

# PRISMA-symposium, 19 mei 2022

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## GAMING FOR ADHERENCE TO MEDICATION USING EHEALTH IN RHEUMATOID ARTHRITIS (GAMER) STUDY – A RANDOMISED CONTROLLED TRIAL

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### Background

Effectiveness of pharmacological therapy in rheumatoid arthritis (RA) is limited by inadequate medication adherence. Medication adherence can be influenced by implicit attitudes of personal medication needs and concerns about adverse consequences. We targeted these implicit attitudes using a serious puzzle game.

### Objective

To assess the effectiveness of a serious game compared to usual care to improve adherence to disease modifying anti-rheumatic drugs (DMARDs) in patients with RA.

**TABLE 1 STUDY OUTCOMES AT END-POINT (3 MONTHS)**

	control group (n = 101)	intervention group (n = 85)	group difference [95%-CI]
<b>primary outcome</b>			
adherent no. (%)	55 (54)	52 (63)	-8% [-22-6]
<b>secondary medication outcomes</b>			
CQR continuous mean ± SD	75 ± 12	73 ± 11	2.2 [-1.1-5.5]
pill count# mean ± SD	95 ± 16	97 ± 8	-2.3% [-9.7-5.1]
BMQ-specific NCD score mean ± SD	4.8 ± 4.2	5.3 ± 4.7	-0.5 [-1.8-0.8]
<b>secondary clinical outcomes</b>			
RADAI score median (IQR)	2.5 (1.2-4.0)	2.5 (1.5-4.2)	0.0 [-0.8-0.8]
HAQ score median (IQR)	0.8 (0.3-1.4)	0.6 (0.3-1.4)	-0.1 [-0.5-0.2]

\* Percentage of the total number of participants excluding missing data.

# n = 21 for the control group and n = 24 for the intervention group.

CI: confidence interval, no.: number, CQR: Compliance Questionnaire on Rheumatology, SD: standard deviation, BMQ: Beliefs about Medication questionnaire, NCD: Necessity-Concerns Differential, RADAI: Rheumatoid Arthritis Disease Activity Index, HAQ: Health Assessment Questionnaire, IQR: interquartile range.

### Methods

A multicentre randomised clinical trial was performed with a 3 month follow-up period. Inclusion criteria were adulthood, RA diagnosis, use of DMARDs and possession of a smartphone/tablet. All participants received usual care. In addition intervention participants were invited to play the serious puzzle game at will. The game was designed to influence players' attitudes toward medication [1]. Collected data consisted of serious game play data, Compliance Questionnaire in Rheumatology (CQR), pill count, Beliefs about Medication Questionnaire (BMQ), Health Assessment Questionnaire (HAQ) and Rheumatoid Arthritis Disease Activity Index (RADAI).

Primary outcome was DMARD implementation adherence at three months assessed as the difference in proportion of non-adherent patients (< 80% taking adherence) between intervention and control group using the discriminant function of the CQR using the chi-square test.

Two sample t-tests and Wilcoxon rank-sum test were performed to test for differences on secondary outcomes between study groups where appropriate.

### Results

229 participants were randomised and 186 participants completed the study. Of the 85 intervention participants, 70 (82%) played the serious game for at least one hour. The serious game was played a median of 36 sessions with an average playtime of 25 minutes leading to a median overall playtime of 9.7 hours. A total of 59 intervention participants (69%) showed at least 40 days of gaming activity. Control group adherence (54%) and intervention group adherence (63%) based on the dichotomised CQR-score did not differ at three months ( $P = 0.13$ ) (see table 1). Neither was there a significant difference in CQR continuous score, pill count, beliefs about medication differential score or clinical outcomes (see table 1).

### Conclusion

A serious game aimed at reinterpreting attitudes toward medication failed to show an effect on adherence to DMARDs or clinical outcomes in patients with RA. The game was played frequently indicating that it can be an effective channel for reaching patients.

### Reference

1. Pouls BP, Bekker CL, van Dulmen S, Vriezekolk JE, van den Bemt BJ. A serious puzzle game to enhance adherence to anti-rheumatic drugs in rheumatoid arthritis patients: systematic development using intervention mapping. JMIR Serious Games 2022;10(1):e31570.

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### COMMUNICATION DURING ENCOUNTERS ABOUT MEDICATION SWITCHING: SELF-REPORTED EXPERIENCES OF PHARMACY TECHNICIANS AND PATIENTS

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### Background

During encounters about medication switches, pharmacy staff often has to deliver a message to patients that may lead to negative emotions. In these situations, clear and patient-centered communication is important.

### Objective

To gain insight in pharmacy technician (PT)-patient experiences regarding the communication during medication switching encounters, and in specific to map the needs and preferences of patients and whether these are met by PTs.

