Evaluation of the Public Health England and Sport England Funded Sport and Exercise Medicine Pilot in Secondary Care

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1. Executive summary

1.1 Background

In 2014 Public Health England (PHE) launched the national physical activity (PA) framework 'Everybody Active, Everyday'. The framework included a key domain for action called 'Moving Professionals'. The Moving Professionals Programme aimed to build expertise and leadership across key professional sectors and to raise awareness and understanding of the health benefits of PA among professionals and the wider public. The Moving Professionals Programme comprised a number of innovative work packages that are described elsewhere (See Brannan et al., 2019). The Sport and Exercise Medicine (SEM) pilot was one element of the Moving Professionals Programme, and aimed to embed an SEM consultant led PA service within an NHS Trust to integrate PA in to the care plans of patients. This was termed creating an 'Active Hospital'.

PHE and Sport England invited expressions of interest (EoIs) from NHS Trusts with the capacity to deliver the SEM pilot through a competitive process. Three Trusts were invited to interview and Oxford University Hospital NHS Foundation Trust (OUHFT) were selected to deliver the pilot. The successful Trust was tasked with developing an SEM pilot that strengthened existing core resources and expanded existing capacity to integrate specialist PA advice into the care pathways for adults in-patient care. This was tested across five clinical pathways within OUHFT where PA had not previously been targeted as a treatment intervention.

Two lead SEM consultants were responsible for developing and implementing the SEM pilot, which targeted five clinical pathways and was underpinned by the COM-B model. These were; Maternity, Enablement, Renal, Complex Medical Unit (originally Critical Care), and Cardiology.

1.2 Evaluation

As part of the National Centre for Sport and Exercise Medicine (NCSEM) network, academics at Sheffield Hallam University (SHU) were commissioned to conduct an independent evaluation of the SEM pilot. The NCSEM were not responsible for the implementation or delivery of the SEM pilot. The evaluation aimed to explore the acceptability and feasibility of the SEM pilot and followed a mixed methods approach. Data was collected from patients and healthcare professionals (HCPs) using surveys, face-to-face and telephone interviews and audits between June 2018 and March 2019.

1.3   Key findings

Data suggests that whilst it is feasible and acceptable to embed PA interventions within secondary care pathways (with the exception of Critical Care), discrepancies exist in how advanced these interventions are in each pathway (see Table 2).

Three key mechanisms appear crucial to the setup phase of the SEM pilot:

1. A supportive context prior to implementation that includes the backing from a departmental lead/senior clinician.

2. Dedicated resource (commonly an SEM registrar) working directly in the pathway to champion the pilot and deliver the interventions in situ.

3. A senior SEM consultant with gravitas, long-standing and trusted relationships within an NHS Trust, that can navigate the local system politically and culturally.

Peer mentoring featured in two of the five pathways. Data here identified that formal peer-mentoring is a complex process that requires certain competencies to deliver successful outcomes. Moreover, this evaluation suggests that it cannot be assumed that the peer-to-peer support model will suit everyone even where these competencies are met. With this in mind, it might be sufficient to create the conditions for patients to informally support one another rather than establish formal structures to achieve what appears to happen naturally.

A particular strength of the SEM pilot is that the interventions were grounded in behaviour change theory. The SEM team mapped the interventions for each pathway using the COM-B framework (Michie et al., 2014), and included a description of explicit Behaviour Change Techniques. This helped to understand how change might occur in the different pathways. It also provides a 'map' for translation of the interventions to other Trusts. The subject specific knowledge provided by the SEM team was crucial for this process.

Leadership is always important in the introduction of new programmes, particularly so in complex systems like the NHS, and it was unsurprising that the lead SEM consultant(s) were central to the implementation and acceptability of the SEM pilot here. The programme leads [SEM consultant(s)] needed to be visible, excellent communicators, and have an ability to make connections across a complex system. They also needed to be sensitive to the demands placed on existing services and empathetically work with service leads to make small but sustainable changes to the physical, social and cultural environment within clinical services. Now that the content and a road map for implementation has been produced for an 'Active Hospital' it is plausible future programme leads for 'Active Hospital' programmes could come from disciplines beyond SEM, providing they possess the personal skills, gravitas and connections across the local system.

There have been challenges with staffing and generating capacity to deliver the various SEM pathways, as such it might be helpful for future programmes to map capacity prior to implementation to determine where capacity to undertake roles such as PA champions might be more or less likely. In the pathways that worked well (i.e. Maternity), the visibility of SEM staff appears to be an important factor. The approach to the SEM pilot relied heavily on the visible presence of a member of the SEM team in each pathway. To achieve a scalable intervention, system wide changes will be important to reduce the reliance on key individuals in delivery, moving to a responsibility of the system to effect change supported by a SEM team to plan change and assess outcome as a result of those changes. Starting with a coalition of the willing will help to build momentum and drive culture change, but establish system prompts (e.g. embedding PA assessment in booking appointments) and identifying local leaders within clinical services is crucial to the growth and sustainability of culture change.

External funding is often required to support innovative projects like the SEM pilot. This funding tends to be short-term however, which makes demonstrating the impact and value of such interventions challenging. This is particularly the case with something like PA, when the benefits are likely to be seen much further downstream. With this in mind, we propose that interventions of the nature of the SEM pilot are funded for a minimum of 3 years from the outset BUT with clear feasibility and acceptability goals that come with stop/go milestones. This longer-term approach to funding would help determine the true impact of the work and avoid a constant cycle of pilots that finish without an opportunity to demonstrate impact.

1.4   Implications/recommendations

- A PA culture isn't created overnight and it is crucial to recognise this when scaling SEM pilots in other Trusts. So much of the culture change observed at OUHFT was driven through long-standing and trusted relationships and whilst this can potentially be achieved through force of personality on occasion, we observed the importance of a long history of SEM as a key driver for change.
- Future programmes might need to lengthen any 'set-up' phase where these long standing relationships do not already exist.
- The experience, connections and trusted relationships of the senior SEM consultant were extremely valuable in this pilot, especially in being able to navigate the political climate of a large Trust with competing agendas and limited resource.
- Undertaking a mapping exercise at the outset of the pilot to explore the physical and social environment of the hospital, who is working where, what can be fitted in where, what's being done well in the hospital, where things can be augmented and where the key partners are, would be a sensible first step in implementation of future SEM pilots.

- New initiatives need a flexible approach to implementation. SEM lead(s) need to be responsive and sensitive to where new opportunities exist, looking for opportunities across the system to intervene.
- The COM-B approach to intervention mapping helped engender consistency across the pilot and it is recommended that future programmes follow a similar approach.
- The sell to commissioners needs to include the contribution that SEM will make to the day to day activity of the Trust and not just on the basis of a culture change. If proposed outcomes can be aligned to current challenges, as well as the future vision then they are more likely to be accepted.
- The pilot has delivered a road map for an 'Active Hospital' and it is plausible that leads for future programmes could come from disciplines beyond SEM, providing they possess appropriate leadership skills.

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2. Background to the Sport and Exercise Medicine pilot

Physical inactivity is the fourth leading cause of death worldwide (Kohl et al., 2012) and is directly responsible for a huge burden of non-communicable disease (Lee et al., 2012). Importantly here, the majority of NCDs can be ameliorated through moving more. Healthcare is cited as one of the '7 best investments' (GAPA, 2012) to promote an active population and provides a unique point of access to a section of the population who are likely to gain the most from only small improvements in increasing their PA. Inactive individuals are more likely to develop chronic illness and chronic illness itself is a well-recognised cause of activity reduction (Lee et al., 2012). This combination results in the morbid population being amongst the least active members of society, but whose health stands to gain most from even marginal increases in PA (Woodcock et al., 2010).

As part of their strategy 'Everybody Active Every Day' (Public Health England, 2014), PHE identifies the role that HCPs can play in promoting PA. Termed 'Moving Professionals', the aim build expertise and leadership across key professional sectors and to raise awareness and understanding of the health benefits of PA among professionals and the wider public.

Whilst progress has been made in developing PA pathways in specific diseases and primary care settings, little ground has been made in the secondary care setting. This is a key omission in healthcare's contribution to improving population PA since leadership from a specialist service has proved to be fundamental to a system wide change in culture in the NHS (Finlay, 2001). Historically SEM in the NHS has focused on musculoskeletal disease clinical pathways, despite the significant evidence base that demonstrates the potential for PA to improve management and treatment outcomes of a range of long term conditions (Gleeson et al., 2011). With training in exercise medicine, population health, musculoskeletal medicine and multidisciplinary team work, SEM physicians are uniquely positioned to support a transition toward empowering patients to lead active lifestyles. The SEM pilot is part of the Moving Professionals Programme.

2.1 The Sport and Exercise Medicine pilot

In 2017, PHE and SE invited EoIs from applicable NHS Trusts (i.e. the Trust employs a SEM consultant) to deliver an SEM pilot in secondary care. Three Trusts were invited to interview; OUHFT were successful and were commissioned to deliver an SEM pilot that focused on the integration of PA into care pathways within secondary care.

2.1.1   Aims of the Sport and Exercise Medicine pilot

The aim of the SEM pilot was to create an 'Active Hospital' by embedding an SEM consultant led PA service within an NHS Trust to integrate PA in to the care plans of patients. This was tested across five clinical pathways within OUHFT where PA has not previously been targeted as a treatment intervention.

2.1.2   Sport and Exercise Medicine pilot clinical pathways

SEM consultants at OUHFT were responsible for developing and implementing the SEM pilot. With guidance from the evaluation team, the SEM consultant leads and wider team at OUHFT designed and developed each component of the intervention using the COM-B model and the behaviour change wheel (Michie et al., 2014). The programme aimed to influence the value of PA within five clinical care pathways, each with a different intervention protocol. An overview of each pathway can be found in Appendix A. In addition, an example of how the COM-B framework was used to map the intervention within each pathway is provided in Appendix B. The aims of each pathway are outlined in Table 2.

3. The evaluation of the Sport and Exercise Medicine pilot

The NCSEM, in partnership with SHU, were commissioned by PHE and Sport England to conduct an independent evaluation of the SEM pilot. NCSEM/SHU were not responsible for the implementation or delivery of the SEM pilot.

3.1   Primary and secondary aims of the Sport and Exercise Medicine pilot evaluation

The primary aim of the evaluation was to explore the acceptability and feasibility of multi-disciplinary SEM teams delivering targeted and tailored support to integrate PA into the care plans of OUHFT patients.

