INTRAOCULAR LENS COSTS IN CANADIAN HOSPITALS



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This study was conducted to determine the average price which Canadian hospitals pay for intraocular lenses (IOLs). In addition, the study determined the methods Canadian hospitals use to secure IOL prices, and identified effective negotiating strategies.

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EXECUTIVE SUMMARY

PURPOSE

The objectives of this study were to determine the average price which Canadian hospitals pay for intraocular lenses (IOLs), the methods they use to secure those prices, and identify effective negotiating strategies.

BACKGROUND

The Medicare program funds 90 percent of the cataract surgeries performed in the United States. During cataract surgery, the natural lens in the eye is removed. In over 95 percent of the cataract surgeries an IOL is implanted, replacing the removed natural lens. In addition to replacing a natural lens removed from the eye during cataract surgery, IOLs are also used to replace a natural lens missing due to disease or congenital absence.

The Medicare program approved payment for 1.1 million cataract surgeries performed in ambulatory surgical centers (ASCs) and hospital outpatient departments in 1988. Medicare allowed charges for IOLs billed in connection with 25 percent of these surgeries averaged about \$324 per lens in 1988.

Based on Office of Inspector General (OIG) recommendations, Federal Regulations published February 8, 1990, establish a single payment rate of \$200 for IOLs provided to Medicare patients in connection with cataract surgery performed in an ASC. Prior to March 12, 1990, the effective date of these regulations, Medicare reimbursement for cataract surgeries performed on an outpatient basis or in an ASC were to be reimbursed by Medicare based on charges subject to reasonable cost limitations.

METHODOLOGY

Provincial Purchasing Directors in each of the ten Canadian Provinces provided us with names of Canadian hospitals where cataract surgery is performed. We asked purchasing directors in each of those hospitals to provide information regarding hospital IOL prices and contracts. We then analyzed the price information to determine the average U.S. price of IOLs purchased by Canadian hospitals. We used the rate of currency exchange on December 31, 1989 to convert Canadian prices to U.S. dollars.

In addition to reviewing contract prices, we interviewed purchasing directors and ophthalmologists in 13 Canadian hospitals.

FINDINGS

Canadian hospitals purchase IOLs for an average of \$110

Negotiated IOL prices ranged from \$68 to \$279 per lens, and included one-piece posterior chamber lenses which are generally considered to be more expensive.
 Ophthalmologists interviewed indicated approximately 55 percent of the IOLs they purchase are one-piece lenses.

Low IOL prices can be achieved without high volume purchase

Canadian hospitals use effective negotiating techniques

- Hospital purchasing directors stated they had effectively reduced IOL prices over the last couple of years.
- Ophthalmologists are involved in the selection of IOL manufacturers awarded contracts.
- Canadian hospitals purchase their IOLs under negotiated contracts.
- Canadian hospitals solicit bids from several manufacturers when negotiating IOL contracts.
- Canadian hospitals contracting with more than one IOL manufacturer purchase IOLs for less.
- Contracts of 24 months or less produce lower average IOL prices.

RECOMMENDATIONS

The Health Care Financing Administration (HCFA) should consider the prices paid by Canadian hospitals for IOLs in adjusting Medicare IOL reimbursement rates. The Medicare program would save \$99 million annually if Medicare reimbursed for IOLs at the average Canadian price of \$110, rather than the current Medicare reimbursement rate of \$200 effective March 12, 1990.

The HCFA should inform U.S. hospitals and ASC's of the effective contracting practices noted in this report.

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HCFA COMMENTS

A preliminary draft report was shared with the HCFA, and an exit conference conducted with them on March 21, 1990. During the exit conference they provided us with their comments and expressed agreement with our recommendations. All HCFA comments were incorporated in the final report.

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INTRODUCTION

PURPOSE

The objectives of this study were to determine the average price which Canadian hospitals pay for intraocular lenses (IOLs), the methods used by Canadian hospitals to secure those prices, and to identify effective negotiating strategies.

