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Health System Approaches in Cancer Prevention

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Presentation at the
Advancing Progress in Cancer Prevention and Risk Reduction Workshop

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For information about the workshop, see: https://www.nationalacademies.org/event/06-27-2022/advancing-progress-in-cancer-prevention-and-risk-reduction-a-workshop.

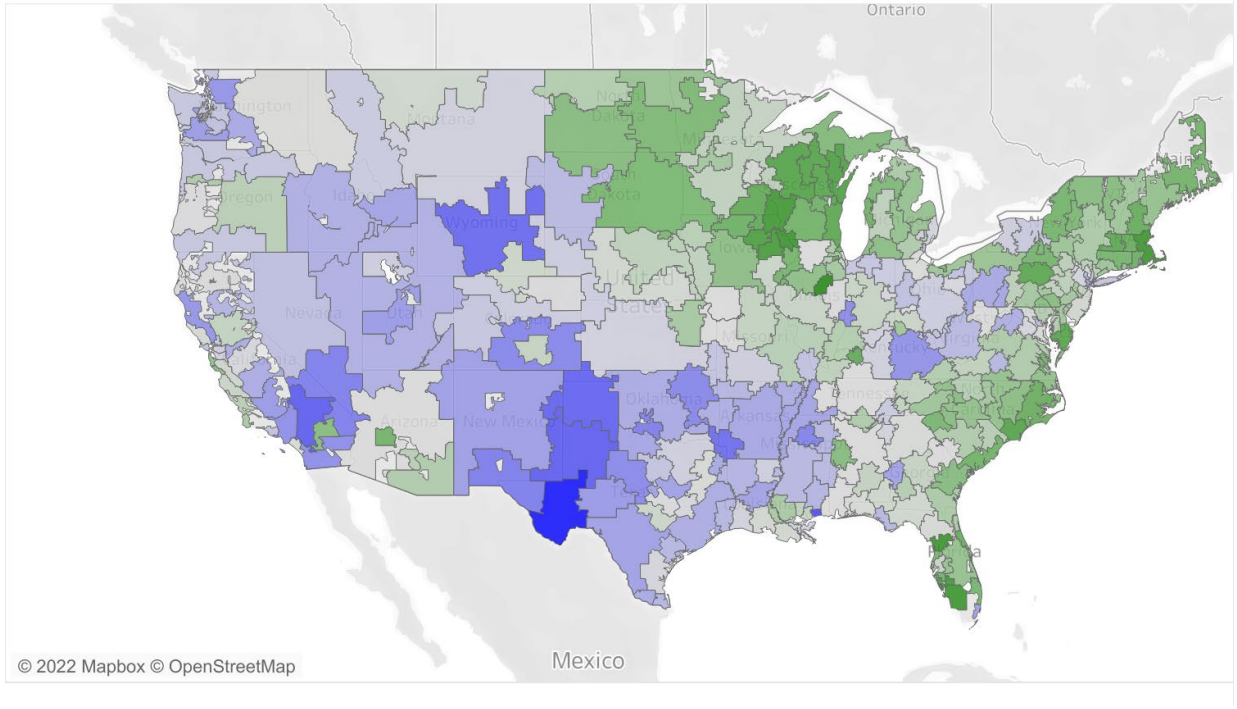
Disclaimers & Disclosures

- This presentation has not been subject to CBO's regular review and editing process. The views expressed here should not be interpreted as CBO's.

- I have no financial conflicts of interest to report.

