Title:

Preparing for Caring: Developing a Smartphone App to Support Student Nurses and Mentors During Practical Placements

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Summary

Healthcare professionals are increasingly turning to the digital sector to access the information they need for their work. Mobile technology such as smartphones and tablets provide a unique opportunity to place high quality information directly into users' hands. This paper reports on a smartphone app designed to help practitioners prepare the future workforce. The 'Preparing for Caring' app has been designed to place supportive materials in the hands of mentors and students during practice based learning episodes across the whole healthcare arena. The necessity for such an app is explored and the challenges and benefits of implementing this resource are considered from the student, mentor and healthcare manager perspective.

Key Words

Smartphones, BYOD, professional competence, practical placements, student nurses, mentors.

Introduction

Preparation of the future workforce is an important consideration for all health service managers. An essential part of this involves supporting both students and mentors during practical placements. A range of supportive strategies and personnel have traditionally been used to meet this need, but support is increasingly being provided through various digital platforms. One area of digital technology yet to be exploited is the smart phone app; none are available which offer support during practical placements. This paper discusses the development of such a resource within nurse

education, examining why it is considered essential and exploring its potential to offer various supportive elements to both students and mentors.

<u>Background</u>

In nursing, students attend practical placements for 50% of their programme. During each placement they are allocated to a registered nurse who has been prepared to act as their mentor (Nursing and Midwifery Council 2010). The mentor role involves both supporting and assessing the student's competence (Nursing and Midwifery Council 2008). It has long been recognised that both students and mentors need support during clinical placements (Webb and Shakespeare 2008). However, defining what this support should consist of is more challenging; if problems occur and help is not forthcoming events can quickly spiral out of control (Hunt 2014). Support roles such as practice educations facilitators (PEF) and link lectures (LL) have been developed to address these concerns, but such human resources are expensive and their activity needs to be targeted to the areas of greatest need (Robinson *et al.* 2012). The 'Preparing for Caring' app has been designed to help PEFs and LLs efficiently focus their activity towards students and mentors who need help.

In practice settings it has been noted that mentors can struggle to access the support they need, particularly when students are having difficulties (Duffy 2014). Mentors often made contact with supporters during their own personal time because their working hours did not coincide with the office hours worked by PEFs and LLs (Hunt 2014). When seeking advice about mentoring processes they looked for a speedy response which offered reassurance and prompt physical presence. In large organisations this could be a challenge; PEFs and LLs were hindered by the vastness of the area to be covered, the numbers of people who could potentially need support and the potential that shift patterns might not coincide with placement visits. Hence, students and mentors might go whole placements without coming into contact with human support mechanisms.

It is predicted that by 2017 43.4 million people will own a smart phone (Statista.com 2015a). Stores such as Google play and Apple offer a huge array of downloadable apps for these devices and it is estimated that 100,000 of these are health related (Statista.com 2015b). The vast majority of university students in the UK own a smartphone and no significant differences in ownership have been identified between genders and ethnic groups (Miller *et al.* 2015). University students identify that the most useful smartphone apps help them to manage their stress. Eighty-five per-cent of health students use an app at least once per day for time management, communication and information purposes (Lee-Ventola 2014).

Generational differences play a significant role in adoption of IT practices (Jones *et al*. 2015). Younger people born after the arrival of digital technology are referred to as digital natives and embrace technology comfortably. Those born earlier are considered digital immigrants who have had to adapt to these new ways of working (Prensky 2001). However, the arrival of the digital tablet and smartphone has gone some way to closing the gap between these two groups (Hirsch-Atticks 2012). It has introduced more intuitive ways of working and allows people to personalise the way data is presented so that their individual needs can be accommodated, for example font sizes and background colours can be adjusted. This means that technology provides a medium which old and young both seem equally comfortable to access.

Debate is widespread in the NHS about whether or not employees should be allowed to use their own smartphones and tablets at work (Kehoe 2013). The acronym BYOD (bring your own device) has been adopted when referring to this concept. Health Education England has recently given its support to such initiatives (Bayliss Pratt 2015). Since BYOD is starting to be an accepted practice it is feasible that smartphone technology could be used to support nurse education in practice areas.

