The benefits of international volunteering in a low-resource setting: development of a core outcome set

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Abstract

Background: Qualitative narrative analysis and case studies form the majority of the current peer-reviewed literature about the benefits of professional volunteering or international placements for healthcare professionals. These often describe generalised outcomes that are difficult to define or have multiple meanings (such as ‘communication skills’ or ‘leadership’) and are therefore difficult to measure. However, there is an interest from employers, professional groups and individual volunteers in generating metrics for monitoring personal and professional development of volunteers and comparing different volunteering experiences in terms of their impact on the volunteers. In this paper, we describe two studies in which we (a) consolidated qualitative research and individual accounts into a core outcome set and (b) tested the core outcome set in a large group of global health stakeholders.

Method: We conducted a systematic review and meta-synthesis of literature to extract outcomes of international placements and variables that may affect these outcomes. We presented these outcomes to 58 stakeholders in global health, employing a Delphi method to reach consensus about which were ‘core’ and which were likely to be developed through international volunteering.

Results: The systematic review of 55 papers generated 133 unique outcomes and 34 potential variables. One hundred fifty-six statements were then presented to the Delphi stakeholders, of which they agreed 116 were core to a wide variety of healthcare professional practice and likely to be developed through international experiences. The core outcomes (COs) were both negative and positive and included skills, knowledge, attitudes and outcomes for healthcare organisations.

Conclusions: We summarised existing literature and stakeholder opinion into a core outcome set of 116 items that are core to healthcare professional practice and likely to be developed through international experiences. We identified, in the literature, a set of variables that could affect learning outcomes. The core outcome set will be used in a future study to develop a psychometric assessment tool.

Keywords: Systematic review, Delphi, Core outcomes, International volunteering, International placements, Health professional education

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Background
Volunteering, or temporarily working in low-resource settings, is often seen solely as a means of helping those in poorer economies [1]. Many professionals find it difficult to obtain support to volunteer and report lack of recognition upon return, which is disincentive to volunteering [2]. Furthermore, health professionals that volunteer abroad predominantly do so using annual leave, rather than recognised study leave for continued professional development [3, 4]. The notion that those from high-income countries (HICs) are altruistically offering ‘help’ to those in low- and middle-income countries (LMICs) can also lead to a distortion of the partnership relationship between high- and low-income partners in health partnerships. The low-income partners can be seen as beneficiaries and the high-income partners seen as donors [5–7]. Furthermore, a tension often exists between UK healthcare professionals and local international staff, as the intentions or role of healthcare professionals and students is often not explicit to the teams with whom they are working. However, the donor-recipient relationship is becoming increasingly contested in recent literature and policy and mutual benefits realised [8, 9].

There is an imperative, therefore, to fully understand the learning outcomes that are possible for HIC health professionals working in low-resource settings and, in particular, to help recognise these activities as educational development [2, 3]. Understanding ‘what’ is gained would allow specification of intended learning outcomes for training and continuing professional development and to make the gain for the HIC more explicit. Understanding under what circumstances learning outcomes occur would result in an understanding of how to maximise that gain.

Literature that explores what and how healthcare professionals learn from temporarily working or volunteering in a low-resource setting tends to report anecdotes or single reports, which provide a lower level of evidence [4, 10]. Furthermore, benefits are detailed in broad categories, with ‘leadership’, ‘communication’ and ‘cultural awareness’ being frequently reported [3, 11–13], with a focus on one of these skill sets in depth or a list of outcomes under umbrella terms, such as communication or leadership skills [3, 14]. These broad labels make an assessment of the learning outcomes difficult as they might contain multiple underpinning knowledge, skills, practice and attitudes. Self-assessment of broad terms is not well associated with objective performance [15]; individuals struggle to assess themselves in relation to ambiguous or ill-defined traits [16, 17]. Specifying learning at this broad level means that the more granular levels remain unspecified. A higher-level group might contain a wide range of lower-level outcomes and might not contain others, which would reduce the content validity of an assessment.

Understanding the metrics of health professional volunteering would have a significant impact on current continued professional development (CPD) policy because international experiences could be evidenced as beneficial to personal and professional development. Numerous policy documents about future health workforce highlight the importance of skills such as leadership, communication and adaptability [18, 19]. Such skills have been described as key outcomes of international placements in LMICs, but have yet to be quantified to enable comparison with other learning opportunities [3].

In a systematic review of the evidence of the benefits to the United Kingdom of health partnership work, Jones et al. reported 40 individual benefits grouped within seven key domains (communication and teamwork, clinical skills, management skills, patient experience and dignity, policy, academic skills and personal satisfaction and interest). There were a number of features of this review that makes it insufficient for the purposes of measuring learning outcomes from international volunteering. Firstly, this review focused only on health partnerships, a specific type of health link, and not all types of volunteering or international placements. Secondly, the findings were categorised broadly, with the difficulties of broad measurement specified above. Thirdly, the professions in their search terms were only doctors and nurses. Finally, it did not extract factors that may affect learning outcomes. For the purpose of measurement, we needed to include literature from a broad range of experiences, extract outcomes at a granular level, include all healthcare staff groups and extract variables that may affect these outcomes.

The outcomes for health professionals are not always positive and the costs of international placements in literature have included health consequences, skills degradation and financial cost [3, 20, 21], reputational, health and opportunity [3]. Research has explored the costs and benefits of international placements [13, 20, 22] and barriers to volunteering, but no research has yet listed all reported negative outcome [23].

Many aspects of LMIC placements are different from working in a HIC. Relationships between outcomes and these aspects have been proposed, for example that individuals learnt from the opportunity to interact with more patients or conditions than in the United Kingdom [10, 24] and that longer stays may be more beneficial than shorter stays [25, 26]. These variables have not been systematically reported.

This current paper presents two studies: a meta-synthesis and a Delphi. The meta-synthesis aimed to (a) detail the personal and professional development outcomes of international work, at a granular level, i.e. ‘knowledge about procedures rarely conducted in the United Kingdom’ (rather than at a too broad level, i.e. clinical skills or too specific level, i.e. experience conducting vesico-vaginal fistula
Method

Study 1: Meta-synthesis study design and sample

The systematic review of peer-reviewed literature, published in academic journals, was conducted between September and November 2014. Inclusion criteria included that (1) participants must not be in receipt of their full UK salary (a stipend or living allowance was permissible), thus excluding those in permanent employment overseas; (2) health professionals or health professional students (students were included, as much research has been conducted about educational outcomes in students); (3) activities must be health-focused to ensure outcomes were related to clinical work; (4) some participants must have departed from the United Kingdom and be UK citizens (papers that included a partial UK sample were included); (5) some participants must only have travelled to a LMIC; and (6) the paper must reference something that is perceived as a benefit, cost or potential variable, (7) there were no date restrictions. Guidelines for inclusion were used to ensure consistency.

Each paper was screened by one team member (NT) to ensure that it met the inclusion criteria. A second team member (JC) independently checked the first 20% of the included papers to ensure agreement of implementation of inclusion criteria. This was then discussed in a meeting. Disagreements would have been resolved using discussion and refining inclusion criteria for greater specificity; however, the reviewers agreed on all of the papers for inclusion (Table 1).

Data sources and study selection

A standard set of terms were used to search 11 databases for peer-reviewed literature between the earliest date indexed and the time of the review. This included five columns of synonyms relating to outcomes and variables, international volunteering placements, health professionals, the United Kingdom and LMICs (see Additional file 1). The databases were medical and generic databases: Cochrane Economic Evaluations, Health Management Information Consortium, Health Business Elite, Web of Knowledge/Social Sciences Citation Index, PsycINFO, CINAHL, AMED, International Bibliography of Social Sciences, Social Services Abstracts and Sociological Abstracts, Global Health and JSTOR.

The abstracts and titles of each result of the electronic database search were screened, papers that did not meet inclusion criteria were removed and retained papers were rescreened to confirm inclusion.

Citation mapping

Reference lists of all included papers were assessed. Any papers that were of relevance were assessed against the inclusion criteria.

Quality assessment

We chose to include papers that were peer-reviewed but did not present empirical findings; therefore, the Cochrane risk of bias tool was not applicable to this research [27]. We categorised the papers using a quality framework [28].

Data extraction

We took a thematic synthesis approach to data extraction [29], which consists of three stages: line-by-line coding of text, development of descriptive themes and generation of analytical themes. We did not undertake the third stage as our purpose was the extract outcomes as a low level and the third stage has been criticised for being open to the judgement of the researcher [29, 30].

Each study that met the inclusion criteria was read, and any text (related to variables or positive/negative outcomes, at an individual, national or institutional level) was coded according to both content (explicitly stated in the papers) and meaning (inferred by the researcher). Outcomes were defined as anything that happens to UK health professionals as a result of volunteering/international placements (at an individual, national or institutional level), both positive and negative. Variables were any factors that reported influence outcomes, both implicitly and explicitly.

Using Nvivo, a node was created at a ranked level for each component of descriptive theme. For example, the outcome experience conducting ‘vesico-vaginal fistula surgery’ was coded within the second-order theme of ‘greater knowledge of procedures not used in the United Kingdom’ within the higher-order theme of ‘Increased awareness of and knowledge about conditions and procedures rarely encountered in the United Kingdom’. We decided that the lowest level of specificity would be
applicable to all/most professions and generalisable across situations. As each paper was coded, the nodes were adapted, developed and generated. Two researchers (NT, JC) independently reviewed the first 20% of papers and then met to develop a coding framework together. There were no disagreements as we were not looking to categorise, but rather develop a matrix of emerging codes; therefore, any differences in extraction occurred only when one reviewer had overlooked an outcome cost or variable. The second reviewer verified the extraction of the data from a further 20% of papers.

**Study 2: Stakeholder Delphi**

**Design**

We used the Delphi method, an iterative process of rounds in which data are collected and condensed into a group consensus [31]. A series of virtual questionnaires record participant’s agreement with statements concerning a particular topic. Delphi is often used to develop COS in health research [32, 33]. As we were creating a core outcome set, this stage of the process only included the outcomes extracted in study 1; variables were not included.

In round 1, we held a face-to-face discussion group with stakeholders to generate outcomes. Subsequent rounds were online (with paper version emailed if there were technical difficulties). Participants were asked to indicate to what extent they agreed or disagreed each outcome was a core outcome of international placements and volunteering.

**Participants**

Participants were people who were volunteering health professionals; coordinators of international health professional volunteers, responsible for intended learning outcomes (ILOs) for health professionals; coordinators of health partnerships; study health professional education and international development; educational commissioners and NHS stakeholders. Participants were recruited for an initial workshop from a global health network, to ensure that participants from each of the stakeholder groups were invited and represented. Non-attendees were invited to participate online. After this event, a snow-ball sampling technique was used to reach further stakeholders from each group for online rounds; participants were asked to recommend interested individuals.

**Instrumentation round 1: Stakeholder face-to-face discussion and pilot**

In order to generate a list of outcomes, any new data generated from round 1 was added to the existing coding framework (see Additional file 1). Outcomes were then generated by presenting the highest-order theme as the outcome and any relevant lower-order themes as examples within brackets to add context. We input outcomes from the meta-synthesis and any additional outcomes from round 1 of the Delphi, into the hosting software. We piloted round 2 with seven members of the research team, who commented on structure, grammar, wording, level of specificity and technical issues. With the addition of items from the Delphi round 1 and comments from the pilot (and separation of some outcomes into two unique outcomes), the 133 outcomes from the meta-synthesis were converted into a list comprising of 156 outcomes to go forward to round 2.