The Quality Problem – Underuse and Overuse

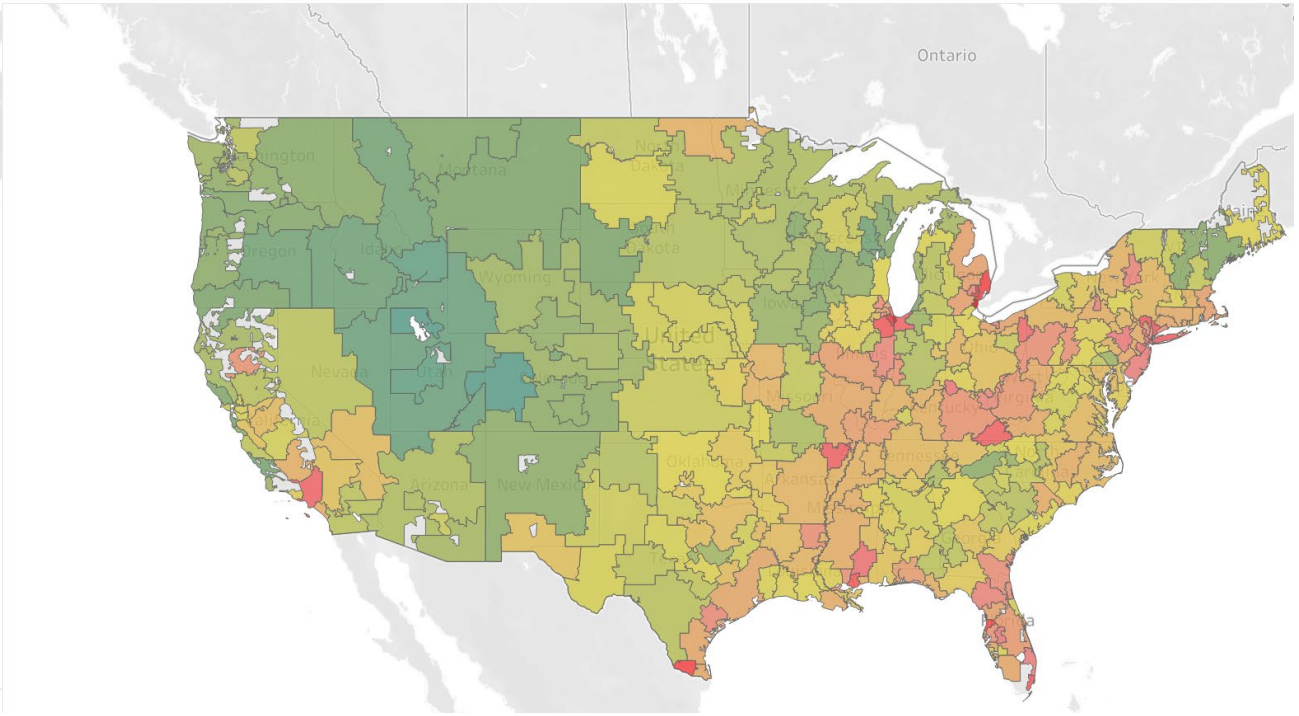
Map: Percent of Female Medicare Enrollees Age 67-69 Having At Least One Mammogram Every Two Years, by HRR (2015)



Crude Rate

46.98 77.17

Map: Hospital Admissions per Decedent during the Last Six Months of Life, by HRR (2017)



Adjusted Rate

0.78 1.68

Pressure is on to improve quality while containing spending growth

- Aging and population growth will continue to increase the cost of cancer care, which surpassed $200 billion in 2020. Across countries, these expenditures were not associated with age-standardized cancer mortality rates.

- In response, commercial and public payers are increasingly turning to alternative payment models with the hope of reducing growth in spending and incentivizing high-quality care.

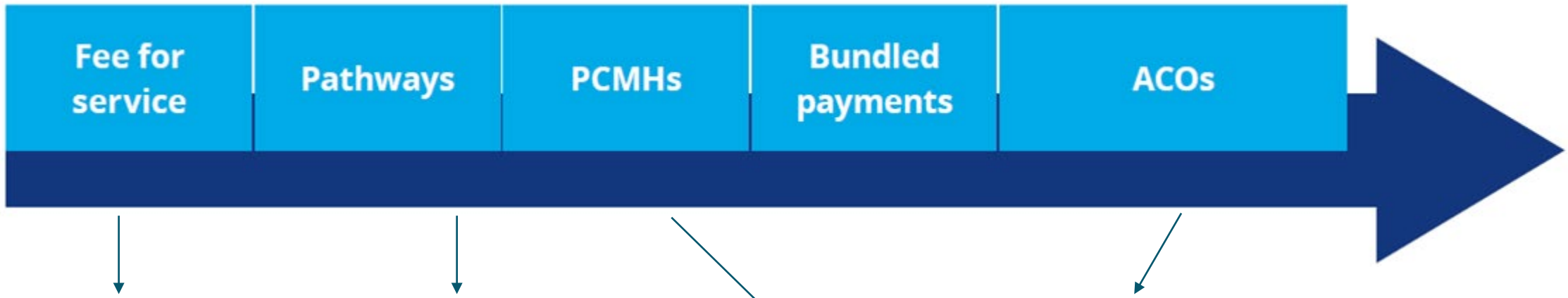
- Largest experiment was the CMMI Oncology Care Model, designed to affect quality of care and spending in the first six months after diagnosis and chemotherapy initiation. The OCM resulted in marginally lower Medicare payments, but greater overall spending once performance payments were included. The OCM will end in June.

