Economic Evaluation of a Novel Physical Healthcare Advice and Guidance Service in a Mental Health Trust

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Aims: People with severe mental illnesses experience poorer physical health outcomes compared with the general population, partially related to fragmented care. The Integrating our Mental and Physical Healthcare Systems project implemented an Advice and Guidance Line, supported by colleagues in King's Health Partners, using the Consultant Connect (CC) app in the South London and Maudsley NHS Foundation Trust to enhance collaborative physical healthcare. This study evaluates the app's impact on inpatient transfers from mental health wards to acute hospitals, focusing on clinical outcomes and cost savings.

Methods: This cost-minimisation analysis used retrospective observational data to analyse electronic health records across a 42-month period (21 months pre- and post-intervention) centred on the CC introduction date in June 2020. The study population was Trust adult inpatients during the study period. Outcome measures were the number of Trust inpatients who attended ED in, or were admitted to, one of the four acute NHS Trusts serving the catchment area. Transfers with a primary COVID-19 diagnosis were excluded. Outcomes are presented as the number of transfers per Trust inpatient bed-year. This divisor accounts for the decrease in bed-days during the pandemic.

Results: In the pre-CC period there were 5,472 Trust inpatients across 7,308 inpatient episodes (1,328.78 bed-years) with 1,834 ED transfers. Post-CC the Trust had 5,362 inpatients across 7,396 episodes (1,183.06 bed-years) with 530 ED transfers. The number of ED transfers per bed-year was 1.38 in the pre-CC period, and 0.45 in the post-CC period, a 68% reduction ($p<0.001$, Chi-square). Interrupted time-series analysis confirmed this decrease (−0.752, 95%CI [−1.117, −0.386], $p<0.001$). There was no significant difference in admission rates pre- and post-intervention. Based on recent annual bed occupancy (720.97 bed-years) and costs (£457 per ED transfer), CC prevents approximately 670 transfers annually, generating total Trust savings of £241,720 after deducting annual service costs (£61,698) and annualised implementation costs (£3,000).

Conclusion: While the pandemic contributed to an initial decrease in ED transfers, the reduction was sustained even as overall ED presentations at the four hospitals returned to pre-pandemic levels. There was no change in admissions to acute Trusts, suggesting that the level of care provided was appropriate to need. The Advice and Guidance model appears cost-effective in managing physical health within mental health settings. These findings support wider implementation of similar services across mental health trusts, though further evaluation in a post-pandemic context is warranted.

Abstracts were reviewed by the RCPsych Academic Faculty rather than by the standard *BJPsych Open* peer review process and should not be quoted as peer-reviewed by *BJPsych Open* in any subsequent publication.

Evaluating AI Ambient Voice Technology as a Documentation Assistant in Psychiatry – a Proof of Concept Study

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Aims: Artificial Intelligence Ambient Voice Technology (AI AVT) which uses a large language model to summarise clinical dialogue into electronic notes and GP letters has emerged. Although effective in general practice and medical settings, its potential in psychiatry is unknown. In this proof of concept study, we sought to apply AI AVT into clinical practice for a limited duration.

The specific aims were to:

Assess the functionality and suitability of AI AVT in a child and adolescent mental health service (CAMHS) outpatient clinic for the selected use cases.

Identify whether AI AVT reduces documentation burden during and after clinical consultations, and improves clinician work satisfaction.

Identify whether AI AVT is acceptable to patients.

Identify potential challenges and issues from a clinician, organisational and patient perspective and to make recommendations for refinements.

Methods: We conducted a mixed-methods pre-post (manual versus AVT-assisted documentation) service development pilot with 10 clinician participants in a CAMHS outpatient clinic. Use cases were attention deficit hyperactivity disorder medication reviews, general medical reviews and developmental history assessments. The primary outcome was time taken to complete administrative tasks per patient. Secondary outcomes included qualitative clinician experience and patient/carer perception and acceptability of AVT. Measures including questionnaires, time sheets and focus groups were conducted at baseline and intervention. Data analysis included descriptive statistics and mixed linear regression. Focus groups were audio-recorded before being transcribed and thematically analysed.

Results: AVT was used in 351 clinical encounters. Administration time for 251 encounters was recorded (AVT n=171). The median time per encounter reduced from 27 minutes (manual) to 10 minutes (AVT) ($p<0.001$). On average, AVT-assisted documentation took 45% of the time of manual documentation ($p<0.001$). Clinician-rated accuracy, quality and efficiency of AVT-assisted documentation was statistically significant in its favour. Patient acceptance was high: only 3 preferred for AVT not to be used (0.85%). 97% felt clinicians were not distracted by taking notes. Thematic analysis from focus groups identified positive effects from AVT (improved productivity and mental wellbeing) balanced by barriers (technological limitations).

