Clinical Teacher paper

Title [max 50 characters]:

Learning in underserved UK areas: a novel approach

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Summary [max 250 words]:

Background: There is an insufficient number of medical students intending to pursue general practitioner (GP) careers. The undergraduate curriculum has traditionally prioritised teaching in large hospital settings despite most National Health Service patient contact occurring in primary care. Primary care is faced with providing healthcare for an ageing population with high levels of co-morbidities. Patients who live in deprived areas suffer many disadvantages affecting their health and additionally tend to be underserved. Globally, there has been an initiative to provide medical students with extended clinical placements in rural and remote areas. These placements have identified many beneficial outcomes; however, little is known about placements in other underserved, deprived areas. This paper describes an innovative pilot programme to tackle these issues.

Context: The North East of England has a large proportion of the most deprived communities and worst healthcare outcomes in England. In Teesside, Phase 1 Medicine at Durham University provides the pre-clinical curriculum. Durham students then join Newcastle University for Phase 2 Medicine, the clinical years.

Innovation: The Difficult and Deprived Areas Programme (DDAP) places fourth year students in general practice and community settings in post-industrial, deprived areas for 14 weeks, thus adopting and applying principles from rural initiatives (continuity and immersion) to other deprived settings. The DDAP allows students to learn about psychosocial determinants of health and to pursue community interests whilst gaining an excellent clinical grounding.

Implications: The DDAP provides a model for educators seeking to implement initiatives in similar underserved, deprived settings, which may potentially alleviate GP workforce shortages.

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Introduction

The insufficient number of medical students intending to pursue a general practitioner (GP) career is a consistent problem[1] particularly given GP shortages in deprived areas[2]. This may be exacerbated by the heavily prioritised hospital-based teaching model amongst medical schools[3] despite around 90% of National Health Service patient contact occurring in primary care[4]. There are fewer students interested in GP training posts, than are needed to respond to the healthcare needs of the population[1].

The UK population demographic is changing so healthcare must be provided for ageing patients with higher levels of chronic conditions and co-morbidities. In addition, disadvantaged groups (i.e. unemployed, racial and ethnic minorities, disabled) have reduced access to healthcare and suffer poor health outcomes across their lifespan[5].

GP consultations in areas of high socioeconomic deprivation deal with a high prevalence of psychological distress in patients[6], therefore, future doctors who provide care for such populations often require context-dependent knowledge and skills. The learning opportunities for students to consider undifferentiated symptoms of illness and psychosocial determinants of health are more readily available in primary care compared to hospital settings.

In the UK, recent policy has striven to enhance community involvement within the undergraduate curriculum[7] and increase the GP workforce[8] to ensure equitable healthcare[2]. Health Education England, the responsible organisation for the education and training of healthcare staff to help ensure the highest quality healthcare to England's population, has a mandate to recruit 50% of graduating medical students to become GPs[8].

Current teaching models are arguably exacerbating the problem as not enough students are choosing general practice and those who are, are not working where they are most needed: in deprived, inner-city UK areas[1, 3, 5].

Reviews of undergraduate clinical placements in rural, community areas suggest they are increasingly accepted educational environments[9, 10]. The initiatives are underpinned by principles including continuity and immersion[9]. 'Continuity' refers to repeated, on-going contact with a healthcare team whereas 'immersion' involves a deep exclusive engagement experience in a setting[9]. However, the placements are mainly located in vast rural and remote communities with very little known about initiatives in other underserved locations such as post-industrial, inner-cities and deprived areas[10].

This paper describes an innovative pilot programme to tackle these issues.

Context

Community settings

Most deprivation indicators are composites of different variables which often include measures of unemployment, income, housing, education, and health. The definition of 'deprivation' has to be contextualised within any given population.

The geographical area of Teesside in the North East of England was considered as 'difficult and deprived' because the deprivation indicator is significantly worse than the England average (according to the Index of Multiple Deprivation) and healthcare outcomes are poor, replicated over many years[11]. Life expectancy is significantly worse in Stockton-On-Tees than the England average however there is also socioeconomic variation within the community e.g. life expectancy is 16 years lower for men and 11.4

years lower for women in the most deprived areas of Stockton-On-Tees compared to the least deprived areas[11].

