

Benefits Review :

Leg Ulcer Telemedicine Service at Good Hope Hospital NHS Trust

NHS Connecting for Health:

Integrated Service Improvement Programme

31 October 2006

Executive Summary

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Executive Summary

Introduction

1. Integrated Service Improvement is an approach to change/improvement management which focuses on benefits for stakeholders. Local Health Communities across England have devised Integrated Service Improvement Programmes for main priority areas in service delivery. The aim of this review was to take a completed improvement and to test if the benefits could be demonstrated to have been realised using the approach.

Vascular Disease

2. Vascular disease affects the network of blood vessels; the arteries that carry blood from the heart and the veins that carry blood back to the heart. Vascular disease affects a large proportion of the population, more especially elderly patients, and is usually incurable and chronic and so places high demands on health care services.
3. Leg ulcers are a good example of a chronic, non-life threatening disease that affects a large number of elderly people and which benefits from the collaborative care of community based generalists and hospital based specialists.
4. Under ideal circumstances of expert shared care up to 70% of new ulcers can be healed within 3 months; however, other studies have consistently shown that the healing rate is only 20-25% when these patients are managed solely in primary care.

The Improvement Project

5. The Good Hope Hospital NHS Trust (GHH) is a medium sized district general hospital situated on the north-east corner of Birmingham serving a mixed urban-rural population of around 450,000 and has for many years included vascular surgery as part of the department of General Surgery.
6. Increased demand for the specialist service created major problems for the outpatient clinics, long waiting times for appointments and tests, disgruntled patients and increased stress for staff. The start position was one where it was not unusual for a patient to wait four months for a new outpatient appointment, over six months for an outpatient duplex ultrasound examination and over a year for an operation. Clinicians in the vascular department recognised that what was needed was not just more staff, but a radical and innovative solution to how they managed patients.

Objective of the innovative solution

7. This was 'to improve the quality of the leg ulcer service within the constraints of existing resources', and the team realised there were three constraining features of their current service:
 - Lack of consistent, accurate, timely communication of clinical information of patients with Leg Ulcers.
 - Lack of accurate, timely measurement of response to treatment.
 - Lack of a booking system which reflects patients' time allocation needs and maximises efficient use of clinical resources.
8. The project team set out to address each of these gaps and focused their solutions to deliver the benefits which were of value to the stakeholders.

9. The first and main stakeholder is the patient whose benefit is that of **reduced healing time and improved quality of life**.
10. The second stakeholder is the provider organisations who would want to benefit from **increased productivity**.
11. The third and equally important is the staff involved who would want to maximise the opportunity to increase their own **motivation and satisfaction**.

Workstream 1: One Stop Clinic

12. The solution taken forward was that of a One Stop Clinic (OSC) which improved communication as many of the aspects of care were carried out within the same attendance and also reduced the number of times a patient had to attend. Although this appeared simple, it could have been met with resistance from the radiology department because it meant that the staff and equipment would have to move into the clinic environment.

Workstream 2: Research into Leg Ulcer Management via Telemedicine

13. The system provides the fast and accurate assessment of leg ulcer status, including accurate measurement and a predictive healing date tool. The communication of that information is delivered electronically between clinicians involved in the care and treatment of patients with leg ulcers. Referrals, request for advice, monitoring and evaluation all take place via the telemedicine software and using nhs.net.

Workstream 3: Clinic booking system

14. This project was aimed at creating a clinic booking system which was designed around the patient pathway. The solution included being able to book patients for differing lengths of time and to align time for diagnostic tests with times of consultations. It also had to be simple and robust, given the range of people and locations from which booking could take place.