The secondary aims were to:

i) Explore secondary care HCPs baseline perceptions of SEM clinical advice in the context of clinical patient care.

ii) Determine clinical acceptability of SEM intervention with HCPs and with patients.

iii) Identify what works and what doesn't work in establishing this model of SEM PA provision in secondary care.

iv) Understand the uptake of SEM PA provision in different clinical pathways and by different clinical teams within secondary care.

3.1.1 Evaluation methodology

The evaluation adopted a mixed methods approach and comprised seven discrete studies to assess the feasibility and acceptability of the intervention. The number and breadth of the studies is indicative of the ambition and complexity of the SEM pilot. A summary of these studies is presented in Table 1 with more detailed information available in Appendix C. Data on the experience of engaging in the pilot was gathered from patients and HCPs using surveys, face-to-face and telephone interviews and clinical audits. Data was also gathered from formal reports from the SEM leads to PHE and informal discussions between the SEM leads and the evaluation team. For further information about data analysis see Appendix C. Collectively this data was used to determine the extent to which a) it was possible to deliver the proposed interventions within the time, resources, cultural, political and financial climate and medical context of OUHFT (i.e. feasibility) and b) the interventions hit their targets, and patients and staff engaged (i.e. acceptability).

It was beyond the scope of this report to provide a detailed account of progress against the deliverables for each of the pathways in the SEM pilot – this is the remit of OUHFT and for PHE and Sport England as the funders of the programme. That said a broad summary of progress is included in Table 2 along with RAG ratings of the feasibility and acceptability of individual pathways within the SEM pilot.

Table 1 Summary of evaluation studies to explore the acceptability and engagement with the SEM pilot.

Study	Description of works
Study 1	Understand the current culture of PA within the hospital from the perspective of operational directors and HCPs. This study will provide the context within which the pilot is being delivered.
Study 2	a) Explore the impact of a bespoke SEM led Clinical Champions training programme (with PA team as recipients) on attitudes, knowledge, confidence, and intentions to promote/engage in a conversation about PA as part of routine practice. b) Audit the number of subsequent HCPs receiving Clinical Champions training programme delivered by a PA team member.
Study 3	Investigate the feasibility of a peer-to-peer support programme in the Enablement pathway.
Study 4	Explore the impact of the SEM intervention on the behaviour of HCPs in the Maternity and Enablement pathways.
Study 5	Acceptability of an 'active ward' – case study using the Renal pathway.
Study 6	Explore patients experience of a patient centred PA intervention (a PA plan using the iCAN tool – see Appendix D) in the Complex Medical Unit (CMU) pathway. Furthermore, explore the acceptability of this type of intervention with ward staff.
Study 7	Capture the experience of lead SEM consultants implementing a broad programme of PA in a hospital Trust.

Table 2 Summary of feasibility and acceptability of clinical pathways within the SEM pilot.

Pathway	Aims	Intervention components	Delivery of the intervention	Receipt	Rating for feasibility	Rating for acceptability
Maternity	To influence the PA of pregnant women directly through the gestational diabetes management and silver star services and indirectly by changing staff behaviour, the environment and culture.	PA calculator has been integrated into the Maternity booking form on the electronic patient records. Staff trained to deliver brief PA advice using motivational interviewing to pregnant women. Short film and posters displayed in waiting area.	Work has progressed as planned in this pathway. Early indications suggest the intervention is having an impact on the PA levels of patients in the service.	The intervention was well received by staff in the Maternity pathway. There has been strong support from the Consultant Obstetrician from the outset. A dedicated PA champion (midwife) has been appointed.	4	5
Enablement	To encourage PA by providing patients access to a PA class and a peer support group. This pathway focused on medical amputees.	An exercise class to support physiotherapy rehabilitation programme. Motivational interviewing integrated in to the exercise class. PA calculator and brief PA interventions within current pathways to support all patients coming through the service whether they go on to get prosthesis or not. Development of peer support group with education sessions.	The majority of the planned activities are underway. However, there has been no formal training of patients to become peer mentors as yet. Two patients have been identified and approached to be trained as peer mentors by charity Limb Power - OUHFT are awaiting responses. Patient transportation has been a challenge; nearly all patients rely on patient transport which is notoriously unreliable.	Patients described how much they enjoyed and valued taking part in the Enablement PA class. A consistent reflection reported by all the participants was the universal praise for all staff involved in the delivery of the Enablement class and in their patient journey to date.	4	4

Pathway	Aims	Intervention components	Delivery of the intervention	Receipt	Rating for feasibility	Rating for acceptability
Renal	To develop an activity permissive environment (active ward) and a social support network to foster peer-to-peer support to increase the PA of in-patients on the Renal ward.	Daily walk round. Individualised motivational support and goal setting. Social support network to foster peer-to-peer support. Posters and patient information.	The SEM team found the peer-to-peer support element of the Renal pathway challenging. It was not possible to establish a peer support programme in the first phase of the pilot. Patients' stay on the Renal ward is brief, making it difficult to establish a peer support system. There were also issues with staffing on the Renal ward.	HCPs were extremely positive about the intervention and they also suggested additional activities for the future. HCPs were keen to explore the possibility of increasing PA prior to surgery. Patients were also positive about the intervention and felt PA should be a part of every patient's treatment	3	3
Critical Care	To implement a patient centred PA intervention (the iCAN tool) to set PA goals and follow up patients on their destination ward following discharge from the intensive care unit.	Motivational interviewing and goal setting. Bed-based, chair-based and standing exercise program leaflets. iCAN tool that documents each patients' physical capability so ward staff are aware of what the patient is able to do.	The intervention on the Critical Care ward evolved to focus on the CMU. The Critical Care pathway was challenging as it is a relatively chaotic setting; patients are only on the ward for a short time and are then transferred on to one of 23 other wards.	The intervention was not well received in the Critical Care pathway. Patients in this pathway are very sick and therefore medical care was prioritised over patient mobilisation. Changing the culture within this pathway was problematic as there are a vast number of HCPs involved in the patients pathway of care.	1	0
Complex Medical Unit	To implement a patient centred PA intervention to increase the amount of PA patients do during their stay on the ward.	Motivational interviewing and goal setting. Bed-based, chair-based and standing exercise programme booklet. iCAN tool that documents each patients' physical	This strand of the SEM pilot is still in its early stages but the intervention is beginning to gather momentum. The iCAN tool is being used along with the exercise booklet with patients. However, it was clear that this only happened when there was a dedicated member of staff (PA	HCPs perceived a clear need for this intervention on their ward. It was regarded as a positive move towards a shift in culture for both ward staff and patients. Anecdotal evidence from the staff suggested that the exercises were well received by those	3	3

Pathway	Aims	Intervention components	Delivery of the intervention	Receipt	Rating for feasibility	Rating for acceptability
		capability so ward staff are aware of what the patient is able to do.	champion) on the ward. There also needs to be engagement from other ward staff going forwards.	patients who experienced them.		
Cardiology	To introduce PA to patients prior to undergoing transcatheteraortic valve implantation (TAVI) and to provide them with a PA plan and support with finding local PA services post-surgery.	Motivational interviewing, goal setting and exercise advice with a leaflet.	Activity within the Cardiology pathway was slow to start due to a lack of dedicated support; a PA champion was not appointed until January 2019.	At the time of this report we have no information on the implementation of this pathway	-	-
Mean overall score for feasibility and acceptability of the SEM pilot					3	3

Key:

- Feasibility: To what extent was it possible to deliver the proposed interventions within the time, resources, cultural, political and financial climate, and medical context of OUHFT.

- Acceptability: Did patients engage in the interventions, did staff engage in the interventions, did interventions hit their targets , is there evidence of progress.

- RAG Scores; score of 0-1 Red little or no progress made; score of 2-3 Amber some progress but barriers in two or more areas of implantation, score of 4-5 Green interventions implemented as designed with little or no barriers identified.

4. Study 1: Understanding the culture of physical activity within OUHFT

The aim of this study was to explore the culture of PA within OUHFT and the perceptions of SEM clinical advice among operational directors and HCPs. In other words, this study aimed to provide the context within which the pilot was delivered and was designed to shed light on why different elements of the pilot were successful or otherwise.

A total of nine interviews were conducted with HCPs and NHS managers across OUHFT. A critical narrative of the data emerging from these interviews is provided below. In depth analysis can be found in Appendix F.1.

4.1 OUHFT is a large multi-site Trust that values innovation

Staff described OUHFT as an innovative Trust which strives to push the boundaries of patient care by implementing evidence-based practice. The SEM pilot was a good fit for this ethos with the aim of developing new ways of integrating PA into patient care plans.

> *"I think they're very keen on innovation and new ideas" S2P06*
>
> *"We're constantly looking for new ways to deliver the care and sort of innovate and bring in new ideas and certainly this pilot is one of those." S2P01*

OUHFT was described by all participants as a very large Trust, which makes it potentially difficult for new services and concepts to gather traction simply because of the volume of employees. This is further exacerbated by poor staff retention, a problem raised by many staff who were interviewed as part of this study. Citing high living costs with no supplement to pay as a contributing factor, staff shortages could mean HCPs have limited time to implement the project in addition to their usual duties and will certainly make it difficult to build momentum and change the culture within the different clinical pathways.

> *"The trust has a major problem with recruitment and retention. It's a high cost area of living with no cost of living supplement. It has a high turnover of staff." S2P04*
>
> *"The unit I've just come from is massively short staffed with nurses. So it's difficult to drive new initiatives" S2P05*
>
> *"You've not got a cohesive team and that's what you need to get that culture to move forward as a cohesive team, that when new people come in they join an already forward-thinking team rather than treading water team. And there feels like a lot of treading water." S2P05*

OUHFT is spread over four locations and this added to the complexity of implementing a programme of culture change such as that described here. A coordinated and consistent approach was therefore necessary for the SEM pilot to influence behaviour across the whole Trust. Moreover, this is where the longevity of relationships and understanding of the political and social climate of OUHFT that was manifest in the lead SEM was so important. This is discussed more in study seven. Given the size of the Trust and its complexity, many of those interviewed believed that if the SEM pilot could be successfully implemented in OUHFT then the model is likely to be transferrable to smaller Trusts.

