

# Extended Flexible Sigmoidoscopy vs. Colonoscopy: A Family Medicine Perspective

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As family physicians, we are honored by the invitation to collaborate in the discussion to decrease death rates from colorectal cancer via earlier detection and treatment. Studies presented here share the common thread of increased access and improved compliance through a new colonoscopy technique, which is less painful and can be provided at a lower cost. This technique should allow decreased dependence on highly regulated and costly hospital-based services, which frequently generate charges of more than \$3,000 per colonoscopy. In other words, more services might be provided to more people at a lower cost. Although screening of asymptomatic patients is one issue, our early studies described the reality of communities where symptomatic patients could not or would not comply with recommendations for colonoscopy/flexible sigmoidoscopy.<sup>1,2</sup>

The unkept promise of cancer prevention through colonoscopy is the visible tip of a larger iceberg calling for changes in the way physicians get the right test to the right patient for the right price. Family Medicine was designed to provide high quality continuing care unrestricted by age, gender, organ system, and location. Fewer than 30% of family physicians have maintained these skills, and that too is part of the unkept promise. See Figure 1.

Academic medical centers and the US government have worked to produce miraculously effective centers of excellence where the best doctors produce the best outcomes under the best conditions. But Boston, Massachusetts, is a lot different from Muddy Waters, Tennessee. Efficacy in the Mayo Clinic does not automatically translate into effectiveness in Mississippi. The American miracle of JCAHO- approved hospital medicine

**Figure 1:** Physicians demographics for flexible sigmoidoscopy/colonoscopy in the USA

- Over 900,000 physicians in USA.
- Fewer than 150,000 general internists/family physicians.
- Fewer than 75,000 have access to equipment for gastrointestinal [GI] endoscopy.
- Training programs are not encouraged to teach basic endoscopy which is the gateway to early diagnosis and prevention.
- Access for patients is affected, but revenues increase for the hospital. Misaligned incentives.

*In the mid-1990s generalist physicians were relabeled as “primary care providers” which included nurse practitioners. Many primary care providers stopped participating in hospital care, which is where privileges and equipment for colorectal cancer screening existed.*

is too expensive and inaccessible to most uninsured patients everywhere. Even well insured patients will avoid examinations which are perceived as inconvenient, too distant, embarrassing, or lacking enthusiastic support by a trusted family physician.<sup>3,4</sup>

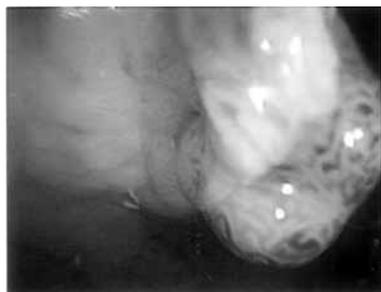
Fear and perceived pain are some of the psychosocial barriers preventing early detection of colorectal cancer by colonoscopy. Fear of colonoscopy is exaggerated by language, travel, and financial barriers. Most of Memphis cannot read English at a high school level of comprehension. Rather than a melting pot, 21<sup>st</sup> century USA has become a salad bowl of distinct cultures.

Psychiatric comorbidity affects over 35% of health care visits. Usually these psychiatric issues are undetected or unmentioned.

Family Medicine physicians are more likely to deal with multicultural, multilingual, and broad comorbidities on a daily basis. This includes the special issues of mental health and rural community medicine.<sup>5,6</sup> These dimensions are not adequately addressed by the cocoon environment of most academic medical centers where fragmented care is the rule.

There are potential benefits from decentralizing services back into the community if quality can be maintained. The water immersion method of colonoscopy may be part of this solution.

The blending of high tech services, such as colonoscopy, with high touch primary care in the community was published in Family Medicine journals 1981-2000.<sup>7-9</sup> The technology had improved to allow simple and low cost video documentation of normal and abnormal findings. For the first time there was objective evidence available to resolve differences of opinion.<sup>10</sup> See Figure 2.



**Figure 2:**  
Photodocumentation improves specificity of diagnosis

*This is a second generation of an image. It was digitalized using a \$120 camera in the office. The adenomatous surface characteristics of this lesion and its size are now a matter of recorded fact versus a vaguely remembered opinion. Interobserver agreement for interpretation of the photo is 100%.*

Table 1 describes the flexible sigmoidoscopy rationale as presented at a meeting of Family Medicine educators in 1986. In that year, a family physician published findings that unsedated extended flexible sigmoidoscopy to 105 cm could reach the cecum in a substantial percentage of cases.<sup>11</sup>

Family physicians moved on to using colonoscopy and published their results.<sup>12-14</sup> Yet, none of these data are mentioned in the literature of gastroenterology. This is the first and only conference bringing members of both specialties together.

What happened to the push for colonoscopy in the community where access is better, costs are lower, and compliance seemed to be enhanced by advice from a continuity physician? We had predicted that diagnostic endoscopy of the gastrointestinal tract would become “despecialized” and available to community-based physicians in family medicine and internal medicine.<sup>15</sup> Similar to other technical innovations, there would be a diffusion curve and eventually the technology would be improved to the point where these skills could be incorporated into residency training. At that time few had even dreamed of owning a smart phone, a digital camera, and a personal computer. But time marched on, except for colonoscopy.

