

Welcome!

Before we begin...

**Today's session will be
recorded**

**Please add your name
and health system in
the chat**





April 16, 2024, | 4:30 PM ET • 3:30 PM CT • 2:30 PM MT • 1:30 PM PT

Prostate Cancer Screening IMPACT ECHO

Session 3: Utilizing Data for Pre-biopsy Risk Calculation and/or Referral to Urology

The PSA is Elevated: *Now What?*

Welcome to Session 3 of the **Prostate Cancer Screening IMPACT ECHO**



Each ECHO session will be recorded and **will** be posted to a publicly-facing website. Chat content, attendance, and poll responses are also recorded



Please update your Zoom Participant Name to First Last, Org (Molly Black, ACS).



Type your full name, the full name of your organization, and e-mail in the chat box.



You will be muted with your video turned off when you join the call. Use the buttons in the black menu bar to unmute your line and to turn on your video.



Today's materials will be made available on our [ACS ECHO website](#).



All ECHO sessions take place on the [iECHO](#) & Zoom platforms. [iECHO Terms of Use & Zoom Privacy Policy](#).



Questions about Zoom during the call? Find **@Beth Graham** in the chat.

This project is being funded by



Every cancer. Every life.



MERCK



Have a question? Don't wait to ask! Feel free to enter in the **Chat** at any time.

Goals

Together with our Primary Care Participant Sites and Subject Matter Experts using the ECHO's all-teach, all-learn approach, we aim to:

- 1 **Increase** appropriate prostate cancer screening.
- 2 **Increase** utilization of prostate cancer shared decision-making tools by primary care teams.
- 3 **Increase** relationships and streamline referral pathways with urologists/other specialty providers within the medical neighborhood.
- 4 **Increase** data capacity to:
 - risk stratify patients,
 - track shared decision-making process,
 - track PSA results and identify trends, and
 - collect and utilize data for pre-biopsy risk calculator and/or referral to specialty care.

Today's Agenda

1. Welcome, Housekeeping & Data | *7 minutes*
2. Didactic Presentation & Discussion: Utilizing Data for Pre-biopsy Risk Calculation and/or Referral to Urology **The PSA is Elevated: Now What?** | *25 minutes*
Presented by: Andrew M.D. Wolf, MD, MACP
3. Participant Site Introduction: Greater Baden Medical Services | *3 minutes*
4. Case Presentation & Recommendations | *20 minutes*
Presented by: Debbie Apperson, CPRN | Greater Baden Medical Services, Inc.
5. Survey, Schedule, Reminders, & Wrap-Up | *5 minutes*

Your ACS ECHO Team



Molly Black

Director, Screening
American Cancer Society
**ACS ECHO Program Lead
& ECHO Facilitator**



Mindi Odom

Director, Project ECHO
Your ECHO Co-Lead



Beth Graham, MPH, CHES

Program Mgr., Project ECHO
Your Program Support



Jennifer McBride, PhD

Senior Data & Evaluation
Manager

Introductions

Meet Our Prostate Cancer Screening IMPACT ECHO HUB – Subject Matter Experts (SMEs)



**Andrew M.D. Wolf,
MD, MACP**
Professor, Internal Medicine
**University of Virginia,
School of Medicine**



**Quoc-Dien Trinh,
MD, MBA**
Chief of Urology
**Brigham and Women's Faulkner
Hospital**



**William H. Boykin, Jr,
MD**
Urology Specialist
**UK King's Daughters
Medical Center**



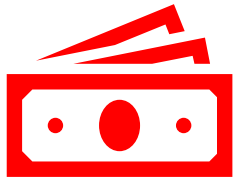
**Yaw A. Nyame,
MD, MS, MBA**
Assistant Professor,
Director of Urology
**Fred Hutch at University
of Washington**

We use your feedback!

What would make these ECHO sessions more impactful in the future?

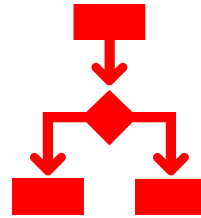
- So far so good thanks
- need to establish practical way to apply in the complex primary care setting of the FQHC where time is limited and there are many social barriers.
- A little more time
- The SMEs are wonderful.
- No specific suggestion
- More emphasis on best practice workflows and practical tools to use to establish a screening program
- I hope we can create a standard of care on when to screen for prostate cancer and the frequency of screening for prostate cancer.