**Rounds 2–4: The online rounds of the Delphi**

Two team members divided the 156 outcomes into three categories (see Table 2): knowledge, skills and attitudes (\(n = 115\)); organisational outcomes (\(n = 8\)); and negative outcomes (\(n = 33\)). Statements were presented alongside a 7-point Likert-type scale, regarding agreement as to whether each statement should be “considered a core outcome of international placements that should be measured in a toolkit”. The scale used the following numbers to represent agreement: 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = no preference, 5 = slightly agree and 6 = agree, 7 = strongly agree. For emphasis, the phrase ‘core outcome’ was presented in bold and the definition was repeated in numerous emails, instructions and synopsis. A core outcome was defined in the following way:

A core outcome is something that is common, important and applicable across a wide range of settings. It can be a benefit or cost, but it must be something that would be more likely to happen to an individual on international placement rather than somebody working in the UK.

For each round, participants had 14 days to respond. Email reminders were sent to invitees frequently. However, as the initial questionnaire was particularly long, some participants requested an extension of the deadline by 10 days and 2 days at round 3. In round 4, participants who had not responded in round 3 (but had in round 2) were invited to re-join the study; many stakeholders worked internationally and had limited internet access at certain periods. In round 4, the expressions of some statements were changed in light of the comments from previous rounds to improve clarity.

**Table 2** The three questions presented to stakeholders

| 1) KNOWLEDGE, SKILLS AND ATTITUDES: to what extent do you believe the following is a CORE outcome of international placements (that should be measured in a toolkit)? |
| 2) ORGANISATIONAL OUTCOMES: to what extent do you believe the following is a CORE outcome of international placements (that should be measured in a toolkit)? |
| 3) NEGATIVE OUTCOMES: To what extent do you believe the following is a CORE outcome of international placements (that should be measured in a toolkit)? |
The statements with at least 70% consensus in the previous round were retained and not re-presented to the group. Therefore, by round 4, a much smaller group of non-consensus statements were presented. In rounds 3 and 4, participants were asked to use the same Likert scale and reconsider their answers from the previous round (displayed) in light of the group median and any anonymised comment gathered in the previous round.

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**Fig. 1** PRISMA flow chart to show number of papers included and excluded

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*From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed.1000097

For more information, visit [www.prisma-statement.org](http://www.prisma-statement.org).
Results

Study 1: Meta-synthesis

Data sources

The search of the electronic databases generated 521 hits including duplicates, i.e. 384 unique papers. Twenty-two papers met inclusion criteria. Citation mapping revealed a further 33 papers which were included. Therefore, the total number of papers from which data was extracted was 55. The main reasons for exclusions of papers were (1) not concerning the subject of interest, (2) non-British populations, (3) no health focus, (4) only placements in HIC, 5) only including paid/permanent staff and (6) reporting no benefits, outcomes or costs.

No papers included fell within the top two quality categories proposed by Benzies et al.: randomised controlled trials [28]. Some papers included qualitative or quantitative data (23/55, 42%), but the majority of papers reported no primary data.

Positive outcomes were extracted from 96% (53/55) of the papers, whilst negative outcomes were extracted from only 49% (27/55). Potential variables that could affect these outcomes were extracted from 90.91% (50/55) of papers. None of the papers explicitly reported or explored how variables were thought to affect outcomes (Fig. 1 and Table 3).

Extracted outcomes

We found 133 unique outcomes, including 28 negative outcomes. The outcomes extracted could be categorised within NHS professional development terminology; there were 24 items about knowledge, 44 about skills and 20 about attitudes [34]. Six were organisational benefits and 29 negative; 10 were categorised as ‘other’. Organisational outcomes were deliberately separated, as organisation-specific outcomes were identified in addition to the general positive effect of staff with developed knowledge, skills and attitudes. Only 29 (22%) of the outcomes stated in the literature were negative, suggesting an overall positive attitude towards international placements from the authors (Fig. 2 and Tables 4 and 5).

Study 2: Delphi

Participants

Fifty-one participants attended the round 1 workshop. Invitations were sent to 259 participants for the online Delphi, and 78 (30%) accepted. Once enrolled in the study, response rates remained high: round 2, \( n = 58/78 \) (74%); round 3, \( n = 49 \) (63%); and round 4, \( n = 45 \) (58%). More than half of the participants were involved in global health policy, and one third of the participants had volunteered.

![Fig. 2 Example coding matrix (communication was not a theme, but it highlights how it was used in past research)](image-url)
Table 3  Factors which influence outcomes

| Higher order themes | Lower order Components | Examples from data |
|---------------------|------------------------|--------------------|
| **External Variables** |                        |                    |
| Ethics               | Are local patients informed of the risk? | “For example, it was not uncommon at first for an anaesthesiologist to encounter a complex paediatric patient having major surgery in the operating theatre where she was expected to proceed with anaesthesia without question and without preparation of adequate drugs or equipment.” (Kinnear, 2013) |
|                     | Corporate and social responsibility | |
|                     | Do patients come first? | |
|                     | Levels of standards | |
|                     | Health and Safety | “I just think the really important thing in the drawbacks is the health and safety issues—I think we have that as the biggest drawback—on both sides really; the volunteers and the patients in host countries” (Workshop Participant) |
| Funding             | Consistency of funding for project | “The period of external funding is drawing to a close and the link needs more regular and predictable funding to ensure sustainability.” (Baillie, 2009) |
|                     | Finance plan for project | |
|                     | Funding from a charity or grant | “All international experiences are financed by the students either by assistance from grant awarding bodies, fund raising activities or personal finance.” (Thompson, 2000) |
|                     | Volunteer funded by sending organisation | |
|                     | Volunteer fundraising | |
|                     | Support of a health link partnership | |
|                     | Self-funding | |
|                     | Specific funding for training | |
| Decision of host countries needs | Needs Assessment by both parties | “In South Africa, for example, the government tries to fill all clinical posts with local doctors. Only when a post has not been filled by a local doctor does the government seek external applications for which UK GP trainees can apply.” (Kernan, 2014) |
|                     | High income party decides | |
|                     | Host country decides | |
| Healthcare facility factors | Does the environment favour flexibility | “This support is, by necessity, mostly provided by the host supervisor, and home medical schools in effect delegate their duty of care to the host.” (Lumb, 2014) |
|                     | Does management allow people to become multi-skilled | “Students should be exposed to a variety of nursing experiences within the host country. This would give them a broad spectrum for comparisons between cultures, nursing practice and health care delivery in those cultures” (Button, 2005) |
|                     | Level of organisational support | |
|                     | Use of specific activities/sessions for learning | |
|                     | Volunteer exposure to numerous systems | |
|                     | Opportunities for exposure to culture outside of hospital | |
|                     | Differences in protocols | |
|                     | Licensing and professional regulations | |
|                     | Level of corruption | |
|                     | Are volunteer skills best utilised? | |
|                     | Encouragement and motivation of volunteers | |
|                     | Financial and human resources | |
|                     | Criticism of project/volunteers | |
|                     | Mobility of local staff | |
|                     | Existence of local role models | |
|                     | Number of times volunteers and local professionals engage | |
| Benefits for host organisation | Donations | “In order to transform a process favouring the trainee into an equitable exchange, each trainee must recognise the need for reciprocity when a community contributes to his or her education. This might manifest through the provision of resources, such as books and surgical supplies, of teaching and new ideas, or of money, which could be reallocated to meet local need.” (Banatiali, 1998) |
|                     | Material/financial benefits | |
|                     | Payment for supervision | |
| Income of host country | Low | “They therefore concluded that there was no significant difference in level of knowledge and skill gained by going to a developed or developing country” (Button, 2005) |
|                     | Middle | |
|                     | High | |
| Commitment of local staff to project | Staff time pressures | “It was reported that some overseas staff are wary of offering constructive criticism, not wishing to appear ungrateful. There is a move among many links to address this problem through structured appraisal and evaluation for each visit. One had begun to use anonymous feedback forms to learn from visits and improve the quality and effectiveness of programme.” (Baguley, 2006) |
|                     | Empowerment of local staff | |
|                     | Involvement of hospital leaders | |
|                     | Project use local experts | |
|                     | Local perceptions of volunteers | |
|                     | Value of volunteer opinions | |
### Table 3: Factors which influence outcomes (Continued)

| Higher order themes | Lower order Components | Examples from data |
|---------------------|------------------------|--------------------|
| Difference between host and origin country | Cultural distance between host and origin country | “The greater the cultural differences of the international placement, the greater the impact.” (Thompson, 2000) |
| | Level of cultural immersion | “One of the main weaknesses has been difficulties with communication between the two partners in the link, exacerbated by problems with access to email in Uganda, intermittent exchange visits and an excessive reliance on communication through the two link coordinators.” (Longstaff, 2012) |
| | Severity of communication difficulties | |
| | Shared values and cultural fit | |
| | | |
| NHS and UK Factors | Accreditation | “This placement is recognized by the (UK) Royal College of Anaesthetists to count towards training, and these trainees will all have completed their Royal College examinations before the trip.” (Button 2005) |
| | Existence of returner schemes | “Many forward-thinking NHS trusts actively support relationships with overseas organisations but barriers remain.” (Dean, 2013) |
| | Bureaucracy | |
| | Political Climate in UK | |
| | Recognition of benefits by NHS/UK organisation | |
| | Trust, deaneries and PCT’s support and influence | |
| | Support of UK colleagues | |
| Relationship between host and sending organisation | Dependence on one-another | “Links are not properly established until a visit has given collaborators time to become familiar with each other and to plan the first year, at least, of their work together.” (Parry, 1998) |
| | Quality of communication | “Links forged as trainees on these initial UROLINK visits have often been strengthened, and centres where these trainees have become consultants are now ‘twinning’ to continue the two-way exchange of experience.” (Gujral, 2002) |
| | Collaboration | |
| | Differing expectations | |
| | Equality of input | |
| | Ground rules and protocol | |
| | How the link is set up | |
| | Multi-departmental partnerships | |
| | Registered links i.e. THET | |
| | Sensitivity to local contexts | |
| | Sustainability of relationship | |
| | Length of relationship | |
| | Uni-professional or multi-disciplinary | |
| Level of supervision and support | Mentor in UK | “less support from organisational structure, developed skills as a result” (workshop participant) |
| | Support in UK | “the supervision styles of host supervisors as the major challenges faced” (Horton, 2009) |
| | Supervision from western staff residing in host country | |
| | Linking of senior and junior volunteers | |
| | Supervision from local people | |
| | Support structure in host country | |
| | Access to HR | |
| Existence of other similar project in areas | Over-crowding of volunteers in hospitals | “specialises in delivering high-quality primary health care in very hard to reach communities, where government service provision is non-existent and where there are very few other NGO projects” (Nunns 2011) |
| | Support from others volunteers in another project | |
| Focus of project | Agreement of focus | “For IMV placements to work, both host and volunteer need to have realistic goals and a common understanding of the aims of the placement.” (Elnaway, 2013) |
| | Focus on mutual benefit | “The most commonly-reported roles overall were clinical service delivery in a non-emergency setting” (Seo, 2012) |
| | Alignment of project with host country health plans | |
| | Capacity building focus | |
| | Service delivery focus | |
| | Developmental focus | |
| | Sustainability focus | |
| | Training focus | |
| Practical Factors | Travel | some students plan their electives in groups, all travelling to a particular destination. This process often involves students planning a travel experience rather than a learning experience. (Miranda, 2005) |
| | Accommodation | |
| | Use of travel agent | |
| | Documentation | |
| Structure of the programme | Aims developed by volunteers themselves | ‘undertaking project work, particularly if beneficial to the host.’ (Lumb, 2014) |
| | Informed by other similar projects | “It may have been helpful to obtain more input from similar programs at an earlier stage of planning, and it would be helpful in the future to establish formal links between programs or a forum for discussion” (Kinnear, 2013) |
| | Informed by literature | “degree of developing country ownership” (Smith, 2012) |
| | Coercion | |
| | Continuation of project by other volunteers | |
| | Involvement of local | |
| Higher order themes | Lower order Components | Examples from data |
|---------------------|------------------------|--------------------|
| "governments"       | Countrywide initiatives|                    |
| Do volunteers have a project? |            |                    |
| How project is managed (i.e., well run) |            |                    |
| Existence of guidelines and frameworks |            |                    |
| Commitment/time allocation/number of UK admin staff |            |                    |
| Programme tailored to volunteer needs |            |                    |
| Spread of volunteers throughout the year |            |                    |
| Quality control of services provided by volunteers |            |                    |
| Length of placement | Long term | ‘the average time out being 12 months, you really have time to get to grips with trusting people when you are volunteering that it takes that long before you can kind of be comfortable with it.’ (workshop participant) |
|                     | Short term |                    |
|                     | Adjustment |                    |
|                     | Short re-occurring trips |            |
| Project evaluations | Evaluations during placement | The collection and application of feedback from hosts and volunteers, as well as the assessment of impact of such placements, are vital for ensuring that potential harms are mitigated and beneficial outcomes maximised (Elnaway, 2013) |
|                     | Post-placement longitudinal evaluation |                    |
| Project retention and recruitment of volunteers | Volunteer drop out | ‘Retention of staff’ (workshop participant) |
|                     | How are volunteers recruited |                    |
| Assessment and Education | Existence of set learning outcomes and objectives | ‘it’s all about gaining global health knowledge, so that’s their basic outcome, there’s no assessment, it’s quite fluid’ (workshop participant) |
|                     | Use of assessment |                    |
|                     | Use of model to facilitate contextual understanding |                    |
| Time of programme arrangement | In advance | ‘Communications between Hereford and Muheza are difficult so details of each programme are arranged on arrival’ (Wood, 1994) |
|                     | In country |                    |
| Training and preparation | Appropriate training and preparation before placement | ‘the intensity of the learning experience and pretrip preparation had a greater influence’ (Button, 2005) |
|                     | Contact with previous volunteers | ‘subsequently question the actual benefit of their placement. Of note, this was despite the fact that all had received comprehensive pre-placement briefings and documents, and had had contact with previous volunteers’ (Elnaway, 2013) |
|                     | Debriefing |                    |
|                     | Encouraging people to share experience |                    |
|                     | Set training and preparation events |                    |
|                     | Health monitoring |                    |
|                     | Meeting in UK |                    |
|                     | Training and preparation in country |                    |
|                     | Volunteer involvement in planning |                    |
| Type of organisation | Health Partnership | ‘Links forged as trainees on these initial UROLINK visits have often been strengthened, and centres where these trainees have become consultants are now ‘twinning’ to continue the two-way exchange of experience.’ (Gujral, 2002) |
|                     | Existing organisations |                    |
|                     | Commercial involvement |                    |
|                     | DIY/self-organised |                    |
|                     | Remote or physical volunteering |                    |
| Transferability of skills learnt | Non-transferable skills | ‘Areas in which responders were most easily able to transfer competencies to the UK to a moderate or significant degree were personal qualities (such as self-awareness and integrity)’ (Young, 2014) |
|                     | Skills latency period |                    |
|                     | Context dependency of skills |                    |
| Volunteer dynamics within project | Different disciplines of volunteers in project | ‘Thus a broad range of departments become involved and a variety of activities are developed with the partner institution in the United Kingdom. As our experience grows, we are seeking to catalyse major links between medical schools and hospitals. This is preferable to a medley of individual links from a number of different institutions converging on a single overseas institution because it brings coherence to the goals of individuals and groups involved.’ (Parry, 1998) |
|                     | Number of volunteers in the project |                    |
|                     | Social support from other volunteers in country |                    |
|                     | Planned travel to destination as a group |                    |
### Table 3 Factors which influence outcomes (Continued)

