

# Community-engaged primary care medical education

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## Abstract

**Background:** Community-engaged medical education (CEME) requires medical schools to partner with local communities to help address community priorities, whilst enhancing the learning experiences of students. Current literature on CEME has focused on evaluating its effects on students; however, there remains a gap in exploring whether CEME initiatives can have a sustainable impact for communities.

**Approach:** The Community Action Project (CAP) at Imperial College London, is an eight-week, community-engaged, quality improvement project for Year 3 medical students. Students initially consult with clinicians, patients and wider community stakeholders to understand local needs and assets, and identify a health priority to address. They then work with relevant stakeholders to design, implement and evaluate a project to help address their identified priority.

**Evaluation:** All CAPs ( $n = 264$ ) completed in the 2019–2021 academic years were evaluated for evidence of several key areas, including community engagement and sustainability. 91% of projects evidenced a needs analysis, 71% demonstrated patient involvement in their development, and 64% demonstrated sustainable impacts from their projects. Analysis revealed the topics frequently addressed, and the formats used by students. Two CAPs are described in more detail to demonstrate their community impact.

**Implications:** The CAP demonstrates how the principles of CEME (meaningful community engagement and social accountability) can lead to sustainable benefits for local communities through purposeful collaboration with patients and local communities. Strengths, limitations and future directions are highlighted.

## 1 | BACKGROUND

Medical schools can play a vital role in addressing societal inequalities.<sup>1</sup>

This has been reinforced by the World Health Organization, who have defined the need for medical schools to be socially accountable as<sup>2</sup>

*‘the obligation to direct their education, research and service activities towards addressing the priority health*

*concerns of the community, region, and/or nation they have the mandate to serve’.*

Such a shift requires an institution-wide approach to transform its management, admissions, curriculum, learning experiences, community engagement and research priorities.<sup>3,4</sup>

The development of socially accountable curricular innovations requires authentic partnership with community stakeholders. Such a

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community-engaged medical education (CEME) approach has been defined as<sup>5</sup>

*'activities that directly engage members of a community in their design, conduct and/or evaluation so as to meet the needs of the community in some way and to enhance the experience or outcomes of the learners'.*

## *The development of socially accountable curricular innovations requires authentic partnership with community stakeholders.*

CEME has been extensively integrated in several notable medical schools founded with strong social missions to serve their region's communities, such as in Canada,<sup>6</sup> the Philippines,<sup>7</sup> South Africa<sup>8</sup> and Sudan.<sup>9</sup> The benefits to learners of CEME have been shown to include development of critical-thinking, problem-solving, leadership skills, applied health promotion learning and increased awareness of social determinants of health.<sup>10</sup> However, critique of current CEME projects

has highlighted a lack of research on the extent of community impact and sustainability.<sup>11</sup>