C-SASI Baseline:



9

Health systems offer reduced cost prostate cancer screenings



2

Health systems use a shared decision-making tool (Athena Alerts)

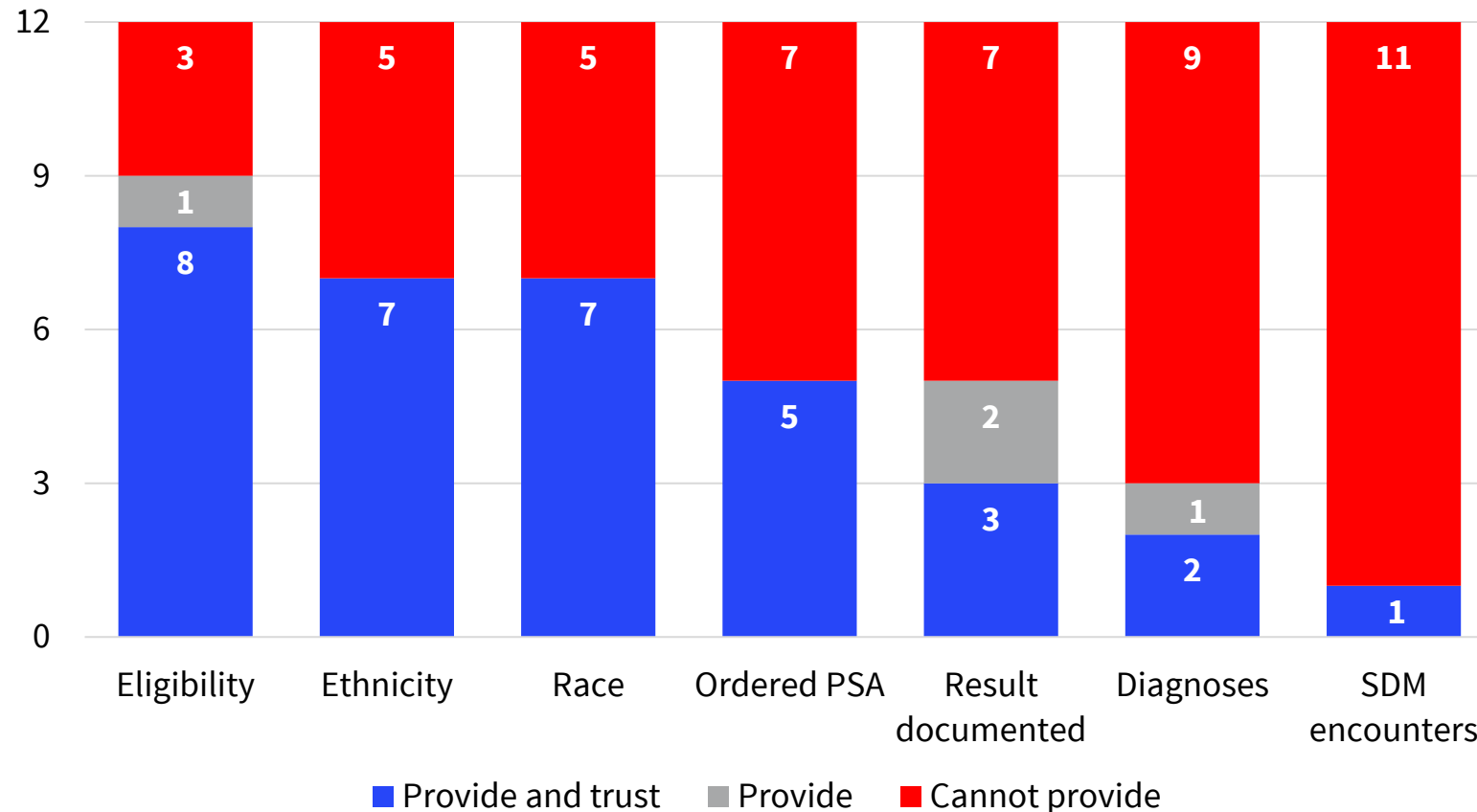


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Health systems use a pre-biopsy risk calculator following an abnormal PSA test

