INVESTIGATING THE LONG-TERM IMPACT OF INTERPROFESSIONAL EDUCATION (IPE) INITIATIVES IN CARE HOME SETTINGS

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March 2024

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Glossary and abbreviations

IPE	Interprofessional Education	IPE is about "a group of people, from a range of disciplinary backgrounds, working and learning together to ensure the integrated use of natural, social and environmental sciences and services in the planning and decision-making processes which may have an impact on a child's, adult's or older person's health and their environment." (Stephens, Robinson and McGrath (2013: 493)
LAPS	Long arm practice supervision	The supervision of students at a distance, by an educator/teacher from the same profession or related field who is supported by a day-to-day onsite supervisor from a different discipline.
AHP	Allied Health Professions	There are currently fourteen registerable titles for AHPs which can be found here.

Acknowledgements

The project team would like to thank to the care home staff, residents and learners who engaged in the initiative and took the time to tell us about their experiences. A special thank you to the steering group, operational group and care home support network, for their dedicated support to the project.

Abstract

While emerging evidence suggests that IPE initiatives can have benefits in care homes, their lasting impact in this context remains unclear. This study investigated the long-term impact of IPE in five care homes in Greater Manchester, building upon a 6-week pilot conducted by the project team in 2021 (Stephens et al., 2022a; Stephens et al., 2022b; Stephens et al., 2023; Kelly et al., 2023; Chesterton et al., 2023). From May to December 2023, students from a range of disciplines, such as Nursing (Adult, Learning Disability and Mental Health Fields of Practice), Physiotherapy, Dietetics, Occupational Therapy, and Sports Rehabilitation, were continually placed within five care homes. There were four six-week cycles of IPE conducted, during periods of 'overlap', where students were out on placement at the same time. In each cycle, the students attended weekly meetings to address the goals of residents as a collaborative team. A mixed-method evaluation ran alongside the IPE scheme which had two components: 1) weekly digital surveys were administered to students and care home staff to measure the impact involvement has on their development, and 2) a smaller sample of students, staff and residents involved took part in qualitative semi-structured interviews. This work explores the positive impact engagement had on the participants knowledge, skill, and personal development, illuminates the longer-term impacts of IPE in care homes, and explores future directions for such initiatives in this environment.

Introduction

This report details the outcomes of a research project led by the University of Salford with partners at Manchester Metropolitan University, University of Bolton and the University of Manchester. It was supported by Greater Manchester Project Management Office and received external funding as part of Health Education England's (2022) Targeted Practice Education Programme (TPEP) workstream.

The World Health Organisation (WHO, 2010) recognises IPE as a central component in strengthening health systems, responding to the increasing complexity within the health and social care sector (Stephens and Ormandy, 2018). When students recognise how to work interprofessionally, they are better prepared to enter the workplace as a member of the collaborative practice team.

The care home environment is uniquely suited to IPE opportunities as the complex health and care needs of residents provide the ideal context for a collaborative experience (Bridges et al., 2011). Studies have highlighted that IPE enhance students' knowledge of other professional approaches and the care home environment (Damsgård et al., 2018) and that this increased knowledge on the speciality of aged care practice has the power to increase the aged care workforce (Seaman et al., 2017). However, IPE tends to be conducted in clinical settings and very few have been implemented in the UK care home environment.

In response to this, the project team conducted a feasibility study in 2021 which developed, implemented, and evaluated the impact of a six-week IPE initiative across three care homes across in Greater Manchester. Students from a range of professional health and social care programmes were placed within the homes to work in a collaborative interprofessional environment. The pilot study demonstrated that IPE can have transformative and positive impacts in the UK care home setting (Stephens et al., 2022b).

This study extends our pilot work by investigating the longer-term impact of an IPE initiative in five care home settings across Greater Manchester. Across June – December 2023, forty students from Nursing (Adult, Learning Disability and Mental Health Fields of Practice), Physiotherapy, Occupational Therapy, Dietetics and Sports Rehabilitation were placed in five care homes across Greater Manchester. There were four six-week cycles of IPE conducted, during periods of 'overlap', where students were out on placement at the same time.

During this period, they had time to work together to learn from, with and about each other. To foster interprofessional collaboration, they also attended weekly MDT meetings with care home staff, meeting facilitators and two care home residents, to address the individual goals of the residents. An action learning pedagogy underpinned the MDT meetings, fostering a participatory and reflective approach to problem solving and decision making.

A mixed-method evaluation accompanied the initiative, using weekly digital surveys for staff and students to track the impact of their involvement, and conducting interviews with a smaller sample of residents, students, and staff to gather qualitative insights. This approach aimed to capture the initiative's impact on three domains of staff and student development (knowledge, skill and personal) as well as learning regarding long-term impacts and best practice moving forward.

This report examines the initiatives impact on staff and students' knowledge, skills, and personal development, as well as its influence on residents' experiences of their care. Additionally, it explores the longer-term effects of engagement and offers recommendations for best practice moving forward.

Background

In the landscape of Adult Social Care in England, the workforce is comprised of approximately 1.6 million individuals, which speaks to the essential role these professionals play in supporting and caring for people in our communities (Skills for Care, 2023). However, there is an urgent call across the sector for the creation of new career pathways to accommodate the growing demands and evolving needs within social care.

Recognising this, the Department of Health and Social Care (DHSC) initiated consultations aimed at developing a dedicated workforce pathway for Adult Social Care (DHSC, 2024). The objective is clear: to address the escalating demand for skilled professionals by strategically reshaping the workforce landscape. Part of this initiative involves a focused effort to increase AHP training places by 25% over the course of the next decade, with incremental milestones set for progress - aiming for an 8% growth by 2024/25 and a 13% increase by 2028/29.

