Birmingham and Solihull Sustainability and Transformation Partnership (BSOL STP)

STRATEGY EVIDENCE REVIEW

Research Report

Dr Agnieszka Ignatowicz
Ms Helen Crump
Prof Daniel Lasserson
Prof Judith Smith

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This report sets out the findings of a pragmatic review of research evidence commissioned by the Birmingham and Solihull Sustainability and Transformation Partnership in 2018 to inform its implementation of strategy for health and care. The review is not intended to be exhaustive, and details of its methods, scope and limitations are set out on p.16.

Executive summary

The University of Birmingham was commissioned by the Birmingham and Solihull (BSOL) Sustainability and Transformation Partnership (STP) Board in October 2018 to undertake an independent evidence review to inform the STP's strategic priorities and objectives.

The aim of the review as commissioned was:

To provide a series of recommendations to the BSOL STP Board concerning the content of its strategic plan – commenting where the current aims, outcomes and projects are well evidenced and where elements of the plan should be re-considered due to strong countermanding evidence of harm or high cost, or a lack of evidence which suggests that caution should be exercised in pursuing certain courses of action at this stage (for example where research studies are ongoing and robust evidence from evaluation studies is still awaited).

This report is the output of our work and examines the evidence base underpinning the STP Board's vision to improve and transform health and social care for the local population. We hope that our work summarising relevant research evidence and making recommendations based on our reading of this literature will enable the STP to move forward quickly in the areas it has sought to prioritise, confident that it is well-informed about where the research evidence is strong (or not) in respect of specific plans.

Our work is based on an analysis of selected empirical research studies, systematic reviews, grey literature (papers from government, think tanks and other non-academic journal sources) and policy documents with relevance to key areas within the three BSOL STP priority areas:

(1) Maternity, children and adolescents;

(2) Adulthood and work; and

(3) Ageing and later life.

This report is not an exhaustive review of the evidence within these topics, but highlights areas for consideration and provides a series of recommendations to the BSOL STP Board concerning the content of its strategic plan.

Our approach

We began by reviewing the STP's draft strategic plan, first released in May 2018, (https://www.livehealthylivehappy.org.uk), and conducting an initial rapid review of the research literature to understand the range and nature of available published material that was relevant to the STP's three broad priority areas.

Once this initial review was completed, we discussed the STP's requirements in more detail with their leads from each priority area. As a result of these discussions, we were able to pinpoint three critical issues or interventions for the STP within each of the three priority areas for action. These nine issues were selected on the basis that STP leads viewed them

as being areas of significant challenge for the STP population, and were ones that the STP wished to prioritise with early action to design new services or approaches.

The nine issues/interventions are set out in fig.1 below:

Figure 1. Priorities and issues

Priority area	Issue/intervention
Maternity, childhood and adolescence priority area	Interventions promoting emotional wellbeing and resilience
	School readiness for children entering primary school
	Interventions supporting children's transition to secondary school
Adulthood and work priority area	Understanding the evidence base for social prescribing
	Prevention of stress and musculoskeletal illness and provision of "best in class" support to staff with these conditions
	Effective interventions for supporting young adults experiencing the highest levels of deprivation in the STP area, with a particular focus on addressing youth unemployment (19-25yo) and gun and knife crime.
Ageing and later life priority area	Multidisciplinary team working in integrated care
	Intermediate care
	Interventions tackling social isolation and loneliness

Findings

Having identified these nine critical issues/interventions, we undertook a focused literature search for each of them, identifying relevant systematic reviews, service evaluations, research studies, grey literature and other materials. For each issue/intervention, we made an assessment of the quality of the evidence we had been able to review. We then considered the substantive findings for each intervention area alongside our assessment of the strength of the evidence to make a series of recommendations to the STP about how it might wish to proceed in developing new services (or not) for these priority issues.

Where we considered that an action was clearly recommended by the evidence, or spoke for itself, we suggested the STP **ensured** it was implemented. Where the evidence was less clear, or the recommendation was contingent on other aspects of the scheme, we suggested the STP **considered** it. If the literature indicated that a particular approach was clearly ineffective or undesirable, we recommended that the STP **avoid** it. That said, because of the nature of the available research, there were relatively few instances where we felt the evidence was strong enough to recommend avoiding a specific course of action outright. Our recommendations are set out in full in the main body of this report, but a summary of the main findings for each priority area is set out below. For more detail about the research findings and recommendations, please see the relevant sections of the report.

Maternity, childhood and adolescence

Many of the interventions we reviewed within this priority area have the potential to improve the emotional and behavioural wellbeing of children and young people, facilitate successful transition from home or nursery to school and support transition from primary to secondary school. Across the maternity, children and adolescents' priority areas, interpretation of evidence is inconsistent because of the nature and quality of available research. The STP may therefore want to take our findings and assess them against their knowledge of what has proven to be effective for children and young people locally, and what opportunities there are for improvement or expansion of interventions already in place.

Promoting emotional and behavioural wellbeing of children and young people

A range of evidence-based approaches at individual, interpersonal, school and community levels can support children and young people and their parents to build friendships, support personal development and relationships with peers, and provide additional advice and support if problems arise.

An extensive literature on the role of schools in promoting emotional health and wellbeing suggests that there is a strong need for school-based strategies, but also that formulating and effectively implementing such strategies is challenging. The most effective programmes promoting emotional and behavioural wellbeing appear to be whole school, multi-component programmes, focusing on promoting wellbeing, social and emotional skills and positive behaviour.

Various systematic reviews and meta-analyses of whole school interventions suggest there are better outcomes for at-risk children and young people, though the most recent systematic review of effectiveness of school-based universal mental health interventions (Mackenzie and Williams 2018) concluded that effectiveness is neutral or small, with more positive effects found from poorer quality studies and those based in primary schools (pupils aged 9–12 years).

Peer mediation programmes have been found to be effective in promoting social and behavioural skills over the long term. However, evidence on peer support programmes - which aim to help pupils with social and emotional problems through befriending, listening and support - is mixed. One systematic review found that the presence of social work in schools can increase children's skills, problem solving, and positive relationships with peers and adults (Early and Vonk 2001).

Although there is a substantial literature examining school interventions promoting the emotional and behavioural wellbeing of children and young people, there has been very little analysis of the economic costs and benefits of these interventions. Measuring the impact of wellbeing and resilience programmes and approaches is therefore complex.

In summary, a whole school approach to promoting emotional and behavioural wellbeing is supported by policy and some research. Different interventions seem to work better for primary and secondary school children and young people. However, sustaining positive effects over time may be challenging. Generalisability of school-based interventions to real-world environments has been questioned in the literature. Buy-in from teachers is imperative and the role of local authorities in supporting and encouraging schools to take action is vital.

School readiness – transition from home or nursery to school

Good home to school transitions have been linked to better outcomes, particularly for at-risk groups. There is evidence that a range of parenting programmes designed for families with children of a particular age are effective in supporting child's transition from home or nursery to school.

There is also evidence that transition interventions are more likely to be successful where they focus on the whole child, implement a variety of practices, provide targeted support for at-risk groups, are flexible and responsive to local needs, share information and ensure good communication amongst everyone involved in delivery of intervention (Evans et al. 2010). Research highlights the importance of preschool attendance for promoting successful school transitions for all children. Evidence from early childhood curricula indicates that high-quality early childhood education in the year before school can have positive impacts on the school readiness skills of children who are at risk for later academic difficulties. A range of different parenting interventions have demonstrated positive impacts on school readiness in pre-school children. The literature seems to suggest that those that promote positive parenting practices and parent-child relationships; those that promote home learning activities and effective teaching strategies; and those that strengthen parent-teacher partnerships lead to positive outcomes.

More generally, practices to support children through a period of transition, such as open days and part-time starts to the year, are associated with improved social and emotional skills and children making a better adjustment to the new school environment. Interventions that coach parents in specific behaviours, and starting the intervention earlier may also produce better outcomes. The STP may want to consider supporting interventions already in place in local schools.

However, the literature seems to suggest that early childhood parenting interventions may not always produce positive impacts on child's school readiness, possibly because many of these interventions have not been designed to achieve this outcome. The literature is unclear about the level of intensity and 'dosage' of intervention required to meaningfully impact school readiness.

In summary, although there are some promising interventions, the literature is limited in a number of ways. Studies tend to focus on children, parent and teacher experiences and perceptions of approaches, rather than evaluating specific programmes or long-term outcomes.

Transition from primary to secondary school

Despite agreement in the literature that the primary to secondary transition is a difficult period for some pupils, there is a lack of longitudinal research focusing on children transitioning to secondary school.

Well-designed and implemented approaches are thought to help support students, their families and school staff in the transition process. However, the literature seems to suggest that the majority of transition interventions focus mainly on making new friends quickly, because it is thought to have a positive effect on transitions. Studies with long-term follow-up of children or analysis of different outcomes are scarce.

Given that school transition is a long-term process, starting before children move to secondary school and continuing after, evidence suggests that pupils need to be well-prepared before the transition occurs. Studies indicate that support from the family is important and that parents' involvement in facilitating successful transitions is imperative. The type of support needed depends on whether, and to what extent, the child requires additional academic support.

For children struggling with primary to secondary transition, multiple types and sources of support are necessary. There is agreement in the literature about the key aspects which influence a successful transition to secondary school. Interventions to facilitate a successful transition should be comprehensive, should involve parents, and receiving schools should make every effort to create a sense of community belonging.

Adulthood and work

There appears to be potential to achieve some improved outcomes using social prescribing, staff-facing interventions for stress and musculoskeletal disease and interventions to address gun and knife violence and youth unemployment.

But there are also gaps in the available evidence, particularly in relation to cost-effectiveness. And some of the evidence relating to each area of focus has been generated through topic-based research studies rather than service evaluation, meaning it can be less helpful in deciding whether to pursue a particular course of action.

Understanding the evidence base for social prescribing

Social prescribing schemes can present challenges to clinical staff working within or alongside them who are unused to the theories of social prescribing - scheme managers may need to demonstrate clinical, rather than social benefits of the project to colleagues. Clarity of purpose is essential for service users, staff providing the service and staff referring into it. A common pitfall is insufficient explanation to patients of what a social prescribing approach entails, resulting in confusion and elevated expectations. Collaborative commissioning, emphasising outcomes such as mental wellbeing, mental capital, creativity and resilience, is viewed in the literature as important to reduce future health costs.

Practical challenges for social prescribing providers seeking to operate well-integrated services described in the literature include agreeing referral routes and criteria; accountability and liability for referred patients and voluntary sector capacity. The social prescribing link worker is an evolving role, with unanswered questions around whether it requires competencies and accreditation, whether it can be performed by volunteers as well as paid staff and whether link workers should be managed by the health or voluntary sector. Care continuity can also pose difficulties – researchers reported that in some evaluated schemes, GPs appeared unaware of what had happened to a patient following referral into a scheme, and some community organisations were unaware that a service user had reached them via referral through a social prescribing scheme.

Multiple studies identified specific challenges experienced by those operating social prescribing schemes in deprived areas. There is a risk that social prescribing is treated as a "panacea for complex problems and social issues such as loneliness, poverty and increasing inequalities", or a "silver bullet" to address demand pressures (Drinkwater, 2019).

It has been suggested that when evaluating social prescribing schemes, standard health outcome measures do not capture the 'non-health' related outcomes that reflect patient priorities, and there is uncertainty over what is an appropriate expectation for the duration of effect for a social prescribing scheme. Given the complexity of the needs of patients accessing social prescribing schemes, it is unlikely that an evaluation will be able to demonstrate a causal relationship between enrolment on a scheme and changes in service use, but scheme managers should give consideration to NHS England's suggested social prescribing outcome measures.

Providing "best in class" support to employees experiencing stress and all forms of musculoskeletal problems

A major governmental review into the health of working age people in the UK (Black, 2008) recommended case-managed multidisciplinary support for patients in the early stages of sickness absence, along with a goal of widening the availability of work-related health support, and greater support for GPs and other healthcare professionals to adapt their services in order to help people to enter, stay in or return to work.

Our search identified more literature on mental health conditions in the health workforce than on musculoskeletal conditions. Much of the available evidence focuses on clinical, rather than support or managerial staff.

A review of literature on online workplace-based mental health interventions found cognitive behavioural therapy had a “modest effect”, but there was limited evidence to suggest that exercise interventions targeting mental health staff were feasible and acceptable. Studies into mentoring and peer support schemes found some effects – for instance influencing collegiate relationships, networking and aspects of personal wellbeing.

Burnout appears in the literature as a particular issue for clinical staff, with nurses experiencing psychological aggression reporting higher rates of burnout in one study. Using principles of “interactional justice” (see section 3.2) was seen as a way of ameliorating these issues. Presenteeism itself can lead to stress illness: a pattern of over-commitment and effort-reward imbalance that was found to be predictive of chronic stress in young doctors.

Evidence from systematic review indicates that there is no strong evidence for the efficacy of any training interventions aiming to prevent back pain and injury in nurses. However, return-to-work coordinators have been found to help reduce long-term disability, particularly for those with musculoskeletal disorders.

For preventing illness, monitoring staff wellbeing, for instance using the Health and Safety Executive management standards approach, is recommended.

The success of staff-facing interventions is likely to be dependent to a degree on organisational culture and staff need; therefore the STP may wish to undertake a review of activities underway already across Birmingham and Solihull, followed by consultation with staff to determine areas where there is particular appetite from staff for increased focus.

Effective interventions for supporting young people experiencing the highest levels of deprivation, with a specific focus on addressing youth unemployment (19-25yo) and gun and knife crime

In general, knife-related violence is associated with age, gender and deprivation status, with offending behaviour, neighbourhood disorder and lack of trust in the police acting as risk factors for carrying a knife. Offending behaviour, neighbourhood disorder and lack of trust in the police are significant in understanding weapon-carrying. By contrast, gun-related violence appears more closely associated with illegal drug use.

There is a growing consensus around the need to adopt a public health approach to addressing youth violence. Healthcare professionals can potentially play an important role by identifying individuals who would benefit from services to prevent “repeat victimisation”.

Greater provision of youth services in deprived areas should be supported, alongside mediation of gang disputes, where there is scope for this. Adopting a public health/harm reduction approach to involvement in the criminal economy is also encouraged - well-implemented aftercare programmes reduced the risk of reoffending among older young people with violent criminal histories.

There is a predominance of small organisations working in this area and the STP may therefore be able to play a highly significant role as a convenor of organisations across different sectors, providing a route for these organisations to collaborate and brokering new relationships at a local level in line with STP strategic goals.

There is some evidence that targeted approaches may be more effective than universal approaches and the STP may wish to carry out a focused assessment to stratify different relevant populations in terms of the types of targeted intervention that are likely to have the greatest impact, before developing new approaches to addressing these challenges. The STP may also wish to implement an approach to tackling gun and knife violence that spans its maternity and childhood and adulthood and work programme areas.

Increases in low-paid self-employment and 'atypical' work mean young adults today take on more risk than previous generations. The picture for disadvantaged groups and black and minority ethnic populations is worse, with higher unemployment than national averages. Analysis found disabled people were significantly less likely to be employed, had lower earnings and were less likely to be in high-pay occupations than non-disabled people. And some ethnic minorities, particularly Bangladeshi and Pakistani groups, were less likely to be employed, more likely to be unemployed, and more likely to be in insecure employment. Young carers are also more likely to be unemployed.

Providing integrated services via co-located teams can assist staff in offering personalised services – an increasingly popular response to youth unemployment - as well as reducing the amount of paperwork that service users themselves need to complete. Vocational training schemes are viewed as more successful because, unlike general or vocational schooling, they allow trainees to gain knowledge and experience through close links with training companies. Targets for increasing ethnic minority apprenticeships to reflect the demographic composition of the area, alongside data and outcome monitoring, are also recommended by the literature.

Support relevant to young adult carers' needs can enable them to make successful transitions into employment. Looked-after children and young people are also likely to require enhanced support as part of their transition out of care services, given the higher likelihood that members of this group may find themselves not in employment, education or training. Many of the targeted youth employment schemes in operation use a case management approach to address the specific needs of individuals receiving support.
In addressing both youth violence and unemployment, the STP will need to reach beyond the boundaries of its own member organisations in order to fully address some of the challenges of implementing effective approaches.

Older people and later life

Overall, many of the interventions outlined within this priority area have the potential to improve patient outcomes and experience. However, the evidence for reducing unplanned admissions to hospital and delaying institutionalisation for older people is mixed.

There is no univocal evidence to show that the intervention areas reviewed in this section of the report will lead to financial savings, reduce hospital activity or delay hospitalisation for older people. However, studies and their evaluations have been constrained by design, small samples and a lack of cost data. It has been noted in the literature that many of the interventions might not have been appropriately implemented or supported, and therefore failed to demonstrate the intended outcomes. None of the above should detract the BSOL STP Board from pursuing those interventions and proceeding with caution.

Multidisciplinary team working in integrated care

Early research into multidisciplinary team (MDT) meetings argued that this way of working produces better outcomes for patients by providing a better assessment of treatment options, improved prescribing or medication adherence, and improved job satisfaction. However, several recent systematic reviews of MDT working in cancer, mental health and

other disciplines have concluded that there is insufficient evidence to determine their effectiveness. Studies on cost effectiveness are scarce and more robust evidence is needed.

Literature on shared care models - an approach to care which utilises MDT working - indicates that this way of working may improve prescribing, medication adherence and patient satisfaction for patients with chronic illnesses, but has mixed or limited effects on other outcomes. Generally, research demonstrates that the most successful examples of integrated care and the facilitation of multidisciplinary teams have been those that identified a designated care co-ordinator/case manager. Research on the effectiveness of multidisciplinary teams that specifically includes social work team members is scarce.

There is a sizable evidence base regarding the factors and elements that make multidisciplinary teams perform better and the challenges in implementing these sorts of initiatives. Literature exploring the views of service providers emphasised the importance of having clear policies in place about multidisciplinary team working, clarity about each other's expectations, regular team meetings, open communication and a clear focus on patient care.

However, structures and processes for implementing multidisciplinary teams in integrated care are not always well described. Evidence also seems to suggest that greater multidisciplinarity is not associated with more effective decision-making. Successful approaches to multidisciplinary working seem to be highly context-specific, and literature suggests that they cannot be simply transported from one setting to another.

Intermediate care

Overall, evidence on effectiveness of intermediate care is mixed. The literature seems to suggest that bed-based intermediate care does not reduce admissions or readmissions. The evidence on the impact of rapid response services on hospital admissions is also mixed, as is the literature on the effectiveness of community-based intermediate care services.

The literature suggests that evidence of cost-effectiveness is not clear. Whilst there is generally good evidence for enhancing patient experiences and improving people's independence and quality of life, intermediate care does not always appear to be cost-effective. Similarly, the cost of reablement is usually higher than that of usual homecare services because reablement requires more resources, including a need for more training, supervision and user evaluation at the outset.

A recent review and secondary analysis of data from 7,620 intermediate care patients (Ariss et al. 2015) concluded that intermediate care is more likely to benefit older frail people with selected long-term conditions, such us stroke or chronic obstructive pulmonary disease (COPD), where there is potential for rehabilitation. The importance of good inter-agency and inter-professional communication throughout the intermediate care pathway is often mentioned in the literature as a component of successful intermediate care services.

Interventions to tackle social isolation and loneliness

There is a wide range of interventions developed to reduce social isolation and loneliness amongst older people. However, the evidence about successful interventions is relatively limited.

The literature divides the interventions into two main types: *group-based interventions* (e.g., support groups, reminiscence therapy, video-conferencing) and *one-to-one interventions* (e.g., computer use training, animal companionship, visitor volunteers). Generally, evidence suggest that in mitigating social isolation and loneliness, group interventions are more effective than one-to-one interventions.

The cost-effectiveness of services tackling social isolation and loneliness is difficult to establish. The literature suggests that the majority of interventions focus on the impact on quality of life; the evidence whether these delay deterioration or reduce service utilisation is unclear or unavailable. Nor is the literature clear on which specific aspects of interventions tackling loneliness and social isolation contribute most strongly to their success, as most interventions are complex.

The adaptability of an intervention to a local context and involvement of older people are seen as important factors to its success, particularly where interventions are large scale. Interventions to tackle loneliness and social isolation do not always appear to be cost-effective. What qualitative studies in this area seem to indicate, however, is that older people value these interventions.

Conclusion

In our review, we have sought to present the findings from the literature we identified as comprehensively as possible, and aligned these to the three key service interventions agreed with the relevant STP lead for each of the overall thematic areas. We then used this evidence for the preparation of recommendations for each of the nine service interventions/approaches.

There were no priority areas identified by the STP where the literature urged against using interventions in that area. For each priority area, we have recommended steps the STP should ensure are in place, and actions that it could consider in order to achieve the best chance of success when proceeded to implementation design and delivery. We have also included a small number of recommendations for the STP to avoid certain actions that do not appear to be recommended in the literature.

Findings from the literature can however only represent part of the picture, as they do not consider the local context in which the STP is operating. It will therefore be important for STP staff to take our conclusions from reviewing the research evidence and assess them against their knowledge of what services are already in place within the STP area, what has proven to be effective locally and what opportunities there are for service improvement or expansion, given available funding and workforce.

As can be seen above and in the main body of this report, many of the issues/interventions that the STP asked us to review either lack a clear evidence base for their effectiveness, or have evidence that is still emerging, with research studies currently under way – such as in the case of social prescribing, for instance. Evidence of cost-effectiveness was particularly sparse across the nine service areas, something that is all too often the case with health service interventions.

Where evaluations had already been carried out of the service interventions planned by the STP, it was sometimes the case that timescales had been too short to accurately assess impact, or the scope of the evaluations was limited – for instance omitting a judgement about value for money or focusing narrowly on patient experience and not considering that of staff. In some areas, such as gun and knife crime, the availability of information about evaluated services was very limited indeed and the available evidence was mostly in the form of topic-based qualitative research, case studies and grey literature.

Where evidence is weak or emerging, this points to the value of rapid or concurrent evaluation. We would recommend that – budget allowing – the STP puts in place an approach to evaluating some of the more innovative interventions that make up its strategy, and doing this in real-time. Should the STP wish, it will be possible to partner with an established evaluation team to undertake formal monitoring and research work.

Evaluating these initiatives will of course enable the STP to improve the effectiveness and impact of these new interventions for service users in Birmingham and Solihull. But in conducting such research and publicising the findings, the STP can also potentially make an important contribution to the development and roll-out of innovative practices across the English NHS.

We hope BSOL STP staff will find our recommendations helpful as they begin to implement the STP strategy.

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1. Background

The University of Birmingham has been commissioned by the Birmingham and Solihull (BSOL) Sustainability and Transformation Partnership (STP) Board to undertake an independent evidence review to inform its strategic priorities and objectives. The aim of the review as commissioned is:

> To provide a series of recommendations to the BSOL STP Board concerning the content of its strategic plan – commenting where the current aims, outcomes and projects are well evidenced and where elements of the plan should be re-considered due to strong countermanding evidence of harm or high cost, or a lack of evidence which suggests that caution should be exercised in pursuing certain courses of action at this stage (for example where research studies are ongoing and robust evidence from evaluation studies is still awaited).

This aim shaped the methods we adopted for our review and influenced the way in which the findings are presented in this report. We describe our approach in more detail below.

2. Our approach

We undertook desk-based research and review of literature. The work plan in the original proposal for the evidence review set out the following steps:

i. Consultations with STP work stream leaders to identify highest priority objectives and interventions, to inform the development of our evidence search strategies (one for each of the three work streams).
ii. Undertaking searches of research evidence within the three thematic areas, and appraising the quality, key messages, and gaps of this evidence base.
iii. Synthesising the findings of our review, focused on the priorities and suggested interventions of the STP strategy.

Firstly, we interviewed the portfolio leads and other relevant colleagues within the three BSOL STP priority areas for action, seeking to clarify the precise nature of each area, the intended deliverables or interventions, and how progress might be measured. As the work got under way, we learnt that the BSOL STP strategic plan set out many of its aims and objectives in terms of very broad outcomes, rather than describing specific projects or interventions. This was understandable given that the strategy development was at an early stage, the task was complex and ambitious, and the impending publication of the NHS Ten Year Plan was likely give a more specific steer in relation to interventions. Therefore, we undertook initial 'horizon scan' searches using the expertise of the University of Birmingham's specialist health policy library and information service based at Health Services and Management Centre (HSMC), focusing on potential interventions that appeared to meet the requirements of the strategic goals for each of the three priority areas for action in the draft BSOL STP plan. The tables summarising our searches and the examples of health and social care interventions whose evidence base we initially reviewed are set out in Appendix at the end of this report.

We presented the summary of our initial evidence review to the Portfolio leads and worked closely with BSOL STP colleagues to think carefully about how best to focus our analysis in a way which will generate the most useful and implementable findings. We further refined our searches in discussions with the STP colleagues and agreed areas for more in-depth analysis. In summary, we focused our review on the following intervention areas:

I. **Maternity, Childhood and Adolescence** priority area – the searches focused on interventions supporting children's wellbeing at schools, school readiness and

transitioning between primary and secondary schools, with combined searches yielding over 1000 publications. The prioritised areas for the in-depth analysis were: (1) **interventions promoting emotional wellbeing and resilience;** (2) **school readiness for children entering school;** and (3) **interventions supporting child's transition to secondary school.**

II. **Adulthood and work** priority areas – the searches focused on social prescribing, the impact of stress and musculoskeletal conditions on staff wellbeing and deprivation related to young adults, yielding over 1260 publications. The prioritised areas for the in-depth analysis were: (1) **social prescribing**; (2) **prevention of stress and musculoskeletal illness and provision of "best in class" support to staff with these conditions**; and (3) **effective interventions for supporting young adults experiencing the highest levels of deprivation in the STP area, with a particular focus on addressing youth unemployment (19-25yo) and gun and knife crime.**

III. **Ageing and later life** priority area – the searches focused on interventions likely to reduce unplanned admissions to hospital and delay institutionalisation for older people, with combined searches yielding over 894 publications. The prioritised areas for the in-depth analysis were: (1) **multidisciplinary team working in integrated care;** (2) **intermediate care;** and (3) **interventions tackling social isolation and loneliness**

For our in-depth analysis, we took an iterative approach. The search keywords and terms were used specifically in relation to the intervention areas of interest, but were also applied to searches across the health and social care literature more broadly in order to identify other potential sources of information.

This report is based on an analysis of selected systematic reviews, primary studies, policy documents and grey literature with high levels of relevance to the intervention areas prioritised for the in-depth analysis. Although this might have limited our review, best efforts have been made to provide summary of the evidence available and identify any cost effectiveness information. In reporting the evidence, we provide an overview of factors that deliver improved outcomes and potential implementation and other challenges. Where evidence was more encouraging, we have tried to pull out what contributes to success of the interventions and provide examples based on the literature.

3.1. Maternity, Children and Adolescents

In this section, we present the evidence on the three intervention areas that were selected for the in-depth analysis in the *Maternity, children and adolescents* priority area:

- Promoting emotional and behavioural wellbeing of children and young people
- School readiness – home or nursery to school transition
- Transition from primary to secondary school

I. Promoting emotional and behavioural wellbeing of children and young people

Overview of evidence

The emotional health of children and young people has been recognised as being fundamental to wellbeing[1]. The impact of the environment, relationships, experiences and opportunities on children's and young people's emotional wellbeing is usually described in the literature through the lens of risk and protective factors. Risk factors are those factors that are more likely to lead to vulnerability, while protective factors are those ones that are more likely to increase wellbeing and resilience. **Literature seems to suggest that there is good evidence about what is likely to work to build protective factors and reduce risk factors in order to promote wellbeing.** For instance, relationships, experiences, opportunities and environments are usually classified as both protective and risk factors (Public Health England and UCL Institute of Health Equity 2014a). Each of these factors can increase or decrease child's and young person's wellbeing.

