



Report of the Evaluation of the Scottish Patient Safety Fellowship

A Partnership between NHS Quality Improvement Scotland, NHS Education for Scotland and the Scottish Government Health Department

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EXECUTIVE SUMMARY

Background

It is widely acknowledged that around one in ten patients may experience an adverse event while in hospital and that half of these events may be preventable.¹ In response the Scottish Government Health Directorate (SGHD) made patient safety a national priority and launched the Scottish Patient Safety Alliance (SPSA) in March 2007 to address safety-related issues.²

The SPSA launched their first major work stream, the Scottish Patient Safety Programme (SPSP) in January 2008. The aim of the programme is to steadily improve the safety of acute hospital care across Scotland over a five year period. NHS Quality Improvement Scotland (NHS QIS) is leading this work with support from the Institute of Healthcare Improvement (IHI), NHS Education Scotland (NES) and other organisations. A major, recent initiative was the pilot Scottish Patient Safety Fellowship (SPSF).

The Scottish Patient Safety Fellowship

The SPSF was conceived and commissioned in recognition of the increasing need for clinical leadership capacity and capability to effectively promote, deliver, sustain and spread the SPSP. The specific *aims and objectives of the fellowship* were therefore:

- to develop and strengthen clinical leadership capability to support the SPSP,
- to contribute to the development of a long term quality improvement and patient safety culture,
- to establish a learning support network for transformational leadership and
- to strengthen existing collaborations within NHSScotland

The Fellowship Programme Project Group (FPPG) was responsible for the fellowship design, development and delivery. They based it on successful quality improvement initiatives such as the IHI's Quality Improvement Fellowship. The curriculum was developed by choosing and adapting specific content from these initiatives, from the various partnership organizations, from other recognized sources of local and

international expertise and from the theoretical framework of W.E. Deming's 'profound knowledge' and the Model for Improvement.

Funding was secured to host the fellowship as two sequential intakes during 2008/9 and 2009/10. The programme lead and three FPPG members used specific criteria to short list candidates, interviewed applicants and appointed six fellows. The main outcome measure of the fellowship and expectation of fellows was that they would design and complete a quality improvement project within their own organisations. They were also encouraged to submit their projects for presentation at national and international conferences and to consider submitting their work for publication.

The fellowship was delivered over a period of ten months through a combination of self directed distance learning supported by web based communication and formal coaching by the SPSP faculty. Formal education was delivered through focused residential seminars during clinical release time, offering master classes in specific aspects of patient safety and quality improvement and were delivered by internationally recognized 'experts'. Informal learning and networking were strongly encouraged and national and international leaders were invited as guests and after-dinner speakers. Fellows were expected to participate in the SPSP learning sessions and had additional educational and networking opportunities through attending the International Forum on Quality and Safety in Health Care in Berlin.

The report's findings and recommendations are informed by twenty one semi-structured interviews, two focus groups and more than seventy hours of direct observation, reviews of relevant course documentation and the results from the 'Baseline Assessment' questionnaire and the 'Indicators of Quality Leadership' (IQL) questionnaire which was completed by all fellows before and after the SPSP.

Main findings

The fellows reported deriving multiple **personal and professional benefits** from the SPSF.

- **Professional benefits** included expanding their current roles, taking on new responsibilities, being able to perform their current duties more efficient and in one case a promotion.
- Self-reported measures of **knowledge, skills and understanding** *improved* significantly. Examples of generic, transferable skills acquired by the fellows include: the ability to influence various types of health care workers; increased ability to reflect on personal strengths, weakness and behaviour; and appropriate delegation.
- Fellows reported **enhanced credibility** with their peers and health care staff. They also reported an insidious, general increase in their confidence, personal growth and increased motivation.

The fellows identified and had to deal with **various, specific challenges**.

- The majority reported having **little or no protected time** for studying, reflecting or even projects and had to fit it into their evenings and weekends. The majority had to integrate the fellowship with their existing *workload* or in some cases was given additional responsibilities.
- There was a perceived lack of **organizational support** and a failure to recognize and utilize them to their potential. Fellows felt that the fellowship organizers should have taken a more active role in addressing these issues with the corporate sponsors.
- The **projects** created their own unique challenges which were generally dealt with effectively.

The fellows expressed various **aspirations and plans** after completion of the SPSF.

- They would like to **continue to be involved** in and expand their roles in the SPSF.
- The majority would like to continue some clinical work, but negotiate or be presented with opportunities for **new and/or more influential roles in patient safety** and quality improvement on local and national level.
- They recognize the **need for ongoing and further development** and would like formal support from and/or membership of the Scottish Patient Safety Faculty.

- They intend to continue **supporting each other**, e.g. through regular, scheduled meetings.

The SPSF reportedly has many **unique strengths** and aspects that were particularly valued by all the fellows.

- The **small number of fellows** facilitated formation of a particularly strong group, with members inspiring, motivating and learning from each other. It also allowed adequate opportunities for every fellow to present progress reports, receive tailored feedback, 'one-to-one' tutoring and personal interaction with 'experts'.
- An appropriate mixture and number of learning sets, master classes and conferences were delivered. Fellows perceived these **residential learning events** to be extremely beneficial and appreciated that the content could be adapted to their specific learning needs.
- They particularly valued the many opportunities of meeting, socializing with, learning from and being inspired by ***national and international 'experts'*** and leaders.
- The **practical focus** of the SPSF and requirement for an individual improvement project was also considered a strength.

The SPSF met or exceeded its aims and objectives with a number of successful **outcomes**.

- One fellow *published* two articles in peer-reviewed publications and two have submitted manuscripts while others are working on or have the clear intention of future publication. The majority have had to write proposals to help design future policy, specific improvement guidelines and protocols for their organizations and promotional material for a range of intra and inter-organizational newsletters, information leaflets and other media.
- At least one fellow's improvement project was accepted and presented as a poster at an international patient safety conference.
- Some have facilitated learning events for the SPSP with very positive feedback with further sessions planned for the near future.
- All of the fellows successfully completed original improvement projects that they believe can continue independently of their input and that will translate into sustainable change and have the potential to hugely benefit organizations (although it is not always possible to quantify the impact). The improvement projects are summarized below with further detail provided in Table 7.

Improvement Project	Main outcome
<p>To reduce the number of infectious complications from central venous catheters in one intensive treatment unit</p> <p>Incorporating quality improvement and patient safety into the undergraduate curriculum of all healthcare professions</p> <p>To reduce the average length of stay of patients admitted to one ITU</p> <p>To improve the quality of care of patients with congestive cardiac failure.</p> <p>Ensuring beta-blocker medication is administered to suitable patients in the post-operative period</p> <p>To increase the adherence of health care staff, patients and visitors with hand-hygiene measures.</p>	<p>Compliance with care bundles exceed 95%. The rate of infections has been reduced to the target of < 1/300 days</p> <p>Open school established and eight educational organizations affiliated. An Open School Chapter Congress was held.</p> <p>The average length of stay has been reduced by two days. The total number of admissions has increased.</p> <p>Secondary care adherence of 100% to the nine quality indicators in their correspondence with primary care.</p> <p>The number of patients who are receiving beta-blockers post-operatively has increased.</p> <p>The target of >95% adherence was achieved.</p>

Recommendations

- There needs to be a balance between increasing the *number of fellows* in a given year and the reported benefits of a small group. Certain teaching activities and learning opportunities can accommodate larger group but presentations of individual improvement projects, project feedback, group work and meetings with 'experts' need to be targeted to specific needs and delivered in small groups.
- The current, structured *selection process* that gives preference to applicants with direct connection to SPSP and mature clinical experience is fair and transparent and should be retained.
- Stakeholders should consider providing *mentors for future fellows*. Some of the benefits to future fellows may include clarification of expectations, encouragement of personal reflection, a more structured and directed approach to personal learning and personal and professional support. The current fellows have indicated their willingness to participate in such a formal mentorship programme and would be imminently suitable for this role for cohort 2.

- The design of the SPSF was based on adult learning principles. Although the fellows favoured this approach they identified specific areas where they would have preferred more structure and/or additional, clear and timely information. Examples of where improvements could be made include: clarifying what the organizers' expectations of fellows are; the criteria against which fellows' performance will be measured; how and when formal feedback will be given to them; more information and support with starting up their projects; a prescriptive, compulsory reading list; and formal, practical tasks. A small number of learning sets can be further improved by replacing didactic teaching with interactive learning.
- The '*shared space*' online site requires significant redesign, promotion, regular postings from organizers and fellows and early training of new recruits if it is to be of future benefit. There should be greater clarity and an expansion of its functions as a potential learning resource, feedback and evaluation tool. At present group 'e-mailing' is the superior communication tool.
- Visits to other Scottish health care institutions should be encouraged, with a minimum requirement of one visit to another fellows' organization. This would improve networking, collaborative working and ensure that good practice is more likely to be generalized and transferred between settings. In addition, fellows should be offered the opportunity to choose and attend a recognized, *international centre* of improvement expertise. This would allow them to observe examples of successful change firsthand, gain practical experience and showcase Scottish improvement efforts. Such an international 'study trip' should be awarded on merit and after formal submission by fellows explaining their choice, the potential benefits and their strategy for disseminating their learning.
- Although all the fellows achieved their project aims and objectives they did not attempt any formal evaluation. It should be a requirement of future fellows that they incorporate an evaluation strategy and *impact assessment* from conception-stage into their projects to better quantify the organizational benefit. This may require encouragement, additional teaching and practical support. The improvement projects should also be submitted for formative assessment by external reviewers.