This also interconnects with the NHS Long Term Workforce Plan (NHS England, 2023), a broader strategy aiming to enhance the overall health and social care landscape in England. It further emphasises the importance of a resilient and skilled workforce to meet evolving health care needs, calling for the investment in and development of the workforce to deliver high-quality care.

It is clear that new initiatives are needed to ensure high-quality, person-centred care can be and is delivered in adult social care. A comprehensive workforce redesign is crucial, not only in terms of increasing but also diversifying the workforce. Prioritising workforce development is also key to ensure staff are equipped, empowered and enabled to deliver high-quality person-centred care, fostering a supportive environment to retain these valuable professionals.

This strategic shift is particularly crucial given the growing concerns about the future of the care home sector. As the Kings Fund (2022) suggest, the sectors' ability to continue with the current levels of provision for care home residents is under threat from workforce and funding crises that have been further compounded by the Covid-19 pandemic. Roberts (2023) also recently reported that embedded perceptions regarding social care roles as not being highly skilled continue to persist.

One approach to address these workforce challenges is through IPE. IPE fosters collaborative learning and working among healthcare professionals, which can be particularly valuable in Adult Social Care. This aligns with the NHS Long Term Plan's focus on workforce development, as IPE can equip staff to work collaboratively across disciplines. Schrader and colleagues (2022) established that by engaging in IPE initiatives, professionals are likely to improve collaboration practices and contribute to a more positive workplace culture. This approach can thus contribute to a more efficient and adaptable health and social care system, better equipped to meet the evolving needs of the population.

Aims and Objectives

The scheme aimed to investigate the long-term impact of an IPE initiative within five care home settings in Greater Manchester. To do so, it looked to the experiences of three groups:

- Students
- Residents
- Staff members

The objectives which the study focused on are as follows:

1. To develop and evaluate four cycles of an IPE initiative in five care homes across Greater Manchester.
2. To measure, evaluate and understand the impact IPE has on care home staff's knowledge, skills and personal development.
3. To measure, evaluate and understand the impact IPE has on students' knowledge, skills and personal development.
4. To explore the impact IPE has on care home resident's experiences of their care.
5. To disseminate key learning and best practice from the project to other HEIs, care homes and the wider health and social care sector.

Collaborative networks

The project employed a participatory research approach called Heron's Cooperative Inquiry (Heron, 1996). This method brings people together to explore shared interests and concerns. It has two main goals: 1) to deepen understanding and develop new and creative ways of looking at things, and 2) to improve practice and address areas for change. At the heart of this approach is the notion that research should be done with people, not on them, to empower rather than exploit them. This approach emphasised active participation, shared reflection, and inclusive engagement among all stakeholders, aligning with our project's focus on collaborative learning. This not only enriched the project but also ensured a comprehensive and inclusive approach to achieving our goals. As part of this, we established three working groups who played a crucial role in the successful implementation of the IPE initiative.

Steering group

This group was made up of stakeholders, programme and placement teams, academics and health and social care leads. Many of them were involved in the pilot study in some capacity and played pivotal roles in shaping the foundations of the initiative. They met three times throughout the course of the project to collaboratively engage in the project design, development, planning and implementation process as well as to guide and advise on its evaluation. The members were:

Dr Melanie Stephens	Associate Professor of Nursing at the University of Salford and Principal Investigator of the project
Siobhán Kelly	Research Assistant
Carol Le Blanc	Head of Greater Manchester Project Management Office at Manchester Foundation Trust
Paula Breeze	Greater Manchester AHP Workforce Programme Lead
Professor Andrew Clark	Professor of Sociology at Greenwich University
Deborah O'Connor	Director of Placements, Partnerships & Employability, Manchester Metropolitan University
Jo Finnerty	Workforce Lead for Social Care at GM Health & Social Care Partnership.
Jez Ashdown	Skills for Care Northwest Locality Manager
Dr Joshua Pink	Health Economist at the University of Salford
Susan Clarke	Greater Manchester Social Care & PIVO Workforce Development Manager
Kath Arrowsmith	Chief Nurse & Education Lead Bolton GP Federation
Annette Baines	Greater Manchester Social Care & PIVO Workforce Development Manager
Maria Murphy	NHS Greater Manchester Education and Training Lead (Stockport)
Ian Davies	Programme Manager for Health Improvement , NHS Greater Manchester
Hayley Moorhouse	Head of HR&OD at Viaduct Care

| Mervyn Eastman | Co-Founder of Change AGEnts Network UK Co-operative & Co-Founder and President of the Practitioner Alliance for Safeguarding Adults |

Core-operational group

A smaller operational group, primarily comprised of placement and programme leads and practice educators and facilitators, supported the day-to-day implementation of the scheme. The success of the initiative relied on their efforts to support allocation and supervision processes. This collaborative effort required members to share their expertise and work together seamlessly, necessitating both professional cooperation and compromise. Members included:

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Dr Melanie Stephens	Associate Professor of Nursing at the University of Salford and Principal Investigator of the project
Siobhán Kelly	Research Assistant
Julie Fletcher	Head of Quality Assurance- Practice Learning at the University of Bolton
Kevin Bayley	Academic Lead for Practice Development at the University of Manchester
Victoria Ashworth	Practice-Based Learning Lecturer for Physiotherapy at Manchester Metropolitan University
Nathan Finnigan	Placements Unit Manager at the University of Salford
Sarah McRae	Social care partnership lead at Greater Manchester Training Hub
Lyndsay Bailey	Clinical Educational Specialist / GP Nurse Lead at Bolton NHS Foundation Trust
Carla Long	Pre-Registration Clinical Educator for Families and Community Division at Bolton NHS Foundation Trust
Lindsay Gregory	Lead Practice Education Facilitator at Stockport NHS Foundation Trust
Joanne Martin	Head of Learning and Education at Stockport NHS Foundation Trust
Sam Bulpitt	Lead – Pre-Registration Education at Bolton NHS Foundation Trust

Care home support network

Care home managers, staff, MDT meeting facilitators and the research team also met monthly as a collective. This forum provided a platform for the research team to share updates and engage in dialogue with care home staff and MDT facilitators. It also served as a supportive space for staff to voice concerns or ask questions within a collaborative environment. By actively engaging and valuing the insights of care home staff and MDT facilitators, the group fostered an inclusive culture where everyone's experiences and expertise informed the research process.