Literature suggests that that there is a range of evidence-based approaches at individual, interpersonal, and school and community levels that can promote emotional and behavioural wellbeing of children and young people. These can be directed at and support children and young people and/or their parents, and aim to build friendships, support peer relationships and personal development, and provide additional advice and support if problems arise.

[1] In this chapter of the report, wellbeing is described in line with the literature in this area as encompassing emotional wellbeing (including happiness and confidence, and the opposite of depression/anxiety), psychological wellbeing (including resilience, confidence, attentiveness/involvement; and social wellbeing (good relationships with others, and the opposite of conduct disorder, interpersonal violence and bullying).

School-based interventions promoting emotional and behavioural wellbeing of children and young people: evidence and cost-effectiveness

There is a widespread recognition that schools play a crucial role in the promotion of well-being (Banerjee et al. 2016). Schools also have a key role in building resilience among children and young people. In what follows, we describe the evidence base behind the various interventions delivered at school (for examples and more information on interventions and approaches delivered outside of the school environment, please see figure 6 below).

Literature on the role of schools in promoting emotional health and well-being is extensive. The evidence suggests that there is a strong need for school-based strategies, but also that formulating and effectively implementing such strategies is may be challenging. Generally, evidence on promoting emotional health, well-being, and resilience in schools varies. Available approaches include peer mediation, peer support and mentoring, specialist staff involvement and school based universal programmes. These are explored in more detail below.

Peer mediation
Peer mediation programmes have been found to be effective in promoting social and behavioural skills over the long term (Cremin 2007). Cunningham and colleagues reported positive results on school climate and a decrease in physical aggression (Cunningham et al. 1998), but Blank and colleagues argued that evidence is mixed on whether they can be effective in reducing bullying and disruptive behaviour (Blank et al. 2009).

Peer support/mentoring
Evidence on peer support programmes, which aim to help pupils with social and emotional problems through befriending, listening and support, is mixed. Large programmes run by the Mental Health Foundation and ChildLine (ChildLine 2008) have reported benefits for children and young people. A UK review of evidence on the benefits of peer mentoring in schools (Mentoring and Befriending Foundation 2011) found that peer mentoring benefited both the mentees and the school overall. Pilot studies have found that peer mentoring has an impact on reducing bullying, promoting self-confidence and self-esteem. However, an evaluation of the Formalised Peer Mentoring Pilot (Parsons et al. 2008) noted mixed evidence of impact on outcomes such as behaviour, attendance, attainment and self-concept.

Specialist staff involvement
Literature suggest that specialist staff in school can play an important role in reducing or preventing children's and young people's emotional difficulties. However, the complexities of measuring the impact of introducing such roles have made it difficult to evaluate such approaches. Previous studies evaluating school nursing programmes, for example, found that nurses improved health and education outcomes of pupils and students with chronic health conditions and provided care coordination, health education, and decreased long-term health issues (Leroy, Wallin, and Lee 2017).

Similarly, some local authorities and schools in the UK introduced support staff dedicated to fostering emotional literacy, known as Emotional Literacy Support Assistants (ELSA). The focus of these staff was on supporting individual pupils' needs, although some ELSA activities may involve group elements (e.g. to support friendship skills). The national ELSA Network website (http://www.elsanetwork.org/) provides more information about the evaluation of this approach, but the evidence is generally mixed. **Finally, a systematic review on effectiveness of school social work by Early and Vonk (2001) found that the**

presence of social work in schools increased skills, problem solving, and relationships between children.

School-based whole school/universal programmes
Alongside schemes at individual level and those that work to build interpersonal relationships and support children and young people, there also those that aim to promote emotional and behavioural wellbeing at schools in a wider context. This includes a 'whole school approach', which aims to modify the school environment in order to be of best benefit to pupils, staff and families.

Whole school approaches have been described as "cohesive, collective and collaborative action in and by a school community that has been strategically constructed to improve student learning, behaviour and wellbeing, and the conditions that support these" (Department of Education 2009).

Evidence on the effectiveness of universal/whole-school approaches is generally positive (Weare and Markham 2005). Systematic reviews of the impact of school-based interventions for mental health indicate that the vast majority of interventions have taken a universal (whole-school) approach to achieve optimal impact (Newman, Blackburn, and Scottish 2002). Evidence from systematic reviews in the Australian context suggests that the whole school approach in primary schools specifically increases resilience (Stewart et al. 2004).

The literature seems to suggest that the most effective programmes promoting emotional and behavioural wellbeing are whole school (see figure 4 for more information), multi-component programmes focusing on promoting wellbeing, social and emotional skills and positive behaviour. They include a classroom teaching element, provide teacher training, involve parents where possible and take place within a supportive school ethos and environment (Adi et al. 2007).

Figure 2. Ten elements to the whole school approach

Ten elements to the whole school approach:

1. Leadership.
2. Policy development.
3. Curriculum planning and resources, including working with outside agencies.
4. Learning and teaching.
5. School culture and environment.
6. Giving children and young people a voice.
7. Provision of support services for children and young people.
8. Staff professional development needs, health and welfare.
9. Partnerships with parents/carers and local communities.
10. Assessing, recording and reporting children and young people's development.

Source: (Department for Education 2014).

There are a number of specific school approaches that teach social and emotional skills as part of a wider school strategy or curriculum, which have shown some positive (although also mixed) results. For example, social and emotional learning (SEL) programmes and

social and emotional aspects of learning (SEAL) programmes (see also following boxes for examples of other successful interventions in the UK).

Figure 3. Building emotional resilience in schools in Denny, Scotland - an example of successful intervention

Intervention: building emotional resilience in schools in Denny, Scotland
The pilot was funded by the Scottish Government, Falkirk Council and HeadsUpScotland, and was delivered by YoungMinds and eight schools in Denny.

The programme included four initiatives:

- ✓ building confidence and self-esteem among pupils
- ✓ promoting confidence and understanding among teachers and other support staff
- ✓ raising awareness of resilience and wellbeing among parents through workshops designed to increase support
- ✓ enhancing the leadership skills of head teachers in the areas of resilience and wellbeing

Evaluation: Evidence suggests that pupils' self-esteem and resilient attitudes were enhanced; staff's own confidence in their ability to promote and facilitate discussion about resilience and emotional wellbeing increased, and parents felt more confident in their ability to support their child.

Source: (Scottish Development Centre for Mental Health YM 2009)

Interventions which target social and emotional learning seek to improve pupils' interaction with others and self-management of emotions. SEL interventions might focus on the ways in which children work with their peers, teachers, family or community. SEL programmes can be universal, which generally take place in the classroom; more specialised which are targeted at students with particular social or emotional needs; and school-level approaches to developing a positive school ethos, which also aim to support greater engagement in learning.

A 2011 meta-analysis of over 200 universal whole school SEL programmes (Durlak et al. 2011) identified overall significant improvements in evaluated pupils' skills, behaviour (e.g. fewer conduct problems), emotion (e.g. lower distress), and academic attainment (e.g. improved scores on standardised tests). The positive effects of SEL programmes are evident in other meta-analyses and systematic reviews (Sancassiani et al. 2015; Sklad et al. 2012).

However, **the UK PATHS (Promoting Alternative Thinking Strategies) programme, which aims to improve all pupils' behaviour and utilises the SEL approach, produced no evidence of sustained effects on behaviour or well-being.** A recent UK trial of the PATHS programme in 45 primary schools has shown no overall effect on academic achievement (Education Endowment Foundation 2015). Similarly, the evaluation of the previous UK Social and Emotional Aspects of Learning programme has also been mixed (Wigelsworth, Humphrey, and Lendrum 2012). The evaluation of a 2012 PATHS programme in Birmingham (Little et al. 2012) concluded that the programme produced mixed results with some improvement in the first 12 months. The authors argued, however, that there was a confounding influence because in the control group of schools there were other whole school programmes which were used at the same time.

Social and emotional aspects of learning (SEAL) is described in the literature as a comprehensive, whole-school approach to promoting the social and emotional skills that

underpin effective learning, positive behaviour, regular attendance, staff effectiveness and the emotional health and well-being of all who learn and work in schools. The national evaluation of SEAL programmes implemented in the UK found that the programme failed to impact significantly upon children's social and emotional skills, general mental health difficulties, pro-social behaviour or behaviour problems (Humphrey, Lendrum, and Wigelsworth 2010).

Figure 4. Place2Be - an example of successful intervention

Intervention: Place2Be

Place2Be provides support for parents, teachers and other school staff. Parents come to counselling sessions, most commonly to discuss depression and divorce.

Herlitz et al. 2013 reported consistent improvements reported by teachers, parents and children in wellbeing over four years of analysis.

For children with the greatest difficulties improvements were higher than for children as a whole: three-quarters of these children improved and half achieved clinical 'recovery' according to teachers.

Economic evaluation has estimated that for every £1 spent on the counselling support services, there is a cost saving of £6. This includes reduced costs associated with social services, welfare benefits and the criminal justice system.

Source: (http://www.place2be.org.uk/)

The evidence shows that whole-school approach interventions usually have positive effects, but to varying degrees. Effect sizes are small and positive effects can last, but will eventually diminish over time (Banarjee et al., 2014; Wigelsworth et al. 2016). **Systematic reviews and meta-analyses of interventions adopting whole school approaches suggest that there are better outcomes for children and young people identified as at risk,** but evidence about age remains limited and mixed. Some reviews indicate that younger children benefit more and others indicate that adolescence can be a more effective time for intervention. Children and adolescents in socio-economically deprived and ethnic minority background are rarely studied as a specific group as they are typically included in at-risk groups but when analysed, these groups are thought to experience better outcomes than their peers (Wigelsworth et al. 2016; Weare and Nind, 2011; Paulus et al., 2016).

A whole-school approach is advocated by policy (NICE, 2015) and empirical research, which demonstrates that a whole-school approach can lead to improvements in the pupil behaviour, school attendance and academic attainment (Banerjee et al., 2014). Literature suggests that while specific provision for children and young people with identified emotional and mental health needs is important, a whole-school approach is thought to build the emotional health of all children and young people. However, National Institute for Health and Care Excellence (NICE) outlines two distinct pathways for supporting emotional wellbeing and mental health in schools: targeted support for children and young people with particular needs, and a universal, whole-school approach embedded within the culture of the school (NICE, 2015).

Other school-based approaches

A number of school interventions focus on building positive strengths. A 2011 review (Waters 2011) examined interventions spanning primary and secondary schools specifically designed to focus on positive emotions, resilience and character strengths. Twelve studies encompassing interventions focused on gratitude, serenity/meditation, resilience, and

character were included. The review concluded that the findings were promising, although the author recognised that many of these interventions were often in the piloting stage. In the UK, a feasibility study of mindfulness in secondary schools (Kuyken et al. 2013) reported positive results, but, as with 2011 review, it was recognised that this work is still at an early stage and needs considerable further research.

The most recent systematic review of effectiveness of school-based universal mental health interventions (Mackenzie and Williams 2018) concluded that effectiveness is neutral or small, with more positive effects found for poorer quality studies and those based in primary schools (pupils aged 9–12 years). Another meta-analysis reviewing interventions preventing depression found that while there was evidence of immediate post intervention effects, these did not sustain over time (24–36 months) (Merry et al. 2011). It has to be noted that the majority of reviews in the mental health area focus on interventions delivered outside of the UK. The disparity in educational contexts between countries has put some of the review findings into question (Weare and Markham 2005). A NICE funded review (National Institute of Clinical Excellence 2008) of universal school-based interventions also noted that though findings from international based research are helpful, the generalisability to the UK educational system is questionable.

Further reading

- Profiling and monitoring to support Healthy Schools, available from: www.healthyschools.gov.uk/Enhancement/

- Promoting children and young people's emotional health and wellbeing. A whole school and college approach. Public Health England, available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/414908/Final_EHWB_draft_20_03_15.pdf

- Various resources providing guidance on whole school approaches:
  - The CASEL Guide (2015), available from: http://secondaryguide.casel.org/casel-secondary-guide.pdf
  - Australian KidsMatter Primary mental health initiative offers a library of rated programmes (https://beyou.edu.au/)
  - US based Blueprints for Healthy Youth Development website - provides a guide of rated programmes across various settings, target groups, and outcome domains. Available from: https://www.blueprintsprograms.org/

Approaches to school based emotional and social wellbeing interventions within further education

There is limited evidence on effective approaches within further education. However, a 2006 study (Warwick et al. 2006) identified a number of factors which appear to contribute to effective work in this area, including: building a college-wide awareness about the ways that emotional health affects student retention, attainment, and achievement; embedding the rationale for emotional health support and promotion into college-wide policies (both specific emotional health policies and more general ones such as learning support); enabling staff to address emotional health issues through good leadership (at senior and middle management levels) and adequate resourcing (from internal and external sources).

The same study also recommended having in place staff with specific responsibility for emotional health issues, including promotion within tutorial programmes; one-to-one support when problems arise; and developing college wide activities; having a tiered approach to professional development activities for staff so that all are aware of basic emotional health issues, and how to identify problems and refer where needed address emotional health as

part of a wider health-related programme (rather than tackling health topics on an ad hoc basis); and building a college culture or ethos that is perceived by students to be supportive and inclusive.

Figure 5. National Healthy Schools Programme: example of a whole school intervention

Intervention: National Healthy Schools Programme (NHSP)

NHSP was a government-led project designed to improve health and wellbeing within schools. Programme tackled emotional health and wellbeing, physical activity, healthy eating, and personal, social and health education.

The whole school approach was a key element of the healthy schools programme. The programme used a toolkit available to help schools 'plan, do and review' the health and wellbeing improvements within their student population, and to encourage selection of interventions based on needs data and evidence.

The programme is no longer monitored, but the resources (including case studies) are still available online:

http://www.healthyschoolslondon.org.uk/about

Source: (Healthy Schools 2010)

Out-of-school interventions

The literature relating to out-of-school interventions promoting emotional and behavioural wellbeing is very broad and often does not deal directly with wellbeing, transition and support for pre-schoolers, except as a side result of other outcomes. Therefore, we have not focused on out-of-school interventions, but we have included recommendations from a review of these interventions below for reference.

Evidence suggests that effective out-of-school activities and services can maximise opportunities to develop young people's social and emotional skills. Participation in activities that provide goals, skills and positive relationships with adults and peers can transform life choices of young people. The evidence suggests that benefits from these activities are greater if they are sustained throughout the teenage years (Eccles et al. 2003). The following service features have all been shown to promote positive youth development (Mahoney, Larson, and Eccles 2005):

- secure and health-promoting facilities and practices;
- safe and appropriate peer interactions;
- clear, appropriate and consistent rules and expectations;
- appropriate and predictable adult supervision;
- stable opportunities to form relationships with peers and adults;
- social interchanges characterised by warmth, closeness, caring and mutual respect;
- a social environment that emphases the inclusion of all members and recognises, appreciates and encourages individual difference;
- encouragement for desirable and accepted values and morals;
- focus on improvement not performance.

Figure 6. Examples of interventions delivered outside of the school environment

- **Watch, Wait and Wonder** - psychotherapeutic approach for parents and young children aged 0 to 4 with relational, behavioural, regulatory and developmental problems. An evaluation showed an increase in parenting satisfaction and competence, more secure attachment patterns and improved cognitive and emotional regulation in infants (more information on http://www.watchwaitwonder.com/).
- **The Family Nurse Partnership programme** - an intensive, structured home visiting programme delivered by specially trained nurses to vulnerable first time young mothers and their families, beginning during pregnancy until the child's second birthday. More information available from: https://www.nice.org.uk/guidance/ph40/documents/social-and-emotional-wellbeing-early-years-expert-report-42.
- **Sunderland Infant Programme** – parents are invited to participate and learn more about their babies' unique ways of communicating, which are captured through a short video clip at eight to 12 weeks. Tailor-made interventions are then devised, varying from behaviourally focused video-based guidance by health visitors to parent-infant psychotherapy with clinical psychologists. An evaluation showed a significant impact on maternal sensitivity and subsequently their child's attachment security. More information is available from: https://www.researchgate.net/publication/241688055_The_Sunderland_Infant_Program_UK_Reflections_on_the_first_year_The_Signal_9_15_World_Association_of_Infant_Mental_Health).

Cost-effectiveness of emotional and behavioural wellbeing interventions

Although there is a substantial literature examining school interventions promoting the emotional and behavioural wellbeing of children and young people, there has been little analysis of the economic costs and benefits of these interventions. Two studies explored health economic costs involved (Berry et al. 2016; Stallard et al. 2013). Cost-effectiveness was not calculated by Berry et al. due to lack of impact, and Stallard et al. concluded that the intervention was not cost-effective. Both studies had high initial costs due to training 101 teachers to deliver the PATHS programme, recurring costs associated with the management and delivery of the scheme, and due to employing external facilitators to lead the intervention rather than teachers.

NICE has modelled the cost-effectiveness of whole school approaches to preventing bullying and victimization and found that where these interventions were successful, the cost would be £9,600 per quality-adjusted life year (QALY) (Hummel et al. 2009). Whilst cost can be an issue, literature has argued that improving wellbeing and resilience can reduce costs in other areas. For example, reducing truancy can produce a saving of £1,318 per year per child, and reducing exclusion can save £9,748 in public value benefits, 89% of which goes to local authorities (HM Treasury, Public Service Transformation Network, and New Economy 2014).

Implementation and other challenges

Evidence suggests that measuring the impact of programmes and approaches is complex. For example, a methodological review of resilience measurement scales found 15 measures of resilience, but no 'gold standard' (Windle, Bennett, and Noyes 2011). Even where the evidence base for the intervention is very strong, Cheney and colleague suggest that there is no guarantee that introducing the programme will generate positive and long-term change (Cheney et al. 2014). Generally, literature indicates that

successful implementation of programmes in an everyday school context could require additional resources and support not normally available to schools.

Some further lessons from the literature are below:

- ***A whole school approach is supported by policy and some research.*** Research indicates that more positive outcomes were obtained for programmes adopting a 'whole-school' approach that lasted more than 1 year and aimed to promote mental health rather than prevent mental illness (Wells, Barlow, and Stewart-Brown 2003). However, NICE recommends a balance of both universal and targeted approaches for children and young people with particular needs, along with focus and monitoring of implementation of interventions (NICE, 2015).

- ***Different interventions seem to work better for primary and secondary school children and young people***. A review focusing on UK schools (Mackenzie and Williams 2018) found that studies based in primary schools seemed to find more encouraging results from cognitive behavioural therapy (CBT)-based interventions on measures of anxiety. Positive results tended to be found in the group of older age primary school pupils (9–12 years old). Within the secondary school population, the most positive results were found when delivering mental health education sessions, behavioural or mindfulness interventions. Two recent good quality studies evaluating CBT-based interventions within secondary school children and young people found some significant results (Mackenzie and Williams 2018). A 2011 meta-analysis (Durlak et al. 2011), covering SEL programmes across primary and secondary schools, identified a group of factors that seem to differentiate more effective SEL programmes: they include a coordinated sequence of activities to achieve the SEL goals, they involve active forms of learning, they have a specific focus on personal and social skills, and they involve explicit attention to particular social and emotional skills, rather than focusing on generic outcomes.

- ***Sustaining positive effects over time may be challenging*****.** Research across all interventions and approaches seems to indicate the positive effects of the interventions promoting emotional and behavioural wellbeing may not be sustained over time. For example, in studies reporting a 12-month follow-up no significant difference was found in the reduction of anxiety or depressive symptoms for children in the treatment and control groups (Mychailyszyn et al. 2012). There is also more research needed on the long-term impacts and costs of interventions. NICE has identified a number of areas where further research is needed in specific relation to social and emotional wellbeing (National Institute for Health and Clinical Excellence 2014). These include: (a) the differential impact of different professional groups; (b), cost-effectiveness of organisation-wide interventions; (c) the links between social and emotional wellbeing of children and young people and later health outcomes; (d) the impact of interventions on educational attainment and crime rates, and (e) a method for valuing the costs and benefits of interventions that involve different sectors.

- ***Generalisability of school-based interventions in the literature to real-world environments has been questioned*****.** Research seems to indicate that while several positive evaluations exist, this does not automatically translate to generalisability of findings across diverse settings and populations. Education system differences between countries mean that these findings may not necessarily be generalised to the UK. Many of the interventions involve external, specialist staff (e.g. therapists, researchers) and it is not clear how widespread rollout of this kind of intervention would work across schools. Greater understanding of how interventions that work

can be scaled up but also greater awareness of how interventions can best be integrated with school systems are needed.

- ***Buy-in from teachers is imperative***. Research indicates that without 'buy-in' from teachers, any school-based intervention is less likely to sustain or achieve positive outcomes (Mackenzie and Williams 2018; Weare 2015). However, the evidence is unclear on the beneficial role of teacher involvement in universal interventions to prevent bullying and disruptive behaviour. Blank and colleagues note that many interventions rely on teacher involvement and training without explicitly stating this (Blank et al. 2009).

- ***The role of local authorities in supporting and encouraging schools to take action is vital***. Schools and local authority children's services should work closely with child and young people mental health a services to develop and agree local protocols. These protocols should cover assessment, referral and a definition of the role of schools and other agencies in delivering interventions (NICE, 2015).

  Schools and local authorities can work together to gather data on local children's outcomes, using the measures mentioned in this section, as well as other local sources of data. Literature seems to suggest that some effective local authority approaches have tended to include the following features, in addition to the responsibility for overseeing maintained schools (Public Health England and UCL Institute of Health Equity 2014a):

  a. providing schools with data of levels of need within their local populations;
  b. monitoring changes in health outcomes, using national and local data and indicators, and sharing these with schools;
  c. sharing information on interventions that are evidence-based, and have been shown to have good outcomes;
  d. enabling and encouraging schools to work in partnerships; including facilitating connections between schools and clinical commissioning groups to help ensure that local commissioning is responsive to the experiences and needs of local children and young people;
  e. acting as a conduit for information and guidance about national and local policy to schools;
  f. training school staff on resilience-promoting programmes.

The literature also suggests a range of indicators of overall progress and implementation of interventions that can be used to measure impact (see below). 'Measuring what matters: a guide for children's centres' sets out a range of indicators to measure early child development in the areas of children's health and development, parenting skills, the context of parenting, and later life outcomes (Roberts, Donkin, and Pillas 2014).

Figure 7. Possible measures of progress in intervention implementation

Outcome area	Measures of progress
Improvements in overall emotional health	Participation in Healthy Schools/Healthy Further Education programmes and proportion of schools/colleges achieving a high standard of provision Findings from other assessment tools and scales used in specific interventions with children

Outcome area	Measures of progress
Parents and carers more confident in nurturing their child's emotional health	Evaluation reports from parent support programmes; formal evaluations
Childcare and learning environments are attractive, supportive and safe	Performance against Ofsted wellbeing indicators
Better attendance	School and college level data
Better behaviour	School and college level data
Better attainment	School and college level data
Greater placement stability for looked after children	Local authority data
Better access to services when help is needed	Data on the range and success of local programmes and projects – for example behaviour and education support teams, parenting programmes, counselling and drop-in services
Staff more confident and competent in identifying and supporting children with emotional health needs	Evaluation reports, formal evaluations
Community and leisure environments are attractive and safe	Evaluation reports, formal evaluations

(Adapted from Promoting the emotional health of children and young people. Guidance for Children's Trust partnerships)

Recommendations

Below are some recommendations for designing and implementing interventions in the promoting emotional wellbeing and resilience, drawn from the evidence review. Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 8. Interventions promoting emotional wellbeing and resilience

Interventions promoting emotional wellbeing and resilience	Recommendations
School-based intervention development and implementation	When designing the intervention**, consider** a universal whole school (embedded within the culture of the school) approach, as supported by NICE guidelines. **Ensure** the whole school approach focuses on promoting wellbeing, social and emotional skills and positive behaviour, includes a curriculum that integrates the development of social and emotional skills within all subject areas, provides teacher training, and involves parents where possible.
	For children and young people with particular needs, **ensure** universal approaches are augmented by targeted interventions designed to address their needs.
	Consider CBT-based interventions for the older age range of primary school pupils (9–12 years old) and mental health education sessions, behavioural or mindfulness interventions for secondary school pupils.

Interventions promoting emotional wellbeing and resilience	Recommendations
	Ensure interventions are designed in such a way as to meet language and literacy needs of the group/s targeted.
	Consider whether the intervention will be delivered by teachers/school nurses or specialist staff. If the former, ensure resourcing implications have been addressed; if the latter, ensure an approach is in place to recruiting and training for new roles.
	Consider how the proposed intervention will fit with the day-to-day running of the school.
	Ensure appropriate resources. Implementation of interventions in an everyday school context could require additional resources and support not normally available to schools.
Intervention evaluation	**Ensure** you evaluate the intervention in order to support further development of efficient and effective approaches, both within the BSOL STP and nationally.
	Consider measuring outcomes such as emotional wellbeing and resilience, but also risk and protective factors that may enable children and young people to have a resilient response when faced with adversity in future. These can include, but are not limited to, achievement and attainment at school, lack of poverty and deprivation.
	Ensure schools taking part in the intervention are provided with data about the levels of need within their pupil and student population, so that they are enabled and encouraged to tackle existent need.
	Enable and encourage schools taking part in the intervention to work in partnership – with other schools, the local community, the voluntary sector, and local authority commissioned services and programmes.
STP assurance	**Ensure** working across governance frameworks – so that relevant stakeholders such as local councillors or local authority staff can play a role in the oversight of these schemes, for instance via school governing boards, and head teachers or other school representatives can sit on local health and wellbeing boards.

II. School readiness – transition from home or nursery to school

Overview of evidence

Home to school transition interventions aim to ensure a smooth transition from the home, or nursery setting, into primary school, which gives children better chances of good outcomes (Public Health England and UCL Institute of Health Equity 2014b). School readiness is increasingly recognised as an important component of the readiness. A good transition from home or nursery into school is important, particularly for children living in more difficult circumstances, those with special needs, or for whom English is not a first language.

Good home to school transitions have been linked to better outcomes, particularly for at-risk groups (Public Health England and UCL Institute of Health Equity 2014b). There is some debate around the precise definition of school readiness and how it should be assessed (Aiona 2005). Some argue children are ready for school once they reach a certain age; others understand school readiness as a range of skills and competencies that a child is taught at home or in a childcare environment.

There is evidence that a range of parenting programmes designed for families with children of a particular age are effective in supporting child's transition from home or nursery to school. The literature suggests that the quality of parenting affects children's long-term physical, emotional, social and educational outcomes. Positive, warm parenting, with firm boundaries and routines supports social and emotional development and reduces behavioural problems.

There is also evidence that transition interventions are more likely to be successful where they focus on the whole child, implement a variety of practices, provide targeted support for at-risk groups, are flexible and responsive to local needs, ensure strong leadership, share information amongst everyone involved in delivery and proactively seek it, and ensure good communication between all involved.

However, although promising, literature on school readiness is limited in a number of ways. Studies tend to focus on children, parent and teacher perceptions of approaches, rather than evaluating specific interventions. There is also very little evidence from the UK.

Interventions facilitating successful transition from home/nursery to school: effectiveness and cost-effectiveness

Child-focused interventions

A range of different interventions have been developed to promote school readiness in young children. Most focus on the academic skills of the child, with a particular focus on literacy and numeracy, but many also concentrate on developing self-regulation, sitting still, listening, following instructions, and taking turns in conversation and play.