"We operate on four big sites and employ about 12,000 staff in those" S2P01

"I imagine that to be much more difficult just because… it's got to be quite a big message, so it's got to be pervasive throughout the whole psyche if you like, rather than be in sort of the little strands that pop up ad hoc." S2P05

"I think actually if you can implement it in this Trust which is massive, then you can implement it anywhere" S2P09

A prominent theme highlighted by eight out of the nine interviewees was that OUHFT, and the NHS as a whole, is very outcome driven. Unless a new service or programme can demonstrate impact through improved outcomes (i.e. length of stay) it is unlikely to receive long-term funding through the hospital. It is difficult to demonstrate the benefit of a project like the SEM pilot as the impact on outcomes may not be apparent straight away. For example, being more physically active during and after a hospital stay might not impact upon length of stay, but may reduce the number of readmissions in the future.

"The culture in the NHS is that if you want to have a service that is continually funded, you have to show the outcome." S2P04

Furthermore, one interviewee indicated that acute Trusts might not perceive PA interventions like the SEM pilot to be their responsibility to fund because the focus is on long term prevention rather than treatment of acute conditions.

"As well as doing it, you're keeping people well for 10, 20, 30 years from now with the exercise programme or the health and promotion rather than preventing the disease. But a lot of acute Trusts, they spend all their day managing acute disease. You're so busy doing the heart attacks in A&E or chest infections, actually someone says well we'll invest lots of money now for stopping heart attacks, but that's going to be in 20 years' time, that's great. But people see that then as a very Public Health England role, but not in the role of an acute Trust I think." S2P03

With this in mind, programmes that have culture change at their heart, such as the SEM pilot, need to be given sufficient time to demonstrate their value not only to patients but to the economic, social and cultural drivers of a Trust.

OUHFT is one of the largest Trusts in England. If the SEM pilot is successful in a Trust as big as OUHFT then the model is likely to be transferrable to smaller Trusts. This will be crucial to explore if the SEM pilot is scaled up and trialled in other Trusts. It remains unclear whether, in Trusts without SEM consultants, a programme of work such as this could be led by other types of HCP (i.e. physiotherapist, occupational therapist); but now that the content and a road map for implementation has been produced for an 'Active Hospital' it is plausible future programme leads for 'Active Hospital' programmes could come from disciplines beyond SEM, providing they possess the personal skills, gravitas and connections across the local system. This model would need to be tested however.

4.2   Supportive culture

When interviewees were asked about OUHFT as a place of work, staff described it as friendly, supportive and nurturing; a place where senior staff support more junior staff. This was perhaps at odds with the poor staff retention data.

> *"business has always been done in the corridor on first name terms in a very social and friendly manner." (S2P03)*
>
> *"The Trust are incredibly supportive." (S2P08)*

All nine interviewees noted that there are services available to support staff wellbeing at OUHFT. However, the level of enthusiasm for the staff wellbeing programme varied. Some staff were enthusiastic about the services on offer:

> *"There are gym facilities I think near the site or aligned with the site. There are various sports groups. So there's five-a-side football and all of those usual kind of groups. There is Pilates, yoga." S2P08*

None of those interviewed reported actually taking up any of the services available to them and others felt the Trust paid 'lip service' to staff wellbeing:

"The trust does a lot to promote health and wellbeing and it pays a lot of lip service to, go for a walk at lunchtime, do your mindfulness training for that, you know, it really does, but actually I think a lot of that is just lip service." S2P03

When asked about the SEM pilot specifically, staff perceived the SEM pilot to be supported at senior leadership level, but it was acknowledged that there are multiple competing interests for the Trust and PA is not always top of the Trust's strategic priorities.

"it's [PA] on the Trust's strategic priorities, but I can't pretend it's the top of them." (S2P09)

4.3 Physical activity provision and the role of Sport and Exercise Medicine

When asked who is responsible for promoting PA to patients, the majority of staff believed it was "everyone's responsibility" (S2P01).

"I think that it's [promoting PA] any opportunity or interaction with a healthcare professional ideally." (S2P02)

Although most believed there was a shared responsibility to promote PA, interviewees suggested that it should be led by SEM specialists.

"it's the remit of all of us but maybe the leadership comes from people who have specialised in sport and exercise medicine." S2P02

"it needs to be figure headed by somebody, it may as well be the exercise medicine people, delivered by anybody." (S2P04)

It was acknowledged that whilst the promotion of PA was deemed to be everyone's responsibility, it was less clear whose responsibility it was to promote PA at a strategic level.

"That's interesting actually because I don't know if anyone could take responsibility for it [promote PA]… I suppose the very naïve simple answer is to say well it's everyone's responsibility… But if you wanted someone to be an overarching point of contact to say these are strategies that the Trust want to develop and we want to implement with our patients, then does that sit with the rheumatology, does it sit with the orthopaedics, does it sit with SEM, or does it sit with the chief executive" (S2P03)

A key theme that emerged was staff believed that for PA to sit higher in the Trust's priorities there would need to be a formal policy, making PA a mandatory part of secondary care provision. Staff felt that other areas took priority especially if they had a formal target or standard to meet, such as the "four hour wait in A&E" or "the 18 week cancer wait" (S2P04).

"the PA is a bonus in an inpatient ward environment…there isn't a CQUIN [Commissioning for Quality and Innovation] or anything in any inpatient pathway that says a patient should, PA is involved… there is no stick to beat the executive board with to say if patients aren't physically active" (S2P04)

SEM was recognised as a medical specialty in 2005 and yet it was clear from interviews that the role of an SEM consultant within the Trust was perhaps not well defined or understood. This could be explained by the wide variety of services and roles that the speciality interacts with. That said, interviewees tended to highlight musculoskeletal injury as one of the main areas of work for SEM consultants.

"I think that's where we're trying to figure out as a specialty what our role is: are we leaders that just overview things and try and implement these things and have a knowledge about what works; or is that public health's actual goal to refer to; or are we working with them? I think that's still something that's going to be ironed out in the future." (S2P06)

"looking after elite athletes and people with musculoskeletal problems and getting them back to activity" (S2P06)

Those interviewed also made a distinction between the types of patients SEM consultants might treat. The first being elite athletes after an injury with the goal of treatment being to regain pre-injury performance levels. The second type of patient was those receiving treatment in the NHS for a musculoskeletal injury.

"looking at sports medicine for those higher performing athletes and that seems to be a bit of a focus." (S2P04)

"for the more general population is the role of sport and exercise chaps managing low level tendinopathies, sort of sprains, strains that where they can bring to bear their expertise of high end athletes to the average population." (S2P03)

There was less emphasis placed on the role of the SEM consultant in promoting PA within the NHS in the interest of public health, but this was discussed. This preventative public health role is a new area of work for the SEM specialism.

"there's really a public health role for us to have in promoting PA and getting people more active now, I think that's evolving and that's something that hopefully we'll develop in the future." (S2P06)

4.4   Barriers to the implementation of the Sport and Exercise Medicine pilot

Interviewees said that the Trust has numerous priorities and targets to meet and PA is not currently one of them.

"It's not a priority, it's not a trust priority, and PA isn't a trust priority." (S2P04)

Although PA might not be a Trusts priority currently, others thought it was still high on the Trust's 'to do' agenda.

"I think the trust is very, it's definitely, high on their agenda is PA in preventative medicine" (S2P06)

Because of competing demands, PA is often seen as complementary rather than core treatment and is the first thing to go if time or resources are tight, at both a strategic level and in practice.

"I do still think it's seen as an extra, and not an essential." (S2P04)

"And by the time they've done all that and they've gone through all this big booking form and they're doing the damn thing, the PA has really fallen off the end" (S2P02)

Another challenge was the differences in how care is delivered across the different pathways. Something that works in one pathway might not necessarily work in another. These differences mean it is essential that interventions are developed in collaboration with staff who work within the different pathways. Furthermore, for interventions to be acceptable they must be designed with sufficient flexibility that they can be adapted to fit and be delivered within different circumstances.

> *"Well it's different in different areas, what will be important both to the patients and to the staff and accepted as is really worth investing in in terms of time and other resources in Maternity will be very different to what is important in the dialysis unit to what is important in the amputee unit. And so it's having it localised enough that it carries on, not just having a sort of one size fits all model." (S2P09)*

It was clear from the interviews that resources (time and money) are a major determining factor to the short-term success and long-term sustainability of an intervention like the SEM pilot.

> *"I don't think there's been a pushback in terms of a worry that it's not important or that it's dangerous or any of those things, it really has just been about time and, well mostly time I suppose and money I suppose." (S2P02)*
>
> *"I think the challenges are it was a short period of time to try and deliver something and to spend longer doing more and to get the sustainability element together into a field that it's something that will continue to benefit." (S2P02)*

External funding is often required to support innovative projects like the SEM pilot to 'buy-out' staff time to focus on delivering the project. This funding tends to be short-term however, which makes demonstrating the impact and value of such interventions challenging. This is particularly the case with something like PA, when the benefits are likely to be seen much further downstream (with the exception perhaps of prehabilitation before major surgery). With this in mind, we propose that interventions of the nature of the SEM pilot are funded for a minimum of 3 years from the outset BUT with clear feasibility and acceptability goals that come with stop/go milestones. This longer-term approach to funding would help determine the true impact of the work and avoid a constant cycle of pilots that finish without an opportunity to demonstrate impact.

> *"But yeah I'm not sure to be brutally honest what would happen if they said like there's no money for this, what we going to do? I think they'd say OK we'll just use the leaflet because that's what they may have done." (S2P06)*
>
> *"I think what they've achieved is huge in that short timeframe and what we need is a bit longer to then start to do the next bit." (S2P02)*

Safety concerns were raised about encouraging patients to be more physically active. Some interviewees worried that by encouraging patients to be more active they might increase the risk of injury. This was perceived to be a barrier to promoting PA within the hospital and a potential reason why other lifestyle factors are targeted more readily.

"So I guess lifestyle intervention has been something that's been on our radar for a long time. I would probably say that the dietetic element of it has taken precedence over the PA element. Often because people just, you know, again it's about the safety issues and worried about it [PA]" (S2P02)

"Am I going to break this person, yeah I think so." (S2P05)

"what we also need to be careful of is that by promoting more PA we're also not putting patients at risk of falls and that of course, that's another thing that is perhaps a bit or a barrier is this patient safety" (S2P05)

4.5 Facilitators of the implementation of the Sport and Exercise Medicine pilot

Interviewees reported that buy-in from senior management was crucial for the success of a project like the SEM pilot.

