FACTORS AFFECTING THE DELIVERY OF A PHARMACIST-LED MEDICATION REVIEW. EVIDENCE FROM THE MEDSCHECK ANNUAL SERVICE IN ONTARIO

Petros Pechlivanoglou, Lusine Abrahamyan, Linda Mackeigan, Lisa Dolovich, Giulia Consiglio, Valeria E. Rac, Jonghyun Shin, Suzanne Cadarette, and Murray D Krahn

Purpose: Medication reviews have become part of pharmacy practice across developed countries. However, the target population and the effectiveness of these reviews is not yet well understood. We aimed to identify factors affecting the likelihood of eligible Ontario seniors receiving such a publicly-funded, pharmacy-led medication review: the Medscheck annual (MCA) service.

Method: We designed a cohort study using pharmacy claims from linked health administrative databases collected between April 2012 and March 2013 for a 20% random sample of Ontario seniors. We identified pharmacy "claim-dates" for individuals receiving three or more chronic prescription medications who had not had an MCA within the last year. Drawing on literature findings and MCA guidelines we developed a conceptual framework that identified potential individual (e.g., demographic and clinical information), pharmacy (e.g. pharmacy volume) and community-level predictors (e.g. rurality, socioeconomic status) of MCA utilization. A generalized-estimating-equations model was constructed to estimate the effect of each factor on the likelihood of receiving MCA.

Result: Of the 2,878,958 eligible claim-dates, 65,605 included an MCA. Compared to eligible individuals who did not receive an MCA, recipients were more likely to have had a prior MCA (OR:3.05), receive a new medication on the claim-date (OR:1.78), be receiving a high-risk medication (OR:1.1) or have recently been discharged from hospital (OR:1.07). In contrast, MCA recipients had fewer medications (baseline: 3-4 medications. ORs: 7-8 medications:0.80, 9-11 medications:0.64, 12+ medications:0.44) and fewer comorbidities (OR:0.98) were less likely to receive an MCA in a rural (baseline: urban. ORs: small urban:0.75, rural:0.74) or high volume pharmacy (OR:0.65) or if prescribed an inappropriate medication (OR:0.9).

Conclusion: The MCA program appears to have a mixed record of reaching those who are most likely to benefit. Those prescribed a new or high-risk medication or those who had been recently hospitalized were in fact more likely to receive an MCA. In contrast, and inconsistent with our conceptual framework, older seniors with multiple comorbidities and multiple medications were less likely to receive an MCA. Policy regarding MCA funding may need to evolve to ensure that those at greatest need receive timely and comprehensive medication reviews.