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Dr Melanie Stephens	Associate Professor of Nursing at the University of Salford and Principal Investigator of the project
Siobhán Kelly	Research Assistant
Gail Howard	Manager of Lakeside care home in Wigan
Gabrielle Macdonald	Registered manager and owner of the Old Vicarage care home in Bolton
Claudia Macdonald	General manager of the Old Vicarage care home in Bolton
Karen Johnson	Clinical Director at Heathlands Village

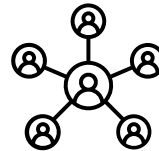| Marie Madeley	Clinical Manager at Heathlands Village
Jemma Sharratt	Village Nurse Manager at Belong Atherton
Dr Lorna Chesterton	Action Learning Facilitator at the University of Salford
Angie Chadwick	Lecturer in Mental Health Nursing and Action Learning Facilitator at the University of Salford
Sue Walker	Senior Lecturer in Adult Nursing and Action Learning Facilitator at the University of Salford

Implementation and integration of students

Forty learners from the University of Salford, University of Bolton and Manchester Metropolitan University were placed in five care homes in Greater Manchester from June to December 2023. They came from a mixture of different disciplines, including Dietetics, Physiotherapy, Nursing (Adult, Learning Disability and Mental Health Fields of Practice), Sports Rehabilitation and Occupational Therapy. Some learners attended as part of their natural placement cycle and others joined as part of a split-site learning opportunity. There was a mix of full-time and part-time learners and their placement duration spanned from five weeks to eighteen weeks. The IPE scheme was developed to take place at 'overlap' periods where all students were on placement within the home at the same time. Across June to December, there were four 6 week overlap periods which resulted in **four cycles of IPE** being conducted.
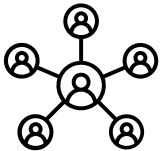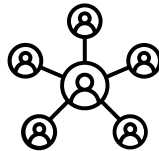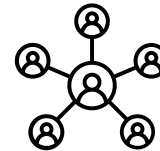

1: June 5th - July 3rd   2: July 31st - September 4th   3: October 2nd – November 6th   4: November 13th – December 18th

To enable interprofessional development and reflection, the students, along with care home staff, residents, and a meeting facilitator took part in weekly multi-disciplinary team (MDT) meetings whilst on their placement. In the MDT meetings, the students worked with a small number of residents to work on their individual goals as part of an integrated team. Action learning was utilised as the learning framework in the MDT meetings due to its emphasis on collaborative problem-solving, critical thinking, and shared learning experiences. By adopting this approach within the MDT meetings, the students were encouraged to actively engage with the residents in a structured cycle of action and reflection. Through a continuous process of identifying the residents' goals, action and reflecting on outcomes, the students not only worked towards enhancing the resident's well-being but also gained invaluable insights into interprofessional collaboration and holistic care. This facilitated a dynamic and interactive environment where knowledge and expertise from various disciplines converged, fostering a deeper understanding of each other's roles and perspectives.

Here is an overview of the learners involved in each cycle of IPE:

Cycle 1

Heathlands

Dietetics (MMU)
Sports Rehab (UoB)
Nursing (UoS)

Lakeside

Nursing (UoS)
Dietetics (MMU)

Old Vicarage

Sports Rehab (UoB)
Dietetics (MMU)

St George's

Physiotherapy (MMU)
Nursing (UoB)
Dietetics (MMU)

Cycle 2

Heathlands

Physiotherapy (UoB)
Nursing (UoS)

Lakeside

Nursing (UoS)
Sports Rehab (UoB)
Physiotherapy (UoB)

Old Vicarage

Sports Rehab (UoB)
OT (UoS)

Note: St Georges did not take part in cycle 2 due to organisational issues.

Cycle 3

Heathlands

Sports Rehab (UoB)
Nursing x 2 (UoS)

Lakeside

Physiotherapy x 2 (UoB)
Nursing (UoS)

Old Vicarage

Physiotherapy x 2 (UoB)
Nursing (UoS)

Note: St Georges did not take part in cycle 2 due to allocation complexities.

