Additional File 2: supplemental results

Supplementary table S1. Results from the needs assessments among patients and health care professionals

Information concerning discharge is provided to the patient using * - verbal information	Item	Patients	HCPs
using * - verbal information 47 (90.4) 72 (94.7) - written information 1 (1.9) 24 (31.6) - digital information 0 (0) 3 (3.9) - unknown 4 (7.7) 0 (0) Decision concerning discharge is currently made by * - - the patient 16 (30.8) 21 (27.6) - the caregiver(s) 2 (3.8) 0 (0) - a neurologist 12 (23.1) 36 (47.4) - a rehabilitation specialist 0 (0) 26 (34.2) - a geriatrician 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 16 (21.1) - all HCPs cooperatively 16 (30.8) 32 (42.1) - unknown 6 (11.5) 0 (0) Decision concerning discharge should preferably be made by 5 (9.6) 0 (0) - the patient 5 (9.6) 0 (0) - the patient and HCP together 19 (36.6) 41 (53.9) - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seriously considering the patients' opinion N/A 35 (46.0)	nem	(n=52)	(n=76)
- verbal information 47 (90.4) 72 (94.7) - written information 1 (1.9) 24 (31.6) - digital information 0 (0) 3 (3.9) - unknown 4 (7.7) 0 (0) Decision concerning discharge is currently made by * - - the patient 16 (30.8) 21 (27.6) - the caregiver(s) 2 (3.8) 0 (0) - a neurologist 12 (23.1) 36 (47.4) - a rehabilitation specialist 0 (0) 26 (34.2) - a quarrician 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 16 (21.1) - all HCPs cooperatively 16 (30.8) 32 (42.1) - unknown 6 (11.5) 0 (0) Decision concerning discharge should preferably be made by - 16 (30.8) 32 (42.1) - the patient 5 (9.6) 0 (0) - the patient and HCP together 19 (36.6) 41 (53.9) - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seri	Information concerning discharge is provided to the patient		_
- written information 1 (1.9) 24 (31.6) - digital information 0 (0) 3 (3.9) - unknown 4 (7.7) 0 (0) Decision concerning discharge is currently made by ** 16 (30.8) 21 (27.6) - the caregiver(s) 2 (3.8) 0 (0) - a neurologist 12 (23.1) 36 (47.4) - a rehabilitation specialist 0 (0) 26 (34.2) - a geriatrician 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 6 (11.5) 0 (0) - a transe (stroke or transfer nurse) 16 (30.8) 32 (42.1) 10 (0) 10 (0) 10 (0) 10 (0) 10 (0) 10 (0) 10 (0)	using *		
- digital information 0 (0) 3 (3.9) - unknown 4 (7.7) 0 (0) Decision concerning discharge is currently made by * - the patient 16 (30.8) 21 (27.6) - the caregiver(s) 2 (3.8) 0 (0) - a neurologist 12 (23.1) 36 (47.4) - a rehabilitation specialist 0 (0) 26 (34.2) - a geriatrician 0 (0) 16 (21.1) - a nurse (stroke or transfer nurse) 0 (0) 16 (21.1) - all HCPs cooperatively 16 (30.8) 32 (42.1) - all HCPs cooperatively 16 (30.8) 32 (42.1) - becision concerning discharge should preferably be made by - the patient 5 (9.6) 0 (0) - the patient 5 (9.6) 0 (0) 0 - the patient, after seriously considering the HCP's opinion 7 (13.5) 7 (9.2) - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - mei	- verbal information	47 (90.4)	72 (94.7)
- unknown 4 (7.7) 0 (0) Decision concerning discharge is currently made by * - the patient 16 (30.8) 21 (27.6) - the patient 16 (30.8) 21 (27.6) - the caregiver(s) 2 (3.8) 0 (0) - a neurologist 12 (23.1) 36 (47.4) - a rehabilitation specialist 0 (0) 26 (34.2) - a geriatrician 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 16 (21.1) - all HCPs cooperatively 16 (30.8) 32 (42.1) - unknown 6 (11.5) 0 (0) Decision concerning discharge should preferably be made by - the patient, after seriously considering the HCP's opinion 7 (13.5) 7 (9.2) - the patient, after seriously considering the HCP's opinion 7 (13.5) 7 (9.2) - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP after seriously considering the patients' opinion 10 (19.2) 22 (29.0) </td <td>- written information</td> <td>1 (1.9)</td> <td>24 (31.6)</td>	- written information	1 (1.9)	24 (31.6)
Decision concerning discharge is currently made by * - the patient	- digital information	0 (0)	3 (3.9)
- the patient 16 (30.8) 21 (27.6) - the caregiver(s) 2 (3.8) 0 (0) - a neurologist 12 (23.1) 36 (47.4) - a rehabilitation specialist 0 (0) 26 (34.2) - a geriatrician 0 (0) 5 (6.6) - a nurse (stroke or transfer nurse) 0 (0) 16 (21.1) - all HCPs cooperatively 16 (30.8) 32 (42.1) - unknown 6 (11.5) 0 (0) Decision concerning discharge should preferably be made by - the patient 5 (9.6) 0 (0) - the patient, after seriously considering the HCP's opinion 7 (13.5) 7 (9.2) - the patient, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP 5 (9.6) 0 (0) - missing 6 (11.5) 6 (7.9) For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently reliable <t< td=""><td>- unknown</td><td>4 (7.7)</td><td>0 (0)</td></t<>	- unknown	4 (7.7)	0 (0)