"the practical barrier of making a service change and the inertia that you face with a large organisation to influence an effect, getting buy-in from senior management" (S2P03)

"I think you need buy-in and I think, it's almost like you need to go and prove a business model, as in proving it's effective and then they'll buy onto it." (S2P06)

Early engagement with and ownership of the SEM pilot was evident among the interviewees. Staff at all levels across the hospital, from ward staff to senior management, were supportive of the project. A number of interviewees reported that the SEM pilot had been well received and some staff had even completed training related to the pilot on their days off.

"there's been a hugely positive response to the work that the sport and exercise team have been doing to promote PA in pregnancy. There have been very few barriers to educating staff and all the rest of it and given the fact that we're asking staff to come on their days off or whatever who haven't been able to take out of their time in order to come to education sessions we've had a really good uptake." (S2P02)

"I think at a management level, all the managers have been very positive about it." (S2P02)

"the Trust are really behind it, they do endorse it and they are keen on it" (S2P06)

However, there were a couple of exceptions and some aspects of the SEM pilot were met with resistance. One interviewee suggested that senior staff were reticent because they did not fully understand the purpose of the project. Another interviewee believed that a lack of understanding on

the part of the SEM leads around how individual wards work could hinder the acceptability and feasibility of delivery and therefore success in certain pathways.

> *"I mean it felt a little bit as though there was some resistance from above, initially, but I think that was not fully understanding the aims of the project, what we were trying to do. But the moment that was discussed and we'd had that conversation it became very very easy." (S2P07)*
>
> *"So initially they said they wanted to do pre-op, which isn't necessarily intensive care. And I don't think, I think they got quite a frosty reception from preadmission clinic, so then they moved to inpatients." (S2P04)*

There were mixed opinions about whether the SEM pilot leads had engaged with key stakeholders sufficiently early in the project. One interviewee felt the pilot would have been more successful if the SEM leads had engaged with stakeholders in each of the five pathways from the outset.

> *"I think the setup would have been significantly more successful if they'd have contacted the stakeholders of the five areas prior, because they probably would have been able to focus more and foreseen some of the problems that have come up in the different areas, and would have probably been a better tailored intervention." (S2P04)*

However, another interviewee felt the central team had engaged with them early on.

> *"[the SEM leads] have been very engaged from the beginning." (S2P07)*

Some interviewees indicated they had an interest in PA prior to the SEM pilot. A PA intervention like the SEM pilot is more likely to be met with enthusiasm if staff already value PA, which in turn will facilitate the implementation of the pilot. Furthermore, the Trust staff are more likely to buy-in to something they think is of value to the patient. Interviewees also said there have been other PA initiatives within the Trust prior to the SEM pilot and this may have 'warmed up' the hospital (or localised areas) to PA interventions making them more susceptible to change.

> *"I suppose the first thing what helps is if they've had, if they understand the value of it [PA] and understand why they should be doing it" (S2P06)*
>
> *"I think they tried to implement an active ward previously over at the Churchill before we'd been doing that sort of thing. So I don't think we're coming into a group of people that have never, the doors have been closed and this has never been entertained before." (S2P07)*

4.6   Summary

OUHFT staff thought that PA in general was valued by the Trust and that they were supportive of the work that was being carried out as part of the SEM pilot. Despite senior level buy-in it was acknowledged that there are competing interests and PA is not always top of the Trust's strategic priorities. PA promotion was perceived to be the responsibility of all HCPs within the hospital but staff felt it should be driven by SEM consultants.

A number of challenges were highlighted when implementing a Trust wide intervention such as the SEM pilot. A lack of time and resource and competing interests (i.e. A & E wait time targets) make it difficult to implement changes to encourage PA within a hospital setting. Although PA was valued by staff, it is seen as an extra and is often the first thing to go when time or resources are lacking. Variations in how different pathways operate also meant that the delivery of the pilot had to be flexible and interventions needed to be designed specifically for each setting. Including staff from each pathway in the development phase of any intervention is recommended in order to minimise the risk of the intervention failing.

Interviewees felt there was senior leadership buy in for the SEM pilot and this had helped with the implementation of the project. However, to gain more traction, secure long term funding and ensure the sustainability of the pilot there needs to be changes to policy to make PA a mandatory component of patient care. There has been a shift towards prevention in recent years, evidenced by the recent 'Prevention is better than cure' document from the Secretary of State for Health and Social Care, Matt Hancock. The SEM pilot aligns well with this vision.

4.7   Implications for this evaluation

Based on the results from interviews with operational directors and HCPs at OUHFT, the evaluation findings should be interpreted in light of the following:

- The context within which the pilot was delivered may not be reflective of other NHS Trusts:
  - o   OUHFT is considered an innovative teaching hospital - a place where new things happen and as such staff might be receptive to change and new processes.
  - o   It is a large Trust situated across a number of sites.
- Incentive - there was an incentive for this to work - i.e. external funding and possibility of further funding if success is demonstrated.
- SEM is a relatively young discipline, and it's role in preventative public health is not widely recognised or understood. OUHFT had SEM consultants already in situ prior to the start of the pilot and this might not be the case in other Trusts. Scaling the interventions described here through similar models of delivery will require careful thought and may need to be adapted to suit different Trusts.

- Whether a programme of work such as the SEM pilot could be led by other types of healthcare professional (i.e. physiotherapist, occupational therapist) is unclear and this model would need to be tested. Now that a road map for implementation of an 'Active Hospital' programme has been produced, it is plausible that leads could come from disciplines beyond SEM, providing they possess the personal and leadership skills, gravitas and connections across the local system.

5. Studies 2-7: Exploration of interventions delivered across individual clinical pathways

The SEM pilot worked to implement PA within five clinical pathways. The following sections explore the feasibility and acceptability of these interventions through five discrete studies (studies 2-7 in Table 1). The data from these studies is presented here in the form of case studies. The first case study focuses on the bespoke PA training for OUHFT staff. Subsequent case studies explore; Enablement patients' experience of a group PA class and their perceptions of the role of a peer mentor; the impact of a PA training intervention on the behaviour of HCPs in the Maternity and Enablement pathways; the experience of HCPs and patients regarding the promotion of PA on the 'Active Ward' as part of the Renal pathway; HCPs experience of a patient centred PA intervention in the CMU.

6. Study 2 - Impact of a bespoke Sport and Exercise Medicine led Clinical Champions training programme

The aims of this study were to i) explore the impact of a bespoke SEM led Clinical Champions training programme (with PA team as recipients) on attitudes, knowledge, confidence, and intentions to promote/engage in a conversation about PA as part of routine practice, and ii) audit the number of subsequent HCPs receiving Clinical Champions training delivered by a PA team member.

Clinical Champions training was originally intended to be delivered by the core SEM pilot team to PA champions within each of the five clinical pathways. The PA champions would then cascade the training down to other members of staff involved in patient care in their respective pathways. The format was intended to be similar to that of the PHE Clinical Champions PA training programme with training delivered to a group using a PowerPoint slide set[1].

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[1] This was not the PHE Clinical Champions PowerPoint slide set. Training was delivered with a bespoke set of slides which was not standardised as the different pathways changed the presentations for their respective audiences.

6.1   Summary of main findings

The cascade method of training was implemented successfully with staff in the Maternity and Enablement pathways but not in the other 3 pathways. Although this suggests that the structured cascade model of delivering the Clinical Champions PA training is not feasible in all clinical settings there are a number of reasons that help explain the discrepancies observed here. The Maternity and Enablement pathways had dedicated SEM registrars and PA champions from the outset, which facilitated the training. Cardiology also had an SEM registrar but didn't have a PA champion until late in the pilot (January 2019). The other pathways struggled with staff capacity to deliver day-to-day services and so any additional activity simply did not happen. This underlines the importance of dedicated and appropriate resourcing of interventions, as where these are deemed 'nice to have', the reality is that they do not get delivered when resources are stretched.

Data from formal interviews with SEM and pathway leads suggests that within Maternity and Enablement pathways, buy-in from staff was high with some staff even attending training on their days off. On the one hand this presents a positive picture of committed staff, but on the other it points to some of the challenges of implementing training in a resource stretched environment such as OUHFT. Future pilots are wise to acknowledge that where staff do not have protected time to attend training, uptake is likely to be effected. Alternative and potentially more flexible approaches to the face-to-face delivery of training such as drop in sessions, webinars and digital resources (e.g. educational videos) might be more suited to a secondary care context. The SEM core team also suggested that training could be mandated for all HCPs to engage. Whilst this might increase uptake, careful consideration at management level would be required if this type of training was to be implemented in other clinical pathways/Trusts.

Despite variances at an individual pathway level, data from the SEM consultant leads suggested that 18 training sessions were delivered and 249 HCPs were trained across OUHFT during the SEM pilot. Table 3 below provides information about who received the training, what type of training they received (i.e. Clinical Champions PA, motivational interviewing, both or other) and who delivered it. In addition to the face-to-face training, an 8 week online Motivational Interviewing course was delivered to a further 137 OUHFT staff. Staff trained included, but were not limited to Dermatologists, Nutritionists, Physiologists, Physiotherapists, Occupational Therapists, Nurses, Paediatricians, SEM Consultants, Diabetic Medicine staff. This activity has potentially created a critical mass of staff who are on message and have been in receipt of a programme of training on PA.

Table 3 Details of training delivered in OUHFT as part of the SEM pilot.

Pathway	Number of sessions	Number of attendees	Trainer
Maternity	7	80	SEM Registrar
Enablement	4	43	SEM Registrar and Clinical Champion
CMU	2	59	SEM Registrar and Clinical Champion
Renal	2	21	Clinical Champion
Other	3	46	Consultant lead and Clinical Champion
TOTAL	18	249	

HCP survey feedback

An online survey was distributed to explore the impact of the bespoke SEM led Clinical Champions training programme on attitudes, knowledge, confidence, and intentions to promote/engage in conversations about PA as part of routine practice (see Appendix C.1 for further information). Ten HCPs completed both the baseline and follow-up surveys. At the time of the follow-up survey, all 10 HCPs said they had not completed Clinical Champions training or been involved with any other initiatives as part of this SEM pilot. Given the respondents did not complete the training it is inappropriate to explore the impact of the Clinical Champions PA training on the survey outcomes using this sample. Therefore, we have not presented data in this report. A description of the survey data can be found in Appendix F.2.