Cycle 4

Heathlands

Physiotherapy (UoB)
Sports Rehab (UoB)
Nursing (UoS)

Lakeside

OT (UoS)
Nursing (UoB)

Old Vicarage

Physiotherapy (UoB)
OT (UoS)

St George's

Physiotherapy (UoB)
Nursing (UoB)

Belong

Physiotherapy (UoB)
Nursing (UoB)

The pilot study illuminated the pivotal role of student integration in an IPE care home initiative. We found that students can enter the process of IPE with uncertainties and pre-conceptions about working in care homes. As such, we developed a pre-placement module designed to equip learners with the essential knowledge about IPE and working in care home settings necessary for their engagement. Prior to starting their placement, learners received a link to this module, allowing them to access and complete it at their convenience. The module served three primary objectives: (1) introduce learners to the role and value of social care; (2) offer an overview of working in care homes, showcasing their diverse and dynamic nature; and (3) emphasise the significance of IPE and illustrate what participation in an IPE care home initiative entails. Interactive elements, including quizzes, were incorporated to actively engage learners throughout the module. These features aimed to reinforce learning and encourage practical application of the concepts presented. This module ultimately sought to better prepare learners for their engagement in the IPE care home setting, fostering a more meaningful and informed experience for both students, staff and residents alike.
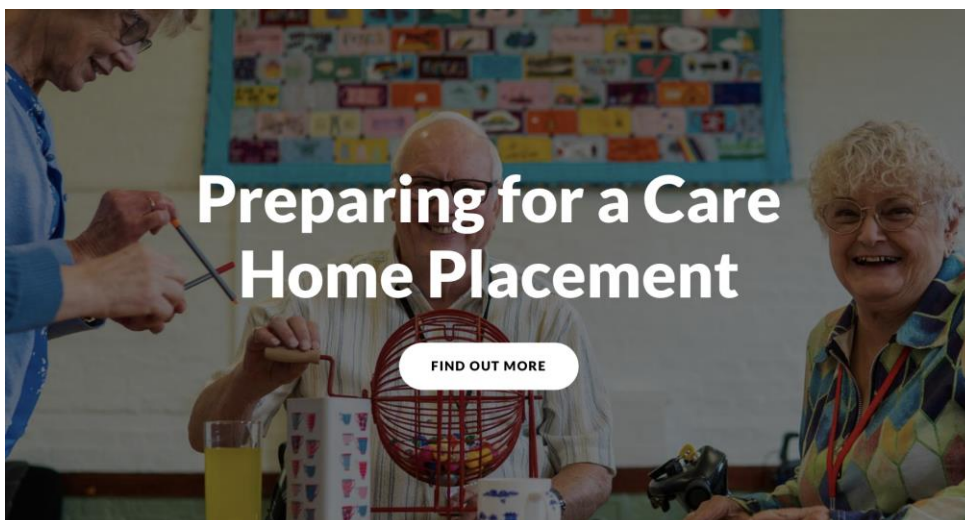
Reflections on placement and supervision complexities

Complexities we have faced reflected barriers experienced during the pilot study. Navigating placement provision was difficult as care homes were still sometimes being integrated into the pre-registration placement circuit as an 'add on' rather than integral to nursing and allied healthcare programmes.

This meant we sometimes had to engage in a 'last minute fix' process to get students out in the homes. This reactive strategy was not sustainable because it strained resources, consumed significant time on the core-operational group members, and created an ongoing cycle of urgency for both the research and placement teams.

This was also paired with broader concerns regarding the use of long arm supervision for some allied health professional senior clinicians, clinical educators and practice supervisors, which created a dual barrier that was complex to address. Where certain professions, such as Occupational Therapy and Social Work, are historically accustomed to long-arm supervision models, others do not regularly utilise this model. This made it challenging to place some learners without profession-specific on-site support in the homes.

To address these challenges, we actively worked on developing strategies within our collaborative networks, recognising the need to overcome apprehensions regarding risk and responsibility. A split-site model was devised with placement leads and clinical/practice educators to ensure continued integration of Allied Health Professionals (AHPs) in cycle three and four of the initiative.

Through this model, learners on their primary placement close to one of the participating care homes attended the care home one day a week and their primary placement for the remaining four days. This ensured that they could attend the weekly MDT meeting and have some time to work and learn with the interprofessional team. On the one day they were in the care home, the supervisor from their primary placement acted as their LAPS whilst a registered professional within the home acted as their day-to-day supervisor.

As part of this, we also implemented a series of webinars aimed at clinical educators and practice supervisors who might potentially support students in the one-day split-site placement to ensure they were well-equipped to fulfil their roles as long-arm practice supervisors. By providing insights into the dynamics of the split-site placement, the IPE scheme and clarifying the responsibilities associated with long-arm supervision, we aimed to mitigate apprehensions and enhance the overall effectiveness of the placement structure.

Evaluation Design

A mixed-method evaluation package ran alongside the placement scheme to assess its impact. This evaluation included both surveys and interviews. Surveys measured changes in students' and staff members' perceptions of the positive impact involvement had, while interviews gathered in-depth insights into their experiences. This approach allowed for a detailed understanding of the initiative's effectiveness.

Surveys

Thirty-nine students and ten care home staff who attended the MDT meetings completed a series of short digital surveys. This was a repeated design, which they filled in every week for the six-week period of IPE. Using a Likert-style format, the survey asked respondents to assess the beneficial effects of their involvement in the IPE scheme across three key domains: knowledge development, skill development, and personal development. We developed and utilised this conceptual framework based on findings from a scoping review we conducted and findings from our pilot study (Stephens et al., 2022b). The survey also provided participants with an opportunity to offer open-ended responses, allowing them to explain their choices and share additional comments or thoughts. See below for a picture of the survey.

5   What level of positive impact do you feel your involvement in the IPE initiative has had on your knowledge, skill and personal development? (Note: Please choose the appropriate answer for each of the 3 areas)

	No positive impact	Minor positive impact	Neutral	Moderate positive impact	Major positive impact
Knowledge development	☐	☐	☐	☐	☐
Skill development	☐	☐	☐	☐	☐
Personal development	☐	☐	☐	☐	☐

   a.   Please provide a short explanation of why you decided to choose the above options

   b.   Do you have any other comments? *(Note: You can include anything you think could be improved or changed about the IPE initiative here)*

Interviews

Following the completion of the four IPE cycles, qualitative semi-structured interviews were conducted with five residents, five care home managers, and six students. We purposively sampled these groups to ensure representation; we captured a resident and manager from each of the care homes involved, and students from a range of professional groups. These interviews aimed to delve deeper into the participants' perspectives and experiences, providing a richer understanding of the impacts of the IPE scheme as well its longer-term effects. These interviews were a blend of face-to-face and virtual, all recorded and transcribed with participants' consent.