### Methods

PTs were invited to fill in a questionnaire via the Dutch Panel on practical research for Pharmacy Employees. Online questionnaires were distributed to adult chronic mediation users in two patient panels. Both questionnaires contained questions on how PTs and patients experience the conversation at the moment (i.e. type of information patients need/receive, timing of information, channel, communication style), and whether the needs and preferences of patients are met.

### Results

In total, 138 PTs and 4679 patients responded. PTs indicated that they regularly struggle with these conversations due to emotional or negative responses of patients. Most patients need information about why the medication switch took place (68%) and about the (same) effect of the medication (61%), while fewer patients currently receive this information (21% and 39%, respectively). Patients indicated they need verbal information during pick-up/delivery (45%), written information beforehand (29%) and during pick-up/delivery (25%), while patients more often receive verbal information during pick-up (58%), and less frequently receive written information beforehand (6%) and during pick-up/delivery (18%).

### Conclusion

Patient information needs are not always met during encounters about medication switches. Doing so, this can improve patient-centered communication.

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## BARRIERS AND FACILITATORS FOR EVIDENCE-BASED SELF-CARE COUNSELLING IN COMMUNITY PHARMACY

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### Background

Structured self-care advice based on evidence-based guidelines was implemented in the Netherlands in the 1990's. Previous studies have shown room for improvement of self-care advice in daily pharmacy practice.

### Objective

To map community pharmacists' and pharmacy assistants' views on their role in self-care advice and barriers and facilitators for providing evidence-based advice in the community pharmacy.

### Methods

Semi-structured interviews were conducted face-to-face or online with pharmacists and assistants using topic guides based on the Theoretical Domains Framework (TDF). Interviews were audio-recorded and transcribed verbatim. Transcripts were deductively analysed to identify barriers and facilitators.

### Results

In total, 13 pharmacists and 12 assistants were interviewed to reach data saturation. Pharmacists delegate self-care advice to assistants and are available for consultations in complex situations. Overall, important barriers were lacking ready knowledge, lacking cooperation with general practitioners (GPs), time-pressuring due to crowded waiting areas and prioritising prescribed medications, believing that asking WWHAM questions (Who, What, How long, Action, Medication) would always lead to correct advice and consumers' unjustified belief in advertisements, commercials and the internet. Important facilitators were availability of guidelines, conversational, process and analytical skills, skills development and assessment and access to patient records.

### Conclusion

Pharmacists should create an optimal environment in the pharmacy for self-care advice, such as minimising environmental stressors and providing sufficient time for advice. In addition, they should arrange knowledge and skills training, assessing themselves and their team to improve the quality of self-care advice. Pharmacists should also improve cooperation with GPs and raise awareness of medication safety of self-care products with consumers.

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## GENEESMIDDELGEbruIK GEDURENDE ZIEKTEDAGEN: ERVARINGEN VAN PATIËNTEN MET EN ZONDER EEN VERMINDERDE NIERFUNCTIE

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### Achtergrond

Tijdens periodes van intercurrente ziektes – koorts, braken of diarree – moeten patiënten met een verminderde nierfunctie sommige geneesmiddelen tijdelijk stoppen om geneesmiddelgerelateerde problemen te voorkomen. Tot op heden is het onduidelijk hoe patiënten omgaan met hun geneesmiddelen tijdens ziekte.

### Doel

Het doel is om te onderzoeken hoe patiënten met en zonder een verminderde nierfunctie tijdens ziektedagen met hun geneesmiddelen omgaan.

### Methoden

Een vragenlijststudie is in september 2021 uitgevoerd in het AMP-patiëntenpanel. De online vragenlijst bestond uit open en gesloten vragen rondom het melden van intercurrente ziekte bij een zorgverlener en geneesmiddelgebruik tijdens ziekte. Patiënten met een verminderde nierfunctie kregen additionele vragen over de informatievoorziening van zorgverleners over geneesmiddelgebruik tijdens ziektedagen.

### Resultaten

De vragenlijst werd door 5960 patiënten ingevuld waarvan 837 patiënten met een verminderde nierfunctie. Van de patiënten met een verminderde nierfunctie gaf 35% aan op ziektedagen alle geneesmiddelen gewoon in te nemen, 23% nam contact op met een zorgverlener en 33% heeft een ziekdedag nog niet eerder meegemaakt. Bij patiënten zonder een verminderde nierfunctie was dit respectievelijk 32%, 21% en 39%. Daarnaast gaf slechts 30% van de patiënten met een verminderde nierfunctie aan dat zij informatie van een zorgverlener hebben gekregen over het omgaan met geneesmiddelen tijdens ziektedagen.

### Conclusie

Patiënten met en zonder een verminderde nierfunctie gaan niet anders met hun geneesmiddelen om tijdens ziektedagen. Er wordt nog weinig informatie gegeven aan patiënten over dit onderwerp. Dit brengt mogelijk risico's met zich mee.

