IMPACT OF DEPLOYING SERVICES TO ADDRESS MENTAL HEALTH ISSUES IN PRIMARY CARE

Scoping Review

for National Collaborative Commissioning Unit

Catrin Wallace, Mark Llewellyn, Mark Davies and Carolyn Wallace

Welsh Institute for Health and Social Care · University of South Wales

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CONTENTS

1. INTRODUCTION 2

1.1 REVIEW REMIT 2

1.2 REVIEW OBJECTIVE AND QUESTIONS 3

2. METHODS 4

3. RESULTS 6

3.1 TYPES OF PAPERS 6

3.2 MODEL EFFECTIVENESS 7

3.3 EMERGENT THEMES IDENTIFIED IN PRIMARY CARE MENTAL HEALTH INTERVENTIONS 7

4. CONCLUSION AND RECOMMENDATIONS 12

4.1 WHAT IS THE IMPACT OF DEPLOYING SERVICES TO ADDRESS MENTAL HEALTH PROBLEMS IN PRIMARY CARE? 12

4.2 IS THERE SUFFICIENT EVIDENCE TO JUSTIFY UNDERTAKING A FULL LITERATURE REVIEW? 12

REFERENCE LIST 14

BIBLIOGRAPHY 15

APPENDICES 17

APPENDIX 1. PICO TABLE 17

APPENDIX 2. LIST OF SEARCH TERMS 18

APPENDIX 3. INCLUSION AND EXCLUSION CRITERIA 19

APPENDIX 4. TABLE OF LITERATURE INCLUDED IN THE SCOPING REVIEW 20

APPENDIX 5. TABLE OF THEMES 34

1. INTRODUCTION

Mental health is affecting more people annually with depression now the leading cause of disability worldwide (WHO, 2021). Approximately, 1 in 4 people in Wales will experience a mental health issue each year yet only 12% report receiving treatment (Mind, 2016). Mental health problems when left untreated can have a debilitating impact on the person's quality of life by increasing the risk of physical health issues and can lead to loss of life and suicide (NICE, 2019). As such, improperly treated mental health not only leads to increased costs in care, but has an extensive impact on organisational capacity, work productivity, and educational attainment. The cost of mental health problems to the Welsh economy is estimated at more than £7 billion every year (Friedli and Parsonage, 2009).

For over 90% of people in the UK, primary care services such as GPs, optometrists, pharmacists and dentists, are the first point of contact with the NHS (NHS Wales, no date). For many, GPs are gatekeepers for people seeking mental health support with two in five GP appointments now involving a mental health issue (NHS England, 2018). Pressure is increasing on primary care practitioners to address mental health and GPs are estimated to now be spending more than 20% of their working day addressing mental health (RCGP Wales, 2015). Despite this, GPs have expressed concern that they cannot deal with the increase in mental health workload and are feeling less confident in managing complex cases, particularly where external factors such as debt or unemployment are the cause (Inquiry into Primary Care Clusters, HSCSC 2017).

Steps are being taken to address increased mental health issues presented across primary care settings. NICE guidance recommends using psychological therapies, including CBT and self-help interventions as part of a stepped-care model for treating common mental health disorders for individuals with anxiety and depression, and more recently digitally enabled therapies, such as video consultations (NICE, 2019; NICE, 2009). The Welsh Government (2019) have taken a person- and community-centred approach to address service availability to mental health services, but nonetheless, there continues to be an absence in evidence-based services and treatments for people presenting with early symptoms of mental health illnesses.

1.1 REVIEW REMIT

This scoping review has been commissioned by the National Collaborative Commissioning Unit (NCCU) as part of a wider body of work exploring the prevalence and type of mental health interventions within Primary Care and, the gaps that exist in mental health intervention.

A scoping review is "a preliminary assessment of potential size and scope of available research literature. It aims to identify nature and extent of research evidence (usually including ongoing research)" (Grant & Booth, 2009). As such, this review is not a comprehensive examination of literature as would be found in a systematic review but instead aims to conceptualise the boundaries of the review topic; mental health interventions in primary care settings.

The aim of this scoping review is twofold: to explore the possible impacts of establishing mental health services in primary care settings and to consider whether there is sufficient evidence to carry out a full literature review on this topic.

1.2 REVIEW OBJECTIVE AND QUESTIONS

This scoping review answers the following two questions:

1. What is the impact of deploying services to address mental health problems in primary care?
2. Is there sufficient evidence to justify undertaking a full literature review?

The first question is answered through an analysis of services identified in the literature. By exploring the impacts – including barriers, facilitators, outcomes, and return on investment – this scoping review can postulate whether deploying services in primary care settings to address mental health problems can be beneficial to services and patients. The second question is answered by conducting an informal rating of the literature that has been scoped. This rating of the literature was carried out to appraise the quality of papers and assess whether there is sufficient evidence to conduct a more substantial investigation.

2. METHODS

This scoping review was carried out between December 2021 and January 2022 with the aim of conceptualising the literature on intervention models that address mental health issues within a primary care setting. The search comprised academic literature across the following seven databases: Cochrane, JBI, ASSIA, CINAHL, Medline, Science Direct, and Social Care Online. Due to the nature of the review being scoping and the time restraints, snowballing did not take place.

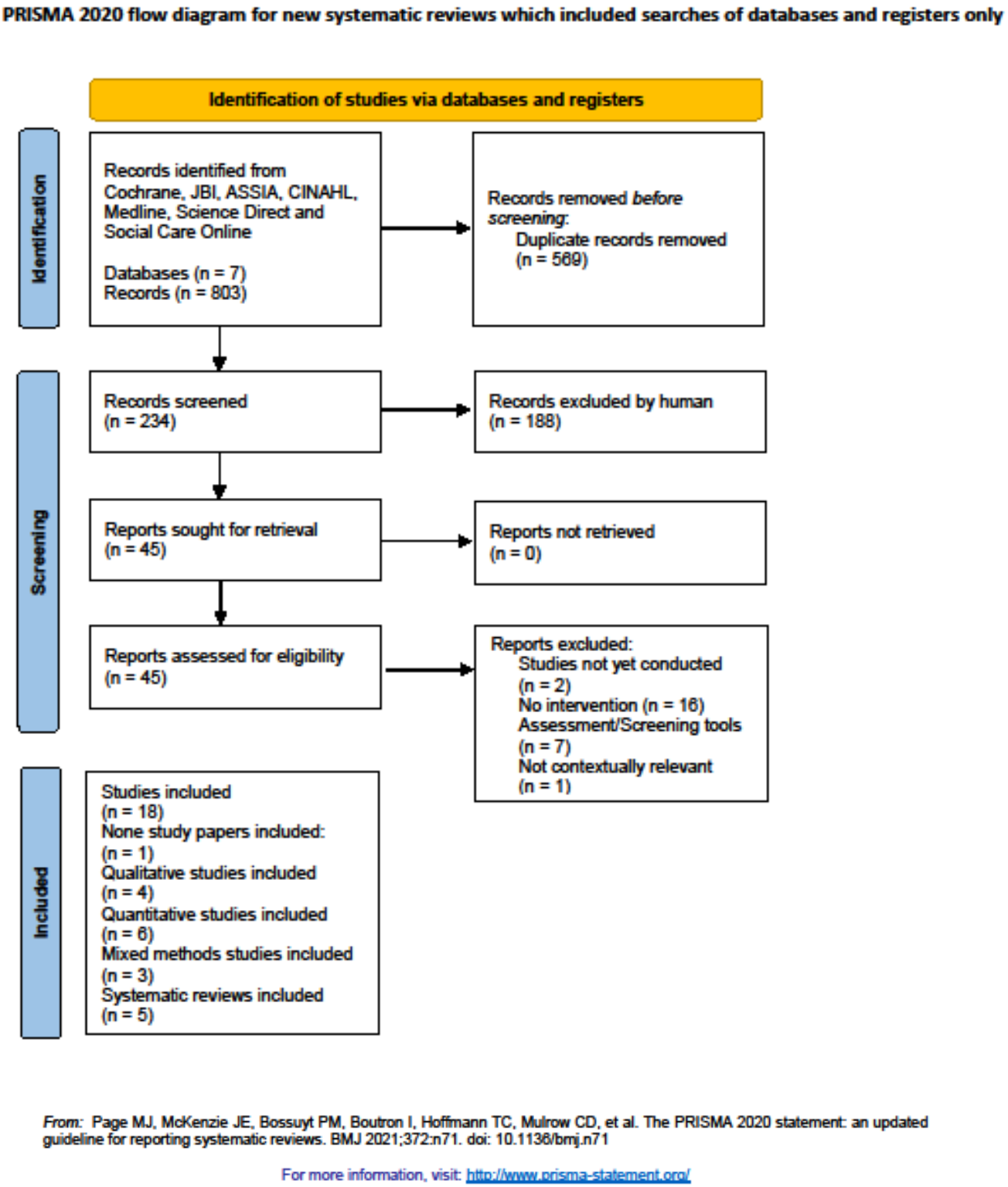
A PICO table was developed to assist in searching databases (see Appendix 1). Search terms were limited to those closely aligned to the research questions and, therefore, synonymous with the terms 'mental health', 'primary care', 'service' and 'cost' (see Appendix 2 for a list of search terms used). Each database was searched using the same combination of search terms.