6.2 Implications

- It is feasible and acceptable to deliver a cascade model of PA training in secondary care, however this appears contingent on having dedicated staff to co-ordinate and deliver the training within clinical pathways (i.e. SEM registrar and Clinical Champion).
- Staff either need dedicated time to attend training or more flexible approaches than face-to-face are required (e.g. webinars and digital resources) to overcome resource challenges.
- Data suggests that the training can be delivered by either an SEM consultant, an SEM registrar or a trained Clinical Champion.

7. Study 3 - Enablement patients' experience of a physical activity class and their perceptions of the role of a peer mentor

The aim of this study was to explore Enablement patients' experience of a group PA class[2] and their perceptions of the role of a peer mentor[3]. Semi-structured interviews took place over the telephone (n=2) or face-to-face (n=2) with 4 patient participants who had attended the Enablement pathway at OUHFT. Details regarding data analysis can be found in Appendix C.8. The topics and themes are described in more detail in Appendix F.3 along with direct quotes to support the themes and provide an example of the point being made.

7.1 Summary of main findings

Participants described how much they enjoyed and valued taking part in the Enablement PA class. A consistent reflection reported by all the participants was the universal praise for all staff involved in the delivery of the Enablement PA class and in their patient journey to date. It was evident that the HCPs whom the participants had encountered in the Enablement PA class were particularly skilled in delivering PA based support that was empathetic, motivational and patient focussed.

> *"And they've all been very good to me [healthcare staff]. The whole journey from when I lost my legs has been good. Because one day I had them then I haven't got them. And everybody helped me. The hospital and Nuffield " (S3P04)*
>
> *"But they do get us moving, get us shifting, encourage us" (S3P02)*
>
> *"He's allowed me to talk and he's very understanding, empathetic. He's a top bloke really, to be brutally honest" (S3P02)*

Participants reflected that the aim of the Enablement PA class was "to get people moving again". This understanding was facilitated by the clear and direct communication style of the HCPs; an approach which was welcomed by all participants. Additionally patients reported a shared responsibility with staff for achieving successful Enablement outcomes.

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[2] These Enablement PA classes did not exist in OUHFT previously but they do exist in some other Trusts. The class was set up by the SEM pilot team with the funding from PHE and is now being continued with Trust funding.

[3] The original aim of this study was to explore patients' experience of a peer-to-peer support programme in two clinical pathways: Enablement and Renal. However only the Enablement pathway provided participants for interview. Furthermore, there were difficulties getting the peer support under way and therefore the focus of the study shifted to the PA class and the perceived role of a peer mentor.

"There's no - how can I put this politely? - BS about them. They're very, very intense with us and they're absolutely brilliant" (S3P02)

"The ball's in your court, you know" (S3P01)

The contribution of staff to the success of the Enablement PA class cannot be underestimated. Central to the success of the Enablement class was staff whom had the knowledge and the interpersonal skills to create patient rapport and support patient motivation. Staff imparted a sense of professionalism and positivity that in turn gave patients a sense of hope. Patients see several professionals through-out their patient journey and they consistently value their input, professionalism and acknowledge it is the HCPs who help them to move on. Data here suggested that patients perceive that services are under-resourced and that increasing staffing capacity would be beneficial and thus enhance the capacity of future Enablement programmes.

"my answer when it comes to the NHS: there's not enough of them and there isn't enough money, it's as simple as that. The people we have don't need any kind of improvement at all. We just need more of them" (S3P02)

The group-based class format was deemed motivational and it provided the opportunity for tailored patient support yet logistically it accommodated several individuals at once. Despite the current Enablement PA class not having any formal peer mentors the group class was still reported as being meaningful providing patients with the opportunity to share their experiences through informal chats after the class. Building time for coffee and a chat post class seems to be an important feature of the intervention. It seemed implicit for those interviewed that there is more to being in the class than simply taking part for oneself.

"Do you know the whole thing is of a value as far as I would say. It's not just one aspect of it. It's the whole group working together and the encouragement of everybody that's there, not just the physios and the doctor. It's everybody else, as patients, helping each other out. And I think it's good we can talk about what happened to us because it is massively life changing " (S3P02)

"And if we can help each other out then that's why we're there" (S3P02)

"We're all in the same boat. We all have the same problems with the amputations. (S3P02)

Enablement was described as being more than PA based rehabilitation; it also encompasses learning life skills and learning how to manage post-amputation. This was a key part of the whole Enablement

approach experienced by the participants and suggests a broad, holistic, integrated approach to Enablement which covers physical, social, psychological and practical needs is valued.

"The best part is, I think has been learning life skills, after an amputation that everything, you know, you have to really plan even the minimum task you have to really plan what you're going to do" (S3P03)

The opportunity for talking and sharing experiences is a key part of the Enablement experience. The desire and intention to support others who have been through something similar and help others was a strong theme. Participants suggested they could offer encouragement and support. Formally sharing their lived experience of amputation and their experience of going through their patient journey in a future peer-to-peer support role was something that was welcomed by two of the participants. However caution should be applied as it was noted…

"There's more to peer-to-peer health than what it sounds like" (S3P02).

Patients were generally willing to give something back and share their experiences. Patients also reported enjoying and benefiting from the camaraderie of their peers and having the opportunity to talk, but it should not be assumed that everyone wants to receive formalised peer support or adopt a peer mentor role. For some patients it was the potential of formally being asked to engage in conversations that might be perceived as personal or uncomfortable that was off putting as opposed to it happening as a natural part of programme engagement. Previous history of other conditions such as mental health conditions, personal preferences, logistical issues (i.e. physical ability to get to venue) also meant some patients did not wish to engage in peer-to-peer support programmes. This is perhaps underlined by the fact that no formal peer mentors were recruited or trained. Mentoring is clearly a complex process and it is likely that it will require the patient mentor to have certain competencies to deliver successful outcomes. Setting, processes, communication skills and mentor characteristics therefore need careful consideration. Moreover, it cannot be assumed that the peer-to-peer support model will suit everyone even where these competencies are met. Ultimately, data here suggests that it might be sufficient to create the conditions for patients to informally support one another rather than establish formal structures to achieve what appears to happen naturally.

7.2 Implications

- The implementation of the Enablement PA class was in its infancy, but the findings suggest that it was well received by those attending and had benefits beyond physical rehabilitation.
- The qualities of staff involved in the Enablement PA class were important contributors to its perceived success. Knowledge, interpersonal skills, professionalism and positivity were particularly beneficial.
- The social experience of the Enablement PA class was valued, but this should not be confused for a formal peer mentoring process, which is unlikely to be feasible and moreover desirable for many patients.
- Ongoing monitoring and evaluation is important to fully understand the process of implementation and the potential impact of peer-to-peer support.
- The PA Enablement class is now being funded by the Trust with the existing staff (Clinical Champion and Physiotherapist supervising) as part of the Enablement pathway due to its success during the SEM pilot.

8. Study 4 - Impact of the Sport and Exercise Medicine intervention on the behaviour of healthcare professionals in the Maternity and Complex Medical Unit pathways

To explore the impact of the SEM pilot on the behaviour of HCPs in the Maternity and Enablement pathways, OUHFT were asked by the evaluation team to audit electronic patient records prior to and after implementation of the SEM pilot for mention of PA in patients' notes. This intention being to explore whether HCPs were talking to patients about PA more frequently as a result of the intervention. The following case study presents the data that was received from OUHFT in this regard and provides an indication of the impact and reach of the activities taking place in the Maternity and Enablement pathways. The narrative begins with a brief summary of interventions in the Maternity pathway.

8.1 Maternity

As part of the Clinical Champions training, nurses within the Maternity pathway were trained to conduct motivational interviewing sessions with the aim of increasing the amount of PA pregnant women with gestational diabetes mellitus (GDM) engaged in. Between 18th May 2018 and 15th February 2019 48 women were assessed. Women with a diagnosis of GDM were invited to engage in a 20 minute individual motivational interviewing session on PA, delivered by a trained midwife, during their first outpatient appointment as an adjunct to their normal care. Each motivational interviewing session included goal setting and activity planning. A modified version of the exercise

vital sign (see Appendix E) was used to record self-reported PA levels (moderate intensity or greater) at baseline, and at a two-week telephone follow-up. PA levels were assessed and coded into three categories: Red (<30 min/week), Amber (30-150 min/week), and Green (>150 min/week).

8.1.1   Summary of main findings

- There was an increase in PA post-motivational interviewing (see
- Figure 1).
- There was a large decrease in the number of women in the Red category (see
- Figure 1).
- The proportion of women achieving the national PA guidelines increased nearly two-fold and average PA doubled (see Figure 2).
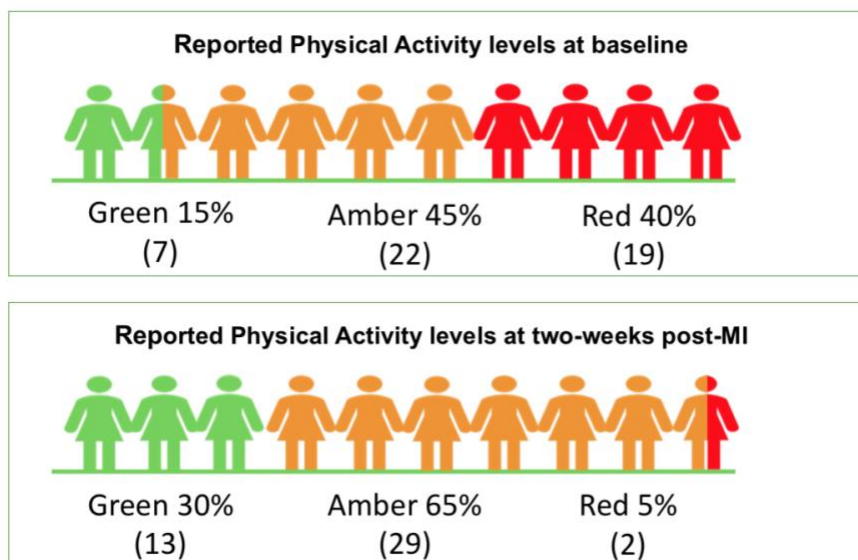

Figure 1 Self-reported PA levels at baseline and two-weeks post-MI (motivational interviewing).
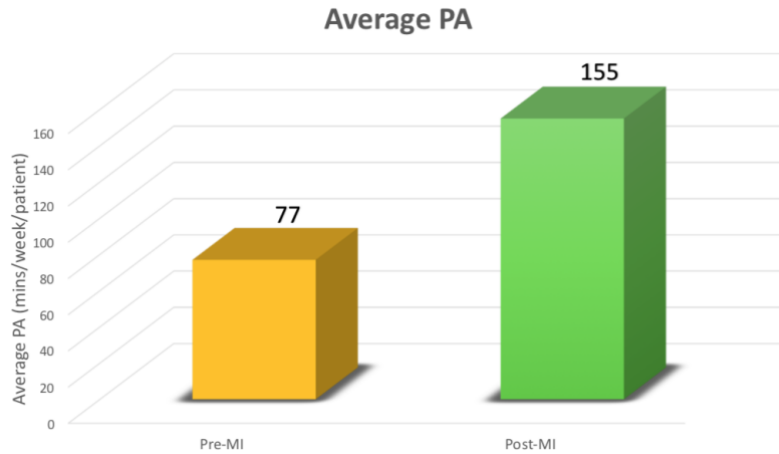
Figure 2 Average self-reported PA levels at baseline and two-weeks post-MI (motivational interviewing).

