BYPASSING THE NEAREST HOSPITAL TO OBTAIN GENERAL HOSPITAL CARE OUTSIDE DISTRICT BOUNDARIES: HOW MUCH OCCURS IN NOVA SCOTIA, AND WHY IT MATTERS

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1.0 PROJECT DESCRIPTION

This research sought to estimate how many residents of Nova Scotia travelled further than appears necessary to obtain hospital-based services that are otherwise available in their district of residence. A methodology for estimating this kind of activity was developed using hospital discharge abstract data for all residents of Nova Scotia. Annual estimates of the rate of district hospital bypassing were calculated over the period 1992/93 to 2000/01 using present district health authority boundaries as the spatial unit of analysis. Consumer profiles of bypassing for seven common procedures were constructed from the hospital discharge abstract and medical services data. Statistical analysis was performed for each of the procedures using 2000/01 data as the base year to compare the characteristics of district hospital bypassers to those obtaining the same procedure at a facility in their district of residence.

delivered in at least one hospital in the district that year. Furthermore, procedures offered between 20 and 99 times a year in the province had to be provided 5 or more times in a given district to be included in the analysis, and procedures offered 100 or more times a year province-wide had to be provided 10 or more times within the district to be included in the analysis. Finally, diagnostic procedures, entry through emergency, and billing codes used in Nova Scotia to indicate circumstances such as cancelled surgeries, were also excluded from the analysis. We then queried the data subset of eligible secondary level procedures to flag hospital visits that occurred out of district (i.e., district hospital bypassing). To make meaningful comparisons between districts of different population sizes, we report the annual rate of district bypassing, or the number of bypasses divided by the number of eligible secondary level procedures in a year for each district.

3.0 FINDINGS

Rates of district hospital bypassing remained relatively constant at just over 9% of eligible separations over the entire study period (Table 1). Of note, the introduction of regional governance in 1998 and the replacement of the original four Regional Health Boards with nine District Health Authorities in 2001 made little difference in the overall rates. It can reasonably be argued that RHBs, and especially DHAs, were not in place long enough to expect improvement in the retention of hospital patients at the local level. Nevertheless, DHAs and the Department of Health should keep monitoring the rate of district hospital bypass to determine whether improvements have since occurred and/or continue to occur in both the number and volume of eligible secondary procedures, and the rates of district retention of these eligible separations.

Table 1.Estimates of district hospital bypassing using DHA boundaries, Nova Scotia, 1992/93 to 2000/01

Year	District Hospital Bypassing	Eligible Secondary Level Separations	Rate of Bypass
1992/93	8,696	92,774	9.4%
1993/94	8,821	91,194	9.7%
1994/95	8,552	91,524	9.3%
1995/96	8,152	85,305	9.6%
1996/97	7,960	85,021	9.4%
1997/98	8,204	88,675	9.3%
1998/99	8,692	91,071	9.5%
1999/00	8,532	93,127	9.2%
2000/01	8,204	88,675	9.3%

There were wide spatial variations in rates of district bypass (see Table 2), with smaller populated districts tending to record the highest rates. In general, the two larger populated DHAs recorded very low levels of district bypass, and the other seven DHAs recorded considerably higher rates. DHA 4 consistently recorded the highest level of local bypass. This is partly a function of the way in which the boundary between DHA 4 and its neighbour to the south, DHA 9, were drawn. Specifically, the boundary divides Hants County in two, and may have resulted in inflated estimations of bypass activity in both directions by including residents who travel across district boundaries, but who are nevertheless obtaining care at the nearest facility. Unfortunately, we were unable to estimate how much of the cross district exchange occurring between these two jurisdictions was for this reason.

Table 2. District estimates of district hospital bypassing, 1992/93 to 2000/01

	Year								
DHA	***92/93***	***93/94***	***94/95***	***95/96***	***96/97***	***97/98***	***98/99***	***99/00***	***00/01***
1	21.1%	19.9%	18.3%	22.6%	22.8%	23.8%	23.4%	21.2%	23.8%
2	16.7%	17.1%	14.4%	13.7%	12.3%	17.1%	18.8%	19.3%	17.1%
3	14.4%	12.8%	13.6%	13.7%	12.6%	11.9%	12.4%	12.8%	11.9%
4	31.2%	32.2%	31.0%	31.3%	32.7%	34.4%	34.3%	34.3%	34.4%
5	15.4%	19.5%	16.4%	17.5%	17.2%	15.6%	18.1%	17.4%	15.6%
6	13.0%	14.7%	14.3%	12.7%	14.3%	15.0%	19.1%	16.3%	15.0%
7	18.3%	19.3%	15.2%	16.8%	14.7%	16.5%	15.0%	14.5%	16.5%
8	6.7%	7.2%	8.0%	8.5%	8.2%	7.4%	7.4%	7.3%	7.4%
9	2.0%	2.1%	2.0%	1.8%	1.9%	1.8%	1.8%	1.7%	1.8%

District bypassing is not a one-way exchange, although, on average, approximately 75% of annual bypassing was obtained in DHA 9. For this reason, we calculated the net patient transfer in each district (see Table 3) to determine the combined effects of in- and out-migration. The net transfer of patients is given by the number of patient “in-migrants” (i.e., people from out of district coming to a given district to obtain an eligible secondary level procedure) minus patient “out-migrants” (i.e., the number of district residents obtaining eligible secondary level procedures in a different district). The data in Table 3 suggest that most of the DHAs experience a net out-migration of patients in this exchange, while DHA 9 is clearly the only jurisdiction in the province experiencing a strong net in-migration of patient seeking the secondary level procedures incl

Table 4. Seven procedures commonly contributing to district hospital bypass

Procedure Code	Description
57.32	Optical instrumental (cystoscopy) exam of the bladder or urethra
13.71	Insertion of plastic lens (pseudophakos) at time of cataract removal
45.16	Endoscopic examination of esophagus, stomach and/or duodenum, with biopsy
08.63	Reconstruction of eyelid with hair follicle graft
45.23	Flexible fibreoptic colonoscopy to diagnose tissue of large intestine
45.25	

hospital bypassing as measures of DHA performance in making general hospital care closer to home. Reporting these measures annually would provide health care administrators, Department of Health officials, health professionals and the general public better information and benchmarks with which to evaluate the performance of District Health Authorities. At the same time, more research is needed into the impacts on service providers and hospital resources in districts sending and receiving a large share of cross-district activity for care that is otherwise available more locally.

5.0 NOTES