Analysis

Quantitative data

To assess the impact of the intervention on participants' development across three domains—knowledge, skill, and personal—we conducted quantitative analysis using SPSS. Any variable with >50% missing data was removed as we recognised that level engagement in the evaluation was not enough to draw meaningful conclusions. For those with <50%, missing data was imputed to ensure that the level of impact held by individuals has not been under-estimated. Accounting for some missing data was important, given we understood that staff and learners did not stop participating in the scheme. We recognised that variations in response rates could often be attributed to factors such as busy work schedules or unforeseen events in the care home, rather than a lack of interest or disengagement. Mean scores for each domain were calculated separately for both week one and week six, and paired t-tests were conducted to determine if there were statistically significant differences in the scores between the two time points. The significance level was set at p=0.05. A p-value less than 0.05 was considered indicative of a statistically significant difference.

Qualitative data

Qualitative data gathered from care home staff and students included interviews and open-ended responses in the survey. This data was analysed using our conceptual framework that had already been developed (as described on page 15). We utilised this because we wanted to specifically understand how involvement had impacted these groups knowledge skill and personal development. The data was coded then organised into categories aligned with the three key elements of the framework. Qualitative data gathered from care home managers and residents' included interviews. Thematic analysis was utilised to explore, interpret and identify patterns in the data (Braun and Clarke, 2021). Given the purpose of these interviews was more broadly to explore the longer-term impacts of IPE in the care home setting (for managers) or how engagement impacts experiences of living in a care home (for residents), a more open and exploratory approach to analysis was required.

Ethics

Ethical approval was granted by the University of Salford School of Health & Society Ethics Panel (Ethics number: 8169). To preserve anonymity, this report does not use real names of individuals, reveal their gender nor detail the care home they work within. We understand the problematic nature of ensuring that individuals and groups are not recognisable to one another in studies that involve defined groups, though every effort has been made to protect their identity. The resident participants involved in the research had capacity to participate, were fully informed of the work, consented, and were identified and supported by care home managers/senior staff.

Qualitative Findings

Qualitative findings are organised into four themes: knowledge development, skill development, personal development and lessons learned.

Knowledge development

Participating in an IPE initiative within a care home environment provided individuals with valuable opportunities to learn and acquire new knowledge, contributing to their continuous professional development. IPE actively promoted knowledge sharing among diverse healthcare professionals, fostering a collaborative and enriching learning environment. The quote below highlights how involvement facilitated the exchange of knowledge, allowing learners to benefit from each other's expertise and enhance their understanding of various aspects of resident care.

> We just complement each other really well. She was a nurse. She filled in a lot of my kind of knowledge gaps about the specifics of like medications and stuff like that. Yeah, it was really good. (Student 1504 Physiotherapy)

This underscores the transformative impact of IPE in breaking down professional silos and fostering cross-disciplinary learning. Exposure to different perspectives and practices within a collaborative setting can broaden the knowledge and understanding of even experienced healthcare professionals, leading to a more integrated and holistic approach to resident care. One care home manager discusses this below.

> With regards to the IPE, I was gobsmacked. I've been a nurse now for 42 years and I like to think I know a lot. I know a little about a lot of things, but I learned so much from the other professions, physios and everything and just realised. How ignorant was about physio things? Because when you're in the NHS, they are separate. It's all the physios being today and you might not necessarily understood how they've done an assessment and what conclusion and how they've come to it because she didn't need to because you were the nurse and they were the physio and I learnt such a lot from the student physios, the student dietitians and I'm sitting there thinking bloody hell, didn't know that." (Staff member 1107)

One student also noted: "It was interesting to learn other people's experiences and knowledge out of the study and bringing them into practice" (Student 1303 Dietetics). This exemplifies that involvement is about more than acquiring new knowledge, rather that it gives people the opportunity to apply this to real-life caregiving scenarios.

In this context, participants found that knowledge development is facilitated by certain factors. First, it was expressed as being nurtured through the process of action learning. One learner described that this approach is rewarding because it has helped to solidify their knowledge, that taking an active role in seeking solutions and insights, whilst being guided by others, contributes to a deeper understanding of different perspectives and approaches to care.

> And they kind of they (meeting facilitator) asked the questions so that you find the answers which I found…yeah, really rewarding and definitely helped kind of cement that knowledge for me because obviously I found it on my own with their kind of guidance. So yeah, that was really, really beneficial. (Student 1504 Physiotherapy)

Additionally, the care home setting was described as conducive to fostering knowledge growth, that the slower paced environment allows individuals the necessary space and time for deeper learning compared to more fast-paced clinical settings. This tended to surprise the learners who has limited experience of working in social care.

> But it's really like it's turned out to be my favourite placement, which I never thought, and I've learnt the most there than I have on a hospital ward, which you'd think it would be the other way around. (Student 1214 Occupational Therapy)

In summary, engaging in IPE in a care home enriches participants knowledge development, providing interdisciplinary insights, and promoting collaborative knowledge sharing. This holistic approach contributes to the well-rounded education of both future and current health and social care professionals. An action learning pedagogical approach and the care home environment are factors that facilitate this learning and enables and empowers individuals to put this knowledge into practice.