BACKGROUND

The Medicare program funds 90 percent of the cataract surgeries performed in the United States. During cataract surgery, the natural lens in the eye is removed. In over 95 percent of the cataract surgeries an IOL is implanted, replacing the removed natural lens. In addition to replacing a natural lens removed from the eye during cataract surgery, IOLs are also used to replace a natural lens missing due to disease or congenital absence.

The Medicare program approved payment for 1.1 million cataract surgeries performed in ambulatory surgical centers (ASCs) and hospital outpatient departments in 1988. Data released by the Public Health Service indicates the frequency of cataract surgery continues to increase, with some moderation. Medicare allowed charges for IOLs billed in connection with 25 percent of these surgeries averaged about \$324 per lens in 1988.

Changes have occurred with the reimbursement and place of cataract surgery. Medicare reimbursement for cataract surgery performed in a hospital inpatient setting is based on Diagnosis Related Group (DRG) rates. A DRG rate covers all services and supplies connected with a surgery, including IOLs for cataract surgery patients. However, advances in medical technology have shifted the majority of cataract surgeries into hospital outpatient facilities or ASCs. Until recently, Medicare reimbursement for cataract surgeries performed on an outpatient basis or in an ASC were to be reimbursed by Medicare based on reasonable cost determinations. In these situations, IOLs were to be billed and paid for separately.

A total of four OIG studies have been conducted regarding the reimbursement for IOLs. The first study, entitled "Medicare Cataract Implant Surgery," (OAI-85-IX-046) was issued in 1986. This study reported that Medicare Reimbursement principles neither require nor encourage providers to obtain lenses at the lowest available price, and the average Medicare reasonable charge payment to an ophthalmologist or an ASC for an IOL was \$365. The inspection also found that discounts were available from major manufacturers, and that in Canada, the same U.S. manufactured lenses averaged less than \$200. This study estimated that over \$31 million would have been saved in 1984 if Medicare lens payments had been capped at \$200. The study recommended that a national cap, based on a generic prudent buyer concept, be established for lens payments when lenses are billed separately.

The second study, entitled "Medicare Certified Ambulatory Surgical Centers," (OAI-09-88-00490) was issued in 1988. This study reported that the problems regarding lens

payments that were discussed in the OIG March 1986 inspection report on Medicare cataract surgery had not been resolved. Manufacturers continued to offer discounts, incentives and rebates that were not passed on to the Medicare program. Current reimbursement policy does not provide an incentive for providers to be prudent buyers. The OIG again recommended that the Health Care Financing Administration (HCFA) establish a national Part B reimbursement cap of \$200 for any IOL billed to Medicare.

More recently, the OIG issued two additional studies in the form of Management Advisory Reports (MARs), which focused on IOL prices. One, entitled "Intraocular Lenses Purchased through the Federal Supply Schedule," (OAI-07-89-01661) reported that quality IOLs are available on the Federal Supply Schedule (FSS) for under \$200, and that the majority of VA medical centers and military hospitals purchase IOLs outside the FSS for under \$200. The OIG recommended that the HCFA use the information presented in adjusting IOL reimbursement rates.

The other MAR and fourth study, entitled "Intraocular Lenses Purchased by Indian Health Service Hospitals," (OAI-07-89-01662) reported that Indian Health Service Hospitals purchase IOLs for an average of \$155, and that IOL manufacturers are competitive. The OIG recommended that the HCFA consider the prices paid by IHS hospitals for IOLs in adjusting Medicare IOL reimbursement rates.

Federal Regulations were subsequently published February 8, 1990. These regulations establish a single payment rate of \$200 for IOLs provided to Medicare patients in connection with cataract surgery performed in an ASC. These regulations, effective March 12, 1990, also serve as a base for IOL payments to hospitals for cataract surgeries performed in their outpatient departments.