8.1.2 Implications

- It was feasible and acceptable to train HCPs in the Maternity pathway to deliver motivational interviewing to increase the PA levels of pregnant women attending their service.
- It was also possible to embed an exercise vital signs tool within the electronic patient record to record the PA level of every patient at every booking appointment.
- Patients increased their PA as a result of the motivational interviewing they received.
- Whether this type of intervention would be successful in other pathways in not clear and would need testing before any conclusion can be drawn.

8.2 Complex Medical Unit

A snapshot audit over a five day period was conducted to identify the number of patients who were suitable to receive a PA intervention (i.e. motivational interviewing, goal setting, exercise advice with bed/seated/or standing leaflet and iCAN tool – see Appendix D) and those who actually received one. Exclusion criteria were as follows; a 'track & trigger' score greater than one, cognitive impairment, end of life care and patient refused intervention.

8.2.1 Summary of main findings

- The SEM consultant lead reported that a total of 20 iCAN documents (developed as part of the SEM pilot) had been used with patients but as the iCAN has been through a series of re-designs since January 2018 its use might not always have been recorded.
- It was not clear how many staff had been trained to deliver the iCAN intervention.
- Following a five day snapshot audit of the CMU pathway it was apparent that the exclusion criteria were sensitive but not specific (excluded suitable patients), see Figure 3.

- Data demonstrated only the PA champion was encouraging patients to be physically active, see Figure 4. Therefore on days when the designated PA champion was not on the ward, patients were not encouraged to be active.
- This suggests other members of staff think that it is not their job to encourage PA. Creating a culture on the ward whereby the promotion of PA is everyone's business has to be the goal but data here suggests that this is not business as usual.
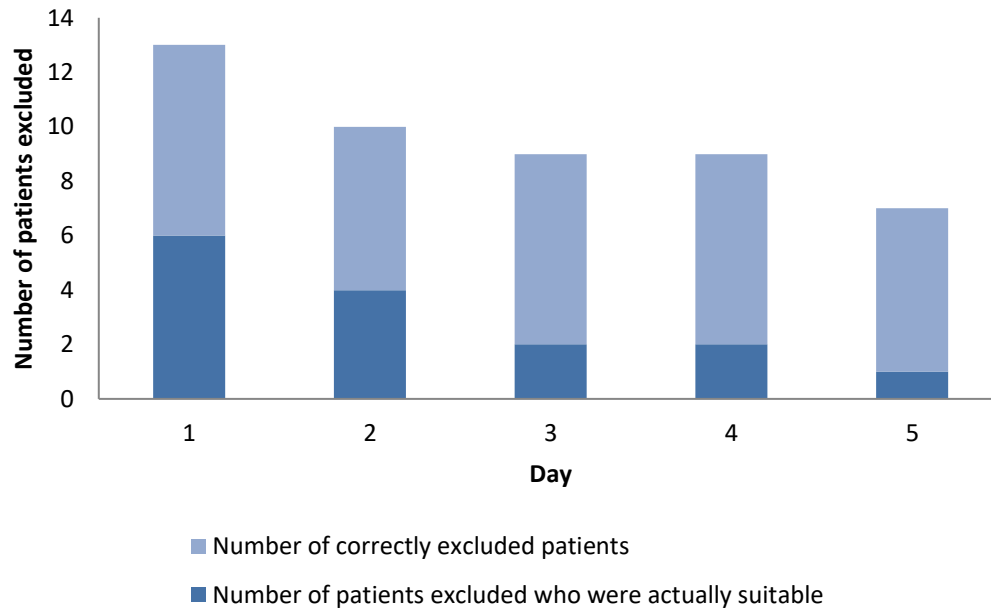

Figure 3 Number of patients correctly and incorrectly excluded from a PA intervention on the CMU ward.
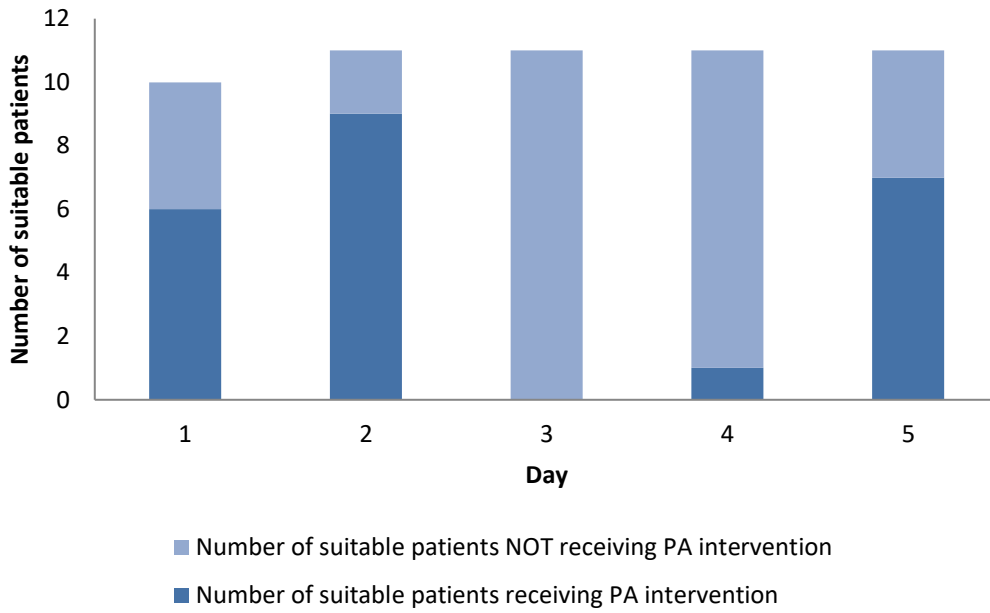
Figure 4 The number of suitable patients who did and did not receive a PA intervention on the CMU ward. The PA champion was not on the ward on day 3.

8.2.2 Implications

- Patients can be encouraged to increase their PA on the CMU ward through a simple intervention such as the iCAN tool. We found little evidence of the impact of this tool in facilitating the transfer of this message to different wards as part of the patient journey.
- Careful consideration needs to be given to the unintended consequences of PA champions, as they might inadvertently limit the spread of a mind-set of 'its everyone's business to promote PA'.
- An alternative approach might be for the PA Champion to oversee and coordinate activities on the ward whilst encouraging ward staff to implement the intervention rather than be responsible for actual delivery.
- To improve the consistency of PA promotion and ensure sustainability it is recommended that the core SEM team encourage the wider MDT to engage with and take ownership of the PA intervention on the CMU ward.
- The exclusion criteria should also be refined to ensure all suitable patients receive a PA intervention.

9. Study 5 - Acceptability of an active ward in the Renal pathway

The aim of this study was to understand the experience of HCPs and patients regarding the promotion of PA on the 'Active Ward' as part of the Renal pathway at OUHFT[4]. Two face-to-face semi-structured interviews took place with HCPs working in the Renal pathway at OUHFT. One telephone interview was conducted with a patient receiving treatment in this pathway. Details regarding data analysis can be found in Appendix C.8 and the interviews are described in more detail in Appendix F.4 along with direct quotes taken which help demonstrate the findings and support the researcher's interpretation.

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[4] One of the intended aims of this study was to explore patients' experience of being part of a peer mentoring scheme. The intention was for patients to have a 'buddy' to encourage PA. This was not possible due to the physical environment of the ward and often short patient stay. Additionally patients are mostly kept in isolation to reduce the risk of infection and there is limited social space. This was not considered when the intervention was developed initially.

Out of 3 possible contacts provided, only one patient responded. Since the peer-mentoring scheme was not implemented the participant was questioned as to whether they would value being part of a peer mentoring scheme, whether they would like to be a mentor and what training they would require to be successful in such a role.

9.1　Summary of main findings

Initially, the SEM consultants at OUHFT planned to trial a peer mentoring scheme on the Renal ward. However, it became apparent that it would not be feasible in this pathway for several reasons including; short admission time, a lack of social space and patients are mostly kept in isolation to reduce the risk of infection. The pathway evolved to include a daily walk round, individualised motivational support, goal setting and posters. The HCPs interviewed highlighted the benefits of having an active ward as well as the need for sustainability. Both HCPs were overwhelmingly positive about the importance of using motivational interviewing with patients and the led walks were deemed to be of value.

> *"Over the last few months we've been seeing the kidney transplants mainly for motivational interviewing and just getting them talking about PA… So the motivational interviewing sessions have probably been the biggest thing. So I sit down with patients and ask them about PA. How they were before their surgery and if doing a bit more since their surgery is something they want to do". (S5P01)*

However, the medical equipment Renal patients often require on the ward was a barrier as it proved difficult to mobilise patients and took time to get patients to the walk meeting point. Furthermore, there was a clear difference in the level of ability, fitness and willingness to undertake PA in the Renal patients. This could cause patients to become demotivated, for example, if they do not feel like they are being challenged, or conversely, if they feel they are being left behind during the group walks. To our knowledge no alternative modes of exercise had been trialled at the time of writing this report.

> *"And also with varying levels of ability among the transplant patients, some people are really active, some people not so much. And I think putting them all in a walking group together was quite difficult…… The patients that haven't been so appropriate tend to be the ones that are fitter already and don't really need our support with that". (S5P01)*
>
> *"There was also the difficulty of people being at very different levels. From somebody that's very active before they came to hospital to somebody that can only really stand for a few minutes before they came to hospital. So there's those sorts of issues". (S5P02)*

A staffing crisis on the Renal ward was apparent but there was a clear desire to keep the promotion of PA high on the agenda. Staff were keen to maintain visibility of the programme to ensure sustainability. However, this was difficult without dedicated resource.

