imagined Case Study

Lung Cancer Screening

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Sara Roth, MD,
Radiology Department Chair
at Crystal Plains Hospital

Mason Sharper,
and his wife, Gayle

Angela, Radiology
Department Receptionist

Proctor Barnstable,
President of
Crystal Plains Hospital

Below is an imagined conversation between a diagnostic radiologist named Sara Roth, MD, and a patient who is an older smoker at risk for lung cancer. The setting is Crystal Plains Hospital, a fictional 200-bed hospital in rural Carteret County, N.C. Crystal Plains is not unlike hundreds of community-based hospitals across the country fighting to keep their doors open.

Our imagined conversation unfolds as Dr. Sara Roth, the radiology department chair, comes face-to-face with an opportunity to help improve patient care, generate a new downstream revenue source for her struggling hospital, and demonstrate radiology's value to the care team. But can she convince hospital administrators to establish a lung cancer screening program?

WE JOIN OUR SCENE, ALREADY IN PROGRESS:

The radiology department receptionist, Angela, speaks with Mason Sharper, a patient in his early 60s. Mason's wife, Gayle, stands by his side.

GAYLE: ... But there's got to be a way.

ANGELA: I wish there was something we could do. But like I said, we don't have a lung cancer screening program here.

GAYLE: We need your help. You're supposed to help.

MASON: Gayle ... let's head on out.

GAYLE: We are not going anywhere until we get some answers.

ANGELA: Mr. Sharper's primary care doctor has to make the referral first. The best I can do is have Dr. Erlich call Dr. Orson in Greenville.

GAYLE: I can't believe there's no other option. Greenville is two hours from here.

DR. ROTH: (*Entering*) What seems to be the trouble?

ANGELA: I was just telling Mr. and Mrs. Sharper that we don't have a lung cancer screening program here.

GAYLE: I'm worried my husband has lung cancer. He's older and smokes a lot. We've read that CT scans can find lung cancer early, if they're set up right.

MASON: Except they don't have the setup for it here, dear.

Dr. Roth invites the couple to her office so they can speak in private. She closes the door and offers them a seat. Mason is visually uncomfortable, reluctant to talk about what he's experiencing. Dr. Roth pours Mason and his wife a cup of coffee.

GAYLE: Well go on, Mason. Tell the lady.

MASON: You see, first it was my brother Elden. He's smoked two packs a day forever. Then last year, he was diagnosed with lung cancer. He's gone downhill fast.

GAYLE: Mason's a heavy smoker too, so naturally we're concerned.

DR. ROTH: We're not here to judge. Some people worry everyone will think they brought lung cancer on themselves, but that's not our M-O here.

MASON: Anyhow, we came here since you're are the experts. But since you don't have the setup ...

Dr. Roth tells the couple that while they do have a CT scanner on site that can do the test, they haven't set up a screening program, mainly due to funding – or the lack thereof. Gayle says that going all the way to Greenville is hard on them, since they can't rely on their 1996 Bonneville over that distance.

Beyond that, their friends and family all work and can't take time off to drive them. Then Mason says something that stops Dr. Roth in her tracks: He knows at least two dozen other heavy smokers who should all get screened.

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In December 2013, the U.S. Preventive Services Task Force issued recommendations calling for annual low-dose CT screening in people aged 55 to 80 years who have a history of heavy smoking and who currently smoke or who quit within the past 15 years.[1]

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IDENTIFYING A COMMUNITY NEED

Dr. Roth leaves the room in a rush, promising to return. Moments later, she tracks down the hospital president, Proctor Barnstable, and pulls him in to speak with the couple. They exchange greetings.

DR. ROTH: Mr. Sharper worries he might have lung cancer. And he knows more people who need to get screened – a lot more people.

GAYLE: My husband has friends at the Elks Lodge who'd all sign up if he told them to. If you had a program, that is.

BARNSTABLE: Lung cancer screening programs are important. I'm sorry to say we've had our share of challenges trying to set one up here. In all honesty, we can't jump over a nickel to save a dime.

GAYLE: Consider helping us, Mr. Barnstable. My husband's life may depend on it.

Once the Sharpers leave, Dr. Roth makes her case to the hospital president: They could do a lot of good for the community if they started a lung cancer screening program. But Barnstable rightly worries about funding such a program, especially since most of the patients the hospital serves are either uninsured or Medicaid recipients.

Dr. Roth suggests covering screening for underinsured and uninsured patients with a grant from the hospital foundation. She also notes that in the long run, in addition to saving lives with early treatment and meeting a desperate community need, lung cancer screening could open up a whole new downstream revenue source for the hospital, allowing onsite doctors to treat patients who turn out to have lung cancer.

Beyond that, Dr. Roth contends that if they help enough patients, the program will pay for itself: They'll make use of their CT scanner during the day and run lung cancer screenings during downtimes, early in the day and late in the afternoon. Or, better yet, they can work the screenings in between other exams. These are relatively quick exams since no IV contrast is necessary. To market the program, they'd invite self-referrals and rely on word of mouth.

Since quite a few potential lung cancer patients have come in inquiring about scans lately, Barnstable agrees to allow Dr. Roth to develop a proposal for the next board meeting. Over the ensuing weeks, she researches a plan to establish a lung cancer screening program at the hospital.

LAYING THE GROUNDWORK

During her extensive research, Dr. Roth finds that she must assemble a dynamic team that includes not just radiologists but also a pulmonary medicine specialist, a thoracic surgeon either within their hospital or locally to whom they can refer a small number of patients, a primary care physician to help with outreach, and tobacco treatment experts. In addition, most lung cancer screening programs have a clinical coordinator or nurse navigator who, among other things, helps patients determine whether or not screening is right for them.

After finalizing her plan, Dr. Roth presents her business case to the board. In attendance are a few department heads she'll need to win over to her effort. She stands at a lectern and walks the group through her PowerPoint presentation. Before long, everyone is engrossed in the charts and graphs that appear on the large screen behind her.

Armed with her research and supercharged by the warm reception she received at the board meeting, Dr. Roth begins visiting the heads of each of the relevant hospital departments to recruit the lung cancer screening team. At each stop, she shares her ambitious target for the program: Enlist 50 patients in the clinic during year one, then add 50 additional patients each subsequent year for the next five years.

The final leg of Dr. Roth's planning efforts involves enrolling patients. Deciding to cast a wide net, she will sign up lung cancer screening candidates from the surrounding counties, in addition to relying on referrals. To this end, Mason Sharper invites her to an Elks Lodge meeting, where she gives a modified version of her PowerPoint presentation. Half of the three dozen members in attendance ask for an appointment before she leaves.

How do you think Dr. Roth's carefully constructed plan works out? What unforeseen challenges might crop up?

Chris Hobson, Imaging 3.0 Senior Communications Manager

ENDNOTE: 1. U.S. Preventive Services Task Force. "Lung Cancer: Screening." Dec. 2013. http://bit.ly/USPSTFScreening. Accessed on 6/14/18.

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