| Higher order themes | Lower order Components | Examples from data |
|----------------------|------------------------|--------------------|
| **Volunteer Personal Variables** | Desire to become culturally sensitive | ‘a LMI country may present a temptation to students to undertake medical care or procedures which they would not be permitted to perform at home’ (Lumb, 2014) |
|                      | Wanting to work outside of competency | ‘learning the local language will enable nurses to succeed in developing relationships with patients or nursing students. In doing so, they will begin to move to the third level of cultural competence’ (Paterson, 2014) |
|                      | Willingness to work in dangerous situations | |
|                      | Use of stress reduction strategies | |
|                      | Understanding of local context | |
|                      | Communication with friends/home | |
|                      | Feeling like a foreigner | |
|                      | Being realistic about achievements | |
|                      | Engagement with project | |
|                      | Willingness to learn language | |
|                      | Perception of placement as negative or positive experience | |
| **Motivations for international placement** | Professional/career motivations | ‘unclear whether those who participated wanted to learn from the experience or whether they saw themselves as aiding the perceived ‘unfortunate’” (Button, 2005) |
|                      | Personal | |
|                      | Cultural | |
|                      | Recognition from peers | |
|                      | Desire to help other | |
| **Differences between volunteers** | Level of advanced preparation | ‘the range of professionals that are not qualified so they have to be supervised when they go out’ (workshop participant) |
|                      | Age | ‘In practical terms, overseas working may be more accessible to younger GPs who have fewer family and financial commitments and may take up international work during training or during periods of job transition’ (Smith, 2014) |
|                      | Locum posts before or after | |
|                      | Have individuals volunteered before? | |
|                      | Stage in professional career | |
|                      | Level of experience | |
|                      | Use of professional leave | |
| **Mechanisms through which outcomes happen** | Critical reflection | ‘the process of critical reflection was uncomfortable for some. Critical reflection facilitated in a safe place may support individuals to transform their way of thinking’ (Briscoe, 2013) |
|                      | Set reflection tasks | |
|                      | Debrief | |
|                      | Self-reflection when choosing a placement | |
|                      | Time for post-placement reflection | |
| **Opportunities for clinical exposure** | To experience complex situations and procedures | ‘Participation in health links provides in depth experience of these increasingly global pathologies’ (Peate, 2008) |
|                      | To be thrown out of professional comfort zone | ‘cannot emphasise enough how seeing a mind-bogglingly large number of seriously ill people has helped … in [their] subsequent career.’ (Seo, 2012) |
|                      | To experience a different healthcare environment | |
|                      | To experience a measure to compare UK and NHS to | |
|                      | To experience unusual networks and hierarchies | |
|                      | To work with higher severity of illness | |
|                      | To work with limited resources | |
|                      | To work with many illnesses: spread and volume | |
| **Opportunities for culturally different exposure** | Risk exposure | ‘being a foreigner- trigger for disturbance’ (Greatex-White, 2008) |
|                      | To engage with people from culturally diverse backgrounds | ‘the opportunity to work in complicated, poorly resourced and challenging environments’ (Kiernan, 2014) |
|                      | To experience another culture | |
|                      | To experience being a foreigner | |
|                      | To experience challenging situations | |
After round 2, 98 of the 156 statements (63%) were retained; this meant over 70% of the stakeholders agreed or strongly agreed these 98 statements were core outcomes. After re-considering their own vote in round 2, the group median and anonymous comments regarding each statement, 13 additional statements were retained in round 3. Finally, after readdressing the above items for the second time, an additional five statements met consensus and were retained in round 4. Of the items that met consensus, 99 were positive and eight were negative. Positive outcomes were of educational benefits to the British health professionals and negative outcomes were drawbacks, costs or negative effects (Tables 6, 7, 8, 9 and 10).

Conclusion
This study aimed to generate a list of core learning outcomes which might be developed through international placements and variables which might affect their development. We found 55 peer-reviewed papers and extracted 133 outcomes and 34 variables Table 3. The most recent research to summarise learning outcomes [3] found 40 individual benefits in seven domains: clinical skills, management skills, communication and teamwork, patient experience and dignity, policy, academic skills and personal satisfaction and interest. Our results support the domains but present the outcomes at a more granular level. For example, the previous review reports ‘management skills’ as a domain, which includes the outcome of ‘leadership and management’. We extracted more granular knowledge, skills and attitudes which would map into the domain of ‘management’, such as ability to manage self, ability to lead by example and ability to manage risk. These more specific outcomes would lend themselves more to measurement due to the reported difficulties with assessment of domains [15, 16]. By extracting outcomes at a granular level, we were also able to highlight many outcomes that do not fit neatly into any of the pre-defined categories of previous research such as ‘ability to cope’ or those that fit into more than one, i.e. ‘ability to disseminate best practice globally’. Our study is the first to summarise the variables which have been assumed or proposed to influence learning in international placements, which will allow for hypothesis testing in the future. The outcome set provides a framework of personal and professional learning across healthcare professional groups. This is important as previous literature has tended to focus on specific professional outcomes.

Table 3 Factors which influence outcomes (Continued)

| Higher order themes                  | Lower order Components                                                                 | Examples from data                                                                 |
|--------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Opportunities for skill development  | To test coping mechanisms                                                            | ‘There was lots of hands-on experience and opportunities to improve clinical skills (Kierman, 2014)’ |
|                                      | To use own approaches to care                                                         | ‘opportunity to use skills- risk management’ (Workshop participant)               |
|                                      | For creativity and innovation                                                        | ‘the opportunity to develop their clinical skills.’ (Barnabas, 1992)              |
|                                      | For hands on work                                                                   |                                                                                  |
|                                      | For student/volunteer-centred approach to learning                                   |                                                                                  |
|                                      | To use risk management skills                                                        |                                                                                  |
|                                      | To convert knowledge to know how                                                     |                                                                                  |
|                                      | To develop communication skills                                                      |                                                                                  |
|                                      | To challenge communication skills                                                    |                                                                                  |
|                                      | To practice clinical skills                                                          |                                                                                  |
|                                      | To practice speaking in another language                                             |                                                                                  |
|                                      | To put theory into practice                                                         |                                                                                  |
| Opportunities for research skill development | To research unusual areas                                                        | ‘Many doctors undertaking research in the UK become frustrated with its perceived lack of relevance to health care: research in developing countries is often more applied and the benefits more tangible’ (Banatlava, 1997) |
|                                      | To undertake collaborative research                                                  |                                                                                  |
|                                      | To conduct research mutually                                                        |                                                                                  |
| Opportunities for leadership          | To be included and opinions valued                                                   | ‘opportunities to develop leadership skills’ Smith (2014)                          |
|                                      | For teaching                                                                         |                                                                                  |
|                                      | To lead and have responsibility                                                     |                                                                                  |
|                                      | To use risk management skills                                                        |                                                                                  |
| Opportunities for atypical learning experiences | To learn about self                                                                | ‘Nursing electives at home or abroad may be one way of encouraging nurses in the UK to consider their role and function from a different perspective’ (Peate, 2008) |
|                                      | Mutual learning                                                                      |                                                                                  |