Stockton-On-Tees and Hartlepool had 58.9 and 63.0 GPs per 100,000 population in 2012 respectively, compared to a national average of 66.9[12]. Further, Middlesbrough had a GP vacancy rate of 10.4% in 2010 compared to a national average of 2.1%[13]. The UK had 2.8 doctors per 1,000 population in 2011, compared to Australia (3.3), Germany (3.8), and the United States (2.5)[14].

Medical School

In 2001, the Durham University School of Medicine, Pharmacy and Health opened at Queen's Campus in Stockton-On-Tees. The facility opened to support the region's economic development and to encourage the local population to become doctors.

Phase 1 Medicine at Durham University teaches two pre-clinical years, students then join Newcastle University for Phase 2 Medicine, clinical years: 3, 4 and 5. A particular strength of Phase 1 medicine at Durham is the involvement of students within the local community.

Innovation: The Difficult and Deprived Areas Programme (DDAP)

A pilot was developed to increase undergraduate exposure to general practice and community settings considered to be in difficult and deprived areas (see box 1). The DDAP is generalist in nature allowing students to learn about psychosocial determinants of health and engage community projects while concurrently gaining an intense clinical experience. Students are given the opportunity to appreciate the complexity of healthcare in deprived areas by allowing continuity and immersion in educational community settings. Initially, funding was secured from the North East Strategic Health Authority alongside permission from the Newcastle-Durham Joint

Board of Management Committee, for five students per cohort, over three consecutive cohorts.

Box 1 DDAP aims

Primary aim

- To encourage medical students to work in deprived areas in the future.

Secondary aims

- To increase student awareness of psychosocial determinants of health and health-seeking behaviours in deprived areas.
- To enhance student motivation, confidence and competence in caring for patients residing in deprived areas.
- To enrich the student experience as active members of the team and provide continuity of care in the community.
- To enable students to understand the interface between primary and secondary care.

Student learning outcomes

- Demonstrate an understanding of the current discourse surrounding health inequalities.
- Identify the links between deprivation and health.
- Describe reasons for specific problems associated with deprived areas.
- To explain how extraneous factors can impact on health outcomes and how to provide effective interventions.
- To demonstrate an understanding of the wider issues relating to health needs in deprived areas and how this may impact on other areas of life.
- Recognise potential barriers to accessing health care in deprived areas and ways in which to address them.
- Describe reasons for the differences in perspective between primary and secondary care and how this may affect health care in deprived areas.
- Identify services and networks within and outside the health service that support people in deprived areas.

Programme structure

Students attended three 3rd year teaching sessions, often by guest speakers, in preparation for their placement, topics included: GP experience of working in deprived areas, wider determinants of health, and mental health awareness.

Fourth year medical students were then placed in general practice and community settings in deprived areas for 14 weeks. The DDAP occurs during the 3rd (out of 3) Student Selected Component (SSC) and the elective time period combined i.e. the end of 4th year. Each SSC (6 weeks) and elective (8 weeks) allow students to choose learning topics related to medicine they would like to experience, potentially in any suitable location. Clinical placements are often short-term rotations (4-6 weeks) whereas the DDAP permits a longer period of time.

The students spend time with one general practice and one community placement organisation, and attend teaching sessions. During the first cohort (2012/13), the weekly timetable consisted of two days in general practice, half day teaching session delivered at Queens Campus, half day self-directed learning, and two days community placement. For the community placement, the student's stated preferences for particular areas (see box 2).

All placement providers were required to induct, support, mentor, and ensure students had useful roles. This often involved observation, shadowing, and hands-on learning experiences under appropriate supervision.

