

ADMITTING OR DISCHARGING PATIENTS WITH OPIATE OR ALCOHOL RELATED PROBLEMS? PSYCHIATRIST UNCERTAINTY AND WELFARE LOSSES

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SUMMARY

Background: Much attention has focused on variations in therapeutic strategies across catchment areas and the related question of whether the differences in attitudes are due to socio-economic variables in the studied population or to physician uncertainty about making a specific therapeutic recommendation.

Subjects and method: We monitored the emergency admission rate for patients with alcohol or opiate related problems of 9 resident psychiatrists for a year. To rule out differences in population characteristics, the study took place in only one hospital: Brugmann University Hospital, whose catchment area is the north of Brussels.

Results: Our results show 3 distinctive practice styles. We suggest that variation in urgent admission rates for patients with alcohol and opiate related problems can be due not only to the socio-economic variables of the population, but also to medical uncertainty about the effectiveness of admission for the treatment of these disorders.

Conclusion: The extent of uncertainty about appropriate standards of care and the plausible related inappropriate care and welfare losses are discussed.

Key words: small area variation – uncertainty - addiction

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INTRODUCTION

The small area variation (SAV) phenomenon refers to the variations in utilisation rates for many medical and surgical procedures that are commonly found in comparing small, contiguous hospital catchment areas. Although evidence supporting the variations is well established, controversy arises from conflicting explanations of the causes of the SAV phenomenon. Some have asked whether SAV reflects subtle measurement problems due to random variation (Diehr et al 1990), since by examining variations in admission rates using more than a year of data, variations can be substantially reduced (Schwarz et al 1994). But because SAV refers to variations across different catchment areas, most of the controversy has been focused on whether observed utilisation rates are related to socio-economic variables of the compared populations or to the degree of physician uncertainty with respect to diagnosis and treatment and on the related question of whether the observed variations are evidence of unnecessary or inappropriate care and welfare loss (Wennberg 1984). The resolution of this controversy is understandably important for policy. If the variations can be reduced, then perhaps welfare gains can be achieved. The interest of our study is that, to rule out the inevitable variables consequent to the study of two different populations, we evaluated the degree of psychiatrist uncertainty by monitoring the decisions of a group of resident psychiatrists working in one hospital and serving a homogeneous population.

SUBJECTS AND METHOD

2258 patients received psychiatric evaluation at the emergency department of Brugmann University Hospital. 102 had opiate related problems and 482 had alcohol related problems as primary diagnosis. The degree of discretion in whether or not to admit of our 9 residents psychiatrist was monitored for a year. To rule out differences in population socio-economic characteristics, the study took place in only one hospital, Brugmann University Hospital, where records show a strong correlation between attending the emergency department of that hospital and living in the north of Brussels.

Chi square analyses were performed to evaluate whether resident psychiatrists at the emergency department induce different admission rates when facing the overall psychiatric population of the emergency department and when facing the subgroup of patients with alcohol or opiate related problems. When significant differences in admission rates were found, we looked for common patterns of attitudes, performing cluster analyses and chi square analyses within clusters.

RESULTS

Table 1 shows the individual attitude for each of the 9 resident psychiatrists for the patients with alcohol related problems and table 2 for patients with opiate related problems. We performed chi square analysis to evaluate whether the differences in attitudes among resident psychiatrists can be considered significant.

Table 1. Individual attitude - alcohol related problems

Group	N	Psychiatrist	χ^2	df	p		
Alcohol	Low	181	4, 5, 6	16.60%	22.4	2	0.0001
	Medium	208	2, 3, 7, 9	26.40%			
	High	93	1, 8	43%			

Table 2. Individual attitude - opiate related problems

Group	N	Psychiatrist	χ^2	df	p	
Opiate	25	4, 5, 8	0%	16.35	2	0.0003
	55	2, 3, 7, 9	16.40%			
	22	1, 6	45.50%			

Results suggest that there is a homogeneous admission rate among resident psychiatrists at the emergency department but there are significant differences in the attitude of psychiatric patients when facing patients with alcohol or opiate related problems. We performed cluster analyses to investigate whether common patterns of attitudes among resident psychiatrists could be found. Indexes of distance show that there are 3 clusters. Chi square analyses were performed within clusters. Scores for alcohol related problems and for opiate related problems suggest homogeneous attitude within clusters.