- There are cancer-specific ACOs and PCMHs for patients with a cancer diagnosis. CMMI is considering the Oncology Care First model, timeline unknown.

Sources: Chow et al. Comparison of Cancer-Related Spending and Mortality Rates in the US vs 21 High-Income Countries. *JAMA Health Forum:* 2022. Mariotto AB, et al. Medical care costs associated with cancer survivorship in the United States. *Cancer Epidemiol Biomarkers Prev*. 2020;29(7):1304-1312. Keating NL, et al; Oncology Care Model Evaluation Team. Association of participation in the Oncology Care Model with Medicare payments, utilization, care delivery, and quality outcomes. *JAMA*. November 9, 2021.

Most alternative payment models focus on cancer treatment; payment models have the potential to affect cancer prevention too

Level of physician accountability and financial risk across oncology payment model types



Individual payments to providers for service. Reductions in patient cost sharing may encourage use.

Can incentivize evidence-based preventive care through P4P, mixed evidence.

Quality measures frequently include screening for tobacco use, breast and colorectal cancers.

Partial capitation models can carve out preventive services for additional payments.

Source: Deloitte. The evolution of oncology payment models: What can we learn from early experiments? https://www2.deloitte.com/us/en/pages/life-sciences-and-health-care/articles/oncology-payment-models.html

Value-Based Insurance Design (V-BID)

V-BIDs align patients' out-of-pocket costs, such as copayments, to the value of the service rather than the cost of its acquisition, and reduce barriers to effective services.

Research indicates even a small cost-sharing amount is associated with reduced use of cancer screening.

Many cancer prevention services are covered with no cost sharing since 2011.

In a review, ASPE found the elimination of patient cost-sharing was associated with an overall increase in colorectal cancer screening tests, while breast cancer screening rates were stable and rates of Pap testing decreased. While some studies show evidence of improved cancer screening in disadvantaged populations, disparities across race/ethnicity, education and income groups remain.

Notes: Study period for Pap testing coincided with revised cervical cancer screening recommendations that include less frequent testing for many patients.

Sources: ASPE, Access to Preventive Services without Cost-Sharing: Evidence from the Affordable Care Act. Jan 2022. Cancino RS, Su Z, et al. The Impact of COVID-19 on Cancer Screening: Challenges and Opportunities. JMIR Cancer. 2020 Jul-Dec; 6(2). London JW, Fazio-Eynullayeva E, Palchuk MB, et al. Effects of the COVID-19 pandemic on cancer-related patient encounters. JCO Clinical Cancer Informatics. 2020(4) July: 657-665. Artiga S, Ubri P, and Zur J. The effects of premiums and cost sharing on low-income populations: updated review of research findings. The Henry J. Kaiser Family Foundation, Jun 01, 2017.

ACOs and Preventive Care – a mixed review

- Medicare Shared Savings Program ACO enrollment was associated with small-magnitude reductions in breast and prostate cancer screening rates, and a small increase was observed in colorectal cancer screening. During the period of study, ACOs were not evaluated on these metrics.

- ACO enrollment was associated with more appropriate breast and colorectal screening, although the magnitude of the observed ACO effect was modest in the early ACO experience.

- Another study found the prevalence of breast cancer screening (35.0% vs. 25.2%, $p < 0.001$) and prostate cancer screening (54.6% vs. 41.7%, $p < 0.001$) was higher among ACO enrollees.