Evidence from the evaluations of early childhood interventions indicate that participation in centre-based programmes at ages 3 and 4 years is associated with greater school readiness and achievement, higher rates of educational attainment and socioeconomic status as adults, and lower rates of crime, substance use, and mental health problems (Lynn, Kilburn, and Cannon 2005; Reynolds et al. 2014; Reynolds and Ou 2011).

Examples of effective early childhood interventions in the US context can be found in the box below. Studies exploring the impact of full day preschool versus half day (Valenti and Tracey 2009; Loeb et al. 2007) show promising results. A 2014 evaluation of the US Midwest Child-

Parent Centre Education Program (Reynolds et al. 2014), which provides comprehensive education, family-support, and health services from preschool to third grade in high-poverty neighbourhoods, found that children who participated in a full-day preschool had higher scores than their part-day peers on socioemotional development, maths, language and physical health.

Furthermore, **evidence from early childhood curricula indicates that high-quality early childhood education can have significant and positive impacts on the school readiness skills of children who are at risk for later academic difficulties**. Results of the US studies provide evidence supporting the value of early childhood education; however, the majority of these studies were comparisons between children who did and did not participate in a programme and cannot directly state which early childhood experiences or curricula result in positive school readiness outcomes (Lonigan et al. 2015).

Some randomized international studies have provided evidence of positive effects of specific preschool curricula (Bierman et al. 2008; Wilcox et al. 2011; Fantuzzo, Gadsden, and McDermott 2011). Bierman et al. (2008) reported that their Research-Based, Developmentally Informed (REDI) curriculum, which included activities designed to promote multiple emergent literacy skills, and the Promoting Alternative Thinking Strategies (PATHS) curriculum, resulted in better child outcomes on measures of vocabulary, phonological awareness, emotion recognition.

Figure 9. Examples of effective early childhood intervention programmes from the US

Effective Early Childhood Intervention Programmes from the US
Home Visiting or Parent Education

- DARE to be You
- HIPPY (Home Instruction Program for Preschool Youngsters) USA
- Incredible Years
- Nurse-Family Partnership Program
- Project CARE (Carolina Approach to Responsive Education) — without early childhood education

Home Visiting or Parent Education Combined with Early Childhood Education

- Carolina Abecedarian Project
- Chicago Child-Parent Centers
- Early Head Start*
- Early Training Project
- Head Start
- High/Scope Perry Preschool Project
- Houston Parent-Child Development Center
- Infant Health and Development Program
- Project CARE — with early childhood education
- Syracuse Family Development Research Program

Early Childhood Education Only

- Oklahoma Pre-K

(Adapted from Lynn et al., 2005)

Wilcox et al. (2011) reported that children with speech or language problems in classrooms that used the Teaching Early Literacy and Language curriculum outscored similar children in non-intervention classrooms on measures of phonological awareness, letter sounds, mean length of utterance, and a curriculum-aligned vocabulary measure. Fantuzzo et al. (2011)

reported significant impacts in US Head Start classrooms of their Evidence-based Program for Integrated Curricula on measures of listening comprehension and mathematics compared to a control group.

Parent-focused interventions

A range of different parenting interventions have demonstrated positive impacts on school readiness in pre-school children. Literature seems to suggest that those that promote positive parenting practices and parent-child relationships; those that promote home learning activities and effective teaching strategies; and those that strengthen parent-teacher partnerships lead to positive outcomes (Bierman, Morris, and Abenavoli 2017). These intervention generally focus on learning activities at home, building positive relationships, engaging in preschool activities, and communicating with teachers. They use various methods of involving parents, including face-to-face intensive individual coaching (Sheridan et al. 2011) and regular parenting groups (Brotman et al. 2011). The majority of parenting interventions are targeted at parents whose children are at-risk for school readiness delays.

A longitudinal study that followed children from kindergarten to 5th grade showed that increased school-based parent involvement (e.g., attending parent–teacher conferences, participating in school activities, or volunteering in the classroom) predicted improved child literacy skills (Dearing et al. 2004). In US Department of Health and Human Services Head Start programme, parent involvement at home was associated with positive growth in children's attention, motivation to learn, and receptive vocabulary (Fantuzzo et al. 2004).

A number of early childhood interventions focus on enhancing parent sensitivity, responsiveness, parent-child communication and parent support for learning. The Incredible Years parenting programme targets parents of preschool children at risk for poor school adjustment due to externalizing behaviour problems. A 2004 evaluation of Incredible Years suggested moderated effects, with the impact on disruptive behaviour problems primarily evident for children who had high rates of problem behaviours prior to the intervention (Reid, Webster-Stratton, and Baydar 2004). Home Instruction Program for Preschool Youngsters (HIPPY), another intervention, is a home visitation programme for parents of low-income four-year-olds that includes the transition to kindergarten. Evaluations of HIPPT suggested that family participation in this home visiting program enhanced child academic performance promoting higher grades and greater social adjustment (Bradley and Gilkey 2002; Nievar et al. 2011).

More generally, practices to support children through a period of transition, such as open days and part time starts to the year, are associated with children making a better adjustment to the new school environment and improved social and emotional skills among children and young people. Review on improving the home to school transition (McIntyre et al. 2007) shows that such practices are linked with improvements in young people’s attainment in some academic subjects. However, researchers have found that children with the greatest risk of poor transition experiences benefit more from good transitions and achieve better grades (Miller et al. 2003).

While many studies examine the effects of school readiness interventions, very few rigorously analyse costs. Those studies that explore cost-effectiveness tend to be outdated and from the US (Lynch et al. 2017). For example, many US studies show that high-quality early learning experiences pay off in the long run (Lynn, Kilburn, and Cannon 2005). However, there are interventions in the literature that are described as very cheap and providing positive results.

Implementation and other challenges

As already mentioned, literature on school readiness is limited in a number of ways. Therefore, whilst providing useful information about what is available, studies in this area are yet to identify which strategies are associated with successful outcomes. However, some general lessons can be pulled out from the literature:

- ***Literature seems to suggest that early childhood parenting interventions may not produce positive impacts on child's school readiness*.** Many of the parenting interventions are not designed specifically to enhance child school readiness, but rather target the needs of the parents. Welsh, Bierman and Mathis (2013) suggest that, as research moves forward, it should assess changes in parenting skills targeted by the intervention, as well as factors that might moderate intervention effectiveness, such as age or developmental status of the child.

- ***Literature is unclear about the level of intensity and dosage of intervention required to positively impact school readiness*.** The level of intensity and dosage of intervention required to meaningfully impact school readiness in studies that target parents remain unclear. While some advocate brief, others suggest that more intensive and sustained interventions produce better outcomes for children.

- ***Interventions that coach parents in specific behaviours tend to produce better outcomes.*** Based upon the available evidence, interventions that focus on coaching parents in specific behaviours linked closely with their children's academic progress appear more consistent in promoting gains in child cognitive skills than programmes that have broader goals and are more focused on educating parents about developmental issues. However, more research is needed in order to better understand the circumstances under which these types of parenting interventions have significant effects on child school readiness outcomes.

- ***Starting the intervention earlier may produce better outcomes*.** In general, the majority of child-focused interventions that have looked at age of entry (three vs. four years of age) and duration (one vs. two years of the program) find that starting an intervention earlier is better for children, and that children with longer exposure also do better (Zill et al. 2003). Results from the US national probability sample of Head Start children revealed that children who spent two years in the program showed stronger gains and higher scores at graduation, compared with those who spent one year (Zill and Resnick 2005).

- ***Literature suggests some features of successful early childhood interventions that lead to greater school readiness.*** Based on the findings from US studies, three features appear to be associated with more effective early childhood interventions (Lynn, Kilburn, and Cannon 2005):

a. Interventions with better-trained caregivers appear to be more effective. In the context of centre-based interventions, this may take the form of a lead teacher.
b. In the context of centre-based interventions, there is evidence to suggest that programs are more successful when they have smaller child-to-staff ratios.
c. There is some evidence that more intensive interventions are associated with better outcomes, but not enough to indicate the optimal duration or intensity.

Recommendations

Below are some recommendations for designing and implementing interventions in the supporting school readiness, drawn from the evidence review. Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the

evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 10. School readiness interventions recommendations

School readiness for children entering school	Recommendations
Intervention design	**Ensure** the goals and target audience are determined before commencing the intervention.
	When designing interventions for pre-school children, **consider** high-quality centre-based programmes and early childhood curricula.
	If focusing on high quality centre-based programmes, **ensure** that that programme is intensive, includes well-trained staff, there is a smaller child-to-staff ratios, and commences as early as is feasible.
	If focusing on early childhood curricula, **consider** Research-Based Developmentally Informed (REDI) or Promoting Alternative Thinking Strategies (PATHS) curricula.
	If improvements in child school readiness are a central goal of parenting intervention, **ensure** it focuses on building the specific child competencies that are important to school readiness. This can be achieved through, for example**,** coaching parents in specific behaviours linked to academic progress.
	Ensure local primary schools hold open days to aid transition to school.
Intervention implementation and evaluation	**Ensure** that the approach to implementing the intervention is flexible and responsive to the needs of children and parents. **Consider** offering differentiated or flexible intervention options, providing written information and frequent feedback.
	Ensure you evaluate the intervention in order to support further development of efficient and effective approaches within the BSOL STP and nationally. **Consider** assessing changes in parenting skills targeted by the intervention, their impact as mediators of improvements in child school readiness skills, and factors that might moderate intervention effectiveness such as age or developmental status of the child, intervention dosage and intensity.

III. Transition from primary to secondary school

Overview of evidence

Despite the evidence that the primary to secondary transition is a difficult period for some pupils, there is a lack of longitudinal research focusing on children transitioning to secondary school.

Most schools implement formal programmes to support pupils through school transition, although these vary considerably in content and focus (Evangelou et al., 2008). The reviewed literature is diverse but the quality of studies varies – most studies are descriptive and only a few studies provide good quality evidence. The majority of studies are small scale and use only questionnaires, and students or teachers reports to evaluate the impact. What is more, interventions focus a variety of skills and behaviours (e.g. self-esteem, personal safety behaviour, school concerns) (Neal et al. 2016). The most recent studies in the area have focused on resource-intensive interventions with small groups of vulnerable pupils and led by highly trained professionals (Mowat 2019).

Interventions to facilitate successful transition to secondary school: effectiveness

There is a consensus in the literature that well designed and implemented transition approaches can assist in the process of supporting students, their families and school staff (Hanewald 2013). However, the evidence base of what works is limited. There are a number of interventions designed and delivered by schools to ease the transition process. However, the emphasis is often on administrative and organizational procedures (Jindal-Snape and Miller 2008).

Pupil-focused universal schemes

Literature describes interventions that improve the social aspects of transition, including buddy systems where older pupils are matched with the new intake in order to provide support and visits made by older pupils to their primary schools (Fuller, Thomas, and Horswell 2005). Dawrent, for example, advocates year 7 pupils questioning year 6 pupils on their concerns about transition and putting together a presentation to help alleviate these (Dawrent 2008). However, these interventions and schemes are rarely evaluated. **What is more, literature seems to suggest that with these types of interventions, the emphasis is put upon making new friends quickly because it is thought to have a positive effect on transitions** (Sirsch 2003). Therefore, the literature often describes transition or induction days as 'interventions' to enable new pupils to find their way around the school, usually when older pupils are not in school (Topping 2011). These initiatives are thought to be effective and valued by pupils themselves (Jindal-Snape and Foggie 2008).

Pupil-focused targeted schemes

A number of interventions focus on helping children who are at risk for a poor transition and provide adequate information and social support activities. **Given that school transition is a long-term process, starting before children move to secondary school and continuing after, evidence suggests that pupils need to be well-prepared before the transition occurs** (Jindal-Snape and Miller 2008). A number of studies have investigated the impact of preventative interventions before secondary transition and reported positive results for targeted interventions (Neal et al. 2016). Using focus groups and questionnaires to elicit child, parent and teacher views on a 10-week 'pyramid club' - a short-term targeted and preventative therapeutic group intervention – Shepherd and Roker reported positive changes in self-esteem, a reduction in school concerns, and improved social skills of children in the final year of primary school (Shepherd and Roker 2005). In another study by Lyons and Woods, the same intervention was implemented and showed positive changes in

children's social-emotional wellbeing and social and interpersonal functioning. The outcomes were further supported with interviews with children (Lyons and Woods 2012).

Another study (Rosenblatt and Elias 2008) found that children who took part in the universal programme prior to the transition to middle school had a significantly smaller decline in their grade point average, compared to a non-intervention comparison group. An international study in Cambodia (Nonoyama-Tarumi and Bredenberg 2009), exploring a universal school readiness program on students' immediate acquisition of school readiness skills as well as students' longer term achievement of formal curriculum, concluded that children who participated in in the programme outperform children that did not participate. The programme included various components, from the development of special curricular documentation, a 14-day teacher training programme to orient new teachers to the programme, a regular monitoring regime to support teachers in their implementation, physical upgrading of classrooms, to formalized student assessment for monitoring and reporting purposes. Similar results were found for children attending such programmes in Nepal (Save the Children 2003), Cape Verde and Guinea (Jaramillo and Tietjen 2001).

Parent-focused universal interventions

Studies indicate that support from the family is important (Jindal-Snape and Miller 2008; Coffey 2013; Lester et al. 2012) and that parents involvement in facilitating successful transitions is imperative (Topping 2011). Efforts to involve parents mentioned in the literature include having "an open-door policy or internet forum" (Howe and Richards 2011) and holding parents meetings and open days prior to transition (Jindal-Snape 2012). Research indicates that children from more supportive home environments tended to experience less academic difficulty when transitioning. Rice suggested that a type of relationship between parents and their children was more important than the types of activities in which parents were invovled (Rice, 1997).

Interventions that target children struggling with transition

Literature suggests a number of ways in which children struggling with transition can be supported. Coffrey notes that parents can support children with homework, whilst positive peer relationships and friendships can promote better transition to the new environment of the secondary school (Coffrey, 2013). The literature also points to the role of teachers. A study undertaken by Hamm and colleagues found that teachers promoted better adjustment and more positive transition period (Hamm et al. 2011). However, teachers were found to provide the least amount of support, in comparison to parents and peers (Kurita and Janzen, 1996).

The type of support needed depends on child's academic deficiencies. For example, students with academic deficiencies are thought to need substantial support. Anderson and colleagues suggest that these children need services provided to them prior to (e.g., a summer academic program) and immediately following (e.g., additional academic assistance) the transition (Anderson et al., 2000). Other forms of assistance mentioned in the literature are: assigning children to the strongest teachers, making tutors available to them, providing them with opportunities for after school homework assistance, making explicit the standards in place in the classroom and school, and counselling to address emotional issues.

Implementation and other challenges

As mentioned in the overview section, most studies in this area are descriptive and only a few studies provide information on evaluation. Despite the different perspectives in the literature, there is some agreement about the key aspects which influence a successful transition from primary to secondary schools.

- ***For children struggling with primary to secondary transition multiple types and sources of support are necessary.*** Children struggling with transitions typically need several types of support provided by multiple groups (Anderson et al. 2000; Combs, 1993). Literature also suggests that this support needs to be provided before, during, and after the transition (Epstein and MacIver, 1990).

- ***There is agreement about the key aspects which influence a successful transition to secondary school.*** Evangelou et al. describe a successful transition as: (1) After a successful transition children have developed new friendships and improved their self-esteem and self-confidence; (2) they are settled so well in school life that they cause no concern to their parents; (3) interest in school and schoolwork has increased compared with primary school; (4) they are used to their new routines and, (5) the school organization and they experience curriculum continuity (Evangelou et al. 2008). The following box is a list of good practice adapted from the National Foundation for Educational Research (NFER) report (Evans et al. 2010).

Figure 11. Good transition practices

Good transition practices

- **Focus on the whole child**. For example, ask children about family, likes and dislikes and show an interest in more than knowledge of the alphabet.
- **Implement a variety of practices** (for example, open days, information sessions, one to one support), because the more practices in place the greater the benefit.
- **Provide targeted support for at-risk groups**, such as looked-after children and those from disadvantaged backgrounds.
- **Be flexible and responsive to local needs**, for example by being flexible on times and providing appropriate translation services.
- **Ensure strong leadership and high-quality delivery**. This includes strong leadership from the local authority and full engagement from senior management within schools.
- **Share information and proactively seek it**. For example, record sharing, pre-school and school linking schemes, teachers familiarising themselves with previous curriculums in pre-school, etc.
- **Hold induction and orientation meetings** for when the child starts school.
- **Adopt shortened school days** at the beginning of the school year with part-time attendance at first.

Source: (Evans et al. 2010)

- ***Interventions to facilitate a successful transition should be comprehensive, should involve parents, and receiving schools should make every effort to create a sense of community belonging.*** Parents can contribute to a smooth transition by participating in their child's schooling. Fostering relationships during the first year of middle school by organizing social and interest-specific events is also important. Effective lines of communication need to be established between parents and the school so that both can work effectively together for the benefit of the children) (Anderson et al. 2000; Coffey 2013). There is evidence that transition programmes are also more likely to be successful where they focus on the whole

child, implement a variety of practices, provide targeted support for at-risk groups, are flexible and responsive to local needs, ensure strong leadership and high-quality delivery, share information and proactively seek it, and ensure good communication between all parties (Public Health England and UCL Institute of Health Equity 2014b).

- ***Studies with long-term follow-up of subjects or analysis of effects are scarce*.** There is, in general, little work that has followed up the subjects of studies in the longer term, particularly in the UK. There is some longer term evaluation work from the US, which is useful to indicate the direction of the effect. Shorter term evaluation work is also useful to see positive effects but there is some evidence that the effects fade over time. The findings of such studies have to be interpreted with caution.

Recommendations

Below are some recommendations for designing and implementing interventions in the supporting a child's transition to secondary school, drawn from the evidence review. Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 12. Interventions supporting a child's transition to secondary school

Interventions supporting a child's transition to secondary school	Recommendations
Intervention design	As most schools already have induction processes in place, **consider** supporting and enhancing existing interventions, where possible**.**
	Consider encouraging schools to implement a variety of practices (for example, open days, information sessions, and one to one support). The more practices in place, the greater the benefit.
	Consider encouraging school to focus on intensive social bonding events and buddy systems where older pupils are matched with the new intake in order to provide support and visits made by older pupils to their primary schools.
	Consider intervening before children move to secondary school
	Ensure targeted support for at-risk groups, such as looked-after children, those with learning difficulties and from disadvantaged backgrounds.
	For children struggling with transition, **consider** multiple strategies. These can involve parents, child's friends and teachers and include help with homework, providing information about transition, and helping children learn new school rules and routines.
	Ensure the overarching transition strategy focuses on the whole child, implements a variety of practices, is flexible and responsive to local needs, supports sharing information and

Interventions supporting a child's transition to secondary school	Recommendations
	proactively seeking it, and is based on good communication between all parties.
Intervention implementation	**Ensure** that the approach to implementing the intervention is flexible and responsive to the needs of schools and parents.

Maternity, childhood and adolescence: summary

- Overall, many of the interventions outlined within this priority have the potential to improve emotional and behavioural wellbeing of children and young people, facilitate successful transition from home or nursery to school and support transition from primary to secondary school.

- Actions to promote emotional and behavioural wellbeing of children and young people can be targeted at different levels – they can aim to increase achievements of pupils; to encourage healthy behaviours and to promote better interpersonal relationships between people. Schools can play an important role in supporting children, and there are a range of ways in which local authorities can support and encourage schools to take action. However, there are also many evaluated parenting programmes in existence. Evaluated interventions can also be delivered at different stages of the child's development, and are designed to work with children and /or parents and teachers.

- In supporting children's and young people's wellbeing, the whole school approach seems to produce better outcomes. Research seems to indicate that more positive outcomes were produced for interventions adopting a 'whole-school' approach that lasted more than one year, and aiming to promote mental health rather than prevent mental illness.

- There is evidence that transition from home/nursery to school interventions are more likely to be successful where they focus on the whole child, implement a variety of practices, provide targeted support for at-risk groups, are flexible and responsive to local needs, ensure strong leadership, share information and proactively seek it, and ensure good communication between all parties involved.

- In supporting children's successful transition from primary to secondary school, the evidence on successful interventions is sparse and mixed. Although there are some promising interventions, the literature is limited in a number of ways. Studies tend to focus on children, parent and teacher perceptions, rather than evaluating specific programmes or outcomes.

- There is agreement in the literature about the key aspects that influence a successful transition from primary to secondary school. Important aspects are: the involvement of all stakeholders in interventions, good communication between all stakeholders, the formation of a supporting network, priorities for "preparedness" for autonomy and for making relationships at secondary school, related to safety and belonging awareness for gender differences. Providing open days, familiarisation lessons and visits is linked with children making a better adjustment to the school environment. Support for parents is also important.

- The evidence for cost-effectiveness is mixed and often not available. However, the literature seems to suggest that developing and implementing the interventions should save money later. When cost-effectiveness data is available, it is specific to the studies and areas illustrated. STP Board members should therefore treat cost-effectiveness data with caution especially in considering the wider applicability of findings.

Across the maternity, children and adolescents' priority areas, interpretation of evidence is inconsistent, which makes reviewing the existing literature difficult. For example, some reviews of interventions promoting emotional well-being conclude that targeted programmes are more effective than universal interventions (Haney and Durlak 1998),

perhaps because there is a greater need to target children and young people who face difficulties (Cheney et al. 2014). Others suggest that the most successful interventions were those underpinned by a whole-school approach (Bernstein et al. 2004).

We suggest that these approaches do not necessarily need to be mutually exclusive and should be considered alongside each other when commissioning and implementing interventions to promote wellbeing of children and young people. Doing so will enable the STP to support the children and young people who will need targeted resources – for example, interventions to facilitate successful transition to secondary schools among children with learning difficulties or non-native English speakers. In addition, there may be schools in the BSOL STP area that serve populations who are likely to experience greater levels of adversity and struggle, and are therefore more in need of programmes to support all children and young people attending school.

3.2. Adulthood and Work

In this section, we present the evidence on the three intervention areas that were selected for the in-depth analysis in the *Adulthood and Work* priority:

- Understanding the evidence base for social prescribing
- Providing "best in class" support to employees experiencing stress and all forms of musculoskeletal problems
- Effective interventions for supporting young people experiencing the highest levels of deprivation, with a specific focus on addressing youth unemployment (19-25 years old) and gun and knife crime

I. Intervention area: understanding the evidence base for social prescribing

Overview of evidence

Social prescribing is "the use of non-medical community resources to respond to the needs of patients presenting in a primary care context" (Cawston, 2010). It can be used to improve both physical and mental health and wellbeing outcomes, though the approach features most commonly in the literature in relation to mental health and wellbeing. It includes elements of co-production, and involves health professionals or dedicated social prescribing staff encouraging patients to join community-based activities in order to improve their wellbeing (Baker, 2016).

Social prescribing is often targeted at patients who "may require a greater level of social and emotional support to improve wellbeing and health" (Drinkwater, 2019). It is generally preferred to conventional treatment in situations where professionals consider that a medical intervention is unlikely to work and a social intervention could be more appropriate, when the patient appears to need "alternative ways to channel their energies", when a patient or carer could benefit from more integration or involvement with local community, or where empowerment or self-help might enable a patient or carer to resolve their own difficulties (Friedli, 2008).

Schemes can focus on isolated, vulnerable or marginalised groups. Examples include low-income single parents, recently bereaved older people, people with chronic physical illness, people with mild to moderate depression and anxiety, people with severe and enduring mental health problems, and frequent attendees in primary and secondary care (Knapp, 2011), as well as groups such as LGBT and BME communities, for whom specific, tailored, services provided from within the voluntary and community sector might be available (Grant, 2000).

Social prescribing schemes are also viewed as a means of reducing demand on health services by finding non-medical ways to meet service users' needs, as well as improving community wellbeing and reducing social exclusion (Knapp, 2011). Improving the sustainability of general practice is often a focus of these schemes (Bickerdike, 2017,

Cawston, 2010). Figure 13 (below) sets out social prescribing goals and outcomes associated with different areas of patient need and service-level objectives.

Figure 13. Social prescribing goals and outcomes associated with different areas of patient need and service-level objectives

Area of focus	Social prescribing goals/outcomes
Mental wellbeing	Increased self-esteem Increased confidence Increased control Increased empowerment Positive mood Reduction in anxiety/depression Improved motivation Providing hope and optimism
Physical wellbeing	Improved physical health Improved lifestyle Increased public knowledge of exercise, sensible drinking, eating well
Social functioning	Increased sociability Improved communication skills Increased social connections Reduced social isolation Reduced loneliness Building and maintaining social networks
Career development/life skills	Acquisition of learning Acquisition of new interests and skills
Service utilisation	Reduction in visits to general practitioners, referring health professionals and primary or secondary care services
Quality of provision	Provision to general practitioners of a range of options to complement medical care for a more holistic approach

Sources: Chatterjee (2018), Knapp (2011)

Effectiveness

Figure 14 and 15 below show summary results from a range of evaluations into social prescribing schemes. Figure 13 shows schemes with only a component on effectiveness at improving outcomes, whereas figure 14 shows schemes where cost effectiveness was also taken into account. Social prescribing schemes evaluated range from online signposting resources to co-production of detailed wellbeing plans and referral to community activities.

There are some specific challenges when evaluating the effectiveness of social prescribing schemes. Carnes (2017), suggests that "given the discrepancy between the qualitative and quantitative literature on social prescribing, it could be that the standard health outcome measures do not capture the 'non-health' related outcomes that reflect patient priorities and their perspective of their own health and wellbeing". Specifically, this may mean that surveys and interview-based research using standard question formulations common in health may need to be adapted in order to capture information about whether these schemes have a broader impact on participants' lives.