METHODOLOGY

Between July 1989 and January 1990, we contacted provincial purchasing directors in each of the ten Canadian Provinces and requested the names of two hospitals in each province where cataract surgery is performed. Seven of the ten directors provided us with the names of 14 hospitals. In two provinces, the director provided the name of only one hospital and another director provided the names of three. The last purchasing director was able to provide us with the name of only one hospital, since it is the only hospital in the province where cataract surgery is performed. In total, we received the names of 19 Canadian hospitals where cataract surgery is performed.

We contacted the hospital purchasing director in each of the 19 hospitals to solicit information regarding contract prices for IOLs purchased by their hospitals. We requested the number of lenses purchased under their contracts, the time period covered by the contracts, the types of lenses purchased (one-piece posterior, multi-piece posterior, or anterior chamber) and lens stock numbers. Finally, we requested information regarding any discounts, free equipment, or supplies received in conjunction with IOL purchases.

In addition to collecting IOL prices, we used discussion guides to conduct telephone interviews with 12 directors and 8 ophthalmologists in 13 of the 19 hospitals. The remaining directors or ophthalmologists refused to be interviewed or could not be contacted.

Our calculation of the average IOL price is based on information received from 15 of the 19 hospitals. One of the 19 hospitals declined to participate in our study, and another's information was never received, resulting in the collection of IOL price information from 17 hospitals. Information received from two of the 17 hospitals was insufficient and could not be used.

The currency rate of exchange between Canada and the United States on December 31, 1989 (.8734 U.S. dollars for each Canadian dollar) was used in calculating U.S. prices for Canadian IOLs. All Canadian IOL contract price information received, for which the contract time period is known, was in effect on that date. With the exception of quoted statements, all IOL prices shown in this report have been converted to U.S. dollars based on this rate of exchange.

FINDINGS

CANADIAN HOSPITALS PURCHASE IOLS FOR AN AVERAGE OF \$110

The sampled Canadian hospitals have negotiated an average price of \$110 for the purchase of 10,844 IOLs (on an annualized basis) under their current contracts. Overall, average IOL prices ranged from \$73 to \$245, as shown in the chart below. Negotiated prices for IOLs ranged from \$68 to \$279 per lens, with only one Canadian hospital paying more than \$200 for an IOL. These contracts cover negotiations with nine U.S. IOL manufacturers and a variety of lens types, and represent over 10 percent of approximately 100,000 IOLs implanted annually in Canada. See appendix A for a complete list of IOL prices negotiated by Canadian hospitals.

Average IOL Prices in Canadian Hospitals

Hospital	Annual Contract Volume	Average Canadian Dollars	Average U.S Dollars	Length of Contract	Contract Timeframe
#1	757	\$103.56	\$ 90.45	12 mo.	01/89-01/90
#2	1400	\$ 83.29	\$ 72.75	24 mo	10/89-09/91
#3	326	\$125.00	\$109.18	24 mo.	11/88-10/90
#4	50	\$170.00	\$148.48	24 mo.	02/89-01/91
#5	1540	\$147.01	\$128.40	24 mo.	12/88-12/90
#6	990	\$103.00	\$ 89.96	24 mo.	04/88-03/90
#7	850	\$107.65	\$ 94.02	12 mo.	03/89-03/90
* #8	252	\$137.86	\$120.41	40 mo.	06/88-10/92
#9	551	\$141.29	\$123.40	36 mo.	04/89-03/92
**#10/11	1473	\$138.93	\$121.34	12 mo.	03/89-03/90
#12	1460	\$136.03	\$118.81	24 mo.	11/88-11/90
#13	264	\$281.02	\$245.44	12 mo.	01/89-12/89
#14	450	\$129.00	\$112.67	24 mo.	07/89-07/91
#15	<u>481</u>	\$107.30	\$ 93.72	12 mo.	12/89-12/90

Total Volume 10,844

Total Expenditures

(Collective Volume X Price)	\$1,363,793.72
Average Canadian IOL Price	\$125.76
Currency Exchange Rate (12/31/8	39) X.8734
Average Canadian IOL Price in U.S. Dollars	\$109.84

- * Hospital #8 receives an equipment credit with the purchase of each IOL. They have negotiated to purchase IOLs for \$245 each, of which \$130 goes toward the purchase of a \$69,784 piece of equipment used in cataract surgery. They will receive an additional \$34,499 piece of equipment upon completion of their contract period. A chart depicting the application of equipment credits and free equipment in the calculation of the average cost of an IOL for hospital #8 is included as Appendix B.
- ** Hospitals 10 and 11 purchase IOLs under a joint contract.