DISCUSSION

Whenever there is substantial uncertainty about appropriate standards of patient care, a psychiatrist's set of beliefs about the efficacy of a particular form of care will in part determine his or her decisions. The process of decision making between discharging patients with opiate or alcohol related problems or admitting to the psychiatry department, is highly variable according to the resident who is in rotation in the emergency ward. This confirms how difficult and subjective the assessment of risk is for these patients. Our data suggests that our resident psychiatrists have 3 very different practice styles when dealing with patients with opiate or alcohol related problems in the emergency department: conservative, intermediate and interventionist. It is interesting to point out not only the differences between groups but also the striking similarity of admission rates within groups. Only the group "opiate-intermediate" shows moderate differences of attitude within its members.

Most studies reporting variation in utilisation of mental health services focus on socio-economic variables in the population and the implication for health planning and allocation of resources (Kelly & Jones 1995; Smith et al. 1994). Supplier-induced demand (Hendryx & Rohland 1994) or physician characteristics are only marginal comments (Hendryx et al 1994). Our study focuses on the degree of psychiatrist uncertainty about the benefits of a mental health service.

The marginal benefit (the total increase in benefit when admission rate is increased by one unit) from admission falls as admission rate increases. In other words, residents that are conservative are probably more

selective and transfer to the psychiatry department only those who will potentially benefit more from admission. Residents who admit more are probably less selective because, according to their perception, the marginal benefit of psychiatric admission is greater. For health economists the optimal rate of admission occurs when marginal cost (the increase in total cost when admission rate is increased by one unit) equals marginal benefit. Rates below or above are inefficient. It may be difficult to identify "unnecessary" or "excessive" utilisation rates because an efficient rate of use reflects the confluence of much information, not only scientific information, but also patient preferences and local cost conditions. Regardless of the determination of an efficient rate, it is plausible that the lack of agreement about appropriate standards of care will result in inappropriate care and substantial welfare losses (Figure 1).

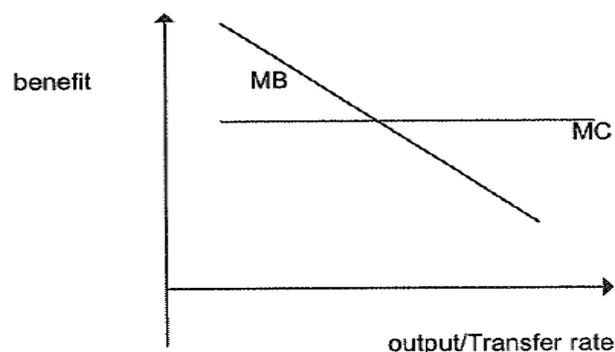


Figure 1.

Phelps and Parete (Phelps&Parente 1990) show that the total welfare loss to society resulting from deviation from the correct rate is approximated by:

$$w = \frac{0.5 * (\text{Total spending on X}) * CV^2}{Ep}$$

CV is the coefficient of variation of inappropriate use and Ep is the absolute value of the price elasticity of demand. Wherever there is uncertainty about the efficient rate for a medical or surgical procedure, CV rises and welfare losses rise exponentially. This is aggravated by the fact that total spending on X (admission) is high

and price elasticity of demand is low because there is no good substitute for inpatient substance treatment (Folland et al 1997). Admission is structurally expensive and elasticity of substitution is related to taste and difficult to modify. Psychiatrist uncertainty is therefore perhaps the only factor that can potentially be reduced to reduce welfare losses.

CONCLUSION

Our data supports the hypothesis that variation in psychiatrists' styles is responsible for variation in emergency admission rates of patients with alcohol or opiate related problems; it is plausible that lack of agreement about appropriate standards of care will result in inappropriate care and substantial welfare losses.

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