Penerapan metode peramalan kuantitatif yang berdasarkan deret waktu pada pemakaian obat oleh karyawan IAIN di Klinik IAIN Syarif Hidayatullah

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Abstrak

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Dalam upaya memperoleh informasi perihal penerapan metode peramalan kuantitatif yang berdasarkan deret waktu terhadap pemakaian obat di instalasi farmasi Klinik IAIN Syarif Hidayatullah, telah dilakukan penelitian dengan cara membandingkan penerapan dari 6 metode peramalan yaitu rata-rata bergerak 3 bulan, rata-rata bergerak 6 bulan, pemulusan eksponensial tunggal, pemulusan eksponensial ganda, regresi linear sederhana dan dekomposisi klasik terhadap 6 sampel obat yang digunakan oleh karyawan IAIN dari tahun 1994-1997. Kriteria yang dipakai untuk membandingkan dan menentukan metode yang paling sesuai adalah nilai kesalahan peramalan, analisis autokorelasi, analisis regresi dan indeks musiman, ditambah kriteria lain yaitu jangka waktu peramalan dan kemudahannya dalam penerapan.

Hasil analisis autokorelasi menunjukkan bahwa pemakaian obat oleh karyawan IAIN memiliki pola data diantara pola acak dan pola kecenderungan, sedangkan hasil peramalan dari setiap sampel obat dengan beberapa metode peramalan yang diteliti menunjukkan nilai kesalahan peramalan yang bervariasi untuk setiap metode peramalan. Analisis regresi secara keseluruhan menunjukkan kecilnya pengaruh variabel babas (waktu) terhadap perubahan variabel terikat (pemakaian obat), sedangkan indeks musiman yang dihitung dengan metode dekomposisi klasik menunjukkan adanya variasi dari setiap sampel.

Kesimpulan yang diperoleh setelah beberapa metode peramalan diperbandingkan menunjukkan bahwa metode pemulusan eksponensial ganda merupakan pilihan utama, sedangkan metode rata-rata bergerak 3 bulan merupakan pilihan kedua untuk meramalkan pemakaian obat oleh karyawan IAIN di Klinik IAIN Syarif Hidayatullah. Meskipun lebih baik dari metode naif, metode dekomposisi klasik dengan rasio rata-rata bergerak dan regresi linear sederhana terhadap waktu sebaiknya tidak digunakan karena tidak memenuhi beberapa kriteria yang ditetapkan.

Disarankan agar pengelola instalasi farmasi memberi perhatian lebih besar terhadap obat-obat yang perlu diramaikan serta mempersiapkan sarana/ prasarana dan sumber daya manusia yang khusus menangani perencanaan pengadaan obat. Sebelum menerapkan metode pemulusan eksponensial ganda terhadap pemakaian obat oleh seluruh pasien disarankan untuk-mencari kesamaan pola pemakaian obat dan poly penyakit antara karyawan IAIN dan seluruh pasien. Apabila pola-pola tersebut memiliki kesamaan maka metode yang sama dapat diterapkan untuk meramalkan pemakaian obat oleh seluruh pasien di instalasi farmasi Klinik IAIN Syarif Hidayatullah.
<hr><i>ABSTRACT
Study is undertaken in clinical pharmacy installation of IAIN Syarif Hidayatullah Clinic that is by comparing 6 of forecasting method application with are 3 months moving average, 6 months moving

average, single exponential smoothing, double exponential smoothing, simple linear regression and classic decomposition toward 6 of drug sample used by IAIN staff within period of 1994-1997. The criteria for comparing and defining of the most suitable method are forecasting error value, autocorrelation analysis, regression analysis and seasonal indexes which combined with forecasting time horizon and its' easy of application.

The result of autocorrelation analysis indicate that drug consumption of IAIN staff have data pattern which is applicable between random and non stationer, whereas the result of forecasting method on every drug sample indicate that forecasting error value is variative. The whole regression analysis indicate that independent variable (time) has small effect on the movement of dependent variable (drug consumption), whereas the seasonal indexes which is calculated using classic decomposition method indicate variative result for every sample.

The conclusion is that double exponential smoothing method is the primary choice method, whereas 3 months moving average method is the second choice to forecast drug consumption of IAIN staff in IAIN Syarif Hidayatullah Clinic. Classic decomposition method with moving average ratio and simple linear regression toward time is not recommended to use for its' unfullfillment to the defined criteria.

It is suggested that management of pharmacy installation provide more attention on the forecasted drug and prepare infrastructure as well as human resources especially to handle planning of drug supply. Before applying double exponential smoothing method for drug consumption for all of the patient, it is suggested to find the similar of pattern of disease and drug consumption between IAIN staff and all of the patient. If these indicate the similar, the method is subsequently applicable. ;Study is undertaken in clinical pharmacy installation of IAIN Syarif Hidayatullah Clinic that is by comparing 6 of forecasting method application with are 3 months moving average, 6 months moving average, single exponential smoothing, double exponential smoothing, simple linear regression and classic decomposition toward 6 of drug sample used by IAIN staff within period of 1994-1997. The criteria for comparing and defining of the most suitable method are forecasting error value, autocorrelation analysis, regression analysis and seasonal indexes which combined with forecasting time horizon and its' easy of application.

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