Figure 14. Summary table of effectiveness of social prescribing schemes as outlined in published evaluations without a cost-effectiveness component

Intervention	Example from literature (and evaluation population)	Effectiveness
Tailored access to local resources based on personal preference, need and acceptability (PLANS tool)	Blickem, C. et al (2013) Focus-group based qualitative study with members of community groups in Greater Manchester	*Principal themes emerging from the research were isolation, safety and linking to support; the power of the group to normalise problems of chronic illness; the group as a forum for exchange of emotional and practical support *Participants raised concerns over mobility and lack of public transport as a barrier to accessing schemes – this was seen as particularly critical in deprived areas where there were fewer resources, therefore access beyond the immediate area was important *Awareness of existing resources was sporadic and required existing links in the community – exacerbating the divide experienced by isolated people
Creation of mutually-agreed wellbeing action plan, working with social prescribing coordinator	Carnes, D et al (2017) Mixed method evaluation using patient surveys with matched control groups and qualitative interviews “mixed socio-economic, multi-ethnic, inner city London borough with socially isolated patients who frequently visited their GP”	*Significantly higher annual GP consultation rate in those referred to social prescribing than in controls both before and in year following intervention, but GP consultation rate lower in SP after matched comparator analysis *GP consultation rates fell; these may have reflected regression to the mean rather than changes related to the intervention *Number of medications prescribed remained stable in the social prescribing group but increased slightly in control group *No statistically significant difference in any PROM outcome at eight months for cases or controls *Most patients had a positive experience with social prescribing but the service was not utilised to its full extent
Social prescribing activity	Loftus, A.M. et al (2017) Impact of social prescribing on general practice workload and polypharmacy	*Sixty-eight patients agreed to participate but only 28 (41%) engaged in a prescribed social activity *No statistically significant difference in GP contacts or number of new

Intervention	Example from literature (and evaluation population)	Effectiveness
	Patients aged over 65 with a chronic condition who attended their GP frequently or had multiple medications, Derry Northern Ireland Data collection – GP contacts, new repeat prescriptions, primary diagnoses referral indication, reason for declining participation in a social prescribing activity after referral	repeat prescriptions between referral and completion of 12 weeks of social prescribing activity *No statistically significant difference in total repeat prescriptions between referral and 6-12 months after social prescribing activity in either intention to treat or per protocol analyses *Mental health issues (anxiety and/or depression) were more common among participants than those who were referred but declined participation in a social prescribing activity (P ¼ 0.022). *While social prescribing may help patients' self-esteem and well-being, it may not decrease GP workload. Further research is required to optimise social prescribing benefits
Link Worker social prescribing programme comprising personalised support to identify meaningful health and wellness goals, ongoing support to achieve agreed objectives and linkage into appropriate community services Psychosocial problems, particularly mental health conditions and social isolation, are the most common reasons for referral into social prescribing programmes	Moffatt, S et al. (2017) Qualitative study in an inner-city area in West Newcastle upon Tyne (40th most socioeconomically deprived in England) using semi-structured interviews	*Most participants experienced multimorbidity combined with mental health problems, low self-confidence and social isolation *Intervention engendered feelings of control and self-confidence, reduced social isolation *Positive impact on weight loss, healthier eating and increased physical activity *Management of long-term conditions and mental health improved *Participants reported greater resilience and more effective problem-solving *Key elements of the model are that it is: long-term in nature; addresses the coexistence of multimorbidity, mental health problems and social isolation; and, where applicable, tackles related socioeconomic issues *Rapport and quality of the relationship between the Link Worker and service user was central to achieving well-being *Change in health-related behaviour and long-term condition management was facilitated through setting realistic, progressive and personalised goals, problem-solving, receiving regular feedback and social support while also supporting

Intervention	Example from literature (and evaluation population)	Effectiveness
		individuals to address social and economic problems N.B. only patients already engaged were interviewed
Arts on prescription programme, Nottingham	Stickley et al (2013) Arts on Prescription: a qualitative outcomes study Ten qualitative one-to-one interviews were conducted in community-based arts venues. Each participant was currently using or had used mental health services, and had been interviewed two years earlier. Interviews were digitally recorded, transcribed and analysed.	*Participants reported increased self-confidence, improved social and communication skills, and increased motivation and aspiration *An analysis of each of the claims made by participants enabled them to be grouped according to emerging themes: education: practical and aspirational achievements; broadened horizons: accessing new worlds; assuming and sustaining new identities; and social and relational perceptions *Follow-up data indicating progress varied between respondents. Whilst hard outcomes could be identified in individual cases, the unifying factors across the sample were found predominately in the realm of soft outcomes. These soft outcomes, such as raised confidence and self-esteem, facilitated the hard outcomes such as educational achievement and voluntary work

Cost-effectiveness

It has been argued that since social prescribing "fits in with the long-term strategic reorientation towards promoting health, independence and wellbeing, and in essence, practitioners believe that by investing in [social prescribing] now, it will reduce future costs of ill health," short-term economic evaluations that conclude social prescribing costs more than usual general practitioner care may be too limited in scope (Kinsella 2015).

This means that cost-effectiveness analysis of social prescribing initiatives is intrinsically challenging and that running cost-effectiveness analysis across normal evaluation timelines may under-report the impact of social prescribing schemes. However, there are some research studies into social prescribing that have included a cost-effectiveness component. Examples are detailed in fig. 15 below:

Figure 15. Summary table of effectiveness of social prescribing schemes as outlined in published evaluations with a cost-effectiveness component (N.B. some studies include a consideration of cost, but not a more detailed cost-effectiveness calculation).

Intervention	Examples from literature	Cost-effectiveness
Social prescribing for users of secondary mental health services	Dayson, C. and Bennett, E. (2016) Evaluation of the Rotherham Mental Health Social Prescribing Pilot, Mixed method evaluation study in Rotherham, comprising interviews with 5 key stakeholders, 3 case studies, wellbeing outcome questionnaires completed by 59 users and analysis of voluntary group data	*For each service user discharged from secondary mental health services who would not have been discharged without engaging with social prescribing, and for whom discharge is sustained for 12 months, there will be an estimated fiscal and economic benefit of £4,281 per year, meaning up to 47 service users will need to achieve a sustainable discharge each year if the Pilot is to create a positive return on investment *If discharge can be sustained for more than a year then the number of service users required to achieve a positive return on investment would reduce *Highlights the importance of monitoring discharge figures, including the sustainability and additionality of discharge, over an extended period *More than 90 per cent of service users made progress against at least one well-being outcome measure and more than 60 per cent made progress against four or more measures *Service users who provided an initially low score against each outcome measure made the greatest amount of progress and the areas where progress was most marked included 'work, volunteering and social groups', 'feeling positive', 'lifestyle' and 'managing symptoms' *Well-being benefits experienced by service users equate to an estimated social value of up to £432,000: a social return on investment of £2.19 for every £1 invested in the pilot
Mainly non-clinical community services, aiming to increase the capacity of GPs to meet the non-clinical needs of patients with complex long-term conditions, delivered by more than 20 local voluntary and community organisations	Dayson, C., et al (2015) The Rotherham Social Prescribing Service for people with long-term conditions; Mixed method evaluation of a social prescribing scheme in Rotherham	*Comparing 12 months prior and following referral to the scheme, non-elective inpatient episodes reduced by 7%; non-elective inpatient spells reduced by 11% and A&E attendances reduced by 17% (effect was more marked if over 80s were excluded from analysis) *Total NHS costs avoided over the period 2012-15 were more than £0.5m *Initial return on investment of 45p/£1 *Estimated that the cost of delivering the service would be recouped after around 2.5 years *Service users engaging more fully with the service experienced more change
Community navigators working	Farenden, C. et al (2015)	*Majority of project costs relate to the core team of three staff members, volunteer

Intervention	Examples from literature	Cost-effectiveness
in GP surgeries to assess patients' non-medical support needs and help them access groups, services and activities that can broadly improve their health and wellbeing	Evaluation of a community navigation social prescribing pilot in Brighton and Hove, using telephone interviews with patients, volunteer surveys and GP practice surveys	training, support and governance. This equated to the following unit costs; £8579 per participating surgery over 16 months; £6434 per surgery per year; £262 average cost per patient referred during the first 12 months of the pilot; £17.68 per hour cost of providing Navigation, compared with £46 per GP appointment without prescription *89% GPs and Practice staff are satisfied with the Community Navigator service. *95% of GPs and Practice staff think the service is effective at providing a referral route to non-medical services. *87% GPs and Practice staff think the Community Navigation service is effective at improving the wellbeing of patients. *84% think the Community Navigation service is effective at improving the surgeries' links to other resources and services in the community. *68% of GP practice respondents think the Community Navigation service is effective at reducing the amount of time patients attend the surgery with non-medical matters, whilst 19% did not know. *98% of patients felt listened to by the navigator; *93% said they gained access to the right information to help them address their issue; *85% would recommend the service; *84% experienced improved wellbeing; *62% were able to take the next step identified with the navigator after 3-6 months; *49% accessed services, groups or activities. *The service was more effective when 3-6 sessions were offered.
Referral facilitation scheme into voluntary sector	Grant, C. et al (2000) A randomised controlled trial and economic evaluation of a referrals facilitator between primary care and the voluntary sector	*Referral to the scheme and subsequent contact with the voluntary sector resulted in clinically important benefits compared with usual general practitioner care in managing psychosocial problems, but at a higher cost
Social prescribing offered by link workers as an option for those experiencing isolation and frequent	Maughan, D. (2016) Primary-care-based social prescribing for mental health: an analysis of financial and	*No statistical difference in the financial and carbon costs of healthcare use between groups. Social prescribing showed a trend towards reduced healthcare use, mainly due to a reduction in secondary-care referrals compared with controls

Intervention	Examples from literature	Cost-effectiveness
primary care attenders. Patients spent different periods of time (between 6 and 18 months) in the project before being discharged when they were adequately engaged in the community projects or felt that they had improved sufficiently.	environmental sustainability Observational study using GP appointments, psychotropic medications and secondary-care referrals Carlisle	*Suggests these services are potentially able to pay for themselves through reducing future healthcare costs and are effective, low-carbon interventions, when compared with cognitive behavioral therapy or antidepressants
Health coaching intervention to improve the skills of patients with multimorbidity to deal with a range of long-term conditions, through health coaching, social prescribing and low-intensity support for low mood, delivered via regular phone calls between patient and health professional	Panagioti et al (2018) Older people with multimorbidity in North West England	*Those selected for health coaching did not improve on any outcome (patient activation, quality of life, depression or self-care) compared to usual care *Patients selected for health coaching demonstrated lower levels of emergency care use, but an increase in the use of planned services and higher overall costs, as well as a quality-adjusted life year (QALY) gain. The incremental cost per QALY was £8049, with a 70–79% probability of being cost-effective at conventional levels of willingness to pay.

Implementation and other challenges

Scheme design and procurement considerations

Social prescribing schemes are usually funded via grants, directly commissioned from service providers (possibly in conjunction with local authorities) or funded by patients through personal budgets (Chatterjee, 2018). Service providers tend to be a mixture of voluntary/not-for-profit organisations and public services, potentially including primary care practices acting as wellbeing hubs (Drinkwater, 2019).

Joint ownership and involvement from the NHS, local government and the voluntary sector, can ensure that voluntary providers are prepared to accept increased numbers of referrals, and broaden the referral routes into social prescribing schemes beyond general practice, involving nurses, pharmacists and social workers as well (LGA, n.d.). Joint funding has also been suggested as a way of improving return on investment for the NHS and ensuring social prescribing projects become embedded in local communities, where sufficient benefits can be realised by the non-NHS funder (Polley, 2017).

Collaborative commissioning, emphasising outcomes such as mental wellbeing, mental capital, creativity and resilience, is viewed as important to reduce future health costs, and patient, referrer, commissioner and provider views can be integrated into the

service design to ensure the service meets both quality of life outcomes and primary health goals (Chatterjee, 2018). **Where a strategic decision has been taken to use social prescribing, Health and Wellbeing Boards can play a role by promoting greater uptake within the NHS** (LGA, n.d.).

Services are accessed via self-referral and signposting through information provision; indirect referral via an adviser/link worker; or formal direct referral via a primary care team member (Chatterjee, 2017). In some areas, providers are exploring the potential of online signposting services such as PLANS (Blickem, 2013) and Evergreen Life (Evergreen Life, 2019) to link service users with appropriate services.

Staffing

Clinical/medical and non-clinical staff can provide social prescribing services. Clinical/medical staff include GPs, physiotherapists, practice nurses, pharmacists and paramedics. Non-clinical staff can offer social prescribing alongside other roles, or can be recruited specifically to provide a social prescribing service. Staff operating in this way are often known as link workers, navigators, wellbeing coordinators, and referral agents. **The link worker is an evolving role, with unanswered questions around whether it requires competencies and accreditation, whether it can be performed by volunteers as well as paid staff and whether link workers should be managed by the health or voluntary sector** (Drinkwater, 2019). Following publication of the NHS Long Term Plan in January, it has been specified that link workers should be recruited as part of new Primary Care Networks. Existing link workers have reported a lack of available funding and resources and difficulty accessing funding and resources as the most challenging aspect of their role (Fisher et al, 2019).

Some studies emphasise the significance of the role of the social prescribing provider in enabling service users to self-manage their conditions (Carnes 2017) and achieve improved wellbeing (eg. Dayson, 2016). However, because of significant variation in how this role was fulfilled between studies, it is not possible to judge from the literature whether one approach is better than others (Bickerdike, 2017).

Social prescribing schemes can present challenges to clinical staff working within or alongside them who are unused to the theories of social prescribing. For instance, a study of paramedics operating social prescribing in Canada found that “referral programs confronted paramedics with an alternative approach to patient care that was in conflict with larger workplace cultural beliefs grounded in emergency response” (Brydges 2015). Bertotti’s (2015) analysis of a scheme in east London found referrals were concentrated in a number of practices and rates were inconsistent. Explanations for these discrepancies proposed by clinicians were lack of time, forgetting about social prescribing options, and scepticism that patients would attend social prescribing appointments.

Scheme managers may need to demonstrate “the clinical, rather than the social (and to some extents fiscal) benefits of the project (or evidence that it makes an equally valid contribution when compared to other existing schemes, such as ‘exercise on referral’ schemes” in order to achieve appropriate clinical engagement (Baker, 2016).

Communicating with service users

Clarity of purpose is essential for service users, staff providing the service and staff referring into it. A common pitfall of social prescribing schemes highlighted in research is insufficient explanation to patients of what a social prescribing approach entails, resulting in confusion and elevated expectations. Some patients felt as a result

of this lack of awareness that their expectations of the service had not been met (Bertotti, 2015; Bickerdike,2017). One study recommends patient information about social prescribing schemes should be branded to aid service user recognition (Bertotti, 2015). Schemes should have a clear focus and objectives, as it is “hard to establish coproduction when the organisations involved are not clear what they are ‘producing’ and for what purpose” (Baker, 2016).

Continuity of care

NESTA (2013) frames the critical challenge for social prescribing at scale as being able both to “integrate with, and challenge, established health care system processes, including drug prescription referrals, data collection and funding mechanisms”. But where social prescribing is introduced, this can pose problems in terms of information, relational and management continuity.

Information about schemes can tend to be paper-based, albeit with some online directories in use. However, online directories tended to fall out of date and were only used for signposting, as well as failing to offer any integration with GP systems. Social prescribing platforms that can “provide the intelligence to manage a SP [social prescribing] programme across an area and all services, users and professionals who need to be involved” – some of which can interface with primary care software - may be of benefit in addressing these issues. (Maughan, 2016).

In some schemes, GPs appeared unaware of what had happened to a patient following referral into a scheme, and some community organisations were unaware that a service user had reached them via referral through a social prescribing scheme (Bertotti, 2015). This is a particular risk for vulnerable patients. For instance, social prescribing can result in responsibility for dementia patients being transferred from the clinical sector to the social sector, unless there is a shared commitment to the co-production of care (South et al, 2008).

Churn in community groups and NHS policy can impact on schemes, as can the capacity of voluntary organisations, and that cultural differences between sectors can challenge joint ownership of programmes (Knapp, 2011). There is evidence of challenges in involving people from community and voluntary sector organisations in social prescribing scheme management, resulting in “a limited sense of belonging to the social prescribing pathway” and limited monitoring of community activities. Using a payment by result type approach, such as a model developed by Newham Community Prescribing Scheme, is suggested as a way to avoid this problem (Bertotti, 2015).

Practical challenges for social prescribing providers seeking to operate well-integrated services include agreeing referral routes and criteria; accountability and liability for referred patients; voluntary sector capacity; maintaining up to date information on sources of voluntary and community support; recording and evaluating impact and outcomes, with resultant increased GP workload (initially) and identifying resources for link workers/ referrals facilitators.

Centralised referral processes with explicit referral criteria are often recommended as a way of addressing some of these challenges through creating a mechanism for improved management continuity (Bickerdike 2017, Friedli 2008). In some cases, commissioners have appointed a single accountable contract holder independent from front-line service delivery to support the micro-commissioning of specific social prescribing activities from local voluntary and community providers in line with need (Dayson, 2016).

Such approaches have clear benefits in terms of gathering information for service evaluation and quality management, but may conflict with objectives around broadening access routes to schemes such as the LGA's preferred approach of having a variety of different referral routes for the service (LGA, n.d.). Therefore, scheme designers may need to consider trade-offs between ease of access and robust integration.

Use of social prescribing in deprived areas

A subset of studies looked at the application of social prescribing approaches in deprived areas. In these areas, a primary focus was often expanding the reach and capacity of primary care, whether by encouraging patients to 'help themselves and take ownership of the problem' (Cawston, 2010), or as offering "one way of extending primary care through partnership working" (South et al, 2008).

In these areas, primary care staff reported facing extra demands including supporting patients with needs relating to social isolation, housing and benefits, training, family issues, volunteering, feeling useless, disabilities, bereavement and exercise (South et al, 2008). GP practices in deprived areas "routinely face the choice between appearing disinterested in their patients' social problems and becoming swamped by these…" with the risk that social prescribing to community organisations may add to the "cycle of disablement and dependency". This is because advocates of service users may "add political and legal pressure to the construction of their client as a disabled or sick person…" as "the focus of social struggle by many community organisations is on individuals seeking to prove they are sick, rather than on collective action to change the underlying socio-economic conditions creating and perpetuating cycles of deprivation" (Cawston, 2010).

One response to this challenge was to offer a limited number of appointments, "in order to prevent dependency on the scheme" as "for some, the initial appointment is all that is needed, as this can give the necessary space for reflection as individuals benefit from the process of being listened to and starting to voice their aspirations", thereby "mitigat[ing] the impact on individual health and enable people with social needs to make positive choices" (South et al, 2008).

Multiple studies identified specific challenges experienced by those operating social prescribing schemes in deprived areas. These include:

- Confidence; interest in/appropriateness of activities; literacy and travel issues affect uptake in these areas (Bickerdike, 2017)
- Signposting is not as effective as it might be in deprived areas (Cawston, 2010)
- Organisations appear to encourage patients to medicalise the problems of life as this legitimises access to social resources (Cawston, 2010)
- Social prescribing risks medicalising wider socio-economic issues, increasing the pressure on health services and perpetuating the disablement and dependency of service users in deprived areas (Cawston, 2010)
- Poor mobility and lack of transport can inhibit service users' ability to access schemes in deprived areas (Blickem 2013)
- Often, routes to learning about and accessing services are via existing social connections – therefore more socially isolated people face greater challenges in accessing services (Blickem 2013)
- Low levels of follow-through of patients initially agreeing to take part in a social prescribing scheme taking subsequent steps to access services have been recorded (Loftus, 2107)

- **There is a risk that social prescribing is treated as a "panacea for complex problems and social issues such as loneliness, poverty and increasing inequalities", or a "silver bullet" to address demand pressures (Drinkwater, 2019)**

Challenges relating to access and take-up are likely to be particularly significant in the context of recommendations elsewhere in the literature for approaches such as referral management, which introduce additional steps into the social prescribing process. However, there is a countervailing view that link workers with specific knowledge of deprived communities are better able to help service users navigate their more complex and challenging problems (Drinkwater, 2019). There is therefore a need for those operating social prescribing schemes in deprived areas to decide whether speed of access or depth of support will be the primary objective in their social prescribing schemes.

Service evaluation

As demonstrated by the limited evidence available about the effectiveness of social prescribing, and the challenges this poses for the effective implementation of these schemes, a greater focus on effective evaluation of social prescribing has the potential to benefit both individual social prescribing schemes and the NHS as a whole.

Researchers recommend evaluations "integrate the views of all key stakeholders including patients, referrers, commissioners and providers, to ensure that as schemes are developed, they meet primary health care objectives as well as delivering the wider quality-of-life outcomes characteristic of non-clinical interventions" (Chatterjee, 2017). Consideration should also be given to ensuring support is in place to help scheme participants complete evaluation materials (Baker, 2016), particularly where literacy issues or a large number of service users not fluent in English may affect survey response rates.

A range of tools are suggested as appropriate for survey components of social prescribing evaluations. These mainly explore service users' mental health and wellbeing or quality of life, although the COOP/WONCA tool addresses physical health and functioning, and several tools explore functional impairment in relation to mental health conditions. These tools are described briefly below:

Figure 16. Survey tools recommended in the social prescribing literature*

Tool name	Brief description	Available at
Affectometer 2	Five minute inventory of general happiness/wellbeing	Link
Clinical Interview Schedule – revised	Structured interview to assess symptoms of anxiety and depression	Link
COOP/WONCA Functional Assessment Charts	Six charts, covering physical fitness, feelings, daily activities, social activities, overall health and change in health status; not limited by age	Link
Core Outcome Measures (CORE-OM)	34 item generic measure of psychological distress covering wellbeing, symptoms, functioning and risk and taking between five to 10 minutes to complete	Link
Generalised Anxiety Disorder Assessment (GAD-7)	Seven item instrument used to measure or assess the severity of generalised anxiety disorder (GAD). Each item asks the individual to rate the severity of his or her symptoms over the past two weeks.	Link

Tool name	Brief description	Available at
	Response options include “not at all”, “several days”, “more than half the days” and “nearly every day” – suitable for completion by people aged 16+	
General Health Questionnaire 12 (GHQ-12)	Screening device for identifying minor psychiatric disorders in the general population and within community or non-psychiatric clinical settings such as primary care or general medical out-patients; suitable for all ages from adolescent upwards	Link
GQoL	Single scale that directly evaluates quality of life by patients by using a rating between 0 (='no quality of life') and 100 (='perfect quality of life')	Link
Hospital Anxiety and Depression Scale (HADS)	14 item scale with seven questions relating to anxiety and seven relating to depression. The survey takes 2-5 minutes to complete and is suitable for administration by a range of clinical professionals	Link
PANAS/PANAS X	Test using two mood scales, one that measures “positive affect” and the other which measures “negative affect”	Link
Patient Health Questionnaire 9 (PHQ-9)	Self-administered tool used to monitor the severity of depression	Link
Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)	*14 item scale with five response categories, which are summed to provide a single score ranging from 14-70. The items are all worded positively and cover both feeling and functioning aspects of mental wellbeing*	Link
Work and Social Adjustment Scale (WSAS)	five item scale to self-report functional impairment attributable to an identifiable problem	Link
WBQ-12	Measures general well-being, including negative well-being, energy and positive well-being	Link

Source: Friedli 2008, Knapp, 2011

**Please note: we recommend that the STP familiarises itself with the individual usage requirements for each tool before use. The University of Birmingham can take no responsibility for the STP’s use of these tools.*

These survey tools can be used alongside qualitative interviews, focus groups, and analysis of service usage patterns, in order to build a clearer picture of the performance of social prescribing schemes.

Evaluating the effectiveness and cost-effectiveness of social prescribing schemes has proved particularly challenging (Bickerdike, 2017). For instance, questions remain over what is an appropriate expectation for the duration of effect for a social prescribing scheme. Where schemes include explicit aims and objectives about reducing use of resources elsewhere in the health and care system, it should be possible to analyse service usage data at patient level to provide a sense of how likely it is that a scheme is having an impact on service usage. However, **given the complexity of the needs of patients accessing social prescribing schemes, it is unlikely that an evaluation will be**

able to demonstrate a causal relationship between enrolment on a scheme and changes in service use (Drinkwater, 2019).

Nevertheless, achieving a better understanding of how social prescribing and service use may or may not interact is likely to be beneficial for service managers, and may ultimately support improvement in how these services are designed and provided. **Scheme managers should give consideration to NHS England's suggested outcome measures for social prescribing schemes in this context** (NHS England, 2019).

Recommendations

As can be seen from figs 14 and 15 above, results of these evaluations are varied and it is not possible to recommend a single approach as being more cost-effective or effective in terms of outcomes, based on the literature. Where evaluations have included a quantitative component, results are often not statistically significant, and it has proved challenging for researchers to isolate the impact of social prescribing from other confounding factors, such as the impact of other services being accessed by patients independently of the social prescribing scheme. Other problems with the literature include small sample sizes, and uncertainty over the duration of effect (where detected), with benefits potentially taking up to two years to accrue (Knapp, 2011).

Below are some recommendations for implementing social prescribing programmes drawn from this evidence review. Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 17. Social prescribing recommendations

Social prescribing interventions	Recommendations
Scheme design and procurement	**Ensure** social prescribing scheme aims/objectives and target audience(s) are clearly defined and well-communicated in advance of launch
	Consider incorporating NHS England outcome measures as a way of improving performance monitoring
	Consider focusing social prescribing resources on addressing specific challenges for areas/groups with particular problems, rather than creating a generic service
	Consider whether ease of access to social prescribing or tailoring the service to the needs of a target population will be prioritised as most important in the design of the scheme
	Consider adopting a governance model that allows voluntary sector strategic involvement (eg. project committee/advisory board comprising NHS, local government and voluntary sector organisations, and patients, carers and service users)
Scheme management	**Consider** whether a centralised referral process, or a more dispersed set of referral routes would better meet the social prescribing scheme aims – or whether a hybrid approach using a variety of referral routes but using a common set of specific referral criteria might work best.
	Consider whether staff/staff groups will be taking on the link worker/coordinator function as part of an existing role, or

Social prescribing interventions	Recommendations
	whether specific link workers/coordinators will be recruited/seconded (relates to consideration about ease of access to social prescribing vs tailored service above).
	Consider whether it would be feasible/desirable to use a payment by activity/payment by results approach to remunerating social prescribing service providers, in order to support the development of good data processes following referral.
	Consider evaluating the scheme, ideally with a component focusing on service utilisation, in order to support further development of efficient and effective social prescribing approaches within the STP area and nationally. This could take into account the impact of participation in a social prescribing scheme on patients' usage of other services, if sufficiently detailed patient-level data is available
	Consider what approach will be used to maintaining a database of providers of community services operating within the scheme (i.e. online or paper-based; service user-facing, staff-facing or both).
Service user communication	**Consider** what approach will be needed if a scheme is found not to be working as a result of an evaluation. What governance processes will be necessary ensure a robust process for disinvestment in such circumstances?
	Ensure details of the scheme are communicated to actual or potential service users (and their carers) in such a way that its purpose, focus and approach are clearly understood.
Staff communication	**Consider** producing patient and service user/carer information resources branded with a strong visual identity to support recognition and understanding of the scheme.
Staff communication Continuity of care	**Ensure** measures are in place to communicate to staff not directly involved in providing the service but who might come into contact with it about anticipated clinical/efficiency-related benefits of the scheme, as well as social benefits.
	Consider linking social prescribing provision to the patient record in primary care via compatible software in order to maintain information continuity.
	Ensure steps are in place to enable primary care providers to keep track of service users' progress, once referred into the social prescribing scheme – this is particularly important in relation to vulnerable groups
Use in deprived areas	**Consider** establishing a clear, well-communicated route to enable service users to ask questions or provide feedback to the professional making the initial referral into social prescribing
	Ensure scheme is designed in order to meet the language and literacy needs of the target population
	Ensure the scheme takes into account access requirements of the target population, particularly where service users might be expected to travel outside the immediate area in order to access community services
	Consider measures to mitigate the risk of service user dependency on the scheme – for instance through clear articulation of what service users can expect from the

Social prescribing interventions	Recommendations
	programme, and through describing what facilities/services service users will be able to access, and what commitments they will be expected to make under an approach of co-production

II. Intervention area: providing "best in class" support to employees experiencing stress and all forms of musculoskeletal problems

Overview of evidence

Musculoskeletal conditions and mental health issues comprise a significant proportion of sickness absences in the health sector, and can result in staff needing to take extended periods of sickness leave (Demou, 2018).

Work stress can be caused by adverse working conditions and pressures such as "unrealistic demands, lack of support, unfair treatment, low decision latitude, lack of appreciation, effort-reward imbalance, conflicting roles, lack of transparency and poor communication" (Bhui, 2016). For clinicians, key sources of stress and distress can be "emotion work", practice culture, and work role and demands (Riley, 2017), and poor process and vexatious use of complaints systems have been associated with decreased psychological welfare and increased defensive practice in doctors (Bourne, 2017). Unwell staff are vulnerable to "presenteeism", fears of stigma and even early retirement on grounds of ill health.

The majority of research into mental health conditions in the health workforce focuses on clinical staff. Several studies have found that clinical staff can perceive stigma in relation to mental illness. For instance, a study into GPs found they experienced stigma surrounding mental health and faced issues around time, confidentiality, privacy and accessing good-quality treatment. Researchers recommended systemic changes including further information about specialist services to help GPs (Spiers, 2017). Reducing the stigma associated with first seeking help is also a key finding from research into professional support for junior doctors (Wainwright, 2017). Doctors can also have confidentiality concerns, meaning the use of support depended on "certainty concerning confidentiality, which for occupational health was not thought to be guaranteed" (Bianchi, 2016), thus potentially inhibiting uptake of treatment.