- Sponsoring organizations should have *greater accountability and involvement*. Fellows should have guaranteed, protected learning time in their normal working week over and above the requirement for attending the learning sets. The SPSF pilot has provision for financial grants to employing organizations to compensate them for the time released. This funding was not used for this purpose in 5/6 of the fellows. There should be regular, scheduled opportunities for communication between fellows and boards and health board presentation at selected, appropriate learning events should be a requirement in the future.
- Creating post-fellowship opportunities and roles is important in encouraging, supporting and ensuring ongoing involvement and continued development of the current fellows. Stakeholders should consider a package of formal and informal measures to support fellows who complete the SPSF. Examples of these measures may be offering membership of the Scottish Patient Safety Faculty, invitations to 'shadow' national patient safety leads, informal peer-review of fellows' manuscripts and/or financial support to enable them to meet at least annually post-SPSF.

Conclusion

There is a national recognition of the ever greater need for clinical leadership capacity and capability to implement practical change and patient safety and quality improvement in NHS Scotland. The SPSF was envisioned, specifically designed and delivered with the intention to fulfill this need. The first year of the pilot has shown that the fellowship is a quality product that delivers on this promise. Although the evaluation identifies potential areas for improvement and makes specific recommendations that may further enhance the fellowship it should largely be left unchanged. There is every indication that the SPSF has significant benefits to fellows, their sponsoring organizations and that it has the potential for cost-effective and sustainable improvement that may spread across the service. The fellowship is one of the essential solutions for the future of a safer Scotland.

1. Introduction and background

It is widely acknowledged that one in ten patients may experience an adverse event such as a medication error, pressure sore, post-surgical complication or infection while in hospital and that half of these events may be preventable. In response the Scottish Government Health Directorate (SGHD) made patient safety a national priority and launched the Scottish Patient Safety Alliance (SPSA) in March 2007 to address safety-related issues.

The SPSA is a coalition that brings together a number of key organisations and people, including the Scottish Government, NHS Quality Improvement Scotland (NHS QIS), Health Protection Scotland, NHS Education for Scotland (NES), NHS Scotland Boards, Royal Colleges and professional bodies, world leading experts in patient safety, and patient representatives.

The Scottish Patient Safety Programme (SPSP) is the first major work stream of the SPSA and the objective of the SPSP is to steadily improve the safety of hospital care right across the country. This will be achieved by using evidence-based tools and techniques in defined areas in order to improve the reliability and safety of everyday health care systems and processes. NHS Quality Improvement Scotland are leading this work with support from our technical partners the Institute of Healthcare Improvement (IHI).

The specific aims of the programme are to steadily improve the safety of acute Scottish hospitals over a five year period by:

- Recognizing and building on international and local achievements, for example the Safer Patient Initiative in NHS Tayside;
- Deploying evidence-based tools, techniques and interventions to improve the reliability and safety of everyday health care systems and processes;
- Building a strong, positive culture of patient safety and quality improvement;
- Ensuring sustainability by building capability and capacity at all levels.

Data will be gathered unit by unit in real time by health care staff directly caring for patients. They will also be expected to have leading roles in the implementation of

those changes that are necessary to achieve the specific objectives of the programme. The objectives are:

- A reduction in healthcare associated infections
- A reduction in adverse surgical incidents
- A reduction in adverse drug events
- An improvement in critical care outcomes
- An improvement in safety and quality culture

The SPSP is co-ordinated and supported by NHS QIS in partnership with NHS Education Scotland (NES), the Institute for Healthcare Improvement (IHI), NHS territorial boards, the Hospital Acquired Infection Taskforce (HAIT) and SGHD patient safety advisors. The partnership commissions and delivers specific initiatives to facilitate the successful implementation of the programme. A major, recent initiative was the Scottish Patient Safety Fellowship (SPSF).

2. Overview of the SPSF

2.1. Aims and objectives of the fellowship:

Every acute hospital in Scotland has now signed up to the SPSP. Some hospitals have only started to implement pilot initiatives, while others are attempting to spread their early improvement successes across departments. There is also an imperative to extend the programme into all other health care sectors, for example general practice and mental health. If the programme is to be effectively promoted, delivered and sustained it will be essential to build additional leadership capability and capacity with incremental increases proportional to its spread. This recognition helped to define the specific aims of the fellowship, namely:

- To development and strengthen *clinical leadership capability* in order to support the SPSP, and
- To contribute to the development of a long term quality improvement and patient safety culture within NHS Scotland.

It was thought that establishing the fellowship within the framework of the SPSA would support clinicians leading frontline teams, enabling effective clinical leadership at the level where it would most effectively support the programme. The objectives of the SPSF were:

- To build leadership capability amongst clinicians engaged with the SPSP and equip them with the necessary enthusiasm, experience and skills to support the development of the programme and spread improvements within their organisations and nationally;
- To develop clinical leaders capable of delivering improved health and healthcare for the people of Scotland;
- To establish a learning support network for transformational leadership within the SPSP, with the potential to spread beyond it into other areas of healthcare improvement;
- To strengthen existing collaborations within NHSScotland through a shared improvement agenda that brings together work programmes and expertise;
- To complement the wider improvement capacity building programmes within NHSScotland and to support NHSScotland workforce development;

2.2. Design and development of the fellowship

The Fellowship Programme Project Group (FPPG) was responsible for the SPSF design, development and delivery and has multi-professional presentation from the various stakeholders. The FPPG reports quarterly to the Health Foundation and the SPSP Steering Group and the SPSP Steering Group in turn reports to the SPSA National Advisory Board.

Development took place during partnership meetings and through electronic correspondence over the first quarter of 2008. The FPPG based the programme's design on their experiences of successful quality improvement initiatives such as the IHI's Quality Improvement Fellowship and Improvement Advisor Programme. The curriculum was developed further by choosing specific content from these initiatives judged to be relevant to the SPSF aims and objectives. Additional fellowship content was also identified and adapted (as necessary) from the various partnership organizations and from other recognized sources of local and international expertise.

The theoretical underpinning and framework for the SPSF curriculum was W.E. Deming's Profound knowledge and the Model for Improvement. The SPSF curriculum content is shown in Table 1.

2.3. Application and selection process

The FPPG and various stakeholders initially agreed to run the fellowship as two sequential intakes during 2008/9 and 2009/10 with each lasting ten to twelve months and recruiting up to five fellows a year.

The SPSF was widely advertised during the summer of 2008. Applications were made in writing with a two-part form that had to be completed by interested candidates as well as by their employing organisation's chief executive before the deadline of 5th September 2008. The programme lead and three members of the Fellowship Programme Project group shortlisted candidates using eight specific short listing criteria, shown in Table 2. They also formed the interview panel and made the final appointments using an assessment centre approach during October 2008.

Six applications achieved broadly similar scores that were substantially above the others. However, three of the applicants were from the same NHS health board. In order to manage the resource allocation equitably the programme lead reached an agreement with the sponsoring executive that the board would only receive the backfill grant for two of the three fellows. This compromise allowed a total of six fellows to be appointed. The demographic information of the fellows is shown in Table 3.

2.4. Fellowship delivery

The fellowship was build using principles of adult and action learning with the philosophy 'all teach, all learn'. It was delivered over a period of ten months using a combination of self directed distance learning supported by web based communication and formal coaching by the SPSP faculty. Formal education was delivered through focused residential seminars during clinical release time. The full SPSF programme has been attached as Table 4 with additional details of selected aspects below:

Residential seminars or 'learning sets' were hosted over two to three days and offered master classes in specific aspects of patient safety and quality improvement delivered by internationally recognized 'experts'. Informal learning and networking were strongly encouraged with ample opportunities created through the provision of

formal social events. National and international leaders were invited as guests and as after dinner speakers to these events. The learning sets also allowed all the fellows opportunities to present their projects, their progress and challenges and to receive feedback. An example of the agenda of one of the learning sets is shown in Table 5.

The fellows attended two national conferences, the SPSP learning session 3 and SPSP learning session 4. These two-day conferences offered opportunities for networking and collaboration as they were attended by more than 300 Scottish delegates with a strong interest and/or participation in patient safety improvement and who presented all the health boards. The fellows also had the opportunity to attend the various lectures, workshops and poster presentations. They facilitated specific learning sessions, raised awareness of and promoted the SPSP. The fellows also attended all four days of the International Forum on Quality and Safety in Health Care in Berlin along with 1800 delegates from 63 countries.

Fellows were provided with a suggested 'reading list' and a selection of books judged relevant to patient safety and quality improvement. They were encouraged to contribute to the 'shared space', an online community envisioned as an educational resource and communication tool for their and the programme organizers' use. Other methods of delivery that was considered by the fellowship organisers included teleconferencing as a potential medium of learning; fellows 'shadowing' SPSP managers and national patient safety leads; and a 'summer school' that would allow fellows to attend an international centre with a recognized track record of quality improvement.

The main outcome measure of the fellowship and expectation of fellows were that they would design and complete a quality improvement project within their own organisations. They were also encouraged to submit their projects for presentation at national and international conferences and to consider submitting their work for publication.

3. Evaluating methodology: Measuring success

The evaluation was designed according to the principles used by the Health Foundation, namely 'describe', 'assess' and 'explain'. This attempted to answer the following high-level questions:

- To what extent does the fellowship help to achieve the stated (strategic) objectives of the SPSP?
- To what extent does the fellowship meet its own objectives?
- What can we learn about the fellowship for future investment / improvement?
- An impact assessment on the outcome levels: fellow (individual), fellowship and future.

These evaluation questions were broken down to set sub-questions for the evaluation on process and structure, outputs, outcomes and resources usage and to demonstrate what data and resources were needed and the phases that were to be undertaken.

Data collection and analysis were undertaken throughout the evaluation following the 'realist evaluation' approach of Pawson and Tilley. This enabled early findings to be fed back to the stakeholders and fellows, both informally and through various reports. This report will seek to identify emergent themes, early outcomes and suggest possible changes. A longitudinal component will ensure that fellows are followed up after completion of the fellowship to gather data on longer-term outcomes.

