Does a Discharge to Assess programme introduced in England meet the quadruple aim of service improvement?

Abstract

Purpose

To examine and evaluate the implementation and delivery of a discharge to assess pathway based on the UK Department of Health and Social Care Hospital Discharge Policy in relation to the quadruple aim of healthcare improvement: improving patient experience, reducing costs, benefiting the wider population and improving the work life of staff.

Design/methodology/approach

Using a place based partnership in the south of England, 18 staff involved the delivery of discharge to assess and 4 patients who had recently been through the pathway were interviewed and the narratives analysed using a framework method.

Findings

All four dimensions of the quadruple aim were felt to be positively impacted by the discharge to assess pathway in varying degrees. Staff described improvements to working lives; patients described a positive experience. There was no evidence of reduced costs and wider benefit through reduced length of stay was suggested rather than demonstrated. The study showed a need to ensure both information flows and discharge process are smooth, that there is sufficient community capacity and capability, a need for strong relationships and shared goals, for clarity of pathway and empowered staff, and for an avoidance of the over prescription of care.

Originality

The revised discharge to assess pathway in England has been in place since 2020 and no other assessments of the pathway were found that related the changes to the quadruple aim framework.

Introduction

Quadruple aim is a relatively recent addition to the quality improvement arena and is an area of increasing interest, particularly with concerns of low morale in the NHS (UK Parliament Public Accounts Committee, 2020) as the fourth aim is one of improving work life of staff (Bodenheimer and Sinsky, 2014). With the enhancements to Discharge to Assess (D2A) during wave 1 of Covid-19, we examine whether these changes had a positive effect on all four aims of health care improvement in a single site study.

The triple aim of healthcare improvement was a term coined by Berwick, Nolan and Whittington (2008) to describe three aims, improvement in the experience of receiving healthcare, improvement in the health of the wider population and a reduction in the cost of healthcare provision. A fourth aim was introduced described as "improving the work life of health care providers, including clinicians and staff" (Bodenheimer and Sinsky, 2014 p. 573,) or "creating the conditions for the healthcare workforce to find joy and meaning in their work and in doing so, improving the experience of providing care" (Sikka, Morath and Leape, 2015, p. 608). These four aims of healthcare improvement have become known as quadruple aim.

The Department of Health and Social Care (DHSC) first published its Hospital Discharge Service: Policy and Operating Model (Department of Health and Social Care, 2020) during the first wave of Covid-19 detailing the discharge requirements for acute NHS hospitals in England.

The policy was based on the principle that people should not remain in an NHS bed for any longer than they need to be. D2A was highlighted as a key route to supporting early discharge either to home with additional short term support or to a bedded facility with rehabilitation support to facilitate the person to return home after a number of weeks; additional central funding was provided by NHS England. D2A provides a reduced assessment in the acute setting followed by a more detailed one 4 to 6 weeks after discharge. The policy is intrinsically one of integration of health and social care bringing teams together at the point of discharge and the 4-6 week period after.

There are two stated purposes of the D2A model:

1. *to reduce the length of stay for people in acute care*
2. *to improve people's outcomes following a period of rehabilitation and recovery, and minimise the need for long-term care at the end of a person's rehabilitation. (Department of Health and Social Care, 2020, p4)*

There have been very few studies looking at the impact of D2A and none of those found were since the introduction of the national policy. There appear to be no published studies that have considered D2A specifically relating to the quadruple aims of healthcare improvement.

With the expansion of D2A as an improvement to health and care during covid it would seem appropriate to consider how D2A has impacted on these four aims.

The experience of receiving healthcare

While no published studies looking at patient experience were found relating to the recent national expansion of D2A, earlier studies have examined D2A on smaller scales. Meehan *et al.* (2018) analysed the responses of patients who had been discharged on a D2A pathway finding that a majority (60%) positively rated the scheme. The remainder, in particular, felt the planning and communication were poor. Davis *et al.* (2019) found that patients understood the need for hospital stays to be as short as possible and that longer assessments at home were better than longer hospital stays, however they found that patients sometimes felt pressured to leave hospital. These studies suggest that patient

satisfaction is dependent on the management of the pathway, the sufficiency of the communication and a balance in the tension between the benefit to the patient of a reduce length of stay and the similar benefit to the hospital.

