor could not be achieved. Previous studies have reported that patients have difficulty in seeing their regular doctors without a prescheduled appointment.(Arber & Sawyer 1985) Furthermore, it has been reported that patients often do not organise appointments in advance, or failed to attend appointments.(Minty & Anderson 2004)

On the second question regarding expansion of the medications available through CD, participants' generally supported inclusion of more medication classes. However, this support was influenced by the use of those medications, with the lowest level of support being for medications for the treatment of depression and the highest for asthma medications. This profound support for the inclusion of medications to treat a broad range of diseases/disorders may be related to patients' confidence in their self-management and the ability to judge the severity of these diseases or their confidence that pharmacists can provide monitoring for diseases such as diabetes and hypertension. In a previous study, (Wakefield et al. 2000) patients provided reasons for preferring to buy Short Acting Beta Antagonist agonists (SABAs) without a prescription or with repeats of a previously issued prescription rather than visiting their doctor and obtaining a new prescription after a clinical examination. These reasons included their perception of the worthlessness of visiting their doctor just to obtain a new prescription, their perceptions of medication not requiring such visits and their long experience with the disease, making them feel that they were able to manage and control asthma without the need to see a doctor. This is despite evidence by Braido that "self-reported symptoms poorly correlate with pulmonary function measures".(Braido 2013) Another study reported that obtaining SABAs without a prescription did not lead to poorer asthma control; instead it supported the claim that OTC availability of these medications benefits asthma patients.(Douglass et al. 2012) On the other hand, other studies reported that OTC asthma medicines have resulted in under-treatment and less consultation with doctors,(Gibson et al. 1993) and assessment and counseling provided by pharmacists or other pharmacy staff was less than the optimal.(Schneider et al. 2009) However, this inadequate counseling may have resulted from unwillingness of patients with long term chronic diseases to discuss with healthcare professionals what they believed they already know. This controversy about effectiveness and benefit of dispensing asthma medications without a doctors' review raises the need to ensure that optimal patient outcomes are being achieved through appropriate monitoring. This suggests that down scheduling of Prescription Only Medication to Pharmacist Only Medication provides better access to such medication,(Gauld et al. 2014) however appropriate patient supervision is essential, as is referral to the doctor whenever deemed necessary.(Abukres et al. 2014)

Disease sufferers were more likely to support inclusion of their medications into CD with the exception of patients with diabetes mellitus and indigestion. Interestingly, more than 92% of patients with depression supported inclusion antidepressants in CD even though the overall support for the inclusion of medication for depression was the lowest. The exact reason for the difference in support for the inclusion of antidepressants is unclear; however it may reflect a poorer level of mental health literacy amongst the general population, in which diseases like depression still have a social stigma. The lack of support for the availability of anxiolytics may also be explained in the same way, although the potential for the abuse of these medications may also be another explanation. Patients on long-term treatment for depression may not see the need for another visit to the doctor, especially if they do not perceive that they receive any new information during their routine appointments.(Gask et al. 2003) The later may apply to chronic diseases general, where patients after several years on the same medication may accept that nothing will be change and see their doctor's appointments as adding little value to their management.

Participants' support to include additional medications being eligible to be dispensed under the CD provisions is consistent with the overall trend to expand pharmacists' roles through rescheduling more prescription only medicines to non-prescription status that requires pharmacist intervention (i.e. Pharmacist Only Medications), such as medications to treat asthma, hypertension and hyperlipidaemia. (American Society of Health-System Pharmacists(ASHP) May 7, 2012; Gabay 2013; Gauld et al. 2014) Conversely, doctors have expressed their concerns about safety and appropriateness of CD, (Daniels 2012) as well as any further reclassifying of prescription only to non-prescription status. (Calabretto 2012).

Limitations of this study in relation to the respondents' distribution and usage of landline phone have been reported in detail previously, (Abukres et al. 2014). In regard to this section of the study, participants' support to include more medications in the CD model was not based solely on their personal experience, as no participant had all the listed diseases/disorders. However, their responses may reflect amongst other things their general awareness of the disease/disorder, the experience of a friend or relative and/or being a health care professional.

Future research should explore specific diseases in relation to CD, including economic and clinical implications. Given the current limitations of the CD method, other medication supply models to patients in cases where there is lack of valid prescription should also be explored.

Conclusions

Current restrictions on CD may limit its capacity to serve its goals, as suggested by this study with participants highly supporting a more flexible and broader CD system. Patients seem to prefer inclusion of additional medications and more opportunity to use CD at any time they cannot see their doctor. These findings suggest that ongoing review of CD is essential and changes which do not compromise patient safety or allow the abuse of CD would be welcomed by patients.

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