For staff with musculoskeletal problems, there is some research into interventions targeting healthcare staff, and the performance of some more general interventions targeting all forms of workplace illness and absence have been assessed in a health context. **There is a larger amount of research into musculoskeletal problems in employees outside a health context – some studies are included here in order to illustrate a wider range of approaches in use**.

By configuring occupational health services to be more proactive and to work more closely with physical and mental health services, it has been suggested that employers might be able to support workers to return to work more quickly, or to avoid sickness absence in the first place.

A major governmental review into the health of working age people in the UK (Black, 2008) recommended case-managed multidisciplinary support for patients in the early stages of sickness absence, along with a goal of widening the availability of work-related health support, and greater support for GPs and other healthcare professionals to adapt their services in order to help people to enter, stay in or return to work.

A literature review conducted as part of the research found that **early intervention in occupational health services "can play a key role in assessing how and when employees can return to appropriate work"**, with services covering "a wide range of support, from simple sickness absence management tools through to high-quality multidisciplinary teams supporting people to either stay in or return to work". The literature review highlighted three "**key principles for effective early intervention**":

- Holistic care in line with the biophysical model (considering the disease or condition, psychological impacts and social factors such as effects on work, home or family situation;
- Multidisciplinary teams able to deliver a range of services tailored to the needs of the individual patient (examples included cognitive behavioural therapy, exercise, education and workplace reviews/adjustments);
- Case managers/support workers to help individuals navigate the system and "facilitate communication between the individual, their employer, the GP and other clinicians"

The NHS Workforce Health and Wellbeing Framework (2018) identifies mental health, and musculoskeletal conditions as two of three top priority areas for the NHS (along with healthy lifestyles). It recommends a dual focus on prevention/self-management (keeping people well at work through good working conditions) and targeted support (for staff in need of particular interventions) along with comprehensive use of health needs assessment as a means of understanding need across an organisation and planning delivery. In addition, there are interventions that can be targeted at the level of the workplace, to make the organisation a better place for employees to work.

Interventions can be categorised as follows:

Figure 18. Categorisation of MSK and mental health interventions

Purpose	Example intervention type
Prevention	• Manual handling training for MSK disease prevention • Mindfulness training for stress and mental health condition prevention
Self-management	• E-health self-management modules for MSK disease • Mindfulness for self-management of mental health conditions • Mailed workplace interventions to assist clinicians in addressing workplace stress • Online/email/SMS guidance interventions for improved psychological wellbeing
Targeted support	• Face-to-face cognitive behavioural stress management training • Intensive case management based on a bio-psycho-social model and facilitated joint working between occupational health and HR departments to target all sickness absences longer than four weeks
Organisation-level interventions	• Improvements to facilities (eg. Provision of higher quality rest areas)

Purpose	Example intervention type
	• Line manager training • Organisational justice policies

Effectiveness

Our search identified more literature on mental health conditions in the health workforce than on musculoskeletal conditions. Much of the available evidence focuses on clinical, rather than support or managerial staff. There is also some general evidence about workplace occupational health interventions in health settings, and some case study-based literature, which may be of interest to the STP. A number of evaluation-based studies explore the effectiveness of schemes in improving outcomes, but cost-effectiveness evidence is very limited indeed. Evaluations tend to have small sample sizes and there are often limitations in terms of the identification of suitable candidates for the intervention arms of control trials, as well as poor availability of controls.

Musculoskeletal prevention/self-management

Evidence from systematic review indicates that there is no strong evidence for the efficacy of any training interventions aiming to prevent back pain and injury in nurses. Reviewers found moderate evidence from multiple trials that "manual handling training in isolation is not effective and multidimensional interventions are effective in preventing back pain and injury in nurses". Similarly, they found single trials provided "moderate evidence that stress management programs [sic] do not prevent back pain and limited evidence that lumbar supports are effective in preventing back injury in nurses, as well as conflicting evidence regarding the efficacy of exercise interventions and the provision of manual handling equipment and training" (Dawson, 2007).

Mental health prevention/self-management

A review of literature on online workplace-based mental health interventions found interventions can improve psychological wellbeing and increase work effectiveness. Interventions that offer guidance, are delivered over a shorter time frame of six to seven weeks, use secondary modalities such as email or SMS for delivering the interventions and engaging users, and use elements of persuasive technology, such as self-monitoring and tailoring, may achieve greater engagement and adherence (Carolan, 2017).

A Cochrane review analysed 58 evaluations of interventions aiming to prevent occupational stress in healthcare workers who had not actively sought help for conditions such as burnout, depression or anxiety disorder (Ruotsalinen, JH. Et al, 2015). Interventions were categorized into three groups: cognitive behavioural interventions; relaxation interventions and organizational interventions designed to change resources, work tasks, working methods or the work environment. Researchers found "low-quality evidence" that CBT interventions with or without relaxation techniques in healthcare workers reduced the level of burnout symptoms when compared to no intervention at one and to six months in eight studies, and more than six months' follow-up in two studies. At less than one month of follow-up, the difference was not significant. **Researchers determined that CBT had a "modest effect". There were no considerable differences when comparing CBT with other active interventions.**

For relaxation interventions, the review found reductions in stress levels comparable with those of CBT. There was low to moderate quality evidence that stress levels remained lower at one-month follow-up in four studies, at one to six months in 12 studies and at more than six months in one study. No significant differences were seen between physical relaxation

interventions like massage and approaches such as mindfulness meditation. Researchers found it difficult to make comparisons between relaxation and other interventions because it was not possible to pool control groups.

The review found low quality evidence in two studies that changing work schedules reduced stress levels, and other organizational interventions did not lead to considerable reductions in stress levels at any of the three follow-up points. The reviewers warned that the quality of the evidence was “not very high”.

Exercise interventions

A systematic review into exercise interventions to improve the health of mental health staff was conducted, with five studies being identified as suitable for inclusion. The review found physical health interventions for mental health staff were feasible and acceptable with low dropout rates. Reductions in work-related stress were reported. **Researchers found limited evidence to suggest that exercise interventions targeting mental health staff were feasible and acceptable** and called for further research to determine efficacy and impact on staff culture and patient outcomes (Fibbins, 2018).

Mentoring

A narrative review of 13 papers examining the relationship between mentoring and doctors’ health and wellbeing (Wilson, 2017) found mentoring schemes influenced collegiate relationships, networking and aspects of personal wellbeing such as confidence and stress management, and were valued by doctors as a specialist support mechanism. One reviewed study suggested personal wellbeing may be enhanced through mentorship because mentors and mentees felt more confident, positive and reassured about their performance, as a result of additional skills and tools mentoring provided to individuals to deal with personal and professional issues (Steven, 2008 in Wilson, 2017). But another reported adverse issues experienced by three mentees and one mentor under a scheme (Mann, 2011 in Wilson, 2017).

Peer support

Peer support networks – inviting “staff who have successfully navigated challenges […] to use their experiences to support on a confidential basis, others to navigate similar challenges” – can be used to support employees returning from sick leave for both physical and mental health problems (Walker, 2014).

A literature review of evaluations of peer support schemes found the schemes performed similarly to schemes provided by professionally trained staff in terms of their impact on admission rates, when evaluated in randomized control trials (Repper, 2010). Qualitative research into the schemes analysed in the same review revealed a greater sense of empowerment for both providers and consumers of peer support. People enrolled in peer support schemes also appeared to score higher on a measure of “community integration”. Moreover, one study found participants in peer support were less likely to identify stigma as an obstacle to gaining employment and more likely to be in work.

Targeted support

Return-to-work coordinators

Return-to-work coordinators can help reduce long-term disability, particularly for those with musculoskeletal disorders (Franche, 2005). A survey-based study into the practices of return-to-work coordinators working in organisations employing 500 or more

people, managing disabilities and coordinating the return to work process, found applying laws, policies and regulations related to absences and return to work, contacting the absent worker and planning the return to work were viewed as the most important tasks for this role. Return-to-work coordinators collaborated mainly with workers and their supervisors and having a nursing or occupational health background significantly influenced their practices. Return-to-work coordinators generally performed this function as one of a wider set of roles in human resources or occupational health departments (Durand, 2017).

Organisation-level interventions

Interactional justice

Nurses experiencing psychological aggression such as "incivility" reported increased burnout – a "psychological symptom of exhaustion, cynicism and inefficacy, which is experienced in relation to chronic job stressors" (Maslach, 2003, in Campana et al, 2013). Campana et al (2013) suggest that although nurses experience burnout from some sources that managers cannot control, **managers can ensure that staff are treated with dignity and given information about "how rewards and consequences are distributed" – a concept known as interactional justice. Interactional justice may serve as a "buffer" so that "when employees are upset by unfair events in the workplace,** if they feel they receive respectful treatment from their organization, they are less likely to experience strains in response to the unfair event". (Campana, 2013).

When nurses were asked to record their experiences of incivility, burnout and justice, using surveys, researchers found that although nurses who perceived their organization as interpersonally just tended to report lower levels of burnout on average, this was not a strong enough effect to be statistically significant. However, individuals who perceived their workplace as providing information about how decisions were made tended to experience less burnout on average. The researchers suggested "**management can help ameliorate the effects of incivility by being transparent in decision-making** and by helping to prepare nurses in interpersonally just environments to anticipate rudeness from patients and their families" (Campana, 2013).

Monitoring staff wellbeing

Monitoring staff wellbeing, for instance using the Health and Safety Executive management standards approach, is recommended as an approach to preventing illness (Kinman, 2016), as is setting up or linking into professional networks nationally and locally to share information on wellbeing at work, developing an emotional resilience curriculum and adopting an emotionally intelligent approach at the organizational level to help staff cope with heavy workloads, for instance through reducing the of stress stigma, improving support networks, ensuring leadership is supportive and prioritizing self-care.

Staff wellbeing initiatives

Norfolk and Norwich University Hospital NHS Foundation Trust achieved a Staying Healthy at Work (ShaW) accreditation by developing and implementing a year-long action plan for improving staff wellbeing, according to a case study (Wray, 2013). As part of the plan, the trust appointed an occupational clinical psychologist, trained all its occupational health (OH) nurses in cognitive behavioural therapy (CBT) awareness and three nurses gained a certificate in CBT for OH practitioners. The trust also introduced a 24-hour counselling service for staff. Other initiatives have included a sports and physical activity challenge, which led to more than half the workforce being engaged in a physical activity and the introduction of book clubs, a running club and a choir. The trust's workplace health and

wellbeing manager, who was responsible for running the project, attributed a drop-in staff absence rates to the programme. At the time of writing, the trust was looking to expand its focus into fast track musculoskeletal physiotherapy and the effects of management behaviour on health and wellbeing.

Robust sick-cover policies

A survey-based study of UK doctors found doctors with an acute illness were critical of arrangements for taking time off, reporting being asked to work "harder for longer", when colleagues were off and reporting feelings of guilt if they took sickness leave themselves. Doctors also perceived a "lack of support and respect from colleagues and management; and a lack of gratitude from management for doctors who worked beyond the call of duty to cover for absent sick colleagues". **Presenteeism itself can lead to stress illness: a pattern of over-commitment and effort-reward imbalance that was found to be predictive of chronic stress in young doctors** (Smith, 2016). This phenomenon is not restricted to the NHS: research has found a link between presenteeism and stress in nurses at a public general hospital in Croatia (Brborovic et al 2016).

Improving staff facilities

A majority of nurses participating in a survey-based study into attitudes about break facilities in the US (Nejati, 2015) viewed high-quality break spaces as "fairly" or "very" important in terms of their potential to positively influence staff, patient and facility outcomes. A significant majority saw them as very important for alleviating nurses' work-related health concerns; with 77.7% seeing them as very important for improving job satisfaction and 50.1% for retention rates.

Figure 19 below shows summary results for a range of evaluations into interventions designed to reduce sickness absence via prevention and/or self-management or targeted support to aid a quicker return to work.

Figure 19. Interventions targeting (or tested with a population of) employees with a musculoskeletal condition, or for stress or related conditions

Intervention	Evidence
Prevention/self-management	
Mindfulness training	Improved median scores on a perceived stress scale, five facet mindfulness questionnaire and self-compassion scale at the end of the programme in Spain, but higher scores were not significant; effect maintained at 3 month follow-up, but small sample (40 people) and adherence rate of only 52.4% in intervention group (Arredondo, 2017)
Mailed workplace intervention for GPs	UK-based randomized controlled trial found that in cost-benefit terms, tailored mailed interventions might be an effective first step in assisting distressed workers to address workplace stress. "Mailed interventions represent one of the least expensive, but potentially valuable interventions to reduce stress and are well-suited to GPs and other groups with high workloads, who typically would not participate in more structured, time-consuming stress management programmes. But as educational programmes can be expensive and tend to attract GPs not suffering psychological distress, cost-effectiveness

Intervention	Evidence
	in terms of total reduction in psychological distress is questionable…" (Holt, 2006).
Self-management via e-health modules for workers with MSK injuries	No significant difference in survey responses by cases and controls, in Netherlands-based study, but intervention improved participants' perceived disability during work (Hutting, 2015)
Online workplace-based intervention for employees with depression	Cluster randomized trial of return to work intervention for employees in the Netherlands with anxiety or depression (in the Netherlands, occupational physicians (Ops) make a problem analysis and provide a return to work plan for sick employees, while treatment is provided by mental health sector). Incremental net benefits of 3187 Euros per employee were found over a single year from an employer perspective, representing a return on investment of 11 Euros per single invested Euro with a break-even at six months (assuming an employer investment of 300 Euros per employee). For the healthcare payer, there was an additional cost of 234 Euros per employee on average (Lokman, 2017)
Face-to-face stretching training to prevent musculoskeletal injury in factory workers	Six of 158 workers (3.8%) WMSD injuries were reported in the 60 days before the stretching program was implemented, and during the first 60 days of the program, two of 146 workers (1.4%) reported WMSD injuries after the stretching program - a decreased rate of requested days off from 84.8 days per 100 workers to 62.3 days per 100 workers in the first 60 days of the program period (p = .01), respectively. Noted causes for time-off work included sick time, personal reasons, workers' compensation injuries, and Family and Medical Leave Act (FMLA). No adverse outcomes were reported due to the program and all eligible workers participated in the program. The scheme achieved a cost of US$5,800 per WMSD (Aje, 2018)
Targeted support	
Intensive case management based on a bio-psycho-social model and facilitated joint working between occupational health and HR departments	Return2Health evaluation at University Hospital Southampton NHS FT: proportion of four-week absences that continued beyond eight weeks fell from 51.7% in 2008 to 49.1% in 2009 and 45.9% in 2010, contrasting with an increase at the control trust from 51.2% to 56.1% over the same period. Intervention was effective and also cost-effective, based on an annual running cost of £57,000 (Smedley, 2013)
Face-to-face stress reduction/ management training (Australia/Israel/US)	Consistent improvement on all stress outcomes as a result of the intervention, which was maintained or improved at 12-week follow-up. For general psychological distress, the improvements could clearly be attributed to the intervention (compared with the control group). For quality of work life, work-related morale and work-related distress, trends indicated effectiveness but results were not conclusive. Intervention led to some initial changes in some coping styles – specificially logical analysis and emotional

Intervention	Evidence
	discharge. Further improvement in the longer term, along with problem solving and affective regulation, but no differences in improvement between control and intervention for these (Gardiner, 2004). Case controlled study using questionnaire data in Israel to evaluate a multimodal stress reduction approach incorporating cognitive, somatic, dynamic, emotive and hands-on elements in a flexible eight month format with weekly instruction sessions and a full day workshop; evaluation found significant benefits on work quality as indexed by improvements in job related tension and work productivity; symptoms of stress, burnout, somatic and mental health complaints, and mood were all significantly improved with a positive effect on general health and well-being; authors suggest the number of components, long length, and integrated, flexible approach may have significant advantages for hospital and health care staff over shorter, more circumscribed, and and/or more homogenous programs (Sallon, 2015) US-based matched control group study into an employee assistance programme (EAP) for state employees including confidential one-on-one counselling found both the control group and the intervention group had “reduced symptomology” at follow-up, suggesting single group pre-post studies may over-estimate programme impact; clinical improvements were stronger and potentially realised more quickly with the help of an EAP; suggestion EAPs contribute to improved workplace productivity and reduce absenteeism by addressing and improving mental health symptoms, but only 22% of EAP clients agreed to participate – if employees in significant distress opted not to participate, the sample may not be representative (Richmond,2016)
Psychotherapy, pharmacotherapy, and combination treatment (Germany)	Cost-effectiveness analysis in Germany of screening and treatment for depression to reduce sickness absenteeism and presenteeism. Screening and treatment for depression in the workplace was found to be cost-effective. Both pharmacotherapy and psychotherapy were found to be cost-saving from the employer perspective. Psychotherapy was found to be the most cost-effective treatment, despite the lower cost of pharmacotherapy. Authors propose that the durability of outcomes associated with psychotherapy treatment in the long term allow for greater improvement in workplace productivity (Evans-Lacko, 2016)

Cost-effectiveness

Evans-Lacko (2016), Lokman (2017) and Smedley (2013) attempt cost-effectiveness calculations (see fig 19 above) as part of their analyses. All find that the interventions evaluated are cost-effective for employers. Aje (2018) calculates a cost for the intervention but does not specifically assess its cost effectiveness. **The fact that three studies with a cost-effectiveness component found positive evidence for cost-effectiveness in these areas is promising, but there is insufficient evidence to recommend specific approaches based on their cost-effectiveness.**

Implementation and other challenges

Information provided within this review is drawn from the literature, and therefore does not take into account existing HR and occupational health provision across the organisations in the STP area. It is likely that there will be some variation in the type and extent of the approaches in use to address employee health and wellbeing across the STP's constituent organisations.

Because the evidence is not strong enough in any one area to identify a single approach better than the others, and because the success of these interventions is likely to be dependent to a degree on organisational culture and staff need, the STP may wish to undertake a review of activities underway already across Birmingham and Solihull, followed by consultation with staff to determine areas where there is particular appetite from staff for increased focus. The impact of any interventions introduced can be measured using absence data and surveys of staff wellbeing.

Recommendations

Below are some recommendations for improving support for employees who are unwell with musculoskeletal or stress conditions, drawn from this evidence review. Recommendations are made on the basis that the STP is assumed already to be following established protocols for undertaking workplace assessments and reviewing the working conditions of staff whose roles put them at increased risk of injury.

Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 20. Recommendations for improving staff experiences of stress and musculoskeletal problems

Interventions for worker stress and musculoskeletal illness	Recommendations
Prevention	**Consider** exploring ways to reduce stigma associated with staff mental health problems, for instance through internal communications/staff engagement
	Consider gauging staff appetite for initiatives such as mindfulness, wider wellbeing/social activities, early warning interventions and emotional resilience support
	Consider likely effectiveness before implementing musculoskeletal illness prevention training or self-management programmes, based on an assessment of need, and potentially in consultation with affected staff

Interventions for worker stress and musculoskeletal illness	Recommendations
	Consider online/SMS training programmes/employee assistance/CBT programmes to address workplace stress, based on an assessment of need, and potentially in consultation with affected staff/staff representatives
	Where prevention training/self management approaches are in use, consider evaluating their impact on staff outcomes in order to expand the evidence base for these interventions
Targeted support	**Ensure** occupational health schemes are operating proactively and are able to work in a joined-up way with physical and mental health services accessed by staff
	Ensure measures are in place to safeguard patient confidentiality (and to reassure staff that confidentiality processes are robust), where staff access care from organisations affiliated with their employment
	Consider initiating a multidisciplinary approach to occupational health, with case management and/or return to work coordinators, if such approaches are not already in use
	Consider introducing mentoring and/or peer support arrangements in order to support staff returning to work after a period of sick leave
Organisation-level response to staff health and wellbeing	Explore whether principles of interactional justice are well-understood within the STP's constituent organisations. Where this is not the case, **consider** articulating a cross-STP approach to workplace justice, including spreading any good practice present among the STP's constituent organisations
	Consider undertaking an assessment of environmental/workplace stressors within the STP's constituent organisations and identify responses in order to reduce the impact of these on staff – consider both organisational policies (eg. line management) and facilities (eg. quality/comfort of staff break areas, facilities for on-site exercise/wellbeing activities)
	Wherever possible, **ensure** robust processes are in place to ensure adequate sick leave cover for staff in order to discourage presenteeism
	Consider implementing organisation-wide wellbeing strategies, where these have not already been put in place; where these exist, explore appetite for harmonising activities across the STP area to create an STP offer
STP assurance	**Consider** evaluating the impact of any new measures introduced, using absence and sickness data, and staff wellbeing and outcomes surveys

III. Intervention area: effective interventions for supporting young people experiencing the highest levels of deprivation, with a specific focus on addressing youth unemployment (19-25yo) and gun and knife crime

Overview of evidence

Gun and knife violence and a lack of opportunities for employment are two challenges that can severely limit the opportunities of young adults – particularly those living in deprived areas. The two issues are interrelated as boosting employment levels has a significant role to play in reducing levels of youth violence, as well as in improving the lives of young adults more generally. McVeigh (2008) identifies **reducing poverty and social inequality as the best way to achieve significant and lasting reductions in homicide**. Measures highlighted include deconcentrating poverty and reducing inequality via provision of "safety nets" such as adequate unemployment benefits, education, health facilities and improved living conditions, as a means of unlocking the benefits of economic growth and prosperity.

Knife-related violence

In general, knife-related violence is associated with age, gender and deprivation status, with offending behaviour, neighbourhood disorder and lack of trust in the police acting as risk factors for carrying a knife.

An 11-year retrospective cohort study from a UK major trauma centre found age, gender and deprivation status were "potent influences on the risk of violent injury in young people". Fifty six percent of the assaults resulting in penetrating trauma at the site were in those aged under 25. Of these, 9.4% were children, 47.2% were aged 16–19 and 43.4% were aged 20–24. Most stabbings occurred in males from deprived communities (Vuillamy, 2018).

Analysis of **risk factors for carrying a knife (Brennan, 2018) has found offending behaviour, neighbourhood disorder and lack of trust in the police are significant in understanding weapon-carrying,** with victimization and concerns about personal safety also significant but to a lesser extent. Brennan (2018) suggests that "although young people in high-crime neighbourhoods may be 'over-policed' in terms of 'stop and search' or the prosecution of drug-related offences, they may be 'under-policed' in terms of the protection from harm or the deterrent effect that the police offer, leading to weapon-carrying as a form of self-protection".

Gun-related violence

By contrast, gun-related violence appears more closely associated with illegal drug use. A Home Office study of 80 recently convicted adult male firearms offenders (Hales, 2006) provides many insights into the experiences of gun users. The 80 offenders included 36 who described themselves as White, 28 Black, 11 mixed race, four Asian and one Chinese. Their average age was 23.7 years. Fifty-nine reported a disrupted family life, including 35 who had grown up in a single parent household. Forty-three had been excluded from school, 22 permanently; only 15 reported any post-16 education. Ten offenders had never worked; 49 only in unskilled or manual occupations.

Researchers were able to identify three broad social lifestyles from the research. These were:

- dance music/clubbing / dance drugs / pubs;
- urban music / clubbing / cannabis;
- dependent drug users.

The urban music group was more likely to report firearms violence relating to parties, and there was a degree of drug dealing and/or robbery associated with all groups. Around half said they were a member of a gang or crew, with gang structures being particularly well-developed in Birmingham and Manchester at the time.

Half the research participants were in prison because of robbery convictions; 25 had firearms convictions; eight had violence convictions; two each of burglary, drugs and false imprisonment and one of theft. On average, they had been sentenced to six years and eight months. Fifty-eight had previous convictions, at least six of which were for firearms offences. Most had been stopped by the police in the year before being arrested, about half on multiple occasions. However, half had previously been threatened with a gun, 29 shot at and eight shot; 28 stabbed, 34 robbed and three kidnapped, so there was a large overlap between being a perpetrator and a victim of crime. Almost half of the participants had first encountered guns in the context of crime, "notably" through associating with criminal friends. Another quarter had first experienced air guns and BB guns, usually in their early teens. Six had used guns in "legitimate contexts" and six had encountered them in violence in their country of origin.

Youth unemployment

Although unemployment is at a 40-year low, with "millennials" in their late 20s around 25 per cent less likely to be unemployed than baby boomers were at the same age, pay progress has stalled. **Increases in low-paid self-employment and "atypical" work mean young adults today take on more risk than previous generations** (Intergenerational Commission, 2018).

However, **this masks a more challenging picture for disadvantaged groups and black and minority ethnic populations, where unemployment is higher than national averages.** Unemployment is particularly prominent among disadvantaged groups, including those who have experienced or are at risk of homelessness. These young people are four times more likely to not be in education, employment or training (NEET), compared to other 16-24 year olds (Centrepoint, 2016).

Australian research (Thomaszewski, 2014) found young people in disadvantaged areas more often sought manual occupations, and were more likely to become unemployed, which the authors attributed to "economic tertiarization and decreasing availability of manual jobs in those areas". But the study also found evidence of young people from disadvantaged areas "using repeated changes in jobs to achieve employment in higher-level occupations". The research demonstrated that growing up in disadvantaged areas "did not prevent the proactive construction of career biographies per se, but it required overcoming more barriers to do so".

An analysis of the state of fairness and human rights in England (EHRC, 2019) found disabled people were significantly less likely to be employed, had lower earnings and were less likely to be in high-pay occupations than non-disabled people. Some minority ethnic groups, particularly Bangladeshi and Pakistani groups, were less likely to be employed, more likely to be unemployed, and more likely to be in insecure employment. These groups also had lower average earnings than White British groups and

were less likely to be in high-pay occupations. Across many regions, Muslims were less likely to be employed and more likely to be in insecure employment.

Of 77 respondents to a survey of young carers, almost half (49.6%) were unemployed, representing 21% of the total young adult carers in the wider survey who were no longer at school (Sempik, 2014). Young people leaving care are also more likely than the general population to be unemployed – analysis by the charity Barnardo's in 2014 found 34% of 19-year-olds leaving care were not in education, employment or training, compared with 20% of 18-24-year-olds overall (Slater, 2014).

Below, details of interventions and approaches to respond to gun and knife violence and youth unemployment are presented. Effectiveness and cost-effectiveness information is shown where available, but much of the available evidence takes the form of policy papers, discussion documents and other grey literature.

Addressing gun and knife crime: effectiveness/cost effectiveness

A range of violence reduction strategies and initiatives exist to address gun and knife violence, although the availability of evaluated schemes is relatively poor. Our search identified some systematic reviews and a large number of policy papers. Because schemes tend to target children and young adults together, some findings relate to evaluations where the audience for the intervention included those who were under 18. Evidence tends to be case-study based, or takes the form of policy recommendations set out in grey literature, and there is little in the way of cost effectiveness evaluation. Different schemes and approaches are described below. Where we were able to find evaluation-based evidence, this is described in Figure 23.

Since many areas of interpersonal violence appear to have shared roots especially in childhood and adolescence (McVeigh, 2005), approaches to addressing gun and knife crime tend to be defined as part of a broader strategy also directed at younger children and families. Interventions tend to be categorised as universal (targeted at all children and young people rather than specific groups) and targeted (aimed at sub-groups, based on specific characteristics). For instance, Waddell (2015) summarised evidence from 67 programmes designed to prevent gang involvement, youth violence or associated problems. Of the 67, 54 had been determined as effective when reviewed. These fell into the following categories:

Figure 21. Categorisation of interventions responding to youth violence.