### DOAC-DOSERING ONDER DE LOEP

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#### Achtergrond

Een recent Amerikaans onderzoek wijst uit dat dosisreductie van direct werkende orale anticoagulantia (DOAC's) bij patiënten met een verminderde nierfunctie vaak niet of onterecht gebeurt. Het gevolg is een verhoogde kans op bloedingen of cerebrovasculaire accidenten (CVA's).

#### Doel

Het doel van het onderzoek is om inzichtelijk te krijgen of het invoeren van een adequaat doseringsprotocol voor DOAC's (op basis van nierfunctie, leeftijd en indicatie) bijdraagt aan een hoger percentage correct gedoseerde DOAC's en daarmee de medicatieveiligheid.

#### Methoden

Het onderzoek is uitgevoerd in vier Nederlandse apotheken. Het betreft een retrospectief onderzoek bij bestaande en een prospectief onderzoek bij nieuwe patiënten. De primaire uitkomstmaat is het percentage correct gedoseerde DOAC's voor en na het doen van een interventievoorstel bij een afwijkende dosering. Secundaire uitkomstmaat is het categoriseren van de afwijkende doseringen op basis van nierfunctie, behandelduur bij indicatie en leeftijd.

#### Resultaten

In het retrospectieve onderzoek ( $n = 527$ ) ging het aantal correct gedoseerde DOAC's van 90% naar 93% na het doorvoeren van de interenties en in het prospectieve onderzoek ( $n = 71$ ) van 80% naar 93%. Wat opvalt is dat de meest voorkomende interventie is dat er te laag wordt gedoseerd op basis van nierfunctie.

#### Conclusie

Nederlandse artsen zijn te voorzichtig met doseringen van DOAC's, met name bij ouderen met een (licht) verminderde nierfunctie. Dit kan ernstige gevolgen hebben voor de patiënt. Het invoeren van een DOAC-doseringsprotocol bij DOAC-gebruikers zorgt voor een hoger percentage correct gedoseerde DOAC-gebruikers in vergelijking tot de huidige zorg.

### MENTALISING IN THE DUTCH PHARMACY SETTING

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#### Background

A training on mentalizing was developed to improve patient-oriented communication in community pharmacies. Pharmacy staff are trained to focus on one's own and the patient's behavior and emotions.

#### Objective

To study whether a mentalization training for Dutch pharmacy staff members impacts the detection of medication related needs and concerns.

#### Methods

In this uncontrolled intervention study, conversations at the pharmacy counter between pharmacists or pharmacy technicians and patients were video-recorded before and after the mentalization training. Outcome measures included: detection of needs and concerns and implicit and explicit provocation and recognition of these needs and concerns. Frequencies were coded using Boris software. Data were analysed using Stata version 16.

#### Results

In total, 22 pharmacy staff members participated. 84 video-recordings were analysed, of which 50 videos during the pre-measurement and 34 during the post-measurement. Patients seemed to explicitly express more concerns during counter-conversations post-training (shift 40.0% to 55.6% ( $n = 10$  and 5)). Pharmacy staff members seemed to provoke and recognise needs and concerns explicitly more often (shift 60.0% to 100.0% ( $n = 6$  and 4)) and 70.8% to 86.7% ( $n = 17$  and 13)). Specifically, pharmacy technicians showed an increase in explicit provocations ( $n = 1$  to 4) and recognitions ( $n = 4$  to 11).

#### Conclusion

This training appears to increase pharmacy staff members' explicit recognition of patient's emotions and their ability to detect patients' needs and concerns concerning medication use. The training is therefore valuable to improve patient-oriented communication in the pharmacy. Future studies should further confirm this result.

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## HET COMBICONULT BIJ DIABETES/CVRM/COPD-PATIËNTEN: EVALUATIE VAN INTERVENTIES EN PERSOONLIJKE BEHANDELDOELEN

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### Achtergrond

Bij een Combiconsult voeren patiënten met diabetes, COPD en/of CVRM in de huisartsenpraktijk een medicatiegesprek met hun openbaar apotheker direct voorafgaand aan de jaar- of kwartaalcontrole bij de huisarts of praktijkverpleegkundige. Centraal in het gesprek met de apotheker staan de persoonlijke behandeldoelen van de patiënt, die enige tijd na het consult worden geëvalueerd.

### Doe

Het onderzoeken van het aantal en type farmacotherapiegerelateerde problemen (FTP's), interventies en behandeldoelen die bij Combiconsulen door apothekers worden vastgesteld.

### Methoden

Op basis van registraties door de deelnemende apothekers van januari 2018 t/m juli 2019 in een webbased registratiesysteem werden aantal en type FTP's, interventies en persoonlijke behandeldoelen geanalyseerd.