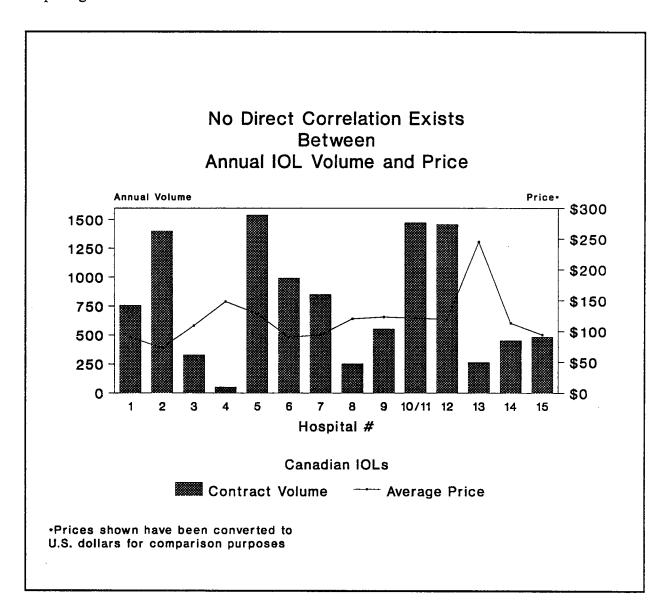
It should be noted that the average IOL price of \$110 includes the purchase of one-piece posterior chamber lenses, generally considered to be more expensive. The ophthalmologists interviewed indicated approximately 55 percent of the IOLs they purchase are one-piece lenses. Forty percent of the IOLs purchased are multi-piece posterior chamber lenses, and the remaining five percent are anterior chamber lenses.

Eleven of the twelve purchasing directors interviewed indicated they purchase the contract IOLs on a consignment basis. In such arrangements, the IOL manufacturer(s) provide the hospitals with an inventory consisting of a variety of lens styles and sizes. This inventory is provided to the hospital at no additional charge, and allows the hospital to pay for lenses as they are used.

A complete overview of high, low, and average prices for IOLs purchased by the sampled Canadian hospitals is outlined in Appendix C.

LOW IOL PRICES CAN BE ACHIEVED WITHOUT HIGH VOLUME PURCHASE

No direct correlation exists between price and the number of IOLs purchased by Canadian hospitals. Average prices ranged from \$73 to \$245. Volumes purchased ranged from 50 to 1540. There was no significant correlation between price and volume, as shown in the chart below. It should be noted that most of these hospitals had contracts with more than one company further reducing the volume of their purchases (see Appendix A for more details.) Our findings indicate that contract negotiations are more effective than volume purchase in acquiring IOLs at lower costs.



CANADIAN HOSPITALS USE EFFECTIVE NEGOTIATING TECHNIQUES

All 12 purchasing directors interviewed stated they had effectively reduced IOL prices over the last couple of years. They attribute these price reductions to their negotiations and bidding processes for IOL contracts. They made the following statements:

"The price has come down. Last year we were paying \$180 per lens. We now pay \$102."

"Prices have really come down. We were paying over \$250 per IOL 2 or 3 years ago. My facility is saving a quarter of a million dollars per year based on reduced prices through tendering."

Physician Input

All 12 purchasing directors indicated the ophthalmologists were involved in the selection of IOL manufacturers awarded contracts. Not only are most involved in deciding which manufacturers should be invited to solicit bids, but in the actual selection of manufacturers awarded contracts.