- In a younger population, the BCBS Alternative Quality Contract ACO program was associated with improvements in breast cancer screening.

Sources: Resnick MJ et al. Medicare Accountable Care Organization Enrollment and Appropriateness of Cancer Screening. *JAMA Intern Med.* 2018;178(5):648–654. Resnick MJ et al. The association between Medicare accountable care organization enrollment and breast, colorectal, and prostate cancer screening. *Cancer*. 2018 Nov 15;124(22):4366-4373. Meyer CP et al. Accountable care organizations and the use of cancer screening. *Preventive Medicine* 2017, 101:15-17. Song, Z et al. “The 'Alternative Quality Contract,' based on a global budget, lowered medical spending and improved quality.” *Health affairs (Project Hope)* vol. 31,8 (2012): 1885-94.

Merit-Based Incentive Payment System (MIPS): P4P

- For physicians not in an advanced payment model, most are required to participate in MIPS
- In 2022 reporting, performance categories include: Quality (30%), Cost (30%), Promoting Interoperability (25%), and Improvement Activities (15%)
- Physicians choose measures of overuse and underuse, e.g.
  - Tobacco Use: Screening and Cessation Intervention
  - Breast Cancer Screening
  - Colorectal Cancer Screening
  - Cervical Cancer Screening
  - Non-Recommended Cervical Cancer Screening in Adolescent Females
- No results to date of effectiveness of program on cancer screening.

Decreases in screening and preventive care during COVID

Decreases in cancer screenings as a result of the COVID-19 pandemic indicate the need to monitor post-pandemic changes in cancer incidence, later-stage cancer diagnosis, and cancer mortality.

At the height of the first wave of the pandemic in April 2020, screenings for breast, colon, prostate, and lung cancers were lower by 85%, 75%, 74%, and 56%, respectively.

One study found that the mean monthly number of patients newly diagnosed with common cancers was 29.8% lower than pre-pandemic levels during the first wave of the pandemic (March-May 2020), 9.6% lower during the second wave of the pandemic (June–October 2020), and 19.1% lower during the third wave of the pandemic (November 2020–March 2021).

Notes: Study period for Pap testing coincided with revised cervical cancer screening recommendations that include less frequent testing for many patients.

Sources: Cancino RS, et al. The Impact of COVID-19 on Cancer Screening: Challenges and Opportunities. JMIR Cancer. 2020 Jul-Dec; 6(2). London JW, et al. Effects of the COVID-19 pandemic on cancer-related patient encounters. JCO Clinical Cancer Informatics. 2020(4) July: 657-665. Patt D et al. Impact of COVID-19 on Cancer Care: How the Pandemic Is Delaying Cancer Diagnosis and Treatment for American Seniors. *JCO*. Nov 2020. Kaufman HW et al. Changes in Newly Identified Cancer Among US Patients From Before COVID-19 Through the First Full Year of the Pandemic. *JAMA Open*. Aug 2021.

Payment is but one potential barrier to screening

- Price, out of pocket cost, and payment method affect both supply and demand for a health care service.
- Insurance coverage and cost sharing elimination are helpful but not sufficient factors in improving preventive care.
- Studies show that consumers have poor knowledge of changes in preventive screening cost sharing benefits and that consumer knowledge of preventive service prices has a substantial positive effect on use.

Table 1: Summary of Selected Preventive Services for Adults Covered by Non-Grandfathered Private Plans without Cost Sharing

Cancer

- Breast cancer
  - Mammography (women 40+*)
  - Genetic (BRCA) screening and counseling (women at high risk)
  - Preventive medication (women at high risk)
- Cervical cancer
  - Pap testing (women 21+ with cervix)
  - HPV DNA testing♀ (women 30–65 with normal pap results)
- Colorectal cancer
  - Fecal occult blood testing, sigmoidoscopy, and/or colonoscopy. (adults 50–75)
- Lung cancer screening
  - Annual tomography (adults 55–80 with history)
- Skin cancer
  - Counseling (adults 18–24)