3.1. Aims of the evaluation:

- To evaluate the effectiveness of the SPSP as the return on expectation (ROE) of the fellows, the organizers and the various stakeholders.
- To identify strengths, areas for improvement and to make specific recommendations regarding the fellowship's potential viability, design and future delivery.

3.2. Sample, setting and subjects:

All six fellows participated voluntarily in the evaluation. In addition, three stakeholders from NHS QIS and NES were also recruited. The setting for the evaluation was the learning sessions, conferences and informal meetings.

3.3. Data collection and analysis:

The evaluation used a mixed-methods approach to better capture the complex and rich data. Triangulating qualitative and quantitative methods also enhance the reliability of the evaluation. All data was treated as confidential.

3.3.1. Questionnaires:

Fellows were asked to complete two different questionnaires before and after participating in the SPSF as part of their formative, confidential assessment and to assist the evaluation.

The first was the 'Baseline Assessment' questionnaire, a learning needs analysis that required fellows to indicate their perceived knowledge of and skill to use various improvement methods and tools on a 1-100 rating scale. The results are used to assess which of the five stages of learning fellows have reached (information, skill, knowledge, understanding and wisdom stage).

The second was the 'Indicators of Quality Leadership' (IQL) questionnaire with 24 close-ended items measuring leadership competencies in three areas: 'feeling' (interacts authentically), 'doing' (acts effectively) and 'thinking' (conceptualises issues). Fellows indicate their perception of the importance and effectiveness of each item on a five-point Likert-like scale. In addition, each fellow's corporate sponsor was asked to complete the IQL at the end of the SPSF. The results highlight their individual strengths, may indicate relative weaknesses and help to prioritize specific leadership development needs.

3.3.2. Interviews

A total of twenty one semi-structured interviews were conducted during pre-booked time slots at the convenience of fellows and stakeholders. All interviews were digitally recorded and transcribed by an independent contractor.

3.3.3. Focus groups:

A one hour session was allocated at the end of specific learning sessions. Fellows were asked to discuss their experiences of the fellowship, their main learning points, whether they had any specific remaining and/or unaddressed learning needs, their plans of action and about the specific changes they hoped to implement, whether they had considered or identified any potential barriers and potential strategies to deal with them. The evaluation officer made field notes and selected portions of the discussions were digitally recorded and transcribed.

3.3.4. Observational data:

The evaluation officer recorded anecdotes, specific events and personal impressions in his field log during more than seventy hours of observation of learning sessions, informal discussions and social activities involving fellows, organizers, stakeholders, 'experts' and guest speakers.

3.3.5. Review of relevant documentation

Relevant course documentation was reviewed. This included agendas and minutes of meetings, strategic documents relating to the design, development and funding of the fellowship, online learning resources available to fellows, documents relating to the application and selection process and communication and information leaflets issued by the organizers for the benefit of fellows.

3.3.6. Review of other fellowships

A brief and informal consultation exercise was undertaken to identify comparable national and international fellowships. The internet and telephone was used to gather information on various aspects of other fellowships such as duration, selection process, number of fellows, outcome measures, content, delivery methods and evaluation strategies.

3.4. Data analysis:

Statistical analysis (frequencies and descriptive) of quantitative data was performed in SPSS v14.0. Missing data from one fellow was accounted for in all calculations. Qualitative data was thematically analyzed with the mind-map software MindGenius Education.

3.5. Timescale

- An interim report was provided March 2009.
- A final report will be provided January 2010.

3.6. Research governance and ethical procedures

The South East Scotland Research Ethics Service (MREC A) considered the proposed evaluation strategy and advised that ethical review was not required.

4. Fellows

4.1. Motivation for participating in and expectations of the fellowship

The fellows mainly described intrinsic, personal motivational factors. Expectations were described on various levels: personal, professional, practice and organisational level. The factors they considered most important have been described in the March 2009 report and have been summarized below:

- To meet specific knowledge, skills and/or attitudinal learning needs.
- Increased confidence.
- Increased credibility,
- The skill to influence colleagues and other health care workers.
- Career progression.

4.2. Personal and professional value derived by fellows from the SPSF

4.2.1. Professional development

The fellows reported deriving various benefits for their professional development from the SPSF. One of the fellows credited the fellowship as the motivation and reason for applying and securing a promotion. Other fellows have indicated their willingness and readiness to take on new and different roles in their organisations and on a national level.

‘...I’ve developed both personally and professionally. I have no doubt I would not have gotten my [promotion] because I wouldn’t have applied for it without the confidence of the fellowship. ...’

‘...There’s a possibility of a role to do with patient safety nationally in the next few months that I would be keen to have. So for me it’s been what I hoped it would be, it’s a step up to a different level and do something on a national scale, rather than a local scale, so it’s been very good for me...’

‘...I think the fellowship is giving me the increased confidence and increased credibility to take up [other positions]. I do think it develops future health care leaders...’

Most fellows reported that they have been expanding their current roles, taking on new responsibilities and applying their learning in different settings.

‘...I’m in the middle of adapting or devising a care bundle for head and neck cancer. I am running a patient care and experience programme for head and neck cancer and applying the same principles to that, and writing stuff for it. At the same time I am writing a newsletter for patients talking about this sort of thing...’

‘...There are new things that I want to do ... some things that I don’t think I would have had the drive for, or the thought that it was a possibility to do that... I will be doing some stuff that I wouldn’t have gone near before ...’

Some fellows felt that they had a better understanding of their current role in their organisations and that they were better equipped to fulfil their commitments.

‘...The big bit of what will happen after the fellowship [is that] I will be better at what I should be doing. Doing it better and a lot more confidently with a clearer picture of how I should be doing it and what I should be doing...’

Fellows valued the opportunity that the SPSF presented to develop portfolio careers. They felt that the variety of roles and responsibilities kept them motivated and their careers interesting.

4.2.2. Increase in knowledge, skills and understanding (transferable skills)

Self-reported measures of knowledge, skills and understanding improved significantly across all domains with the aggregated results shown in Table 6. Fellows reported gaining new knowledge but also welcomed affirmation of existing knowledge.

‘...I’ve definitely got some brand new knowledge, but I’ve also got an awful lot of reinforcement of knowledge that I had but maybe wasn’t that confident in...’

‘...I think knowledge of areas that filled gaps in my own knowledge around everything: around management, around measurement, around measuring change, around politics...’

The practical nature of the SPSF encouraged and supported acquiring new and specific skills. Examples of some of the skills that fellows reported developing include the ability to influence all the various members of the health care team, the ability to critically reflect on their own actions and the ability to delegate responsibility in an appropriate manner. Fellows described these skills as generic and transferable between settings. Results of the IQL questionnaire are shown in Table 7, with significant improvements reported by fellows and by their sponsors in all measured components of leadership.

‘...I think probably my *influencing skills* have developed a bit, in the sense that I’ve actually influenced a national agenda, in the way that I wanted it to be...’

‘...If I was to say one thing that had come out of it I’ve started through some *degree of reflection* on how I am approaching what I’ve got to do now and feeling that there has been significant changes...’

‘...I’ve been leading it a lot in HDU, although actually, for it to succeed, I’ve needed to become less in charge of it and [let] other people take on the responsibility...’

4.2.3. Increased confidence and credibility

All of the fellows perceived ‘credibility’ as a fundamental requirement to be able to effectively implement change, promote the SPSP and especially to engage with their peers. Being selected and taking part in the SPSF enhanced their credibility by formalizing their roles and signalled to their peers that they have some authority in this area. They also realized that there is an ongoing requirement to sustain their credibility by continuing to lead through practical examples.

'...What I was doing at first was clearly not achievable by me without considerable positional authority...'

'...Sometimes you do get people who take a national role in certain things, but actually there may be a sort of gap underneath. You know, have you done it yourself? I think it's always good to be able to say, well I have...'

'...I wouldn't have the credibility to say this is how to do it, if I can't do it in my own place of work so I have to continue my improvement work...'

The majority of fellows reported feeling much more confident in general and about patient safety in particular as a result of participating in the SPSF. They appreciated the organisational investment of time and resources in them. Derived confidence was seen as a by-product of all the aspects of the fellowship contributing over a period of time.

'...more confident about myself now. I now know I'm as good, if not better, than the next person in the room...'

'... I'm feeling a lot more confident, which is what I came in this for ... confident to stand up and argue for safety and quality...'

'... I think it has made me more confident, that feeling of being invested in and supported and valued. Being part of the fellowship has given you a label which you use as a passport into other things...What's interesting about it is that it's quite insidious - you're not aware that it's happening, but then you look back and see how far you've come...'

'...You're made to feel very special. I think in a medical career it's not often that people take such an active interest in you. I think we're all feeling very enabled and supported by it. I think the fellowship does make you feel that you've been selected and that you're important and that things are being invested in you. So that's a really nice, really good feeling to have. NHS isn't very good at doing that...'

Some fellows described a paradoxical effect with their levels of confidence both increasing and decreasing at times. They acknowledged the difficulty of attempting

to lead change, of promoting a new methodology and the negative impact of having to weather adversary from peers and other members of the health care team. The fellowship would seem to be particularly useful to support clinicians facing these difficulties as it 'offset' some of the negative feedback with constructive, supportive and enabling messages.

'...I think when you're leading transformation change as we all are, and I certainly have been, [confidence] for me it is a bit up and down. You can find yourself in the firing line, because you're challenging the accepted norm, you're a doctor, you're leading the vanguard. Whilst it's been encouraging and you think this is good, this gives me more confidence to go on, there's other times when your confidence are shaken because it's such hard work and I sometimes feel a little bit isolated within my organisation. I feel like I'm speaking a different language to other people. It's helped my confidence in lots of ways, but because it's so left field to how everybody else thinks and behaves and does business, it can work the other way as well...'

4.2.4. Networking

The SPSF encouraged and facilitated networking within the group, on a national and also international level. The fellows reported deriving great value from their expanding networks. They were able to progress their own work better, promote their projects and participate in the wider field of quality improvement.