Developing the Preparing for Caring App

Rationale and Justification

The 'Preparing for Caring' app project is the outcome of two recent studies which both demonstrated the need for such a resource (Colton 2014, Hunt 2014). Colton's survey examined students' and mentors' requirements in one NHS Trust whilst Hunt's national study focussed on mentors' needs in situations where students were struggling in placements.

Hunt (2014) found that whilst a lot of on-line support and guidance had been written for mentors this was not easy to use. Web-sites were hard to navigate and the processes, protocols and guidance they contained were long-winded and written in complex academic jargon. On-line resources were also time consuming and difficult to access. Finite numbers of computers in clinical areas meant that mentors struggled to access these for activities which were not directly patient orientated. If access was possible, firewalls and login procedures further hampered speedy access to sites which might provide help. However, during the course of this study it was noted that nurses would access the digital world quickly and easily via their mobile phones during their breaks.

When situations arose where students were struggling in practice both mentors and students became anxious. In these more stressful situations digital resources did not provide the type of support needed and the human touch became essential. The speed of access to a PEF or LL, who had in-depth knowledge about mentoring and assessing, had a strong bearing on how well such situations were managed. Where mentors consistently struggled to obtain help their healthcare organisation could experience the following long term consequences:

- **Increase in formal complaints**: Students could make claims of bullying, discrimination and harassment against mentors when they found it difficult to accept robust feedback on their performance. This could lead to lengthy formal investigations.
- **Increased pressure on capacity**: Students could appeal against assessment decisions because proper processes had not been followed and repeat clinical placements had to be found which placed increased pressure on placement capacity.
- **Increase sickness levels:** Mentors often suffered from stress related difficulties when managing difficult, manipulative or coercive students which resulting in them becoming less effective at work or taking sick leave.

Colton (2014) surveyed students at various points in their three year programme, and mentors in various clinical settings, to investigate the use of smartphone apps in pre-registration nurse education. Findings indicated that many students used a smartphone at least once a day in the clinical setting to access information related to their practice. Mentors also noted that students were

increasingly using this medium to inform, underpin and organise their work. The apps most accessed included:

- Search engines such as Google
- British national formulary
- NICE guidelines
- Alarms and reminders
- Calendars
- Social media

The survey revealed that both students and mentors wanted to be able to access placement related reminders from their devices and obtain guidance about completing practical assessment documents. Mentors also highlighted that, outside office hours, it was difficult to access appropriate information and guidance when a student was struggling.

The survey indicated that the use of a focused application that supported mentors and students had the potential to positively effect healthcare organisations. This could help mentors to promptly identify when students were not meeting the required level and deliver appropriate support at an earlier stage. Allowing students who underperform to progress has been widely discussed, it is both time and cost intensive and negatively affects the workforce. Developing responsive resources to manage this potentially benefits healthcare organisations:

- **Enhancing the quality of the prospective workforce** : weak practice has already been addressed and managed;
- **Reduction in the numbers of staff who need to be performance managed** in the early stages of their career as registered practitioners;
- **Enhanced recruitment** of new registrants, positively affecting workforce planning.

Enhanced support during practical placements can help mentors to nurture, support and develop students, honing the employability of the future workforce. Organisations which have been proactive in providing dynamic, supportive resources will be best placed to attract final year students who are seeking employment. All of this evidence points to the need for an easy access, digital resource which provides clear, simple, initial guidance with the backup of an efficient mechanism to raise human support in more challenging situations.


The Aim of the Project

To develop a smartphone app which supports both mentors and students in practice environments by placing a range of resources directly into their hands.