Target population	Type
Universal (for children and young people generally)	School curriculum and skills-based programmes School-wide "climate change" programmes Classroom management programmes Parent/family training programmes
Targeted (for at-risk children and young people)	School curriculum and skills-based programmes Combined school and family programmes Parent/family training and home visiting programmes Other community-based programmes
Targeted (for high-risk children and young people or those already involved in gangs, youth crime or violence)	Family-focused therapy-based programmes Trauma-focused therapy-based programmes Other programmes

Source: Waddell (2015)

Within this categorization, there are further sub-categories. For instance, interventions can be separated into primary prevention programmes to address violence before it happens, secondary programmes used immediately after violent acts to try and prevent short-term consequences, and tertiary programmes, which take place after violence has occurred and try to prevent long-term consequences (HM Government, 2018). **There is some evidence that targeted approaches may be more effective than universal approaches** (see HM Government, 2018, below).

Policy frameworks to tackle gun and knife violence

There have been multiple attempts to outline policies responding to gun and knife violence at regional and national levels. **Two significant examples from a UK perspective are the Home Office Serious Violence Strategy and Glasgow's Community Initiative to Reduce Violence**.

Home Office Serious Violence Strategy

This strategy (HM Government, 2018) focuses on tackling "county lines" and drug misuse; early intervention and violence prevention; supporting communities and partnerships in addressing violence; and law enforcement and criminal justice responses. It recommends first determining which risk factors are most important in explaining who goes on to offend, second looking at the number of risk factors per individual and thirdly better testing of preventative interventions.

The strategy cites a systematic meta-review suggesting targeted interventions, whether secondary or tertiary are more effective at reducing violence than universal programmes. On this basis, the strategy recommends developing targeting strategies that do not stigmatise the individuals involved.

Interventions highlighted in the strategy "typically follow the socio-developmental path of young people", meaning at pre-school age, they focus on parenting and the family, drawing in broader risk factors once a child starts school, with a "common assumption that the earlier the intervention takes place, the better the outcome is likely to be". However, the strategy review process did not find evidence that interventions targeted at 0-5-year-olds had the best results, and some of the most successful interventions were targeted at "slightly older children, those who had already offended, or shown signs of anti-social behaviour".

The review found that successful interventions for preventing reoffending "tend to focus on skills building, cognitive behavioural therapy, or restorative justice", and that these had more positive effects than mentoring, where results were "mixed", or more punitive approaches, "for which there is little supporting evidence", based on a summary of international evidence into interventions for managing young people who offend.

Public health approaches to violence reduction – including Glasgow's Community Initiative to Reduce Violence (CIRV)

There is a growing consensus around the need to adopt a public health approach to addressing youth violence. This builds on World Health Organisation principles requiring evidence-based action and multi-sectoral cooperation (WHO, 2015). The public health approach to violence reduction has been adopted successfully in the US and is now being used in Glasgow and Bristol, as well as being implemented in parts of London. It comprises a multi-agency approach, with a focus on root causes of problems, an emphasis on encouraging education and employment, mentoring and prevention, starting with young children (LGA, 2019). Further details of an evaluation of Glasgow's CIRV programme are provided in figure 23.

Figure 22. LGA advice to councils on implementing a public health approach to violence reduction

LGA advice to councils on implementing a public health approach to violence reduction

1. Encourage a multi-agency approach and make sure any strategy addresses childhood trauma, social inequality, poverty, mental health problems and education and training.

2. Look to help young offenders into employment and training to 'break the cycle'.

3. Engage the community. Recruiting community mentors and supporting youth clubs are both good options.

4. Work with schools. They can provide valuable intelligence about who is at risk and can also be great partners in delivering universal interventions to children.

5. Start young. Many of the most proactive councils are working with pupils at the end of primary school.

6. Language is important. Young people caught up in crime are victims as well.

7. Collect the data. Analysing A&E attendances and arrests can help identify trends and hotspots.

8. Streamline referral systems. Some councils are setting up hubs to review and assess cases.

9. Make sure parents and carers know what signs to look out for so they can spot early if children are being exploited

10. Consider working with other groups, such as taxi drivers, train staff and security guards, as they may be able to spot changes in behaviour and the arrival of criminal gangs

Table of recommendations taken from LGA (2019), Breaking the cycle of youth violence

Targeted approaches for at-risk individuals

Secondary prevention via healthcare professionals

McVeigh (2005) views **healthcare professionals as potentially playing an important role in prevention of violence by identifying individuals who would benefit from services to prevent "repeat victimisation".** This can be achieved either through screening of all people attending clinical settings, or via targeted approaches to individuals clinicians suspect may have experienced abuse. The authors state that routine screening has the advantage of not stigmatising people and of educating the wider public, as well as avoiding errors where healthcare staff fail to recognise abuse. They suggest that while all screening would require training (for instance to enable staff to question patients safely and sensitively, to treat sensitive patient information appropriately and to signpost to appropriate services), targeted screening would require extensive training to be effective.

Harm reduction in the criminal economy

Hales (2006) notes many offenders perceive people become involved in crime such as drug dealing in their early to mid-teens, implying that people need to be educated about gun violence early in their secondary education. Perceptions of drug dealing as a lucrative

activity can be challenged through amassing empirical evidence into “whether the rewards for drug dealing are short-term and only limited to a small minority of drug market participants, and the degree to which the risks such as violent victimisation and imprisonment offset any economic benefits”. Legitimate employment must “out-compete” illegal activities, with particular emphasis on opportunities outside the target group’s immediate area. **Greater provision of youth services in deprived areas should be supported, alongside mediation of gang disputes, where there is scope for this. Adopting a public health/harm reduction approach to involvement in the criminal economy is also encouraged**.

McVeigh (2005) attributes a 7.8% reduction in gun crime and a 24% reduction in armed robbery is attributed to a Metropolitan Police strategy of gun amnesty, the disruption of gun smuggling and transportation, disturbance of meeting places for gun criminals, and the interruption of communication networks.

Targeted approaches for high-risk individuals

Youth justice interventions

Adler et al (2016) undertook a review of youth justice interventions, including those targeted at young people who had committed violence. For the purposes of the review, young people were taken to be 10-17 years old when considering initial intervention, programmes and supervision, and up to 21 years old when considering transitions into the adult criminal justice system and resettlement post release from custody.

The most effective approaches for managing young people who offend are:

- assessed the likelihood or risk of an individual reoffending and, importantly, matched services to that risk level with a focus on those who are assessed as having a higher likelihood of reoffending;
- considered the needs and strengths of the individual and their ability to respond to the intervention;
- were characterised by using a combination of skills training and cognitive behavioural intervention approaches, rather than deploying primarily punitive or surveillance focussed programmes;
- considered the amount and quality of service provided and programme fidelity. The wider offending context, such as family, peers and community issues, should also be taken into account;
- employed a multi-modal design with a broad range of interventions that address a number of offending related risks. Case management and service brokerage can also be important; and
- made sure communication between staff and young people was strengthened through mutual understanding, respect, and fairness.

(Taken from Adler, J. et al (2016) What works in managing young people who offend? A summary of the international evidence)

The authors cite a meta-analysis of 30 post custody aftercare studies from the US (Weaver 2015, in Adler 2016), showing that **well-implemented aftercare programmes reduced the risk of reoffending among older young people with violent criminal histories**. Significant reductions in further offending were shown for those who were over a mean age of 16.5 years. The authors of the meta-analysis suggest older adolescents might have greater intellectual capacity to participate – and benefit from – the activities in the

programmes. Effective aftercare programmes generally incorporated “a professional who demonstrated commitment to the wellbeing of the young people in their care”, whereas weaker schemes suffered from high staff turnover, and lower contact between staff and participants than had been anticipated – particularly when the expectations of the young people were not met. Figure 23 below shows summary results for a range of evaluations into interventions designed to reduce gun and/or knife violence.

Figure 23. Interventions aiming to reduce gun or knife violence.

Intervention	Evidence
Public health approach to violence reduction	A preliminary review of Glasgow’s Community Initiative to Reduce Violence (CIRV) compared rates of criminal offending (including violent and non-violent offences) for the 167 male youths (aged 16–29) who engaged with the initiative with data for one or two years follow-up for age-matched gang-involved youths from an equally deprived area of the city. Violent offending reduced across all groups over the study period. In the cohort followed for two years, the rate of reduction was greater in the intervention group (52%) than the comparison group (29%). The reduction in the rate of physical violence was not significantly different between the intervention group and the comparison group but the rate of weapon carrying was reduced more in the intervention group than the comparison group after two years – by 84% and 40% respectively (Williams, 2014).
Multi-professional service for vulnerable adolescents	Sefton Community Adolescent Service (CAS) was established to support vulnerable adolescents aged 12-25 in order to reduce involvement with the criminal justice system, and with guns and gangs. The scheme offered residential short-term breaks, residential foster care and a private residential provider, as well as an integrated plan and multi-professional teams. overall, the project achieved mixed success. The initial CAS plan was viewed as overly ambitious, incorporating too many sub-pilots, and the CAS was rolled out while management and supervisory structures were still under development. The evaluation was broadly positive about the scheme: nearly two thirds (65 per cent) of CAS cases were closed because the original aims in the family plan were achieved. Twenty six percent were closed due to withdrawal of consent, and 9% because of moving out of area. Feedback from CAS staff indicated that many of the issues service users faced, including guns and gangs, were starting at age 9 or 10, and that the 12-25 age range was “pitched too high to achieve the maximum impact from the CAS”. (Day, 2017)
Community-based holistic wellbeing and mental health service	Project Future is a community-based holistic wellbeing and mental health service, which aims to improve young people’s wellbeing, access to services, and

Intervention	Evidence
	education, employment and training opportunities with the long-term aim of reducing marginalization and offending. According to a qualitative study into the impact of Project Future, community and criminal justice stakeholders reported a perceived reduction in offending amongst young people attending the scheme as one positive impact arising from the initiative. Young people "reported the importance of Project Future in providing a safe space, routine, purpose and opportunities, and in actively addressing risk factors (e.g. support to get their driving licence reducing their need to walk and carry a weapon), in reducing offending" (Stubbs, 2017).

Combating youth unemployment: effectiveness/cost-effectiveness

As with gun and knife violence, much of the literature relating to combating youth unemployment takes the form of strategies and policy papers, and there is relatively little in the way of evaluated interventions. Programmes to target youth unemployment can also be separated into universal and targeted schemes, as described below:

Universal schemes

Youth guarantee

Addressing youth unemployment has been a focus of the European Union for some years. In April 2013, EU member states committed to adopting a Council Recommendation on establishing a Youth Guarantee scheme. Under the scheme, member states are expected to ensure that all young people under the age of 25 year receive a "good-quality offer of employment, continued education, an apprenticeship or a traineeship within a period of four months of becoming unemployed or leaving formal education". Examples include employment (this may be subsidised or not); self-employment, continued education; apprenticeships; and traineeships. Funding is directed at this scheme via the Youth Employment Initiative, and this provides extra support in regions where youth unemployment rates are higher than 25%.

The most common initiatives are hiring incentives. The authors suggest this is because these are easier to implement than measures that attempt to stimulate demand for labour. Sixty per cent of EU member states have started to set up hiring incentives, but direct employment creation programmes and start-up incentives are much less common in Youth Guarantee implementation plans (Duell, 2018).

A three-year review of the Youth Guarantee scheme (ESF, 2018) recommended a stronger focus on supporting the most disadvantaged young people, and suggested that an integrated approach might be an effective way to achieve this. It highlighted a network of 40 integrated support centres for young people, known as Ohjaamo, in Finland. These operate mainly as drop-in services, but around 10% of users are referred for further support with a guidance worker. The centres offer employment and enterprise support, educational guidance and personal budgeting assistance, as well as housing, health and recreational guidance. Ohjaamo means "cockpit" in Finnish.

The review found that by co-locating public services, the Finnish scheme was able to reduce buildings, overheads and back office costs, as well as providing a more comprehensive response to the "NEET phenomenon" by recognising that unemployment can exacerbate

physical and mental health conditions and “support needs extend beyond educational and vocational inputs and, at their best, such facilities provide a comprehensive support package derived from a holistic assessment process”. **Providing integrated services via co-located teams can assist service providers in offering personalised services – an increasingly popular response to youth unemployment, as well as reducing the amount of paperwork that service users themselves need to complete.**

Vocational training

Further research in European countries has found that in Western Europe, countries such as Germany, Austria, the Netherlands, Denmark and Switzerland, which have vocational training systems and certified, transferable occupational skills focusing on the needs and involvement of employers have the lowest unemployment rates. **These schemes are viewed as more successful because, unlike general or vocational schooling, they “connect with the changing needs of the economy and allow trainees to gain specific knowledge and first job experience” through close links with training companies**. Companies contribute to the cost and the management of the systems, meaning that these approaches are more effective where there is a culture of cooperation between business, government and social partners (Eichhorst, 2013).

Traineeships and apprenticeships

England’s traineeship programme (DfE, 2015) provides 16 to 24 year olds with an intensive period of work experience and work preparation training lasting between six weeks and six months, along with English and maths provision if required. The work experience component of the scheme is intended to provide meaningful work experience and to allow the young person to develop workplace skills, while work preparation training covers CV writing, interview preparation, job searching and interpersonal skills. The Department for Education describes the aim of traineeships as to “secure young people’s progression to a positive outcome as quickly as possible - where they were not ready to take this step without the preparation that the traineeship provides”.

Traineeships are viewed as a preparation for applying for an apprenticeship. These jobs “provide high quality training to ensure that an apprentice can achieve full competency in their occupation and prepare them for a successful career”. Apprenticeships are now overseen by an employer-led non-departmental public body called the Institute for Apprenticeships and Technical Education. See figure 24 for details of an evaluation of traineeships.

Targeted schemes

As highlighted earlier in this report, some people – particularly those from disadvantaged and Black and Minority Ethnic (BME) groups, face greater challenges in securing employment. In response, various bodies have proposed approaches and programmes targeted specifically at these groups.

Local authority role in supporting minority ethnic people into work

Morris (2015) sets out a number of ways that local authorities can support transition initiatives for BME young people seeking to join the workplace, focusing on both the demand side and the supply side, as well as co-ordination between the two.

These include encouraging employers to recruit a more diverse workforce, and providing tailored support for BME people. Morris also urges local authorities to be “transparent about the representativeness of their own workforces and run their own internal placement

schemes for young people looking for work, targeting ethnic minority communities where there is a local need". Morris adds: "Their planning and commissioning powers mean they can require employers to recruit apprenticeships from disadvantaged groups and to increase transparency about the diversity of their workforces." **The report also advocates creating targets for the proportion of ethnic minority apprenticeships underway that reflect the demographic composition of the area, and gathering data in order to monitor uptake and outcomes.**

Supported internships for young people with special educational needs or disabilities (SEND)

The period between the ages of 16-26 is viewed as crucial for supporting people with SEND to achieve their potential in the workplace. Sixteen-year-olds with SEND have aspirations and confidence similar to their peers, but by the age of 26 their hopes and confidence have often "taken a severe knock" (Transitions to Employment Group Sub Group, 2016).

Supported internships have been developed by the government to support young people with SEND to enter the workplace. The internships usually last for a year, and include an unpaid six month work placement. A job coach is provided to support the young person as they follow the scheme (DfE, 2017). Remploy (2016) describes supported internships as "personalised study programmes based primarily at an employer's premises […] designed to better enable young people with learning disabilities to achieve sustainable paid employment by equipping them with the skills they need for the workplace".

Remploy (2016) states that while the internship should contribute to the young person's long-term career goals and fit with their working capabilities, for the employer it should meet a real business need, with the potential of a paid job at the end of the programme of study, should the intern meet the required standard. Remploy advocates a national marketing and communications campaign promoting the approach as a model of recognised best practice. It also states that the nature of the job coach role should be clarified, and calls for a Social Return on Investment report to be compiled which would build the case for a wider take-up of Supported Internships.

Supported internships have been used to improve the job chances of young people with moderate to severe learning difficulties, and the Transitions to Employment Sub Group has called for these to be strengthened and expanded in order to improve poor rates of employment progression from further education for a wider group of young people with milder impairments.

The Transitions to Employment Sub Group recommends at the national level integrating the existing Transitions scheme with the government's Disability Confident programme, and including a commitment to recruiting supported interns and disabled trainees and apprentices and offering work experience opportunities on digital platforms. The group also calls on the National Careers Service, the Careers and Enterprise Company and their partners to take steps to improve outcomes for young people with SEND. It urges a "mainstream expectation of success for SEND young people" and the ending of "acceptance of poor outcomes for young people with SEND".

As the DfE states (undated), "a key issue for supported internships, or other study programmes with work experience as a core aim, is support for learners after the course has ended – especially for those that do not have a job offer lined up". For young people in this position, the DfE recommends ensuring that students and families are aware of support available via Jobcentres, as well as other potential funding sources such as personal budgets.

Support for young adult carers

Young adult carers (aged 16-24) are three times as likely to be or have been NEET (not in education, employment or training) than other young people the same age (Aylward, 2018). Research suggests young adult carers decrease engagement with carers' services as they begin to focus on further education and work, but support relevant to young adult carers' needs can enable them to make successful transitions into employment.

The authors state: "In particular, young adult carers aged 16-25 benefit from information about paid employment, support with the job application process and help accessing further education or training if necessary. In order to counter barriers to employment, support needs to be personalised and holistic. For example, as well as addressing gaps in skills and qualifications and helping with the job application process, advisers could work with a young adult carer to arrange alternative care for dependents, address potential ill-health and navigate benefit entitlements."

Support for looked-after children and young people leaving care

Looked-after children and young people are also likely to require enhanced support as part of their transition out of care services, given the higher likelihood that members of this group may find themselves not in employment, education or training. A National Children's Bureau analysis identified reliable financial support, apprenticeships and work experience, mentoring schemes, interview preparation and help with university forms, special classes or teachers to provide additional support to young care leavers, Personal Education Plans, access to computers, including specific people with educational remit within teams, involving career advisers in leaving care services, employment skills groups and building formal links with colleges, trainers and employers, as beneficial for this group. A scoping review of interventions for youths leaving care in Canada (Woodgate, 2017) also identified time banking schemes as effective.

Case management

Many of the targeted youth employment schemes in operation use a case management approach to address the specific needs of individuals receiving support. Examples include intensive client-centred case management for homeless unemployed people in Australia (Grace, 2015), activity agreement pilots in the UK (DfE, 2010), and schemes such as YouthBuild in the US, which incorporate a case management approach (Miller, 2018). Further details about these evaluated schemes are provided in figure 24 below.

Figure 24. Summary results for evaluations into interventions designed to improve employment levels among young adults.

Intervention	Evidence
Case management approaches	An Australian trial comparing a two-year intensive client-centred case management programme for homeless, unemployed people with standard treatment; intervention comprised direct provision of a range of services on demand through a single point of contact, as well as the brokering of additional services. Both groups improved their circumstances over the two years of the trial. Participants who received 20 or more contacts had significantly better accommodation and

Intervention	Evidence
	employment outcomes than those who received fewer contacts (Grace, 2015) A trial of Activity Agreement pilots in the UK in 2006-8 used personally negotiated contracts between 16-18 year olds not in education or training and personal advisers/ keyworkers alongside continuous support and some discretionary funding for some activities. Three months after participation, 49% of young people were engaged in education and employment related activities, compared with 36% in the control group. 28% were studying towards a qualification compared to 20% in the comparison group; 17% were in paid work without training compared to 27% without an Activity Agreement; 10% entered elementary occupations compared to 16% in the comparison group; 7% of participants reported doing some voluntary work, compared to 5% in the control group. Forty eight percent of participants reported doing some studying or work-based training at follow-up, two years later, which the study authors said was “about 8% higher than would have happened without the Activity Agreement”. Costs were estimated at £2122 per participant. The evaluation concluded that the intensive support and tailored learning were resource intensive in terms of staffing, but “helped to support the needs of young people who had failed to engage through mainstream interventions”. (DfE, 2010) YouthBuild is a US scheme that has been in operation since the 1970s and attempts to improve prospects for “less-educated young people”. It is used by more than 10,000 people each year at over 250 sites across the US. Participating organisations provide “hands-on, construction-related or other vocational training, educational services, case management, counseling, service to the community, and leadership-development opportunities, to low-income young people ages 16 to 24 who did not complete high school”. YouthBuild was evaluated using a randomized controlled trial. The evaluation suggested that over four years the programme provided a starting point for redirecting otherwise disconnected young people, but that this could be improved upon. YouthBuild “increased the receipt of high school equivalency credentials” and “increased enrollment in college, largely during the first two years”. But very few young people had earned a degree after four years, and the programme had a very small effect on degree receipt. YouthBuild “increased survey-reported employment rates, wages and earnings, but did not increase employment as measured with employer-provided

Intervention	Evidence
	administrative records, which might not include certain kinds of employment, such as jobs in the gig economy and other types of informal work". It also "increased civic engagement, largely via participation in YouthBuild services. It had no effects on other measures of positive youth development and few effects on involvement with the criminal justice system". The authors stated: "As with many youth programs [sic], YouthBuild's benefits through four years do not outweigh its costs. But it is too early to draw firm conclusions about YouthBuild as an investment, since the benefits accrue over participants' lifetimes." (Miller, 2018).
Provision of temporary jobs	'Proving Talent', was a scheme developed by the Give Us A Chance (GUAC) consortium of social landlords to provide temporary paid jobs and training opportunities mainly for young people. An evaluation found 25 participants had completed a temporary job - 10 of these had moved into another job immediately. Five left early, mostly owing to early non-attendance or disciplinary issues, and 22 were still in their temporary job. Five of the nine participants on the self-employment awareness course had moved into work, volunteering or training. The report states: "The early indicative level of outcomes appears to be on a par with comparable initiatives. As well as hard outcomes, participants experienced boosts to their confidence, motivation, professionalism and other soft skills as a result of Proving Talent." (Roberts, 2013).
Traineeships	An evaluation of the English government's Traineeship scheme found that overall, trainees had positive outcomes in the 12 months after starting their Traineeship, with 29% beginning an apprenticeship and 57% starting further learning. Younger trainees (aged 16-18) were less likely than older trainees (aged 19-23) to begin employment within 12 months of starting a traineeship (19% compared with 53%). For 16-18 year olds and 19-23 year olds, traineeships increased the likelihood of being in apprenticeship, further learning or employment 12 months after starting the programme. Traineeships increased the likelihood of 16-18 year olds and 19-23 year olds undertaking further learning 12 months following the start of the traineeship, but the impact was focused on low-level qualifications (Level 2), with some evidence that Traineeships reduced the likelihood of progressing to vocational education above Level 2 compared to what would have happened if the young person had not participated in a traineeship. The authors suggest this is likely to be at least partly driven by the fact that

Intervention	Evidence
	trainees had lower levels of educational attainment prior to starting their traineeship. The authors suggest apprenticeships and learning at level 2 appear to be boosted, while learning at a higher level is reduced, especially among younger trainees. They state effects on employment not are significant for 16-18 year-olds but are cautiously positive for 19-23 year-olds. The authors also query whether promoting employment among 16-18 year-olds is an optimal aim when set against the alternatives of, for example, an apprenticeship (Dorsett, 2019).

As with interventions addressing youth violence, there is very little available information about cost effectiveness, and the process of attaching a value to averted periods of unemployment, and of measuring the impact of an intervention across a lifetime, is extremely challenging. Where cost has been considered (for instance in DfE 2010 and Miller 2018), there is an acknowledgement that while programme costs can be high, this does not necessarily mean that they constitute poor value.

Implementation and other challenges

While a proportion of the literature focuses on changes to policy on employment support and anti-violence at a national level that are not part of the STP's remit, there are still many areas in which it will be possible for the STP to effect real change.

A major challenge in implementing change in relation to gun and knife violence and unemployment is the number of different bodies that play a role in providing services or have a responsibility for ensuring different aspects of provision. These could include health and care services, education, policing and criminal justice, housing and the voluntary and private sectors, for example.

As Skae (undated) identifies, smaller charities focusing on similar issues can find themselves working in isolation because of the requirement to compete for funds. Larger organisations can support them by collaborating with them to deliver shared projects or submit joint funding bids. Similarly, these smaller organisations can provide helpful insights for policy development and strategy purposes, but are sometimes left out of these discussions except at the earliest stages. **The STP may therefore be able to play a highly significant role as a convenor of organisations across different sectors, providing a route for these organisations to collaborate and brokering new relationships at a local level in line with STP strategic goals.**

Multi-agency collaboration is a recurring theme in the literature on both gun and knife violence and unemployment, and it is likely that **the STP will need to reach beyond the boundaries of its own member organisations in order to fully address some of the challenges of implementing effective approaches.**

In relation to addressing gun and knife violence, the literature appears to indicate that targeted strategies focused on particular groups are likely to be more effective than universal approaches. Similarly, it is possible to identify sub-groups within the population of young adults who are at greater risk of unemployment who will have distinct needs, such as care leavers, those from minority ethnic groups and those with SEND. For this reason, **the STP**

may wish to carry out a focused assessment to stratify different relevant populations in terms of the types of targeted intervention that are likely to have the greatest impact, before developing new approaches to addressing these challenges.

The STP may also wish to implement an approach to tackling gun and knife violence that spans its maternity and childhood and adulthood and work programme areas, as it is likely that an effective approach to reducing gun and knife violence will need components that are tailored at school-age children as well as older adolescents and young adults.

Recommendations

Below are some recommendations for measures to address gun and knife violence and boost employment in young adults.

Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 25. Recommendations for combating gun and knife violence and youth unemployment.

Interventions for gun and knife violence; youth unemployment	Recommendation
Gun and knife violence	**Ensure** the STP studies and where possible implements approaches in line with the WHO public health approach to youth violence – such as the Glasgow Community Initiative to Reduce Violence (CIRV), given the compelling evidence in support of these approaches.
	Avoid adopting punitive approaches to discouraging gun and knife violence, such as boot camps, as the evidence appears to suggest that these are not effective.
	Consider focusing on schemes targeted at groups/individuals with particular needs, rather than universal violence reduction programmes as these appear from the evidence to be more effective.
	Consider creating a work programme that bridges the children's and adults' work programmes within the STP in recognition of the finding that gun and knife violence is a problem that often emerges in childhood and continues into adulthood. Ideally, consider engaging with older primary school-aged children, in light of findings from the Sefton Community Adolescent Service evaluation (see main body).
	If not already under way, **consider** training healthcare staff to recognise signs of abuse related to gun and knife violence in order to link victims to support that can help them avoid 'repeat victimisation'
	Consider challenging perceptions of drug dealing as a lucrative activity, and to show how legitimate employment can 'out-compete' illegal activities, through education and other engagement with vulnerable individuals.

Interventions for gun and knife violence; youth unemployment	Recommendation
	Consider boosting or reinstating youth service provision, if funding is available, along with increased provision of mediation services to resolve gang disputes.
	Consider enhancing post-custody aftercare services, if needed, using a case management approach with professionals who can 'demonstrate commitment to the wellbeing of young people in their care'.
	Ensure that new interventions to tackle violence and support vulnerable young people are well-targeted and not overambitious in scope, in order to avoid challenges such as those faced by the Sefton Community Adolescent Service (see section 3.2)
Youth unemployment	**Consider** offering enhanced co-located multidisciplinary services – possibly adapting elements of approaches such as the Ohjaamo model, if budget allows (see section 3.2 for further detail about this model)
	Ensure schemes to support young adults into employment and training are tailored to areas of greatest need and accompanied by data collection at a granular level in order to gauge progress.
	Consider the STP constituent organisations' roles as employers and commissioners of services by taking steps to increase workforce diversity and to offer training and employment opportunities to care leavers and people with special educational needs and disabilities (SEND), if not already under way
	Consider how the STP can support and enhance national schemes such as supported internships and traineeships and apprenticeships, by publicising these locally and encouraging local businesses to adopt good practice approaches in working with young adults embarking on these schemes **Consider** identifying target groups who would benefit from intensive case management approaches (see section 3.2 for further detail about these approaches) to support successful uptake of initiatives to prevent youth unemployment, if budget allows, and monitor progress in order to add to the evidence base for such initiatives.

