



Norwegian University of
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Patients and Professionals in collaborative testing
of a web-based tool for integrated care

-an evaluation study

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”Individual care plans”

- National initiative
- Patients in need of long term and coordinated health **and** social care have legal right to an Individual Care Plan (2001 in health care -2005 in social care)
- Longterm and complex conditions
- Management strategies
- Named coordinator
- Establishment of multidisciplinary “responsibility group”
- Patient participation and consent central

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Aim of this Study

- To evaluate the iterative testing and development of a web-based tool “SamPro” for integrated care in authentic user involvements






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Setting

- Site: Middle Norway
 - 5 municipalities
 - 3 local hospitals, 1 regional hospital
- Participants:
 - “Responsibility groups”: 2-7 persons:
 - 158 professionals (79 nurses)
 - 78 Patients
 - 53 Parents and relatives
- Development and testing Period:
 - 2005-2007

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SamPro pilot project

-  Hospital
-  District Psychiatric Centre
-  DPC-satellite
-  DPC-partservice
-  Other psychiatric institutions

8 groups
Psychiatry/
drug
addiction

15 groups.
Children
habilitation

45 groups
psychiatry

643 000 Inhabitants
(estimated 3%,
19300 in right for IP.)



The system training and testing period

- Sampro system training was given to **groups of professionals** in hospitals and municipalities.
- Sampro system training was given to **responsible groups** including the patients/ parents.
- Technological assistance were given
- Follow up assistance in care planning and system use was given
- Testing, reporting and development in short iterative periods.

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Data collection and analysis

- Field notes and reports
- Project documentation
- Errors and suggestions for improvements
- Semi -structured interviews –content analyses
- System Usability Scale questionnaire -SUS
-Likert scale, frequency tables
- Pilot specific questions added to the questionnaire

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Functionality in individual plans

Additional functionality in the web- based tool

Legal requirements	Supporting functionality in the web-based solution
One universal plan per patient, no duplications	Duplication control, online plan overview, log of plan activity
A named coordinator	Online distribution of plan, participant overview
Patient consent form, signed	Control of access to plan: security model , access fragmentation
Plan documentation: Patient mapping, goals, actions, evaluations	Online communication and collaboration: calendar, internal messaging, optional SMS alert for fast information about changes
	Notes
	Control and log of printouts

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Results

- Improvement of Usability
- Experience of control

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Improvement of usability

- SUS questionnaire: 61 (65/55)
- Pilot specific questions revealed both technical and organizational reasons for discontinued use.
- Field reports supporting:
 - Technological barriers (pop-ups, log on, slow sped lines, browsers)
 - Need for increased of coherence in documentation module
 - Messaging module more frequently used
 - Organizational challenges (economy, hierarchy, hospital – municipalities, “tribes”)

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From first release – release 3.0

The screenshot displays the SamPro web application interface. The top navigation bar includes "Start", "Mål og tiltak", "Adm plan", "Planer", "Adm virksomhet", and "Virksomhet". The main content area is titled "STARTSIDEN" and shows a table of updates from 26.04.05 13:35. The table has columns for "Velg", "Type", "Verdi", "Aksjon", and "Dato endret".

Velg	Type	Verdi	Aksjon	Dato endret
<input checked="" type="radio"/>	Melding	Her er en viktig melding	Ny	26.04.05 13:40
<input type="radio"/>	Kalender	Er i Geiranger	Ny	26.04.05 13:42
<input type="radio"/>	Kalender	Ny evaluering	Ny	26.04.05 13:44
<input type="radio"/>	Evaluering	Ny evaluering	Ny	26.04.05 13:44
<input type="radio"/>	Fagplaner	Pleieplan	Oppdatert	26.04.05 13:45
<input type="radio"/>	Fagplaner	Med. journal, sykehuset et eller anne sted	Oppdatert	26.04.05 13:46
<input type="radio"/>	Fagplaner	Opplæringsplan	Ny	26.04.05 13:46

Below the table are buttons for "Vis" and "Oppdater". To the right, there is a section "Om meg selv" with a text area containing a user's self-description and a "Sist endret" timestamp.