We asked the purchasing directors to rank price, surgeon preference, range of products, and service/delivery of products in order of importance when negotiating IOL contracts. They ranked surgeon preference first, followed by price, service/delivery of products, and range of products offered.

It should be noted that all eight ophthalmologists interviewed indicated they are satisfied with the quality of lenses under contract.

Bid Solicitation

All 15 canadian hospitals purchase their IOLs under negotiated contracts. These contracts vary in terms of bid solicitation, selection of lens types, information required from IOL companies and approval. On the average, four IOL manufacturers compete for the IOL contracts in each hospital.

Nine of the 12 purchasing directors stated that a list of IOLs preferred by their ophthalmologists is prepared and submitted to IOL manufacturers invited to bid for their contract. The manufacturers then submit sealed bids, which are reviewed to determine contract award.

One director requires each IOL manufacturer competing for their contract to submit three different bids. Manufacturers must submit prices based on the selection of their company as the sole supplier, prices based on their company being one of two selected suppliers, and prices based on their company being one of three selected suppliers. The ophthalmologists review the information submitted by the IOL companies and determine which company(ies)

they would select if they were required to select only one manufacturer, or if they could select two, or three manufacturers. The purchasing director and ophthalmologists meet to negotiate the final contract(s).

Another director asks bidding IOL manufacturers to submit their very lowest prices for all of their IOLs. The lowest bid is then given to the ophthalmologists for review and comment. The ophthalmologists must agree to contract for that lens, or justify why it is unacceptable. If they find the lens unacceptable, the next higher priced lens is then submitted for their review and comment. The introduction of the next higher priced lens goes on until the ophthalmologists can agree on an acceptable lens. It should be noted that the ophthalmologists review only one bid at a time. They have no idea what other lenses are available, at what prices. The purchasing director compared this process with that of someone in need of a car. The purchasing director stated:

"You get prices on several cars, and show them the (small economy car) first. Ask them if they can settle for the (small economy car) at the quoted price. If not, they must justify turning it down. Then you show them the next in line. Don't ask them up front if they would prefer a (small economy car) or a (large luxury car). Don't come right out and ask them what type of car they'd like, because they won't specify a (small economy car)."

Finally, another purchasing director requires the ophthalmologists to obtain and review IOL product information from different IOL manufacturers. After their review, the ophthalmologists provide the purchasing director with the names of three IOL manufacturers they are interested in purchasing lenses from. These manufacturers are then invited to submit sealed bids covering the range of IOLs they offer.

Canadian hospitals solicit bids from several manufacturers when negotiating IOL contracts

The number of manufacturers competing for the IOL contract(s) in each Canadian hospital ranged from three to seven, and averaged four per hospital. Purchasing directors hold the opinion that broader bidding holds down cost.

Canadian hospitals contracting with more than one manufacturer purchase IOLs for less

The seven Canadian hospitals contracting with more than one IOL manufacturer pay an average of \$90 per lens. Hospitals contracting with one manufacturer exclusively pay an average of \$102. Even though the average price difference is only \$12, applying a per lens savings of \$12 to the total volume of 5169 lenses purchased by hospitals currently contracting with only one company would result in a \$62,028 savings.

The following statements were made by a purchasing director and an ophthalmologist in hospitals where contracts are awarded to more than one IOL manufacturer at a time:

"This allows a larger variety of lenses to choose from. We don't want to put all our eggs in one basket."

"Contracting with more than one IOL manufacturer at a time keeps the manufacturers honest."

Contracts of 24 months or less produce lower average IOL prices

Contract periods averaged 21 months, ranging from 12 to 40 months, as shown in the chart on page 4. Canadian hospitals purchasing under contracts of 24 months or less paid an average of \$105 for each IOL. Hospitals purchasing under contracts in excess of 24 months paid an average of \$122 per IOL, over \$17 more per lens.