- the caregiver(s) - a neurologist - a neurologist - a rehabilitation specialist - a geriatrician - a geriatrician - a nurse (stroke or transfer nurse) - all HCPs cooperatively - all HCPs cooperatively - unknown - the patient - the patient - the patient, after seriously considering the HCP's opinion - the patient and HCP together - the HCP, after seriously considering the patients' opinion - the HCP - missing - the HCP - is sufficiently provided - is sufficiently reliable - should be available in any case about all relevant options - range - ra	Decision concerning discharge is currently made by *		_
- a neurologist	- the patient	16 (30.8)	21 (27.6)
- a rehabilitation specialist	- the caregiver(s)	2 (3.8)	0(0)
- a geriatrician	- a neurologist	12 (23.1)	36 (47.4)
- a nurse (stroke or transfer nurse) 0 (0) 16 (21.1) - all HCPs cooperatively 16 (30.8) 32 (42.1) - unknown 6 (11.5) 0 (0) Decision concerning discharge should preferably be made by - the patient 5 (9.6) 0 (0) - the patient, after seriously considering the HCP's opinion 7 (13.5) 7 (9.2) - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP - missing 6 (11.5) 6 (7.9) For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided N/A 35 (46.0) - should be available in any case about all relevant options N/A 58 (76.3) Total score on the decisional conflict scale - range 0-81.3 N/A - mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 07 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	- a rehabilitation specialist	0 (0)	26 (34.2)
- all HCPs cooperatively - unknown Decision concerning discharge should preferably be made by - the patient - the patient - the patient, after seriously considering the HCP's opinion - the patient and HCP together - the patient and HCP together - the HCP, after seriously considering the patients' opinion - the HCP, after seriously considering the patients opinion - the HCP	- a geriatrician	0 (0)	5 (6.6)
- unknown 6 (11.5) 0 (0) Decision concerning discharge should preferably be made by - the patient 5 (9.6) 0 (0) - the patient 5 (9.6) 0 (0) - the patient, after seriously considering the HCP's opinion 7 (13.5) 7 (9.2) - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP 5 (9.6) 0 (0) - missing 6 (11.5) 6 (7.9) For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided N/A 35 (46.0) - is sufficiently reliable N/A 35 (46.0) N/A 58 (76.3) Total score on the decisional conflict scale - range 0-81.3 N/A - mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	- a nurse (stroke or transfer nurse)	0 (0)	16 (21.1)
Decision concerning discharge should preferably be made by - the patient 5 (9.6) 0 (0) - the patient, after seriously considering the HCP's opinion 7 (13.5) 7 (9.2) - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seriously considering the patients' opinion 10 (19.2) 22 (29.0) - the HCP 5 (9.6) 0 (0) - missing 6 (11.5) 6 (7.9) For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided N/A 35 (46.0) - should be available in any case about all relevant options N/A 58 (76.3) Total score on the decisional conflict scale - range 0-81.3 N/A - mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	- all HCPs cooperatively	16 (30.8)	32 (42.1)
- the patient 5 (9.6) 0 (0) - the patient, after seriously considering the HCP's opinion - the patient and HCP together 19 (36.6) 41 (53.9) - the HCP, after seriously considering the patients' opinion - the HCP, after seriously considering the patients' opinion - the HCP 5 (9.6) 0 (0) - missing 6 (11.5) 6 (7.9) For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided N/A 35 (46.0) - should be available in any case about all relevant options N/A 58 (76.3) Total score on the decisional conflict scale - range 0-81.3 N/A - mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 0 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)		6 (11.5)	0(0)
- the patient, after seriously considering the HCP's opinion - the patient and HCP together - the HCP, after seriously considering the patients' opinion - the HCP, after seriously considering the patients' opinion - the HCP - the HCP - missing - the HCP -	Decision concerning discharge should preferably be made by		
- the patient and HCP together - the HCP, after seriously considering the patients' opinion - the HCP - the HCP - the HCP - missing - the HCP - th	- the patient	5 (9.6)	0(0)