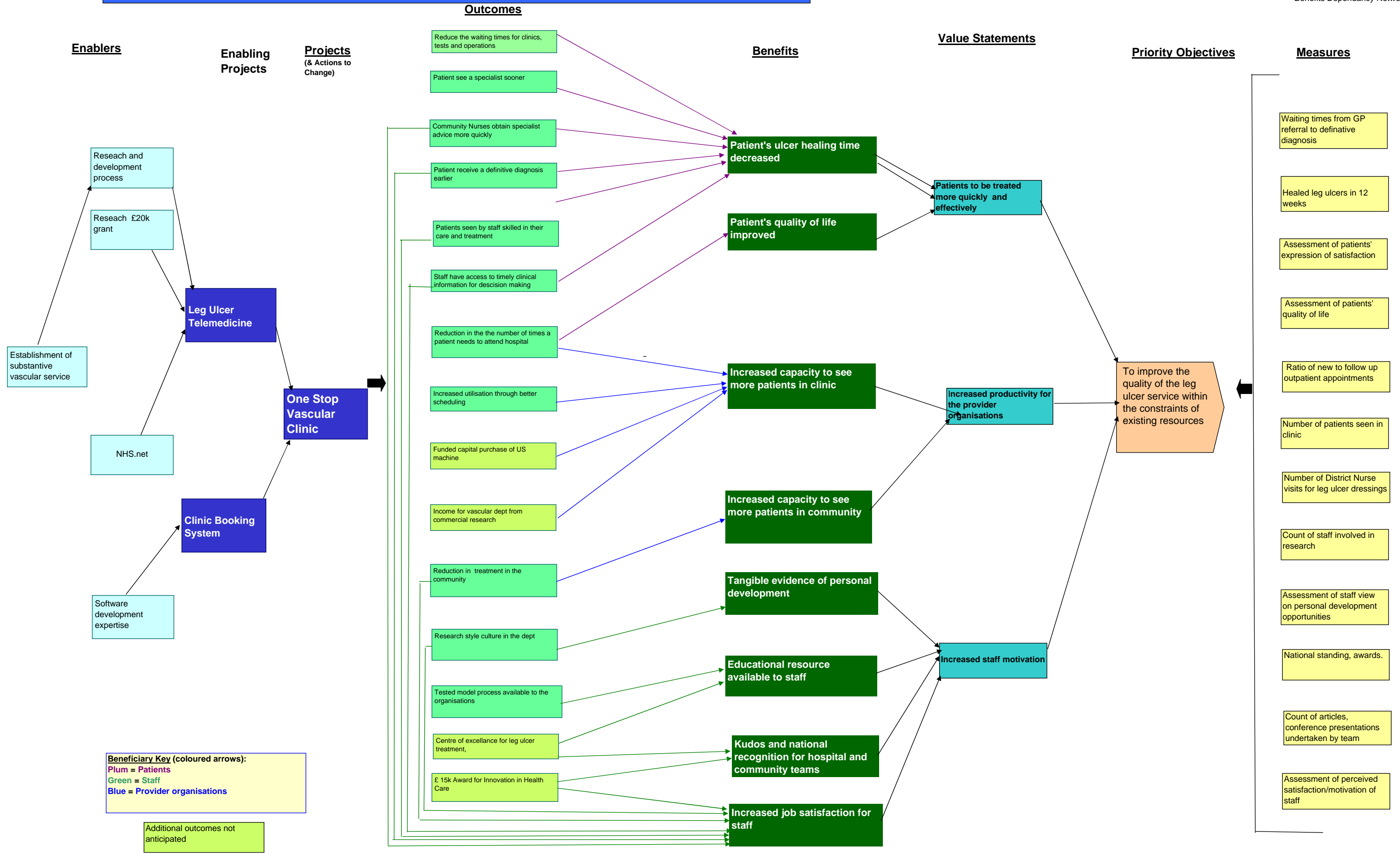
The findings

15. There is clear evidence that healing times had reduced considerably, from 38% healed at 12 weeks to 64% healed at 12 weeks.
16. Staff adopted innovative solutions to maximising their capacity without increasing the finite resource of the consultant or consultant clinic.
17. Members of the vascular team and the wider community have increased their own professional and personal development and gained great satisfaction from the service they now provide.
18. The financial impact on community services was a 26% reduction in costs. There is one off cost for the telemedicine system and for community training which, due to the research initiative, was reduced to the health economy.
19. The reviewer, by taking a best case scenario based on the outcomes of this improvement process, demonstrates that the introduction of such a system could yield reduced spend in community care for leg ulcer in the order of £1M to a population of 500,000, against one off costs of £250,000 for the LUTM in use here. It assumes the vascular skill in secondary care is in place.
20. The project leader has developed a commercial proposition for other service providers, which would be costed based on current pathways and size of population.