Adulthood and work: summary

As with the interventions analysed in the maternity, childhood and adolescence section, there appears **potential to achieve some improved outcomes using social prescribing, staff-facing interventions for stress and musculoskeletal disease and interventions to address gun and knife violence and youth unemployment.**

But there are also **gaps in the available evidence, particularly in relation to cost-effectiveness**. And some of the evidence relating to each area of focus has been generated through topic-based research studies rather than service evaluation, meaning it can be less helpful in deciding whether to pursue a particular course of action.

In the case of social prescribing, this is an area that is evolving rapidly, with a national imperative for STP and ICS areas to put schemes in place. **BSOL STP will need to understand the impact of its social prescribing work in real time, as much as is feasible.** This review describes some of the opportunities and pitfalls that can arise during the evaluation of social prescribing schemes. The STP may wish to draw from this available evidence when considering how to assess the effectiveness of its social prescribing schemes.

We would recommend, based on the literature, that **as social prescribing initiatives are set up, the STP pays particular attention to referral routes, staffing plans for social prescribing schemes and ways of capturing impact data**. It will also be important to ensure that continuity of care is maintained, particularly with regard to information flows between the social prescribing scheme and usual care, and regarding case management of scheme participants.

In working to reduce the incidence of stress and musculoskeletal illness among its staff, **the STP should ensure staff are able to engage with plans to put new interventions in place.** Once again, where possible these should be evaluated in such a way that it is possible to gauge their impact. Strong links between this work and existing occupational health staff will be necessary, as well STP-wide policies to support mental health and wellbeing, and to discourage presenteeism.

When responding to gun and knife violence in the STP area, the WHO approach described in the review has much to recommend it, and benefits from a growing evidence base.

The literature suggests that gun and knife violence is strongly rooted in childhood experience, and is relevant even to children of primary school age. Creating an artificial divide between strategies aimed at under-18s and those aimed at young adults, as a result of the design of STP workstreams could create extra challenges for staff working in this area – a programme that spans both workstreams may be of benefit.

In addressing both violence and youth unemployment, it is likely that targeted approaches represent the most efficient way of using STP resource.

3.3. Older people and later life priority area

In this section, we present the evidence on the three intervention areas that were selected for the in-depth analysis in the *Older people and later life* priority:

- multidisciplinary team working in integrated care;
- intermediate care;
- interventions to tackle social isolation and loneliness.

i. Multidisciplinary team working in integrated care

Overview of evidence

Multidisciplinary working refers to health and care teams, which include a range of health service workers, each providing specific services and working together to provide care to the patients. The term is interchangeably used with inter-professional, multiprofessional, inter-disciplinary, inter-agency and multi-agency working. Multidisciplinary working can take several forms, but in the integrated care context usually refers to multidisciplinary team (MDT) meetings which involve utilising knowledge and skills from different providers to better understand the needs of patients. Literature recognises several common features of MDTs (Figure 26).

Figure 26. Common elements of MDTs

Common elements of MDTs:

- An identified manager and/or practice leader who oversees and facilitates the work of the whole team.
- A single process to access the workers in the team, with joint meetings to share insights and concerns.
- Electronic records of all contacts, assessments and interventions of team members with an individual and their family.
- A 'key worker' system through which care for those with complex support packages is coordinated by a named team member.

(Adapted from Social Care Institute for Excellence, 2019)

Multidisciplinary team working: effectiveness

Early research into MDT meetings argued that this way of working produces better outcomes for patients (Wagner 2004; Mickan 2005) by providing a better assessment of treatment options, improved prescribing or medication adherence, and improved job satisfaction for professionals (Kassianos et al. 2015). However, the evidence base for MDT meetings is limited and mixed, and differs depending on the degree to which they have been absorbed into practice, across healthcare conditions and different healthcare and social settings (see fig 27). Evidence on whether MDTs reduce hospital use is limited.

Several recent systematic reviews of MDT working in cancer, mental health and other disciplines have concluded that there is insufficient evidence to determine their effectiveness (Malone et al. 2007; Lamb et al. 2011). One recent study comparing multidisciplinary memory clinics with general practitioner care found no evidence of improved effectiveness (Meeuwsen et al. 2013). However, a systematic review of initiatives designed to improve integration between care homes and health services found that various schemes had improved residents' health status and quality of life (Davies et al. 2011).

A study exploring the impact of multidisciplinary case conferences on the appropriateness of medications and on patient behaviours in residential care found that there was a significant improvement in appropriate medication in the intervention group compared with the control group (Crotty et al. 2004). In another study evaluating whether multidisciplinary case conference reviews improved outcomes for nursing home residents, however, there were no significant reductions in medications orders, cost and mortality (King and Roberts 2001).

One randomised control trial of multi-component home intervention programme for older people (Gitlin, Winter, et al. 2006; Gitlin, Hauck, et al. 2006) included MDT working and found statistically significant differences in performance of daily life activities, use of adaptive strategies, self-efficacy, and fear of falling. Another study evaluating an integrated health and social care team showed that the time between referral and assessment was shorter in the integrated team but no differences in functional ability were found (Brown, Tucker, and Domokos 2003). An interdisciplinary geriatric outreach rehabilitation and educational programme found a significant improvement in quality of life (Moroz et al. 2004).

Literature on shared care models - an approach to care which utilises MDT working - indicates that this way of working may improve prescribing, medication adherence and patient satisfaction for patients with chronic illnesses (Smith, Allwright, and O'Dowd 2007), but has mixed or limited effects on other outcomes (Smith et al. 2017). The evidence base for reducing hospital use is also mixed. One study of a COPD management programme found a reduction in length of stay (Rea et al. 2004), but other studies found no evidence of impact on hospital admissions, length of stay or outpatient attendance (Schraeder, Shelton, and Sager 2001).

Figure 27. Summary table of effectiveness of multidisciplinary team working

Intervention	Effectiveness
Integrated working between care homes and health care services	There is limited evidence about what the outcomes of different approaches to integrated care between health service and care homes might be. The majority of studies only achieve integrated working at the patient level of care. Some of these schemes improve residents' health status and quality of life.
MDTs working in specific healthcare conditions	There is insufficient evidence to determine effectiveness.
MDTs working in the community	Evidence on reducing hospital use is limited. Evidence on other outcomes is mixed.
Interdisciplinary practice in primary care	Primary care MDTs increase admissions to hospital for people in high risk populations.
Shared care approach with MDT working	Evidence suggests that it can improve prescribing, medication adherence and patient satisfaction for patients, but has mixed or limited effects on other outcomes.

Generally, research demonstrates that the most successful examples of integrated care and the facilitation of multi-disciplinary teams have been those that identified a designated care co-ordinator/case manager.

Goodwin et al. (2013) identified the co-ordinator/case manager role as imperative to delivery of care and better long term outcomes for patients. The report makes a point that in the five UK programmes they reviewed, the care co-ordinators came from a range of professional backgrounds. Although there is a lack of evaluation and measurement on which to judge the performance of care co-ordination programmes, named care co-ordinators appear to be important design features needed to support the process of care co-ordination for patients and enabling access to care through multidisciplinary teams.

Research on the effectiveness of multidisciplinary teams that specifically include social work team members are scarce. Literature is only beginning to define the roles social workers fulfil in integrated care settings, and identify organizational and system factors that affect social workers' delivery of interventions in integrated care models (Saxe Zerden, Lombardi, and Jones 2019). For example, a study focussing on social worker roles in coordinating complex health services and management of care (Xiang et al. 2019) found positive impacts of social worker-led care management interventions on hospital readmission rates, length of stay, and costs for inpatient super-utilizers. The authors also describe how social workers, as part of multidisciplinary teams, can successfully lead the implementation of interventions.

Another study developed the Social Worker Integrated Care Competencies Scale (Davis et al. 2019), which measures and assesses social work trainees' knowledge and skills around integrated care competencies. A study conducted by Reno et al. (Reno, Beaujolais, and Davis 2019) identified factors that affect delivery of successful integrated care for social workers with a conceptual framework related to organizational structures, personal and interpersonal dynamics, and knowledge. The authors highlight the need for more cross-disciplinary training and education in order for the social work practices to be more widely understood.

Multidisciplinary team working: cost-effectiveness

Evidence on cost savings is inconclusive. Studies on cost effectiveness are scarce and more robust evidence is needed. One randomised control trial examining the management of patients with rheumatoid arthritis found that the mean cost per patient was slightly higher for those receiving shared care, but a small gain in quality of life meant that it was likely to be cost effective at £2,000 per quality-adjusted life years (QALYs) (Davies et al. 2011). The economic evaluation of an initiative that provided care homes with a dedicated nursing and physiotherapy service and extra training for care staff found savings as a result of reduced hospital admissions, early discharges and illness recognition, meaning that overall the introduction of the team was 'at least cost neutral' (Davies et al. 2011). No evidence was found that memory clinics were more cost-effective compared to general practitioners with regard to post-diagnosis treatment and coordination of care of patients with dementia in the first year after diagnosis (Meeuwsen et al. 2013). Other work has found that cost effectiveness can depend on the degree of shared care offered, with complex patients who received higher levels of shared care proving more costly (McCrone et al. 2004).

Implementation and other challenges

There is a good evidence base regarding the factors and elements that make multidisciplinary teams perform better and the challenges in implementing these sorts of initiatives have also been described. In this section, we highlight what the

literature tells us about the facilitators and barriers to implementing multidisciplinary teams in an integrated care context.

- ***Workforce/skill mix as factors influencing the effectiveness of multidisciplinary working*.** Factors such as workforce/skill mix, competence in working with older people and awareness of their particular needs all feature highly as factors influencing the effectiveness of multidisciplinary teams for older people. The most frequently represented professions in the literature are: nurses, occupational therapists, physiotherapists, social workers, and physicians. Dietitians, pharmacists, speech therapists, and psychologists are mentioned much less. Research seems to indicate that MTD workforce composition/skill mix is determined more by supply and historical factors than by demand or need factors (Huxley et al. 2011).

- ***Clear purpose, roles, communication and teamwork as enablers of multidisciplinary working.*** Recent research (Mickan, Hoffman, and Nasmith 2010) studied interdisciplinary practice in primary care across 10 countries and found that service providers emphasised the importance of having clear policies in place about interdisciplinary team working, clarity about each other's expectations, regular team meetings, open communication and a clear focus on patient care. Another study (Woodbridge-Dodd 2017), based on interviews with social workers working in three different NHS mental health services, found that for many, the reasons they as social workers were brought into mental health teams were the very skills they struggled to use when working in MDTs. The author suggested that multidisciplinary team working that includes social care needs to include a clear understanding of what constitutes social care, social work and social interventions. Similarly, a recent systematic review on integrated working between care homes and health care services (Davies et al. 2011) concluded that the majority of studies in the area were led and conducted by health care professionals, and therefore present the clinical experience of multidisciplinary working. More research is needed to understand the roles social workers fulfil in integrated health settings and identify organizational and system factors that affect social workers' delivery of interventions in integrated health models.

- ***Structures and processes for implementation are not always well described***. Very little guidance exists on the structure and processes that teams should follow for MDT working (Raine et al. 2014). Recommendations that exist refer to working within community mental health and state that assessments and reviews of patients should be routinely discussed by the whole team in a timetabled weekly meetings, and that these weekly meetings should include the consultant psychiatrist. There is also some guidance about the different professions that should be members of the team, but the guidance doesn't describe how to account for local context (Department of Health 2001). Guidance on how to successfully integrated social care workers into primarily health professional focused multidisciplinary teams is scarce.

- ***Greater multidisciplinarity is not associated with more effective decision-making***. A recent study on improving the effectiveness of multidisciplinary team meetings for patients with chronic diseases (Raine et al. 2014) found that greater multidisciplinarity was not necessarily associated with more effective decision-making. The authors suggest that the relationship between multidisciplinarity and MDT decision implementation is mediated by other factors, such as clarity of purpose and agreed processes. They also found that the teams which implemented the most decisions tended to be the most medically dominated in terms of both attendance and participation.

Figure 28. MDTs enablers

Clear purpose: MDTs need a defined role that requires team members to interact across professional and disciplinary boundaries.
Institutional support: the organisations which employ staff must provide support.
Team leadership: leaders should generally be facilitative in their approach to encourage different contributions. An awareness of team dynamics and a willingness to challenge poor collaborative practice are important competences for a team leader.
Collaborative opportunities: teams must have physical space and time for their members to engage across professions and disciplines.
Person-centric: there is a danger that teams can become too inwardly focused on their own functioning. This can lead to people and their families feeling more, rather than less, excluded from discussions about their care.
Role diversity: a mix of professions and practitioners must respond to the needs of the population concerned while still being small enough to allow members to know each other.
Evidence focused: teams require timely and accurate evidence of their shared impact.

(Adapted from Social Care Institute for Excellence, 2019)

- ***Context is important for multidisciplinary working***. Successful approaches to multidisciplinary working seem to be highly context-specific, and literature suggests that they cannot be simply transported from one setting to another. Understanding one's own local context is the key to learning lessons and successfully transferring approaches.

- ***Most appropriate outcomes for evaluation***. There is a debate in the literature about the most appropriate outcome for evaluating the effectiveness of MDTs (Raine et al. 2014). Measures used in the past studies include health-care use, patient and team member satisfaction, patient well-being, quality of care as well as various patient health outcomes, including subsequent onset of unrelated morbidity, change in patient's personal circumstances, extent to which patients adhere to treatment and efficiency of care provision (Mickan 2005). Raine and colleagues suggest decision implementation as a useful process measure of effectiveness because it takes into account the relevant clinical and non-clinical information and can be measured and compared across MDTs for different conditions (Raine et al. 2014).

Recommendations

Below are some recommendations for implementing multidisciplinary team working interventions, drawn from the evidence review. Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 29. Multidisciplinary team working interventions recommendations

Multidisciplinary team working in integrated care	Recommendations
MDT team design	**Consider** appointing a manager and/or practice leader who will oversee and facilitate the work of the team/s. The background

	of the staff performing this role may vary as a result of local circumstances.
	Consider local context at length and ensure this is taken into account in the design of MDTs.
	Consider including social workers to be members of all multidisciplinary teams working with older patients.
	Consider different ways of supporting team/s to collaborate successfully, either through bringing together those working within a locality into an MDT or maintaining single-discipline teams but enabling collaboration through shared principles, practices and training.
MDT working implementation	**Ensure** clear structures and processes that teams can follow.
	Ensure that the design and structure of the MDT prioritises clarity of purpose and agreed processes over breadth.
	Ensure appropriate workforce/skill mix that is competent and aware of the particular needs of older people. **Ensure** there is sufficient clinical engagement in MDTs.
	Ensure staff's roles are clearly defined, particularly those of social workers. **Consider** cross-disciplinary training and education in order for the social work practices to be more widely understood.
	Consider organizational and system factors that may affect the team members' delivery of intervention. Ensure measures to mitigate these.
	Ensure clear policies in place about interdisciplinary team working, clarity about each other's expectations, regular team meetings, open communication and a clear focus on patient care.
	Ensure teams have physical space and time for their members to engage across professions and disciplines. This will enable them to improve communication and better understand each other's roles and resources.
	Ensure MDTs have clear processes for involving patients and service users in decisions about their care to avoid situations where patients and service users feel excluded from decision-making.
	Ensure you evaluate the team performance in order to support further development of efficient and effective approaches within the BSOL STP and nationally.
	When evaluating the performance, **consider** measures such as health-care use, patient and team member satisfaction, and well-being, as well as decision implementation.
	Consider evaluating the cost effectiveness of MDTs, but give careful consideration to outcomes and units of measurement – for example, how will impacts that do not result in a change in service use be measured?
Communication with older people	**Ensure** the service is explained to older people in such a way that its purpose, focus and approach are clearly understood.
	Consider producing lay information to support recognition and understanding.
Communication with staff/other stakeholders	**Ensure** expectations about multidisciplinary working are communicated to staff/other stakeholders and there is an agreement on anticipated benefits.

Consider closer working with the voluntary and community sector, independent sector organisations and communities.

ii. Intermediate care

Overview of evidence

Intermediate care aims to prevent avoidable admissions to hospital and care homes by supporting patients to live independently. In the UK, the provision of intermediate care is highly variable. Intermediate care can be delivered in a number of settings, with different referral routes, and by teams with different skill-mix. As a result, a variety of different definitions of intermediate care are used. Therefore, and despite a large body of research, the literature it is not always possible to draw generalisations (Allen and Glasby 2010).

There is no single definition of intermediate care. The literature generally recognises four broad service models of intermediate care (Social Care Institute for Excellence 2019):

1. **Bed-based services** are provided in an acute hospital, community hospital, residential care home, nursing home, standalone intermediate care facility, independent sector facility, local authority facility or other bed-based settings.
2. **Community-based services** provide assessment and interventions to people in their own home or a care home.
3. **Rapid response services** are based in the community and aim to quickly assess, treat and support patients who are at risk of hospital admission in their own home, avoiding unwarranted hospital and residential care admission.
4. **Reablement services** are based in the community and provide assessment and interventions to people in their own home or a care home. These services aim to help people recover skills and confidence to live at home and maximise their independence.

Intermediate care: effectiveness

Overall, evidence on effectiveness of intermediate care is mixed (fig. 30). The literature seems to suggests that bed-based intermediate care does not reduce admissions or readmissions (Allen and Glasby 2010; Ariss et al. 2015; Ham 2006). However, a 2007 systematic review of nurse-led in-patient intermediate care units found a 50 per cent reduction in early readmissions compared with usual care, but there was an increase in inpatient stay (Griffiths et al. 2007). Some evidence suggests that bed-based intermediate care can reduce the risk of admission to long-term care for older people (Ariss et al. 2015). An evaluation of older people's experiences of intermediate care found that older people were positive about the service, although expressed a concern about feeling left with no care and having to rely on the voluntary sector when the service was no longer provided (Cornes and Manthorpe 2005).

The evidence on the impact of rapid response services on hospital admissions is also mixed (Barber and Wallace 2012; Steventon et al. 2011; Woodward and Proctor 2016). The 2007 review concluded that because of the lack of good quality evidence, their effectiveness could not be determined (McGaughey et al. 2007). A review by the Nuffield Trust did not find evidence of a reduction in emergency hospital admissions (Steventon et al. 2011). However, there are some successful examples of rapid response services in the UK (figure 31), but the evidence base specifically for older patients is limited.

Figure 30. Summary table of effectiveness of intermediate care interventions.

Intervention	Effectiveness
Bed-based intermediate care	No impact on unplanned admissions or readmissions. Some evidence of reducing the risk of admission to long-term care for older people.
Rapid response services	Mixed evidence or no evidence of reduction in emergency hospital admissions. Limited evidence for older patient group.
Community-based intermediate care	Literature is limited and mixed. Hospital at Home admission avoidance interventions make little or no difference to patient outcomes but are valued by patients.
Reablement services	Positive impact on visits to the emergency department, residential care placements and mortality Some benefits on health-related quality of life and service utilization.

The literature on effectiveness of community-based intermediate care services is mixed. For example, the evidence base for Hospital at Home schemes is limited and mixed. One systematic review (Shepperd et al. 2016) found that, when compared with inpatient care, Hospital at Home admission avoidance interventions make little or no difference to patient outcomes but those cared for in the scheme tended to have higher satisfaction levels than those cared for in hospital.

However, another meta-analysis of randomised controlled trials compared Hospital at Home care with in hospital treatment and concluded that Hospital at Home services can reduce readmissions and lower costs (Caplan et al. 2012). A meta-analysis evaluating a range of complex interventions aiming at maintaining independent living for patients with stroke, including studies with rehabilitation at home, found that these interventions were less likely to result in admission to institutional care (Langhorne et al. 2005). Admission avoidance Hospital at Home schemes have been found to have variable impact on length of stay, ranging from a reduction of eight days to an increase of 15 days, with readmission rates were not significantly different from inpatient care patients (Ariss et al. 2015).

Figure 31. Examples of successful interventions of rapid response services.

Intervention	Evidence
Enhanced Rapid Response Service: Kent Community Health NHS Foundation Trust	Of the 342 referrals recorded as being made to avoid admission 94.4% of patients were discharged to their usual place of residence, avoiding an admission
Guy's & St Thomas' and King's Hospitals Rapid Response Service	4 per cent reduction in A&E attendances
Bristol's Care Services Efficiency Delivery Programme	2008/09 a net saving of £3.6 million was seen by the primary care trust and £0.7 million seen by the local authority
Somerset Care and Yeovil District Hospital	95% of people were discharged home from nursing home 42% of patients required a reduction in their predicted home care packages upon discharge £1.6m savings in ongoing care costs

However, literature seems to indicate high levels of satisfaction with Hospital at Home amongst older people (Shepperd and Iliffe 2005; Wilson, Wynn, and Parker 2002) but some studies found that Hospital at Home was less popular among carers (Shepperd and Iliffe 2005).

A recent systematic review of effectiveness of reablement services (Tessier et al. 2016) found a positive impact on health-related quality of life and service utilization in the first year. One study indicated that the effects were maintained over five year period (Lewin, Alfonso, and Alan 2013). Those that received reablement services required less homecare services than those receiving usual homecare services (Glendinning et al. 2011; King et al. 2012; Lewin et al. 2013; Lewin, Alfonso, and Alan 2013; Senior et al. 2014). Evidence on visits to the emergency department, residential care placements and mortality was limited but suggested some benefits (Senior et al. 2014; Lewin et al. 2014). While reablement may improve health-related quality of life and service use, the reviewed studies highlight the difficulties in appropriately involving or transferring older people to further service provision (Glendinning et al. 2008). No one effective model or approach has seemingly been identified (Francis, Fisher, and Rutter 2010).

Further reading

- Ariss SM et al. (2015) Secondary analysis and literature review of community rehabilitation and intermediate care: an information resource, *Health Services and Delivery Research*, 3(1).

- Jan Stevenson and Linda Spencer (2002). Developing Intermediate Care: a guide for health and social services professionals. King's Fund, available from: https://www.kingsfund.org.uk/sites/default/files/Developing-Intermediate-Care-guide-health-social-services-professionals-Jan-Stevenson-Linda-Spencer-The-Kings-Fund-July-2009.pdf

- Best practice from NICE guidelines, available from: https://www.nice.org.uk/guidance/NG74

- Various resources on reablement services: https://www.scie.org.uk/reablement/

Intermediate care: cost-effectiveness

As with effectiveness, measuring cost-effectiveness is complex because intermediate care spans disciplines, models and professions and can have a range of different service components. **Overall, the literature suggests that evidence of cost-effectiveness is not clear. Whilst there is generally good evidence for enhancing patient experiences and improving people's independence and quality of life, intermediate care does not always appear to be cost-effective**. Although the service may bring about benefits for patients, it is often associated with longer lengths of stay overall (Godfrey et al. 2005). Godfrey et al. also concluded that the financial benefits might take time to realise.

Figure 32. Summary table of cost-effectiveness of intermediate care interventions.

Intervention	Cost-effectiveness
Bed-based intermediate care	Nurse-led units found to be more expensive than usual care, but community hospitals have the potential to be cost effective.
Community-based intermediate care	The evidence on cost effectiveness is complex.

Intervention	Cost-effectiveness
	Cost per patient day is lower in the Hospital at Home scheme, in some cases, the longer duration of care experienced by people in such schemes compared with those conventionally discharged from hospital, is sufficient to outweigh any savings made in the in-patient costs for the Hospital at Home patients.
Rapid response services	Evidence is limited with cost benefit analysis usually not undertaken. In studies looking at saving bed days, it is not clear whether the savings made from these saved bed days outweighs the costs of the rapid response team.
Reablement services	Higher cost than that of usual homecare services initially because of set up costs but associated with cost-effectiveness in the long-term.

Cost data is mixed: cost of care per patient has been found to vary widely from £3,318 to £11,511 (Ariss et al. 2015). Day hospitals and nurse-led units have been found to be more expensive than usual care, but community hospitals have the potential to be cost effective (Griffiths et al. 2007). Although the cost per patient day is lower in the Hospital at Home scheme, in some cases, the longer duration of care experienced by people in such schemes compared with those conventionally discharged from hospital, is sufficient to outweigh any savings made in the in-patient costs for the Hospital at Home group (Goddard, McDonagh, and Smith 1999).

A 2002 study compared nurse-led intermediate care on a GP admissions unit with care on a medical ward. With an occupancy rate of 65 per cent, it calculated only a small difference in cost per occupied bed with one medical bed day costing £136 and one intermediate care bed day costing £131 (Bernhaut and Mackay 2002). Another study costed a single intensive rapid response service and found that, although the cost varied widely by patient, the average cost of an episode of this type of care might cost more than a hospital stay (Netten and Curtis 2003).

Similarly, the cost of reablement is usually higher than that of usual homecare services because reablement requires more resources, including a need for more training and supervision. In the months following the intervention, however, literature seems to indicate that reablement is associated with a decrease in homecare service utilization (Tessier et al. 2016). In one study, balanced total costs, when both reablement and ongoing homecare services were considered, were achieved within the first year (Glendinning et al. 2011). The results of a recent randomised control trial suggest that reablement was cost-effective in the long term: the cost of reablement compared with usual homecare was, on average, 22% lower in the first year, and 30% lower over two years (Lewin et al. 2014).

Implementation and other challenges

In this section, we highlight what literature tells us about implementation and other challenges.

- ***The need to target interventions to older people with specific needs***. The literature suggests that in order for any intermediate care service to be successful, it needs to identify the types of older people who would most benefit from intermediate care services. A recent review and secondary analysis of data from 7,620 intermediate care patients (Ariss et al. 2015)) concluded that intermediate care is more likely to benefit older frail people with selected long-term conditions, such us

stroke or COPD, where there is potential for rehabilitation. This study also identified factors associated with low rates of transfer to inpatient hospital care among intermediate care patients: low need ratings on Levels of Care data, and being resident in nursing home care. Similarly, a systematic review of predictors of outcomes following reablement in older adults (Tuntland et al. 2016) found the following factors were significant predictors of successful outcomes: being female; having a fracture as the major health condition; and high motivation for rehabilitation.

- ***Team working can contribute substantially to improving the quality of care, the efficient use of resources and staff satisfaction.*** The importance of good inter-agency and inter-professional communication throughout the intermediate care pathway is often mentioned in the literature as a component of successful intermediate care services. For example, a number of studies in the UK and internationally highlight the importance of sharing information, effective communication and joined-up working in referral processes across statutory services (Tessier et al. 2016; Barton P et al. 2005; Birkeland et al. 2017; Regen et al. 2008). A review by Ariss et al. demonstrated that intermediate services worked better where multi-disciplinary teams managed patients through a single point of access with a single assessment process and supported by a single health record. Also important was the presence of representatives from social work and mental health (Ariss et al. 2015).

Figure 33. Intermediate Care: lessons from the literature

Local implementation and context impact on outcomes and success. There is no single one-size-fits-all models of intermediate care.
A more integrated approach to planning, funding and delivery of integrated care is needed.
Capacity should be planned across the whole patient flow. There should be a balance between 'step-up' services (designed to prevent hospital admissions) and 'step-down' services (to enable timely hospital discharge).
The aims, objectives and purpose of intermediate care should be clear and understood by people using the services, their families, and professionals from the wider health and social care system. There can be confusion between services funded through the NHS and reablement services funded by local authorities. The difference between active rehabilitation and reablement and other forms of intermediate care are not always understood, nor the time-limited duration of the service.
Multi-disciplinary working requires the right staff and skill mix. Multidisciplinary teams should include: nurses, therapists, social workers and community psychiatric nurses, input from voluntary and community groups, and be led by a senior clinician or social worker.
Effective leadership is crucial to deliver clarity of shared purpose about intermediate care across the system.
Expectations about what intermediate care can achieve, at what cost and over what timescale, should be realistic. Intermediate care may increase the demand by revealing unmet need. Care outside of hospital generally is unlikely to be cheaper for the NHS in the short to medium term.