Table 4 Percentage of papers containing positive or negative outcomes

| Positive outcomes 96% |
|-----------------------|
| Negative outcomes 49% |
| Variables 91%         |
Table 5 How the data extracted was coded, including higher-level outcomes, lower-level outcomes and examples from the data

| Outcome: highest-order theme | Second-order theme | Example data from source |
|------------------------------|-------------------|-------------------------|
| Knowledge                    |                   |                         |
| Increased awareness of and knowledge about how communication between two people can affect understanding | Effectively conveying ideas in an contextually appropriate way | ‘Effectively conveying and receiving ideas and messages in appropriate ways so that information is carried in context’ (workshop participant) |
| Increased awareness of and knowledge about conditions and procedures rarely encountered in the United Kingdom | Greater knowledge of procedures not used in the United Kingdom Better management of conditions that are not common in the United Kingdom | ‘Experience of unfamiliar pathologies’ [14] ‘Experience has been gained in open operations now rarely performed in the UK, including vesico-vaginal fistula surgery’ (Gujral 2002) |
| Increased awareness of and knowledge about the importance of assessing healthcare on an individual basis | The uniqueness of each patient | ‘Enhanced the students’ cultural awareness and made them more aware of the need to assess healthcare needs on an individual basis’ [25] |
| Increased awareness of and knowledge about the importance of community participation in health | The importance of community involvement in health Awareness of the role of the community in improving healthcare Understanding the importance of community work | ‘The investigators reported a significant growth in participants’ awareness of how nurses interacted with the village as a community’ [36] |
| Increased understanding of basic skills and ideas | Core skills often replaced by technology (basic observations, using eyes, relying less on lab tests) | ‘It kind of makes you go back and think about things in their fundamental...of course physics and that kind of thing’ (workshop participant) |
| Increased awareness of and knowledge about clinical knowledge in relation to other professions | Doctors about nurses and vice versa | ‘Facilitate exploration of a different health care profession’. [36] ‘Improved interdisciplinary teamwork’ (Lee et al. 2011) |
| Increased awareness of and knowledge about the importance of mutual learning and respect | Understanding how to target training most effectively Ability to suggest and acknowledge improvements in teaching Understanding importance of experiential learning | ‘Makes you drill down more and more what makes a good teaching programme’ (workshop participant) ‘Learning in this context has enabled me to suggest ways to improve the facilitation of learning’. (Lovatt et al. 2011) |
| Increased awareness of and knowledge about the importance of relationship maintenance skills | Consciously making an effort to get on with colleagues Learning colleagues names | ‘Increased appreciation of and skills in maintaining of relationships’ [3] |
| Increased awareness of and knowledge about the positive impact of clinical policies and governance | Greater policy skills | ‘Work overseas will enable the health care worker to develop a greater understanding of socioeconomic and political determinants of health and consider the benefits of alternative health systems and health care initiatives’. (Banatlava, 1997) |
| Increased awareness of and knowledge about tropical diseases | New knowledge of tropical diseases and increasing existing knowledge | ‘Knowledge of tropical diseases has increased’ (Wood et al. 1994) |
| Increased awareness of and knowledge about appropriate clinical behaviour | Knowing when to ask for help Knowledge of different populations needs | ‘Specifically for people from other cultures’. Remembering to let people speak to husband or want to pray. Not talking to baby when it comes out. (workshop participant) |
| Increased awareness of and knowledge about the cultural aspects of health | Greater understanding and appreciation of health promotion Understanding how culture affects daily occupation Increased understanding of cultural differences in health Understanding the effects of politics on health Understanding how culture affects you professionally Understanding how to incorporate | ‘The noticeable lack of parental input in caring for their hospitalised children compared with UK culture and practice’. (Standage et al. 2014) ‘Increased understanding of the importance of culture in health care and the degree of variability in the countries they visited’ [25] |
| Outcome: highest-order theme                          | Second-order theme                                                                 | Example data from source                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Increased awareness of and knowledge about global    | Health beliefs into a shared decision                                              | "Both learners and institutions potentially will gain from an enhanced awareness of global health issues". (Lumb, 2014)                                                                                                                                                                                                                           |
| issues                                               | Greater understanding of sustainable healthcare                                     |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about cultural   | Re-evaluation of world issues                                                     | ‘In Mexico it was inappropriate for them to discuss family planning methods with females because it was common for the males to exert control over such matters’. (Standage et al. 2014)                                                                                                                                                   |
| differences and similarities                         | Deeper engagement with issues of equality and diversity                             | ‘They could apply this new understanding to immigrant communities in the UK who had come from these cultural backgrounds’. (Standage et al. 2014)                                                                                                                                                                                                                      |
|                                                     | Greater global knowledge                                                          |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about ethical    | Understanding key issues within a culture                                             |                                                                                                                                                                                                                                                                                                                                                       |
| considerations                                       | Understanding culturally acceptable behaviour                                       |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Learning about other cultures                                                     |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Being more attentive to subtle clues about cultural differences                     |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Accepting cultural differences                                                    |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Understanding of cultures of UK immigrants Changed assumptions of culture          |                                                                                                                                                                                                                                                                                                                                                       |
| Increased self-awareness                             | Through experiential learning                                                      | ‘This process of challenging assumptions appeared to help student to appreciate the child rights stance promoted in the UK’. (Standage et al. 2014)                                                                                                                                                                                                      |
| Increased awareness of and knowledge about the need   | Understanding how important effective training is in the United Kingdom and overseas| ‘I recognised the need [for] teaching, so trained as a GP trainer’. (Smith et al. 2002)                                                                                                                                                                                                                                                               |
| for/importance of training                           |                                                                                   |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about how other  | Developed insight into disparities within healthcare systems                       | ‘Gain a more effective measure by which to evaluate the strengths and weaknesses of their own country’s health care system, and further develop insights into disparities’ [36]                                                                                                                                                                        |
| healthcare systems function                          | Increased understanding and awareness of other systems                              |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about finance in | Awareness of own skills and limitations                                            | ‘Also made me more aware of my own values and beliefs and broadened my mind’ (Greatex-White, 2008)                                                                                                                                                                                                                                                      |
| healthcare                                           | Able to challenge own beliefs                                                     |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Able to reflect on own situation                                                   |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Able to self-define                                                               |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about resistance | Awareness of the costs of healthcare                                              | ‘There is an acute awareness of the costs of healthcare delivery especially when confronted by patients who have to pay for each intervention’ (Longstaff, 2012)                                                                                                                                                                                                     |
| of culture                                           | Understanding how to make small changes                                             | ‘To demonstrate cultural competence, nurses should reflect on and recognise their own biases and be open to other perspectives, rather than trying to persuade others to see things their way’. (Paterson, 2014)                                                                                                                                                   |
|                                                     | Being innovative in overcoming language and cultural difference                    |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Understanding not to enforce your perspective onto others                          |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about culture in | Understanding importance of collecting relevant cultural information about people’s | ‘Better understanding of cultural differences and of the need to acknowledge them in the delivery of health care’. (Paterson et al. 2014)                                                                                                                                                                                                       |
| practical assessments                                | presenting health problems                                                        |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Learning how to conduct cultural assessments and culturally based physical         |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | assessments                                                                       |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about the        | Understanding other people’s perceptions of trust                                  | ‘Understanding of perceptions of trust, risk taking behaviour and approaches to risk management style’. [6]                                                                                                                                                                                                                                            |
| importance of trust within healthcare systems and     |                                                                                   |                                                                                                                                                                                                                                                                                                                                                       |
| staff                                               |                                                                                   |                                                                                                                                                                                                                                                                                                                                                       |
| Increased awareness of and knowledge about how        | Able to identify stakeholders and change agents                                   | ‘Had come to understand a lot about how host countries health systems operate. They were also able to make direct comparisons with the British health care system’ (Standage et al. 2014)                                                                                                                                                                      |
| systems work                                        | Understanding of value systems                                                     |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Understanding influencing patterns of those in power                               |                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Ability to assess impact of                                                        |                                                                                                                                                                                                                                                                                                                                                       |
| Outcome: highest-order theme | Second-order theme | Example data from source |
|-------------------------------|--------------------|--------------------------|
| Skills                        |                    |                          |
| Ability to overcome communication challenges | Liase between groups | 'Ability to have challenging conversations about sustainable change' (workshop participant) |
| Ability to communicate non-verbally | Developed non-verbal techniques | 'Developed nonverbal techniques' [36] |
| Ability to provide better care | Ability to provide multicultural care | 'Taking responsibility for developing quality of care' (Banatlava, 1997) |
| Ability to observe and examine patients | Increased intuitive knowledge of clinical signs | 'In particular, UK doctors 'honed' their clinical diagnoses when laboratory confirmation was not available'. [24] |
| Ability to be innovative with clinical skills | Use of innovative techniques New ways of working) | 'Innovation in healthcare delivery and use of resources' [3] |
| Ability to use a broader range of clinical skills | Enhancing existing skills and acquiring new clinical skill | 'Clinical skills were better and that the trainee had a broader range of skills' [35] |
| Ability to apply clinical skills to another context | A more challenging environment or a low resource setting | 'They gained hands-on experience of care and developed a keen awareness of how the principles of nursing were applied in contexts very different from that to which they were used'. [25] |
| Ability to work with limited resources | Being more resourceful Ability to target resource Ability to find solutions despite limited resources Ability to work without reliance on technology Ability to manage in a low resource setting Understanding the reasons behind lack of resources | 'The nurses and doctors there are resourceful with what they have to use. I have learnt a lot and it has made me think differently. [4] |
| Ability to 'get the best out of people' | Encouraging people to work together Empowering people to recognise their own strengths and to take possession of their own work/projects Ability to assess the capability of others Encouraging people to work together | 'Empowering them to recognise their strengths and not deskilling them' (workshop participant) |
| Ability to manage risk | Manage risk in advance Evaluation of environment Understanding the clinical importance of risk management Understanding the wider implication of poorly managed risk | 'To manage risks they would not normally be exposed to' (Morgan, 2012) |
| Ability to negotiate with multiple stakeholders | Improved skills of negotiation with multiple stakeholders' [3] |                          |
| Ability to make independent clinical decisions | Ability to make an urgent decision in an emergency Dealing with uncertain outcomes | 'More independent clinical decision making, eg in an emergency situation' (workshop participant) |
| Ability to manage time and prioritise | Ability to respond quickly in an emergency Prioritisation of limited resources | 'Time management and prioritisation' (workshop participant) |
| Ability to work within a system with unfamiliar power systems | | 'Power relationships very difficult to manage' 'understanding the power context' (workshop participant) |
| Ability to fulfil future leadership | | 'Prepare them for future leadership roles within their
Table 5 How the data extracted was coded, including higher-level outcomes, lower-level outcomes and examples from the data (Continued)

| Outcome: highest-order theme | Second-order theme | Example data from source |
|------------------------------|-------------------|--------------------------|
| roles                        |                   |                          |
| Ability to plan and organise | Able to set direction | 'Planning and organisation' (Pearson et al. 2014) |
| Ability to improve service   | Including renewed enthusiasm for service improvement | 'Service improvement' [11] |
| Ability to transfer skills and knowledge to another context | Applying those skills in a different context (workshop participant) |
| Ability to work towards solutions | Solution focused approach | 'Solutions despite resource constraints' [36] |
| Ability to find facts to solve problems | | 'They all recognised improvements in their ability to problem solve' (Longstaff, 2012) |
| Ability to make decisions | Understanding who the decision is for Taking action on decision Make judgements | 'Better able to make decisions and take action' [36] |
| Ability to co-operate | | 'Enhancing their own cooperation and communication skills' [24] |
| Ability to work as part of a team | Understanding team group norm Perception of roles within the group Managing personal objectives within a group | 'At a professional level, the experience enhanced team-working skills' (Longstaff, 2012) |
| Ability to develop friendships | Relationship formation skills Developing new friendships | 'Fostering friendships' (Smith, 2012) |
| Ability to build a global network | | ‘They provide opportunities for personal and professional development of staff and promote the development of friendships and supportive networks between diverse communities’ (Bagguley et al. 2006) |
| Ability to give and accept praise | | ‘Appeared to be related to the giving and accepting of praise. In this context praise was meaningful and valued and often contrasted with the inanition of the home situation’ (Greatex-White, 2008) |
| Ability to disseminate best practice globally | | ‘Fosters international networking, which leads to the dissemination of best practices’ (Horton, 2009) |
| Ability to be professionally competent | Wider view of profession Intellectual development Reminder of professional responsibilities Stronger work ethic | ‘A wider view of their profession’ (Horton, 2009) |
| Developed research skills | Grant application skills Greater research skills | ‘Experiential engagement with research is a desirable outcome’ (Pearson et al. 2014) |
| Ability to present work | Greater presentation skills | ‘I’ve seen them change considerable as people – by the end they are standing up and presenting their work and they really value that’. (workshop participant) |
| Ability to write reports and academic pieces | | ‘I believe this not only enhances my effectiveness as an NHS consultant, but also the lecturing, teaching and writing that I do reflects favourably on my hospital and university’. (Banatlava, 1997) |
| Ability to apply knowledge gained in host system to the United Kingdom | Relating experiences back to the United Kingdom Using knowledge gained overseas to improve UK systems | ‘Renewed enthusiasm for service improvement’ (Conference) |
| Ability to cope | Better coping strategies Ability to deal with knock backs Being unfazed by things Learning to deal with stress | ‘I am more adaptable and can cope much easier with change’ (Longstaff et al. 2012) |
| Ability to adapt social norms to meet needs of another culture | Change behaviour to fit with social norms | ‘Transcultural adaptation’ [37] |
| Ability to lead by example | | ‘Leading by example with consistency and perseverance’ |
Table 5 How the data extracted was coded, including higher-level outcomes, lower-level outcomes and examples from the data