Subject to the inclusion and exclusion criteria (see Appendix 3), included in the review are all relevant literature published in the English language from 2011 onwards. Each paper focuses on a type of model or intervention that address mental health issues in a primary care setting. As such, interventions which concerned acute mental health requiring secondary or tertiary care were excluded. The review is not limited to scientific studies but sought to include any descriptive papers and commentary alongside quantitative and qualitative studies.

The PRISMA diagram overleaf provides detail on the number of records and papers identified. Following the initial search of databases, 234 records were retrieved following duplicate removal. These were screened by title and/or abstract to extract titles that were deemed relevant against the inclusion and exclusion criteria. A total of forty-five records were retrieved for full review which subsequently decreased to a final figure of nineteen papers. Of the twenty-six records excluded at the full review stage, two studies had not yet been conducted, sixteen records did not investigate an intervention, instead focusing on understanding a population demographic or impact of mental health, seven investigated a screening and/or assessment tool for mental health, and one record was not contextually relevant.

To assess the relevance of each paper, a RAG rating was used to assess each paper against the study questions, which was used at each stage of screening. Furthermore, to assess the reliability of the screening, weekly meetings were held between the members of the research team to discuss the list of screened papers at each stage against the inclusion and exclusion criteria. A second RAG rating was used with the final 19 papers to assess each paper's methodological quality.

Figure 1. PRISMA diagram



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: http://www.prisma-statement.org/

3. RESULTS

A total of nineteen papers are included within this scoping review. Sixteen types of models that address mental health in a primary care setting were identified in the papers. However, due to the variation in methodologies used, it was not possible to compare each paper and intervention like-for-like.

3.1 TYPES OF PAPERS

This scoping review includes six quantitative studies, four of which are Randomised Control Trials (RCTs) of 100+ participants (Lorentzen et al, 2020; Reid et al, 2013; Boseman et al, 2012; Luckock, Kirby & Wainwright, 2011) whilst one non-RCT study analyses Welsh census data of over 10,000 cases (Jackson et al, 2014), and the second analyses the data of more than 33,000 primary care patients in the USA (Leung et al, 2021).

Three mixed methods studies are included (Holtom, D. 2021; Anderson et al, 2020; Saillent et al, 2016). Holtom (2021) evaluates how a counselling intervention within schools at three pilot sites worked and had been understood through a Theory of Change (ToC) methodology and a mixture of survey data, case-study research, and immersion as a 'critical-friend' at national and pilot sites. Anderson et al (2020) use a mixture of surveys and open questions to evaluate the feasibility of an online mental health care service. Saillent et al (2016) analyse both psychiatric reports and qualitative interview data to evaluate the use of joint consultations between psychiatrists and primary care physicians.

Each of the four qualitative studies utilise interviews and focus groups of between 13-22 participants (Bleyel et al, 2020; Decke et al, 2020; Hadfield et al, 2019; Rowe & Fisher, 2015). These studies provide rich qualitative data on four individual models: Collaborative Care (Bleyel et al, 2020), Health Coaching (Deck et al. 2020), Cognitive Behavioural Therapy (Hadfield et al, 2019), and Psychoeducation (Rowe & Fisher, 2015).

Five of the papers are systematic reviews (Hu et al, 2020; Davis et al, 2020; Wood, Ohlsen & Rickets, 2017; Fernandez et al, 2015; Sighinolfi et al, 2014). Of these, three include mixed method papers examining collaborative care models (Hu et al, 2020; Davis et al, 2020; Wood, Ohlsen & Rickets, 2017), whilst two reviews examine quantitative papers on Mental Health Promotion (Fernandez et al, 2015) and the effectiveness of Collaborative Care Models (Sighinolfi et al, 2014).

Finally, one descriptive, non-study paper is included that offers a critical analysis of five telepsychiatry models for the purpose of addressing a lack of capacity, and inequitable geographical distribution of mental health services in primary care (Fortney et al, 2015).

Through the screening process, twenty-six papers were identified as having the potential for being relevant to a wider literature review on the topic. Sixteen papers did not include an intervention but mainly explored the impact of mental health illnesses on a population. Seven papers assessed screening and assessment tools of people with mental health illnesses for intervention or primary care services. Two studies had not commenced at the time of writing the report.

3.2 MODEL EFFECTIVENESS

There is no universal tool for measuring the impact or effectiveness of interventions for primary care patients. The type of tool used was dependent on the methodology implemented and study questions. Measurement tools used appeared specific to the type of issue i.e., depression, anxiety, risk of suicide.

Six papers explored how effective an intervention was at mitigating the symptoms of mental health issues (Lorentzen et al, 2020; Hu et al, 2020; Davis et al, 2020; Hadfield et al, 2019; Sighinolfi et al, 2014; Lucock, Kirby & Wainwright, 2011).

Overall, interventions that were measured by RCT or in quantitative studies were found to have some effectiveness. An RCT of Problem-Solving Treatment of patients with depression and anxiety found no statistically significant effect after 9-months (Bosmans et al, 2012). On the other hand, an RCT of Cognitive Behavioural Treatment (CBT) found that the intervention was more effective on internalisation symptoms anxiety and general functioning but did not make a difference to depression symptoms or the risk of suicide and self-harm (Lorentzen et al, 2020). However, the perception of mothers in a qualitative study of CBT interventions delivered on the NHS, was that it made positive changes to their mood and quality of life (Hadfield et al, 2019).

Some interventions can be effective in the short term or require further intervention for some patients. A guided self-help intervention alongside two 60-minute face-to-face sessions demonstrated that 42% of patients were discharged after the two sessions and a further 37% after further guided-self-help interventions (Lucock, Kirby & Wainwright, 2011). Whilst Collaborative Care models were identified in two systematic reviews to be more effective compared to usual care provided in a primary care setting (Hu et al, 2020; Sighinolfi et al, 2014). Overall, such models demonstrated greater improvement in depression outcomes at 3 months, between 4-11 months and 12 months+ in European primary care contexts (Sighinolfi et al, 2014). Equally, collaborative teams that include pharmacists assessed in a systematic review by Davis et al (2020) found improved clinical outcomes for patients with depression and post-traumatic stress.

The table at Appendix 5 provides an overview of the effectiveness of each of these interventions.

3.3 EMERGENT THEMES IDENTIFIED IN PRIMARY CARE MENTAL HEALTH INTERVENTIONS

Five themes have emerged from the papers that provide an initial insight regarding the impacts of deploying such interventions in a primary setting. These emergent themes are Accessibility, Communication, Capability and Patient Management, Buy-in, and Resource. The table at Appendix 5 provides an overview of these themes and how they relate to each model.

3.3.1 Accessibility

Accessibility encompasses how difficult or easy it is to use the model; be this by the patient, practitioner, or service overall. Five papers explored interventions that included a remote element; using technology or an online delivery (Bleyel et al, 2020; Hu et al, 2020; Fortney et al, 2015; Rowe & Fisher, 2015; Reid et al, 2013). Not all papers measured whether there was a link between using technology and improvement in mental health symptoms. However, results from

six studies in a review by Hu et al (2020) suggest technology can improve depression outcomes for racial/ethnic minorities when implemented effectively. Whilst parents in a further study which did not encompass an online element proposed that one way for improving access to the service would be by allowing telephone consultations (Decke et al, 2020).