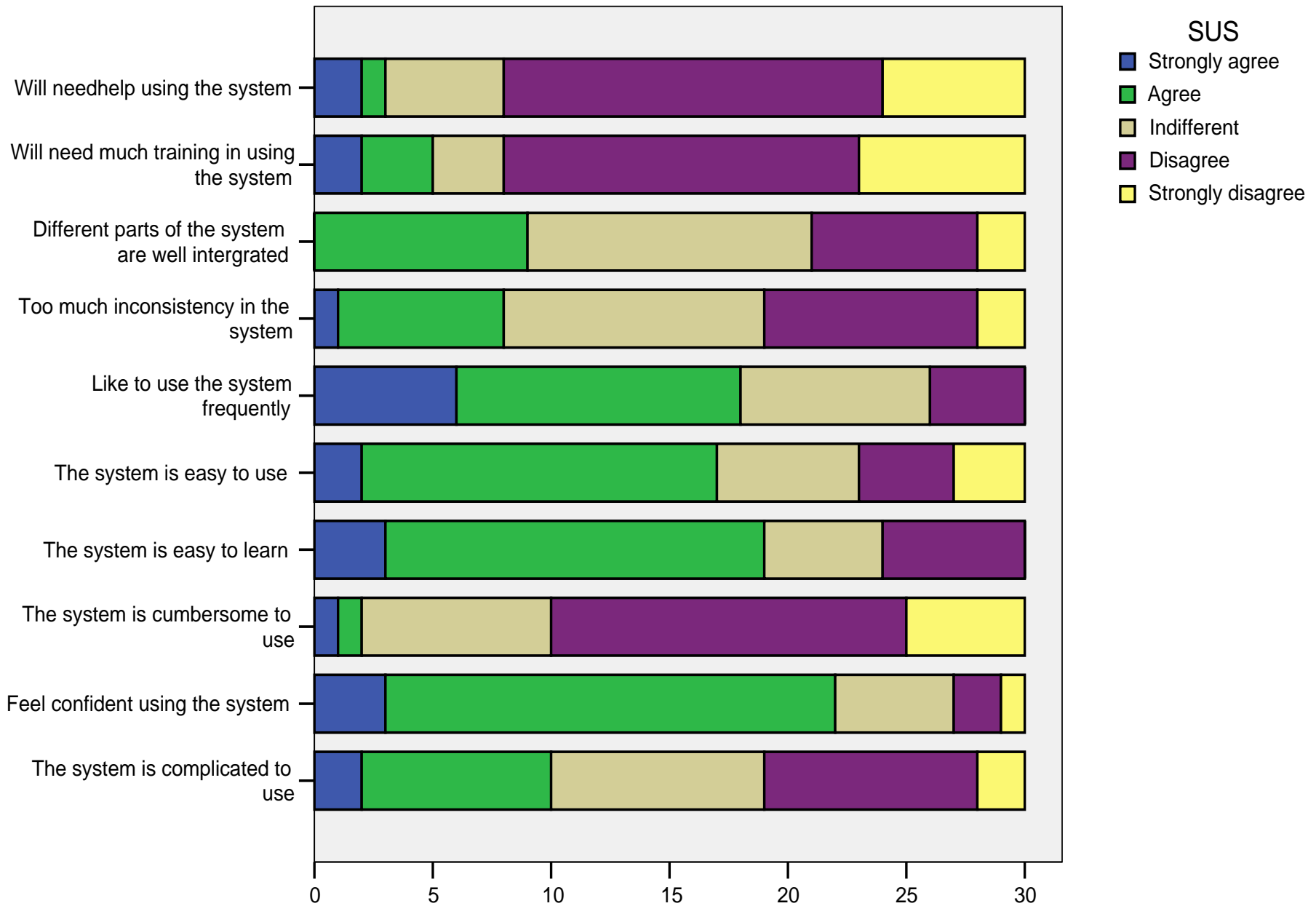
Another window shows the "Endringer i planen" section with a table of visited plans:

Navn	Dato
Lossius, Morten	23.01.09 10:27
Nordmann, Ola	22.01.09 14:06
Høgberg, Hanna	15.01.09 14:41
Fiskaa, Børge	09.12.08 09:31
Loe, Marte	28.11.08 12:53

A third window shows the "Om meg selv" section for Kari Mette Tiller, including a profile picture and a list of activities and dates.

At the bottom left, there is a logo for Jorunn Bje and the website address www.ntnu.no. At the bottom right, the NTNU logo and name are displayed: "NTNU Norwegian University of Science and Technology".

Alternatives in SUS



Experience of control

- The online access for all group participants
- The control of access level- and period
- Decreasing need for technological assistance
- No fear of unintentionally distribution of sensitive information
- Control of logging: showed plan visits as well as changes being done

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Conclusion

- More research needed to reveal whether obstacles for use were technological or organizational.
- Technological and organizational aspects supplement each other, not to be developed separately
- The concept of collaborating method including patients in the development team a model for future integrated care?

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