| Outcome: highest-order theme | Second-order theme | Example data from source |
|------------------------------|-------------------|--------------------------|
| Ability to exchange ideas with those from another culture | Communicate effectively with those from another country or culture | 'Interpersonal skills to live and work together with people of all nationalities and cultures' (Paterson, 2014) |
| Ability to encourage others to take responsibility for own health | Self-management | 'Self-management' (Lumb, 2014) |
| Ability to manage self | | |
| Ability to manage projects | | |
| Ability to think through problems in a logical way | Analytical thinking | 'The experience of clinical practice in a low resource environment stimulated lateral thinking' (Lee et al. 2011) |
| Ability to establish communication systems | Formal and informal | 'Establishing communication systems, both formal and informal'. [6] |
| Developed teaching skills | Greater training delivery skills | 'But nurses/midwives - confidence and skills really increase, do not do teaching in the UK’ (workshop participant) |
| Ability to use evidence based practice | Ability to apply theory | 'Use evidence-based practice effectively and develop a broader and more sophisticated understanding of occupation' (Dowell et al. 2009) |
| Ability to speak host language | | |
| Attitudes | | |
| Confidence to work in other locations | Confidence to move to another city/country Working with UK multicultural/ underserved populations | 'To live and work independently in a new community and culture'. (Morgan,2012) |
| Independence | | 'Autonomy/Independence' [36] |
| Integrity | | 'Integrity' [11] |
| Diplomacy | | 'Utilising diplomacy skills’ (workshop participant) |
| Humility | | 'Knowing that you are sometimes wrong’ (Conference notes) |
| Judgement | Non-judgemental attitude Changed self-judgement | 'Yes and taking things less as face value and less judgemental. (Workshop participant) |
| Proactivity | Using initiative | 'Initiative' (Pearson et al. 2014) |
| Increased cultural sensitivity | Sensitivity to reasoning behind cultural differences Sensitivity towards feelings of minority Sensitivity towards language barriers | 'It involves an awareness and acceptance of cultural differences’ (Paterson, 2014) |
| Increased respect for other cultures | | |
| Reinforced ethnic and cultural identity | Positivity about being British | 'Having become a foreigner in the host country, there remained a sense of being tied to the home culture” (Greatex-White, 2008) |
| Patience and tolerance | Accepting and working at other peoples pace More tolerance | 'Made them more tolerant of others' [25] |
| Increased confidence | In caring for clients from another culture In quality improvement methods To take bolder steps Self-confidence | 'Confidence about caring for clients whose culture differed from their own’ (Briscoe, 2013) |
| Outcome: highest-order theme | Second-order theme | Example data from source |
|------------------------------|-------------------|-------------------------|
| Confidence in professional ability | In ability to address challenging situations | 'Flexibility/humility: Accepting different ways of working' (workshop participant) |
| Flexibility and adaptability | Acceptance of other ways of working | 'Learning cultural differences gave students the rare chance of being in a minority status, with the consequential experience of living and surviving in a foreign culture – an experience that students reported as 'more valuable than a mere excursion' (Morgan, 2012) |
| Emotional intelligence | Changed engagement with self | 'Greater empathy and understanding' [37] |
| Appreciation of importance of care and compassion | Understanding of importance of being a friendly stranger in the United Kingdom | 'Through lack of team working they appreciated Resources - material and human' (workshop participant) |
| Changed perception of otherness | Understanding of importance of being a friendly stranger in the United Kingdom | 'Continued' |
| Appreciation of excellent human resource in the NHS | Multidisciplinary teams | 'Through lack of team working they appreciated Resources - material and human' (workshop participant) |
| Appreciation of having the right tools and equipment to be able to do the job | Resources: technical equipment, disposal equipment, cleaning products and protective equipment | 'Greater appreciation of the resources’ (Lee et al. 2014) |
| Appreciation of free universal health | NHS system of free healthcare for all citizens | 'Able to comment and reflect on issues around the perceived inequalities of insurance based healthcare systems’ (Standage et al. 2014) |
| Appreciation of clinical governance procedures within NHS | Waste disposal, Audit, Teamwork, Education system, Tests and investigations | 'And a greater understanding of why we need to do the things that we do, like gaining consent from a child’ (Standage et al. 2014) |
| Organisational outcomes | Increased staff knowledge and skills | 'Makes people more adaptable when they come back because in some areas if you have not move ward for twenty years, it is trauma just to be asked and work in ward X in the same hospital is not it? If you have got somebody that has been exposed to a range of environment, they are more likely to cover shifts'. (workshop participant) |
| | Increased international reputation of NHS | 'Reputational development' [3] |
| | NHS becomes a more attractive employee (if offers staff opportunity to volunteer) | 'Link attracts potential staff' [24] |
| | Increased patient satisfaction | 'Patient experience and dignity; understanding of patients from different areas' [3] |
Table 5 How the data extracted was coded, including higher-level outcomes, lower-level outcomes and examples from the data (Continued)

| Outcome: highest-order theme                           | Second-order theme                                                                 | Example data from source                                                                                                                                 |
|--------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Medical school more attractive to students (if allow students to go abroad) | Staff more in tune with patients  
Staff more aware of individual needs of patients | 'Medical school benefits (programme are increasingly attractive, potentially providing a strong tool for recruitment)' (Miranda et al. 2005)  |
| Increased workforce productivity                      | Increased staff retention                                                         | 'Increased workforce productivity' [3]                                                                                                                                 |
| Reduction in NHS drop outs                            | Increased staff retention                                                         | 'Attraction & retention of (more/better quality) workforce' [3]                                                                                                                                                   |
| Increased international reputation (of the United Kingdom) |                                                                                 | '96 per cent of health professionals interviewed for the study thought that the reputation of the NHS could only be enhanced by involvement in international health links'. (Longstaff, 2012) |
| Miscellaneous outcomes                                |                                                                                  |                                                                                                           |
| Upper hand when competing for careers                 | Increased motivation and morale with profession  
Renewed passion for work  
Sense of reward | 'They came back with greater job satisfaction’ (Longstaff, 2012)                                                                                                               |
| Increased job satisfaction                             |                                                                                  |                                                                                                           |
| Influence career pathway                              | Affects specialization choice  
Exploration of potential career pathways  
Pursuing careers in primary care, family practice, and public service  
Sub-specialism in global health,  
Teaching or lecturing careers  
Teaching responsibilities within clinical position | 'Such broadening experiences are recognized to impact upon the likelihood of working with underserved populations, and pursuing careers in primary care or public service’ (Lumb, 2013) |
| Refreshment and reinvigoration                         | Coming back to the United Kingdom refreshed and reinvigorated  
Bringing new ideas to the United Kingdom | 'With a rekindling of that initial desire to "change the world and help people" and refresh those values underpinning their initial vocational drive to enter the profession’. (Lumb, 2013) |
| Personal satisfaction                                 | Personal achievements and challenges  
New experiences  
Experiencing a different lifestyle  
A holiday  
Personal fulfilment | 'An opportunity to travel, experience and work in a different setting, and to make a positive impact’ (Elanaway et al. 2014) |
| Increased motivation to learn a language               |                                                                                  | 'Enhanced your motivation and/or ability to learn a foreign language after returning to Northern Ireland?’ (Thompson 2000)                                                                 |
| Development of a new perspective                       | Revising assumptions  
Reassessed outlook on life  
Seeing things differently  
Changed world views  
Changed outlook  
Look at everything in a new light  
Openness to new experiences  
Put things into perspective | 'They were beginning to see differently and to compare aspects of the host environment with those of home, leading to new perspectives on life’ (Greatex-White, 2008) |
| Escapism                                               | Escape from agendas and workload  
A chance to take time out of training and practice  
Space to think and clarify career objectives | 'They want to escape the hassle of home’. (workshop participant)                                                                                                           |
| Negative outcomes                                      |                                                                                  |                                                                                                           |
| Costs to British patients                              | Bringing tropical illness to the United Kingdom                                  | 'It is not uncommon for a few students each year to return from their elective unwell, with some of the infectious diseases occasionally brought back from electives not becoming apparent for some time, e.g. tuberculosis or malaria. This has significant public-
| Outcome: highest-order theme | Second-order theme | Example data from source |
|-------------------------------|-------------------|---------------------------|
| **Developing redundant or bad skills/attitudes** | Non-transferable skills | “They may be left to ‘do their best’ to manage heavy workloads with limited or no supervision, leading to the acquisition of poor practice habits.” (Barnabas, 2012) |
| | Bad habits | |
| | Deskilling | |
| | Overconfidence in ability | |
| | Poorer communication skills | |
| | Loss of confidence | |
| **Difficulty getting the job you want on return** | Permanent jobs or training contracts | “Many of them experienced discouragement and warnings of ‘career suicide’ when proposing to opt out from accepted career pathways in Britain to work in the developing world for a short period.” (Connelly, 1995) |
| **Loss of trained staff** | Utilisation of key staff time | ‘Trained staff leaving their post following links’ [3] |
| | Financial cost of losing staff | |
| | Having to find cover for staff | |
| **Negative perceptions of NHS** | Reputational | ‘Negative perception of the UK institution where links are run badly’ [3] |
| | When program run badly | |
| **Distracted staff** | To work outside of competency | ‘Distracts staff from their work at the institution’ [3] |
| | Lack of regulation | |
| | Too much responsibility | |
| **Exposure to ethical dilemmas** | To encounter challenging ethical scenarios, particularly those students venturing to developing countries’ (Banatlava, 1998) | |
| **No recognition of accreditation upon return** | Trained and accreditation issues (Banatlava, 1998) | ‘Training and accreditation issues’ (Banatlava, 1998) |
| | ‘Lack of accreditation/recognition’ (workshop participant) | |
| **Reduced experience and exposure to UK procedures, protocols and research** | No experience with NHS procedures that do not exist in host country | ‘Referral experience more limited’ [35] |
| | Missing out on formal training and conferences | ‘Things might be outdated’ (workshop participant) |
| | No experience with chronic disease management over time | |
| | No experience with health conditions that are common in the United Kingdom and not in host country | |
| | Unaware of NHS protocol and updates | |
| | Loss of professional networks and relationships | |
| **Affects professional progression** | Lengthens training | “The threat of having to ‘retrain’ is ludicrous when I am working in a developed country in a primary care setting essentially modeled on the British system”. [2] |
| | Less time to prepare for exams | |
| | Loss of partnerships | |
| **Negative colleague perceptions** | Colleagues have to cover | ‘Negative perception of gaps in training programmes’ (workshop participant) |
| **Use of time** | Annual leave | ‘Staff generally use their annual leave for the trips’. [4] |
| | General time consumption | |
| **Professional revalidation issues** | For consultants | ‘Another common barrier was keeping up appraisal in light of the recent changes to GP revalidation’. [11] |
| **Litigation** | Legal issues involving clinical/professional risk | ‘Clinical-professional risk- litigation’ (Morgan, 2012) |
| **Security** | Exposure to aggression | ‘Examples range from involvement in criminal activity (either as perpetrator or victim)’ (Lumb, 2014) |
| | Violence and death | |
| | Becoming a victim of crime | |
| | Political unrest | |
| **Carbon footprint** | Another health and safety issue is the carbon footprint’. (Pearson et al. 2014) | |
| **Culture shock** | ‘Culture shock due to the contextual differences and challenges faced in resource poor settings’. [3] | |
| **Environmental and infrastructural risk** | ‘Physical risk to person- environment, infrastructure’ | |
cadres, so this COS would allow comparison and collation across professional groups [35, 36].