Studies that used technology in whole or part, making them available remotely were found to be accessible for both patients and practitioners (Bleyel et al, 2020; Hu et al, 2020; Reid et al, 2013; Rowe & Fisher, 2015). For patients, video consultations negate the need to travel to see a mental health practitioner in-person, or by support them to become familiar with staff and professionals before making a trip to a clinic (Bleyel et al, 2020). Furthermore, technology was seen as a mechanism for that could support services to overcome cultural and linguistic barriers, by providing access to interpretation services or practitioners who speak the same language thus making the service more widely accessible to diverse communities (Hu et al, 2020).

Such technological functions were not without their drawbacks as using video consultations was found to increase patient expectations that waiting times to see a specialist would be reduced (Bleyel et al, 2020). This can place greater expectations and pressure on services to meet patient demands. Barriers also included technical challenges, such as unstable internet connections and diffidence by professionals who were unfamiliar with technological devices and computers (Bleyel et al, 2020; Rowe & Fisher, 2015). Furthermore, after using online appointment services, some patients were left feeling that speaking to practitioners about their mental health experiences through a screen was uncomfortable and impersonal (Bleyel et al, 2020).

Accessibility further encompassed how adaptable the intervention was in meeting individual patient needs. For mothers participating in postnatal therapies, the provision of childcare or flexible appointment times made it easier to ensure attendance, as they were able to fit the programme around their daily lives (Hadfield et al, 2019). However, giving additional work outside of the appointment was found to increase feeling of being overwhelmed and pressure to complete the work (Hadfield et al, 2019).

3.3.2 Communication

Communication between patient and practitioner or within service teams was found to be a pertinent factor in five papers (David, Qian, & Garza, 2020; Decke et al, 2020; Hadfield et al, 2019; Wood, Ohlsen, & Ricketts, 2017; Reid et al, 2013).

The systematic review on collaborative care models by Woods, Ohlsen, & Rickets (2017) found that utilising multidisciplinary teams to collectively address a patient's mental health can be effective where case manager roles and boundaries are clearly defined. Similar outcomes were found in a systematic review of seven studies on collaborative teams[1] that include pharmacists by Davis et al (2020). This found that regardless of the role pharmacists have within a team, their contribution can improve clinical outcomes of mental health illnesses. However, echoing Woods, Ohlsen & Rickets (20217), where there was uncertainty over pharmacists' roles and boundaries within teams, as well as struggles for autonomy, the effectiveness of the team was hampered (Davis et al, 2020). For Decke et al (2020), the quality of interaction between different practitioners in a Health Coaching programme providing training to paediatricians was found to

[1] Collaborative teams are defined as including "two or more health care providers working together to provide enhanced mental health care services to patients)" (Davis et al, 2020).

be “very uncomplicated”, however, the study failed to identify the aspect of the programme that influenced this.

Communication was found to be strengthened between teams and professionals when placing multidisciplinary teams together in the same building which subsequently had the added benefit of reducing mental health stigma, as patients were not attending a designated ‘mental-health building’ (Woods, Ohlsen, & Rickets, 2017). However, for younger patients using a mobile phone application to log their physical and mental well-being was useful for communicating information between patient and GPs (Reid et al, 2013). This data was subsequently accessed as summary reports by GPs which were reviewed with the patient; despite this, no improvement was found in GP and patient rapport (Reid et al, 2013). Regardless of the method of communication patients value the quality of communication, having their experiences listened to, validated and understood without judgement and feeling more included in decision-making about their treatment and care pathways (Decke et al, 2020; Hadfield et al, 2019).

3.3.3 Capability and patient management

Six papers highlighted the improved capability of practitioners in their skill set, competence and confidence (Holtom, D. 2021; Deck et al, 2020; Anderson et al, 2020; Woods, Ohlsen, & Rickets, 2017; Saillant et al, 2016; Reid et al, 2013).

Three models, StepCare, Mobiletype and Health Coaching, were effective in supporting practitioners to identify and diagnose patients’ mental health problems (Anderson et al, 2020; Decke et al, 2020; Reid et al, 2013). The Mobiletype mobile application enabled GPs to gain a clearer picture of their patients functioning and issues as patients input data themselves throughout their day, enabling them to identify the most appropriate treatment (Reid et al, 2013). Both Stepcare and Health Coaching included supportive elements to their interventions by making treatment recommendations to GPs (Anderson et al, 2020) or giving structured guidelines on actioning diagnosis (Deck et al, 2020).

Increasing knowledge in what practitioner’s should do once they have identified depression was found to increase practitioner confidence (Wood, Ohlsen, & Rickets, 2017). The CAMHS in-reach to schools’ pilot programme found that teachers who had been provided with the training felt more confident identifying and responding to pupils’ mental health issues, however, the study also found that teachers felt less confident in discussing, assessing, and supporting pupils (Holtom, 2021). Therefore, interventions that support professionals in the identification of mental health problems are beneficial, they benefit from having clear referral and escalation pathways.

In-depth training can increase staff and practitioner confidence in delivering structured patient management plans and facilitate improved patient-centred care (Decke et al, 2020; Wood, Ohlsen, & Ricketts, 2017). This resonates with findings by Saillent et al (2016) that shared learning can benefit services as primary care physicians who participated in joint consultations with psychiatrists found they learned the value of therapeutic listening and new techniques in psychiatric interviews. Models that enable collaboration and shared learning provide reassurance and validation to practitioners about their current methods and practices which subsequently reduces anxiety and increases confidence in their roles (Decke et al, 2020; Saillent et al, 2016). Additionally, collaboration can be beneficial for communities for example, collaborative teams

that include pharmacists can increase education public knowledge of pharmacist expertise on medication use and health screening (Davis et al, 2020).

3.3.4 Buy-in

Buy-in, meaning the willingness to support and engage in an intervention, was identified as a theme in seven papers (Holtom, D. 2021; Anderson et al, 2020; Decke et al, 2020; Hu et al, 2020; Hadfield et al, 2019; Wood, Ohlsen, & Rickets, 2017; Rowe & Fisher, 2015). Patient, organisation, and practitioner buy-in can be facilitated or inhibited by how a programme fits in with values and beliefs. This could be a patient's cultural beliefs, social disparities and linguistic skills or the inflexibility of experienced practitioners to try a new intervention (Anderson et al, 2020; Decke et al, 2020; Rowe & Fisher, 2015).

On an organisational level, readiness for changes to daily practice was a barrier to intervention effectiveness (Holtom, 2021; Wood, Ohlsen & Ricketts, 2017). Holtom (2021), who evaluated a mental health training programme delivered by CAMHS professionals to school staff, found that schools have a choice to engage, release and encourage the 'right' staff to be trained in the intervention. The impact of the programme was linked to whether what staff had learned fitted comfortably with school culture and ethos (Holtom, 2021). Challenges were found in ensuring programme fit with the whole-school approach to mental health and well-being (Holtom, 2021).

On a practitioner level, Practitioners and services are likely to buy into an intervention when it integrates easily into practice flow, existing structure and processes, and fits well with practitioner beliefs and philosophies (Anderson et al, 2020). Inflexible attitudes and resistance to change can hinder programme effectiveness due to an unwillingness to engage and embrace the intervention fully (Wood, Ohlsen & Ricketts, 2017; Rowe & Fisher, 2015). Interventions that are evidence-based proving its effectiveness and safety or in which professionals are able to visibly see its benefits, especially behavioural, medication, education and monitoring can facilitate support (Wood, Ohlsen & Ricketts, 2017; Rowe & Fisher, 2015).

For patients, models that have been developed with an understanding of or input from cultures and local context will more effectively improve depression in minority populations than one that only promotes culturally sensitive care and is not locally informed (Hu et al, 2020; Wood, Ohlsen & Ricketts, 2017). Failure to understand and incorporate local context was found to inhibit an organisation's ability to successfully incorporate mental wellbeing into their patient's overall treatment pathway and inhibit intervention success (Wood, Ohlsen & Ricketts, 2017). Whilst post-natal intervention were found to have better programme commitment when tasks fitted into patients' current routines (Hadfield et al, 2019).