'...The fellowship has enabled me to make connections and progress things. I suppose that's the beauty of any fellowship- it's not just the formal things that go on within in, but it's all the spinoffs...'

4.2.5. Personal growth and satisfaction

The fellows were able to describe their personal journeys through the fellowship and reflect on their strengths and weaknesses. The majority reported enhanced self-awareness and personal growth.

‘...I hope that I’ve grown as a person, that I’ve learned more about myself, my own strengths and weaknesses ...’

‘...I’ve got personal and professional development and I think I’m a completely different person than I was in November...’

The fellows enjoyed participating in the wide range of quality-improvement related activities and meeting the challenges of their individual projects. They were proud of what they have accomplished and celebrated specific achievements, while feeling motivated to continue onto the next phase of their ongoing improvement work.

‘..I think the project was certainly worth doing...’

‘...In some ways I’d say my project has done better than expected. When I sit back and reflect upon what I’ve achieved I’m very proud of it...’

‘...The other big achievement [was] to get funding, for my meeting in April, and that’s a big achievement: 100 people from Scotland, England, Wales...’

‘...I’ve got my Va Va Voom back!... I haven’t been performing at that level and the Fellowship has just unleashed that again, and I am now convinced I can make a difference to the NHS in Scotland, absolutely convinced...’

4.3. Challenges posed by the SPSF

4.3.1. Lack of protected time

The majority of fellows reported having little or no protected time for studying, reflecting and sometimes even for working on their projects. Instead, they had to fit the non-residential aspects of the fellowship into their personal time over evenings and weekends. All of the fellows reported spending well in excess of the recommended four hours a week. They were aware of the impact this had on their personal lives and felt that it would not be sustainable in the longer term.

‘...I used evenings and weekends to do work in most weeks...’

‘...It’s all personal time...’

‘...I’ve been doing more than my ten hours a week, if you like. But just now, where I work, the system doesn’t recognise that particularly; I still have to do the same amount of clinical work. So I’ve actually been doing, I feel, a massive leadership/change role, without really being supported in that. And I’ve personally come to the realisation that that’s not sustainable for me...’

4.3.2. Lack of organisational support / workload

The majority of fellows had to integrate the fellowship learning activities with their existing workload. In some cases they were given additional responsibilities.

‘...It’s difficult, nothing was taken off me to do this, you know. In fact to some extent things were put on me, it’s like you have the status of improvement expert and [the organisation] just need more stuff...’

There was a perceived lack of organizational support in dealing with the time and workload pressures of fellows.

‘...people have mentioned the fellowship as something quite nice [about] the organisation: ‘Oh yes, we’ve got a fellow who is doing lots of improvement and safety work, so that shows our commitment.’ But their actual commitment to me has been pretty poor I think... when I went and talked to my sponsors and said ‘I’m struggling I need some time’ [they] said ‘well, you took this on knowing that you could do as long as it wasn’t going to impact on any of your day job.’...’

The fellows also perceived their sponsoring organizations as generally failing to recognize and/or utilize them to their potential.

‘...I’m just not sure how well [the board] will utilise what I’ve learnt from this course...’

‘...If I’m going to be hard on my Health Board, I’ll say that currently [they] don’t quite realise how good I’ve become. I think I can deliver on things that are not covered by the Scottish Patient Safety Programme...’

Many expressed the view that the fellowship organizers should have taken a more active role in addressing these various issues with the corporate sponsors. They felt that there should have been greater accountability given the stakeholder investment with sponsors required to meet the fellowship obligations.

‘...There probably has to be something from [leadership] making sure that Line Managers actually take things off [fellows]...’

4.3.3. Challenges arising from implementing improvement projects

The projects created their own unique challenges. Fellows described difficulties from not being able to personally supervise all stages of their projects, difficulties in dealing with negative feedback and resistance from peers and other health care workers and having to adjust the size, scope and expectations of existing projects.

‘...Because I’m not on site I am relying on other people...’

‘...Downsizing to a very small tiny sliver, not even a chunk, but a sliver, and compressing it into work to be done...’

‘...In terms of improving quality and leading change, and so on, I’ve found it really tough; personally emotionally tough. I find sometimes you do get quite a lot of negative feedback. I’m almost ready to be the guy who just goes and does his job, his one job. Because sometimes I feel that the second job gets very little thanks and/or recognition...’

The fellows were generally able to meet these challenges and successfully resolve difficulties. They found their developing skills in influencing and communication, new knowledge and personal involvement in projects of particular value in overcoming these barriers.

‘...I don’t know if I have got completely past [the barriers], but just by asking people please could they do this...Knowing them and then knowing about the patient safety thing...’

‘...At least one episode of wilful sabotage ...I spoke to him, I engaged him. I did a presentation to the group and gave them an opportunity to actually publicly dissent, which he declined to do... I got round him....’

4.3.4. Opportunity cost of the fellowship

The SPSF presented different personal opportunity costs to the fellows, with some describing lost earnings or foregoing alternative careers options. However, the majority felt that these personal costs could well be justified. Should the current funding arrangements for the fellowship change and future fellows have to incur personal financial costs it may well be necessary for the organizers to consider these opportunity costs in greater detail?

‘...Actually I have paid for [the fellowship] myself in many ways, in that [my private] clinical sessions had been cancelled, waiting time initiatives have been done by other people. This has cost me money I am sure, I have no idea how much - I am not that interested. But if I’d had to put cash up front for it, I think I would have had a hard job selling that one to my wife, quite honestly...’

This is different from acquiring a surgical skill that makes you more valuable in the market place for moving to the States or something like that. This gives a skill that’s specific to the Scottish NHS...’

4.4. Aspirations and plans after the fellowship

4.4.1. Further professional development

The fellows have various aspirations and plans following the fellowship. The majority would like to continue some clinical work, but would also like to negotiate or be

presented with opportunities for new and/or more influential roles in patient safety and quality improvement.

‘...I now have quite a clear idea about what it is that we should be doing. And I just hope that I get the opportunity to use that...’

‘...the stuff that I’m learning could help me get a job in something that I think is really valuable and quite fascinating...’

Some fellows recognized the potential challenges and demands of attempting to balance two seemingly divergent careers and felt that organisational and professional support would be crucial for them to manage both successfully.

‘...I do a full time clinical job and for me I feel a little bit at a crossroads. I either have to get some time or promotion or get a job to do with change and quality improvement, or I have to back off a little bit and go back to being a full time clinician. Changing stuff and developing new ways of caring is a full time job that can be hard [just] to dabble in. The more time and effort that you spend in these projects, which are a bit different from your core business, you become aware that each role is losing out a little bit...’

‘...I am a clinician - I do enjoy my work and you are sometimes conscious that if you take on these types of posts you can be flavour of the month and one day you are suddenly [gone. If] I’ve not done clinical work what the hell am I going to do, so I am interested in keeping clinical going but I would be happy to split up my time...’

4.4.2. Preserve the support and function of the fellowship network

All of the fellows expressed their intention to continue supporting each other. This support will take various forms, for example through regular, scheduled meetings, informal communication at conferences, in their respective health boards and through e-mail and telephone calls. They are also planning a further visit during a proposed ‘summer school’ and are considering visits to each others’ work places to see the improvement projects.

‘...We’re starting to shape our destiny a little bit, which is nice. Although we’re all holding back waiting for someone else to organise it a little...’

‘...I would like us to carry on meeting. I would like us to identify more learning needs and have the capacity to meet up every few months and just support ourselves, maybe do some improvement clinics and try to link in as supported members of the faculty for the rest of Scotland...’

‘...We’re going to carry on and try an be quite proactive and make things happen ourselves...’

4.4.3. Recognized need for ongoing, further personal development

The fellows recognize their need for ongoing and further development and would like formal support from and/or membership of the Scottish Patient Safety Faculty.

‘...I’m not a finished article, I don’t believe you’re ever a finished article, I think you’re always learning until the day you retire, but I will need guidance, and the access that we currently have to the Scottish Faculty and IHI, if I can’t sustain this ...I will not be able to build upon it...’

‘...I’m happy to continue with it [improvement work] but I will need guidance, I will need support, and I’ll need the contacts to help facilitate it. I would like a role or a job description. I don’t necessarily want a title...’

4.4.4. Continued and increased involvement in SPSP / SPSF

The majority would like to continue to be involved in and expand their roles in the SPSP with local but also national influence. Some have requested ‘shadowing’ SPSP leads and/or national patient safety leads. One suggestion was that fellows should atomically be invited to board meetings along with SPSP faculty.

‘...I would like to have influence on a national level...’

'...If people in my health board see that people in the national programme are paying attention to me and value my opinion that's only going to better my career ... I'm not going to stop, I don't know what I am going to do next but I'm not going to stop here...'

The majority of fellows recognised that the principles, knowledge and skills that they have acquired can be transferred and utilized in the wider quality improvement agenda.

'... I can see how it applies in areas of healthcare that aren't currently covered by the Scottish Patient Safety programme, and the test for me over the next six to twelve months is to facilitate and coach to enable that to happen...'

5. Fellowship

5.1. SPSF strengths

5.1.1. Residential learning events

The number, mixture and timing of learning sets, one-day master classes and national and international conferences met the fellows' expectations and needs.

'...Yes, there's been enough I think. I don't think I could have done them any more frequently because you seem to finish one, have some homework to do and the next one comes...'

'...I think probably in balance there were enough learning sessions...'

The fellows described the learning events as comprehensive, relevant, challenging and of exceptional quality. The content was adapted in response to their specific learning needs with one example being the provision of a 'writing workshop' for those fellows with little or no experience of writing for publication. Fellows were generally satisfied with the venues and facilities.

'...All the sessions have been wonderful... All the training that we've had I think are the sort of stuff you know you wouldn't get if you went and looked for it. You know it's quite special...'