- the HCP, after seriously considering the patients' opinion - the HCP - missing For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided - is sufficiently reliable - should be available in any case about all relevant options Total score on the decisional conflict scale - range - mean (SD) Overall satisfaction with the decision-making process - satisfied - not satisfied - neither satisfied nor not satisfied 10 (19.2) 5 (9.6) 0 (0) 6 (11.5) 6 (7.9) N/A 35 (46.0) N/A 35 (46.0) N/A 58 (76.3) N/A 58 (76.3) N/A 98.2 (16.5) N/A 32 (42.1) - not satisfied - 2 (3.8) - neither satisfied nor not satisfied	- the patient, after seriously considering the HCP's opinion	7 (13.5)	7 (9.2)
- the HCP - missing For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided - is sufficiently reliable - should be available in any case about all relevant options Total score on the decisional conflict scale - range - mean (SD) Overall satisfaction with the decision-making process - satisfied - not satisfied - neither satisfied nor not satisfied 5 (9.6) 0 (0) 6 (7.9) N/A 35 (46.0) N/A 35 (46.0) N/A 58 (76.3) N/A 58 (76.3) N/A 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 3 (5.8) 32 (42.1)	- the patient and HCP together	19 (36.6)	41 (53.9)
- missing 6 (11.5) 6 (7.9) For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided N/A 35 (46.0) - is sufficiently reliable N/A 35 (46.0) - should be available in any case about all relevant options N/A 58 (76.3) Total score on the decisional conflict scale - range 0-81.3 N/A - mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	- the HCP, after seriously considering the patients' opinion	10 (19.2)	22 (29.0)
For patients and caregivers, information about discharge planning (from a professional perspective) - is sufficiently provided - is sufficiently reliable - should be available in any case about all relevant options Total score on the decisional conflict scale - range - range - mean (SD) Overall satisfaction with the decision-making process - satisfied - not satisfied - neither satisfied nor not satisfied Sylvantic information about discharge N/A 35 (46.0) N/A 58 (76.3) N/A 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 2 (3.8) 3 (5.8) 3 (42.1)	- the HCP	5 (9.6)	0(0)
planning (from a professional perspective) - is sufficiently provided - is sufficiently reliable - should be available in any case about all relevant options Total score on the decisional conflict scale - range - mean (SD) Overall satisfaction with the decision-making process - satisfied - not satisfied - neither satisfied nor not satisfied N/A 35 (46.0) N/A 58 (76.3) N/A 58 (76.3) N/A 41 (78.9) 32 (42.1) 2 (3.8) 3 (5.8) 3 (5.8)	- missing	6 (11.5)	6 (7.9)
- is sufficiently provided - is sufficiently reliable - should be available in any case about all relevant options Total score on the decisional conflict scale - range - mean (SD) Overall satisfaction with the decision-making process - satisfied - not satisfied - neither satisfied nor not satisfied N/A 35 (46.0) N/A 58 (76.3) N/A 58 (76.3) N/A 41 (78.9) 32 (42.1) 2 (3.8) 3 (5.8) 32 (42.1)	For patients and caregivers, information about discharge		
- is sufficiently reliable - should be available in any case about all relevant options Total score on the decisional conflict scale - range - mean (SD) Overall satisfaction with the decision-making process - satisfied - not satisfied - neither satisfied nor not satisfied N/A 58 (76.3) N/A 58.2 (16.5) N/A 41 (78.9) 32 (42.1) 2 (3.8) 3 (5.8) 32 (42.1)			
- should be available in any case about all relevant options N/A 58 (76.3) Total score on the decisional conflict scale - range - mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	- is sufficiently provided	N/A	35 (46.0)
Total score on the decisional conflict scale - range - mean (SD) Overall satisfaction with the decision-making process - satisfied - not satisfied - not satisfied - neither satisfied nor not satisfied 70-81.3 8 N/A 8 (10.5) 9 32 (42.1) 10 2 (3.8) 11 3 (5.8) 12 (42.1) 13 (5.8) 13 (42.1)	- is sufficiently reliable	N/A	35 (46.0)
- range 0-81.3 N/A - mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	- should be available in any case about all relevant options	N/A	58 (76.3)
- mean (SD) 58.2 (16.5) N/A Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	Total score on the decisional conflict scale		
Overall satisfaction with the decision-making process - satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	- range	0-81.3	N/A
- satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)		58.2 (16.5)	N/A
- satisfied 41 (78.9) 32 (42.1) - not satisfied 2 (3.8) 8 (10.5) - neither satisfied nor not satisfied 3 (5.8) 32 (42.1)	Overall satisfaction with the decision-making process		
- neither satisfied nor not satisfied 3 (5.8) 32 (42.1)		41 (78.9)	32 (42.1)
	- not satisfied	2 (3.8)	8 (10.5)
- missing 6 (11.5) 4 (5.3)	- neither satisfied nor not satisfied	3 (5.8)	32 (42.1)
	- missing	6 (11.5)	4 (5.3)

