

Cost Effectiveness of Offering Free Colonoscopies



Patricia Francis
Program and Education Director
Surgery on Sunday Louisville

Disclosure Slide

- We have no actual or potential conflicts of interest in relation to this presentation.

Economic Burden of CRC

- The economic impact of colorectal cancer (CRC) in the United States is expected to increase to \$14.03 billion by 2020.
- Efforts at reducing the economic burden of CRC focus on preventing late stage presentation by improving access to screening colonoscopies.

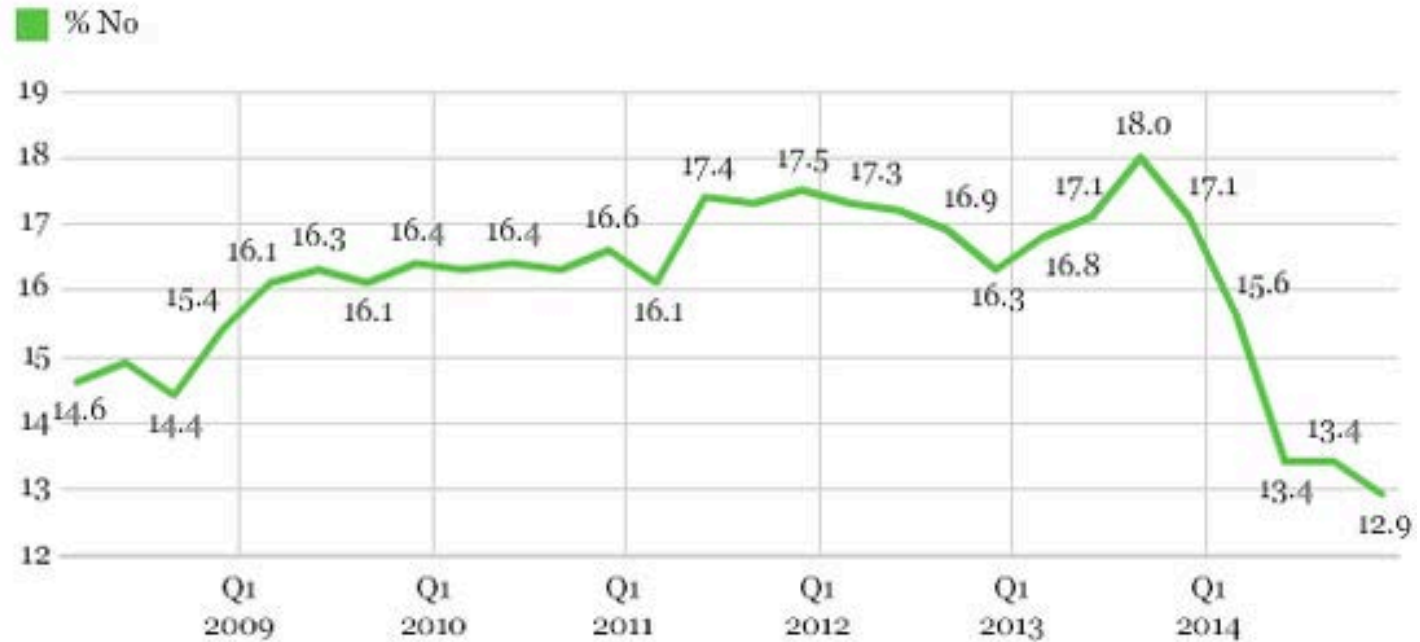
Implications for uninsured?

- In 2013, 30% of uninsured adults went without needed medical care
- 40% of uninsured adults have outstanding medical bills, 20% say those bills create significant financial strain

ACA's Impact

Percentage of U.S. Adults Without Health Insurance, by Quarter

Do you have health insurance coverage?
Among adults aged 18 and older



Quarter 1 2008-Quarter 4 2014
Gallup-Healthways Well-Being Index

GALLUP

Despite ACA, gaps exist

- It is estimated that 13.4% of Americans will continue to be uninsured.
- Uninsured in KY (500,000)
 - 20.4% in 2013
 - 11.4% in July 2014
 - 10.4% in Feb 2015 (481, 315)
 - Ineligible (est. 80,000)
- Underinsured

Impact of being uninsured in Kentucky

- Patients who lack insurance have more than twice the odds (OR = 2.2) of being diagnosed with advanced colorectal cancer
- Patients with Medicaid have more than a 60% increase in the odds (OR = 1.62) of being diagnosed with late stage disease compared to patients with private insurance

