The Efficacy of an Intervention Program aimed at Diabetes Care Physicians regarding Quality of Diabetes Care at a Tertiary Care Hospital

by

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Authorship and Co - workers

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Declaration

I hereby declare that this dissertation presented to the University of Pretoria for the of Masters Science in Clinical Epidemiology degree is my own work and has not been presented previously to any other tertiary institution for any degree.

Abstract

The efficacy of an intervention program aimed at diabetes care physicians regarding quality of diabetes care at a tertiary care hospital

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Background: Diabetes mellitus is a common chronic disease which needs long-term glycaemic control to prevent complications. Guidelines are available to improve control, but these are seldom properly instituted.

Objectives: To determine if a physician education program and a structured consultation schedule would improve the quality of diabetes patient care in a diabetes clinic.

Setting: Two tertiary care diabetes clinics at Kalafong hospital.

Study design: Quasi-experimental controlled before and after study.

Methods: A baseline audit of the quality of care in two comparable diabetes clinics were performed. Thee hundred patients were randomly selected for audit of their hospital records. One hundred and forty one from the intervention clinic, and 159 from the control clinic. Thereafter a physician training program and a structured consultation schedule was introduced to one (intervention) clinic and maintained for a one-year period. The other (control) clinic continued with the usual care. Process and outcome measures were determined at a post-intervention audit and compared between the two groups. A score was derived for comparison of process measures. Consultation time was measured at four different stages during the intervention for both the intervention and control groups and compared with each other.

Results: At baseline the intervention and control groups were not statistically different with regards to process measure score ($p = 0.99$) and outcome measures (HbA1c and number of diabetes related hospital

admissions p = 0.31 and 0.38 respectively). Post-intervention the intervention group had significantly higher process measure scores than the control group ($p < 0.01$). Outcome measures did not significantly differ between the two groups; HbA1c ($p = 0.60$) and hospital admissions ($p = 0.38$). The average number of clinic visits reduced over time for the intervention group in comparison with the control group ($p < 0.01$), but the average consultation time was significantly longer ($p < 0.01$).

Conclusion: The introduction of a physicians education program and a structured consultation schedule improves the care of patients attending a tertiary care diabetes clinic. This however occurs at the expense of a prolonged consultation time.

Abstrak

Die effektiwiteit waarmee 'n intervensie program, gerig op geneeshere wat omsien na diabetes pasiente, die gehalte van pasient sorg verbeter in 'n tersiere hospital.

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Agtergrond: Diabetes mellitius is 'n algemene chroniese siekte wat langtermyn glikemiese kontrole vereis om komplikasies te voorkom. Riglyne vir die verkryging van goeie diabetes kontrole is beskikbaar maar, dit word selde behoorlik nagekom.

Doelwitte: Om te bepaal of 'n geneesheer opleidingsprogram asook 'n gestruktureerde kliniek konsultasie skedule, die gehalte van diabetes sorg kan verbeter.

Ligging: Twee tersiêre sorg diabetes klinieke by Kalafong hospital.

Sudie ontwerp: Quasi-eksperimentele gekontrolleerde voor en na studie.

Metode: 'n Basislyn oudit is gedoen in twee vergelykbare diabetes klinieke om die gehalte van sorg te bepaal. 'n Oudit is gedoen op die kliniese hospitaal rekords van 300 pasiente wat ewekansig geselekteer is, waarvan 141 uit die intervensie en 159 uit die kontrole kliniek kom. 'n Geneesheer opleidings program asook 'n gestruktureerde konsultasie skedule is in die intervensie kliniek geimplementeer vir 'n periode van een jaar. Die kontrole kliniek het voortgegaan met sorg soos gewoonlik. Proses en uitkomste is gemeet vir beide groepe tydens 'n post-intervensie oudit en met mekaar vergelyk. 'n Telling van proses meetings was bereken vir elke kliniek en met mekaar te vergelyk. Die tydsduur van konsultasies was gemeet voor en vier keer tydens die intervensie vir beide die intervensie en kontrole groepe vir vergelyking met mekaar.

Resultate: Met basislyn was daar nie 'n statisties beduidende verskil tussen die intervensie en kontrole groep ten opsigte van proses meeting tellings (p = 0.99) en uitkomsmetings (HbA1c en diabetes verwante hospital opnames p = 0.31 en 0.38 respektiewelik) nie. Post-intervensie toon die intervensie groep 'n beduidende hoër proses meting telling as die kontrole groep ($p < 0.01$). Die uitkoms meetings het nie betekenisvol tussen die twee groepe verskil nie: HbA1c ($p = 0.60$) en hospitaal opnames ($p = 0.38$). In die intervensie groep het die gemiddelde aantal kliniek besoeke oor tydperk verminder in vergelyking met die kontrole groep ($p = 0.01$), maar die gemiddelde konsultasie tyd het beduidend toegeneem ($p < 0.01$).

Gevolgtrekking: Die implementering van 'n geneesheer opleidings program en 'n gestruktureerde konsultasie skedule verbeter die gehalte van pasient sorg in 'n tersiere sorg diabetes kliniek. Dit gebeur ergter ten koste van 'n verlening in konsultasie tyd.

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