All data are presented as n (%) unless otherwise specified.

Abbreviations: HCP: health care professional; N/A: not applicable; SD: standard deviation

^{*} Answers were not mutually exclusive

Supplementary table S2. IPDAS minimum qualifying and certification criteria for patient decision aids¹

	IPDAS criterion	
Qualifying	The PtDA describes a health condition or problem for	compatibility? Yes
criteria	which a specific decision had to be made (index decision)	168
criteria	2. The PtDA explicitly states the index decision that needs to	Yes
	be considered	168
	3. The PtDA describes the options available for the index	Yes
	decision	168
	4. The PtDA describes the positive features (benefits or	Yes
	advantages) of each option	103
	5. The PtDA describes the negative features (harm, side	Yes
	effects or disadvantages) of each option	
	6. The PtDA describes what it is like to experience the	Yes
	consequences of the options (e.g., physical, psychological	
	or social). The PtDA should help patients to clarify values	
Certification	7. The PtDA shows the negative and positive features of	Yes
criteria	options with equal detail (e.g., using similar fonts,	
	sequence, presentation of statistical information)	
	8. The PtDA (or associated documentation) provides citations	Yes
	to the evidence selected	
	9. The PtDA or associated documentation) provides a	Yes
	production or publication date	
	10. The PtDA (or associated documentation) provides	Yes
	information about the update policy	
	11. The PtDA provides information about the levels of	Yes
	uncertainty around event or outcome probabilities	
	12. The PtDA (or associated documentation) provides	Yes
	information about the funding source used for	
	development.	