Our study generated a list of 28 potential negative outcomes. It is interesting that only eight of these were retained in the Delphi, i.e. stakeholders were in agreement that these negative outcomes were either not likely to happen or likely to happen to a range of healthcare professionals. Only one negative outcome was considered core: ‘health consequences’. This indicates that stakeholders believe almost all negative outcomes do not happen on many or most placements. There is much less consensus about the negative aspects of placements.

The literature contains stated or implied variables which might influence learning on international placements, and this study has synthesised these, finding 33 variables. This provides a framework for future research that aims to study the interactions between variables and outcomes by empirically testing some of the hypotheses reported or assumed in the literature.

Historically, international volunteering has been conceptualised as a benefit to the LMIC and a loss to the HIC [8, 9]. Recent policy documents explicitly discuss

Table 5 How the data extracted was coded, including higher-level outcomes, lower-level outcomes and examples from the data (Continued)

| Outcome: highest-order theme | Second-order theme | Example data from source |
|-----------------------------|-------------------|-------------------------|
| Extreme nationalism towards the United Kingdom | Feeling as though imposing on UK colleagues to provide cover | 'Developing negative attitudes towards host culture causes retreat back to culture of origin and even extreme nationalism' (Greatex-White, 2008) |
| Experiencing negative feelings | Feeling out of depth | 'I was subjected to the feelings of guilt and regret which accompany the death of a patient under one's care' (Robinson, 2014) |
| Financial loss | Costs of getting involved | 'Costs of getting involved' [4] |
| Health consequences | Animal bites | '11.1% were concerned that they had placed themselves at risk of HIV and STIs. Unprotected sexual intercourse was the most commonly reported reason'. [20] |
| Psychological consequences | Depression | 'Psychological problems on return from their placements' [20] |
| Exhaustion and burn out | Isolation | 'Exhaustion/Burnout/Stress' [3] |
| Loneliness | Social isolation | 'You will often be doing lone working which will be very high risk and that happens an awful lot'. (workshop participant) |
| Missing things at home | Missing life in the United Kingdom | 'Time away from their family' [36] |
| Loss of interest in global health and international placements | Negative perceptions of volunteering and international placements | 'Many reported negative experiences and never wanted to do it again’ (Conference speaker) |
| Socio-cultural risk | Exposure to corruption | 'Socio-cultural risk dress like them, did not want English influence, corruption' (Morgan, 2012) |
| Become judgemental | | 'Go home with a judgmental opinion of some of the people I look after'. (workshop participant) |

Table 6 Number of statements retained at each stage with 70% consensus being met

| Round | Number of Statements retained (n = 156) | Positive outcomes | Negative outcomes |
|-------|----------------------------------------|-------------------|-------------------|
| 2     | 98                                     | 97                | 1                 |
| 3     | 13                                     | 10                | 3                 |
| 4     | 5                                      | 1                 | 4                 |
| Did not meet consensus | 40                                      | 14                | 26                |
| Domain in [3]                        | Number of COs within this domain | Examples                                                                                                                                                                                                 |
|-------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clinical skills                     | 12                               | Ability to use a broader range of clinical skills (e.g. enhancing existing skills and acquiring new clinical skills, greater all-round competence) Increased awareness of/knowledge about tropical diseases Increased awareness of/knowledge about the cultural aspects of health (e.g. greater understanding of health promotion, how culture affects daily life and professional work, cultural differences in health, the effects of politics on health, sustainable healthcare) |
| Management skills                   | 16                               | Ability to be adaptable in leading (e.g. able to lead in complex novel situations, ability to compromise not dictate) Ability to work within a system with unfamiliar power dynamics Ability to manage projects                                                   |
| Communication and teamwork          | 21                               | Understanding that words and behaviours can have different meanings (e.g. understanding how words are perceived by others, understanding how to speak and behave so as not offend people) Ability to co-operate (e.g. willingness to see another point of view) Ability to work as part of a team (e.g. understanding team group norms, perception of roles within the group, managing personal objectives within a group) |
| Patient experience and dignity      | 19                               | Understanding own potential to empower people Increased respect for other cultures Appreciation of free universal health (e.g. the NHS system of free healthcare for all, privilege and opportunity, the expectations that are placed on NHS by service users) |
| Service/policy development and implementation | 15                               | Increased awareness of/knowledge about the positive impact of clinical policies and governance (e.g. understanding the benefits of a comprehensive checklist) Appreciation of excellent human resource in the NHS (e.g. multidisciplinary teams, HR structures, appreciation of own profession, understanding hierarchy and the importance of each person within it) |
| Academic skills                     | 9                                | Ability to dissemination best practice globally Improvement in teaching skills (e.g. learning new techniques, greater training delivery skills, lecturing skills and small group teaching skills) Ability to build a global network |
| Personal satisfaction and interest  | 16                               | Ability to develop friendships (e.g. relationship formation skills, developing new friendships) Refreshment and reinvigoration (e.g. chance to take time away to become refreshed and feel reinvigorated to work upon return) Can-do attitude |
the benefit to UK health professionals in terms of personal and professional development and the necessity to develop competencies to be used in training curricula [9]. This study will facilitate the specification and exploration of learning outcomes and so in the future help in addressing the imbalanced discourse of the “benefitting LMIC” and the “donor HIC”. Additionally, a recent Royal College policy describes what competencies paediatricians need to work globally, or with a global population in the United Kingdom [37]. Many of the competencies described map onto the core outcome set suggesting that international placements themselves may provide a vehicle for developing these necessary competencies. In fact, the core outcome set maps onto policy documents such as the Health Education England (HEE) Framework 15: 2014–2029, which suggests the future NHS workforce needs to be flexible, open to innovation and change and life-long learners (all components of the COS) [18]. The core outcome set provides a way of framing and evidencing the NHS benefits. Future work will focus on how the core outcome set can be used as a tool to measure outcomes. The research has also influenced the production of the Health Education England Global strategy, which aims to embed global learning opportunities into NHS training [38].

In summary, there is a broad range of learning outcomes which we have synthesised into a set of 116 core outcomes agreed by a group of 45 stakeholders from various invested groups that could be used in future assessment of learning and testing of hypotheses about what leads to or detracts from learning. We also extracted 33 variables from the literature. We reported a list of negative outcomes, as well as every variable that has been reported (implicitly or explicitly) to affect learning. The core outcome set and variables will enable the development of assessments of health professional learning in international placements, which has implications for how international placements are created and on the support for international placements amongst UK healthcare organisations.

Limitations
This study has a number of limitations. Firstly, we did not update the systematic review because this was the first stage of the outcome set development, and therefore, new outcomes could not be added. We conducted a scoping search using the same search strategy in March 2018 and found 23 new papers had been published. We read these papers and did not find any new outcomes or variables reported. Secondly, the papers included in the meta-synthesis included both those with primary data and those which did not. Formal risk of bias assessment, using standard tools, was therefore not possible. However, it is important to note that the papers included and the findings of the Delphi indicate an overall positive attitude towards international placements, with 96% of papers in the review reporting positive outcomes as opposed to 49% reporting negative outcomes. It is possible that there is publication bias, in which reports of negative experiences are less likely to be written and/or accepted for publication. In the Delphi, participants agreed most of the positive outcomes were core and very few negative. It may be that Delphi participants (particularly those who choose to dedicate hours of their own time) feel more positively about the outcomes than those that were invited but chose not to participate. This represents a risk of bias both in terms of an underreporting of negative outcomes and an inconsistent reporting of variables, with variables influencing outcomes being reported by people whose outcomes had been positive.

Future research and recommendations
The core outcome set could be developed into a tool to assess outcomes. Measurement of learning outcomes is not straightforward, and self-report of learning is fraught with difficulties, including people not knowing what they

Table 8 Examples of COs that fell within a number of categories

| Example                                                                 | Categories                                      |
|------------------------------------------------------------------------|-------------------------------------------------|
| Increased awareness/knowledge about clinical conditions and procedures rarely encountered in the United Kingdom | Clinical, academic                              |
| Increased awareness of/knowledge about the importance of mutual learning and respect | Patient experience and dignity, communication and team work |
| Ability to disseminate best practice globally                          | Communication and team work, academic, service improvement and policy |
| Ability to develop friendships                                         | Personal, communication and team work           |

Table 9 Examples of core learning outcomes that did not fit within the categories