### Resultaten

Apothekers van 21 apotheek hebben 834 patiënten geïncludeerd (49% man, gemiddelde leeftijd 70 jaar). Bij de consulten is gemiddeld 1,1 FTP per patiënt geconstateerd, voornamelijk bijwerkingen (33%), onderbehandeling (18%) en overbehandeling (14%). De apothekers hebben hiervoor per patiënt gemiddeld 1,0 interventievoorstel gedaan aan de praktijkondersteuner/huisarts, waarvan 79% is geaccepteerd. Na terugkoppeling van het voorstel aan de patiënt is uiteindelijk 69% van alle voorstellen als interventie geïmplementeerd. Gemiddeld is voor 1 op de 2 patiënten een behandeldoel opgesteld, waarvan 53% (deels) werd behaald.

### Conclusie

Gemiddeld werd bij een Combiconsult per patiënt ruim 1 FTP vastgesteld en ruim 1 interventievoorstel gedaan. Bij de helft van de patiënten werd tevens een behandeldoel opgesteld. De implementatiegraad van de voorgestelde interventies was hoog (69%).

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## FEASIBILITY OF AN INDIVIDUALIZED DISPENSING PROGRAM FOR PATIENTS PRESCRIBED ORAL ANTICANCER DRUGS TO PREVENT WASTE

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### Background

Prescribed quantities of oral anticancer drugs (OACDs) do not always match use by patients, causing drug waste with financial and environmental complications. Alternatively, the pharmacy could individualize dispensed quantities of OACDs based on patient's risk for discontinuation.

### Objective

To evaluate the feasibility of an individualized dispensing program to prevent waste of OACDs.

### Methods

Individualized dispensing was implemented as standard care for adult patients starting an OACD (niraparib, abiraterone, enzalutamide, ruxolitinib, osimertinib or imatinib) at Radboudumc. Instead of dispensing full packages (previous practice), patients received a maximum quantity of one month, reduced based on assessment of use, hospital visits and patient's stock. Feasibility was evaluated for six months among the first fifty patients included in the program conform five domains of Bowen's framework. 1) Implementation: reach (eligible patients included) and protocol fidelity (dispensings following protocol) assessed from pharmacy dispensing data. 2) Acceptability: rated from 0-10 and agreement with Theoretical Framework Acceptability domains via a survey among patients and pharmacy technicians. 3) Practicality based on costs for telephonic assessment, additional dispensings and home delivery services. 4) Effect: waste reduction and net cost-savings versus previous practice (simulated). 5) Demand: potential use based on all patients starting an OACD within the setting.

### Results

Participants' median age was 67 years (interquartile range 58-71) and 76% was male. 1) Implementation: reach and protocol fidelity were respectively 89% and 91%. 2) Acceptability: mean acceptability by patients and pharmacy technicians was respectively  $9 \pm 1$  and  $7 \pm 2$  out of 10. All acceptability domains were agreed on. 3) Practicality: program costs were € 4,289. 4) Effect: OACD waste was reduced by 34% compared to previous practice, corresponding to net cost-savings

of € 693 per discontinued patient. 5) Demand: the program could extend up to seven times.

### Conclusion

An individualized dispensing program for patients prescribed OACDs appears feasible for preventing waste based on implementation, acceptability, practicality, effect and demand.

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## DEVELOPMENT OF PRACTICAL INSTRUMENTS AIMED AT PREVENTING AND REDUCING INAPPROPRIATE USE OF OPIOIDS IN PRIMARY CARE: A PRAGMATIC DELPHI STUDY

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### Background

In the past decades, opioid prescriptions have been rising in the Netherlands. The primary care guideline on pain was recently updated to tackle inappropriate opioid use. Health care providers are in need of tools for implementation.

### Objective

To construct a tool to prevent and reduce inappropriate opioid use for non-cancer pain for primary care.

### Methods

A pragmatic Delphi approach with additional focus group discussions was performed. A draft of a tool was constructed based on literature and Dutch primary care guidelines regarding pain. In the three-round consensus process, a multidisciplinary expert panel of 21 experts assessed the content, usability and feasibility of the components.

### Results

The draft tool consisted of two parts: part A to reduce opioid initiation and short-term use, and part B to reduce opioid use > 3 months. In three rounds, components and subcomponents were added, deleted and adapted until consensus was reached. The final part A consisted of 6 components: education, decision tree for start, risk assessment, agreements on dose and duration of use, guidance and follow-up, and interdisciplinary collaboration. The final part B consisted of 5 components: education, patient identification, risk assessment, motivation and tapering.

### Conclusion

By a consensus process, a tool for primary care to prevent and reduce inappropriate opioid use was developed, with 6 components to reduce initiation and short-term use of opioids for non-cancer pain and 5 components to reduce long-term opioid use in patients with chronic non-cancer pain.