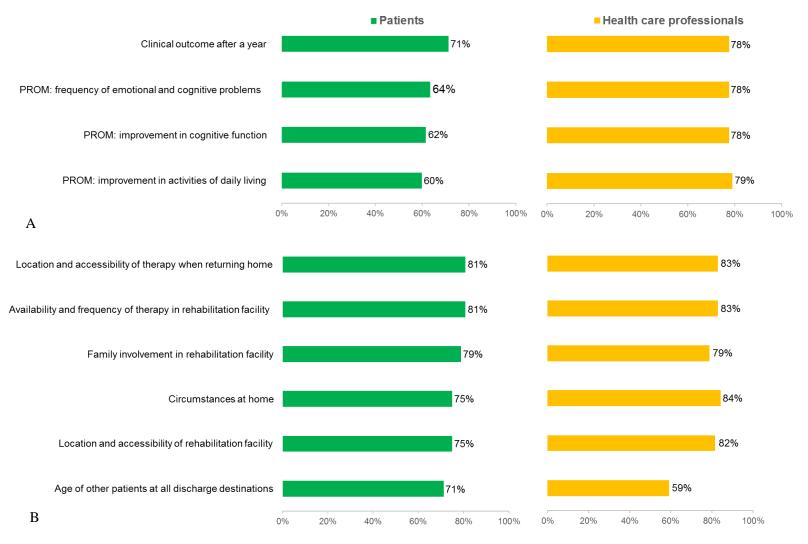
Abbreviations: IPDAS: International Patient Decision Aids Standards; PtDA patient decision aid

Supplementary table S3. Results from the usability test: comments on and changes in the PtDA

PtDA component	Comments	P (+ C)	HCP	Change
First impression	Good initiative	√	✓	N/A
	User-friendly design	✓	✓	N/A
Printed	Clear layout, good color use	✓	✓	N/A
consultation sheet	All basic information represented	✓	✓	N/A
Online	Easily accessible	✓		Access instruction clarified
information tool	Balanced lay out	✓	✓	N/A
	Comprehensive information	✓	✓	N/A
	Consider literacy		✓	Readability checked
	Understandable language	✓		Quality mark "easy reading"
	Text too long	✓	✓	Shortened text
	Not enough illustrations	✓	✓	Added extra illustrations
	Incorrect job description of	✓	✓	Changed several job
	multidisciplinary team			descriptions
	Differences between IRF and SNF	✓		Adjusted the definitions of
	not made explicit			IRF and SNF
	Supportive quotes of other patients	✓		Added extra quotes
	Balanced presentation of options		✓	N/A
Online	Difficult value clarification exercises		✓	Changed order and phrasing
deliberation tool	(statements and questions)			of exercises
	Lack of questions about household	✓		Added question about
	management			household management
	Uncomfortable questions about	✓		Rephrased questions about
	caregivers if you don't have any			caregivers
	Hard to answer all questions and	✓		Emphasized that PtDA should
	statements without family member			ideally be used with caregiver
"Patients-like-	Reassuring to see that many other	✓		N/A
me" model with	patients return to their home			
personalized	Motivating and hopeful information	✓		N/A
outcome	Colors of icons hard to distinguish	✓		Changed colors of icons
information	Statistics are not interesting for an		✓	Clarified the aim of the
	individual patient			outcome information
	Additional outcome information		✓	Will be added when outcome
	desirable (e.g., functional status)			data is available
Summary sheet	Informative for own use	✓	✓	N/A
	Useful during consultation	✓	✓	N/A
General	Essential information for every	✓	✓	N/A
	patient with stroke			
	Concerns about time investment for	✓	✓	Replaced some text to
	patients			optional "read more" sections
	Concern about long-term practical		✓	Accountability addressed
	use			during implementation
	Important to mention that the		✓	Added note about continuous
	information remains available			availability of information

Abbreviations: C: caregiver; HCP: health care professional; IRF: inpatient rehabilitation facility; N/A: not applicable; P: patient; PtDA: patient decision aid; SNF: skilled nursing facility