Engagability

The 'Preparing for Caring' app will be a multi-faceted app with engageability at its heart; this is being built in by ensuring it is both accessible and simple to use (Figure 1). The app will be designed so that it can be accessed in short bursts, quickly providing users with the information they seek. Speed of access is considered important for two reasons, firstly in clinical settings users will be under time

pressures and short interactions with the app should not detract from care delivery. Secondly mentors often access support outside their working hours and this app will reduce the amount of intrusion this has on their personal lives.
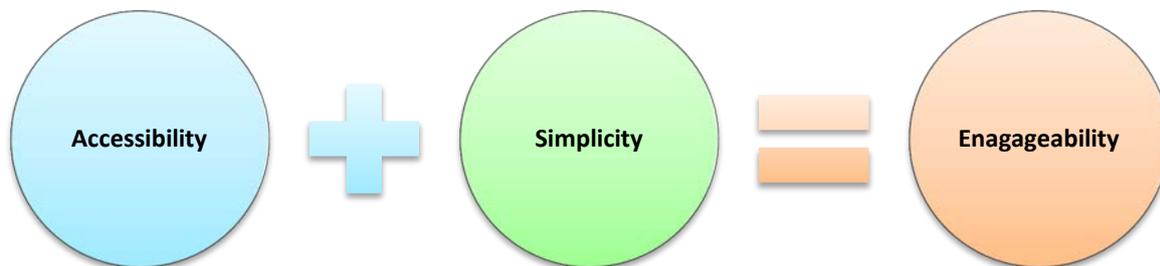
Figure 1. Promoting user engagement

The further advantage of an app is that it can be accessed across healthcare settings, be they hospital or community based, and the user is not tethered to a computer. The app is being designed so that this button is visible on the screen and one touch opens it which increases the likelihood of the student and mentor engaging with it. Content has been simplified to key elements of support, checklists and mechanisms to raise additional help. This deliberate simplification means that users will not feel they are drowning under masses of complex protocol and can easily navigate around the resource. Both of these are essential considerations in building the app because when users can find and understand content they are more likely to continue engaging with it.

Content

The "Preparing for Caring" app has been designed and the best coding solution for this product is currently being explored with specialist app developers. Some of the main elements the "Preparing for Caring" app will contain are:

- **Frequently Asked Questions**: The questions that students and mentors most commonly ask will be built into this section. Questions will be searchable and the answers will be provided in both text and video format. Answers will be written to clear English standards (Plain English Campaign 2015) and will avoid the complex academic jargon which often puts mentors off engaging with written support. Delivering some answers using 'talking heads' (Massaro 2006) will increase accessibility and bring the human touch to the app. This will help mentors and students to recognise that they are not the only nurse to ask this question and that no question is a stupid question.

- **Placement schedules:** Both students and mentors are busy people and key placement events such as progress interviews can be overlooked in hectic practice environments. The app will provide a scheduling facility which mentors and students have direct control over. This will allow them to receive a live count down and timed 'pop up' reminders that certain events are due. Hence, interview dates are less likely to be missed reducing the number of claims made by students that assessment processes have not been followed correctly.

- **Preparation for placement:** Students have blocks of university time where they are away from practice environments, this means that they can forget some of the main things they need to do to settle smoothly back into placement settings. The app will provide a simple checklist and focussed information to help students take responsibility for their re-integration into practice environments. On the flip side this also provides guidance for mentors about what they can reasonably expect students to have prepared in advance of their placement.

- **Mentor triennial review:** It is a mandatory requirement that all mentors must undertake a triennial review, every three years, to ensure they continue to be competent mentors (NMC 2008). This app will provide the tools mentors need to present their evidence for triennial review. Placing this resource in the mentor's hand simplifies the review process and offers the opportunity to build the necessary evidence in bite size chunks. Once the portfolio of evidence is complete it can be sent electronically for review and compliance can be recorded on the local mentor register which each healthcare organisation is required to hold and maintain (NMC 2008).

- **I need help button**: One of the main drivers for the development of this app was to bring human support to both mentors and students when they needed it. The app gives them a way of putting their hand up and directly signalling to PEFs and LLs that support is required. The 'I need help' button is accessible within one tap of opening the app. It sends a request directly to PEFs and LLs who can then more efficiently target their support to areas where their help is needed.

