**CONFERECE ABSTRACT**

**Towards developing a programme theory for the uptake of a national retinopathy screening programme in Ireland: a realist evaluation**

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**Introduction:** In 2013, the national diabetic retinopathy screening programme (NDRSP) was introduced in Ireland to offer free, regular retinopathy screening to people with diabetes. Ensuring a high uptake of a national retinopathy screening programme is challenging [1]. Non-attendance for screening has been identified as a risk factor for poor visual outcomes among those with diabetes [2]. Suboptimal uptake has been previously highlighted by regional screening programmes in Ireland, with attendance rates ranging from 49-80% [3-5]. Therefore, it is essential and timely to understand factors that facilitate or deter screening attendance as the NDRSP is implemented. The aim of this study was to identify and explain why the NDRSP was working (or not working), for whom and in what circumstances to produce outcomes.

**Methods:** This study was guided by a realist evaluation framework and adopts a multi-stage mixed methods design. Qualitative data from documents and semi-structured interviews with a purposive sample of national stakeholders (n=19) were used to develop the initial programme theories. These theories were tested in two large primary health centre in Ireland. Quantitative data extracted the medical records of all adults aged ≥18 years with diabetes registered with the practices were collected to establish uptake rates. A qualitative component was conducted using semi-structured interviews. Sampling was based on four outcome groups identified during the quantitative component of the study: consenting, attending, non-attending, not consenting. Framework analysis was used to identify factors that influenced the decision to participate in the NDRSP.

**Results:** Against the backdrop of a variation in existing retinopathy screening services, it was expected that members of the target population would decide to attend the NDRSP and a national uptake of 80% would be achieved. A total of 581 people with diabetes were included in the quantitative analysis. Over a 14 month period, the uptake of the screening programme was 63%. Qualitative analysis suggested that a fear of blindness and a belief that retinopathy screening could reduce the risk of diabetes-related blindness enabled screening attendance. Having had a recent eye examination at another screening provider was a common reason for not attending the NDRSP. No relative advantage of attending the NDRSP over exiting screening providers was a barrier to consenting to the newly established service.
Discussion/conclusion: Little is known about the characteristics which determine the uptake of retinal screening among those with diabetes in Ireland. Findings from this research will inform the ongoing implementation of the national diabetic retinopathy screening programme and its advertising and recruitment activities.

Lessons learned: It is important that efforts to increase the uptake of the NDRSP include increasing the awareness around this change in service provision among members of the target population.

Limitations: In the absence of national level data, quantitative analysis relied on data from two primary health care centres.

Future research: This study is part of an ongoing evaluation of the National Clinical Programme for Diabetes. Findings from this research will be verified and refined during a multiple case study in four geographical regions in Ireland.

Keywords: diabetes; diabetic retinopathy; screening; prevention; uptake