A human factors approach to understanding information flow in the discharge process

Eva-Maria Carman1,2, Mike Fray1 and Patrick Waterson1

1Human Factors in Complex Systems Research Group, Loughborough Design School, Loughborough University, Loughborough, UK; 2Trent Simulation and Clinical Skills Centre, Queens Medical Centre, Nottingham University Hospitals Trust, UK

THE WORK IN CONTEXT

Care transitions are a common feature in healthcare, as patient care usually will require input from a range of healthcare providers. This requires the interaction of various subsystems and a degree of coordination to ensure continuity of care is provided. At these transition points, continuity of care is often put at risk due to a lack of coordination of the discrete elements of care originating from different subsystems. This has resulted in care transitions becoming commonly recognised as an area of risk for patient safety. The aspect of continuity of care that was the focus of this study was that of informational continuity. This study aimed to understand the required information flow for care transitions from acute care to community-based care and develop an intervention toolkit, based on participatory ergonomics. The methods used to map the information flow and identify associated constraints included the analysis of 374 incident reports, 87 patient complaint reports, two focus groups with community staff and three observation sessions on the tasks associated with this care transition. The intervention toolkit was developed using a literature review, the two focus groups held with community staff and seven interviews with acute staff involved in the discharge process. Common themes relating to problems associated with information flow that were identified included communication problems with patients, their families, other services involved in the process; difficulties in retrieving the required information, inaccurate information provided; missing or insufficient information transmitted and missing and unclear documentation. The proposed intervention toolkit consisted of four intervention suggestions, namely supporting documentation or education on available services and the process for staff and patients, a discharge checklist to aide acute staff and a decision guide for referrals to district nursing services to ensure appropriate referrals.

KEYWORDS

Care transitions, information flow, participatory approach

A brief outline of the work carried out

The purpose of this study was to determine the challenges and constraints associated with information flow for the care transition process from acute to community-based care and develop an intervention toolkit based on participatory ergonomics. As this care transition spans several different subsystems within healthcare, the different subsystems involved in this process were analysed and both acute and community staff were included in designing an intervention toolkit. To understand the information flow for this type of care transition, informal discussions were held with the staff involved in the process, two focus groups were held with community staff, and the triaging
of referrals by community staff were observed on three separate occasions. Furthermore 374 incident reports from community care and 87 patient complaint reports from acute care associated with the discharge process were analysed to identify constraints associated with information flow. The intervention toolkit was developed using a literature review on current interventions for care transitions. The toolkit was then evaluated using the two focus groups held with community staff and seven interviews with acute staff involved in the discharge process.

**Findings/solutions (the outcome)**

The themes relating to problems associated with information flow that were identified included communication problems with patients, their families and with other services involved in the process; difficulties retrieving the necessary information; inaccurate information provided; missing or insufficient information transmitted; and missing and unclear documentation. The intervention toolkit aimed to target the problems associated with information flow that affected communication and the lack of understanding and trust between the different services involved in this process. The proposed intervention toolkit consisted of four intervention suggestions, namely documentation or education covering the services provided by community services, a patient education leaflet on what to expect from the discharge process, a discharge checklist to aide acute staff and a decision guide for referrals to district nursing services to ensure appropriate referrals. The interventions rated as most suitable by acute staff were both education/documentation interventions, namely interventions on information on community services and patient education leaflets. For the remaining two interventions in the toolkit, the discharge checklist and the referral decision guide, both were met with a bit of scepticism from acute staff and community staff.

**Impact**

The key outcomes achieved in this study included identifying key themes associated with information flow problems in the discharge process and based on these results, the design of an intervention toolkit in conjunction with staff involved in this process to address these problems.