C-SASI Baseline: Health systems capacity to report prostate cancer screening data

Health systems were most commonly able to provide and trust prostate cancer screening data on **patient eligibility**, followed by **patient ethnicity** and **patient race**





Session 3

The PSA is Elevated: *Now What?*

Andrew M.D. Wolf, MD, MACP
Professor, Internal Medicine
University of Virginia School of
Medicine

Learning Objectives

- To develop a systematic response to elevated PSA screening tests
- To employ strategies to reduce Urology referrals of patients unlikely to have clinically significant prostate cancer
- To use an on-line risk calculator to inform patient discussions regarding elevated PSA levels
- To stimulate discussion of when Urology referral is appropriate

Case #1

62 yo white man without significant past medical history presents for annual preventive visit. He has no family history of prostate cancer. He has mild urinary hesitancy and his prostate is mildly enlarged without induration or nodules. His PSA has been gradually rising:

- 2015: 2.35 ng/ml
- 2017: 2.17
- 2021: 3.75
- 2023: 4.51

Where do we go from here?

Case #2

55 yo Black man without significant past medical history presents for annual preventive visit. He has no family history of prostate cancer. He has mild urinary hesitancy and his prostate is mildly enlarged without induration or nodules. He has not been screened before. His PSA today returns at **3.51** ng/ml

Where do we go from here?

So what do we do with an elevated PSA?

What about the good old digital rectal exam?



The Digital Rectal Exam

- 2018 meta-analysis: sensitivity 51%, specificity 59% (primary care docs)
 - About the same as flipping a coin
- One survey: ½ of medical school graduates never performed a DRE
- Only ½ of primary care docs are confident in their ability to detect prostate cancer with DRE
- Inter-examiner reliability between urologists to identify suspicious nodules is fair at best ($\kappa = 0.22$)
- Major guidelines now make DRE optional for primary screen
 - ***Still makes sense to do it for abnormal PSA's, symptoms***

Causes of False Positive PSA

- BPH – the biggie
- Prostatitis (often asymptomatic) – don't treat unless symptoms
- Ejaculation (transient)
- Long bike rides
- Probably *not* the DRE
- Rationale for repeating in 1-6 months before acting on it

Age-Specific PSA Thresholds

- 40's: ≤ 2.5 ng/mL
 - 50's: ≤ 3.5 ng/mL
 - 60's: ≤ 4.5 ng/mL
 - 70's: ≤ 6.5 ng/mL
-
- Actually increases sensitivity for cancer at younger ages
 - Overall, reduces false positive rates and overdiagnosis

Reflex Biomarkers to Reduce Biopsies

- % Free PSA
- Prostate Health Index (PHI)
- 4K Score
- PCA3 (prostate cancer antigen 3)
- ExoDx

% Free PSA (fPSA)

- PSA produced by cancer cells is more likely to be complexed to a glycoprotein than PSA produced by non-cancerous cells
- The higher the % free PSA, the lower the risk of cancer
- FDA approved indication: PSA between 4 & 10 ng/ml with normal DRE
- Using a fPSA threshold of <25% detects 95% of cancers & reduces biopsy rate by 20%
 - i.e., only 20% have fPSA levels above 25% & might avoid biopsy

Prostate Health Index (PHI)

- Combination of total PSA, free PSA, and proPSA tests
- Discriminates between high-grade cancer vs low-grade or no cancer
 - Higher score \approx higher cancer risk
- A PHI score cut-off of 24 reduces biopsies by 36-41% at a cost of missing 2.5-5% of high-grade cancers (Gleason ≥ 7)
- FDA approved for PSA values between 4 & 10 ng/dl
- Mayo sendout (at UVA) & expensive

4K Score

- Another combo test: total PSA, fPSA, 'intact' PSA & human kallikrein 2
- Also factors in age, DRE result, and prior biopsy status (if done)
- Significantly improve accuracy c/w compared with PSA
 - AUC for 4K compared to PSA alone was 0.82 vs. 0.74 for detection of high-grade cancers
- Can reduce unnecessary biopsies by ~40% depending on threshold used
- Comparable to PHI (& also expensive)