| Core outcome                                           |
|--------------------------------------------------------|
| Improved flexibility and adaptability                  |
| Ability to be innovative when overcoming challenges    |
| Ability to cope                                       |
| Improved situational awareness                         |
| Core outcome                                                                 | Met consensus at round | Percentage consensus | Include or exclude | Rank |
|------------------------------------------------------------------------------|------------------------|----------------------|--------------------|------|
| Increased awareness of/knowledge about cultural differences and similarities  | 2                      | 100                  | +                  | 1    |
| (e.g. understanding key issues within a culture, culturally acceptable       |                        |                      |                    |      |
| behaviour and cultures of UK immigrants, learning about, accepting and       |                        |                      |                    |      |
| changing assumptions about other cultures)                                  |                        |                      |                    |      |
| Increased awareness of/knowledge about the cultural aspects of health (e.g.  | 2                      | 100                  | +                  | 1    |
| greater understanding of health promotion, how culture affects daily life    |                        |                      |                    |      |
| and professional work, cultural differences in health, the effects of politics|                        |                      |                    |      |
| on health, sustainable healthcare)                                          |                        |                      |                    |      |
| Ability to work with limited resources (e.g. being more resourceful, ability | 2                      | 95                   | +                  | 3    |
| to target resources, ability to find solutions despite limited resources,    |                        |                      |                    |      |
| making use of everything available, ability to work without reliance on     |                        |                      |                    |      |
| technology, manage in a low resource setting)                               |                        |                      |                    |      |
| Increased awareness of/knowledge about culture in practical assessments (e.g.| 2                      | 93                   | +                  | 4    |
| the importance of collecting relevant cultural information about people’s   |                        |                      |                    |      |
| presenting health problems and learning how to conduct cultural assessments  |                        |                      |                    |      |
| and culturally based physical assessments)                                  |                        |                      |                    |      |
| Ability to apply clinical skills to another context (e.g. a more challenging | 2                      | 93                   | +                  | 4    |
| environment or a low resource setting)                                      |                        |                      |                    |      |
| Ability to be adaptable and innovative in teaching (e.g. ability to transfer | 2                      | 93                   | +                  | 4    |
| skills and knowledge to the most influential people or to another context,  |                        |                      |                    |      |
| recognising different learning styles, being adaptable in assessment)       |                        |                      |                    |      |
| Increased awareness of/knowledge about how other healthcare systems function| 2                      | 93                   | +                  | 4    |
| (e.g. developed insight into disparities within healthcare systems,         |                        |                      |                    |      |
| understanding of other systems)                                             |                        |                      |                    |      |
| Ability to cope (e.g. improved coping strategies, ability to deal with      | 2                      | 93                   | +                  | 4    |
| lack of structure, knock backs and stress, being unfazed by things and      |                        |                      |                    |      |
| taking things in stride, new approach to guilt for patients problems)       |                        |                      |                    |      |
| Increased cultural sensitivity (e.g. sensitivity to reasoning behind cultural | 2                      | 91                   | +                  | 9    |
| differences, feelings of minority and language barriers)                    |                        |                      |                    |      |
| Understanding that words and behaviours can have different meanings (e.g.   | 2                      | 91                   | +                  | 9    |
| understanding how words are perceived by others, understanding how to speak  |                        |                      |                    |      |
| and behave so as not offend people)                                         |                        |                      |                    |      |
| Ability to apply knowledge across systems (e.g. ability to apply knowledge  | 2                      | 91                   | +                  | 9    |
| from host system to United Kingdom and vice versa, using knowledge gained in |                        |                      |                    |      |
| system to improve/change another)                                           |                        |                      |                    |      |
| Development of a new perspective (e.g. revising assumptions, seeing things   | 2                      | 91                   | +                  | 9    |
| differently, changed world views and outlook, look at everything in a new   |                        |                      |                    |      |
| light, openness to new experiences, put things into perspective)            |                        |                      |                    |      |
| Improved flexibility and adaptability (e.g. acceptance of other ways of      | 2                      | 91                   | +                  | 9    |
| working, adaptation to responsibility, being able to adapt more easily to    |                        |                      |                    |      |
| unfamiliar situations, able to cope more easily with change, gaining a      |                        |                      |                    |      |
| wider perspective, understanding the flexibility of roles)                   |                        |                      |                    |      |
| Ability to be innovate when overcoming challenges (i.e. finding unique ways  | 2                      | 91                   | +                  | 9    |
| of overcoming cultural and language challenges)                             |                        |                      |                    |      |
| Increased respect for other cultures                                        | 2                      | 90                   | +                  | 15   |
| Increased understanding of basic skills and ideas (i.e. back to basics, e.g.  | 2                      | 90                   | +                  | 15   |
| basic observations using eyes, less reliance on lab tests and technology,   |                        |                      |                    |      |
| basic clinical skills and science)                                          |                        |                      |                    |      |
| Confidence in teaching ability (e.g. being more comfortable around others,   | 2                      | 90                   | +                  | 15   |
| confidence public speaking, confidence in transferring knowledge)           |                        |                      |                    |      |
| Improved confidence (e.g. in caring for clients from another culture, in     | 2                      | 90                   | +                  | 15   |
| quality improvement methods, to take bolder steps, to address challenging    |                        |                      |                    |      |
| situations, self-confidence, confidence in professional ability)           |                        |                      |                    |      |
| Confidence to work in other locations (e.g. confidence to move to another   | 2                      | 89                   | +                  | 19   |
| city/country, working with UK multicultural/underserved populations)         |                        |                      |                    |      |
| Increased awareness of/knowledge about global issues (e.g. re-evaluating     | 2                      | 88                   | +                  | 20   |
| world issues, shared purpose)                                               |                        |                      |                    |      |
| Increased awareness of/knowledge about conditions and procedures rarely     | 2                      | 88                   | +                  | 20   |
| encountered in the United Kingdom (e.g. greater understanding of procedures  |                        |                      |                    |      |
| not used in the United Kingdom, unfamiliar equipment and delayed             |                        |                      |                    |      |
| presentations, better management of conditions that are not common in the    |                        |                      |                    |      |
| United Kingdom)                                                            |                        |                      |                    |      |
| Increased awareness of/knowledge about tropical diseases                    | 2                      | 88                   | +                  | 20   |
| Core outcome                                                                                                                                                                                                                                                                                                                                                       | Met consensus at round | Percentage consensus | Include or exclude | Rank |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------|--------------------|------|
| Increased awareness of/knowledge about the importance of mutual learning and respect (i.e. greater understanding of reciprocal learning)                                                                                                                                                                                                                       | 2                      | 88                  | +                  | 20   |
| Ability to be adaptable in leading (e.g. able to lead in complex novel situations, ability to compromise not dictate)                                                                                                                                                                                                                                               | 2                      | 88                  | +                  | 20   |
| Ability to work within a system with unfamiliar power dynamics                                                                                                                                                                                                                                                                                                    | 2                      | 88                  | +                  | 20   |
| Ability to adapt social norms to meet needs of another culture (e.g. change behaviours to fit into another culture, being aware of own social norms and adapting them)                                                                                                                                                                                                  | 2                      | 88                  | +                  | 20   |
| Ability to exchange ideas with those from another culture                                                                                                                                                                                                                                                                                                       | 2                      | 88                  | +                  | 20   |
| Increased self-awareness (e.g. understanding own skills and limitations, how to challenge own beliefs and importance of reflecting on own situation)                                                                                                                                                                                                                  | 2                      | 88                  | +                  | 20   |
| Patience and tolerance (e.g. accepting and working at other peoples pace, more tolerant)                                                                                                                                                                                                                                                                          | 2                      | 88                  | +                  | 20   |
| Proactivity (e.g. thinking on feet, using initiative, efficiency, get on with things rather than look for someone to blame)                                                                                                                                                                                                                                         | 2                      | 88                  | +                  | 20   |
| Ability to work with resources available in specific contexts (i.e. understanding the reasons behind lack of resources)                                                                                                                                                                                                                                               | 2                      | 88                  | +                  | 20   |
| Ability to work towards solutions (e.g. solution focused approach)                                                                                                                                                                                                                                                                                                   | 2                      | 88                  | +                  | 20   |
| Understanding that speed and language competency affect communication (e.g. awareness of how speed affects comprehension, understanding language differences and checking recipient comprehension, ability to use an interpreter)                                                                                                         | 2                      | 86                  | +                  | 33   |
| Increased awareness of/knowledge about the importance of community participation in health (e.g. understanding the community and social influences on health, the role of the community in health, public health and the importance of community work)                                                                                     | 2                      | 86                  | +                  | 33   |
| Ability to use a broader range of clinical skills (e.g. enhancing existing skills and acquiring new clinical skills, greater all round competence)                                                                                                                                                                                                                     | 2                      | 86                  | +                  | 33   |
| Understanding that changing behaviour is complex (e.g. understanding how to make small changes and not to force your perspective onto others,)                                                                                                                                                                                                                       | 2                      | 86                  | +                  | 33   |
| Ability to improve service (e.g. renewed enthusiasm for service improvement)                                                                                                                                                                                                                                                                                     | 2                      | 86                  | +                  | 33   |
| Increased staff knowledge and skills (e.g. increased staff knowledge of low cost healthcare, more knowledgeable staff able to cover more areas, to discover better ways of doing things and more aware of waste reduction)                                                                                                                                                                               | 2                      | 86                  | +                  | 33   |
| Increased awareness of/knowledge about how context affects communication (e.g. effectively conveying ideas in a contextually appropriate way)                                                                                                                                                                                                                       | 2                      | 84                  | +                  | 39   |
| Increased awareness of/knowledge about the need for and importance of training (i.e. understanding how important effective training is in)                                                                                                                                                                                                                               | 2                      | 84                  | +                  | 39   |
| Improvement in teaching skills (e.g. learning new techniques, greater training delivery skills, lecturing skills and small group teaching skills)                                                                                                                                                                                                                         | 2                      | 84                  | +                  | 39   |
| Ability to deal with the unexpected                                                                                                                                                                                                                                                                                                                                | 2                      | 84                  | +                  | 39   |
| Ability to manage projects                                                                                                                                                                                                                                                                                                                                       | 3                      | 84                  | +                  | 99   |
| Deeper engagement with issues of equality and diversity                                                                                                                                                                                                                                                                                                           | 2                      | 83                  | +                  | 43   |
| Ability to overcome communication challenges (e.g. ability to communicate effectively in high pressure situations, engage in challenging conversations and liaise between groups)                                                                                                                                                                                     | 2                      | 83                  | +                  | 43   |
| Ability to be innovative with clinical skills (e.g. use of innovative techniques, finding new ways to approach a condition, new ways of working)                                                                                                                                                                                                                      | 2                      | 83                  | +                  | 43   |
| Appreciation of having the right tools and equipment to be able to do the job (i.e. resources: technical equipment, disposal equipment, cleaning products and protective equipment)                                                                                                                                                                                          | 2                      | 83                  | +                  | 43   |
| Appreciation of excellent human resource in the NHS (e.g. multidisciplinary teams, HR structures, appreciation of own profession, understanding hierarchy and the importance of each person within it)                                                                                                                                                                                 | 2                      | 83                  | +                  | 43   |
| Improved emotional intelligence (e.g. changed engagement with self, knowledge and world)                                                                                                                                                                                                                                                                              | 2                      | 83                  | +                  | 43   |
| Ability to identify and anticipate potential problems (e.g. identify problems when setting up a...)

**Table 10** List of all outcomes and those that met consensus (those that met consensus were included in the core outcome set) (Continued)
Table 10 List of all outcomes and those that met consensus (those that met consensus were included in the core outcome set) (Continued)

| Core outcome                                                                 | Met consensus at round | Percentage consensus | Include or exclude | Rank |
|------------------------------------------------------------------------------|------------------------|----------------------|--------------------|------|
| Increased awareness of/knowledge about appropriate clinical behaviour (e.g. knowing when to stop and when to move forward, when to ask for help and different populations needs) | 2                      | 82                   | +                  | 50   |
| Ability to make independent clinical decisions (e.g. ability to make an urgent decision in an emergency, dealing with uncertain outcomes, evaluating risks to patients and self) | 2                      | 81                   | +                  | 51   |
| Understanding own potential to empower people                                | 2                      | 81                   | +                  | 51   |
| Ability to work as part of a team (e.g. understanding team group norms, perception of roles within the group, managing personal objectives within a group) | 2                      | 81                   | +                  | 51   |
| Ability to build a global network                                             | 2                      | 81                   | +                  | 51   |
| Ability to disseminate best practice globally                                 | 2                      | 81                   | +                  | 51   |
| Appreciation of free universal health (e.g. the NHS system of free healthcare for all, privilege and opportunity, the expectations that are placed on NHS by service users) | 2                      | 81                   | +                  | 51   |
| Improved situational awareness (i.e. understanding your environment so you can understand what to do) | 2                      | 81                   | +                  | 51   |
| Increased job satisfaction (e.g. increased motivation and morale within profession, renewed passion for work, sense of reward) | 2                      | 81                   | +                  | 51   |
| Personal satisfaction (e.g. personal achievements and challenges, new experiences, experiencing a different lifestyle, a holiday, appreciation of own life, personal fulfilment) | 2                      | 81                   | +                  | 51   |
| Can-do attitude                                                               | 3                      | 81                   | +                  | 100  |
| Ability to co-operate (e.g. willingness to see another point of view)         | 2                      | 79                   | +                  | 60   |
| Appreciation of clinical governance procedures within NHS (e.g. waste disposal, audit, teamwork, education system, tests and investigations) | 2                      | 79                   | +                  | 60   |
| Appreciation of the importance of care and compassion (e.g. ability to compare compassion in both systems, empathy and fairness) | 2                      | 79                   | +                  | 60   |
| Ability to provide better care (e.g. ability to integrate primary and secondary care, to provide multicultural care, to develop most effective approaches to care and taking responsibility for providing quality of care) | 2                      | 79                   | +                  | 60   |
| Increased awareness of/knowledge about the positive impact of clinical policies and governance (e.g. understanding the benefits of a comprehensive checklist) | 3                      | 78                   | +                  | 101  |
| Increased awareness of/knowledge about ethics (i.e. experiencing ethical dilemmas, understanding the importance of ethics) | 2                      | 78                   | +                  | 64   |
| Changed perception of otherness (e.g. understanding importance of being a friendly stranger in the United Kingdom, feeling like a foreigner) | 2                      | 78                   | +                  | 64   |
| Integrity                                                                     | 2                      | 78                   | +                  | 64   |
| Independence (e.g. lone working)                                              | 2                      | 78                   | +                  | 64   |
| Ability to plan and organise (e.g. ability to set direction, improved audit skills) | 2                      | 78                   | +                  | 64   |
| Ability to make decisions (e.g. understanding who the decision is for, taking action on decision, making judgements) | 2                      | 78                   | +                  | 64   |
| Ability to manage risk (e.g. manage risk in advance, evaluation of environment, understanding the clinical importance of risk management and the wider implication of poorly managed risk) | 2                      | 78                   | +                  | 64   |
| Increased patient satisfaction (e.g. staff better able to respond to UK multicultural populations, staff able to compare how systems affect patient satisfaction, have greater relationships with multicultural population, more in tune with patients and more aware of individual needs of patients) | 2                      | 77                   | +                  | 71   |
| Ability to communicate non-verbally                                           | 2                      | 76                   | +                  | 72   |
| Ability to establish communication systems (e.g. formal and informal)          | 3                      | 76                   | +                  | 102  |
| Increased clinical knowledge in relation to other professions (e.g. doctors understanding nurses and vice versa, multi-disciplinary awareness) | 3                      | 76                   | +                  | 102  |
| Ability to get the most out of people (e.g. encouraging people to work together, recognise their own strengths and to take possession of their own work/projects, ability to assess the capability of others) | 2                      | 76                   | +                  | 72   |
### Table 10 List of all outcomes and those that met consensus (those that met consensus were included in the core outcome set) (Continued)

