

is currently ongoing, and more factors will be studied in the future.

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DEVELOPMENT OF A THEORY-BASED IMPLEMENTATION INTERVENTION TO INCREASE UPTAKE OF DIABETIC RETINOPATHY SCREENING

¹F Riordan*, ¹E Racine, ²S Smith, ³A Murphy, ¹J Browne, ¹P Kearney, ¹S McHugh. ¹School of Public Health, University College Cork, Cork, Ireland; ²Department of General Practice, Royal College of Surgeons in Ireland, Dublin, Ireland; ³Department of Economics, Cork University Business School, University College Cork, Cork, Ireland

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Background Diabetic retinopathy is a common complication of diabetes affecting the blood vessels at the back of the eye. Despite evidence that diabetic retinopathy screening (DRS) is effective, uptake continues to be sub-optimal in many countries, including Ireland. As routine management of type 2 diabetes largely takes place in primary care, it is arguably the best setting in which to implement interventions to improve DRS uptake. This study aims to develop a theory-based implementation intervention to improve uptake.

Methods A four-stage systematic development process was undertaken. Target behaviours were identified through a multi-phase sequential mixed methods study involving key stakeholder interviews (n=19), and an audit of screening attendance in two primary care centres. Barriers and enablers to uptake were identified through coding interviews with patients (n=48) and health care professionals (HCP) (n=30) using the Theoretical Domains Framework (TDF). Barriers and enablers were mapped to behaviour change techniques (BCTs) to develop intervention content. The APEASE (affordability, practicability, effectiveness, acceptability, side effects and equity) criteria was used to select the components. Effectiveness was determined through a rapid evidence review. Feasibility, local relevance and acceptability of the intervention were identified through consensus group meetings with patients (n=15) and HCPs (n=16), and key stakeholder consultation, including the national DRS programme.

Results Three key behaviours were identified; one HCP-level (registration of patients for screening), and two patient-level (consent for the programme to hold their details, and attendance). *Modifiable* patient barriers and enablers were associated with six TDF domains. Barriers included confusion between screening and routine eye checks ('Knowledge'), forgetting ('Memory, attention, decision processes'), anticipation of a negative result ('Beliefs about consequences'). Enablers included a recommendation from friends/family or HCPs ('Social Influences'), recognising the importance of screening for early detection ('Beliefs about consequences'), ownership over their condition ('Identity'), and being in a routine of attending tests ('Beliefs about capabilities'). HCP barriers included the time to register patients which was impeded or supported by practice resources ('Environmental context and resources'), and a lack information on screening uptake in their local area ('Knowledge'). Following the consensus meetings, consultation and evidence review, ten BCTs were included and operationalised as an implementation intervention targeting professionals (reimbursement, training, audit/feedback and electronic prompt) and patients (face-to-face/

phone reminder messages, GP-endorsed reminder letter and information leaflet).

Conclusion A multi-stage process combining theory, consultation of multiple stakeholders and existing evidence, was used to develop a multifaceted implementation intervention, targeting both professional and patients, to increase uptake of DRS. The feasibility of delivering the intervention in primary care will be evaluated through a pilot trial.

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COGNITIVE AND SOCIAL ACTIVITIES AND LONG-TERM RISK OF DEMENTIA IN UK WOMEN: PROSPECTIVE STUDY

S Floud*, A Balkwill, E Mauricio Reus, J Green, GK Reeves, V Beral. Nuffield Department of Population Health, University of Oxford, Oxford, UK

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Background Most previous prospective studies have shown an association between lack of participation in cognitive or social activities and increased risk of dementia. However, most studies have been conducted on adults aged over 75 with short follow-up, and thus their findings may be affected by reverse causation bias whereby changes in behaviour are the result of preclinical dementia. In the Million Women Study, we describe the short-term and long-term associations between a lack of participation in cognitive or social activities in women aged 60–65 years old and subsequent risk of dementia.

Methods In 2001, 851,305 UK women, without prior dementia, mean age 60 (SD=5) years, reported participation in six social activities (religious group, voluntary work, adult education, art/craft group, music/singing group and bingo); five years later, 645,967 reported hours per day spent doing cognitive activities: reading and watching TV. They were followed by electronic record-linkage to national databases for validated hospital admissions with dementia. Cox regression yielded adjusted relative risks (RRs) for dementia, with follow-up split into 4 year intervals.

Results For the analysis of cognitive activities, 15,529 women had newly-diagnosed dementia over a mean follow-up of 11 (SD=2) years. During the first 4 years of follow-up, there were apparent excess risks of dementia associated with not reading and not watching TV, but associations weakened substantially with longer follow-up. For women not reading vs reading for 1+ hours/day, the RRs for dementia reduced from 3.84 (95% CI 3.19–4.62) in the first 4 years to 1.27 (1.14–1.40) after 8+ years follow-up; for not watching TV vs watching TV for 1+ hours/day, the RRs reduced from 2.18 (1.55–3.06) in the first 4 years to 1.29 (1.09–1.52) after 8+ years follow-up. For the analysis of social activities, 24,437 women had newly-diagnosed dementia over a mean follow-up of 15 years. A lack of participation in any of the six social activities was weakly associated with dementia in the first 12 years of follow-up, with RRs of 1.15 (0.96–1.38), 1.10 (1.01–1.20) and 1.06 (1.01–1.12) during <4, 4-<8 and 8-<12 years respectively, but after 12+ years follow-up there was no association (0.98, 0.94–1.01).

Conclusion The associations of dementia with a lack of participation in cognitive and social activities become much weaker