Reducing the overall cost of provision

The significant additional funding provided to the English NHS and social care systems for hospital discharge in 2020 has yet to be evaluated in terms of reducing the overall cost of health and care. The impact of Covid-19 with its associated changes in patient presentation on emergency care pathways and the rapidly changing social care landscape make comparisons difficult. It is assumed that with the driver of Covid-19 and the highest level of emergency being declared (NHS England, 2020), cost reduction was not the main aim of the DHSC.

Older evidence on the cost of provision of D2A is varied. Gonçalves-Bradley *et al.* (2017) systematic review of early discharge schemes found mixed evidence of cost savings and concluded there was insufficient evidence of economic benefit. Other studies such as Lin *et al.* (2015) and Parsons *et al.* (2018) found more positive results for supported discharge schemes and the NHS Confederation and NHS Providers (2021) are unequivocable in their assessment that D2A is a cost effective policy.

Improving the health of the wider population

D2A was introduced to reduce the length of stay for people in acute care and "to ensure hospital and community beds are freed up" (Department of Health and Social Care, 2020, p.46). There is some evidence to support the use of D2A in reducing length of stay (e.g. Offord *et al.*, 2017; i5Health, 2017) which, in theory, frees up beds for other patients to be admitted and receive treatment, i.e. it has a beneficial impact on the wider population.

Other associated pathways have demonstrated reductions in length of stay such as early supported discharge for patients with acute stroke (Langhorne *et al.*, 2017).

Improving the work life of healthcare staff

As this pathway is integrated across health and social care it would seem reasonable to express this aim as improving the work life of health and care staff. No studies were found relating specifically to the experience of these staff involved in providing D2A during Covid-19. Other studies on hospital discharge and discharge planning have considered professionals' perspectives. Waring *et al.* (2015) looked at the organisational and professional boundaries that "define and separate professional groups" (p.41) to understand their effect on the safety and quality of discharge. They concluded that professional boundaries are a threat to safe discharge and that promoting a culture of collaboration improved the quality of discharge and resulted in further satisfaction for the different occupational groups involved, i.e. the fourth aim.

The negative impact of Covid-19 on staff morale, burnout and indeed on the mental health of staff, is well documented (e.g. French *et al.*, 2021; Lamb *et al.*, 2021). This suggests that the fourth aim of improving the work life of staff is needed significantly more now than pre-Covid-19.

D2A purpose and the quadruple aim

The two stated purposes of the D2A policy relate to the first three aims only, i.e. the triple aim model. Improving recovery and the assessment process supports the first aim of improving patient experience while reducing length of stay will support the aims of cost reduction (or efficiency) and it will benefit the wider population. The 2020 DHSC policy makes no reference for D2A to improve the working lives of staff.

Research Aim

The aim of this study was to explore the experiences and perceptions of a range of patients, professionals and managers involved in D2A including aspects such as communication, roles and relationships, co-ordinated and person-centred care, the nature of impacts and effectiveness, and of patients experiencing the pathway. This is considered within the framework of the quadruple aim of health and social care improvement.

Research Methodology

Design

The evaluation was formative (assessing processes) and summative (assessing outcomes) focusing on the impact of the programme from a service user and staff perspective. A range of staff groups were accessed including health and social care staff in acute and community settings, service managers, commissioners and other key informants as identified by a steering group. The approach was qualitative and multi-method. Data sources consisted of focus groups and individual interviews with staff and service users.

Service users were invited to take part in a one-to-one semi-structured telephone interview with a researcher. The interviews explored aspects such as the overall experience of care, the extent to which needs were identified and met in an holistic way, participation in care, the quality of care and how co-ordinated it was, effects on health and wellbeing, and care transitions.

Focus groups of staff were selected as a data collection method as they provide a means of obtaining a collective view of group process and norms (Kreuger and Casey, 2014).

Individual staff interviews were conducted to allow for individual and detailed exploration of the pathway and processes. It was important to explore a range of perceptions about the potential impact of the programme to provide both breadth and depth of data so staff representing each point on the pathway were interviewed.

Both the focus groups and interviews were semi-structured and guided by a focus group / interview schedule. They explored key themes such as the processes involved, how communication works, roles and relationships, the extent to which care is co-ordinated and person-centred, and the nature of impacts on patients and the service.

Population

The study was carried out in a local health and social care (place-based) partnership in the south of England. Working with the managers across the four organisations involved in the pathway, eighteen staff providing care and management of the D2A pathway were identified.