3.3.5 Resource

One study by Bosmans et al (2012) was identified to have conducted an economic evaluation of the cost-effectiveness of a problem-solving intervention to primary care patients delivered by mental health nurses. Problem-solving treatment is described as "a brief treatment focused on practical skill building, education, and managing depressive symptoms" (Bosmans et al, 2012). In total, mental health care costs for the intervention group were €485 compared to €259 in the comparison group of usual care provided by GPs. However, this was not statistically significant nor considered cost effective from an NHS perspective. The study further found that both the

direct and indirect costs of the model were lower than the control group. However, indirect costs accounted for the main of the total costs and were significantly lower in the intervention group.

Whilst other papers did not assess the cost-effectiveness of their models, there are indications that some may be resource effective or inhibiting. Five papers discussed the impact their model would have on time and/or workforce capacity (Decke et al, 2020; Bleyel et al, 2020; Wood, Ohlsen, & Rickets, 2017; Rowe & Fisher, 2015; Sighinolfi et al, 2014). Decke et al (2020) found that despite the additional financial support provided alongside the Health Coaching programme, paediatricians reported to continue to have limited opportunity to interact with patients. It's noted that increasing financial resources does not necessarily equate to an increase in time and suggest that a solution could be to strengthen and expand formal and informal networks and to increase collaborative working with allied health workers into care pathways (Deck et al, 2020).

Interventions that have a technological or remote element can appear to be resource efficient and have the potential to leverage resources more effectively and directly at patient needs (Forney et al, 2015). They can negatively impact on time and resources where practitioners require additional space and rooms to carry out appointments in private or where it is perceived as an additional task beyond usual practice (Bleyel et al, 2020). Whilst Reid et al (2013) comment that the *mobiletype* intervention was "low-cost", no further evidence is provided as to the aspects of the intervention that are considered so and Bleyel et al (2020) do not comment directly on the cost effectiveness of the intervention or infrastructure. Furthermore, collaborative care models are more successful when implemented in health care systems with good financial and adequate workforce resources (Sighinolfi et al, 2014). Finance is the main barrier to the sustainability of collaborative care models as they place an additional burdens on workforce staff to perform the model's roles (Wood, Ohlsen, & Rickets, 2017). None of the studies reviewed by Wood, Ohlsen, & Rickets (2017) or Sighinolfi et al (2014) commented directly on the cost-effectiveness of the models.

4. CONCLUSION AND RECOMMENDATIONS

4.1 WHAT IS THE IMPACT OF DEPLOYING SERVICES TO ADDRESS MENTAL HEALTH PROBLEMS IN PRIMARY CARE?

The results demonstrate that interventions that address mental health problems can have impact in a primary care setting. However, there is no universal tool for measuring impact or effectiveness of interventions and so it depends on the type and level of impact intended to be achieved. Some interventions can have an impact on an individual patient level by reducing the symptoms of mental health issues, reducing stigma, and improved patient care. Whilst impact is also demonstrated on a service and team level through improved use of time and financial resources and by services becoming more digitally accessible.

The emergent themes indicate how mental health interventions in primary care settings can be impactful, they also illustrate potential obstructions. Ensuring such programmes are accessible demonstrated to be a strong emerging theme throughout many of the qualitative papers. Most pertinently, the advent of the Coronavirus pandemic has forced services to be more technologically available. The use of technology in whole or part played a role in a number of studies in this review demonstrating that technology can have the potential to facilitate access to services, e.g., via telephone or online portal, for patients in rural communities and patients who are not able to travel to a primary care service in person. Furthermore, technology has the potential for improving the delivery of services, such as presenting information in a more accessible format, to watch recap videos, or engage with others in an online forum.

Interventions that made use of multidisciplinary teams, such as collaborative models, indicated positive results in information sharing and improved clinical outcomes which could be due to shared knowledge from diverse specialisms, notably the inclusion of pharmacists in primary care settings. However, without clarity as to roles and transparent communication processes interventions can be hindered. Providing appropriate training reduces anxiety whilst also increasing practitioner and teacher confidence to identify and diagnose mental health problems. However, having clear pathways to care can maintain practitioner confidence in what to do once mental health problems have been diagnosed and that patients are able to access the treatment they need.

Overall, belief in an intervention and willingness to engage with it will promote success. As such, interventions should be evidence-based and have clear and visible outcomes so that practitioners and patients can anticipate the results.

4.2 IS THERE SUFFICIENT EVIDENCE TO JUSTIFY UNDERTAKING A FULL LITERATURE REVIEW?

This review describes the range and type of papers identified in a scoping exercise. It is, therefore, essential that this evidence is understood as a scoping review, and as such does not allow us to be certain about the outcomes and evidence presented. Whilst the results of this review are promising in demonstrating that there is potential for services to address mental health problems in primary care, further research is required to determine precise answers. A full realist review of the literature would provide an in-depth analysis into how interventions work, for whom and why in primary care settings.

In order for a further in-depth analysis to be carried out, the questions informing such an exploration would have to be precise and limited in scope. Areas for further consideration should include:

- the baskets of metrics that studies measuring outcomes use and whether there are measures in common across them and agency of individual;
- the extent to which different types of mental health problem lead to different sorts of outcomes;
- the mechanisms which trigger good practice in models of collaboration; and for whom do they work, patient, pupil, teacher or practitioner?; and
- furthermore, what is the social value of implementing collaborative models in mental health in primary care?

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Fortney, J. C., Pyne, J. M., Turner, E. E., Farris, K. M., Normoyle, T. M., Avery, M. D., Hilty, D. M., & Unützer, J. (2015). 'Telepsychiatry integration of mental health services into rural primary care settings.' *International Review of Psychiatry*. 27(6): 525-39.

Sighinolfi, C., Nespeca, C., Menchetti, M., Levantesi, P., Belvederi Murri, M., & Berardi, D. (2014). Collaborative care for depression in European countries: a systematic review and meta-analysis. *Journal of Psychosomatic Research*, Oct 2014, 77(4): 247-63.

Jackson, C., Pybis, J., Hill, A., Cromarty, K., Rogers, J. & Cooper, M. (2014). 'Users of secondary school-based counselling services and specialist CAMHS in Wales: A comparison study...Child and Adolescent Mental Health Service' *Counselling & Psychotherapy Research*, Dec 2014; 14(4): 315-325.

Reid, S. C., Kauer, S.D., Hearps, S.J., Crooke, A.H., Khor, A.S., Sanci, L.A., Patton, G.C. (2013). 'A mobile phone application for the assessment and management of youth mental health problems in primary care: health service outcomes from a randomised controlled trial of mobiletype' *BMC Family Practice*, 14(84).

Bosmans, J. E., Schreuders, B., van Marwijk, H. W., Smit, J. H., van Oppen, P. & van Tulder, M. W. (2012). 'Cost-effectiveness of problem-solving treatment in comparison with usual care for primary care patients with mental health problems: a randomized trial' *BMC family practice*, 13(98).

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APPENDICES

APPENDIX 1. PICO TABLE

Population/Problem	Intervention	Comparison	Outcome
CAMHS	Treatment		Cost benefits / Costs and benefits
Adult services	Mental health services		Economic evaluation
Mental health and/or problems	Assessment		Cost effectiveness
Mental well-being	Formulation		
Integrated care	Triage		
Intermediate care			
Primary Care - General Practice			
Urgent/same day primary care			

APPENDIX 2. LIST OF SEARCH TERMS

"services" AND "mental health problems" AND "primary care"

"mental health problems" AND "primary care"

"mental well-being" AND "service" AND "cost effectiveness"

"mental well-being" AND "service" AND "cost benefit"

"mental health" AND "service" AND "cost benefit"

"integrated care" AND "mental health service"

"primary care" AND "mental health service"

"intermediate care" AND "mental health service"

"general practice" AND "mental health service"

"primary care" AND "mental health" AND "benefit"

"urgent primary care" AND "mental health service"

CAMHS AND "mental health service"

"assessment" AND "mental health problems" AND "primary care"

"formulation" AND "mental health problems" AND "primary care"

"triage" AND "mental health problems" AND "primary care"

"assessment" AND "mental well-being"

assessment AND "mental well-being" AND "cost effectiveness"

assessment AND "mental well-being" AND "cost benefit"

"formulation" AND "mental well-being" AND "cost effective"

"formulation" AND "mental well-being" AND "cost benefit"

triage AND "mental well-being" AND "cost effectiveness"

triage AND "mental well-being" AND "cost benefit"

"assessment" AND "mental health" AND "general practice"

"formulation" AND "mental health" AND "general practice"

