Introducing service improvement into pre-registration education of healthcare professionals – for better, safer healthcare

Abstract
The NHS workforce is made up of highly trained clinical skills experts – systems thinking has not been part of the curricula for healthcare professionals. Meanwhile, healthcare systems are failing and the services are not yet at the standard that many of us want them to be. Being a better practitioner will not solve the problems that are detracting from the quality of the care currently provided.

To tackle this, in 2006 the National Health Service Institute for Innovation and Improvement commissioned three consortia consisting of universities and their health provider partners, to pilot the introduction of the principles of service improvement into the pre-registration education of healthcare professional. The short courses that were developed all included a patient focus, process mapping and PDSA cycles. In 2007 the NHS Institute recruited six more consortia to adapt the original pilots for use in their own curricula. In 2008 twenty-three additional universities joined the initiative and a further fifteen in 2009. This means nearly 60% of universities offering healthcare education in England are introducing their students to the concepts, tools and techniques of quality improvement and giving them the opportunity to apply these tools and techniques in practice. This initiative aims to involve all the universities in England who provide validated pre-registration education of healthcare professionals in embedding the message that everyone, whatever discipline or grade, has a contribution to make in improving quality and providing better, safer healthcare.

What is this initiative trying to achieve?
An objective of the National Health Service Institute for Innovation and Improvement (NHS Institute) is to ‘build capability for a self-improving National Health Service’. The NHS Institute was aware that historically, improvement skills and techniques have not been part of curricula for healthcare professionals in training. Therefore they developed an initiative, working with partners in the National Health Service (NHS) and Universities to develop improvement capability in the NHS workforce by engaging with pre-registration (pre-qualification) healthcare students during their professional education.

This initiative is about developing healthcare students, of all disciplines, who are willing to challenge and be challenged to improve services for users.

Phase 1
In 2006 the NHS Institute commissioned three consortia to develop a short course in service improvement and to pilot it on pre-registration healthcare professional students. The consortia comprised a university that provides validated pre-registration education for healthcare professionals with the healthcare providers in their locality, where their students undertake clinical placements and work experience. The students involved represented the full multi-professional provision of health professionals; nurses, midwives, doctors, physiotherapists, occupational therapists, dieticians, radiographers, dieticians, etc. The initiative was externally validated.

The initial three consortia (now known as Phase 1 Partners) were kept separate and asked to develop and pilot their short courses. The criteria for the short courses was:

a. They must be offered within the programmes of initial training for clinical staff of all professions
b. They must provide a minimum of a one day (or equivalent) session to introduce the core knowledge and skills (some provided whole days some undertook 3 x 2 hour sessions)
c. There must be practical application and facilitated reflection

We found that all the Phase 1 Partners used the same fundamental principles. They all started from the position that service improvement has to be user focused. Patient / client / carer / service user involvement was incorporated either through the involvement of actual users or by way of recordings (both visual and audio) of users’ experiences. This was the foundation of all three pilot courses which replicates the model for improvement as identified by Penny (2003).

The theory sections of the short courses also contained amazing similarities; they insisted that students needed a systems focus (Berwick 1996), to understand process mapping (NHS Institute, 2007) and to be able to apply a Plan Do Study Act (PDSA) Cycle (Scholtes et al 2003). Most used the model for improvement developed by Langley et al (1996) (cited in NHS Institute, 2007).
One of the differences between the pilots developed by our Phase 1 Partners was when it was delivered to the students. One Partner chose final year students as they qualified in their preceptor stage and inserted the short course into their already programmed preceptor curriculum. Another Partner chose students who were just starting their final year of training and also inserted the pilot into a mandatory part of the course. The final Partner chose students at the start of their penultimate year of training. They were unable at this point to insert it into an already existing section of their courses so it was offered as a voluntary extra course and had remarkably good uptake with nearly 200 students from three different professions attending.