5.1.2. Small number of fellows

There was unanimous agreement that the small, selected number of fellows contributed significantly to the overall success of the fellowship. Fellows found that there were sufficient opportunities for 'one-to-one' teaching, clarification and/or expansion of key learning points, chances to present their progress and challenges and individualized feedback.

'...I think the valuable thing in the Fellowship is the small numbers. That's what makes it different, that's what *makes* it, in my opinion...'

‘...As I’ve said before I don’t think you’d get that in a big lecture theatre. ... it’s stuff unless you’re up close and personal to it, in a small room, as opposed to a big lecture theatre, you might not engage with it, it’s as simple as that...’

The fellows credited their small number as a crucial facilitating factor in forming and functioning as a supportive group. They described learning from each other, drawing inspiration from each other’s work and using the group as a resource, for example to introduce them to new contacts.

‘...I think having five or six colleagues who fed a lot of each other - that’s been great, [we were] on a kind of joint journey together...’

‘...[The other fellows] provoke you, makes you think, and everybody’s work that goes on fires you up, re-motivates you...’

5.1.3. The fellowship had a practical focus

The practical focus of the SPSF and the requirement of an individual improvement project were also considered fellowship strengths. Fellows reported learning through trial and error and by applying their acquired knowledge and skills ‘Expert’ feedback could be tailored to help fellows resolve specific challenges.

‘...It’s (the projects) gone fine, there’s been learning points and we’ve been getting into a fair bit of detail, it’s been extremely helpful to discuss and learn around a real practical thing that you’ve been doing...’

5.1.4. Experts

The fellows particularly valued their many opportunities of meeting, socializing with, learning from and being inspired by national and international ‘experts’ and leaders in patient safety, quality improvement and government.

‘...I think that having the high value experts coming to speak to you in a small group has enormous power. I can understand that it’s expensive [but] I think it adds a lot of value...’

‘...I think meeting, being taught and being inspired by world class people in the true sense, purely inspiring individuals, who have clearly walked the walk as well as talked the walk...’

‘...To have the opportunity to meet policymakers and current and future healthcare leaders – sitting down in a room with like-minded individuals, getting ideas from these people, learning from where they went wrong - that’s a very positive thing...’

‘...The access you get to these people money can’t buy, because it’s not on the open market. So that’s the beauty of it...’

They commented on the networking opportunities and also on the potential resource these contacts presented to help them develop and achieve their aims and objectives.

‘...I’m also fairly aware that within the facility there is a wonderful network of people who are eminently published and I think through the fellowship I would be quite comfortable sending it to a whole bunch of other people and saying ‘please just pull this apart and tell me what it should look like.’...’

5.2. Aspects of the SPSF that can be improved

5.2.1. Communication and information regarding the fellowship

The fellows identified a number of areas in which the SPSF could potentially be improved for future delivery. They felt that communication between the fellowship organizers and fellows could generally be improved. They expected greater clarity of the organizers’ expectations of them, timelier, structured and detailed information about the practical aspects of the SPSF delivery, more information and support with starting up their projects and more administrative support.

‘...It was a bit of a shaky start...The preparatory information about what was expected from us was a bit unclear before the first learning set...’

'...I think communication needs to be improved, absolutely, [especially] at the beginning. The others felt exactly the same... I think they wasted two or three months not doing this, so that's crucial. Actually that still goes on, we're still getting a drip feed of information and it feels a bit chaotic...'

'...I think the admin needs to be changed...'

'... I suppose there is an expectation which has never been quite made clear in the fellowship that we do produce something for publication...'

The majority of fellows felt a need for a formal system of regularly scheduled meetings between the organizers and fellows to allow two-way feedback and/or appraisal of performance.

'...In a way, we're also looking for that feedback about the things that we can do better...'

'...So some feedback individually would be quite useful. You know, you've done this well, you know, this is an area that, you know, we're a bit disappointed ... you know, you could have done a bit better, and why is that, you know, what other skills do you need? So actually just almost having a stock take and say, what can we do to round off the experience and the training as much as possible, would be quite good...'

5.2.2. Increased involvement, accountability and responsibilities of sponsoring organisations

All of the fellows agreed that the sponsoring organizations should have greater accountability and involvement in the SPSF. They reported that there was little or no board presentation at their learning sets. On the few occasions when board representatives did attend the learning content was not considered to be of specific value to showcase their progress.

'...It might be more sensible for the people to come when we're talking about our projects and what's next...'

Fellows should have guaranteed, protected learning time in their normal working week over and above the requirement for attending the learning sets.

There should be regular, scheduled opportunities for communication between fellows and boards. These meetings will allow fellows to update boards on their personal and project progress, highlight specific challenges that may need to be met, enlist board support for future spread and act as tangible proof of senior leadership commitment to quality improvement. In turn, the board will gain greater understanding of the practical dimensions of working at 'grass roots', of ways in which they can help to facilitate change more effectively and the potential of empowering and enlisting the fellows to have greater and varied roles in their organizations. One of the fellows reported that this was already the case in his board as his project was a standing item on their agenda.

'...They've got us on as a standing agenda on their meeting, so that's good...'

5.2.3. Learning sets

The design of the SPSF was based on adult learning principles. One of the principles is that the fellow should drive the learning process, with the fellowship adapting and responding to specific needs. The fellows appreciated this approach and identified one learning set that could be further improved by replacing didactic teaching with interactive learning.

'...This one has not been as successful as previous ones. It was the worst possible educational experience, being talked at for seven hours. I think the beauty of the six has been that it has tended to be a very interactive, as you've seen, and then we have something that actually just stifles any interaction, it's just a waste of everyone's time...'

5.2.4. Shared space

All of the fellows found the 'shared space' cumbersome and slow. They preferred group e-mail as a communication tool. The shared space also did not deliver as an educational tool.

'...It's not sexy, is it?...'

'...I think that the most disappointing aspect of the fellowship has been the 'shared space'. The shared space has not delivered in any way. It's a dog, it's difficult to use and presumably that's why it's not been populated...'

They felt that the shared space would require significant redesign, promotion, regular postings from organizers and fellows and early training of new recruits if it is to be of future benefit. There should be greater clarity and an expansion of its functions as a potential learning resource, feedback and evaluation tool. One practical suggestion was to alert fellows via SMS text message whenever an important posting was made. Another suggestion was to enlist the help of future mentors in promoting its use.

'...I think that there has to be some leadership pre loading of this. There has to be a commitment to actually almost make us look at it every day...'

Fellows should receive electronic notification when important resources or postings are added to the shared space

The course organizer / dedicated person should lead discussions on the shared space. Fellows that don't contribute initially should be encouraged by their mentors in the first instance.

5.3. SPSF delivery

5.3.1. Teleconferencing

Teleconferencing was proposed as one possible communication and teaching method. Fellows did not feel that it would be valuable. Other, more efficient communication channels exist and there were enough alternative learning events and opportunities. Fellows also pointed out the resource implications and logistical difficulties.

‘...For six of us it would probably be easier to be in the same place... We’re not good at using it. There are compatibility problems, you can actual spend twenty minutes going “Hello! Hello!”..’

5.3.2. Reading

Fellows used the recommended reading list and the supplied books to varying degrees. They found it a useful resource and could give examples of applying the principles in practice and/or helping them to write for publication.

‘...I’ve read all the books actually...’

‘...I didn’t do enough [reading]. It has been a wasted opportunity for me...’

‘...We got handed this 15 kilogram’s of books...I read two of them from cover to cover. I found it very useful - in fact, I’ve definitely used stuff from it...’

Some fellows felt that it would have been helpful to have had further guidance with specified, required reading according to a timetable. The course organizers may want to consider a more prescriptive approach to encourage all the fellows to gain maximum benefit from this resource.

‘...I think they could have given us some guidance, ‘read this by the next session’. I think some prescriptive reading is a good idea and I think that was a missed opportunity, because if it’s not prescriptive people tend not to do it...’

5.4. Specific fellowship outcomes

The SPSP met or exceeded its aims and objectives with a number of successful outcomes.

5.4.1. Increased SPSP leadership capability and capacity

The fellowship helped to train and equipped six clinicians with the knowledge skills and confidence to implement the SPSP. The fellows also reported that these new skills were potentially transferable to other leadership settings.

‘...If [my career] involves me moving into some sort of area, [for example] clinical management actually having the Fellowship would be useful and helpful both from the point of view of the programme and for me personally...’

‘...[The SPSP] needs somebody who can deal with a bullying surgeon, who is telling somebody that they’re talking rubbish and that probably needs to be somebody like me...’

5.4.2. Publications and Posters

At least one fellow’s improvement project was accepted and presented as a poster at an international patient safety conference. At least two have already submitted manuscripts to peer-reviewed journals while the others are working on or have the clear intention of future publication. All of the fellows have been involved in writing about their projects, patient safety and quality improvement in general for various purposes. The majority have had to write proposals to help design future policy, specific improvement guidelines and protocols for their organizations and promotional material for a range of intra and inter-organizational newsletters, information leaflets and other media.

‘...I fully intend to publish...’

'...I've done five publications. I'd probably have done three of them before anyway. The thing is, though, they (the organisation) don't know I've done these things. It's maybe not necessarily the success of my project charter but it's a success of the fellowship...'

'... I published a poster on central line infections which has been my project at the Berlin meeting...I'm about to send in a description of this work to a medical journal for publication - that's just being finalised now...'

'... I'm going to send a poster for the next international forum, because I know that I've got stuff that's good enough to show...'

5.4.3. Presentations / Teaching

Some fellows have facilitated learning events for the SPSP with very positive feedback and have further sessions planned for the near future. One fellow hosted an Open School Chapter Congress and were involved in organising and/or presenting various quality improvement lectures in Scottish educational institutions.

'...I already facilitate for the Learning Sessions and I'll be facilitating one of the conference calls for them already. I wouldn't have had the confidence to do [that] until being on the fellowship programme...'