Box 2 Examples of community placement organisation areas

Arts	Domestic Violence
Employment	HIV/AIDS
Men's Groups	Social Care
Carers	Drugs & Addiction
Food Bank	Homelessness & Housing
Mental Health	Sport & Exercise
Children	Education & Literacy
LGBT & Sexual Health	Hospices/Palliative Care
Prisoners & their Families	Women's Groups
Disability	Elderly
Health Promotion/Public Health	Learning Disabilities
Refugees & Asylum Seekers	Young People

The teaching sessions covered issues relevant to the DDAP aims, such as psychosocial determinants of health, health-seeking behaviours, and social benefits systems (See box 3). Topic selection was informed through discussions with GPs about issues deemed pertinent to working in deprived areas.

Box 3 Examples of topics covered in teaching sessions

Topics:

- Introduction to Project
- Perspectives of Health in Difficult and Deprived Areas
- Commissioning in Relation to Deprived Areas
- Safeguarding Children
- Mental Health
- Medicine in Prisons

- Domestic Abuse
- Infectious Diseases
- Conflict management
- Asylum and Human Rights

Student participation

The DDAP provides an experience that is not currently part of the existing curriculum therefore is new for all students. Medical students from either Durham or Newcastle University have to volunteer in their 2nd year. If volunteer numbers exceed maximum uptake then selection interviews with an emphasis on relevant experience, interest and intent are implemented.

Management & placement allocations

Quarterly steering-group meetings consisting of: GPs, academics, Dean of Medicine, administrators, researchers, and funding body representatives, discussed issues including timetabling, general practice and community placement involvement, assessments, and future planning.

Following an invitation to all general practices in the Teesside area, the DDAP steering-group was overwhelmed by the high level of interest. General practices were compensated in-line with existing reimbursement given to undergraduate training practices.

All potential placement allocations were selected by the steering-group because of their overall relevance to the DDAP aims although the unique student experience varied depending on the specific nature of the organisation. For example, a student placed

with an asylum seekers organisation would be involved with case management of individuals dealing with benefits, health and housing.

Student assessment

Learning objectives were identified by students (and signed off by supervisors) prior to placements. For the SSC, students had to pass a patient-case presentation (relevant to deprived areas) and electronic portfolio. The e-portfolio enabled students to record progress towards their learning objectives and to reflect on their experiences. For the elective, a written reflection was required, including areas such as motivation for choice, valuable learning experiences, and personal reflection.

DDAP evaluation

Curriculum evaluation forms indicated a high level of satisfaction with the DDAP. Students typically commented that they valued the programme structure and opportunity to learn about medicine from different perspectives, beyond what is taught in the existing curriculum. GPs enjoyed the extended placement length and the opportunity to focus on deprivation topics with students.

Separate Ph.D. qualitative research was conducted with stakeholders to investigate how and what students learned throughout the DDAP. The educational evaluation will inform future directions of the DDAP to target follow-on-funding.

Implications

The broadening understanding of placements in underserved areas, including post-industrial, deprived areas, provides a model for those seeking to implement initiatives in similar settings. Two domains, setting and length of placement are imperative characteristics.

Setting of placement

The DDAP explores the transferability of successful rural models to other underserved areas and begins to unpick the pragmatic viability. This example can be built on further; research is needed to ascertain how appropriate such initiatives are as commonplace educational environments and how feasible they are to address workforce shortages.

Length of placement

There is a need to understand student learning processes during extended placements in underserved areas and differences in accordance with placement length variation. Between four weeks and five months, Worley and Kitto[15] identified a 'turning point' as a student becomes familiar with the general practice and their role; requiring less hands-on-time with supervisors. The DDAP provides support for a 14 week model. In terms of learning there is a general consensus about placement length of "the longer the better" to develop relationships between students, supervisors and patients. However, the associations between placement length, continuity and outcomes largely remain unknown.

Summary

In summary, the DDAP provides medical students with an extended learning experience in underserved, deprived UK areas. Such settings are currently under-utilised teaching environments within undergraduate medicine despite poor healthcare

outcomes and workforce shortages. This model suggests there are many benefits to be realised.

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Conflict of interest: None

Ethical approval: This is a descriptive study of an approved institutional course and was deemed exempt from formal ethical review by the chair of the Durham University School of Medicine, Pharmacy and Health Ethics Committee as there were no ethical issues.

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