"triage" AND "mental health" AND "general practice"

APPENDIX 3. INCLUSION AND EXCLUSION CRITERIA

Inclusion
Mental health services
Health and social care
CAMHS
Adult services
Mental health problems/illness/disorder
Mental well-being
Economic evaluation
Costs and benefits
Cost effectiveness
Integrated Care
Intermediate care
Primary care - General Practice
Urgent/Same-day Primary Care
UK and English-speaking countries ('Western' health systems)
Published from 2011 onwards
Validity testing of instruments - having a relationship with models of care or system design
Study protocols
Local Primary Mental Health Support Services (LPMHSS) or equivalents - (located in secondary care)
Assessment
Formulation
Triage

Exclusion
Acute
Secondary (but note that LPMHSS are included and 'located' in secondary care
Tertiary
International (non-English speaking)
Validity testing of instruments - country specific, isolated
Demographic characteristics atypical of the UK
Specialist medical / physical interventions
Inpatients

APPENDIX 4. TABLE OF LITERATURE INCLUDED IN THE SCOPING REVIEW

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
Evaluation of the Child and Adolescent Mental Health Service (CAMHS) In-Reach to Schools Pilot Programme. Final report: executive summary	Holtom, D.	Welsh Government, 2021	Wales	**CAMHS In-Reach to Schools Pilot Programme** Aim to build capacity (including skills, knowledge and confidence) in schools, improve schools' access to specialist liaison, consultancy and advice when needed, reduce school staff stress and improve their well-being. 3 models: North Wales, West Wales and Mid and South Wales.	**Pros:** • Improved teacher confidence and skills in identifying and responding to pupils' emotional and mental health concerns. • Overall teachers less confident in discussion, assessing or supporting pupil mental health needs. • Flexibility and responsiveness of pilot welcomed. • Increased capacity in schools to address low level mental health difficulties. • The accessibility of CAMHS In-Reach practitioners, their expertise and the relationship of trust and understanding they have forged with schools (so their advice is grounded in an understanding of what is feasible for schools), are very much valued. **Cons/barriers:** • Pilot did not provide a systematic approach to upskill staff and change practice. • Programme effectiveness depends on school choice to engage and select, release and encourage the 'right' staff to be trained. • Impact of programme dependant on staff being able to implement what they learnt. Barriers were found to be time restraints, forgetting what staff have learnt, of what staff have learnt does not comfortably fit with school culture and ethos. • Challenge to ensure programme's offer supported the whole-school approach to mental health and well-being. • Pilot's steering group lacked authority to plan and coordinate the offer with other services and relied upon their members' influence and the time and willingness of other services to collaborate with the pilot. • Harder to engage and support primary schools, particularly in large rural counties. **Return on investment?** N/A	**Theory of change evaluation - Mixed methods**	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
Increasing Depression Treatment for Safety-Net Patients: A Five-Year Evaluation of Integrated Mental Health Services in Primary Care across Los Angeles County	Leung, L., Benitez, C., Dorsey, C., Sugar, C., Whelan, F.,	Health Services Research. Vol. 56, Iss. S2, (Sep 2021), 65-66.	USA	**Select safety-net clinics implemented the Mental Health Integration Program (MHIP)** Embedding behavioural health specialists to co-manage primary care patients (e.g., psychiatric consultation support for medication prescription, brief problem focused psychotherapy).	• 30.1% of episodes, primary care patients received any treatment within 90 days of a new depression diagnosis (38.7% [after] vs 36.2% [before] vs 25.0% [never implemented MHIP in clinic]). 27.9% received medication within 90 days, while only 3% reached specialists. • Odds of treatment initiation were higher among minority (Asian > Latino > Black) than White patients, Spanish than English-speaking patients, and uninsured than insured patients in the study sample. **Return on investment?** N/A	**Quantitative** 33,537 primary care patients who were newly diagnosed with depression from June 30, 2009 to July 1, 2014.	
Stepped care mental health service in Australian primary care: codesign and feasibility study About the intervention	Anderson, J., O'Moore, K., Faraj, M., & Proudfoot, J.	Australian Health Review, 2020, 44, 873–879	Australia	**StepCare** An online stepped mental healthcare service in general practice that screens patients, provides immediate feedback to patients and general practitioners (GPs), transmits stepped treatment recommendations to GPs and monitors patients' progress, including	**Pros:** • Overall, patients, practice staff and GPs found StepCare acceptable and feasible, commending its privacy, the mental health screening, monitoring and feedback. • GPs reported that StepCare helped with their identification and management of patients with common mental health issues. • Most GPs reported that StepCare fitted well with their beliefs and philosophies about general practice and was congruent with their practice's existing structure and processes. • Most practice staff agreed that StepCare worked well for people with worries or low mood, and 68.1% indicated a need for the service and 81% of staff reported that they would support the future use of StepCare in their practice. • 64.8% of patients indicated they would recommend StepCare to a friend. • Patients were less confident than GPs that the service worked well for people with worries or low mood	**Mixed methods - Codesign and feasibility study** Thirty-two GPs, 22 practice staff and 418 patients participated in survey questionnaire and open	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
				notification of deterioration.	**Cons/barriers** • Only 45.5% liked the verbal scripts for GPs (the remainder being neutral) and 63.7% reported they did not login to check patients' fortnightly symptom scores. • 31.8% of GPs found that StepCare integrated easily into practice flow, with 22.7% responding 'difficult' and 45.5% 'neutral' to this question. • In answer to whether StepCare changed their usual practice, 22.7% responded 'moderately', 50% 'slightly' and 27.3% 'not at all'. **Return on investment?** N/A	questions.	
The Effectiveness of Collaborative Care on Depression Outcomes for Racial/Ethnic Minority Populations in Primary Care: A Systematic Review	Hu, J., Wu, T., Damodaran, S., Tabb, K.M., Bauer, A., & Huang, H.	Psychosomatics, Nov-Dec 61(6), 632-644.	USA	**Collaborative Care Model**	**Pros:** • Potential for collaborative care to effectively improve depression for racial/ethnic minority adults and those results can be sustained over time. • Inclusion of family members may be important for certain minority groups in which family cohesion and interdependence are key values. • A high-fidelity, well-implemented collaborative care program designed with understanding of and input from the local context will more effectively improve depression in minority populations than a program that only boasts culturally sensitive care. • Technological adaptations have the potential to connect patients to care providers who speak the same language or interpretation services and can link patients up to specialists in specific cultural contexts. **Cons:** • Minority adults' views of what depression is and what causes it (e.g., stress and social factors) may make them less inclined to participate in studies with a focus on medication treatment (versus therapy). **Return on investment?** N/A	**Systematic Review - Mixed evidence**	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
Patients' Perspective on Mental Health Specialist Video Consultations in Primary Care: Qualitative Preimplementation Study of Anticipated Benefits and Barriers.	Bleyel, C., Hoffmann, M., Wensing, M., Hartmann, M., Friederich, H-C., & Haun, M. W.	Journal of Medical Internet Research, Apr 2020; 22(4): 1-13.	Germany	**PROVIDE (Improving Cross-Sectoral Collaboration Between Primary and Psychosocial Care: An Implementation Study on Video Consultations)** Virtually colocates primary care teams and specialists who provide video consultations to patients presenting with depression or anxiety, or both, in the primary care practice.	**Pros:** • The accessibility of mental health specialist care (shorter waiting times: 11/13, 85%; lower threshold for seeking specialist mental health care: 6/13, 46%; shorter travel distances: 3/13, 23%) • The environment in primary care (familiar travel modalities, premises, and employees: 5/13, 38%). • Participants mostly welcomes the specialist video consultations. • Decrease threshold for seeking mental health care and overcome stigma of seeking support. • Patients already know the practitioner, practice staff, premises and travel modalities. **Cons:** • Barriers from the patients' perspective were the lack of face-to-face contact (13/13, 100%) and technical challenges (12/13, 92%) and stigma of seeking mental health case (7/13, 54%). • Increased expectation of more rapid access to specialists. • Impersonal and uncomfortable • Impact on time, spatial resources and workflow. **Return on investment?** N/A	**Qualitative** One-off semi-structures interviews 13 participants (patients)	