'...The spinoffs from the fellowship for me are that I've been doing lots of presentations and other work - developing patient safety, getting primary care involved, I've written proposals and ideas for the future and so on... I have done a lot of writing round about it and promotion and so on...'

'...There are other folk here who came to our Improvement Clinic and they came up to me and said 'That session that you and [X] did about measurement was amazing.'...on the 3rd and 4th of September there's an SICS event - [X] and I are going to be there, and we're going to do three separate sessions of varying kinds on quality improvement...and it will work because we know how to do it...and that is the bit of magic we've got to contribute...'

‘...I was facilitating a Learning Session in January...’

5.4.4. Projects

All of the fellows successfully completed original improvement projects that they believe can continue independently of their input and that will translate into sustainable change and have the potential to hugely benefit organizations (although it is not always possible to quantify the impact). All six improvement projects have been summarized in Table 8. The reason fellows chose their projects, the evidence-base for their intended interventions and an impact assessment of their projects fall outside the scope of this evaluation.

‘...I’ve not asking anybody to do anything that wasn’t sustainable - that’s been built into it...’

‘...In terms of clear aims and achievements, [my project went] unbelievably well... [my colleagues] still can’t believe it; the difference is so dramatic...They don’t struggle with it because they think it’s wrong, but because it’s a different scale... a completely different mindset from the way we’re used to working. It’s a fundamental shift from showing what works to learning how to make things work, and those are two different skills...’

Some fellows were able to achieve their aims and objectives earlier than expected. They have already started to spread their improvement work to other settings and/or aspects of health care, with the other fellows considering and planning similar expansion.

‘...The project is living on its own quite often. The people that are running it are more than competent and I touch base with them regularly. We’ve done what we’ve set out to achieve...we achieved it about a month and a half [before] and we’ve sustained it... We’ve already put that out and started to get similar results on two other wards and the final two acute wards are starting to measure this week. So, yes, it’s quite successful...’

‘...It’s absolutely sustainable. It’s having other spinoffs on the heart failure service and it’s probably going to start influencing what happens in the rest of cardiology roundabout the style of letters...Actually we’ll carry on doing small

tests of change, so the process is continuing - it's not as if I've walked away from it and it's stopped...'

'...We've used the same process to change other things - so in fact the major thing I actually achieved was using a resource to recognise something that wasn't there before. We're actually getting them to use the same process to flag diabetics that are going through the collective surgery pathway and that's certainly picked up quite a few...'

The majority of fellows did not attempt an evaluation of their project and none of them did an impact assessment and/or cost analysis.

'...My project wouldn't stand up to external scrutiny...My project has been successful in the sense that it has led to change [but] it hasn't led to an a measurable outcome change. '

6. The fellowship and the future

6.1. The need for the SPSP

There is an identified, increasing need for capacity and capability to deliver the SPSP. It is recognized that a minimum number of the health care workforce will have to be trained if the programme is to be sustainable and translate in a culture change.

'...I don't think six of us or twelve of us are enough to get anywhere near tipping point...'

'...I think without creating more people who are able and confident and literate we will really not achieve critical mass. The more individuals you can educate, train and support in these techniques the easier it will become to effect change and push forward...'

'...I think we have a moral obligation to continue it now because quality improvement is here to stay and we have to talk about sustainability in the long term. IHI will not be around forever...'

The science of patient safety and quality improvement is relatively new. There is a need to foster new talent and develop capacity in this relatively new area. The fellowship delivers a different product to other, existing programmes.

‘...I think it’d be a shame to lose it. I think it provides something different from the leadership programme. I think that in some ways there is not the expertise in quality improvement in Scotland...’

‘...[There is a need for this fellowship] partly because this is not mainstream. Once this is mainstreamed maybe you won’t need it anymore. But we’re ten years off that...’

The fellowship is endorsed and recommended by all the fellows. They have reported great personal and professional value. There are also early indications of benefits to the SPSP and sponsoring organisations.

‘...I feel really, really privileged to have [been on the fellowship] - if you get [only] the little bits, like you’re going to a course, you know, it’s just a few days and it’s quick fixes. This is much more than that and the stuff we’re learning, I think, is very, very useful...’

‘...I think [the fellowship is] great, I would recommend it to anyone...’

‘...I would wholeheartedly recommend [the fellowship], I think it’s one of the best things I’ve done in my professional career, I’ve really enjoyed it...’

6.2. Recommendations / changes to future SPSP

‘... I think it would actually be hard to improve [the fellowship] to be honest. I think it’s worked really, really well. I wouldn’t change a lot.

6.2.1. Mentor / tutor role for fellows

Although there was some initial confusion regarding the terms, the majority of fellows agreed that the relatively informal support of a mentor would be more helpful than a tutor.

‘...Maybe a step down from a tutor, maybe more of a mentor... I’d like to just have somebody who’s been through it, who can say, yeah, that’s what you’d expect, well you want to read this, yeah...’

The majority of fellows thought that they would have had benefit from individual mentoring.

‘...I think if there was a tutor, you’d be right in, you’d have to talk to them, you’d contract yourself to a half an hour a week or something like that and that would make you push your things...’

‘...It’s quite rare, as a consultant, to have someone that you can sit and critically discuss with... that, in itself, is quite a luxury. I think if somebody offered me that at any stage in my life, if I had time, you’d be a fool not to take it up...’

The current fellows would be suitable to take on the role of mentors.

‘...I think one of the most important things that the [next] fellows could get out of doing the fellowship is to link with us. Because we’ve been through it and we know what it means...We would enjoy supporting and providing a level of mentoring and reassurance...’

‘...We could be the mentors....I can see that happening straight away...For the next rounds of fellows – yes absolutely and that’s a sensible logical thing to ...That is something where I think we could all contribute...’

Some fellows highlighted that co-ordinators will have to be alert to the reality that individuals will have varying benefit from working together in such a close relationship.

‘...Is it a tutor, is it a coach? It might be more useful to make it a faculty of tutors or coaches. How can I put this? There might be an element of controlling comes into it depending on the person involved...’

6.2.3. Selection process

The current, structured *selection process* that gives preference to applicants with some management and clinical experience and evidence of practical involvement in improvement work is fair and transparent and should be retained.

‘...We have a range of ages which is reasonable, so that’s not too bad ...’

‘...It’s determined by two different things. It’s what you do with the Fellowship and what sort of people we take into the Fellowship...’

‘...It [should be] people that are interested in quality improvement of not just their own wee silo but for the nation or for the health board. I would encourage selectivity...’

6.2.4. Utilizing fellows – career opportunities

Creating post-fellowship opportunities and roles is important in encouraging, supporting and ensuring ongoing involvement and continued development of the current fellows. Stakeholders should consider a package of formal and informal measures to support fellows who complete the SPSF. Examples of these measures may be offering memberships on the Scottish Patient Safety Faculty, invitations to ‘shadow’ national patient safety leads, informal peer-review of fellows’ manuscripts and/or financial support to enable them to meet at least annually post-SPSF. Fellows have incredible / substantial opportunity to create roles for themselves.

'...I guess at the moment the question is up in the air, 'what are the fellows going to be useful for?' And I think to a large degree that answer is going to come from the fellows themselves...'

Consideration should also be given to incorporating an element of training and involvement in the financial aspects of health care and quality improvement in response to the clear need, as expressed below:

'...It's easy as a clinician to be isolated because you're away from the action, you're away from budgets, you're away from how to spend money. As a very honest example I am involved in elective surgical patient journeys which ties into assessment and waiting times. I basically don't have much relationship with the waiting times people who are spending thousands of pounds every weekend doing waiting list initiatives. I really struggle to get them to spend money to make changes to assist them that would lead to the long term sustainable recurring change and financial benefits. I have not been able to make that connection...'

Clinicians have different career considerations when they consider applying for a different role. Most of them will already be employed doing a job that they really enjoy and receive what can be considered above-average remuneration. Changing roles often mean closing a door on their previous, clinical job, as they deskill and because of regulations are not considered 'safe' to practice. Even if they can still meet / prove their clinical ability there might not be a job to return to.

'...If you're a consultant, you can stay as a consultant or there might be other opportunities open to you. In a way the opportunity is only an opportunity when it's presented to you. So only when and if you see there's a possibility of doing this thing or that thing can you really consider that properly...'

In spite of these potential difficulties the fellows were still keen for opportunities of alternative roles in the organisation.

'...if we just do the fellowship and walk away on Wednesday [with no] follow up that's a disaster, that's a huge investment in resources on [fellows] that are very unlikely to deliver in the future... You have to encourage us to work as a network; you have to encourage us to work with [organisations]...'

6.2.5. Visits to national and international centres with proven track records of quality improvement

Visits to other Scottish health care institutions should be encouraged, with a minimum requirement of one visit to another fellows' organization. This would improve networking, collaborative working and ensure that good practice is more likely to be generalized and transferred between settings.

'...If they're going to send us to places actually a good starting point would be to send us round each others places or go to [various Scottish health board]...'

'... I think we should all do that [visit other fellow's organisations] irrespective. I don't think nearly enough of that is done... more movement should be encouraged. It's a small country; it doesn't take long to drive round it...'

In addition, some fellows should be offered the opportunity to choose and attend a recognized, *international centre* of improvement expertise. This would allow them to observe examples of successful change firsthand, gain practical experience and showcase Scottish improvement efforts. Such an international 'study trip' should be rewarded on the merit of a formal submission by fellows of specific learning needs, potential benefits and with the expectation of formal feedback.

'...The most valuable part of the safety programme and output is that you've got access to other people's data. So you can actually trawl through other people's data and look at it. There should be a 'improvement story of the month' or something...[X] is one that really got me excited just now. And I've been battering on about it to our team - get to [X], find out what they're doing...'