"I think it's been slightly difficult for us in particularly because we're really short staffed. We're missing a couple of band 5s.....so ideally we'd be getting patients up into the gym and getting them doing exercise as soon as possible. But sometimes we're a little bit delayed with that which can't be helped because a nurse needs to be with them at all times". (S5P01)

"On Renal ward they were having a real crisis of staffing when we first started". (S5P02)

Whilst only one patient agreed to be interviewed they were very complimentary about their experience on the ward as well as the PA education and opportunities they received. They felt that PA should be a part of every patient's treatment but it needs to be tailored to individual patient needs and ability. The patient would have been happy to be a mentor or mentee, but they felt that training would be needed to become a peer mentor.

"I'm not clever enough to know what [exercises] that would be. What would be a good idea is that the part of the pack you get when you come out is, while you are in there some information is given about the local centres". (S5P03)

Based on the three interviews (two HCPs and one patient) it appears to be acceptable to promote PA on the Renal ward. Furthermore, HCPs felt that capitalising on the 'teachable moment' early after surgery might act as a catalyst for positive behaviour change. HCPs were keen to explore the possibility of increasing PA prior to surgery; however, they indicated there could be a risk of overwhelming the patient with too much information. Prehabilitation is becoming more popular for a range of clinical populations - the next phase of the pilot could explore this approach in the Renal population.

9.2   Implications

- The feasibility of the peer support programme needs exploring further and for the existing PA provision (led walks, motivational interviewing, goal setting) to be sustainable the ward must be adequately staffed.
- Motivational interviewing was evaluated positively by HCPs.
- PA needs to be tailored to suit the individual needs of patients.

10.   Study 6 - Patient centred physical activity intervention in the Complex Medical Unit

The aim of this study was to understand the experience of the SEM pilot within the CMU pathway from the perspective of HCPs[5]. Semi-structured interviews took place over the telephone (n=2) or face-to-face (n=1) with three HCPs working in the CMU pathway at OUHFT. Details regarding data analysis can be found in Appendix C.8 with more detail on the content of the interviews provided in Appendix F.5 along with direct quotes to support the themes and provide an example of the point being made.

10.1   Summary of main findings

The HCPs interviewed perceived a clear need for this intervention on their ward. The mobilisation of patients on the CMU ward was a priority, to prevent pressure areas and infections developing through lack of movement. It was regarded a positive move towards a shift in culture for both ward staff and patients.

> *"Most people that I've come across have been really pleased about doing it. They've enjoyed it. Sometimes they've been surprised about what they've managed and it's generally been well received by patients" (S6P03)*
>
> *"it's the knock-on effect…it only takes one in the bay and someone else will say tomorrow, well he's walking, Alfie's walking to the toilet, I'd like to do that." (S6P02)*

The implementation of the SEM pilot in the CMU pathway evolved into the use of exercise booklets and the iCAN tool with patients on the ward. The aim was to change the culture of the ward such that PA and mobilisation were encouraged to all patients (wherever possible) by all staff. The staff identified training needs, changes to practice and the need for a PA champion to facilitate implementation.

> *"what's made it easier, obviously having people having some dedicated time for this, and having some dedicated champions on the ward that are nurse based" (S6P03)*

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[5] The original aim of this case study was to explore patients' experience of the PA intervention. This was not possible as no patients were identified by staff in the CMU pathway. One HCP working on the ward suggested that telephone interviews were not appropriate for CMU patients. We did not have ethical approval to conduct home visits. We are aware that a questionnaire for patients has been developed by staff at OUHFT that could be used to evaluate the scheme.

It was apparent that physiotherapists were already well accustomed to the emphasis on mobility and accustomed to mobilising patients, whereas this was not always a priority for nurses. The iCAN tool was praised for facilitating communication between staff, especially staff across different shifts and for its ease of use.

"It's found to be helpful, especially for communication between members of the team when they come to work" (S6P01)

The staff interviewed were hopeful that the iCAN tool would encourage patients to keep mobile and functioning at their pre-hospital level, helping prevent deconditioning. The exercise booklets were also praised for being easy to use.

"can be distributed by any member of staff, they're fairly self-explanatory" (S6P03)

It was important that the intervention fitted easily within the system and existing work practices. An example of this was taking an existing skin integrity assessment tool (SKIN) and placing more emphasis on the 'keep moving' element of this assessment, thus not asking staff to do anything different (i.e. low burden). Anecdotal evidence from the staff suggested that the exercises were well received by those patients who experienced them.

"I have seen a nurse doing exercises with a patient. The patient looked very involved and interested and taking it seriously as something good for his health, and as a positive really." (S6P01)

Staff noted that that the exercises were not suitable for all patients, for example those with palliative care needs, suggesting that an individualised and case-by-case approach to implementation is needed.

10.2 Implications

- The feasibility of the patient-centred PA intervention on the CMU needs exploring further, especially from the viewpoint of the patients receiving the intervention.
- Where an intervention targets the MDT, staff with different training backgrounds may have different training needs.

- Interventions are received well by staff when they fit within existing systems and work practices.
- Motivational interviewing was evaluated positively by HCPs.
- PA needs to be tailored to suit the individual needs of the patients.

11. Study 7: Experiences of lead Sport and Exercise Medicine consultants in delivering the Sport and Exercise Medicine pilot

The SEM pilot at OUHFT was overseen by two SEM consultants. A senior SEM Consultant with over 10 years' experience of working in SEM at OUHFT (one session a week in their job plan allocated to the project), and a newly appointed locum SEM consultant that was funded two days per week to implement the pilot. These posts are here forward referred to as 'lead SEM consultants'. There are other SEM roles aligned to the SEM pilot (i.e. SEM registrar) but they are not considered here.

The primary aim of this study was to explore the experiences of the lead SEM consultants in implementing a broad programme of PA in a hospital Trust. Objectives included exploring:

- The demands placed on the SEM lead consultant during the SEM pilot.
- Barriers and facilitators to implementation of new PA services.
- Lessons for scaling of interventions in other NHS Trusts.
- Leadership qualities required from SEM lead consultants in implementing system wide programmes.

Face-to-face semi-structured interviews were conducted with the lead SEM consultants midway through the implementation of the pilot and post-pilot. Details of data collection and analysis can be found in Appendix C.

11.1 Leadership that is trusted and enduring

The ambition and vision of the OUHFT SEM pilot meant that implementation was complex and challenging. The pilot aimed to work across five clinical pathways and deliver multi-component interventions across the physical and cultural environment of the hospital including embedding change within IT systems and different areas of clinical delivery. The importance of strong and committed leadership across the system was highlighted consistently in interviews and this is perhaps where the importance of long-standing relationships of the senior SEM consultant at the Trust was invaluable. The SEM pilot was delivered with a dual consultant model. A senior lead (one session/week) and a locum SEM consultant who was allocated to the programme two days per

week[6]. The senior lead took overall responsibility for the project with service delivery overseen by the locum. The senior lead made introductions between the locum and key staff across the Trust and ensured that the locum was able to navigate their way around the hospital – culturally and politically, as well as structurally. This 'intuitive' knowledge of the Trust gained through working in the context for over 10 years was a significant advantage when implementing the pilot.

> *"I think it would be very difficult for a new consultant to come into a Trust and immediately set up a new service like this. I think you need to know people both on the clinical and the managerial side, or it makes it an awful lot easier if you do. I'm not saying it wouldn't be possible, I just think it would take longer." S7P02*

The message here was that culture isn't created overnight and it is crucial to recognise this when scaling SEM pilots in other Trusts across the UK. So much of the culture change observed at OUHFT was driven through long-standing and trusted relationships and whilst this can potentially be achieved through force of personality on occasion, we observed the importance of a long history of SEM as a key driver for change here. Future programmes might need to lengthen any 'set-up' phase where these long-standing relationships do not already exist.

> *"These things generally get driven by influential people with a strong desire for change and so when we're looking to scale this model we need to have things that are going to enable those people to start making changes." S7P01*

11.2   Understand how the NHS system works

Within any complex system it is important to understand how the system behaves (Tsasis et al., 2012) and data here suggested that it is important that conversations occur between the same hierarchical 'levels' of professional within the Trust – particularly at the outset of the pilot when making the case for engagement. For example, because the SEM lead was from a 'medicine' background, they were able to have conversations with other consultant leads in other services in a more direct manner than perhaps a HCP might be able to. The model of having a consultant at the top is also consistent with other services in the hospital. Reaching agreements, achieving a mandate for action and working out how interventions could be implemented could be achieved more efficiently (or indeed actually implemented) through a consultant to consultant level approach.

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[6] The person undertaking this role left after 12 months in post and was subsequently replaced in January 2019.

> *"Where there's a senior clinician, a consultant who is engaged in driving forward some of these initiatives in a department that makes a huge difference in terms of the impact there and that really impacts upon the speed at which you can make stuff happen."* *(S7P01)*

Moreover, the degree of scepticism about PA and other non-medical interventions amongst some clinicians and managers was perhaps more easily overcome due to the existing trust between long-standing consultants. The experiences described here suggest that it would perhaps be more difficult if these conversations needed to happen across different hierarchical levels and with staff who are new to the Trust. These are key factors to understand when considering scaling and translating the pilot work to other Trusts.

11.3   Create the team from a coalition of the willing

Leadership from the lead SEM consultants was a key factor in the acceptability and feasibility of the pilot but data from the interviews highlighted the importance of developing a 'network of champions' within departments and services so that lines of communication could easily be maintained.

> *"The PA champion network works so well because you have someone that's in that service and you're talking to them regularly, and if there's problems in an area you can go and chat to the people in that service a bit higher up the food chain or something like that to see what the barriers are and explore things."* *(S7P01)*

One of the roles of the lead SEM consultant(s) was therefore to spot opportunities for collaboration and in essence establish a coalition of the willing. In that regard, the lead SEM consultant(s) needed to have the skills, influence and mandate to 'join the dots' of practice that was already occurring in the Trust. This had the effect of creating momentum across departments that was beyond what was being implemented directly through this pilot.