A randomized controlled trial of a six-session cognitive behavioral treatment of emotional disorders in adolescents 14-17 years old in child and adolescent	Lorentzen, V., Fagermo, K., Handegård, B. H., Skre, I. & Neumer, S. P.	BMC psychology, 2020, 8(1), 25	Norway	**SMART program** A Norwegian version of the GO! program. 8-week manual-based modularized CBT program with a strong emphasis on cognitive restructuring, exposure and activation. Five	**Pros:** • Treatment effects were achieved for internalisation symptoms, anxiety, and general functioning for the treatment group. • 11 patients in the treatment group experienced clinical and reliable change compared to 3 in the comparison group with no deterioration. • 10 patients in the treatment group experienced either clinical or reliable change compared to 3 in the comparison group with no deterioration. • Clinically significant change in emotional problems (SDQ) was observed significantly more frequently in the treatment condition.	**RCT** 145 participants	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
mental health services (CAMHS)				modules (introduction, depression, anxiety, assertiveness training, and summary, in a total of eight sessions). In this study, all modules except the assertiveness module (2 sessions) at the end of the program were employed.	• The inclusion of both therapists and patients have shown good feasibility and transportability to ordinary clinical practice. **Cons:** • No significant difference between treatment and control group for depression symptoms. • No significant difference between treatment and control group for risk of suicide and self-harm. **Return on investment?** N/A		
The clinical impact of pharmacist services on mental health collaborative teams: A systematic review	Davis, B., Qian, J., Ngorsuraches, S., Jeminiwa, R., & Garza, K. B.	Journal of the American Pharmacists Association, Sep-Oct 2020;60(5S): 44-S53	USA	**Collaborative teams that include pharmacists**	**Pros:** • Mental health collaborative teams that included pharmacists showed improved clinical outcomes. • Pharmacists have a positive impact in collaborative teams no matter the role or the setting. • Mental health clinical outcomes were shown to improve overall for collaborative teams that included pharmacists. **Cons/barriers:** • Common problems included struggles for autonomy, and unclear roles and boundaries of team members. • Lack of public understanding of the role of pharmacists. • Pharmacists are less comfortable counselling patients with mental health conditions than patients with more common conditions **Return on investment?** N/A	**Systematic Review - Quantitative evidence**	
"We're in good hands there." - Acceptance,	Decke, S., Deckert, K., Lang,	BMC Family Practice, Dec 2020; 21(1):	Germany	**Health Coaching (HC) programme** A training concept	**Pros:** • Families were generally satisfied with paediatric care received in the programme's context.	**Qualitative** Interviews	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
barriers and facilitators of a primary care-based health coaching programme for children and adolescents with mental health problems: a qualitative study (PrimA-QuO).	M., Laub, O., Loidl, V., Schwettmann, L. & Grill, E.	1-12.		for paediatricians, standardised guidelines for actions for 16 defined diagnostic entities, and additional fees for paediatricians who undergo this specific training and prescribe and manage insurees according to the guidelines.	• HC programme supported paediatricians' essential role as consultants and improved their diagnostic skills. • The programme was perceived as a facilitator for more patient-centred care. • Paediatrics perceived their own competence for children with MHP as improved. • HC programme material was helpful and facilitated paediatrician's diagnosis and decision-making. • Parents and adolescents felt that their paediatrician allocated a large part of his consultation time to their problems. • Quality of communication and being included in the decision process were appreciated. • Interactions between different care providers was noted as positive. **Cons/Barriers:** • Time and financial restrictions as well as patients' challenging family structures. • Opportunities to interact with patients was felt to be limited by paediatricians. • Difficulties in referring patients for enrolment. • Perceived distinct social disparities, and cultural and linguistic barriers which could not be resolved by the programme. • Need for improved interdisciplinary networking. • Parents proposed to improve access to services, e.g., by allowing telephone consultations, a better communication between providers, and a more convenient localisation of specialised services. • Parents proposed to involve other health professionals such as midwives and alternative practitioners into the programme. **Return on investment?** • Time and budgetary restrictions were perceived as major barriers to success. • Despite increased resources allocated to the programme, opportunities to interact with patients was felt to be limited by	with 11 paediatricians, 3 HC developers, 22 parents and 4 adolescents	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
					paediatricians. • A realistic resource estimate should be made before the enrolment of a patient. • Need for improved interdisciplinary networking.		
Psychological Therapy for Postnatal Depression in UK Primary Care Mental Health Services: A Qualitative Investigation Using Framework Analysis	Hadfield, H., Glendenning, S., Bee, P., & Wittkowski, A.	*Journal of Child and Family Studies*, 28 (12): 3519-3532.	UK	**NHS Cognitive Behavioural Therapy for post-natal depression.**	**Pros:** • All the mothers in the study believed that their therapy had been helpful or beneficial in some way. • Value of having their experiences listened to, validated and understood without judgement. • Most of the mothers received interventions based on CBT, and reported that they found the concept of challenging their thoughts helpful. • Provision of childcare and/or flexibility in appointment times so that they could arrange childcare accordingly. • Tasks which fitted into the mother's current routine and that mothers knew were not mandatory were helpful in managing the sense of commitment. • In group therapy, continuing friendships with other group members formed part of this support. • All mothers in the study reported positive changes to their mood and quality of life following therapy. • Many of the mothers in the study believed that their relationship with their infant had improved since receiving therapy and were more able to enjoy their time with their infant, or were spending more time with them. **Cons/barriers:** • Group size often resulted in fewer opportunities for all mothers to share experiences, and the benefits of the group depended on the amount mothers were willing to share. • Having experiences which were different to the rest of the group. • Additional time and effort required to complete homework, increased feelings of being overwhelmed in some mothers. **Return on investment?** N/A	**Qualitative** Interviews with 14 participants.	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
What are the barriers and facilitators to implementing Collaborative Care for depression? A systematic review	Wood, E., Ohlsen, S., & Ricketts, T.	Journal of Affective Disorders, May 2017, 214:26-43	International	**Collaborative Care Model**	**Pros/Facilitators:** • Multi-professional team working • Staff positive attitudes and organisational buy-in to change seen as facilitator to implementation of Collaborative Care • Case manager role can be efficient and effective where clearly defined case management roles and boundaries enforced by the organisation. • Implementation can be successful where structured management plans for patients, made of high-quality materials provided alongside in-depth staff training, and confident staff to deliver it • Sufficient staff training in Collaborative Care and what is expected from it and of patients. • GP understanding of what to do once depression identified increased confidence • Increased confidence in intervention when able to see benefits, especially behavioural, medication education and monitoring. • Co-location in the same building and integrated information systems was found to increase communication and collaboration between teams and professionals. • Co-location can de-stigmatise mental health as patients do not have to go to a 'mental health building' • A supportive, constructive and regular supervision schedule helped the case managers deliver care and talk over difficult cases or ask questions about referral on to mental health services. • Perceived to be cost effective by patients. **Cons/barriers** • Organisational readiness for physical changes to daily practice and cultural change • Individual practitioner resistance to change • Increased case management workload and increased stress • Lack of understanding of what Collaborative Care is and how it differs to usual care • Breakdowns in communications and networks a barrier to	**Systematic review - qualitative and mixed method evidence**	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
					implementation. • Professionals' use of jargon that is not accessible to patients or language patients do not identify with, such as 'mental health' and 'depression' • Breakdown between team members and professional groups or limited technology to support timely communication. • Finance a barrier to sustainability to collaborative care **Return on investment?** Perceived as cost effective, however, financial sustainability a barrier to implementation.		