The way the theory was delivered varied from a whole day's study, to sessions within a taught course, to three, two hour sessions a week apart. Following the theory sessions the students were then given practical experience of developing an improvement project within a clinical work placement.

The evaluation of the pilots was exceptionally good. The students were amazed that it is not already mandatory and most felt they could apply the knowledge and experience they had gained within their chosen professions. Some even asked to return to their placements to continue to do improvement work on a voluntary basis! The staff in the hospitals that were supporting the students on their placements were enthusiastic to continue the initiative, particularly after they saw the success of the students' proposals. At this point in the project the academic staff, from the Universities were passionate champions of improvement. They did not need to have the topic ‘sold’ to them and were clearly hoping the pilot would allow them to bring their faculties on board to get service improvement embedded within their health professional programmes – this has proved successful.

The NHS Institute and the Phase 1 Partners agreed on issues that they consider to be essential to the introduction of service improvement into the pre-registration education of healthcare professionals for better, safer healthcare.

These are:

- public and patient involvement: listening and understanding the service users’ experiences and their needs
- personal and organisational development: recognising and working with differences in the culture of both organisations and people
- process and systems thinking: understanding the effects of different practices and procedures
- initiating, delivering and sustaining improvement: generating change ideas then knowing how to plan for and measure the effects of improvement
- students not only have to have the theory but they are expected to use the tools of improvement within a practical healthcare setting.

It was clear to the NHS Institute that we needed to investigate whether the piloted short courses could be replicated or whether they were institutionally specific. It was also necessary to know whether these courses could be adapted to fit the requirements of other universities without the ideals being diluted.

**Phase 2**

Following the success of Phase 1, the NHS Institute funded a second phase, and in 2007 recruited a further six consortia (again made up of a university that provides pre-registration education for healthcare professionals and the healthcare providers in their locality) – the Phase 2 Partners. Their role was to implement the piloted short courses within their own institutions to their own students, not as pilots but embedded within their curricula.
Each Phase 1 Partner worked with two Phase 2 Partners, who had to decide whether they could take on the piloted short course un-amended or adapt it, and if so how the adaption could be made while maintaining the ideals. The short courses had not been developed as ‘off the shelf training packages’. The Phase 1 Partners felt that service improvement knowledge is best developed in a facilitative, interactive teaching environment; therefore even if the model was to be taken un-amended, the teaching materials had to evolve for use by the Phase 2 Partners, thus enabling them to take ownership.

The task of taking the initiative into their curricula and embedding the teaching experience meant service improvement was no longer optional or voluntary.

This phase was also externally evaluated and again proved the initiative was exceptionally successful. The evaluation included a student survey and these results showed:

- 88% were keen to be involved in service improvement
- 66% were confident about being involved in service improvement
- 58% had an opportunity to use service improvement
- 60% had a receptive practice environment
- 88% believe service improvement knowledge important to their professional development
- 59% believe service improvement knowledge will help them gain employment
- 77% would recommend the learning to a friend.

The logic of the success of Phase 2 was that the NHS Institute should offer their models of introducing service improvement into the pre-registration education of healthcare professionals for better, safer healthcare to a wider audience.

The NHS Institute, with the Phase 1 and 2 Partners identified the elements that are key to achieving the introduction of improvement tools and techniques to health and social care students, to achieve the desired impact. These elements and design principles are described below under the headings of expected, highly desirable and recommended.

**Expected:**

1. A minimum of an equivalent to a 1 day ‘stand-alone’ introduction to improvement …
   - called ‘improvement for better, safer health and social care’.
2. Introduction to improvement to include …
   - exposure to a patients/service user experience
   - principles of process mapping
   - model for Improvement to include PDSA (plan, do, study, act) cycles.
3. Practical application in a clinical setting …
   - supported, if possible, by clinical facilitators/mentors
   - setting appropriate to the student
   - an opportunity to test out a tool (e.g. PDSA) in practice
4. Faculty and clinical facilitator development
   - ‘training’ faculty and clinical facilitators in the same tools and techniques that students are learning
   - make links to other areas of expertise e.g. leadership, management, leading change, clinical governance, safety, etc.
   - links to University and NHS targets.