6.2.6. The size of future fellowships

The number of fellows in a given year should remain as low as possible to retain the reported benefits of individual coaching, opportunities for personalized feedback and

informal learning. This may be difficult to achieve as organizations realize their need for clinical leadership capacity and ‘critical mass’.

‘...If they bring 12 people in next year you’ll have to more than double the time...’

‘...I certainly wouldn’t make it any bigger than six. I just think we know each other well, we have camaraderie. If there were 12 people [they] would polarise...’

One solution would be to divide the planned intake of twelve new fellows into two cohorts. Certain teaching activities and learning opportunities can then be targeted specifically to each cohort. Examples include presentations of individual improvement projects, project feedback, group work and meetings with ‘experts’. Both cohorts would still attend the same learning sets ensuring greater economies of scale.

‘...If you’re going to have a big bunch of people presenting projects people are going to kill themselves while that happens...that’s all you’ll do, you’ll do nothing else. You’ll have to do sub sets or split them in two to do it ...’

6.3. Partnerships with health boards and health care organisations

Health boards’ core business is providing safe, quality care to patients. The SGHD has made it a national priority to continuously improve this care. There are various ways in which organisations can achieve this goal. However, having the capability and capacity, the ‘right’ people for the job is essential.

‘...I think the organisation needs the expertise to be out there, it needs ‘change agents’, it needs protagonists ... Everybody has to have core skills in this, but you need a bunch of people who are either leading it or consulting on it, or taking it forward or acting as an ambassador for it. There are ways of doing that but I think [the fellowship is] logical...’

‘...The health board have to provide healthcare to the population, but they have to improve upon that healthcare on a daily, weekly basis and as things

change. So they have a moral obligation to provide fellowships, to provide fellows...'

'...There is absolutely no argument that [health boards] are going to have to start training people to do quality improvement. Organisations don't have people who can do quality improvement that are trained to any degree. There are people who have got Phds in finance to look after their finances and Phds in Cardiology to look after their hearts but nobody to improve – because it's not important... we both know that the main thing that is stopping all this is the lack of leadership and will at a high level...We just know that the only way that they will is when the ministers say: 'It's now the most important of your targets. Start doing it or you will lose your job.'...'

The fellowship has benefits for the organisation. Some of their health care staff receives training in quality improvement science and gain practical experience in its application. However, the board is often unaware of this potential resource. Awareness should be raised and boards should be encouraged to create further opportunities for fellows after the fellowship.

'...I think [the fellowship] is beneficial to [organisations]. These sorts of opportunities should be available, this fellowship, this investing in staff but it's very unusual and I think that's a tragedy, really, because you can see the benefits of it...'

'... I think that what's probably missing is that the health boards haven't woken up to the fact that these people (fellows) is here, that they can be very useful...'

'...I've already heard two or three of the guys saying, I don't know what's going happen, I don't want to go back to where I was, I want to go back to a different role and I want to have time to do it, develop my skills and input. But that's not being worked out - yet that was originally part of the sponsorship organisation [agreement] that you'll get the opportunity to move on... I think there is a real gap of linking us back to our organisations...'

Health boards should have greater transparency in showing how the financial grants / support are being applied to improve the fellows' learning opportunities / protected learning time.

'...I think the money has disappeared into a black hole on the boards for the others and so I don't think there's a requirement necessarily for boards to be paid to release people...'

Boards have no 'interest' in outcomes as there was never a monetary risk. There is a real case to be made for boards to fund the fellows. There is also opportunity for the fellowship stakeholders to have a more active role to ensure board participation.

'...The difficulty of the boards not investing [money] in the programme is that they're not coming back to us because they've not spent anything...'

'...they (the fellowship organizers) tried very hard to make those people think about letting one of their staff do this but my experience was that attempt to get commitment didn't work. They've got to try a little bit harder. There was never any feedback to my organisation on what they might expect or what I might expect from them. I think they could be more explicit ... they could hold some degree of accountability. 'We are paying quite a lot of money to develop a member of your staff. We expect something in return.'...I think there was a bit of rhetorical lip service paid, but I don't think that really entered into anybody's plans. Certainly didn't enter into anybody's priorities...'

7. Conclusion

The patient safety movement and quality improvement agenda are relatively new in modern health care systems. The theory, practical tools and human resources are being developed, adapted and built in response to the ever increasing needs of the service users, providers and central government for better, safer care. There is a national recognition of the ever greater need for clinical leadership capacity and capability to implement practical change and patient safety and quality improvement in NHS Scotland.

The SPSF was envisioned, specifically designed and delivered with the intention to fulfill this need. The first pilot has shown that it is a quality product that can deliver on this promise, comes fully endorsed by the first cohort of fellows and should be considered a success. Although the evaluation identifies potential areas for improvement and makes specific recommendations that may further enhance the fellowship, the SPSF should largely be left unchanged. There is every indication that the SPSF has significant benefits to fellows, their sponsoring organizations and that it has the potential for cost-effective and sustainable improvement that may spread across the service. It provides a model for clinical fellowship programmes of the future and should be considered an essential part of a sustainable workforce development programme to support long-term quality improvement and patient safety culture in NHSScotland.

‘...I think it’s been really fantastic - I couldn’t speak highly enough about it to be honest...’

‘...I would like to say ‘thank you’, [we’re] getting a lot out of it and it’s worth its weight in gold...’

Table 1: SPSF Curriculum content

1. Improvement theory, methods and tools
 - a. Theory of profound knowledge
 - b. Model for improvement
 - c. Quality improvement as core business strategy
 - d. Planned experimentation

2. Leading clinicians through change
 - e. From stable delivery model to adaptability and growth within an organisation
 - f. Principles and differences of adaptive vs technical change
 - g. Building a compelling case for change
 - h. Developing a shared vision
 - i. Sponsorship, champions, alignment and feedback
 - j. Compacts

3. Measurement for improvement
 - k. Data, variation, reporting
 - l. Measure for improvement vs research and judgement

4. Communication, presentations and marketing skills

5. Reliability theory, systems, design for safety

6. Working with people, motivation, team building

Table 2: Short listing criteria

Candidates must:

1. Have a current role which clearly relates to service / quality improvement;
2. Be at an appropriate stage in their career to derive maximal benefit from this development opportunity;
3. Be motivated and have the ability to build on existing expertise and commitment to healthcare improvement;
4. Have the ability to use the learning for the benefit of NHSScotland and be prepared to share this both locally and nationally;
5. Be prepared to participate in all aspects of the Fellowship curriculum;
6. Have the full support of their employing organisation and explicit sponsorship from the Chief Executive and the Nurse or Medical Director, as their current salary and benefits must be covered by the employing organisation for the duration of the fellowship;
7. Be resident and working in Scotland;
8. Be educated to degree level or equivalent.

Table 3. Demographic data of fellows

All the fellows have experience in quality improvement and patient safety-related areas in addition to their clinical backgrounds. Most have portfolio careers with specific roles in the SPSP and/or patient safety initiatives in addition to their clinical duties.

Name	Job title	Organisation
Mr Alan Bruce	Clinical Governance and Clinical Effectiveness Co-ordinator	NHS Orkney
Dr Malcolm Daniel	Consultant in Anaesthesia & Intensive Care	NHS Greater Glasgow & Clyde
Dr Neil Houston	General Practitioner & Clinical Effectiveness Lead	NHS Forth Valley
Dr Andrew Longmate	Consultant in Anaesthesia and Critical Care	NHS Forth Valley
Mr John McGarva	Consultant ENT Surgeon	NHS Forth Valley
Dr Kevin Rooney	Consultant Anaesthetist & Lead Clinician in Intensive Care	NHS Greater Glasgow & Clyde

Table 4. Fellowship programme



**Scottish Patient Safety Programme
Fellowship Key Dates**

Date	Activity
1 - 3 December 2008	First residential course – Stirling Highland Hotel
13 – 14 January 2009	SPSP – Learning Session 3 – EICC (Edinburgh)
15 January 2009	Surgery with Carol Haraden (NHS QIS, Elliott House, Edinburgh)
9 – 11 February 2009	Second residential course – Stirling Highland Hotel Masterclass – Leading individual clinicians and teams through change- Goran Henriks – Jonkoping Sarah Goldsworthy – Influencing and getting to yes! After dinner speakers: Derek Feeley, Jason Leitch
15 -16 March 2009	Masterclass in Berlin (Monday 16 March) – Robert Lloyd Data, measurement, information and knowledge- building your measurement strategy for improvement.
17 - 20 March 2009	Participation in International Forum on Quality and Safety in Health Care 2009 16-20 March, 2009
28 April 2009	Surgery with Carol Haraden (NHS QIS, Delta House, Glasgow)
19 – 20 May 2009	SPSP – Learning Session 4 – SECC (Glasgow)
15-17 June 2009	Third residential course – venue tbc Masterclass - Cliff Norman Moving from projects to programmes and building integrated organizational safety strategy.