> *"The more you find people are doing stuff, like one of the vascular surgeons has set up milestones for walking down the ward and things like that. So there are people doing stuff like this and this is where having a central service to support it and share ideas and things like and drive change is so valuable really, because all these small things that people are already working on and doing brilliantly that work in different environments have just never been coordinated."* *(S7P01)*

To achieve this, the lead SEM consultant(s) reported spending a significant amount of time having meetings with a substantial range of people across the Trust, in terms of; engagement, talking about what they can do, what they can offer, how PA and SEM skills can fit into services. Undertaking a mapping exercise at the outset of the pilot to explore the physical and social environment of the hospital, who is working where, what can be fitted in where, what's being done well in the hospital, where things can be augmented and where the key partners are, would be a sensible first step in implementation of future SEM pilots.

11.4   A flexible approach and a willingness to fail fast

At the outset the SEM pilot had clearly articulated plans for how and importantly where PA was to be embedded within the Trust. This included exploring the theoretical underpinning for behaviour change using the COM-B model, which was a strength of the approach. The lead SEM consultants also explored the interests of people across different departments, audited what was happening already and subsequently explored what could be augmented to include a greater element of PA. This work was undertaken in addition to the planned pathways of work in this pilot. Over time, it became clear that changes to the implementation process needed to be made, either because services were simply inappropriate for the proposed interventions (i.e. Critical Care) and/or because there were existing activities that could be harnessed to drive forward a change in culture but were not part of the original scope. The SEM lead(s) therefore needed to be sensitive to where these new opportunities existed whilst at the same time not being dogmatic about pre-planned activity but instead looking for opportunities across the system to intervene.

> *"You just shoehorn things in, I don't think it's the best way of doing things but because of the reality of the timelines we've just been just jumping on any opportunity we can and making it happen." (S7PO1)*

The SEM consultants also needed to be able to recognise that the contexts differed significantly between departments and this was facilitated by a baseline understanding of what was currently being delivered in the Trust, where it was being delivered and by whom.

> *"We might be working on general medical wards one ward to the next ward and the routines will be different, the staffing patterns will be different, when they do the drug rounds will be different." (S7P01)*

These qualities of flexibility also applied to the development of resources. The implementation of activities as a one size fits all approach would not work due to the varying contexts within the Trust

services. The COM-B approach to intervention mapping helped engender some consistency across the pilot and it is recommended that future programmes follow a similar approach.

> *"It has to be very individualised within [departments], so you work from the core elements, but then the implementation has to be tailored, so there's that difficult balance between making common resources to support everybody, but having flexibility that they can be adapted into whatever the demands of the specific service are."* *(S7P01)*

It is important to be mindful that this phase of evaluation was about feasibility and acceptability and therefore it was really important to explore the SEM pilot in a number of different pathways. The diversity of work whilst challenging has been a strength of the pilot. The approach here is therefore perhaps best described as 'starting a thousand fires, knowing only a few will keep going'. The risk with this approach is that next time people are less receptive to the 'offer' but data here suggests that getting spread as well as depth across a Trust is important when it comes to increasing the profile and priority of PA. It is likely that future pilots will need to seek out the 'open doors' for interventions but the road map developed here will potentially support the process of this.

> *"I think it's very easy to create an initial spark, but to build on it and continue to motivate people over a number of years and to progress things is a whole different ballgame."* *(S7P02)*

11.5   System supporters to drive change and ensure sustainability

The lead SEM consultant(s) identified that points of contact need to be embedded in pathways and these 'champions' need to be given the freedom and mandate to lead change locally. In addition, ensuring that these roles/people are engaged early in the process is crucial as this prevents the mind-set of:

> *"there's a new PA team and they're going to be doing some stuff to your patients…".*
>
> *"Having someone already in the department to be able to be there and initiate, so we've got a therapy assistant working with amputees who was working part-time as a therapy assistant and part-time in research and he was allowed to come out of his research time to deliver this."* *(S7P01)*

The SEM consultants were also required to develop new leaders of culture change within different services so that once their direct support was withdrawn, the services did not immediately revert back to type.

> *"So having regular contact with different departments and that's where the PA champion network works so well, because you have someone that's in that service and you're talking to them regularly, you can have team meetings with them and the others, sharing ideas, working on things and if there's problems in an area that something's not happening or there's barriers that you can go and chat to the people in that service a bit higher up the food chain or something like that to see what the barriers are and explore things." (S7P01)*

It wasn't deemed sufficient to simply appoint the team leads and kick-start the intervention, data here suggested that there needed to be longer-term and planned support and audit of the process.

> *"I think there has to be core components that are structural just because of the nature of the most essential things will always be done." (S7P01)*

One way to achieve this was through establishing policies and structures that aligned to making the new behaviours sustainable. These policies then needed to be bolstered with good governance and follow-up processes.

> *"if you set it up but leave them and you never go back to them, it might sustain for another year. So, what you need to do is set things up, then leave them, but keep going back and reminding them, do some audits, do the patient feedback, do the health professional feedback, do the 360 appraisals, all those things as part of a really robust governance structure and that will sustain it but that all takes work and it takes leadership." (S7P02)*

The lead SEM consultants suggested that they were used to dealing with clinical governance on a regular basis and so this is perhaps an important reason as to why a consultant role is well suited to leading these types of interventions. The system leadership and central co-ordination functions provided by the lead SEM consultants was also essential in the sustainability of the interventions. Throughout the pilot they acted as voices for the change and provided a platform upon which to continue to build. Had the support of this core team been removed, evidence here suggests that the pilot would have potentially collapsed.

> *"everyone's getting engaged and they've made a big effort at it, but then the reality is that it's hard to maintain, because to sustain that change takes a lot more than just a good idea and an intervention. They have to be embedded in the day to day practice of that specific department"* (S7P01)

In addition, interview data suggested that there were a number of practical aspects to the set-up of the pilot that could have enhanced implementation. These included but were not limited to the early employment of staff on the programme, finance systems being established at the outset, and system prompts setup through the Electronic Patient Record. This is the ideal scenario of course and this needs to be tempered with the realities of implementing change within a resource stretched Trust with multiple competing agendas for that resource. Not to labour the point, but this is where the experience, connections and trusted relationships of the senior SEM consultant were perhaps most valuable. Being able to navigate the political climate of a large Trust is challenging and change programmes such as the one described here are potentially at risk of getting swamped by larger agendas without strong senior leadership.

11.6   More than just physical activity

The lead SEM consultant(s) were realistic about the stage at which the SEM pilot was in terms of being wholly embedded within the core offer of the Trust. The SEM lead consultant(s) also identified that the sell to commissioners needed to include the contribution that SEM will make to the day to day activity of the Trust and not just on the basis of a culture change programme to promote PA, even where the rationale was that it might save money further down the line. This is important insight when thinking about making the case to scale such interventions to other areas of the UK, and talks to the tangible case that needs to be made to drive forward prevention agendas such as this. If they can be aligned or linked to a resource that can equally contribute to the here and now challenges, as well as the future vision then the view here from the lead SEM consultants was that they are more likely to be accepted.

> *"I think from a Trust, writing a job plan, doing a VCF and employing somebody, they need to have the easy quick wins. They need to know that you can see 50 patients a week and you can bring in the money that way…we'll do that for three days a week and then for the other two days I'm going to do this PA intervention, I think that's easier"* (S7P02)

12. Conclusions

The SEM pilot represented a complex system intervention. It therefore required consistent leadership from senior clinical staff with excellent negotiation skills, gravitas and an ability to make connections across system components for it to work. The data captured here also identified that a depth of relationship and pre-existing high levels of trust might also be important in successfully delivering such an ambitious pilot in a large Trust with multiple dynamic relationships and hierarchies. Where a Trust has a lead SEM consultant(s) with these skills and broad networks then a programme similar in size and scale to that delivered in OUHFT could feasibly be replicated with the necessary mandate from Trust executives. Where this is absent then we would suggest a more modest approach is adopted (e.g. identifying one clinical area to work within in to demonstrate success). It is crucial that this is considered in the spread of any learning from this pilot as failure to do so could lead to a significant waste of resource.

13. Implications

The results from this evaluation will have direct implications for OUHFT and ongoing implementation of the SEM pilot. There is also the potential for wider implications for practice, with OUHFT sharing its learning with other Trusts across the UK.

- A PA culture isn't created overnight and it is crucial to recognise this when scaling SEM pilots in other Trusts. So much of the culture change observed at OUHFT was driven through long-standing and trusted relationships and whilst this can potentially be achieved through force of personality on occasion, we observed the importance of a long history of SEM as a key driver for change. Future programmes might need to lengthen any 'set-up' (up to 6months) phase where these long standing relationships do not already exist.
- The experience, connections and trusted relationships of the senior SEM consultant are extremely valuable, especially in being able to navigate the political climate of a large Trust with competing agendas and limited resource.
- Undertaking a mapping exercise at the outset of the pilot to explore the physical and social environment of the hospital, who is working where, what can be fitted in where, what's being done well in the hospital, where things can be augmented and where the key partners are, would be a sensible first step in implementation of future SEM pilots.
- New initiatives need a flexible approach to implementation. SEM lead(s) need to be responsive and sensitive to where new opportunities exist, looking for opportunities across the system to intervene.
- The COM-B approach to intervention mapping helped engender some consistency across the pilot and it is recommended that future programmes follow a similar approach.

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- The sell to commissioners needs to include the contribution that SEM will make to the day to day activity of the Trust and not just on the basis of a culture change. If proposed outcomes can be aligned to current challenges, as well as the future vision then they are more likely to be accepted.

14.   Strengths and limitations of this evaluation

The main strengths of this evaluation relate to its methodological rigour. Using the SHU research team as external evaluators means that the evaluation was independent of OUHFT and PHE. A key strength was the use of mixed methods to collect a range of relevant and in-depth data to aid the evaluation.

The evaluation team identified a number of methodological challenges to this evaluation, which should be considered when interpreting the findings. The sample size at each data collection point varied and some were small. With small samples it is difficult to reach robust conclusions and findings should be interpreted with caution. Larger sample sizes might further support the present findings but might also reveal new insights and potentially contradictory opinions. That said, this was an exploration of acceptability and feasibility and not effectiveness and so the sample sizes are perhaps less of a limitation in this context. It is also possible that self-selection bias resulted in a sample that may be skewed towards reporting outcomes from patients and HCPs who are highly engaged with the pilot.

When considering the potential for SEM pilot to bring about change, it is important to be realistic about the time it may take for change to happen. Embedding SEM into the Trust is likely to require a change in culture and therefore any changes brought about by the SEM pilot might not be expected to manifest as measurable change within the lifespan of this evaluation.

15. Acknowledgements

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