COMMENTARY BY THE AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY

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In defining costs of performing an upper gastrointestinal endoscopy (EGD), a more realistic cost analysis would include all costs of space, drugs, supplies, depreciated equipment costs, repair costs for instruments, and realistic personnel costs.

The Showstack/Schroeder paper does not contain some of these costs, and consequently their estimates appear erroneous. Also, their paper includes the physician's fee, which we feel should not be considered in estimating actual costs of the procedure, Of course, the physician's fee is variable, depending on experience, geographic location, type of practice, etc., and so we have not included it in our procedural costing data.

Of particular concern is the lack of inclusion of the real instrument costs, including a more realistic 2-year depreciation because of the remarkable advances in equipment; the large instrument repair bills occasioned by the kind of wear attendant to this particular procedure; the necessity for backup instruments; the necessity for equipment for resuscitation in the event of emergency; accessory equipment, electrosurgical power sources, disposable supplies, and realistic personnel costs.

A true cost incorporating similar personnel and space figures as Showstack and Schroeder detail and assuming only 5&percent utilization of facilities and personnel is presented in table A-1. Assuming only *50* percent of personnel and space costs and incorporating actual costs per procedure, one can readily figure accurate and true costs of an office EGD assuming a yearly 46-week working experience.

Although Showstack and Schroeder state the average number of EGDs performed in 1976 was 275/year/endoscopist, a more realistic range today would be *368* to 690/year *(8* to 15/week). This results in the incorporation of only 50 percent of personnel and space expenses in the cost analysis, as these resources would be free for other uses when not being utilized for EGDs.

8 procedures/week x 46 weeks = 368 procedures 'year
10 procedures/week x 46 weeks = 460 procedures/year
12 procedures/week x 46 weeks = 552 procedures/year
15 procedures/week x 46 weeks = 690 procedures/ year

With personnel, space, and depreciated equipment costs of *$41,401.20* and with recurring per procedure costs of $29.70 per EGD, the following range of true per procedure costs in the physician's office can be obtained by the following formula:

$$\frac{\text{Total fixes costs}}{\text{Number of EGDs/year}} + \text{recurring costs/EGD} = \text{true cost/EGD}$$

Fixed, costs. – FGSs	No. of [A v		fixed cost FGD	+	t cuming cost	True cost (-(). / = per FGD
41, 401. 20 –	368	=	112.50	+	29.70	= 142.20
41. 401. 20 -	460	=	90.00	+	29.70	= 119.70
41. 401. 20 –	552	=	7500	+	29.70	= 104.70
41. 401. 20 –	690	=	60.00	+	29. 70	= 89.70

It must be realized that when 16 or more procedures are done per week, full-time nurse, and space expenses must be included because procedure set-up time, cleaning time, etc., become a reality. Thus, if 25 procedures per week were performed with full-time R.N. and space expenses included, cost per EGD is figured at $79.70. However, added to this would be the necessity for an additional examining room, table, cart, endoscope, light source, suction machine, oxygen, etc., which would bring the cost above the $100 range.

Finally, it is reemphasized that these figures represent realistic costs for an EGD performed in the physician's office and do not incorporate the physician's fee.

Table A-1.—Estimate of Overall Costs and Recurring Costs per Procedure in Physician's Office (not including physician's fee)

Personnel		
Nurse ($15,000/yr; ½-time, net income)		$7,500.00
LPN ($10,000/yr; ½-time, net income)		5,000.00
Secretary ($10,000/yr; ½-time, net income)		5,000.00
Space (585 ft² @ $1.50/ft²/mos; 50% utilization)		5,265.00
1 examining room ..... 12'x10 = 120 ft²		
2 offices ..... 10'x12 = 240 ft²		
1 supply room ..... 10'x1O = 100 ft²		
½ waiting room area ..... ½ — 10'x20 = 100 ft²		
1 dressing room ..... 5 'x5 = 25 ft²		
Equipment		
A. 2 endoscopes	($14,800)	
1 light source	($1 ,000)	
1 electrosurgical power supply	($1 ,000)	
Items in A are depreciated over 2 years]		8,400.00
B. 1 mechanical table	($4,500)	
1 patient cart	($350)	
1 endoscopic equipment cart	($350)	
1 suction machine	($200)	
1 tank oxygen	($200)	
Emergency equipment (ambu bag; defibrillator, drugs)	($6,000)	
[Items in B are depreciated at 20% per year over 5 years + 10% per year interest expense]		2,436.00
C. Endoscopic accessory equipment:		
3 biopsy forceps	($450)	
1 snare	($150)	
2 cytology brushes	($200)	
[Items in C have 1 year depreciation]		900.00
Subtotal		34,501.00
Overhead @ 20% (light, electricity, heating, fringe benefits, telephone, insurance, etc.)		6,900.20
Total		$41,401.20
Recurring costs per procedure		
A. Drugs(valium, demerol, dyclone, narcan)		$5.00/procedure
B. Disposable items		
1 glove	$0.10	
4 syringes	0.40	
2 needles	0.10	
1 scalp vein	0.50	
Alcohol sponge, band aid, cotton ball	0.05	
Five 4 x 4 sponges	0.05	
1 disposable gown	0.90	
1 trash bag	0.05	
1 charge bill (triplicate)	0.50	
Emesis basin, tissues Iubrifax	1.00	
Cleaning solution (glutaraldhyde, alcohol)	1.00	
Instruction and permit sheet	0.05	4.70/procedure
C. Instrument repair cost		20.00/procedure
Total recurring costs per procedure		$29.70/procedure