In addition to price, one purchasing director indicated technology is an important factor in support of short contract periods:

"Changing technology is a good reason to stick with shorter contract periods. Don't get stuck with obsolete IOLs at a premium price."

RECOMMENDATIONS

The HCFA should consider the prices paid by Canadian hospitals for IOLs in adjusting Medicare IOL reimbursement rates. The Medicare program would save \$99 million annually if Medicare reimbursed for IOLs at the average Canadian price of \$110, rather than the current Medicare reimbursement rate of \$200 effective March 12, 1990.

The HCFA should inform U.S. hospitals and ASC's of the effective contracting practices noted in this report.

COMMENTS

A preliminary draft report was shared with the HCFA, and an exit conference conducted with them on March 21, 1990. During the exit conference they provided us with their comments and expressed agreement with our recommendations. All HCFA comments were incorporated in the final report.

APPENDIX A

IOL Prices Negotiated by Canadian Hospitals

	Description	Annual	Price		
	Multi-piece or	Contract	Canadian	U.S.	
Manufacturer	One-piece	Volume	Dollars	Dollars	
_				 	
Hospital #1					
Company A	*	23	\$150.00	\$131.01	
Company A	Multi-piece	412	\$100.00	\$ 87.34	
Company B	Multi-piece	27	\$115.00	\$100.44	
Company A	One-piece	219	\$100.00	\$ 87.34	
Company C	One-piece	76	\$115.00	\$100.44	
Hospital #2					
Company A	*	1000	\$ 85.00	\$ 74.24	
Company A	*	200	\$ 80.00	\$ 69.87	
Company A	*	200	\$ 78.00	\$ 68.13	
Hospital #3					
Company F	*	26	\$125.00	\$109.18	
Company F	*	300	\$125.00	\$109.18	
Hospital #4					
Company C	*	50	\$170.00	\$148.48	
Hospital #5					
Company F	One-piece	1300	\$152.00	\$132.76	
Company F	Multi-piece	240	\$120.00	\$104.81	
Company F	One-piece	210	Ψ120.00	Ψ10 1.01	
Hospital #6					
Company E	*	113	\$103.00	\$ 89.96	
Company E	Multi-piece	877	\$103.00	\$ 89.96	
	-	•			
Hospital #7	One -:	150	6100 00	#1 /7 07	
Company E	One-piece	150	\$190.00	\$165.95	
Company A	Multi-piece	1700	\$ 90.00	\$ 78.61	
Hospital #8					
Company H	*	200	\$137.86	\$120.41	
Company H	Multi-piece	52	\$137.86	\$120.41	

	Description	Annual	P	rice
	Multi-piece or	Contract	Canadian	U.S.
Manufacturer	One-piece	Volume	Dollars	Dollars
Hospital #9				
Company E	One-piece	132	\$155.00	\$135.38
Company E	Multi-piece	127	\$130.00	\$133.54
Company E	One-piece	292	\$130.00	\$113.34
Company E	One-piece	292	\$140.00	\$122.20
Hospital #10/11				
Company G	*	108	\$140.00	\$122.28
Company G	*	2	\$140.00	\$122.28
Company G	*	2	\$140.00	\$122.28
Company G	*	32	\$140.00	\$122.28
Company G	*	25	\$140.00	\$122.28
Company G	*	2	\$140.00	\$122.28
Company G	*	2	\$140.00	\$122.28
Company G	*	165	\$140.00	\$122.28
Company G	*	60	\$140.00	\$122.28
Company G	*	7	\$140.00	\$122.28
Company G	*	7	\$140.00	\$122.28
Company G	*	6	\$140.00	\$122.28
Company D	*	150	\$105.00	\$ 91.71
Company G	*	395	\$110.00	\$ 96.07
Company F	Multi-piece	312	\$190.00	\$165.95
Company F	One-piece	16	\$190.00	\$165.95
Company A	* .	122	\$150.00	\$131.01
Company D	*	60	\$105.00	\$ 91.71
		•	4105.00	Ψ > 1.71
Hospital #12				
Company H	One-piece	60	\$160.00	\$139.74
Company H	Multi-piece	1400	\$135.00	\$117.91
Hospital #13				
Company I	*	12	\$275.00	\$240.19
Company F	Multi-piece	47	\$315.00	\$275.12
Company F	*	42	\$255.00	\$273.12
Company E	*	2	\$315.00	\$275.12
Company E	*	17	\$295.00	\$273.12 \$257.65
Company E Company E	*	6	\$315.00	\$237.03
Company E	*	43	\$225.00	•
	*	43 22		\$196.52 \$275.12
Company E Company E	*	22	\$315.00	\$275.12
- •	*		\$319.00 \$305.00	\$278.61 \$257.65
Company E	*	34	\$295.00	\$257.65