21. The approach of using a benefit led improvement process can be employed successfully to achieve results. Good baselining, robust measurement and setting target values for the desired benefits are vital elements of the project planning.
22. The ability to adapt and respond to situations as the project is planned and implemented is also important.

Benefits Dependency Network

Benefits Dependency Network - Leg Ulcer Service Improvement



Benefits Realisation

Leg Ulcer Telemedicine Project Benefits Realisation

| | | | Milestones | | | | |
|---|---|---|---|--|--|---|---|
| | | | Pre improvement | OSC | OSC & LUTM trial | OSC & LUTM roll out | OSC & LUTM roll out |
| | | | Dates | | | | |
| | | | 1999 | 2000 | 2004 | 2005 | 2006 |
| Benefit | Lead indicator | Benefit measures | Value | Value | Value | Value | Value |
| Leg Ulcer healing time reduced | Waiting times from GP referral to diagnosis | | 142 days | 42 days | 12 days | 40.5 days | |
| | | Healed leg ulcer in 12 weeks | National community rate: 22% | Good Hope Hospital: 38% | Good Hope Hospital: 64% Pre LUTM: East PCT: 35% in less than 12 weeks, 53% in 12-24 weeks, 12% greater than 24 weeks | | 12 months post LUTM: East PCT: 40% in less than 12 weeks, 60% in 12-24 weeks, 0% over 24 weeks. |
| Patient's quality of life improved | Patients' expressions of satisfaction | | Not collected but staff recall patient frustration at long waits and repeat returns | | | | Patients' expressed high levels of satisfaction with the service and with treatment. Some dissatisfaction with car parking |
| | | Assessment of patient's quality of life | Not collected but staff recall patient frustration at long waits and repeat returns | 58% of patients receiving 2 DN visits per week, 13% receiving 3 visits per weeks. 23% of patients attended 1 hospital appointment, 23% 2 appointments, 39% 3 appointments and 15% more than 3 appointments. | 66% of patients receiving 1 DN visit per week, 28% receiving 2 visits and 6% 3 DN visits. 31% of patients attended 1 appointment, 38% 2 appointments, 23% 3 appointments and 8% more than 3 appointments. | | Patients' report waits of 2-3 weeks for 1st appointment, delight at transfer of information via telemedicine system. Nurses report patients have reduced travel time and costs, reduced carer time to accompany, earlier return to mobility. |
| Increased capacity in clinic | Referral to new appointment as part of total wait | | 29 | 0 | 0 | 28 | |
| | Ratio of new to follow up appointments | | 1:1 | 1:3 | 1:2 | 1:1 | 1:1 |
| | | Number of new patients seen OSC session. | 52 | 46 | 143 | 222 | 225 |
| Increased capacity to see more patients in the community | | Number of DN visits for leg ulcer dressing per week per patient | | | 29% of patients receiving 1 DN visit per week, 58% receiving 2 visits and 13% receiving 3 visits per weeks. | | 66% leg ulcer patients improving on X1 visit a week. 0% of leg ulcers where unhealed at 24 weeks. |
| Tangible evidence of personal development | | Count of staff who have involvement with research | 1 | 2-3 | 30+ | 30+ | |
| Educational resource available to staff | | Assessment of staff view on personal development opportunities | Frustration at effectiveness of intervention | | | Centre of excellence, supporting students and qualified staff in research and best practice | |
| Kudos and national recognition for hospital and community staff | | National standing/ awards | 0 | | 2 | 2 | |
| | | Count of articles, conferences undertaken | 1 | | 4 articles, numerous presentations | numerous presentations | 4 articles, one book, numerous presentations |
| Increased job satisfaction for staff | | Assessment of perceived satisfaction/motivation of staff | not recorded at time, but reported frustration and isolation | | | | Evidence of good team work, highly motivated staff. Good retention rate. |