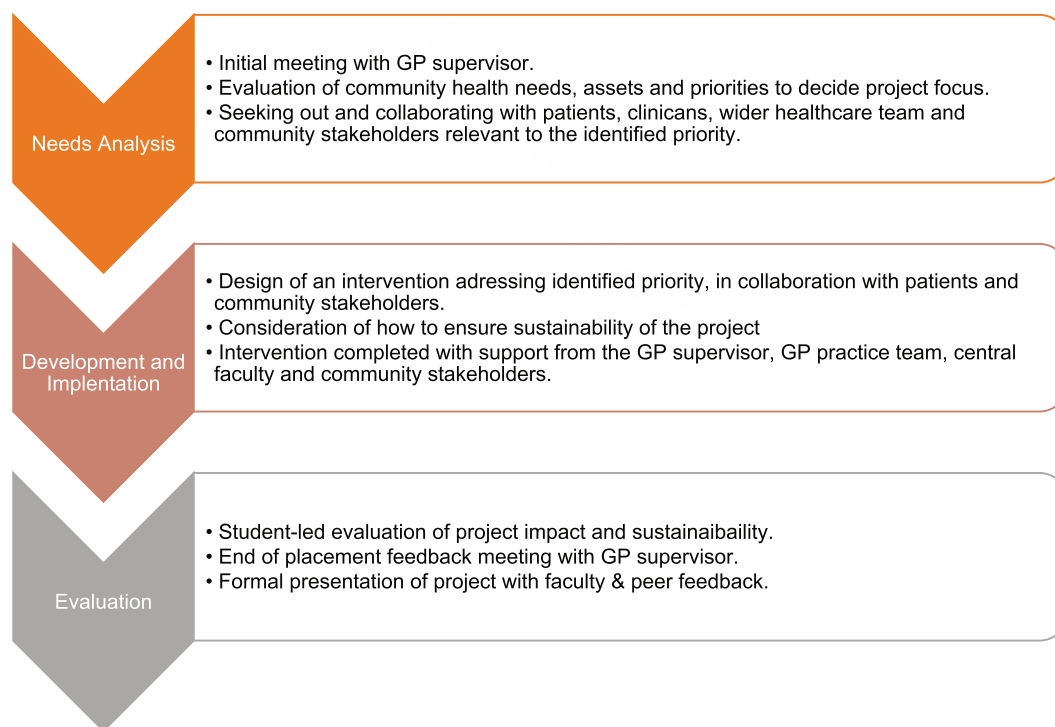
In 2016, the Undergraduate Primary Care Education team at Imperial College London developed the Community Action Project (CAP). CAP is a community-engaged, quality improvement project completed by all third-year undergraduate medical students, during their eight-week general practice placement, alongside clinical experiences. In this article, we present a review of all projects completed between 2019 and 2021, to evaluate their community impact and understand the breadth of local health priorities being addressed by the projects.

## 2 | APPROACH

During the CAP, medical students completed three key stages of their project (Figure 1):

1. Conducting a needs analysis to identify a local community health or well-being priority
2. Developing and implementing the project
3. Evaluating their project's impact and sustainability

The CAP has evolved based on student, community and tutor feedback. Community input into CAP development has been facilitated through the appointment of a community collaboration lead within the team. Students work in partnership with their local general



**FIGURE 1** Flowchart demonstrating the three stages of a typical Community Action Project.

practitioner tutors, patients and community stakeholders to design and develop their projects, and are supported by guidance from faculty tutors. Upon completion, students present their projects for faculty and peer marking. As the CAP has evolved, we have increasingly emphasised community engagement and sustainability to our students, including through written guidance and inclusion in the marking scheme (Figure S1). We also broadened the needs analysis to include an asset-based approach, to evaluate strengths and resources available in the community. The development of the CAP is part of a wider initiative of developing an increasingly community-engaged primary care curriculum.

### 3 | EVALUATION

#### 3.1 | Analysis of projects completed from 2019 to 2021

The presentation of all 264 CAPs completed in the academic years 2019–2021 were evaluated and assessed for the following criteria (Figure 2):

1. Target population
2. Completed needs analysis
3. Community involvement: evidence of working with patients or other community stakeholders during the needs analysis and development of the CAP
4. Impact: a measured post-project improvement in a predefined aspect of the medical and/or social well-being of community members
5. Sustainability: a valid assessment and plan for how the activities and benefits of the CAP can be continued beyond the eight-week placement