The NEW ENGLAND JOURNAL *of* MEDICINE

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MRI-Targeted or Standard Biopsy for Prostate-Cancer Diagnosis

V. Kasivisvanathan, A.S. Rannikko, M. Borghi, V. Panebianco, L.A. Mynderse, M.H. Vaarala, A. Briganti, L. Budäus, G. Hellawell, R.G. Hindley, M.J. Roobol, S. Eggener, M. Ghei, A. Villers, F. Bladou, G.M. Villeirs, J. Viridi, S. Boxler, G. Robert, P.B. Singh, W. Venderink, B.A. Hadaschik, A. Ruffion, J.C. Hu, D. Margolis, S. Crouzet, L. Klotz, S.S. Taneja, P. Pinto, I. Gill, C. Allen, F. Giganti, A. Freeman, S. Morris, S. Punwani, N.R. Williams, C. Brew-Graves, J. Deeks, Y. Takwoingi, M. Emberton, and C.M. Moore, for the PRECISION Study Group Collaborators*

MRI vs Standard Biopsy

Table 2. Comparison of Cancer Detection between Groups.*

Outcome	MRI-Targeted Biopsy Group (N = 252)	Standard-Biopsy Group (N = 248)	Difference†	P Value
Biopsy outcome — no. (%)			—	—
No biopsy because of negative result on MRI	71 (28)	0		
Benign tissue	52 (21)	98 (40)		
Atypical small acinar proliferation	0	5 (2)		
High-grade prostatic intraepithelial neoplasia	4 (2)	10 (4)		
Gleason score				
3+3	23 (9)	55 (22)		
3+4	52 (21)	35 (14)		
3+5	2 (1)	1 (<1)		
4+3	18 (7)	19 (8)		
4+4	13 (5)	6 (2)		
4+5	7 (3)	2 (1)		
5+5	3 (1)	1 (<1)		
No biopsy‡	4 (2)	3 (1)		
Withdrawal from trial§	3 (1)	13 (5)		
Clinically significant cancer¶				
Intention-to-treat analysis — no. (%)	95 (38)	64 (26)	12 (4 to 20)	0.005
Modified intention-to-treat analysis — no./total no. (%)	95/245 (39)	64/235 (27)	12 (3 to 20)	0.007
Per-protocol analysis — no./total no. (%)	92/235 (39)	62/227 (27)	12 (3 to 20)	0.007
Clinically insignificant cancer — no. (%)	23 (9)	55 (22)	-13 (-19 to -7)	<0.001
Maximum cancer core length — mm	7.8±4.1	6.5±4.5	1.0 (0.0 to 2.1)	0.053
Core positive for cancer — no./total no. of cores (%)	422/967 (44)	515/2788 (18)	—	—
Men who did not undergo biopsy — no. (%)	78 (31)	16 (6)	—	—

MRI vs Standard Biopsy Complications

	MRI-Guided Biopsy	Standard Biopsy
Median # of core biopsies	4*	12
Blood in urine (%)	30%	63%
Blood in semen (%)	32%	60%
Post-procedural pain (%)	13%	23%
Rectal bleeding (%)	14%	22%

*Among men who underwent biopsy

Case #1

62 yo white man without significant past medical history presents for annual preventive visit. He has no family history of prostate cancer. He has mild urinary hesitancy and his prostate is mildly enlarged without induration or nodules. His PSA has been gradually rising:

- 2015: 2.35 ng/ml
- 2017: 2.17
- 2021: 3.75
- 2023: 4.51

Where do we go from here?

Management Options

- Repeat – always repeat an elevated PSA in 1-6 months given variability
- DRE if not yet done
- Consider other tests to refine risk assessment, eg % free, PHI, 4K
- *Consider using a prostate cancer risk calculator*
- Prostate MRI
- Biopsy

riskcalc.org/PCPTRC/

Characteristics

Race
Caucasian

Age
62

PSA [ng/ml]
4.51

Family History of Prostate Cancer
No

Digital rectal examination
Normal

Prior biopsy
Never had a prior biopsy

Percent free PSA available?