Conclusion: Although subject to the limitations of a small pilot study, we demonstrated that AVT can be implemented successfully, resulting in significantly reduced documentation burden. To evaluate its scalability and potential to further streamline processes,

we are currently in phase 2 which involves expanding the clinical roles of our participants and the use cases across Central & North West London NHS Foundation Trust (5 boroughs).

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Ethnic Disparities and Inequalities in Dementia Care: An Extended Literature Review

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Aims: Dementia is a leading cause of disability and loss of independence among older people. There is growing concern about ethnic disparities and inequalities in dementia care. In the UK, Black and South Asian people have a higher risk of developing dementia compared with their White counterparts. Despite this, there is underrepresentation of minority ethnic groups in dementia services and they are more likely to have a delayed diagnosis or no diagnosis.

This literature review aims to identify the ethnic disparities in dementia care. It also aims to explore the causes of delayed diagnosis and underdiagnosis of dementia amongst Black, Asian and Minority Ethnic (BAME) groups, particularly Black and South Asian ethnic groups in the UK.

Methods: An electronic literature search was performed using PubMed and Google Scholar.

Results: Across the literature, it is evident that health inequalities currently exist and exacerbate the disparities in the care of BAME dementia patients. These inequalities can affect quality of care and lead to overall poorer outcomes for people from BAME backgrounds.

Multiple risk factors for dementia such as hypertension and diabetes disproportionately affect Black and South Asian people.

Delayed diagnosis and underdiagnosis of dementia in BAME groups can be attributed to multiple barriers to accessing dementia diagnostic services such as stigma, lack of knowledge, misperceptions, language barriers and cultural beliefs.

In secondary care, patients from BAME groups are younger and have greater severity of dementia at the time of diagnosis.

Survival time following a dementia diagnosis can vary across different ethnic groups. However, there are contrasting findings between studies. Further research is required to investigate these contradictory findings to clarify how survival time post-diagnosis is affected by ethnic background.

Across multiple studies, data from large ethnic groups such as South Asian or Black are combined without taking into account the diverse subgroups within these larger groups. Further research is required within ethnic subgroups to provide a more person-centred approach.

Conclusion: There is a need to tackle the ethnic disparities in dementia care faced by South Asian and Black people in the UK. This requires action and collaboration between people from BAME communities, healthcare professionals and policymakers, in order to improve timely access to services. Further research should address the disparities to ensure equitable and inclusive dementia healthcare.

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Climate Change and Climate Change Related Natural Disasters, and Maternal Mental Health: A Scoping Review of Socioeconomic Vulnerabilities

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Aims: As the climate crisis escalates, pregnant women are increasingly exposed to extreme weather events, such as heatwaves and floods, which may lead to psychological distress and adverse mental health outcomes for both mothers and infants. This scoping review synthesizes research on the direct and indirect effects of climate change-related stressors on maternal mental health, identifying key trends, interventions, and mitigative strategies. Emphasis is placed on socioeconomic disparities in both high- and low-income countries, as these groups are disproportionately affected.

Methods: A systematic search was conducted to identify studies focusing on mental health, pregnancy (pre-, during, post-), and climate change, as defined in the AR6 Climate Change 2023 Synthesis Report, published up to October 2024. Data extraction included study design, population, interventions/exposures, outcomes, and socioeconomic implications. Only original articles and preprints in languages translatable to English were considered.

Results: The initial search retrieved 675 articles, of which 14 met the inclusion criteria. Two studies were from middle-income countries (Egypt and Turkey), while the remainder came from high-income countries (Australia, Canada, and the USA). The studies examined climate-related exposures, such as hurricanes, flooding, and extreme heat. Key findings indicate that acute exposure to high temperatures was associated with an increase in psychiatric emergency visits among pregnant women. Similarly, prenatal stress from natural disasters (e.g., hurricanes) was linked to higher levels of maternal mental health symptoms (e.g., depression, PTSD) and changes in infant temperament. Socioeconomic vulnerability played a critical role, with middle-income regions facing greater healthcare barriers, fewer mental health resources, and economic instability. Even in high-income regions, marginalized populations (e.g., Puerto Rico and the US Virgin Islands) experienced healthcare disruptions and prolonged recovery following climate disasters.

Conclusion: While the findings highlight the intersection of climate change and maternal mental health, several studies were limited by small sample sizes and reliance on self-reported data. A significant gap exists, as no studies specifically focused on maternal mental health in low-income countries affected by climate change were found during the literature search. Socioeconomic disparities strongly influenced mental health outcomes, underscoring the urgent need for equitable healthcare policies, financial support systems, and culturally adapted interventions. The review calls for the integration of climate resilience strategies into maternal healthcare and the strengthening of mental health infrastructure in low- and middle-income settings. Future research must prioritize longitudinal studies, policy-driven interventions, and targeted support for vulnerable populations.

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