

## SUPPLEMENTARY FILES

## Supplementary File 1. Structured observational tool

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**Observation tool**

Please complete the survey below.

Thank you!

1. Today's date

.....

2. Ward

.....

3. Encounter start time

.....

4. Encounter end time

.....

5. Where is this encounter occurring?

- Bedside (single room)
- Bedside (shared room)
- Nurses' station
- Corridor
- Other

5a. Please specify other location

.....

6. What is the main purpose of this communication encounter?

- Medication counselling
- Medication reconciliation
- Treating team consult
- Medication administration
- Bedside handover
- Discharge planning conversation
- Day of discharge conversation
- Other

6a. If the communication encounter had more than one purpose, please list other purpose(s):

.....

6b. Please specify other purpose:

.....

7. How does the patient communicate with health care professional(s)?

- Face-to-face
- Telephone
- Written
- Other

7a. Please specify other way of communicating

.....

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8. How does the family/friend/carer/significant other communicate with health care professional(s)?

- Not applicable  
 Face-to-face  
 Telephone  
 Written  
 Other

8a. Please specify other way of communicating:

\_\_\_\_\_

9. What patient factors influence communication?

- None  
 Poor sight  
 Poor hearing  
 Symptoms  
 Other

9a. Please specify other patient factors:

\_\_\_\_\_

10. What tools are used during communication? (Only tick if patient actively views these)

- None  
 Electronic medical record  
 My Health Record  
 Discharge summary  
 Discharge Medication Record  
 Consumer Medicines Information  
 Brochure  
 Prescription  
 The patient's medication list from home  
 The patient's own medications from home  
 Hospital medication stock  
 Other

10a. Regarding the patient's own medications from home, were this in a Webster pack or personalised medication packaging?

- Yes  
 No

10b. Please specify what other communication tools were used:

\_\_\_\_\_

11. What environmental factors influence patient communication?

- None  
 Layout  
 Noise  
 Lighting  
 Temperature  
 Computer/iEMR  
 Other

#### Computer/iEMR

	Inability to maintain eye contact	Speech pattern modifications	Other
11a. What iEMR/computer factors influence patients' ability to communicate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11b. Please describe other iEMR factor influencing communication:

\_\_\_\_\_

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11c. Please specify other environmental factors influencing communication:

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12. What organisational factors influence patient communication?

- None
  - Leadership or staff communicates need to quickly transfer the patient i.e. due to bed block
  - Teamwork: short staffed
  - Timing: patient transfer has set time (i.e. QAS booked)
  - Timing: patient/family/carer/SO wishes to be transferred by set time
  - Technology: lack of computer availability
  - Other
- 

12a. Please specify other organisational factors influencing communication:

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13. What interruptions occurred during the encounter?

- None
  - A HCP interrupts by engaging in the encounter with irrelevant content
  - A HCP interrupts by engaging in the encounter with relevant content
  - A HCP undertakes a task in close proximity that diverts attention (but does not engage in the encounter)
  - A non-HCP interrupts by engaging in the encounter with irrelevant content
  - A non-HCP interrupts by engaging in the encounter with relevant content
  - A non-HCP undertakes a task in close proximity that diverts attention (but does not engage in the encounter)
  - Patient transferred off ward (i.e. for procedure, to transit lounge)
  - Technology issues
  - Medical emergency
  - Phone call
  - Equipment alarms
  - Other
- 

13a. Please specify other interruptions:

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14. What other tasks occurred during the encounter?

- None
  - Medication administration
  - Transportation of patient
  - Packing patient belongings
  - Taking vital signs
  - Other
- 

14a. Please specify other tasks occurring during the encounter:

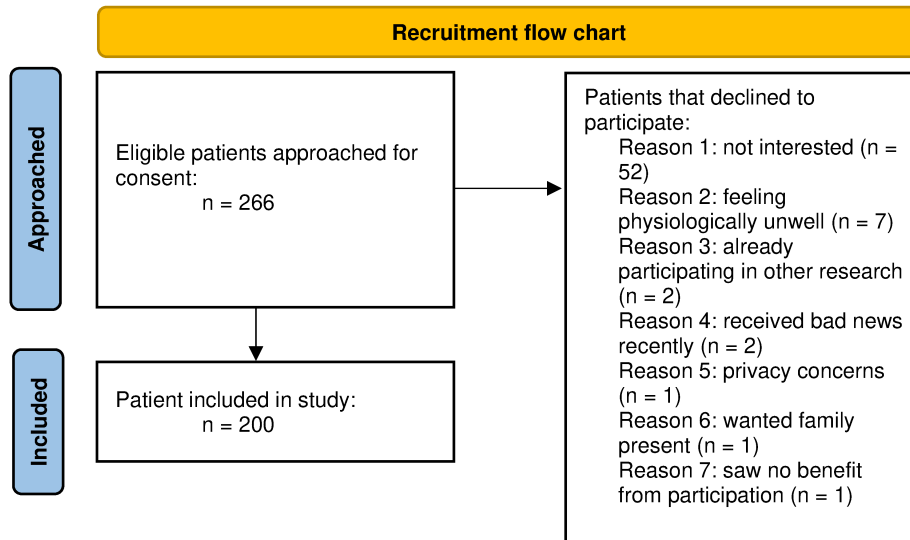
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**Supplementary File 2.** MEDICODE categories and sub-categories.

<b>Category</b>	<b>Sub-categories</b>	<b>Category description</b>
Designation of medication	<ul style="list-style-type: none"> <li>- Medication named</li> <li>- Long/short action specified</li> <li>- Class name</li> <li>- Appearance/form</li> </ul>	“Any reference to medication name, class or description of its format” (Lussier et al., 2016, pp 533).
Main effect or action of medication	<ul style="list-style-type: none"> <li>- Evidenced/expected effect</li> <li>- Observed effect</li> <li>- Action of medication/treatment</li> </ul>	“Discussion of the observed effect and anticipated effect of a medication experienced by the patient” (Lussier et al., 2016, pp 533).
Observed adverse effects	<ul style="list-style-type: none"> <li>- Observed adverse effects (general)</li> <li>- Observed adverse effects (specific)</li> </ul>	“Discussion of side effects of a medication experienced by the patient” (Lussier et al., 2016, pp 533).
Expected adverse effects	<ul style="list-style-type: none"> <li>- Possible adverse effects (general)</li> <li>- Possible adverse effects (specific)</li> </ul>	“Discussion of a potential or predicted side effect of a medication on the patient” (Lussier et al., 2016, pp 533).
Contra indications/warnings	<ul style="list-style-type: none"> <li>- Contraindications</li> </ul>	“Discussion of reasons to not take a medication or to be vigilant” (Lussier et al., 2016, pp 533).
Dosage/instructions	<ul style="list-style-type: none"> <li>- Instructions for medication use or treatment</li> <li>- Duration of prescription/treatment</li> <li>- Strength of medication/treatment</li> <li>- Mode of administration of medication/treatment</li> <li>- Delay of expected effect</li> </ul>	“Any information related to drug regimen” (Lussier et al., 2016, pp 533).
Indications to re-consult	<ul style="list-style-type: none"> <li>- Indications to consult again about the medication/treatment</li> </ul>	“Discussion of reasons for a return visit or getting in touch with the medical team” (Lussier et al., 2016, pp 533).
Adherence to medication	<ul style="list-style-type: none"> <li>- Patient commitment to adhere</li> <li>- Anticipated or reported compliance</li> <li>- Solutions for compliance problems</li> <li>- Consequences of non-compliance</li> </ul>	“Any information related to the patient’s adherence behaviour” (Lussier et al., 2016, pp 533).
Attitudes/emotions towards a medication	<ul style="list-style-type: none"> <li>- Attitudes/emotions towards medication/treatment</li> </ul>	“Any expression of concern or worry or a positive or negative attitude towards medication” (Lussier et al., 2016, pp 533).

Lussier, M.-T., et al. (2016). "The impact of a primary care e-communication intervention on the participation of chronic disease patients who had not reached guideline suggested treatment goals." Patient Educ Couns **99**(4): 530-541.