Six staff members (P) were interviewed individually and three focus groups (FG) were held. The six staff were from key points in the D2A pathway: the discharge team, ward staff, social care commissioners and community providers. The focus groups were based on the teams within the pathway, i.e. community staff, discharge team and social care team.

Four service users (SU) were recruited by the hospital discharge team and invited to participate, one of them was accompanied by their informal carer during the interview. The inclusion criteria were:

- Cognitively able to participate
- Able to understand and converse in English
- Discharged home with carer support

Data Collection

Interviews and focus groups were conducted in summer 2021. Each lasted around one hour and were audio-recorded and transcribed. Verbal consent was obtained and recorded at the time of data collection.

Analysis

Data were analysed using a framework method (Ritchie and Spencer, 1994). This consists of five stages: familiarisation, identification of a thematic framework based on the interview and focus group schedules, indexing, charting and mapping and interpretation. Analysis was both deductive in that themes were set up *a priori* according to the interview or focus group schedules and inductive, themes derived from the interviews and focus groups.

Data were indexed and collated for themes within each interview and across the whole data set. The themes were then interpreted to produce the findings.

Ethics and funding

Ethical approval was gained by the University of Kent Research Ethics Committee, reference: 0435. Funding was provided by the NIHR Applied Reseach Collaboration Kent, Surrey and Sussex.

Findings

Aim 1: The experience of receiving healthcare

Overall, most service users described their experience of hospital discharge positively especially in terms of overall support and carer input and felt the process was smoother that previous experiences:

> *"I find very hard to find fault with it. The team worked well and we felt supported. All the time we felt confident."* (SU1)

> *"It was definitely better the way I was discharged this time. I felt more comfortable this time. I was discharged and got a discharge letter and everything else which I didn't before. "* (SU2)

Some service users also described not being really involved in the decisions during the discharge process although they were happy to be discharged.

All service users were assessed by services including intermediate care, therapists, care agencies and social care. Services users, in general were not aware of peoples' organisations or roles. For most, care was a positive experience:

> *"Most of them I thought were outstanding. Really knew their job pretty good"* (SU/C1)

Service users described a lack of continuity in terms of carers which impacted on the development of relationships and hence, quality of care:

> *"It would have been nicer to have the same person or the same two people all the way through because inevitably there's a variation, but you don't have a relationship, or ongoing relationship"*(SU/C1)

> *"I would think it better for people if they had the same person all the time"* (SU2)

Some staff felt it was positive for patients:

> *"[D2A] is a really positive thing … to actually get that person out under D2A because … you know that that person is going to be receive [care] for up to six weeks."*

Aim 2: Reducing the overall cost of provision

Staff identified a range of positive impacts on service users including being discharged sooner and having more time to make decisions about their long-term future. The D2A programme was perceived as resulting in a better assessment of long term needs for the patient:

> *"I do think this discharge to assess is really good for the person…I never felt quite comfortable assessing someone in hospital for long-term needs as it's not the appropriate place"* (FG1)

One challenge was around the perceived increase in discharges to nursing homes and the provision of 'intensive' care packages. This was attributed to differences in the perception of 'risk' between hospital and community staff, the influence of family members and the drive to discharge medically fit patients quickly, particularly during Covid-19.

Concerns were raised about a lack of promotion of independence and the low level of therapy staff in the community that may impact on the effectiveness of the D2A programme.

Aim 3: Improving the health of the wider population

Integrating the discharge teams, particularly the co-location and use of a single assessment process was felt to have significantly helped the implementation and delivery of the pathway as well as facilitating the flow of information, improving the flow of referrals and the speed of discharge.

Staff achknowledge an improved patient flow through the hospital and 'to free up beds' with quicker discharges.

Service users also described their recent experience of discharge as 'speedier' or more 'straightforward' compared to previous discharges.

Aim 4: Improving the work life of healthcare staff

Staff reported having greater job satisfaction, using their skills more, working more efficiently, having a shared pupose and being empowered:

> *"It gives you much better work satisfaction to be honest, to work this way, than how we were working before"* (P5)

> *"I really enjoy this sort of working because I'm closer to the patient I'm using my clinical skills much more than before"* (P5)

Distributed leadership was acknowledged and staff described mutual support between community and hospital teams:

> *"The communities and wards worked together in a way that supported each other so well…I don't think I have had ever been so supported"* (P5)

Some concerns were raised that the initial assessments sometimes lacked information which could cause problems for staff further on in the pathway.