Chronic Conditions

- Abdominal aortic aneurysm screening (men 65–75 who have ever smoked)
- Cardiovascular health
  - Hypertension screening
  - Blood pressure
  - Lipid disorders screenings (high risk women 20+; at risk men 20–35; all men 35+)
  - Aspirin (men 45–79; women 55–79)
  - Behavioral Counseling (overweight or obese adults with CVD risk factors)
- Diabetes (Type 2) screening (adults with elevated blood pressure
- Depression screening (adults when follow up supports available)
- Hepatitis B screening (adults at high risk for infection)
- Hepatitis C screening (high risk adults; one time screening for adults born between 1945 and 1965)
- Obesity Screening and Management (all adults via body mass index (BMI))
  - Referral for intervention for adults ≥ BMI of 30 kg/m²
- Osteoporosis screening (all women 65+; high risk women <60)

Immunizations

- Haemophilus influenzae type b (adults 18+ with risk factors)
- Hepatitis A (adults with risk factors)
- Hepatitis B (adults with risk factors)
- HPV (women 18–26 and men 18–21 not previously vaccinated; at risk men 22–26)
- Influenza (yearly)
- Meningococcal (adults 18+ with risk factors)
- Measles, Mumps and Rubella (adults 18–49; 50+ with risk factors)
- Pneumococcal (adults 19–64 with risk factors; adults 65+)
- Td booster, Tdap
- Varicella
- Zoster (adults 60+)

Health Promotion

- Alcohol misuse screening and counseling (risk assessment all adults)
- Fall Prevention Counseling and Preventive Medication (community-dwelling adults 65+)
- Intimate partner violence screening, counseling♀ (women)
- Tobacco counseling and cessation interventions
- Well-woman visits♀ (women 18–64; visits for recommended preventive services, preconception care, and/or prenatal care)

Pregnancy-Related**

- Alcohol misuse screening and counseling
- Breastfeeding supports
  - Counseling
  - Consultations with trained provider♀
  - Equipment rental♀
- Folic acid supplements (women with reproductive capacity)
- Gestational diabetes screenings♀ (after 24 weeks gestation)
- Iron deficiency anemia screening
- Preeclampsia preventive medicine (pregnant women at high risk)
- Low-dose aspirin (at risk women after 12 weeks of gestation)
- Screenings for pregnant women
  - Hepatitis B
  - Chlamydia (women ≤24 years; older women at risk)
  - Gonorrhea
  - Syphilis
  - Bacteriurea
- Tobacco counseling and cessation interventions

Reproductive Health

- Contraception (all women with reproductive capacity) ♀ *
  - All FDA-approved contraceptive methods as prescribed
  - Sterilization procedures
  - Patient education and counseling
  - Services related to follow-up, management of side effects, and device removal
- Screenings
  - Chlamydia (sexually active women ≤24 years old, older women at risk)
  - Gonorrhea ((sexually active women ≤24 years old, older women at risk)
  - Syphilis (adults at high risk)
  - HIV (adults 15–65; at-risk younger adolescents and older adults)
- STI and HIV counseling (adults at high risk; all sexually-active women♀)

Notes: Unless noted, applicable age for the recommendations is age 18+. Pregnancy-related applies to pregnant women. Age ranges are meant to encompass the broadest range possible. Each service may only be covered for certain age groups or based on risk factors. *The ACA defines the recommendations of the USPSTF regarding breast cancer services to "the most current other than those issued in or around November 2009." Thus, coverage for mammography is guided by the 2002 USPSTF guideline. **Services in this column apply to all pregnant or lactating women, unless otherwise specified. ***Certain religious employers exempt from this requirement. ♀Recommendation from HRSA Women's Preventive Services; coverage for these services without cost sharing in "non-grandfathered" plans began August 1, 2012. Coverage without cost sharing for all other services went into effect Sep. 23, 2010.
Sources: CMS, Affordable Care Act Implementation FAQ's Set 18 CMS, Preventive Health Services for Adults. More information about each of the items in this table, including details on periodicity, age, risk factors, and specific tests and procedures are available at the following websites: USPSTF, ACIP, HRSA Women's Preventive Services.

Source: Kaiser Family Foundation, 2015.