## Supplementary File 3. Recruitment flowchart



**Supplementary File 4. Taxonomy for coding co-morbidities from chart audit**

<b>9. Comorbidities (tick all that apply):</b>	
Myocardial	<input type="checkbox"/> Angina <input type="checkbox"/> Arrhythmia <input type="checkbox"/> CHF <input type="checkbox"/> Myocardial infarction <input type="checkbox"/> Valvular
Vascular	<input type="checkbox"/> Cerebrovascular disease (stroke or tia) <input type="checkbox"/> Hypertension <input type="checkbox"/> Peripheral vascular disease or claudication
Pulmonary	<input type="checkbox"/> Asthma <input type="checkbox"/> Chronic obstructive pulmonary disease (COPD, emphysema)
Neurologic	<input type="checkbox"/> Dementia <input type="checkbox"/> Hemiplegia (paraplegia) <input type="checkbox"/> Neurologic illnesses (i.e. multiple sclerosis or parkinsons)
Endocrine	<input type="checkbox"/> Diabetes type I or II <input type="checkbox"/> Diabetes with end organ damage <input type="checkbox"/> Obesity and/or BMI > 30
Renal	<input type="checkbox"/> Moderate or severe renal disease
Gastrointestinal	<input type="checkbox"/> Gastrointestinal disease (hernia or reflux) <input type="checkbox"/> GI bleeding <input type="checkbox"/> Inflammatory bowel <input type="checkbox"/> Mild liver disease <input type="checkbox"/> Moderate or severe liver disease <input type="checkbox"/> Peptic ulcer disease
Cancer/Immune	<input type="checkbox"/> AIDS <input type="checkbox"/> Any tumor <input type="checkbox"/> Leukemia <input type="checkbox"/> Lymphoma <input type="checkbox"/> Metastatic solid tumor
Psychological	<input type="checkbox"/> Anxiety or panic disorders <input type="checkbox"/> Depression
Musculoskeletal	<input type="checkbox"/> Arthritis (rheumatoid or osteoarthritis) <input type="checkbox"/> Connective tissue disease <input type="checkbox"/> Degenerative disc disease (back disease or spinal stenosis or severe chronic back pain) <input type="checkbox"/> Osteoporosis
Miscellaneous	<input type="checkbox"/> Hearing impairment (even with hearing aids) <input type="checkbox"/> Visual impairment (cataracts, glaucoma, mac degeneration)

**Supplementary File 5.** Crude OR (95% CI) obtained using univariate logistic regression

	<b>Dialogue Ratio OR (95% CI; p value)</b>	<b>Preponderance of Initiative OR (95% CI; p value)</b>
Age	1.0 (0.9-1.1; $p = 0.92$ )	1.1 (1.0-1.2; $p = 0.27$ )
Sex (reference= male)	2.4 (0.9-6.9; $p = 0.10$ )	0.6 (0.2-2.6; $p = 0.54$ )
Type of healthcare professional participating, nurses (reference= pharmacist)	5.5 (1.8-17.4; $p = 0.01$ )	0.6 (0.1-2.4; $p = 0.44$ )
Type of healthcare professional participating, doctors (reference= pharmacist)	0.7 (0.1-5.6; $p = 0.99$ )	0.6 (0.1-3.8; $p = 0.59$ )
Total medications discussed	0.6 (0.5-0.8; $p = <0.001$ )	1.2 (0.9-1.5; $p = 0.16$ )
Total people present (excluding the patient)	1.0 (0.8-1.3; $p = 0.99$ )	1.1 (0.7-1.6; $p = 0.77$ )
Health status	1.0 (0.9-1.0; $p = 0.78$ )	1.0 (1.0-1.0; $p = 0.76$ )
Noisy environment (reference=yes)	2.0 (0.6-6.2; $p = 0.24$ )	0.6 (0.1-2.9; $p = 0.53$ )
Total medications prescribed at hospital discharge	1.0 (0.9-1.1; $p = 0.92$ )	0.9 (0.8-1.0; $p = 0.20$ )
Patient health literacy	0.9 (0.8-1.1; $p = 0.38$ )	1.0 (0.7-1.3; $p = 0.80$ )
Patient risk of medication-related problems	1.0 (0.8-1.2; $p = 0.80$ )	1.3 (0.9-1.7; $p = 0.14$ )
Patient factors (reference= yes)	0.3 (0.1-1.6; $p = 0.16$ )	0.4 (0.1-1.4; $p = 0.14$ )
Communication tools used (reference= yes)	0.4 (0.2-1.1; $p = 0.09$ )	21.8 (0.5-6.6; $p = 0.37$ )
Family/friend/carer/significant other present (reference= yes)	0.7 (0.2-2.6; $p = 0.62$ )	0.3 (0.1-1.1; $p = 0.07$ )
Preferred role in discussing medications with healthcare professionals (reference= active)	0.8 (0.3-1.9; $p = 0.55$ )	0.2 (0.1-1.9; $p = 0.18$ )