Facilitating factors for implementation were a collaborative approach to care due to the Covid-19 pandemic and co-location of services.

> *"[A] collegiate response and a collaborative response as a result of the pandemic…the will and the kind of putting aside any organizational boundaries and barriers"* (P1)

There was a sense from the staff that despite the recent impact of Covid-19 and the rapid pace at which the discharge pathway was implemented, the revised pathway created a positive way of working, simplified processes and helped reduce barriers. The staff interviewed generally reported a sense of team working, greater and clearer focus and a simplification of tasks.

Discussion

The purpose of the D2A was described as two fold, promoting independence for patients recovering from illness and maximizing the bed capacity in acute care. These two purposes map onto the first three of the quadruple aims of healthcare improvement however all four of the aims were evident to some extent in the comments made by staff. In particular, the fourth aim of improving the working life of staff was most clearly identified and seemed to be directly related to the introduction of an integrated way of working, despite it not being a specific aim of the D2A programme.

In relation to the four aims: firstly*, improvements in the experience of receiving healthcare* were identified by service users. Staff also suggested that the faster discharge from hospital are a positive aspect of D2A for patients and Davis *et al.* (2019)'s findings that patients understood the need for hospital stays to be as short as possible suggests that patients generally accept this need.

This study concurred with previous ones that found that service users positively rated the scheme (e.g. Meehan *et al.*, 2018).

Staff strongly felt that assessing for long term needs was best done after discharge from hospital when the patient is at home or in a place of long term care. In addition the staff acknowledged the benefits of the rehabilitation element of the programme although there were concerns that it required improvement.

Secondly, *reductions in the overall cost of provision* were not assessed directly within the study as the NHS in a level 4 emergency precluded this. The shorter length of stay should have, as shown by the emergent evidence from pre-pandemic studies, either increased the number of patients able to be treated in hospital or allowed for a reduction in the number of open beds.

Whether the reductions in length of stay were enough to off-set the increased cost of domicillary and non-domicillary social care was not assessed. Further, the perception that care was being overprescribed by the discharge team would, if true, be negatively associated with this aim.

Thirdly, *improving the health of the wider population* is, in this case, intrinsically linked to the reductions in length of stay and the freeing up of beds to allow for more patients to be treated. The faster discharge process leading to a shorter length of stay provides this wider benefit to the population, i.e. a benefit that is not to the person on the pathway but to others in the community that require hospital treatment. Therefore the wider population benefits as a result of improved access to acute health care.

Fourthly, *improving the work life of healthcare staff* was demonstrated through increased job satisfaction along with greater empowerment, increased clinical skills, improved teamworking, a shared purpose and vision, and closer relationships with colleagues in other settings and providers, i.e. closer integration. It would seem reasonable to consider these as complementary aspects to an improved and overall positive nature of working within the pathway.

Staff described a highly positive change to the discharge processes, particularly around simplification and streamlining; Bishop and Waring (2019) described discharge as a complex process requiring coordination and it is assumed that the simplification of the pathways will ensure improved coordination. With the pressures of Covid-19 and the traumatic impact that this had on staff, positive changes to their satisfaction and experience are obviously needed.

There seemed to be more evidence for the improved experience of staff than for the other three aims. It would seem that the positive impact on staff satisfaction is an additional benefit of a successful D2A pathway and can therefore be considered to complete the quadruple aim of improvement.

Overall, the importance of clear referral pathways, shared vision and goals, trusted relationships and clear information flows were found to be essential components to the pathway. In addition the empowerment of staff and the co-location of the discharge team were felt positively impact.

As the findings show, problems were found that were felt to act negatively against the quadruple aims and therefore have a detrimental impact on the pathway. These include the over prescription of care, the pressures of Covid-19, a lack of rehab capacity and a lack of choice for patients. These negative themes offset the positive findings to varying extents. Setting out the positives (in green) and negatives (in red) the following diagram provides a schematic of the drivers shown in Figure 1.

