



Development of a Collaborative Surveillance Care Delivery System for Early Stage Colon Cancer Patients

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Background

Early stage post-surgical colon cancer patients

- Colorectal CA: **the second** leading cause of CA death¹,
- Survival rate: **stage I - 92%, stage IV - 11%**²
- **Less than 50%** of colorectal CAs are diagnosed at an early stage²
- **30%** experience recurrent disease³
- **CA surveillance is key** for early detection and optimal disease outcome^{1,3,4}

- Surgeons**
- Responsible or risked pts being unmonitored
 - Practice varied
 - Expect more surgeons' time would be required

- Patients**
- Risked not receiving CA surveillance
 - Risked receiving fragmented care₂

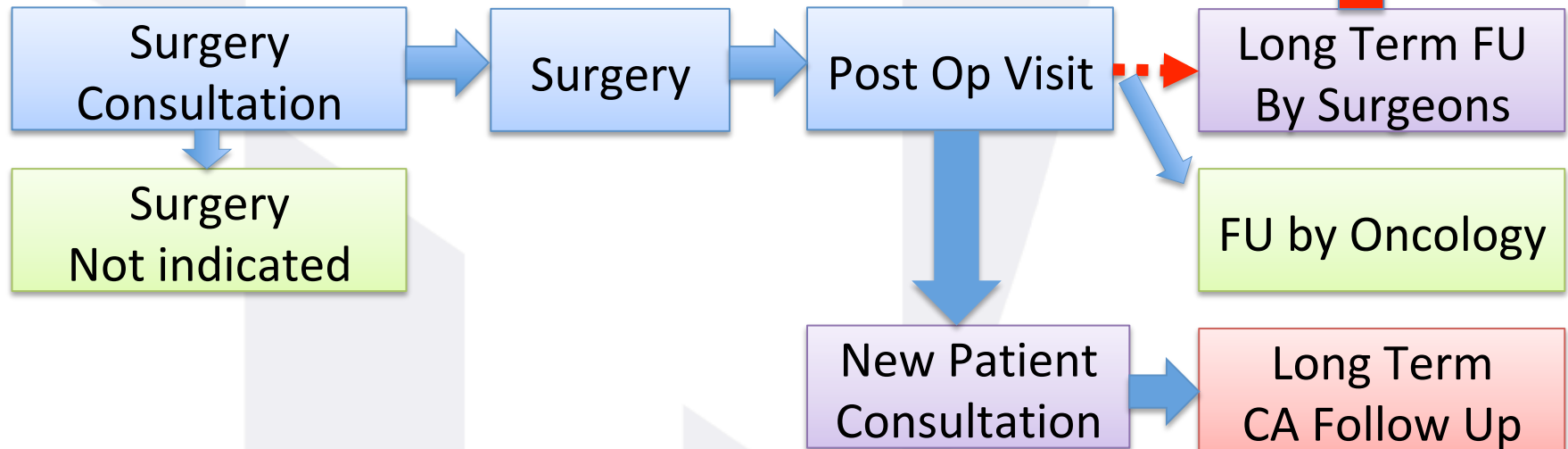
Purpose

To develop a surgery-primary care collaborative surveillance system where PCPs lead CA surveillance

Aims

To develop a successful collaborative pathway
To analyze revenue gain or loss associated with this system change

Surgery



Abbreviations: Op, operation; FU, follow up

Primary Care

Results

Demographics

Comparison of demographics between the study sample and all early stage colon cancer patients who had resections by any surgeon at our center in 2009-2014

Demographics	Study sample N=15	Total patients 09-14 N=314	p-value
Mean age (range) [SD]	68.9 (46-90) [SD 13.7]	63.2 (25-93) [SD 13.9]	0.126 ^a
Staging N (%)	Stage 0: 1 (6.7%) Stage I: 8 (53.3%) Stage II: 6 (40.0%)	Stage 0: 68 (21.7%) Stage I: 110 (35.0%) Stage II: 136 (43.3%)	1.000 ^b

^a Based on Independent T test

^b Based on Fisher's exact test. Staging was grouped into either 1 (stage 0 and I) or 2 (stage II) to produce a comparison analysis

Results

Patients' interest in cancer surveillance

Patients' interest in cancer surveillance	N=15 (100%)	P-value
◆ Stated wish to receive combined care at PCP settings in the future	15 (100%)	N/A
◆ Expressed intention to transfer surveillance care to JH PCP	11 (73.3%)	0.000 ^a
◆ Actually made surveillance appointments at JH PCP	8 (53%)	0.004 ^a
◆ Overall surveillance appointments made at any location	14 (93.3%): 8 (53.3%) with PCP 5 (33.3%) with surgery 1 (6.7%) with local provider	0.035 ^b

^a Compared to our administrator's goal of 20% successful transfer rate using binomial tests

^b Compared to our administrator's goal of 70% success rate of providing surveillance to our post-surgical patients using a binomial test

Abbreviations: JH, Johns Hopkins; PCP, primary care provider

Results

Satisfaction Survey

<i>Patient Satisfaction</i>	n=15	Neutral	Agree	Strongly Agree
Feeling secure		0	1	14
Understanding tests and visits		0	1	14
Desire to continue CA surveillance		1	0	14
<i>Providers' Satisfaction</i>	n=8 (4 PCPs and 4 surgeons)			
	100% of providers satisfied-no analysis needed			
Care improved	PCP	0	1	3
	Surgery	0	1	3
Workload manageable	PCP	1	0	3
	Surgery	0	0	4
Desire to continue collabo	PCP	0	0	4
	Surgery	0	0	4
<i>Administrators' Satisfaction</i>	n=4			
Revenue gain		2	2	0
Desire to continue for colon CA pts		0	3	1
Desire to expand to other CA pts		0	3	1
"disagree" and "strongly disagree" not displayed due to the count 0				6
Abbreviations: PCP, primary care provider; CA, cancer; Collabo, collaboration				

Results

Revenue Analysis

Collaboration

- ✓ Yields increased capacity to perform more surgeries
- ✓ Keeps the total cost relatively unchanged
- ✓ Maintains the same surgical staff level
- ✓ Produces greater cost efficiency by spreading existing costs across more patients



Generation of marginal profit without increasing costs
A good cost efficiency model



A viable care delivery system change

Discussion

Patients desired combined care hand off is feasible

- ✓ Evidence Support
- ✓ Resource availability
- ✓ Timing
- ✓ Win-Win Product Development

Conclusion

New care delivery system prevents fragmented care and improves resource utilization



Benefits patients, providers and health system

References

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