Skill development

Involvement facilitated the development of broader professional skills, which was often reported in terms of leadership, creative thinking, and time management. Leadership was a pivotal skill reported for both staff and learners. Staff frequently discussed this in relation to learning about the pedagogical process of action learning, emphasising their journey in acquiring the skills to effectively facilitate and take on leadership roles during meetings. Learners felt that having more autonomy in their placement experience inherently developed their leadership skills.

Encountering a range of people with diverse goals encouraged students to think creatively and consider different approaches to problem-solving. Creative thinking was essential when addressing the unique needs and preferences of care home residents, requiring students to devise personalised care plans and interventions. One student describes this below.

> So, I think it was just being more creative than I had before because we'd have to be like creative in other ways, like on the orthopaedic ward, you'd be getting people to do things. But because we had so many different people here, it was working with all different people and conditions at different times.[…] I think it just helped me be more creative. (Student 1204 Occupational Therapy)

Central to skill development in this context was cultivating a diverse set of interpersonal abilities. Learners often expressed the value of having dedicated time to learn about residents' histories (physical, psychological and social) and fostered meaningful bonds in working with them on their goals. Through enhancing teamwork abilities, participants not only optimised collaborative care but

developed their communication skills. For example, one learner spoke about having initial apprehensions about working with older people but that the opportunity has taught her how to communicate and engage more effectively with diverse groups.

> Yeah, it's my first placement with the geriatric population, and to be honest, I was like, it was a little bit of scared because I didn't know what to expect. And now I have more confidence working with this kind of population, and I've learnt how to… I mean, I'm still learning, but I know more how to communicate with them, and more about their issues. Like for example dementia. (Student 1405 Physiotherapy)

Forming strong bonds as a team was also related to the learners' decision to work in the care home sector post placement. One sports rehabilitation student described her choice to apply as bank staff below:

> Because I like their environment and working with the patients […] it's a good team. I work with many, many teams. Sometimes it just works. (Student 1304 Sports Rehabilitation)

Participation was also understood to foster the development of the participants clinical skill sets. For example, learners spoke about gaining the ability to formulate well-rounded and effective care plans that consider various aspects of a patient's well-being (Student 1401 Dietetics). Furthermore, active participation empowered participants to learn new techniques, such as distraction techniques grounded in Cognitive Behavioural Therapy, which they recognised they would not have otherwise tried (Student 1409 Physiotherapy). Similarly, another participant highlighted the development of knowledge and skills when observing a registered clinician deliver a Botox injection to a resident for spasticity in their upper limbs, which increased their confidence for future practice (Student 1504 Physiotherapy). This was also important in regard to the staff's development, as one manager describes.

> I think the staff (carers) benefit, especially from the physio point of view, they enjoyed the fact that the result is (resident name) walking most of the time with them now and she's mobile […] Yeah, in some cases the carers now are actually mobilising (resident name) properly now […] before that, it was like hoist and wheelchair. (Staff member 1107)

Skill development, while invaluable, was not always an easy process. Engaging in action learning could be unsettling and marked by moments of uncertainty as individuals grappled with new perspectives and challenges. While students are reconciling new information with their prior understanding, a natural part of the learning process, it is an aspect of the process which, whilst challenging, worked to further enhance their skillsets in how it contributed to their resilience and ability to work effectively in different environments.

In summary, participation in the IPE initiative developed essential professional skills, particularly in fostering effective communication, working with people and creative problem-solving. Further, it

enhanced staff and learners' clinical skill sets. Whilst the process was not always easy, its challenges spurred valuable growth.

Personal development

Engaging in IPE also served as a catalyst for personal development by encouraging reflective practice, building a person-centred mindset and changing perceptions of social care. This was expressed broadly by participants, who often spoke about engagement as being transformative: "The IPE initiative has taken me on a real journey of self-discovery…"(Student 1406 Nursing).

Working with residents in this setting altered the learner's perspective on social care, challenged negative stereotypes, and contributed to a more positive and nuanced understanding of care home environments. One learner described this below, highlighting that their initial impressions, shaped by media portrayals, were markedly different from the rewarding reality they experienced first-hand.

> I had the first impression and hearing lots of distress, so that's sort and then obviously what we see in the media, what you see on the telly, this sort of this picture of a care homes, not a nice place to be […] so I went in obviously that completely changed my perspective because it was just amazing. (Student 1505 Nursing)

Having the space to become autonomous practitioners within the care home setting provided learners with the freedom to independently navigate and grow within their professional roles, fostering a sense of self- confidence. For instance, one learner at week one expressed some apprehensions and noted "I have a lot to learn." By the end of the 6-week initiative, she voiced that she had developed self-confidence in her own abilities.

> …confidence in myself. Because I'm not very confident… I can build a relationship with others, but you know when you arrived in in another environment and you don't know anything about that, you have this kind of struggle, you know, but… it was amazing. (Student 1304 Sports Rehabilitation)

Involvement also supported participants to become reflective practitioners. Engaging in meaningful discussions and receiving feedback as part of the process encouraged individuals to introspect, consider alternative approaches, and delve into evidence-based practices. This is demonstrated in a learner's feedback provided after one of the MDT meetings.

> Reflecting upon last week using Gibbs I have learned more about why I felt upset, positive reinforcement of what we have been doing today was really good and affirming I am developing the right qualities. (Student 1205 Physiotherapy)

Engagement also proved instrumental in cultivating a person-centred mindset among participants. By fostering collaborative interactions with diverse healthcare professionals and residents, participants gained a richer understanding of individual needs and preferences, contributing to the development of empathetic and personalised approaches to care. Having time to get to know residents was key

here. One learner said it centred around: "the use of natural conversation to bring a full holistic approach to care" (Student 1505 Nursing).