The primary care physician/psychiatrist joint consultation: A paradigm shift in caring for patients with mental health problems?	Saillant, S., Hudelson, P., Dominicé Dao, M., & Junod Perron, N.	Patient Education & Counseling, Feb 2016; 99(2): 279-283.	Switzerland	**Joint consultation/psychiatric evaluation** to primary care professionals in training who encounter diagnostic or management difficulties with patients suffering from mental health problems.	**Pros:** • For PCP's, joint consultations clarified the role of psychiatrists, reduced their anxiety and increases their confidence in dealing with patients' mental health problems. • PCP's felt they'd learned to value the therapeutic effect of listening. • Observing psychiatrist interviews led to learning new techniques, increased clinical skills in psychiatry and validated some current practices. • Better integration of the patients' mental health management and somatic problems. • participants who had not benefited from joint consultations felt neither confident nor competent to deal with their patients' mental health problems, and expressed a strong desire to observe and learn from psychiatrists in practice. **Return on investment?** N/A	**Mixed methods study**	
Prevention of postnatal mental health problems in women: knowledge	Rowe, H. J. & Fisher, J. R. W.	Health Promotion Journal of Australia, Apr 2015; 26(1): 64-69.	Australia	**What were we thinking programme (WWWT)** a psychoeducation group program for	**Pros:** • Most regarded an online environment as suitable, but a minority expressed doubts in accessibility. • Sessions that take place outside of work hours or are flexible meant more partners could attend sessions after work. • The program's acceptability is likely to be context-specific.	**Qualitative** Semi-structured interviews and group	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
exchange in primary care in Victoria, Australia.				the primary prevention of postnatal mental health problems in women. It addresses unsettled infant behaviour and adjustments in the partner relationship after the birth of a first baby.	• Both self-directed learning and learning in groups of MCH professionals were highlighted as preferred methods. **Barriers:** • Lack of time, conflicting cultural practices and beliefs among clients, inflexible attitudes of some older MCH nurses, language barriers and the suggestion that teaching infant behaviour management practices be universally rather than individually applied. • Nurses, especially the more recently graduated who have an appreciation of evidence-based practice, would need to see clear evidence of safety and effectiveness in order to buy-into the programme. • Suggested that it would be helpful if the programme were part of routine care that was expected to be implemented. • Consistent information provided to everyone was highlighted as preferential so there were no mixed messages.	discussions with 21 nurses.	
Is there a case for mental health promotion in the primary care setting? A systematic review	Fernandez, A., Moreno-Peral, P., Zabaleta-del-Olmo, E., Bellon, J. A., Aranda-Regules, J. M., Luciano J. V., Serrano-Blanco, A., & Rubio-Valera, M.	*Preventive Medicine*. Jul 2015;76 Suppl: S5-11.	International	**Mental Health Promotion** Increasing their ability to cope with significant adversity or stressful life events by improving cognitive, social, and emotional skills (e.g., problem solving, social skills, and social support)	• MHP activities conducted by primary health providers have been focused on older people with disabilities and parenting. • Not have enough evidence to recommend—or not—the implementation of MHP activities in the primary health care setting. 1 out of the 3 studies detected a small effect. **Return on investment?** N/A	**Systematic review - RCTs and observational studies** 3 studies included	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
Telepsychiatry integration of mental health services into rural primary care settings	Fortney, J. C., Pyne, J. M., Turner, E. E., Farris, K. M., Normoyle, T. M., Avery, M. D., Hilty, D. M., & Unützer, J	International Review of Psychiatry. 27(6): 525-39.	USA	**Telepsychiatry Collaborative Care** Five models of telepsychiatry are described, including (1) the traditional telepsychiatry referral model, (2) The telepsychiatry collaborative care model, (3) the telepsychiatry behavioural health consultant model, (4) the telepsychiatry consultation–liaison model, and (5) the telepsychiatry curbside consultation model.	N/A **Return on investment?** N/A	**Descrptive literature/ Opinion piece**	
Collaborative care for depression in European countries: A systematic review and meta-analysis	Sighinolfi, C., Nespeca, C., Menchetti, M., Levantesi, P., Belvederi Murri, M., & Berardi, D.	Journal of Psychosomatic Research, Oct 2014, 77(4): 247-63.	Europe	**Collaborative Care Model**	**Pros:** • Collaborative Care models have greater improvement in depression outcomes at 3 months, between 4-11 months and 12 months+ in European primary care contexts. • Collaborative Care is more effective compared to primary care physician's usual care. • Better outcomes were found in high fidelity models. • The structure and the process level of primary care can play a role in determining collaborative care positive outcomes; thus, it may work better in strong primary health care systems in which there are adequate workforce and good financial coverage. • Collaborative Care models are feasible and adaptable to available resources.	**Systematic Review and Meta-analysis - Quantitative evidence**	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
					Return on investment? Collaborative care appeared to be feasible, and its specific features adaptable to the available resources of the primary care system.		
Users of secondary school-based counselling services and specialist CAMHS in Wales: A comparison study...Child and Adolescent Mental Health Service	Jackson, C., Pybis, J., Hill, A., Cromarty, K., Rogers, J. & Cooper, M.	Counselling & Psychotherapy Research, Dec 2014; 14(4): 315-325.	Wales	**School-based counselling service in secondary schools across Wales.** Sessions were typically one hour, or one lesson's, duration held on a weekly or fortnightly basis.	• A higher proportion of females (61.63%), than males (38.37%) access school-based counselling services in Wales compared to specialist CAMHS services (43.82 and 56.18% respectively). • 97% of service users were of a white ethnic background, despite only 94% of the Welsh secondary school population identifying as white. • Young people with special educational needs were well represented in both school-based counselling and Welsh specialist CAMHS services. • Over half of all referrals to secondary school-based counselling services were made by school staff, and another quarter were self-referrals. • Females were significantly more likely to self-refer to secondary school-based counselling services than males, whereas males were significantly more likely to be referred to such services by parents or school staff. • Over 55% of school-based counselling users were not referred on to any other service, around 3% were referred on to specialist CAMHS, and it was unknown for a further 35%. No impact on CAMHS service. • High prevalence of family-related problems in secondary school-based counselling services, anger was second highest. • Males were significantly more likely than females to present with anger and behavioural-issues as the initial reason for accessing. • Males were significantly more likely to present with issues related to bullying and relationships with teachers. • Both specialist CAMHS and secondary school-based counselling meet different user needs. **Return on investment?** N/A	**Quantitative -** Data were collected on 10,687 episodes of counselling. Collated results were then compared to matched data from Welsh specialist CAMHS and Welsh secondary schools data.	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
A mobile phone application for the assessment and management of youth mental health problems in primary care: health service outcomes from a randomised controlled trial of mobiletype	Reid, S. C., Kauer, S.D., Hearps, S.J., Crooke, A.H., Khor, A.S., Sanci, L.A., Patton, G.C.	BMC Family Practice, 2013, 14, 84	Australia	**"Mobile Tracking Young People's Experiences" (*Mobiletype)*** A mobile phone mental health assessment and management application. It's objective it to monitor mood, stress, and everyday activities then transmits this information to GPs via a secure website in summary format for medical review with the patient.	**Pros:** Increased understanding of patient mental health Assisted in decisions about medication/referral Helped in diagnosis **Cons:** No differences in GP-patient rapport nor in pathways to care. No significant effect was identified on doctor-patient rapport from the young person's perspective. No significant effect was identified on pathways to care. **Return on investment?** N/A	**RCT** 118 included in study, 114 included in analysis	
Cost-effectiveness of problem-solving treatment in comparison with usual care for primary care patients with mental health problems: a randomized trial	Bosmans, J. E., Schreuders, B., van Marwijk, H. W., Smit, J. H., van Oppen, P. & van Tulder, M. W.	BMC family practice, 2012, 13, 98	Netherlands	**Problem-Solving Treatment (PST)** PST isa brief treatment focused on practical skill building, education and managing depressive symptoms.	• PST patients improved more than the control group, but not statistically significant.	**RCT and economic evaluation** 175 participants (88 in PST:87 control)	