Table 5 – Example of an agenda of a learning set

SPSP Fellowship Programme Learning Session 4

June 15-17th, 2009
Marriott Hotel
500 Argyle Street, Glasgow

Monday June 15th

- | | |
|---------------|--|
| 9.30 - 10.00 | Coffee and Registration |
| 10.00 – 12.30 | Moving from discreet improvement projects to organisation wide quality programmes
<i>Cliff Norman</i> |
| 12.30 – 13.30 | Lunch |
| 13.30 – 17.00 | Quality as a core business strategy for healthcare organisations
<i>Cliff + Jane Norman</i> |
| 19.30 – 21.30 | Dinner with Sir Graham Teasdale and others |

Tuesday June 16th

- | | |
|--------------|--|
| 9.00 – 12.30 | NHS Conference <i>Working together for healthier Scotland</i>
SECC |
| 14.30- 17.30 | Reliability in healthcare + Design for Safety
<i>Simon Watson + David Embry</i> |
| 19.30 | Dinner |

Wednesday June 17th

- | | |
|--------------|---|
| 8.30 -11.30 | Projects update – <i>Fellows and Faculty</i> |
| 11.30- 12.30 | Summer school travel plans
Ongoing facilitation + support for cohort 1
Contacts with cohort 2
<i>Anna Gregor, Jill Gillies + faculty</i> |
| 12.30 | Lunch + adjourn |

Table 6. Training needs analysis

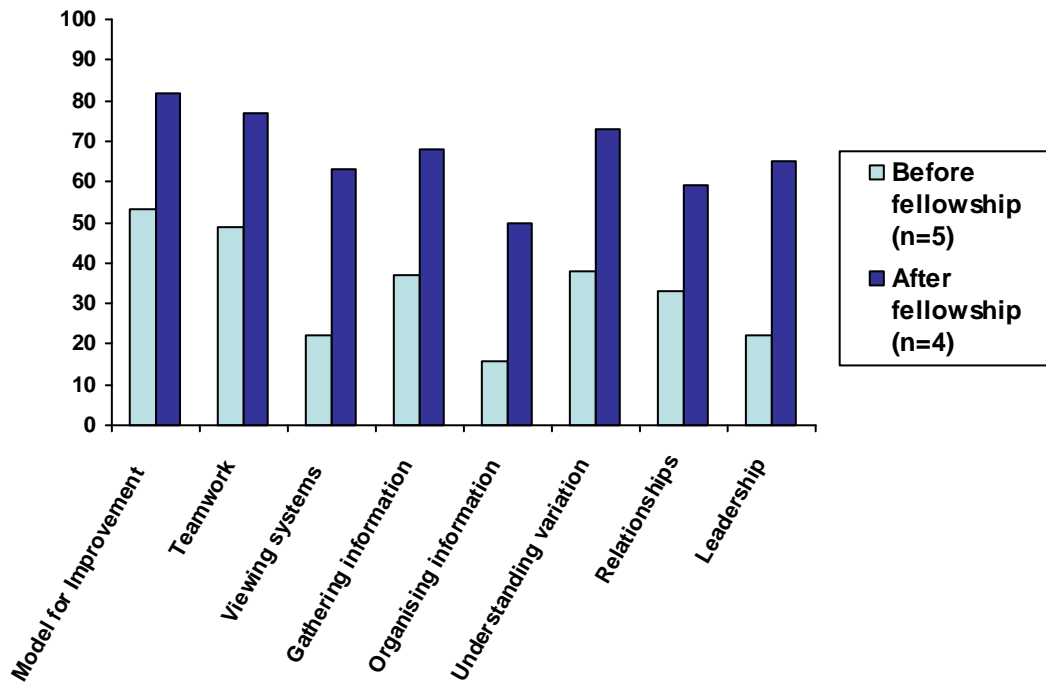


Table 7: A summary of the fellows' improvement projects

Andrew Longmate

Project aim:

To reduce the number of infectious complications from central venous catheters in one intensive treatment unit (ITU).

Objectives:

- To achieve a minimum of three hundred days between catheter-related blood stream infections (CRBSI),
- To achieve > 95 % compliance with SPSP 'insertion bundles' by the end of the fellowship. 'Bundles' include evidence based actions such as taking maximum barrier precautions, Chlorhexidine skin antisepsis, daily review of catheter indication with prompt removal of unnecessary lines, optimal catheter site selection and using pre-packaged insertion sets.
- To spread the improvement methodology and successfully interventions to other ITUs, theatres and high dependency units (HDUs).

Achievements at completion of SPSP:

- Compliance with the care bundle exceeds 95%. This was accomplished through multiple PDSA cycles, engaging all members of the health care team, responding to local challenges and by feed back of early successes to patients and their families.
- The rate of CRBSIs has been dramatically reduced with the target of minimum 300 days between infections met. Run charts are updated weekly and prominently displayed in the unit.
- The success of the project is informing the planning stage to spread similar improvement work to other settings.

Verdict:

- The project has successfully met its aim and objectives.
- The project has improved patient care and safety significantly. The interventions presented minimal or no additional cost to the organization while potentially saving thousands of pounds in extra bed days and resources as well as considerable patient suffering.

Kevin Rooney

Project aim:

To establish quality improvement and patient safety as an integral part of the undergraduate curriculum of all healthcare professions

Objectives:

- To create an 'open school' according to the IHI model. Organizations are encouraged and invited to register and participate with free access to all individuals with an interest in patient safety
- A minimum of 1 500 undergraduate students in various health care professions will be aware of the open school,
- 480 student interactions with the open school and its online modules in patient safety and quality improvement
- Six educational organizations (schools) will be affiliated and have established 'chapters'.
- Partnerships will be built with other organizations in an attempt to engage post-graduate health care professionals.

Achievements at completion of SPSF:

- Eight educational organizations have been affiliated
- An Open School Chapter Congress was held and attended by more than a hundred delegates from across the UK. The fellow was able to obtain funding for the congress through the Health Foundation. The congress evaluation showed that the event was well received and valuable to the delegates.
- The fellow has networked with the NES Patient Safety Multi-disciplinary Steering Group with the promise of further collaboration.
- Awareness of the open school has been raised through various channels.
- A patient safety knowledge portal has been developed with very positive feedback from those undergraduate students that have utilized it.
- Various quality improvement lectures and/or presentations have been organized and delivered in the various chapters.

Verdict:

- A large number of educational institutions have been affiliated to the open school.
- Although undergraduate student awareness and knowledge of the open school, patient safety and quality improvement has undoubtedly been improved, it has not been quantified.
- Further investment, support, resources and time will be required to ensure that the project is sustained, meet longer term aims and deliver on its promise to improve care, safety and quality.

Malcolm Daniel

Project aim:

To reduce the average length of stay (los) of patients admitted to one ITU

Objectives:

- To reduce the average length of stay by one day by the end of the SPSF,
- To Increase the total number of admissions while decreasing the number of patients that need to be transferred out to other ITUs as a result of bed shortages,
- To improve communication between shifts and within the health care teams through setting 'daily goals'.

Achievements at completion of SPSF:

- The average length of stay has been reduced by two days. This result seems even more significant when one considers that no other Scottish ITU were able to demonstrate any reduction over the same period of time.
- The total number of admissions has increased.
- 'Daily goals' are being set and reviewed on more than > 95% of days measured.
- Multiple PDSA cycles were undertaken and health care staff were consulted and engaged throughout.

Verdict:

- The project aim and objectives were met or exceeded.

- The project has led to significant improvement in the use of resources and organization efficiency, with even conservative estimates showing that potentially hundreds of thousands of pounds have been saved across all patient journeys. Informal feedback suggests that health care worker morale and motivation has also improved significantly.

Neil Houston

Project aim:

To improve the quality of care of patients with congestive cardiac failure.

Objectives:

- To develop a model of shared care between primary and secondary care with enhanced communication and complete transfer of information ('handover').
- Secondary care discharge and out-patient clinic letters will have > 80% compliance, ie structured recording of the nine key components that form the standardized, evidence-based 'care bundle' for cardiac failure.
- Practices will consistently follow all received, secondary care recommendations, where possible.
- To improve patient understanding of their condition, it's monitoring and management and to enhance their participation in their own care.

Achievements at completion of SPSF:

- Standardized letters have been developed and approved by all relevant stakeholders and are now being used routinely at discharge and for written communication between out patient clinics and primary care.
- Secondary care adherence to the nine quality indicators in their correspondence improved with each PDSA cycle. At the end of the SPSF the sample of letters showed 100% compliance with documenting of all the care components!
- Practices carried out 66% of secondary care recommendations. Practices reported that their ability to communicate changes in patients' conditions to secondary care clinics had improved.

- Informal feedback from patients suggests that their understanding of cardiac failure, its monitoring and management have improved through the process of 'talk back'.

Verdict:

- The aim and objectives of the project were met.
- The project attempted to and succeeded in improving a specific area of interaction between primary and secondary care. This may have significant potential to improve quality of care and patient safety if similar improvements can be shown in other areas and settings.
- The project enhanced quality of care and has little or no additional cost to the stake holding organizations.

John McGarva

Project aim:

Beta-blocker medication should be administered to suitable patients in the post-operative period

Objectives:

- All patients that received beta-blockers as a 'repeat' prescribed medication should have it administered during the post-operative period, unless a clear contra-indication has been identified.
- To develop and implement a process that will allow appropriate patients to be identified during their pre-operative, out-patient assessment.

Achievements at completion of SPSF:

- A reliable, feasible and acceptable process has been developed through which appropriate patients are being identified and this information is being relayed to the appropriate theatre and other health care staff
- The number of patients who should be receiving beta-blockers post-operatively has increased.
- The process is now being piloted in other aspects of care as well as other settings. The current focus is to try and develop a successful process to

identify all patients with diabetes mellitus and ensure that they receive their appropriate medication pre- and post-operatively.

Verdict:

- The project has met its aim and partially met its objectives. Although the number of patients receiving their appropriate medication post-operatively has increased, it is unsure whether that is 'all'.
- The project has improved patient care, has the potential to improve patient safety and has little or no additional cost implications for the organization.
- Early indications are that the project will be sustainable.
- The experience and learning from the initial project is now being transferred and spread.

Alan Bruce

Project aim:

To increase the adherence of health care staff, patients and visitors with hand-hygiene measures in medical wards of a regional hospital.

Objectives

- To achieve an overall adherence to hand-hygiene measures by everyone of > 95% by the end of the SPSF.

Achievements at completion of SPSF:

- Various awareness campaigns, posters and PDSA cycles were undertaken. Health care staff was actively engaged and were requested to sign up to the project aim. The target of >95% adherence was achieved by March 2009 and has been sustained since.

Verdict:

- The project's aim and objective was met and sustained.
- The improvement work is now being spread to other wards within the same hospital.

- The project has the potential to benefit patient safety, is essential to meet SGHD regulations and has little or no additional cost implication to the organization.

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