> Yeah. So, I think looking at the person like holistically, like I said before […] it gives me like knowledge how to approach this person and what they might need. (Student 1405 Physiotherapy)

Lessons learned

A key lesson learned for the participants was the recognition that the IPE framework is immensely valuable, offering substantial potential for fostering collaborative learning, enhancing communication across diverse disciplines, and ultimately contributing to a more comprehensive and integrated approach to care. Care home managers articulated important and lasting impacts on the quality of care provided to residents. For example, one manager spoke about how the ongoing utilisation of students' input contributes to sustained improvements within the care home environment.

> Let me show you this (laminated infographic) is just [physio student] she did it with one of our residents. One of the two, and there was no reason why we couldn't start it off with the others and it was wheelchair exercises for someone who is old and frail and has trouble understanding […] And we've started doing that not only with the gentleman that was in the IPE, but, but having sessions with more because a lot of arm chair exercises are quite complicated and our residents don't understand. (Staff member 1107)

Residents themselves expressed a heightened sense of well-being and engagement as a result of the IPE initiative. They reported feeling more actively involved in decisions about their care, gained a sense of meaning and purpose, and benefitted from a more holistic and personalised approach to their individual needs. The students' input not only enhanced the overall quality of care but also contributed to a more positive and enriching living experience for the residents.

> Initially, it was just sort of standing up and perhaps walking the length of the room […] And then from there onwards, it was out of the room, down the corridor and into the dining room […] So, I really felt like they were opening the door and letting me walk out. […] it's what I want. You see, when I was stuck in the hospital, and stuck in the room particularly. When they kept me in bed more or less all the time, and I couldn't get up, I couldn't get out. (Resident 1101)

Areas for growth or improvement were also identified. Participants tended to discuss this in relation to 1) the recognition that one-day learner placements do not work well, that 2) allocations could be organised and communicated in different ways, and 3) that the composition of the Multidisciplinary Team (MDT) was not always ideal. Both staff and learners expressed that one-day split-site placements do not give the learners enough time to develop holistic relationships and immersive themselves into the IPE initiative, with two or three days in the home being noted as more suitable to 'get the balance'.

> We'd see them (full time students) on break times, we'd see them, you know, moving about in different areas […] You'd see them down in activities, you'd see them all over the place. You saw how they

communicated with each other. Because we were only seeing them (1-day students) for a pocket… a tiny pocket of time. I didn't get that group dynamic feel from them. (Staff member 1206)

Complexities in allocating students reflected in the experiences of care home staff, who felt the pressure of adapting to changes in allocations at the last minute. This underscored the need for a streamlined and collaborative allocation approach to optimise the integration of students into the care home environment.

Develop a really clear kind of allocation process so that then you have a really clear process of like when you're getting students (Staff member 1208)

Some participants reported that they would have preferred more learners or learners from different professional groups. One manager (Staff member 1104) for example described that it "would be better to have more students in different professions to add different aspects and views to care plans". Others however felt the amount was right for their home and that having less learners allows for space for the MDT to flourish and unpack the intricacies of the residents' goals. This begins to establish the final key lesson learned: that the way the initiative should and will look like in every home will be different. Ultimately, this emphasises the need for a customisable and adaptable framework that allows care home teams to harness the full potential of IPE while catering to the specific characteristics and requirements of their respective environments. One manager for example noted that they would involve residents in multiple cycles, enabling learners to more gradually and comprehensively understand the unique aspects of care for individuals with advanced dementia.

The input, the effect of any input is a lot slower than if they didn't have advanced dementia. […] So what I'd like to do, if it was OK with the next one, is to continue with the same 2 residents so that they'd have the input again and give them a chance, a longer chance for change. (Staff member 1107)

Quantitative Findings

Surveys asked the participants to rank how they feel involvement in the IPE initiative has impacted three domains of their development: knowledge, skill and personal. They ranked each domain weekly on a Likert-style scale of 1 (no positive impact) to 5 (major positive impact). Across each, the mean scores increased from week one to week six, which is shown below.

Variable	Week 1 mean	Week 6 mean
Knowledge	3.4821	4.4372
Skill	3.2513	4.8231
Personal	3.7077	5

Paired t-tests showed statistically significant differences ($p < 0.01$) in mean scores across all three domains at the two distinct time points (week one and week six). T-values for knowledge (3.945, df=58), skill (7.798, df=47), and personal (6.466, df=39) show that there was a relatively large increase between scores at week one and week six. More detailed results of each paired t-test are presented in the tables below, with Row A depicting the original data results and Row B reflecting the outcomes after data imputation. These results support the qualitative data reported by demonstrating that participation in the IPE programme leads to statistically significant improvements in care home staff and learners' knowledge, skill and personal development.

							95% Confidence Interval of the Difference				Significance	
Row A	Original data	Pair one	Know 6 – know 1	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
				.70000	1.05935	.33500	- .05781	1.45781	2.090	9	.033	.066
Row B	Pooled	Pair one	Know 6 – know 1	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
				.95513		.24213	.47047	1.43979	3.945	58		<.001