Percent free PSA
15

Risk of prostate cancer if biopsy were to be performed

Based on the provided risk factors a prostate biopsy performed would have a:



8% chance of high-grade prostate cancer,



24% chance of low-grade cancer,



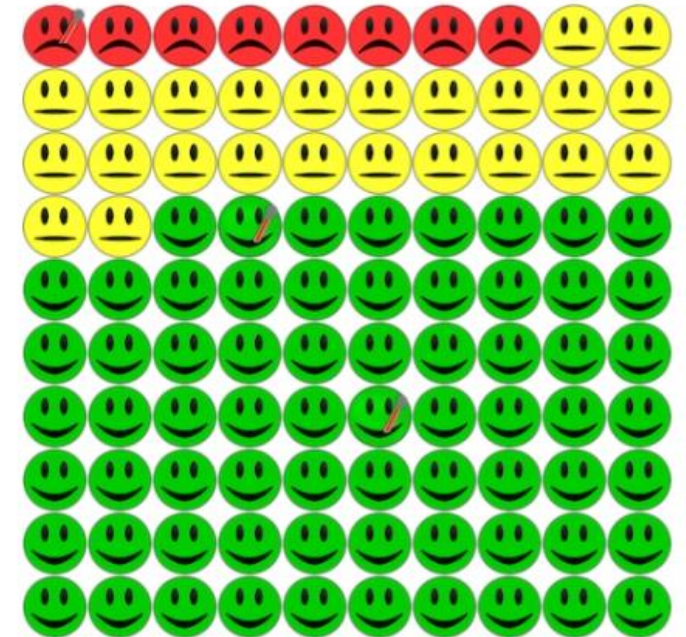
68% chance that the biopsy is negative for cancer.



About 2 to 4% of men undergoing biopsy will have an infection that may require hospitalization.

Please consult your physician concerning these results.

If you are Caucasian, click [here](#) for a new update to the PCPTRC that incorporates detailed family history into a risk of prostate cancer calculation.



Case #2

55 yo Black man without significant past medical history presents for annual preventive visit. He has no family history of prostate cancer. He has mild urinary hesitancy and his prostate is mildly enlarged without induration or nodules. He has not been screened before. His PSA today returns at **3.51** ng/ml

Where do we go from here?

riskcalc.org/PCPTRC/

Characteristics

Race

African American

Age

55

PSA [ng/ml]

3.51

Family History of Prostate Cancer

No

Digital rectal examination

Normal

Prior biopsy

Never had a prior biopsy


Percent free PSA available?


Percent free PSA


21


Risk of prostate cancer if biopsy were to be performed

Based on the provided risk factors a prostate biopsy performed would have a:

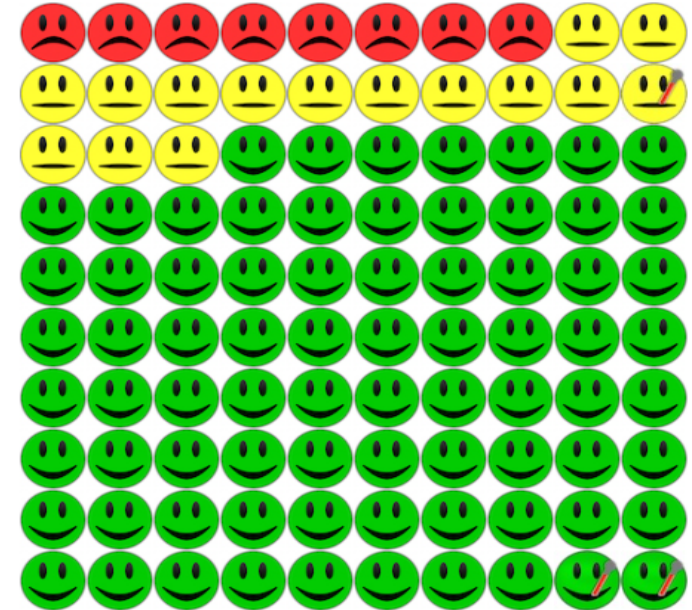
 8% chance of high-grade prostate cancer,

 15% chance of low-grade cancer,

 77% chance that the biopsy is negative for cancer.

 About 2 to 4% of men undergoing biopsy will have an infection that may require hospitalization.

Please consult your physician concerning these results.