Title	Author	Full reference	Location	Description of intervention	Impacts achieved	Method	RAG rating
A pragmatic randomized controlled trial of a guided self-help intervention versus a waiting list control in a routine primary care mental health service.	Lucock, M., Kirby, R. & Wainwright, N.	British Journal of Clinical Psychology, Sep 2011; 50(3): 298-309.	UK	Two session **guided self-help (GSH) intervention** provided by primary care graduate mental health workers (PCGMHWs) in a primary care mental health service.	**Pros:** • Significant treatment effect at 8 weeks with 47% showing reliable and clinically significant improvement. • Significant improvement between screening and the first GSH session for both groups. • 42% of patients were discharged after the two-session GSH intervention, a further 37% were discharged after further GSH interventions. • 15% of patients were referred on to formal psychological therapy, mainly CBT. **Cons/barriers:** • Few patients looked at the self-help materials prior to the first session.	**RCT** 122 participants	

APPENDIX 5. TABLE OF THEMES

Model	Treatment effect	Themes				
		Accessibility	Communication	Capability & patient management	Buy-in	Resources
Mobiletype - mobile application		Mobile application Data accessed via patient summary reports Data inputted by patient	Data reviewed by patient and GP together Useful for transferring information between patient and GP No improvement in GP/patient rapport	Supports the identification treatment approaches Assists GPs in gaining a picture of the patient's functioning Helped diagnosis Better understanding of patient issues Support in building management plans No impact on pathways to care		
Cognitive Behavioural Treatment (RCT)	Higher treatment effect for internalisation symptoms, anxiety and general functioning No difference for depression symptoms or risk of suicide or self-harm.	Good feasibility and transportability				

Model	Treatment effect	Themes				
		Accessibility	Communication	Capability & patient management	Buy-in	Resources
Health Coaching Programme		Parents call for improved access to services Parents call for involvement with wider health professionals Difficulties in referring patients for enrolment	Participants expressed feelings of inclusion in decision-making processes Positive interactions between different care providers Need for improved interdisciplinary networking	Supports paediatrician's essential role as consultants Improved paediatrician diagnostic skills Perceived improvement in competence for working with children with mental health problems Helpful material facilitated diagnosis and decision-making Facilitated patient-centred care More time felt allocated to consultation of problems	Social disparities, cultural, and linguistic barriers	Time and financial restrictions Limited opportunity for paediatricians to interact with patients
Joint Consultations				Primary care professionals felt they'd learned to value the therapeutic effect of listening. Observing psychiatrist interviews led to		

Model	Treatment effect	Themes				
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				learning new techniques, increased clinical skills in psychiatry and validated current practices. Improved confidence in addressing mental health problems with patients. Reduced anxiety and improved confidence addressing mental health problems with patients. Non-participants reported feeling neither confident nor competent to deal with their patients' mental health problems. Better integration of the patients' mental health management and somatic problems.		
Psychoeducation group programme		Online environment felt suitable. Self-directed learning			Need for evidence-based practice on safety and	Lack of practitioner time for intervention delivery.

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		and learning in groups preferred. Expressed that intervention should be part of routine care. Need for consistent information to be provided.			effectiveness of intervention. Barriers to buy-in were conflicting cultural practices and beliefs among clients, inflexible attitudes of some older nurses, language barriers	
Guided self-help (GSH) intervention	Significant treatment effect at 8 weeks with 47% showing reliable and clinically significant improvement. Significant improvement between screening and the first GSH session. 42% of patients were discharged after the two-session GSH intervention. A further 37% were discharged after further GSH interventions. 15% of patients were	Few patients looked at the self-help materials prior to the first session.				

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	referred on to formal psychological therapy, mainly CBT.					
Mental Health Specialist Video Consultations		Online video consultations Intervention was felt to lead to shorter waiting times, lower threshold for seeking specialist mental health care, shorter travel distances. Participants familiarised travel modalities, premises, and employees. Patients already know the practitioner, practice staff, premises and travel modalities. Technical challenges included lack of face-to-face contact – impersonal and uncomfortable. Increased expectation of more rapid access to specialists.		Decrease threshold for seeking mental health care and overcome stigma of seeking support.		Impact on time, spatial resources and workflow.

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Secondary school-based counselling	Higher proportion of females than males and persons identifying as white accessed the intervention. Young people with SEN well-represented. Half of referrals by school staff and a quarter self-referral. Females more likely to self-refer. Males more likely to be referred by school staff.					

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Collaborative care	Potential for collaborative care to effectively improve depression for racial/ethnic minority adults and be sustained over time. Collaborative Care models have greater improvement in depression outcomes at 3 months, between 4-11 months and 12 months+ in European primary care contexts. Collaborative Care is more effective compared to primary care physician's usual care. Better outcomes were found in high fidelity models.	Technological adaptations have the potential to connect patients to care providers who speak the same language or interpretation services and can link patients up to specialists in specific cultural contexts.	Case manager role can be efficient and effective where clearly defined case management roles and boundaries enforced by the organisation. Co-location in the same building and integrated information systems can increase communication and collaboration between teams and professionals. Co-location can de-stigmatise mental health as patients do not have to go to a 'mental health building'. Breakdowns in communications and networks a barrier to implementation.	Implementation can be successful where structured management plans for patients, made of high-quality materials provided alongside in-depth staff training, and confident staff to deliver it. Sufficient staff training in Collaborative Care and what is expected from it and of patients. GP understanding of what to do once depression identified increases confidence.	Staff positive attitudes and organisational buy-in to change a facilitator to implementation. Increased confidence in intervention when able to see benefits, especially behavioural, medication education and monitoring. Organisational readiness for physical changes to daily practice and cultural change. Individual practitioner resistance to change can mitigate implementation. Lack of understanding of what Collaborative Care is and how it differs to usual care a barrier. Inclusion of family members may be important for certain minority groups in	A supportive, constructive and regular supervision schedule helps case managers deliver care and talk over difficult cases or ask questions about referral to mental health services. Perceived to be cost effective by patients. Increased case management workload and increased stress. Finance a barrier to intervention sustainability. Structure and process of primary care can enable positive outcomes. Systems with adequate workforce and food financial coverage more likely to work better. Feasible and

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			Breakdown between team members and professional groups or limited technology to support timely communication a barrier. Professionals' use of jargon that is not accessible to patients or language patients do not identify with, such as 'mental health' and 'depression' a barrier for patients.		which family cohesion and interdependence are key values. Design with understanding of and input from local-context will more effectively improve depression in minority population than one that just promotes the notion of culturally sensitive care.	adaptable to resource.
Mental Health Collaborative Teams	Improved clinical outcomes		Struggles for autonomy, and unclear roles and boundaries of team members are common problems. Lack of public understanding of the role of pharmacists a barrier.	Pharmacists less comfortable counselling patients with mental health conditions than patients with more common conditions		

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CAMHS in-reach to schools pilot programme		Flexible and responsive		Improved teacher confidence and skills in identifying and responding to pupils' emotional and mental health concerns. Overall teachers less confident in discussion, assessing or supporting pupil mental health needs. Intervention had no systematic approach to upskill staff and change practice.	Programme effectiveness depends on school decision to select the 'right' staff to be trained. Impact of programme dependant on staff being able to implement what they learnt. Barriers were staff forgetting what they had learnt, or what staff have learnt not fitting comfortably with school culture and ethos. Challenge to ensure programme's offer supported the whole-school approach to mental health and well-being. Harder to engage and support primary schools, particularly in large rural counties. Relationships between schools and CAMHS	Time restraints of teachers a barrier. Increased capacity in schools to address low level mental health difficulties.

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					enabled shared understanding of contexts and helped ground advice in what is feasible for schools. Pilot's steering group lacked authority to plan and coordinate the offer with other services. Led to overreliance on members' influence and the time and willingness of other services to collaborate with the pilot.	
NHS Cognitive Behavioural Therapy	Most participants found the concept of challenging their thoughts helpful. Group therapy supported continuing friendships. All participants reported positive changes to their mood and quality of life.	Provision of childcare and/or flexibility in appointment times a facilitator. Tasks that fit into current routines, non-obligatory helped manage commitment and feelings of being overwhelmed.	Experienced being listened to, validated and understood without judgement.		Group size can lead to fewer opportunities for all participants to share experiences. Having experiences which were different to the rest of the group a barrier to contributing.	

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	Many felt improvement in their relationship with their infant and were more able to enjoy spending time with them.					
Mental Health Integration Programme	Increase number of patients treated within 90 days of new depression diagnosis					
StepCare - online mental healthcare service	Perceived success working for people with worries or low mood	Acceptable and feasible.		Supports identification and management of patients with common mental health issues.	Fit well with beliefs and philosophies about general practice. Fit well with GP practice structure and processes. 31.8% of GPs found intervention integrated easily into practice flow. 68.1% indicated a need for the service 81% of staff would	

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					support the future use in their practice. 64.8% of patients would recommend to a friend. Patients less confident than GPs that the service worked well for people with worries or low mood.	
Problem-solving treatment (PST)	Patients improved more than the control group, but not statistically significant.					Direct and indirect costs more effective in intervention group compared to control group. Cost of PST €253 lower than the control group, not statistically significant and not considered cost effective from an NHS perspective.

Welsh Institute for Health and Social Care

University of South Wales, Lower Glyntaf Campus, Pontypridd, CF37 1DL
wihsc.southwales.ac.uk · wihsc2@southwales.ac.uk