•	Description Multi-piece or One-piece	Annual	P	rice
Manufacturer		Contract Volume	Canadian Dollars	U.S. Dollars
Hospital #13 (cont	inued)			
Company E	*	28	\$295.00	\$257.65
Company E	*	4	\$225.00	\$196.52
Company E	*	4	\$295.00	\$257.65
Company E	*	1	\$225.00	\$196.52
Hospital #14				
**Unknown	One-piece	50	\$129.00	\$112.67
Unknown	One-piece	400	\$129.00	\$112.67
Hospital #15				
Company A	One-piece	26	\$200.00	\$174.68
Company E	Multi-piece	268	\$102.00	\$ 89.09
Company E	Multi-piece	148	\$102.00	\$ 89.09
Company E	Multi-piece	25	\$102.00	\$ 89.09
Company E	Multi-piece	2	\$102.00	\$ 89.09
Company E	Multi-piece	10	\$102.00	\$ 89.09
Company E	Multi-piece	2	\$102.00	\$ 89.09

10844

^{*}Lens type not provided by hospital.

**Hospital refused release of company name

APPENDIX B

Application of Free Equipment and Equipment Credits in Calculating Average IOL Price

(Hospital #8)

Hospital #8 pays \$245 (\$280 Canadian dollars) per IOL, of which \$130 (\$149 Canadian dollars) goes toward the purchase of emulsification equipment valued at \$69,785 (\$79,900 Canadian dollars). They will also receive an additional piece of equipment valued at \$34,499 (\$39,500 Canadian dollars) upon completion of their 40 month contract.

Our calculation of the actual cost of an IOL under this contract, after discounts and credits were applied is outlined below.

Free Equipment

\$34,499 (\$39,500)

Equipment Credits

+ \$69.785 (\$79,900)

= \$104,284 (119,400) Discount

Hospital purchases 252 IOLs per year (21 per month)

21 IOLs purchased per month

- x 40 months
- = 840 IOLs purchased under contract

840 IOLs

- x \$245 (\$280) per lens (contract price)
- = \$205,800 (\$235,200) total expenditures under contract

\$205,800 (\$235,200) total expenditures under contract

- 104,284 (\$119,400) discount
- = \$101,516 (\$115,800) actual cost of 840 lenses under contract

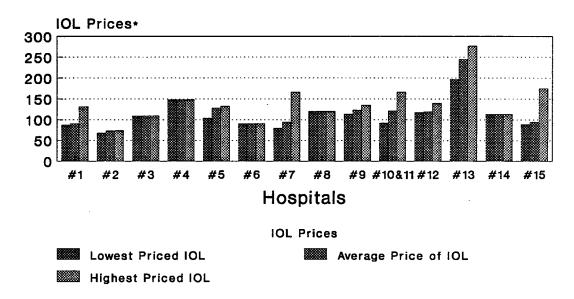
\$101,516 (\$115,800) divided by 840 lenses

= \$121 (\$137.86) per lens

APPENDIX C

Overview

IOL Costs in Canadian Hospitals (Negotiated IOL Contracts)



*Prices shown have been converted to U.S. dollars for comparison purposes.