**Highly desirable:**

1. Inter-professional / multi-professional learning
   - in partnership with services; either NHS or Social care
   - if possible learn, work and reflect with students of other disciplines possibly about the service of other disciplines.
**Recommended:**

1. **Build in an assessment element**
   - Assessments can include things like presentations, poster displays, project reports, management reports.
   - Include clinical staff, fellow students, and faculty in the assessment.

2. **Plan for sustainability**
   - Engage faculty and senior management at university.
   - Engage with improvement teams and colleagues in NHS and social care.
   - Include in revalidation with professional bodies.

3. **Steering group**
   - For academic year 08/09.
   - Membership: university faculty (including senior management), NHS support staff (clinical facilitators and managers), an NHS Institute representative, and at least one student representative.
   - Assess progress, identify issues, and ways forward, celebrate success, etc.

It was agreed that these elements are key issues for the introduction of improvement in pre-registration education as agreed by the NHS Institute and their Phase 1 and Phase 2 Partners.

**Phase 3**

In 2008 all 79 universities in England who offer validated healthcare professional courses were approached by the NHS Institute and asked whether they would like to undertake ‘supported implementation’ of service improvement into their pre-registration teaching programmes.

Any university that agreed became a Phase 3 Partner and was ‘buddied’ with either a Phase 1 or Phase 2 Partner, who facilitated the necessary support. All the partners are supported by the NHS Institute. The support took the form of staff training, attending steering committees, attending validation boards, etc. All the Partners were invited to regular ‘events’ to meet and discuss with the NHS Institute and Partners from all three phases.

The Phase 3 Partners were not required to work with a specific model, as originally piloted as a short course. They could pick and choose any part of any model as appropriate to the way their institution works and how their curriculum runs, on condition they fulfilled the key elements of the design principles.

Phase 3 has also been externally evaluated and has again been proved to be successful. In the academic year 2008/2009, 32 universities undertook the introduction of service improvement into their preregistration curricula delivering it to 5,678 health and social care students from twenty-three professional groups.

Comments from students about their experience of the project include;

“... now I take time to consider each client as an individual, listening not just hearing”
“...this has had a significant impact on my feelings about my responsibility as an individual to facilitate and initiate change in the NHS”
“...before this I felt like a cog in a wheel, I definitely feel more empowered now”
“...surely this should be mandatory?”

**Phase 4**

In March 2009 the NHS Institute invited the remaining 47 universities to an event where faculty staff explained how they had implemented the initiative, healthcare staff discussed the reality of supporting students in their placements and students described the projects they had undertaken. All attending universities were offered the opportunity to join the initiative. The NHS Institute...
hopes to support the implementation of service improvement into all pre-registration teaching programmes and they are currently on track to have 50 universities working with them on the initiative by the start of the 2009/2010 academic year.

The nature of the supported implementation has changed and Sue Lister, a member of the academic team from one of the Phase 1 Partners, has been seconded to work full-time on the project. Sue will buddy all the universities but can call on existing Partners for support in training and development when needed. We have also produced an information pack that contains a booklet, CDs and DVDs of the materials produced for the original pilots and a CD to provide specific support of placement support staff based in the health care providers.

NHS Institute for Innovation and Improvement has shown that it is possible to successfully introduce the principles of quality improvement into pre-registration education for health and social care professionals. These principles are now being taught in 32 of the 79 universities that currently offer validated pre-registration courses within England – with plans to introduce it to many more.

In September 2009 the NHS Institute is holding a Student Conference, to celebrate the success of the initiative where students will present their improvement projects.

References


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For more information go to: www.institute.nhs.uk/preregistration

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