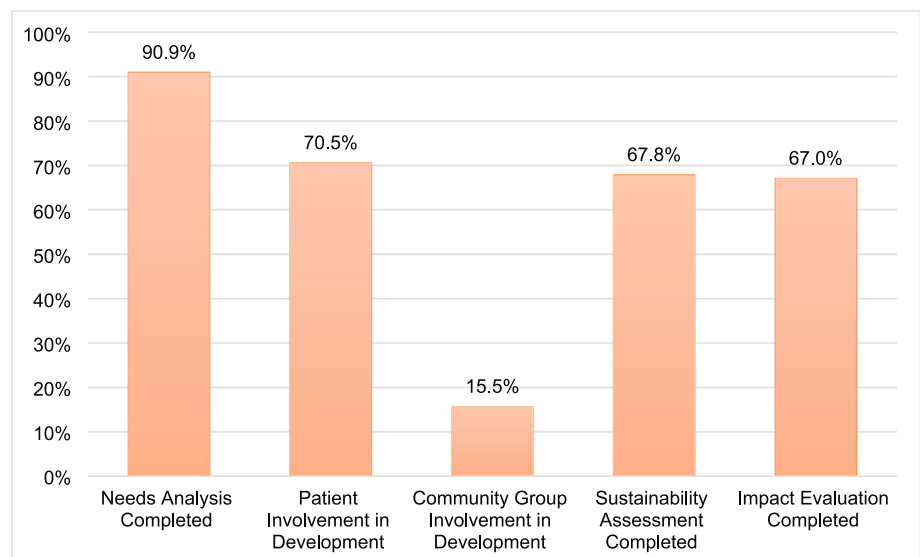
Each CAP presentation was assessed for evidence of each of the above predetermined criteria. The analysis was conducted by two faculty academics who had no other involvement in CAP development or delivery.

240 (90.9%) projects successfully completed a needs analysis. Out of all the projects, 186 (70.5%) projects evidenced direct engagement with patients, and 41 (15.5%) also demonstrated engagement with external community groups, in their development and implementation. 179 (67.8%) projects completed sustainability assessments, with 170 (64.4%) projects demonstrating sustainability beyond the eight-week placement. 177 (67.0%) projects completed impact evaluations, most commonly involving surveys of patients (152 projects, 57.6%).

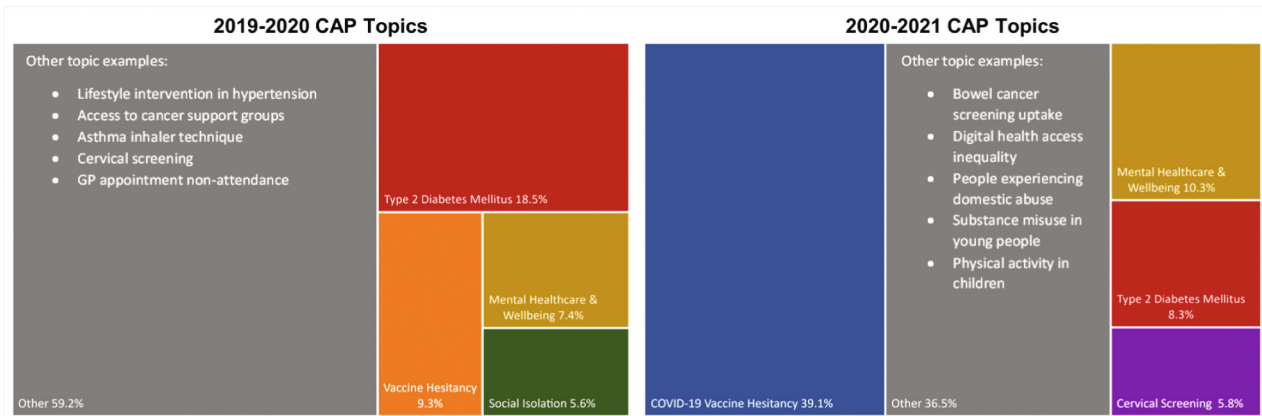
A wide range of medical and social problems were addressed by the projects, targeting a diversity of patient groups (Figure 3). The most addressed area in 2019–2020 was lifestyle change for patients with type 2 diabetes mellitus (T2DM) or prediabetes (commonly after identifying gaps in targeted education for specific minority groups) (20 projects, 18.5%). In 2020–2021, students were specifically asked to create projects related to the COVID-19 pandemic, and COVID-19 vaccine hesitancy was the most addressed area (61 projects, 39.1%). Most projects involved creating patient information leaflets or posters, with other common formats including patient education courses, direct patient contacts/discussions, and patient information videos or websites.

#### 3.2 | Specific examples of projects

Several projects excelled and sparked conversations in local communities and beyond. One such project, featured two students working with local care homes and the local Clinical Commissioning Group to address low COVID-19 vaccine uptake in health and social care staff.