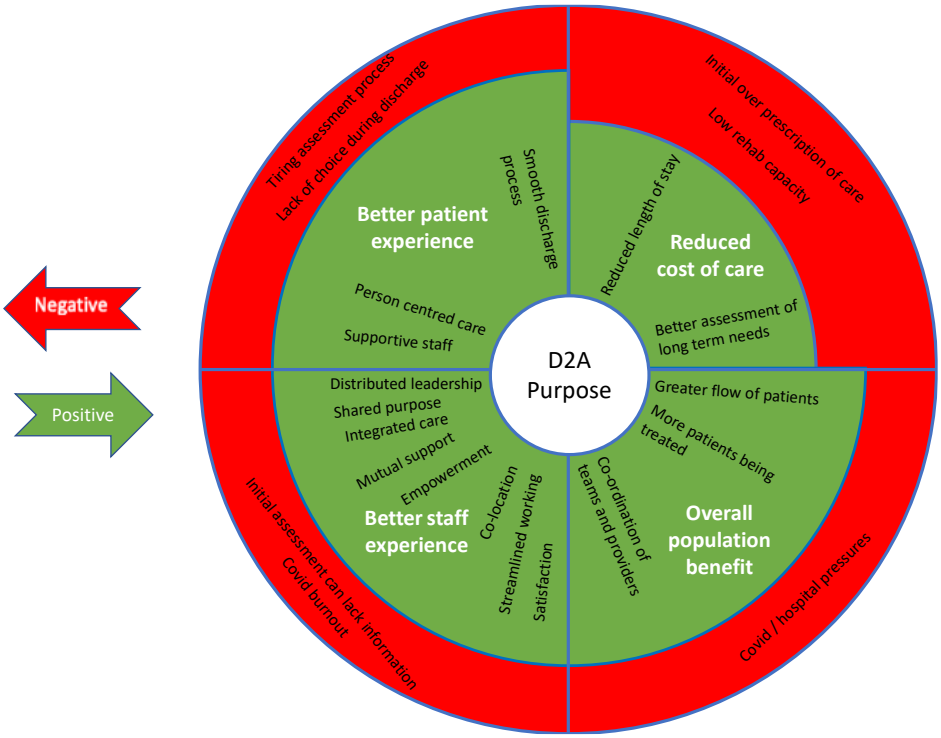

Figure 1: Positive and negative drivers in the quadruple aims found with discharge to assess.

Limitations

The study was limited to a single health and social care partnership case study and included a relatively small number of respondents. Other areas will have different contextual factors in their D2A pathways which may produce different findings but the main themes are felt likely to be seen in other areas such as the need to ensure both information flows and discharge process are smooth, sufficient community capacity and capability, strong relationships and shared goals, clarity of pathway and empowered staff, and for an avoidance of the over prescription of care.

There were a small number of service users interviewed and their patient journeys prior to the discharge element was not explored which may have provided additional context. Additional studies into patients experience are suggested.

The study was conducted during the Covid-19 pandemic, a unique time of pressure on the NHS and on the staff in particular. This is likely to have influenced the comments from the staff and therefore the findings of the study.

This study did not conduct an economic evaluation of the pathway and the overall population benefit has been inferred from the responses of staff. Additional studies to explore these aims in further detail would be beneficial.

Recommendations for practice and further research

Recommendations for practice:

- To agree levels of risk in relation to different discharge destinations to minimise both risk and overprescription of care.
- To ensure that independence is promoted after acute discharge through appropriate skills and capacity in the community.
- To ensure both information flows and discharge processes are smooth.

Recommendations for further research:

- A wider study on patient experience to fully explore the impacts and outcomes.
- An economic evaluation of the pathway include health and social care.
- An evaluation of the impact on capacity and the other / wider benefits.

Conclusion

In conclusion, the study has shown that the implementation of D2A has been felt to have had an overall positive impact of the quadruple aims associated with health and care improvement, in particular the improvements in staff experience were felt to be a significant outcome of the implementation and one that was not identified in the original purpose of the pathway. There was a reasonable perception among staff that the aims concerned with patient experience, reduced costs and wider benefit were being met broadly although some areas for improvement were noted.

Increased integration of care was noted and enhanced roles for discharge coordinators were seen to be positive.

With the impact of covid being felt harshly on health and social care staff, the aim of improving staff experience would seem to be increasingly necessary.

This study demonstrates that the improvement of staff experience can be a significant additional benefit to the implementation of a discharge to assess pathway. Knowledge of this benefit may be useful for health and care managers when building and developing new D2A teams.

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