Developing the prototype

Phase 1: Literature review
The search blocks were combined stepwise, and no filters were applied. We included all articles published in English or Scandinavian languages. Included articles concerned the development or validation of instruments for assessing aspects relating to any experiences or perspectives on medicines. The PubMed literature search gave 469 hits, which were screened by title and abstract. A total of 39 articles were read in full, and of these, eighteen articles met the inclusion criteria as they concerned specific tools or questionnaires on patients’ beliefs, attitudes, perspectives or similar concerning medicines. In total, we were able to identify 30 relevant tools (communication aids or questionnaires) of which 25 were available in full [1-25]. This resulted in a gross list of 386 items. These items were thematised, and duplicates were deleted. The items covered 37 themes to consider for inclusion in the following workshop.

In the first condensation made by AS and AM, the list of potential questions were reduced to 79 items, still covering 36 themes. This list was then considered by the entire research group, who further condensed the list of questions to 22 items covering the following six themes: personal information, experiences with medicine, concerns about medicine, difficulties related to medicine, needs of aid related to medicine and wishes for treatment (details presented in table 1).

Phase 2: Workshop with GPs
During the workshop, the participants discussed the list of potential themes and items and rated them by their ability to enable prosperous dialogue with patients. The number of questions was reduced as the GPs preferred a concise and brief questionnaire. Based on their discussions and perspectives, the research group adjusted the questionnaire and reduced the number of items to five, which were culturally translated into Danish, and the exact wording was selected. Based on the existing literature, the research group decided on the response options and scales before initiating the first pilot test.

Table 1: Changes made at phase 1-2 during the development of the prototype

| Phase | Phase 1 | Phase 2 |
|-------|---------|---------|
| Revisions during phase | Step 1: Literature search | Step 2: Condensation | Workshop with GPs |
| | Coding by the researchers and condensation into specific themes. | Omitting least relevant themes and wordings. Development of first draft questionnaire. | |
| | Sort out of least relevant themes. | |

ADDITIONAL FILE 3: DETAILS FROM THE DEVELOPMENT AND PILOT TESTING OF PROTOTYPE
| Format after phase | Content after phase |
|-------------------|-------------------|
| List of 386 questions (covering 37 themes) | ● Information about the patient |
| | ● General satisfaction with treatment |
| | ● Open questions/ coaching questions |
| | ● General opinions of medication |
| | ● Medication dependence |
| | ● Concerns |
| | ● Misunderstandings |
| | ● Health literacy |
| | ● Knowledge about medication |
| | ● Wishes/hopes |
| | ● Self-efficacy |
| | ● Adherence/compliance |
| | ● Medication effects |
| | ● Factors associated with adherence/compliance |
| | ● Numbers/ quantity of drugs |
| | ● Adverse drug reactions |
| | ● Symptoms |
| | ● Use of alternative/over-the-counter medication |
| | ● Medication-related burden: in general |
| | ● Medication-related burden: format/management of drugs |
| | ● Medication-related burden: planning and organisation |
| | ● Medication-related burden: everyday life/ activities |
| | ● Medication-related burden: economic considerations |
| | ● Medication-related burden: social considerations |
| | ● Treatment burden |
| | ● Attitudes towards medication among families and friends |
| | ● Support (emotional and practical) |
| | ● Expectations of GP’s opinions |
| | ● Supportive tools |
| | ● GP-patient relation/ communication |
| | ● Satisfaction with information about medication |
| | ● Satisfaction with information about medication problems |
| | ● Experiences with medication changes |
| | ● Opinion on importance of medication changes |
| | ● Expectations for medication changes |
| | ● Drug monitoring |
| | ● Follow up |
| | ● Living conditions |
| | ● Educational background |
| | ● Adherence |
| | ● Over-the-counter medicines |
| | ● Other treatments |
| | ● Satisfaction with current treatment |
| | ● Knowledge about medicines |
| | ● Adverse drug reactions |
| | ● Concerns about the effect of the medication |
| | ● Concerns about adverse drug reactions |
| | ● Discontinuation of medications |
| | ● Suspension of unnecessary medication |
| | ● Suspension of wrong medication |
| | ● Difficulties with taking medication |
| | ● Routines or daily activities |
| | ● Financial constraints |
| | ● Acquisition of medicines |
| | ● Medication management assistance |
| | ● Support or assistive devices |
| | ● More involvement |
| | ● More dialogue/ knowledge |
| | ● Discontinuation of medicines |
| | How much do you agree with the following statements? |
| | ● I am overall satisfied with my current medication |
| | ● I sometimes think that I get too much medication. |
| | ● I experience adverse drug reactions of the medication that bother me significantly. |
| | ● I have a sense that I might get some medication that I do not need. |
| | ● Is there something about your medication that you would like to discuss with the GP? Yes/No. If yes, please elaborate. |
Pilot testing the prototype

Phase 3: First pilot testing
During the first pilot testing, the questionnaire was continuously revised as the pilot testing was designed and conducted in a stepped process. Based on the patients’ experiences with filling out the questionnaire, the response scale was simplified, and instructions were added. The response scale was changed from a five-point Likert scale (‘highly agree’, ‘agree’ ‘neither agree nor disagree’, ‘disagree’ and ‘highly disagree’) to a three-point Likert scale (‘agree’, ‘neutral’ and ‘disagree’).

Phase 4: Second pilot testing
During the second pilot testing, the order of the questions was changed into starting with the questions that the patients found easiest to answer. The font type and size was changed, as some patients were visually impaired and found it hard to read the questions in the original layout.

| Table 2: Changes made at phase 3-4 during the development of the prototype |
|-----------------------------|-----------------------------|
| Phase  | Phase 3 | Phase 4 |
|  | 1st pilot 1 | 2nd pilot 2 |
| Revisions | Simplification of response options. Rewording of difficult questions. Adding an introductory sentence. | Changing the order of the questions. Graphic setup of questionnaire. |
| Format after phase | List of five questions | List of five questions |
| Response scale to a three-point Likert scale (agree, neutral, disagree). | Response scale to a three-point Likert scale (agree, neutral, disagree). |
| Content after phase | You will soon visit your GP and talk about your medication. Completing this form will help you prepare for the conversation. At the same time, you will help your GP select the best treatment for you. Please bring the questionnaire at the next appointment with your doctor. | You will soon visit your GP and talk about your medication. Completing this form will help you prepare for the conversation. At the same time, you will help your GP select the best treatment for you. Please bring the questionnaire at the next appointment with your doctor. |
| Do you mostly agree or disagree in the following statements? | Do you mostly agree or disagree in the following statements? |
| ● I am overall satisfied with my current medication | ● I experience adverse drug reactions of the medication that bother me significantly. |
| ● I sometimes think that I get too much medication. | ● I sometimes think that I get too much medication. |
| ● I experience adverse drug reactions of the medication that bother me significantly. | ● I think that I might get some medication that I do not need. |
| ● I think that I might get some medication that I do not need. | ● I am overall satisfied with my current medication |
| ● Is there something about your medication that you would like to discuss with the GP? Yes/No. If yes, please elaborate. | ● Is there something about your medication that you would like to discuss with the GP? Yes/No. If yes, please elaborate. |

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