Take-Home Points: Managing the Elevated PSA

- Repeat the PSA within 1-6 months given fluctuation.
- Consider DRE if not yet done.
- Consider % free PSA, Prostate Health Index, or 4K score to reduce unnecessary biopsies.
- Consider using prostate cancer risk calculator to help your patients decide next steps if PSA elevated.
- Although usually ordered by urologist, MRI has become a valuable tool to reduce biopsies, overdiagnosis, overtreatment.

Open Discussion: Questions & Answers

Welcome Greater Baden Medical Services, Inc.

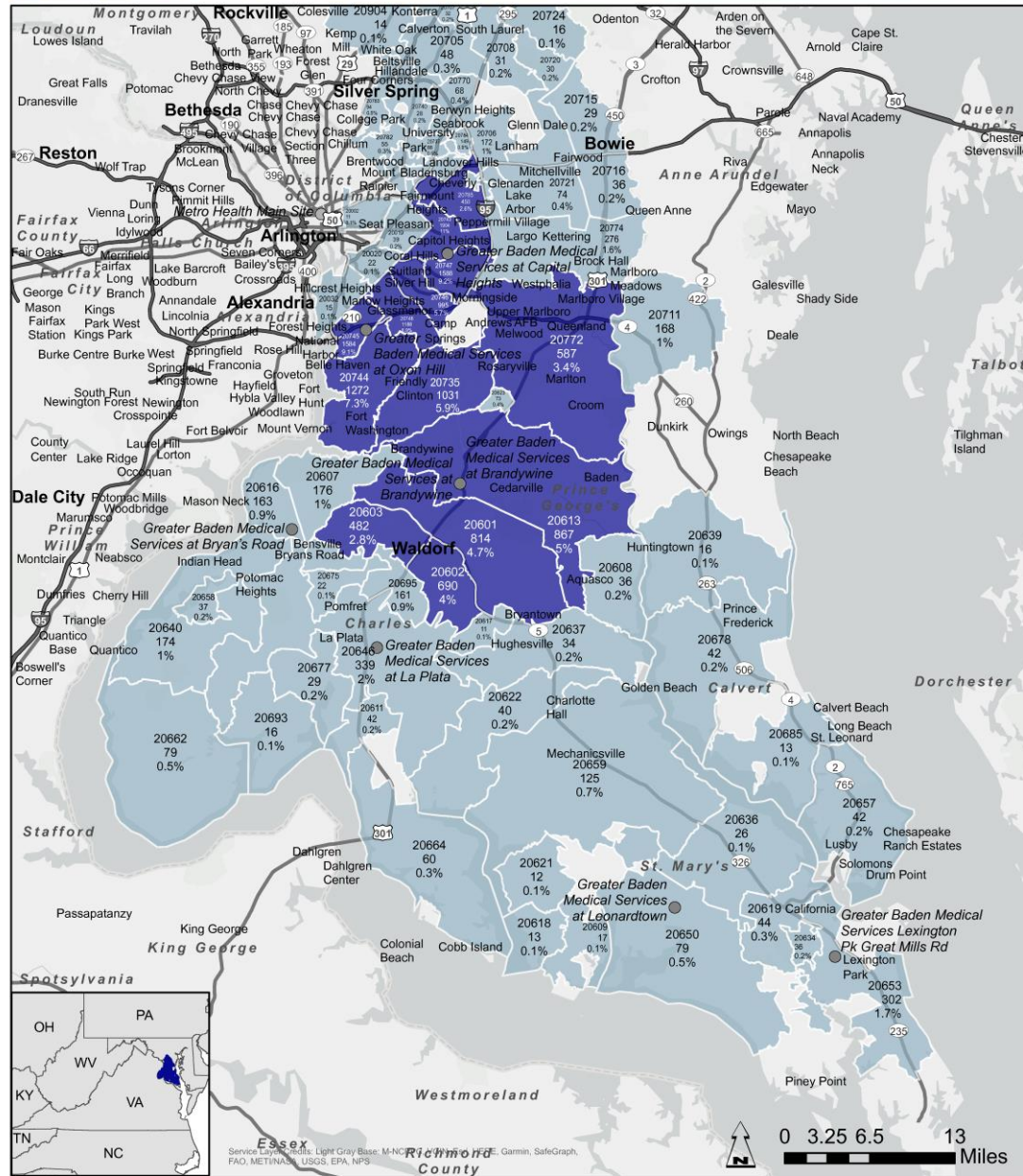
Brandywine, MD



**GREATER BADEN
MEDICAL SERVICES**
Primary and Preventive Health Care

GREATER BADEN MEDICAL SERVICE INC

Patients Served by Grantee
(Within mapped Areas):
17,337



Cumulative % Grantee Patient Origin by Zip Code Tabulation Area (ZCTA)

