A Mixed-Methods Evaluation of Diabetic Retinopathy Screening Supported by Provincial Healthcare Administrative Data

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Background

- Diabetic retinopathy is a public health issue impacting the lives of 3 million or more Canadians.
- Systematic identification of those requiring screening for retinopathy is not possible within electronic medical records.

Methodology

- Provincial-level identification through a list of unscreened individuals to community health centres (CHCs) (Figure 1)
- Convergent mixed-methods implementation-effectiveness hybrid evaluation approach. (Figures 2 & 3)
- Evaluating effectiveness, cost-effectiveness, implementation and policy barriers and key success factors (Figure 4).

Methodology

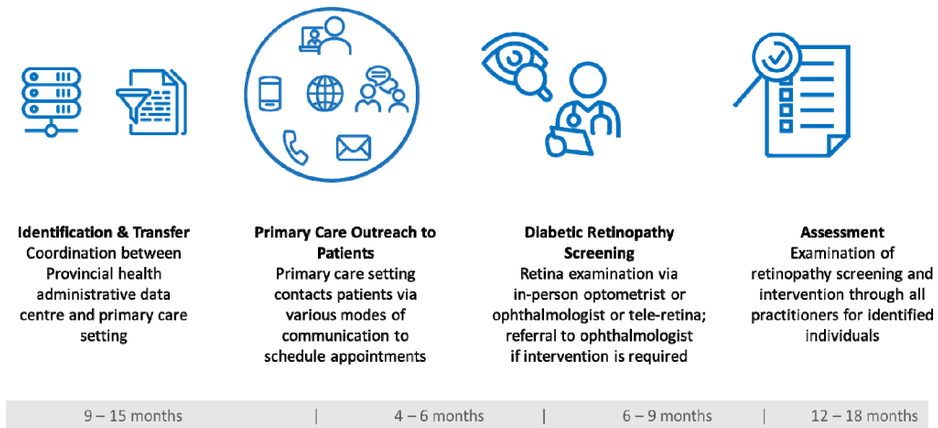

Figure 1. Stages of diabetic retinopathy screening intervention and evaluation

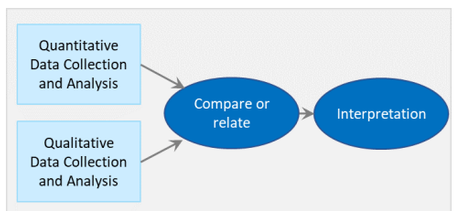

Figure 2. The Convergent Parallel Mixed-methods Design (Figure adopted from Creswell and Clark, 2017)

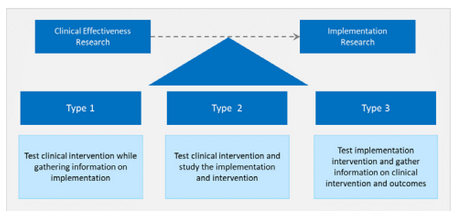

Figure 3. Effectiveness-Implementation Hybrid Study Designs (Figure adopted from Curran et al., 2012)

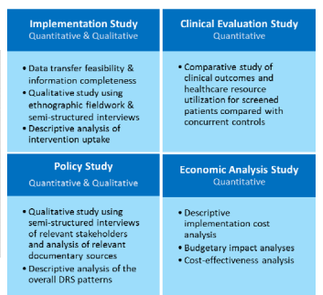

Figure 4. Study Components and Designs

Results

- Initial evaluation of contact lists across three CHCs found between 575 and 900 individuals unscreened within 425 days.

Conclusions

- A "top-down" approach using healthcare administrative data provided to primary care settings can raise awareness of need for diabetic retinopathy screening.
- A step towards increased screening and reducing vision loss.

Acknowledgement

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References 1. Creswell JW, Piano Clark VL. Designing and Conducting Mixed Methods Research. Third ed. Los Angeles, CA: Sage Publications; 2017; 2. Curran GM, Bauer M, Mittman B, Pyne JM, Stetler C. Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. Med Care. 2012;50(3):217-26.

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