Discussion

Attitudes towards mobile technology are not always positive; engagement continues to be limited by concerns about data protection. This concern is compounded if staff are to use their own mobile devices in work areas; it increases concerns about security breaches and also the use of handheld devices in patient areas is often viewed as unprofessional. Nevertheless there are several apps that support *point of care* decision making but there is not an app to support *point of mentorship* decision making.

Benefits

To move forward it is important to recognise the benefits such an app could have for organisations, staff, students and, most importantly, patients. Implementing such an app requires the use of hand held devices and consideration needs to be given to how this can be achieved. If each member of staff needed to be provided with a workplace mobile phone it would be an expensive undertaking. However, the vast majority of staff already have a personal smartphone and implementing a BYOD model has significant cost saving advantages since organisations do not then have to purchase devices (Mace 2012). This releases money to fund other patient focussed IT projects, whilst allowing staff to gain efficient access to the educational resources they need via their smartphones. This is an attractive option given the current financial constraints healthcare providers are operating under.

The app offers increased access to support which can reduce mentors' and students' stress. The app is more responsive than current IT support mechanisms since it reduces the time it takes users to boot up, login and search for support. This allows a 'do it when you think of it' approach and means that issues are not forgotten because they can be raised immediately. This remains true in independent locations, since the app places support and information in the user's pocket, it is accessible whether or not they are logged in to the organisation's systems. The app can also enhance PEFs ways of working, enabling them to respond to needs in a timely and targeted way.

Early intervention can refocus student and mentors activity so that relationships do not breakdown and a productive learning environment is maintained. This has benefits for patients since they are then more likely to be exposed only to student nurses who are being safely and effectively supervised. Having such positive and well-managed learning experiences influences the choices students make about where to work after graduating. This can positively influence recruitment and reduce workforce attrition in healthcare organisations.

Challenges

There are three key challenges to implementing BYOD approaches in healthcare settings; these are ensuring sensitive data remains secure, managing negative views around the use of mobile devices in patient areas and encouraging digital immigrants to engage with this type of technology. Protecting data in healthcare settings is a significant consideration and embracing a BYOD approach does need careful management. The advice and expertise of IT managers are needed in developing protocols and procedures to protect the public when such working practices are introduced. This also needs to be underpinned by well structure human resource and governance strategies (Gothard 2012). However, this is not an impossible undertaking since several NHS organisations have already developed procedures and safeguards to enable BYOD to be implemented (Perna 2014).

Alongside this re-education mechanisms are needed. The public need to understand the role handheld devices are beginning to play in clinical areas so that they do not see this as nurses having social interactions during working hours. However, Kehoe (2013) cautions that processes do need to be in place to stop employees abusing the system. Re-educating patients and visitors does not need to be a complex undertaking; simply explaining why a device is being used can often suffice. Alongside this publicising the organisation's investment in hand held device technology and apps can help patients understand how this helps to enhance the care they receive. Patients, though, are not the only people who need re-education. Persuading staff who are digital immigrants (Prensky 2001) that they can engage with this type of technology can also be challenging. Using mentor updates to brief staff and allow them to experiment with this resource is probably the best way to encourage initial engagement. Since mentor updates are mandatory, and should already be offered annually, organisations would not need to find further release time to aid this. Digitally native students can also educate mentors about such apps. This can lead to reciprocal learning, the student sharing their digital know-how and the mentor their clinical expertise, which promotes mutual respect and an enhanced mentor/student relationship.

Conclusion

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The 'Preparing for Caring' app is an innovation being developed out of the needs of mentors and students for accessible support and information in work areas. It has the potential to enhance mentoring practices and help students to get the most out of their placement experiences. At the heart of the app is the belief that support must be simple and accessible in busy care environments if nurses are to be able to usefully engage with it. It will not replace practice educators or link lecturers, but helps them to target their activity to areas where mentors and student need them. The app has the potential to enhance the quality of the future workforce by preparing them for caring.

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