							95% Confidence Interval of the Difference				Significance	
Row A	Original data	Pair one	Skill 6 – skill 1	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
				1.77778	1.30171	.43390	.77720	2.77836	4.097	8	.002	.003
Row B	Pooled	Pair one	Skill 6 – skill 1	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
				1.57179		.25335	1.06216	2.08143	6.204	47		<.001

| | | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | t | df | Significance | |
						Lower	Upper			One-Sided p	Two-Sided p
Row A	**Original data**	**Pair one**	**Personal 6 – personal 1**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**Lower**	**Upper**	**t**	**df**	**One-Sided p**	**Two-Sided p**
				.88889	.92796	.30932	.17560	1.60218	2.874	8	.010	.021
Row B	**Pooled**	**Pair one**	**Personal 6 – personal 1**	**Mean**	**Std. Deviation**	**Std. Error Mean**	**Lower**	**Upper**	**t**	**df**	**One-Sided p**	**Two-Sided p**
				1.29231		.19985	.88793	1.69668	6.466	39		<.001

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Discussion

This work supports existing research that highlights the positive effects of IPE initiatives (Illingworth and Chelvanayagam, 2007). It demonstrates that IPE in care home settings offers valuable opportunities for continuous professional development and encourages knowledge sharing among diverse healthcare professionals. Involvement not only builds broader softer professional skills like leadership, communication, and time management but also enhances individuals' clinical skill sets. It also empowers participants to think differently about social care, promotes a person-centred mindset, and supports learners to become more reflective and autonomous practitioners.

While most existing research tends to focus on the short-term benefits of IPE in this context (see Lawlis et al., 2016), these findings broaden such discussion, providing a richer understanding of the long-term implications of IPE in care home environments. The results offer original insight into the continued value of IPE and its lasting impact within care homes, shedding light on how techniques and approaches continue to benefit those living and working in these settings. It also unpacks some of the complexities involved in integrating IPE in different types of care homes, taking into consideration factors such as placement duration, long-arm supervision, and the facilitating role of action learning.

These findings are consistent with the goals outlined in the NHS Long Term Workforce Plan (NHS England, 2023). Specifically, it responds to calls to expand placement capacity and provide learners with more enriching and diverse placement opportunities. IPE in care homes offers significant potential to impact the social care sector by creating more avenues for individuals to pursue careers in this field. This expansion plays a crucial role in providing students with diverse and integrated placements, broadening their range of experiences, and enhancing their understanding of collaborative practice.

The work also aligns with the State of Care report (Care Quality Commission, 2023) and Greater Manchester Integrated Care Partnership (2022) calls to contributes to strengthen the workforce and enrich the pool of skilled professionals in the social care domain. Despite recent governmental focus, Adult Social Care remains a sector facing significant challenges, with staffing concerns a crucial issue. Through focus on learning and development in care homes, IPE empowers and supports care home staff to enrich their skillsets, which directly feeds into goals to improve care delivery, enhance job satisfaction and reduce turnover (Foster, 2024). Plus, by creating more opportunities for students to engage in care home placements, IPE inherently offers the potential to address staffing shortages in care homes.

This further supports the findings of the Chief Medical Officer's annual report: Health in an Ageing Society (DHSC, 2023) and the British Geriatrics Society (2021) report, which both highlight the need for improved quality of care for care home residents. Implementing evidence-based interventions

ensures residents receive higher quality and more effective care, potentially leading to better health outcomes, increased satisfaction, and improved overall well-being.

This study responds to the dearth of evidence regarding the long-term impacts of IPE in care home settings. Engaging students in these initiatives presents an opportunity for transformative change. By participating, students develop a more positive perception of social care provision and interprofessional collaboration. This fosters a new generation of healthcare professionals with a deeper understanding and appreciation for the challenges and opportunities within care environments.

This framework evidently offers rich opportunities, but it requires further collaboration to reach its full potential. To ensure successful implementation across diverse settings, embedded ways of working need to be challenged and entrenched norms regarding placement allocation and supervision deconstructed. The development of comprehensive resource guidelines and a robust framework will be essential for embedding this approach in a variety of care environments and contexts.

Limitations

1. The study included a relatively small number of care homes in one region (Greater Manchester), though the five involved were diverse in their set up so that we could test implementation in different contexts and assess the breadth of impact.

2. There was a relatively small number of students from each profession involved, and there was not representation from all Health and Social Care professions, which limits the generalisability of its findings.

3. The study included resident interviews, but we did not aim to undertake a comprehensive evaluation of the program's impact on resident health, well-being, or functional abilities. It would be worthwhile for future research to prioritise this and incorporate measures to assess the long-term effects of IPE on resident outcomes.

Conclusion

The purpose of this study was to evaluate the long-term impact of IPE within five care homes across Greater Manchester. The findings highlight the significant benefits of IPE initiatives within care homes for staff, students and students. IPE fosters a collaborative learning environment that breaks down professional silos and encourages knowledge sharing across disciplines. This holistic approach equips participants with a deeper understanding of resident needs and empowers them to deliver more integrated and person-centred care. Participation in IPE facilitated knowledge acquisition through action learning, exposure to diverse perspectives, and a slower-paced learning environment compared to traditional clinical settings. The initiative also fostered the development of essential professional skills like leadership, creative problem-solving, communication, teamwork, and clinical skills specific to each discipline. IPE further served as a catalyst for personal growth by encouraging reflective practice, building a person-centred mindset, and changing perceptions of social care. Residents also reported a heightened sense of well-being and engagement as a result of being actively involved in their own care planning. Insight into the long-term impacts of IPE in this context highlight that: 1) it has a sustained positive influence in the home, 2) the factors that facilitate IPE, and 3) the factors that challenge its successful implementation, such as allocation complexities. This work ultimately sheds new light on the transformative power of IPE in care homes. It reveals the lasting impacts it can have on residents, staff, and the overall care environment, demonstrating alignment with national calls to strengthen the workforce and improve quality of care. By fostering a collaborative and person-centred approach, IPE offers a powerful tool to enrich lives, enhance job satisfaction, foster interdisciplinary learning and develop both the future and current social care workforce.

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