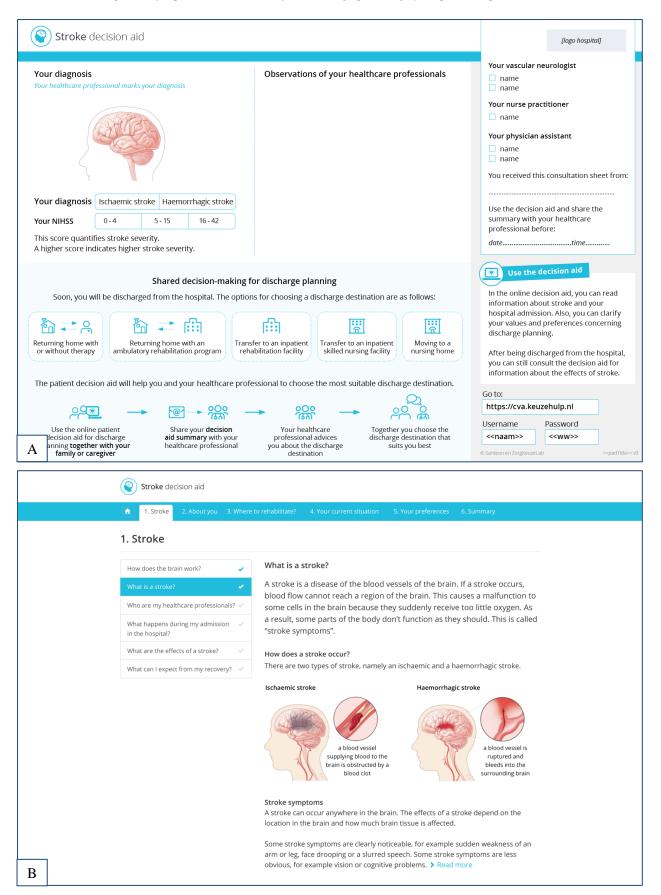
Prick et al. Development of a patient decision aid for discharge planning of hospitalized patients with stroke



Supplementary Figure S1. Most relevant information for decision-making concerning discharge as indicated with a score of \geq 4 points on a 1-7 Likert scale by patients and health care professionals.

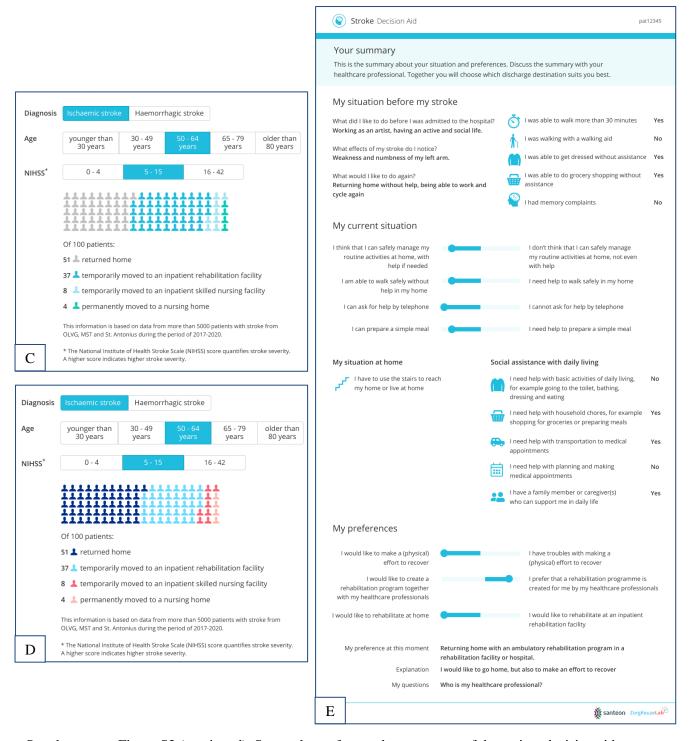
A: information about outcomes according to patients (green) and health care professionals (yellow)

B: information about discharge destinations according to patients (green) and health care professionals (yellow)



Supplementary Figure S2. Screenshots of several components of the patient decision aid

- A. Printed consultation sheet
- B. Online information and deliberation tool



Supplementary Figure S2 (continued). Screenshots of several components of the patient decision aid

- C. Integrated "patients-like-me" model with personalized outcome information
- D. Different colors of the "patients-like-me" model, adjusted after usability testing
- E. Summary sheet with patients' values and preferences