| Core outcome                                                                 | Met consensus at round | Percentage consensus | Include or exclude | Rank |
|------------------------------------------------------------------------------|------------------------|----------------------|--------------------|------|
| Ability to manage people (e.g. able to allocate tasks and co-ordinate people, to deal with people with differing objectives, to negotiate with multiple stakeholders, to manage difficult people) | 2                      | 76                   | +                  | 72   |
| Ability to develop friendships (e.g. relationship formation skills, developing new friendships) | 2                      | 76                   | +                  | 72   |
| Ability to manage self (e.g. own expectations, self-reliance, self-management, self-assurance, reflexivity) | 2                      | 76                   | +                  | 72   |
| Changed judgement (e.g. non-judgemental attitude, changed self-judgement)     | 2                      | 76                   | +                  | 72   |
| Diplomacy                                                                    | 2                      | 76                   | +                  | 72   |
| Ability to find facts to solve problems                                       | 2                      | 76                   | +                  | 72   |
| Developing redundant or bad skills/attitudes (e.g. developing non-transferable skills, bad habits, deskilling, returning with overconfidence in own ability, poorer communication skills, loss of confidence) | 3                      | 76                   | –                  | 102  |
| Financial loss (e.g. costs of getting involved, loss of earnings, pension or employment entitlement) | 4                      | 76                   | +                  | 112  |
| Reduction in NHS drop outs (e.g. increased staff retention, when they volunteer and come back to NHS) | 3                      | 75                   | +                  | 105  |
| Ability to observe and examine patients (e.g. increased intuitive knowledge of clinical signs and clinical judgement ability to make diagnosis without investigations) | 2                      | 74                   | +                  | 80   |
| Ability to work in a professionally competent way (e.g. having wider view of profession, intellectual development, reminder of professional responsibilities, stronger work ethic) | 2                      | 74                   | +                  | 80   |
| Increased understanding of how to be a good teacher (e.g. allowing students to learn from mistakes, ability to suggest and acknowledge improvements in teaching, understanding how communication affects learning, how to target training most effectively and the importance of experiential learning) | 2                      | 74                   | +                  | 80   |
| Act as a role model (e.g. lead by example)                                   | 2                      | 74                   | +                  | 80   |
| Influences career pathway (i.e. affects specialism choice, exploration of potential career pathways, pursuing careers in primary care, family practice, public service, sub-specialism in global health, teaching) | 2                      | 74                   | +                  | 80   |
| Ability to manage time and prioritise (e.g. ability to respond quickly in an emergency, managing immediate need vs long term need, prioritisation of limited resources) | 2                      | 74                   | +                  | 80   |
| Increased ability to change behaviour in colleagues or patients (e.g. ability to implement behaviour change and to assess the impact of healthcare systems) | 4                      | 73                   | +                  | 113  |
| Ability to manage tragedies                                                   | 3                      | 73                   | +                  | 106  |
| Reduction in staff competence (e.g. brain drain reversal: NHS loss of competent staff to overseas placements, staff unable to cope with paperwork on return) | 4                      | 73                   | –                  | 113  |
| Exposure to ethical dilemmas (e.g. expected to work outside of competency, to do clinical work, little regulation, little supervision, too much responsibility) | 3                      | 73                   | +                  | 106  |
| No recognition or accreditation upon return                                   | 4                      | 73                   | +                  | 113  |
| Increased international reputation (of United Kingdom)                        | 3                      | 73                   | +                  | 106  |
| Increased international reputation of NHS (e.g. greater fulfilment of social responsibility) | 3                      | 73                   | +                  | 106  |
| Ability to verbalise knowledge (e.g. ability to verbalise core concepts and deep knowledge, ability to explain complex ideas to others) | 2                      | 72                   | +                  | 87   |
| Increased awareness of knowledge about the importance of trust between colleagues within healthcare systems | 2                      | 72                   | +                  | 87   |
| Increased awareness of and knowledge the functioning of systems (e.g. able to identify stakeholders and change agents, understanding influencing patterns of those in power, value systems and the difficulty of questioning organisations) | 2                      | 72                   | +                  | 87   |
| Refreshment and reinvigoration (e.g. chance to take time away to become refreshed and feel reinvigorated to work upon return) | 2                      | 72                   | +                  | 87   |
| Increased awareness of knowledge about the importance of consciously making an effort to get on with colleagues (e.g. learning colleague’s names) | 3                      | 71                   | +                  | 109  |
| Ability to manage healthcare environments (e.g. ability to manage wards and staff) | 2                      | 71                   | +                  | 91   |
| Increased awareness of knowledge about the costs of healthcare                | 2                      | 71                   | +                  | 91   |

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Table 10 List of all outcomes and those that met consensus (those that met consensus were included in the core outcome set) (Continued)

| Core outcome                                                                 | Met consensus at round | Percentage consensus | Include or exclude | Rank |
|------------------------------------------------------------------------------|------------------------|----------------------|--------------------|------|
| Ability to accept and understand failure (e.g. to continue with something that did not have desired outcome at first, learning to accept failure, thinking differently about failure, persistence) | 2                      | 71                   | +                  | 91   |
| Humility (including professional humility)                                    | 2                      | 71                   | +                  | 91   |
| Ability to think through problems in a logical way (e.g. analytical/lateral thinking) | 2                      | 71                   | +                  | 91   |
| Ability to engage senior people                                              | 2                      | 70                   | +                  | 96   |
| Loss of interest in profession (e.g. not wanting to work in your profession when home) | 4                      | 70                   | –                  | 114  |
| Extreme nationalism towards the United Kingdom                               | 3                      | 70                   | –                  | 110  |
| Health consequences (e.g. animal bites, tropical diseases, STD’s, injuries and transport accidents, infection, jet lag, skin disease) | 2                      | 70                   | +                  | 96   |
| Increased workforce productivity                                              | 3                      | 70                   | +                  | 110  |
| NHS becomes a more attractive employer (e.g. an employer that offers staff the opportunity to volunteer) | 2                      | 70                   | +                  | 96   |
| Reinforced ethnic and cultural identity (e.g. understanding of own ethnic and cultural identity) | No Con                 | 0                    |                    |      |
| Ability to listen                                                             | No Con                 | 0                    |                    |      |
| Increased awareness of knowledge about the importance of assessing healthcare on an individual basis (i.e. the uniqueness of each patient) | No Con                 | 0                    |                    |      |
| Ability to apply evidence based practice (e.g. understanding its importance (sometimes through being unable to apply it overseas), understanding how to apply it innovatively with limited resources) | No Con                 | 0                    |                    |      |
| Ability to give and accept praise                                            | No Con                 | 0                    |                    |      |
| Ability to encourage others to take responsibility for own health             | No Con                 | 0                    |                    |      |
| Ability to speak the host language                                            | No Con                 | 0                    |                    |      |
| Ability to challenge breaches of privacy and confidentiality (e.g. ability to stand up for patients’ peoples rights if they are jeopardised, increased awareness of human rights, ability to respect regulatory standards of home and overseas regulatory bodies) | No Con                 | 0                    |                    |      |
| An upper hand when competing for careers                                      | No Con                 | 0                    |                    |      |
| Spiritual development                                                         | No Con                 | 0                    |                    |      |
| Escapism (e.g. freedom from bureaucracy, space outside of regular routine to clarify objectives, escape from agendas and workload, a chance to take time out of training and practice) | No Con                 | 0                    |                    |      |
| Improved research skills (e.g. grant application skills, research design and implementation) | No Con                 | 0                    |                    |      |
| Ability to present work                                                        | No Con                 | 0                    |                    |      |
| Ability to write reports and academic pieces                                   | No Con                 | 0                    |                    |      |
| Costs to British patients (e.g. staff desensitised, staff less tolerant and patient, staff bringing tropical illnesses to the United Kingdom) | No Con                 | 0                    |                    |      |
| Loss of trained staff (e.g. utilisation of key staff time, financial cost of losing staff, having to find cover for staff) | No Con                 | 0                    |                    |      |
| Negative perceptions of NHS (e.g. NHS reputation jeopardised if a health link is badly organised) | No Con                 | 0                    |                    |      |
| Distracted staff (e.g. staff going on international placements coming back disengaged with UK work and pre-occupied) | No Con                 | 0                    |                    |      |
| Difficulty getting the job or training position that you want upon return (e.g. returning to work in a locum position, not having a permanent job upon return) | No Con                 | 0                    |                    |      |
| Reduced experience and exposure to UK procedures, protocols and research (e.g. NHS procedures that do not exist in host country, missing out on formal training and conferences, chronic disease management over time, health conditions that are common in the United Kingdom and not in host country, NHS protocol and updates, loss of professional networks and relationships) | No Con                 | 0                    |                    |      |
| Affects professional progression (e.g. lengthens training, less time to prepare for exams, time for professional readjustment upon return, career suicide, loss of partnerships) | No Con                 | 0                    |                    |      |
| Negative colleague perceptions (e.g. colleagues think it’s a holiday, colleagues have to cover) | No Con                 | 0                    |                    |      |
do not know and people not being aware of what has changed for them at a particular time [39]. Nonetheless, metrics and standard indicators are useful for policy and decision-making [40], and this COS could facilitate quantification and the variables could facilitate hypothesis testing.

Additional file

Additional file 1: Systematic review search criteria. Systematic review instructions for screeners. Systematic review results: table of literature included in the review. Systematic review and meta-synthesis results: table of outcomes. Systematic review and meta-synthesis results: table of variables that may affect outcomes. List of core outcomes after Delphi study: percentage of consensus, positive (include)/negative (exclusive) and the overall rank in terms of stakeholder agreement. Descriptive statistics for each statement in the Delphi across the three rounds. (DOCX 143 kb)

Abbreviations
CO: Core outcome; COS: Core outcome set; CPD: Continued professional development; HIC: High-income country; ILO: Intended learning outcome; LMIC: Low- and middle-income country; MOVE: MOVE Project, Measuring the outcomes of volunteering for education; NHS: National Health Service

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Availability of data and materials
The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Authors’ contributions
NT participated in the design of the study; conducted the systematic review, meta-synthesis and Delphi; analysed the data; and drafted the majority of the manuscript. LBD conceived the design of the study, analysed the data and contributed significantly to the drafting of the manuscript. JC was the second reviewer in the systematic review and contributed to the drafting of the manuscript. GB provided oversight of the study design, helped recruit participants and drafted the manuscript. JH was involved in the design.
conception and drafting the manuscript. All authors participated in the coordination of the research and read and approved the final manuscript.

Ethics approval and consent to participate
The approval for the study was obtained from the Ethical Research Committee, University of Salford, and the University of Manchester Research Ethics Committee.

Consent for publication
Not applicable.

Competing interests
Professor Ged Byrne is the Director of Global Engagement for Health Education England. The other authors declare that they have no competing interests.

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