- Cumulative to 75%
- Cumulative 75%-100%
- Delivery Sites

Example Values

- 12345 - ZCTA Number
- 1,234 - Patients in ZCTA
- 12% - % of Patients from ZCTA

Source: Uniform Data System, Bureau of Primary Health Care, 2022



Session 3 Patient Case Presentation

Debbie Apperson, CPRN
Greater Baden Medical Services

Patient Case Presentation

Presented By: Debbie Apperson, CPRN | Greater Baden Medical Services



Patient-Related Case Presentation

Patient Hx

72-year-old, African American/Black male

Past Medical/Surgical History

HTN T2DM CKD3a Inguinal hernia repair

Past Cancer Screening History

prostate: 4/15/22

colon cancer: 11/15/2023 - FIT negative

Medications

Irbesartan/HCTZ 300-12.5mg daily, Lovastatin 20mg, qHS

Metformin 1000mg, BID Glipizide 5mg daily, Basaglar 20U daily SC

Family History

father: hx of colon cancer dx at 83 yo; currently living mother: hx of diabetes and cardiovascular disease; currently living

Current Strategies

4/2022: presented w/ swelling in right scrotum- sent to urology

4/15/2022: PSA at urology office- **203**

4/20/2022: repeat PSA at urology office **236**

4/2022: PET CT scan: metabolic activity in the prostate

6/2022: inguinal hernia repair

12/12/2022: PSA **244**; did not follow up with urologist

4/2023: came to GBMS office to discuss need for f/u for elevated PSA

6/2023: GBMS- again, referral made for urology

7/19/2023: new appt w/ urologist - bx done G G3 (G4+3=7) in 7/12 cores

7/2023: repeat PET CT completed – unknown results

8/16/2023: scan showing prostate cancer w/o evidence of metastasis;

shared decision making made w/ patient and urologist - active

surveillance/radiation therapy/androgen deprivation

therapy/cryotherapy; patient opted for radiation therapy XRTL+ADT X2 years

8/30/23: began ADT therapy w/ urologist

8/31/23: radiation oncologist appt- National Cooperative Cancer

Guidelines as a 'High Risk Patient' - 'excellent candidate for external beam radiation therapy and long course of ADT therapy'; given Lupron

11/2023: finished radiation. **PSA 9.8**; admits s/e hot flashes

2/29/24: **PSA 1.2**; second Lupron treatment

Patient Case Presentation

Presented By: Debbie Apperson, CPRN | Greater Baden Medical Services



Patient-Related Case Presentation

Questions for Discussion:

- 1) What symptoms are common for checking PSA? We were more using PSA as screening asymptomatic patients.
- 2) How would the urology team on this panel have handled lack of follow-up in the setting of an elevated PSA?



Open Discussion: Questions & Answers

Survey Time!

Participant Site Team Members Only



How to Use a QR Code



1. **Turn on** your phone camera
2. **Aim** the camera at the code
3. A link will show up
4. **Tap** the link to go to the survey

Take it now! Survey closes next Tuesday, April 23rd

Reminders

Session 3 Slides, Recordings, & Resources will be made available within one week on the [ACS ECHO Website](#).



Is **Session 4** in your calendar?

Tuesday, May 21, 2024

4:30 PM ET • 3:30 PM CT • 2:30 PM MT • 1:30 PM PT

Topic: Increasing relationships and streamlined referral pathways with urologists within the medical neighborhood

Case Presentation: Family Circle of Care Health Centers

Thank You!

See you again

Tuesday, May 21st at

4:30 PM ET • 3:30 PM CT • 2:30 PM MT • 1:30 PM PT

in iECHO Zoom

Post-Session 3 Survey