(Adapted from Social Care Institute for Excellence, 2019)

- ***The context in which intermediate care is delivered may have a significant impact on its success.*** A 2015 literature review and secondary analysis of community rehabilitation and intermediate care found no intermediate care service model would consistently achieve a specific impact on admission or readmission to inpatient hospital care (Ariss et al. 2015). The authors suggested that other factors are more important in determining the risk of hospital (re)admission: the degree of integration across the acute and secondary care interface or the capacity for a patient's needs to be met within the community. This is consistent with other studies that seem to suggest that amongst the barriers to effective delivery of intermediate care, the perceived short-term nature of funding for these services, staff recruitment

and retention, and low buy-in from clinical professionals are most pervasive (Regen et al. 2008).

Recommendations

Below are some recommendations for implementing intermediate care interventions, drawn from the evidence review. Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 34. Intermediate care recommendations

Intermediate care	Recommendations
Service design	**Ensure** the objectives and target audience are determined and agreed on before implementing the service.
	Consider how intermediate care service/s will fit in with services already provided in the community.
	Consider a more integrated approach to planning, funding and delivering intermediate care, via a single point of access and shared assessments across all services.
	Consider bed-based intermediate care if reducing levels of admission to long-term care for older people is a challenge in the STP area, but bear in mind the evidence is mixed about whether this will result in reduced admissions/readmissions.
	Consider focusing intermediate care services on frail older patients with long-term conditions where there is potential for rehabilitation.
	Ensure that expectations, cost and timescales for delivery of services are realistic. Intermediate care may increase demand by revealing unmet need.
Implementation of services	**Ensure** a multidisciplinary team composition with staff that are able to work flexibly across services.
	Ensure staff's roles are clearly defined. **Consider** organizational and system factors that affect the staff's delivery of intermediate services.
	When implementing services, **consider** the degree of integration across the acute and secondary care interface and the capacity for meeting patients' needs within the community.
	Ensure clear channels for sharing information, effective communication and multidisciplinary working across the intermediate care pathway. **Consider** shared access to health and social care records.
	Ensure you evaluate the services in order to support further development of efficient and effective approaches within the BSOL STP and nationally.
	Consider incorporating short-term outcome measures, but **avoid** concentrating only on cost-effectiveness and reduction of hospital activity as markers of success. **Consider** to what extent improved patient experience in this area is a primary goal of the STP, given the evidence that intermediate care can deliver cost savings is weak.

Intermediate care	Recommendations
Communication with older people	**Ensure** details of the services are communicated to older people in such a way that its purpose, focus and approach are clearly understood.
	Consider producing lay information to support recognition and understanding of the services.
Communication with staff/other stakeholders	**Consider** closer working with the voluntary and community sector, independent sector organisations and communities

iii. Interventions to tackle social isolation and loneliness

Overview of evidence

There is a wide range of interventions developed to reduce social isolation and loneliness amongst older people. However, the evidence about successful interventions is relatively limited. Given the complexities around understanding loneliness and isolation, the quality of evidence is generally weak as interventions differ based on their purpose, content and intended outcomes. Little is known, for example, about the range and scope of effective interventions, and what aspects of interventions contribute to their success (Gardiner, Geldenhuys, and Gott 2018).

The literature divides interventions into two main types: *group-based interventions* (e.g., support groups, reminiscence therapy, videoconferencing) and *one-to-one interventions* (e.g., computer use training, animal companionship, visitor volunteers) (Landeiro et al. 2017). These interventions can focus on developing social skills, providing social support, increasing opportunities for social interaction, and be delivered with or without the use of technology.

Interventions to tackle social isolation and loneliness: effectiveness

Generally, the literature seems to indicate that in mitigating social isolation and loneliness, group interventions are more effective than one-to-one interventions (Findlay, 2003; Cattan *et al*., 2005; Oliver et al., 2014). However, the outcomes are not always consistent (Windle 2015). Some group activities have no impact while there are specific one-to-one interventions that are effective. For example, positive evidence exists for befriending interventions and reducing loneliness (Butler 2006; Siette, Cassidy, and Priebe 2017); social prescribing services and reducing secondary care service use and quality of life (Dayson, Bashir, and Pearson 2013); group activities and volunteer schemes on reducing loneliness and increasing happiness and life satisfaction (Saito, Kai, and Takizawa 2012). However, studies evaluating day care centres for frail older people and a friendship enrichment programme demonstrate no impact on loneliness (Iecovich and Biderman 2012; Martina and Stevens 2006). Similarly, short term mentoring interventions have not demonstrated effectiveness (Dickens, Richards, Hawton, et al. 2011), whilst the evidence for technology assisted interventions is inconclusive (Windle 2015; Windle et al. 2008).

A 2018 integrative review of interventions that target social isolation and loneliness amongst older people (Gardiner, Geldenhuys, and Gott 2018) concluded that the majority of interventions were at least moderately successful in reducing social isolation and/or loneliness. The qualitative data from their review indicated that engagement activities, which may be offered on one-to-one basis, were a feature of many successful interventions.

Figure 35. Summary table of effectiveness of interventions to tackle social isolation and loneliness

Intervention	Effectiveness
Group-interventions	Evidence is mixed. Generally, group interventions are more effective than one-to-one services but evidence differs based on the intervention purpose, mechanisms of action, and intended outcomes. Group activities and volunteer schemes are effective in mitigating loneliness, increasing happiness and life satisfaction in older adults. Day care centres for frail older people and a friendship enrichment programmes are unable to demonstrate any impact on loneliness.

Intervention	Effectiveness
One-to-one interventions	Evidence is mixed. Befriending interventions and social prescribing services show some promising results. Short term mentoring interventions have not demonstrated effectiveness. Evidence for technology assisted interventions is inconclusive.

Interventions to tackle social isolation and loneliness: cost-effectiveness

The cost effectiveness of services tackling social isolation and loneliness are difficult to establish. The literature seems to suggest that the majority of interventions focus on the impact on quality of life; the evidence whether these delay deterioration or reduce service utilisation is unclear or unavailable. The cost-effectiveness evidence of such interventions is weak because the main outcome (social inclusion/loneliness) is not well defined, making it impossible to attribute outcomes to specific services (Landeiro et al. 2017). What is more, in most studies, loneliness was viewed as a secondary rather than a primary outcome measure (McDaid, Bauer, and Park 2017).

Therefore, there have been very few attempts to assess the economic benefits of addressing loneliness. Summarising evidence, the evidence on befriending initiatives was mixed, containing evaluations showing highly cost effective and highly cost ineffective interventions. There is also a mixed picture on the benefits of participation in social activities, ranging from cost saving actions to cost ineffective (McDaid, Bauer, and Park 2017).

Further reading

- Scottish Collaboration for Public Health Research and Policy (2010). *Promoting health and wellbeing in later life: interventions in primary care and community settings*. Edinburgh: Scottish Collaboration for Public Health Research and Policy. Available at: www.scphrp.ac.uk/node/198.

- The UK-wide Campaign to End Loneliness has a toolkit for health and wellbeing boards, available at: www.campaigntoendloneliness.org.

Implementation and other challenges

Literature is not clear on which specific aspects of interventions tackling loneliness and social isolation contribute most strongly to their success as most interventions are complex and multifaceted. The evidence is mainly based on data from the interviews due to a large number of qualitative studies in this area. In this section, we highlight the factors contributing to the success of interventions that have been identified through qualitative research and evaluation.

- ***The need for active participation of older people.*** Literature seems to suggests that interventions with group-based formats and where individuals are required to actively participate were more effective than one-to-one interventions (Franck, Molyneux, and Parkinson 2016; Dickens, Richards, Greaves, et al. 2011). Involving people in the planning, implementation and evaluation (Findlay 2003), tailoring to meet individual needs (Grenade and Boldy 2008), high-quality training of facilitators (Franck, Molyneux, and Parkinson 2016) and interventions based on existing community resources seem to produce more successful outcomes.

- ***The approach and adaptability of the intervention are important***. The adaptability of an intervention to a local context is seen as an important factor to its success (Kime, Cattan, and Bagnall 2012; Gardiner, Geldenhuys, and Gott 2018).Also, literature seems to suggest that a community development approach has been associated with more successful interventions (Bartlett et al. 2012; Gardiner, Geldenhuys, and Gott 2018).

- ***Cost-effectiveness is only one way of measuring impact***. Interventions to tackle loneliness and social isolation do not always appear to be cost-effective. What qualitative studies seem to indicate, however, is that older people value these interventions. It is, therefore, important to consider a range of outcomes and measures when evaluating such interventions (McDaid, Bauer, and Park 2017).

Recommendations

Below are some recommendations for implementing interventions tackling social isolation and loneliness, drawn from the evidence review. Where a recommendation is clear or speaks for itself, we have suggested that the STP **ensures** it is enacted. Where the evidence is less clear, or the recommendation is contingent on other aspects of the scheme, we have suggested the STP **considers** it. If the literature indicates that a particular approach is clearly ineffective or undesirable, we have recommended that the STP **avoids** it.

Figure 36. Interventions tackling social isolation and loneliness recommendations.

Interventions tackling social isolation and loneliness	Recommendations
Intervention design	**Consider** taking measures to understand older people's needs in the BSOL STP area and the nature of the demand for these types of services.
	Consider targeting specific groups of older people in the BSOL STP communities and neighbourhoods. **Consider** developing relationships with other statutory and voluntary agencies, GPs, pharmacists so they can identify older people who are or are at risk of loneliness and/or social isolation.
	Consider implementing group interventions (e.g. day centre type services, self-help and self-support groups) rather than one-to-one interventions.
	When deciding on the intervention/s, **consider** focusing on productive engagement, such as socialisation or creating opportunities for socialisation and forming new social networks.
	Ensure that staff delivering intervention/s are appropriately trained in identifying older people and helping address loneliness and/or social isolation.
	Ensure an active involvement of older people in the planning, implementation and evaluation of the intervention/s.
Intervention implementation	When implementing the intervention, **consider** a community development approach. Building partnerships with the community may lead to interventions carrying on after funding is withdrawn.
	Consider the role of members of the local community. Building community awareness and trust promotes legitimacy and engagement, and can play a role in the success of the intervention.

Interventions tackling social isolation and loneliness	Recommendations
	Ensure you evaluate the intervention in order to support further development of efficient and effective approaches within the BSOL STP and nationally.
Intervention evaluation	When evaluating interventions, **consider** a range of outcomes and measures of impact that are relevant to older people and all sectors that fund these interventions.
	Consider putting formal mechanisms in place for evaluating what works or doesn't work in relation to addressing loneliness and/or social isolation.

Older people and later life: summary

Overall, many of the interventions outlined within this priority have the potential to improve patient outcomes and experience. However, the evidence for reducing unplanned admissions to hospital and delaying institutionalisation for older people is mixed. The evidence of cost-effectiveness is limited and often mixed.

Whilst there is generally good evidence for enhancing older people experiences and improving their independence and quality of life, **intermediate care does not always appear to be the most cost-effective approach.**

In mitigating social isolation and loneliness, there is **good evidence that group activities can reduce feelings of loneliness amongst older people.**

Where interventions have been most successful, they have: targeted particular older patient group; had clearly defined purpose and outcomes; had effective leadership and appropriately trained and supported staff.

The implementation challenges within the three intervention areas are considerable. There are still gaps in the evidence base around which interventions are generalizable to the diverse older population, like the one in Birmingham and Solihull, and whether the positive outcomes can be sustained over time.

There is no compelling evidence to show that the intervention areas reviewed in this section of the report can lead to financial savings, reduced hospital activity or delayed hospitalisation for older people. While there are some positive examples of interventions, evaluations of these to date have found mixed evidence of effectiveness and cost-effectiveness.

However, evaluations pointed to flaws in study design, small samples and a lack of cost data. It is possible that many of the interventions explored in this section of the report have been too small/too big and not appropriately supported, and therefore failed to demonstrate success. **None of the above should detract the BSOL STP Board from pursuing those interventions and proceeding with caution.**

The NHS Long Term Plan sets out in some detail a vision of what the future will look like in the context of care. The BSOL STP Board should prioritise the development of local solutions appropriate to the needs of its older population, based on best available evidence, realistic timelines and measurable objectives.

Conclusions and next steps

Our research identified a large volume of literature that was relevant to the areas of focus identified by the STP. **There were no priority areas identified by the STP where the literature urged against using interventions in that area.** In reviewing this literature, we have been able to make a series of recommendations to the STP about actions clearly recommended by the literature, steps that the STP might wish to consider implementing and actions to avoid.

In our review, we have sought to present the findings from the literature we identified as comprehensively as possible. But findings from the literature can only represent part of the picture, as they do not consider the local context in which the STP is operating.
It will therefore be important for STP staff to take our findings and assess them against their knowledge of what services are already in place within the STP area, what has proven to be effective locally and what opportunities there are for service improvement or expansion.

Clearly, budget and workforce availability will also be considerations for the STP. The leaders we met with have told us that the areas we have focused on are a high priority for the STP, but our recommendations have been made without knowledge of the financial resources available to the STP or of its approach to resource prioritisation and staffing.
Therefore, we would recommend that as a next step, work is undertaken internally to consider the recommendations in light of the STP's system-wide public health and prioritisation strategy, and to map potential new approaches onto existing service areas and areas of unmet need.

Many of the issues/interventions that STP asked us to review either suffered from a lack of clear evidence about their effectiveness, or evidence was emerging, with research studies underway. Evidence of cost-effectiveness was particularly sparse. Where evaluations had already been carried out, it was sometimes the case that timescales were too short to accurately assess impact, or the scope of the evaluations was limited – for instance omitting a judgement about value for money or focusing narrowly on patient experience. In some areas, the availability of information about evaluated services was very limited indeed and the available evidence was mostly in the form of topic-based qualitative research, case studies and grey literature.

Where evidence is weak or emerging, this points to the value of rapid or concurrent evaluation. We would recommend that – budget allowing – the STP puts in place an approach to evaluating some of the more innovative interventions that make up its strategy. Should the STP wish, it will be possible to partner with an established evaluation team to undertake formal evaluation work. In order to undertake evaluation work, the evaluation team will need to give careful consideration to the terms and scope of the evaluation, for instance what types of outcomes will be measured and how cost will be taken into account.

Where the literature we reviewed contained a detailed discussion of evaluation methodologies such as potential outcome measures, we have indicated this in our report.
Should the STP wish to evaluate new care models implemented as a result of the plan, we recommend that staff should begin thinking about evaluation approaches in tandem with service development work, so that a baseline performance position can be identified before any new approaches commence.

Evaluation will enable the STP to improve the effectiveness and impact of these new interventions for service users in Birmingham and Solihull. But in conducting such research

and publicising the findings, the STP can also potentially make an important contribution to the development and roll-out of innovative practices across the English NHS.
We hope BSOL STP staff will find our recommendations helpful as they begin to implement the STP strategy.

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Older people and later life

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Appendix

Summary tables of all interventions reviewed

1. Older people and later life

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
Reducing hospital admissions for older people	Integrated care	100+ Good quality systematic reviews Independent reports from the Nuffield Trust, King's Fund and Health Foundation	High quality evidence nationally and internationally but the variety of models, approaches and interventions make it difficult to summarise the evidence. The majority of models of integrated care are complex and multi-element interventions. Evidence seems to suggests that integrated care is unlikely to lead to reduction in hospital admissions but a range of other outcomes may be appropriate and of interest. *Note: Lessons from the NHS England Vanguards not published yet. The available presentations seem to suggest that the change is slow, even when the substantial funding from the government is available.* Economic evaluations are still in their early years. There is some evidence of cost-effectiveness of selected integrated care approaches but the evidence base remains weak - findings are
	Multidisciplinary team working in an integrated care	100+ A number of systematic reviews	

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			frequently based on a small number of primary studies only, or studies that used a before–after design without control. High quality evidence nationally and internationally focusing on common features of successful multidisciplinary teams working but no agreement on the form of how multi-disciplinary teams should be organised. Current evidence insufficient to determine whether multidisciplinary case management is cost-effective in the *secondary care*. Evidence suggests that multidisciplinary risk assessment added to *usual primary care* can be cost-saving in managing some long-term conditions, but data lacks for older people.
	Comprehensive Geriatric Assessment (CGA)	30+ (mainly trials) A number of high quality systematic reviews	Cost-effectiveness studies of CGA inpatient services demonstrate either cost neutrality or long-term cost benefits compared with usual inpatient hospital care. Some studies indicate that CGA may lead to a small increase in cost but evidence for cost-effectiveness is often of low-certainty due to imprecision and

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			inconsistency among studies. CGA-modelled discharge planning can reduce bed occupation in acute-care hospitals by patients awaiting placement in long-term care. In community settings, the evidence shows that CGA for people with frailty can reduce hospital admission and can reduce admission in those recently discharged and can reduce the risk of readmission in those recently discharged.
	Intermediate care	25+ A number of systematic review 2018 German framework and recommendations on facilities and structure A number of qualitative papers describing patient and professional experience	Large body of research but the evidence has its limitations – literature is not always able to compare models due to a number of different approaches and interventions. Evidence tends to focus on a single component of care or individual model of care, usually in hospital settings, rather than at the whole of the patient's journey. Lack of consensus over the cost- effectiveness of intermediate care. However, stronger evidence for the cost-effectiveness of intermediate care services that target specific

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			groups/illnesses/events such as strokes and falls.
	Hospital at home (treated as a subtype of Intermediate care in the literature)	5+ 2016 update of the Cochrane review of 16 randomised controlled trials	Admission avoidance hospital at home, with the option of transfer to hospital, may provide an effective alternative to inpatient care for a select group of elderly patients requiring hospital admission. However, the evidence is limited by the small randomised controlled trials.
	Rapid response teams	10+ 2017 systematic review of 29 studies	No evidence on whether RRTs are effective in preventing hospital admissions or delaying institutionalisation. RRTs do not seem to reduce the number of readmissions.
	Assistive living technologies	5 papers with a relevant outcome Papers mainly on assistive technologies for older people with dementia	Paucity of evidence. The link between incorporating aids and adaptations and preventing or delaying ill health and the use of services rarely explored in the literature.
	Specialist palliative care teams	50+ A number of good quality systematic reviews and primary studies	Evidence suggests that palliative care teams improve symptom management, satisfaction, and quality of life. The evidence for reducing hospital and emergency department visits is mixed and has been shown to vary by type of

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			service, patient and temporal factors. Cost analyses of palliative care interventions tend to demonstrate relative cost savings, but they are limited by small sizes, a health system perspective, and study design. Very few of the studies are randomized controlled trials and only a few have included costs to patients, caregivers, or society.
Delaying institutionalization older people with living frailty (encompasses living independently and well-being)	Physical activity	2 papers with a relevant outcome 2017 systematic review of reviews of interventions and context, some dated primary studies	Evidence for the uptake of physical activities is mixed. Behavioural (walking, exercise) and cognitive (counselling and motivational interviews) interventions are effective for short-term uptake of physical activity in older people. The evidence of effectiveness for preventing dementia and cognitive decline is lacking.
	Interventions to tackle social isolation and loneliness	10+ 2018 update systematic review	Large body of research but the evidence is limited by small sample sizes and study design. The variety of interventions make it difficult to summarise the evidence. Cost-effectiveness of befriending and participation in social activities is mixed.

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			Modelling work suggests that signposting/navigation services have the potential to be cost effective, with one analysis generating a very conservative positive return on investment of between £2 and £3 per £1 invested. Some evidence that interventions with group-based formats and where individuals are required to actively participate are more effective than one-to-one interventions.
	Low-level practical interventions to support older people to remain at home (such as adjustments to homes)	10+ 2006 King's Fund report	High number of qualitative studies – evidence suggests that low-level practical interventions are highly valued by older people and that they can be effective in maintaining independence. Lack of robust evidence indicating that such interventions are cost-effective. Evidence is often limited because establishing a direct causal relationship between such interventions and long-term financial savings has proved problematic.
	Day centres	50+	High quality evidence indicating that day centres are unlikely to reduce health care use.

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			Economic evaluations suggest that day care is at least as costly as usual care, but up-to-date evidence is lacking. Evidence on outcomes is also lacking - gaps about how day centres are perceived, their outcomes, what they offer, to whom and their wider stakeholders, including family carers, volunteers, staff and professionals who are funding, recommending or referring older people to them.
	Reablement services	2 papers with relevant outcomes 2016 systematic review of time-limited home-care reablement services for maintaining and improving the functional independence of older adults	Very little evidence from the UK. Low quality evidence suggests that reablement may be slightly more effective than usual care in improving function at nine to 12 months. Positive impact of reablement on health-related quality of life and service utilization reported in some studies.
	Assistive living technologies	5 papers with relevant outcomes	Paucity of evidence that assesses the impact of aids or adaptations that could increase or maintain mobility (e.g. ramps, outside handrails, raised beds in gardens), or ensure reductions in risk of injury (e.g. walk-in shower, bath rail, non-slip flooring).

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			Some evidence indicating that assistive technologies can minimise disability and deterioration from established diseases but the evidence base remains fragmented. Variations in team characteristics have been found to be associated with different patient outcomes. *Note: Recent Help at Home publication from NIHR summarises evidence from a number of UK based projects but some of the primary evidence isn't available yet*.

2. Adulthood and work

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
Successful implementation of social prescribing schemes	Social prescribing schemes	50+	A range of evaluations of different types of social prescribing scheme, plus journal articles on social prescribing policy and grey literature; Evaluations tend to be limited by study size and design – often focusing either on qualitative or quantitative methods; Very little research on the cost-effectiveness of interventions; Time frame for evaluations is generally too short to detect long-term changes in patient/service user outcome Evaluations and other literature provide a clear picture of emerging practice in a fast-moving policy area
Musculoskeletal conditions/stress	Prevention and self-management	15+	A small number of evaluations, plus a larger proportion of qualitative research, often interview- or survey-based; Literature highlights examples of different types of intervention and aspects of practice, but there is insufficient detail to provide a good picture of effectiveness or cost-effectiveness

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
	Targeted support	10+	A small number of evaluations, plus a larger proportion of qualitative research, often interview- or survey-based; Literature highlights examples of different types of intervention and aspects of practice, but there is insufficient detail to provide a good picture of effectiveness or cost-effectiveness
	Organisation-level interventions	10+	A small number of evaluations, plus a larger proportion of qualitative research, often interview- or survey-based, and a small amount of grey literature; Literature highlights examples of different types of intervention and aspects of practice, but there is insufficient detail to provide a good picture of effectiveness or cost-effectiveness
Addressing gun and knife violence	Universal schemes and targeted schemes aimed at at-risk/high risk groups	15+	Published literature is dominated by policy papers/grey literature/government strategies feature prominently; Literature tends to cut across approaches and interventions targeting both under-18s and adults
Combating youth unemployment	Universal and targeted schemes	15+	Published literature is dominated by policy

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			papers/grey literature/government strategies;

3. Maternity, children and adolescents

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
Promoting emotional and behavioural wellbeing of children young people	School based interventions	60+	Large body of research but evidence has limitations – literature is not always able to compare models/interventions due to small samples, number of different approaches, intervention components and outcomes. Systematic reviews of effectiveness are available in the following areas: nutrition and exercise, safety, psychological aspects of health, sexual health, substance use, personal hygiene and mix of these. Interventions demonstrate improved health knowledge but the impact on attitudes, health-related behaviour and health is much less reliable. Interventions to promote healthy eating and fitness, prevent injuries, and promote mental health were the most likely to be effective.

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			Interventions which included a whole-school approach and lasted over 1 year were more likely to be effective than those which did not. Cost-effectiveness modelling available for some interventions with only a few cost-effectiveness studies available from the UK.
	Parenting interventions	10+	Large number of interventions but evidence has limitations due to small samples, intervention components and outcomes. Evidence of effectiveness is mixed. Small body of research supporting the effectiveness for improving parental competency and infant adjustment, but insufficient evidence to reach firm conclusions on the long-term effectiveness of these programmes. Cost effectiveness evidence available for some international parenting interventions but indicating no cost –effectiveness or cost-neutrality.
School readiness	Pre-school interventions	5	A number of small studies and programmes with evidence suggesting significant effects from attending a preschool programme on child's social and school progress and cognitive outcomes. Literature comparing traditional, academic, and cognitive-developmental early childhood programmes found that academic programmes generally

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			produced better immediate and mid-term cognitive outcomes. However, cognitive-developmental programmes produced better long-term educational and social adjustment outcomes. Cost-effectiveness is rarely explored.
	Transition to kindergarten	6	Numerous international programmes targeting child's transition to kindergarten available but evidence has limitations. Good evidence demonstrating that interventions that are school-based, parent-focused and directed at reducing early behaviour problems can be effective, especially for children who begin school with behavioural or relational risk. Limited evidence from the UK. No cost-effectiveness studies available.
	Primary to secondary school transition	1	Literature is limited. Some evidence showing primary to secondary school transition interventions are effective. No cost-effectiveness studies available.
	Literacy 'catch-up' schemes for the transition to secondary school	20+	Large body of research with a number of different interventions. Some reading interventions appear to be effective, but some do not or have not been tested

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			properly. The literature lacks appropriate and high quality evaluations. Some evidence of effectiveness from the UK. Some evidence and modelling of cost-effectiveness from the UK.
	School-based mentoring programmes supporting at-risk adolescents in their transition to high school	10+	Large body of research but evidence is mixed. Research examining social–emotional outcomes (e.g., social competence, emotional/psychological adjustment, or self-esteem/self-concept) of mentoring is somewhat inconclusive, despite the theoretical support for the potential of mentoring to positively influence the social–emotional development. Cost-effectiveness evidence available, but for programmes designed for adolescents is limited.
	School readiness interventions	20+	Large body of research with a number of interventions and programmes. Evidence from primary studies is mixed. Some evaluations show that the interventions positively affect the quality of the preschool classroom environment, as well as measures of children's self-regulation and academic achievement.

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			Paucity of research that follows children beyond the elementary school years.
Early childhood intervention programmes to improve cognitive and social development of children	Model targeted early childhood interventions	20+	An extensive body of international and national literature. Interventions are, generally, high quality and well implemented but with small sample sizes, and replication on a large scale has been difficult. Large-scale interventions have frequently been poorly defined with short-term follow up and numerous methodological problems in their evaluation, making it difficult to assess the impact. Studies of effectiveness of early childhood interventions for children and families that target the circumstances that make supporting children's development show improved outcomes.
	Large-scale targeted early childhood interventions	30+	Large body of research but the evaluations of interventions frequently suffered from poor methodological designs and the measured outcomes did not necessarily reflect the real impacts of the interventions. Some UK and international evidence indicating that a number of different interventions had a positive impact on child development, high school and college attendance, proportions of overall and violent arrests, rates

Outcome of interest	Intervention	How many relevant studies found in our searches?	Pros/Cons
			of full-time employment and percentage of depressive symptoms.

Institute of Applied Health Research
College of Medical and Dental Sciences
University of Birmingham
Birmingham B15 2TT
https://www.birmingham.ac.uk/research/applied-health/index.aspx

Health Services Management Centre
College of Social Sciences
University of Birmingham
Birmingham B15 2RT
https://www.birmingham.ac.uk/schools/social-policy/departments/health-services-management-centre/index.aspx