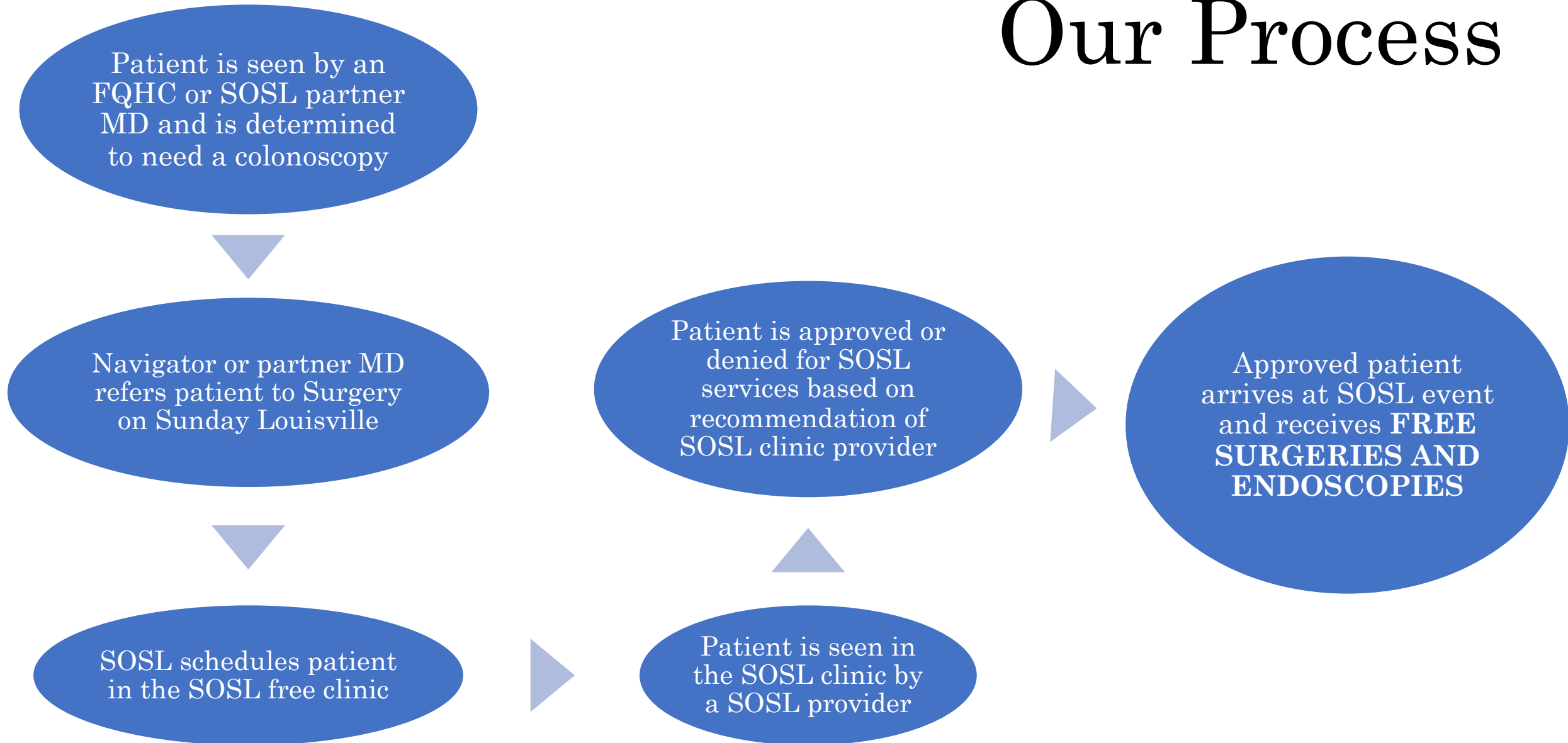
How are we preventing colon cancer for people in the gap?

- Our central hypothesis is that providing *pro bono* colonoscopies to uninsured patients at high-risk for CRC successfully detects early stage disease and is cost-effective.

Methods: The Partnership

- The Kentucky Colon Cancer Prevention Project was funded by the state of Kentucky when the Cabinet of Health examined our ranking of 48th in the country for colon cancer screening.
- Surgery on Sunday Louisville, Inc. is a non profit organization that provides free outpatient surgical procedures to uninsured/underinsured people in areas surrounding Louisville, KY

Our Process



Methods: Patient cohort

- Patients who were considered high risk for CRC were offered free screening colonoscopies.
- Patient data from these colonoscopies was prospectively collected over a 12-month period, and the incidence of CRC within the cohort was compared to a control group of uninsured patients from the SEER registry.

Methods: Cost comparison

- SEER-Medicare data was used to analyze health expenditures by CRC stage to develop a cost model.
- To compare overall costs between the cohort and the SEER control, the average initial cost of care was weighted by the stage-specific CRC incidence in each group.

Results: Demographics

- 682 patients (all high risk), 35 to 64 years old were screened, with 9 cancers identified.
- Colonoscopies were performed by a total of 23 gastroenterologists (18), general surgeons (2) and colorectal surgeons (3).
- Overall, the incidence of CRC in our cohort was 1.3%.

Results: Cohort vs. SEER

Table 1. Distribution of CRC by Stage		
	Cohort	SEER
Stage 0	11.1%	6.7%
Stage 1	33.3%	22.2%
Stage 2	22.2%	30.5%
Stage 3	33.3%	22.0%
Stage 4	0%	14.5%

Results

- A total cost of \$353,262 was estimated to be incurred during the initial phase of care.
- Compared to the SEER control, the cohort included more early stage cancers, and subsequently had a lower per patient initial cost (\$39,251 vs \$45,827, a 16% decrease).

Stage	Cost of 1 st yr of care
0	\$19,432
1	\$29,746
2	\$46,623
3	\$50,449

What happens to CRC if we make screening available to all high risk individuals?

- We found a 1.3% CRC incidence rate in our study sample, which represents a 32.5-fold increase in CRC incidence over the general normal risk population.
- When compared to SEER data, we detected cancer earlier than would have been predicted.

Limitations

- Our sample size is small with less than 700 patients treated to date.
- We made the assumption that reported SEER-Medicare costs for CRC are accurate and valid representations of healthcare costs associated with the various stages of CRC.

What we Learned

- Our screening criteria successfully identified a high-risk population with an overall 1.3% incidence of CRC.
- For these patients, the provision of free screening colonoscopies not only identifies earlier stage tumors, but may decrease overall health care costs.

How we got it DONE

- Formed a nonprofit organization (IRS 501c3)
- COVINCED EVERYONE
 - Hospital administrators
 - Lawyers
 - Human Resources
 - Unit Managers
 - Billing Office
 - Doctors

How we got it DONE

- Started SLOW
- Problem SOLVED
 - Formed partnerships with central credentialing organization
 - Obtained an organization specific malpractice insurance policy
- KEPT going NEVER quit REPEAT