**FIGURE 2** Percentage of Community Action Projects from 2019 to 2021 demonstrating primary evaluative outcomes.



**FIGURE 3** Topics most frequently addressed by Community Action Projects (CAPs) in 2019–2020 and 2020–2021.

A qualitative assessment was conducted to understand reasons for poor uptake during meetings with community stakeholders.

An animated video, offered in multiple languages, was then created to specifically address these barriers.<sup>12</sup> Video interviews with community leaders and health and social care staff about their experiences with vaccination, were also created and distributed to care homes.<sup>13</sup> Students organised multiple educational webinars that staff could attend. Local charities and the local authority shared the videos widely on social media, and they were also used by other primary care organisations. Of 50 staff survey respondents, 84% said they would be more likely to accept the COVID-19 vaccine after watching the videos. This award-winning project has since been presented at a national conference<sup>14</sup> and promoted by the UK Department of Health via their social media platforms.

Another project identified using needs analysis and patient interviews, that there was a gap in T2DM health education within the local Arabic-speaking population, which was further linked to below-average medication adherence. An information leaflet was created in English and Arabic, explaining T2DM medication, and was distributed to all patients with T2DM in the practice. Following this, the students developed and delivered in-person seminars with local translators, educating patients on lifestyle and medication management of T2DM. A diabetes charity was also engaged to help develop this project. Pre- and post-project patient surveys revealed significant improvements in patient understanding and decreased concern around medication side-effects.<sup>15</sup>

### 3.3 | Implications

We believe the CAP model of CEME is of key relevance to health educators and students. It offers a practical, simple model of service-learning, where students can contribute to the health of local communities, whilst undergoing professional and personal development. Despite the risk of disengagement during the early stages of the COVID-19 pandemic, through remote-working with clinicians,

community stakeholders, and patients, students were able to develop projects responding to key community priorities at the time, including vaccination uptake and mental health concerns.

*Students can contribute to the health of local communities, whilst undergoing professional and personal development.*

A key strength of the CAP is that it can provide CEME whilst integrating seamlessly into an existing clinical primary care placement. The main challenge facing both educators and students in delivering the CAP is the limited time students have to complete projects, alongside other competing clinical commitments. This also meant that impact could only be assessed within the 8 weeks, and sustainability could only be assessed on the students' plans to continue their projects beyond the placement. An additional challenge has been in establishing stronger relationships and collaborations between students and community members, partly due to the project's limited time. Some students did not involve any community members in their CAP, and most limited this involvement to patients and not wider community groups.

Possible evolutions of the CAP to address these challenges include placing students directly in contact with relevant community members at the start of the CAP, as has been shown in other CEME innovations<sup>6,7</sup>; however, this could diminish an authentic aspect of students identifying their own priority groups based on their needs analysis. Other possible enhancements to our community engagement include involving community members in the presentation and marking of projects and in establishing an advisory committee to steer the CAP development.

### 3.4 | Limitations

We acknowledge that there are important limitations to this study. Firstly, there was a lack of community stakeholder representation in the analysis of CAPs. Using a more community-engaged approach would be valuable in assessing for meaningful community involvement and impact. Secondly, whilst the CAP provides an example of a community-engaged curricular innovation, a whole institutional approach is required for true social accountability, addressing all aspects of higher education.<sup>6-9</sup>

#### 3.4.1 | Future Steps

This study lays the groundwork for further studies to explore the impact, and facilitators and barriers of CEME approaches in undergraduate primary care education. We suggest that qualitative research is required, assessing the impact of the CAP from community and student perspectives. Additionally, a longitudinal study assessing community impact would help us understand whether projects lead to lasting impacts beyond the placement.

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The authors have no acknowledgement to disclose.

#### CONFLICT OF INTEREST

The authors have no conflict of interest to disclose.

#### ETHICS STATEMENT

Our project was confirmed to be a service evaluation by the Research Governance and Integrity Team at Imperial College London, and therefore ethical approval was not required. All work was conducted within relevant ethical principles and guidelines (Declaration of Helsinki). For the 'specific examples of projects' section, involved students gave written consent for their projects to be included.

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#### SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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