In a phrase, we underestimated the geopolitical and economic incentives for preservation of the status quo in the medical schools. Family Medicine and general Internal Medicine were not viewed as essential power players, and, to this day, are not major requirements for the accreditation of a medical school.

Literally every mention of colonoscopy success by a family physician was countered by criticism on the grounds of FP going beyond the scope of their training.<sup>16,17</sup> After a promising collaboration in flexible sigmoidoscopy with the American Society for Gastrointestinal Endoscopy [ASGE],<sup>18</sup> requests for support of colonoscopy were denied. Family Medicine academics were instructed by Deans that GI endoscopy would be off limits. The enthusiasm for office-based endoscopy examination reached its highest level in the mid 1990s. See Figure 3. Hospital committees looked to gastroenterology for credentialing rules, and a credentialing arms race ensued.<sup>19</sup> Family physicians and general internists were slowly removed from eligibility in hospital settings. Office overhead crept upward while reimbursement remained flat. Incentives were not aligned.

New studies confirmed the need and technical feasibility of colonoscopy in the office,<sup>20,21</sup> but a substantial percentage of family medicine programs began to abandon colonoscopy and flexible sigmoidoscopy. The tree of family medicine was obscured by a forest of generic primary care where “providers”

**Figure 3:** Interest in office screening reaches its peak

#### AAFP 1994 Survey Availability of Training

	HOSPITAL	OFFICE	PLAN TO ENHANCE THE TRAINING
RIGID SIGMO	21%	27%	13%
FLEX SIGMO	70%	97%	46%
COLONOSCOPY	22%	27%	24%
EGD	18%	13%	34%

*The American Academy of Family Physicians [AAFP] started providing CME annually with registration requests from 200 physicians each year 1984-1998.*

**Figure 4:** Family medicine enthusiasm for colorectal cancer screening 2004 —What changed?

2004: Interest Declines: Why?			
	HOSPITAL	OFFICE	PLAN TO ENHANCE THE TRAINING
RIGID SIGMO	OBSOLETE	OBSOLETE	OBSOLETE
FLEX SIGMO	AVAILABLE BUT RARELY ACCOUNTABLE	40% - 60% TRY TO ATTAIN 25 PROCEDURES	DYING OUT IN 50% OF PROGRAMS
COLONOSCOPY	15%	35%	0%
EGD	15%	35%	0%

*A variety of political, economic, and psychosocial vectors affected those who viewed themselves as family physicians. General internal medicine began its decline with increasing desire among students to subspecialize and have limited ownership of their own practice. In this year registration for the AAFP course was less than 80.*

**Table 1:** The Environmental Impact of Technology Transfers on Medical Practice

I. Assumptions	II. Predictions
A. In health care, accurate and early diagnosis is of public value.	A. Some offices will evolve into health centers offering urgent care, preventive care, team care, patient education, counseling, resource management, procedures, and office surgery. Colonoscopy is one example.
B. Dissemination of diagnostic and therapeutic skill to a broader base of physicians is desirable, if the costs are acceptable. This improves access.	B. New diagnostic and therapeutic skills will gradually blend the technical power of the hospital with the high touch environment of the office (community health center).
C. Training resources are limited, costs are significant, and tax support for medical education has been deflected away from the training of generalist physicians in the community.	C. For example, the power of diagnostic imaging will return to the office. Defragmentation of health care will enhance continuity and patient satisfaction.
D. Technology is quietly transforming the biomedical model and the psychosocial model. A new paradigm is evolving, but political resistance is substantial.	D. Digitized images, computerization, and other advances will create electronic information management systems linking offices into efficient primary care research networks. Outcomes will be measured, analyzed, and published.
	D. Digitized images, computerization, and other advances will create electronic information management systems linking offices into efficient primary care research networks. Outcomes will be measured, analyzed, and published.
	F. Parallel health care systems will persist and compete. Without painful reconfiguration, parallel systems of medical education will persist and compete.
	G. The absolute numbers of general physicians will grow slowly. Generic "primary care" will compete with procedurally enhanced generalists for training resources. Comprehensive care physicians (much needed in rural and underserved communities) will constitute less than 10% of practicing physicians until a sustained crisis precipitates change or until economic and technologic events shape evolutionary change.

were interchangeable. The interchangeability was largely due to an emphasis on ambulatory skills with immediate referral to specialized clinics for all procedures. The cutting edge of technical innovation was viewed by some as the lunatic fringe.<sup>22</sup>

The controversy over the professional identity of family medicine<sup>23,24</sup> has temporarily obscured this important opportunity for community physicians to provide new methods, such as the water immersion colonoscopy method presented at this conference. This renewed collaboration between the two specialties fosters improved public health. Virtual colonoscopy has not provided a realistic alternative,<sup>25</sup> and the unkept promise of flexible sigmoidoscopy has been given new life.<sup>26</sup>

My compliments to the Doctors Leung who conceptualized and administrated this conference on research into making colorectal cancer prevention more available to everyone.

***"Everyone is in favor of progress, it's the changes that they don't like."***

— *Anonymous*

Source: *Mary MacMillan Rodney, MD 1882-1968*

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