David Cameron: Hello and welcome to the July 2015 Harvard Medical Labcast. This podcast is brought to you by Harvard Medical School’s Office of Communications in Boston. I’m David Cameron.

Stephanie Dutchen: And I’m Stephanie Dutchen.

Cameron: And in this episode, Stephanie tells us about a really cool experiment where scientists here have taken our circadian clock and transplanted it into another organism.

Dutchen: And in today’s conversation, David speaks with physician poet Rafael Campo about the intersection of poetry, literature and medicine. Now, David, I know I’m not supposed to pick favorites, but I’m a big fan of today’s conversation.

Cameron: Oh, man, that’s totally against the rules. We are not allowed to pick favorites here. No, it was a lot of fun talking to him. And the thing that really struck me is how Rafael is not a physician and Harvard Medical School professor by day and poet by night, just as if it’s just, like, completely different things, some hobby that he does, but for him, practicing medicine and writing poetry are deeply interconnected with each other, and each informs the other in very profound ways that was just really, I thought, delightful to talk about.
And the conversation does have a special surprise at the end where Rafael will read us a poem.

**DUTCHEN:** Oh, spoilers.

**CAMERON:** Yeah, spoiler alert, but do not fast-forward to the poem.

**DUTCHEN:** All right. Let’s hear what he has to say.

[MUSIC PLAYS]

**CAMERON:** So Rafael, thank you so much for joining us.

**RAFAEL CAMPO:** Thank you so much for having me.

**CAMERON:** Yeah, no, it’s truly a pleasure. I just want to begin by quoting a poet, another physician-poet who you’re no doubt familiar with, William Carlos Williams. And this is actually one of my personal favorite quotes from him. He says, “It is difficult to get the news from poems, yet men die every day for lack of what is found there.” So I’m sure you’re familiar with that. So do you believe that?

**CAMPO:** Yes, I do. I think particularly through my own lens as a physician-poet and seeing how so many stories, so many important voices in our culture are silenced by disease, by the experience of illness, I really do think that it’s true that men do die, people do die for lack of what we do find in poetry, for lack of finding that voice, for lack of being heard in our society in a broad sense. And so I do believe that.

I think poets are, to quote another famous poet who maybe wasn’t a physician, but we are the unacknowledged legislators, perhaps, of our nations, and I think we do have a very, very important role to play in thinking about illness, certainly, which is probably one of
the most important issues any of us can face in our lives, but also other kinds of issues, as well.

And the way in which some of these kinds of issues are reflected through the body through the experience of illness, I think, again, from my perspective makes poetry really indispensable. Because really, poetry is a kind of merging of the body and language. And I think when we read poems, we are immersing ourselves deeply in another person’s voice, even in the sound of another person’s body.

I find frequently when I’m listening to my patient’s hearts through my stethoscope, I’m hearing that iambic rhythm that’s so familiar to me from reading metrical poetry. And so I really think of poems as sort of embodied stories. And, you know, I also think of the whole “silence equals death” response to the HIV crisis in this country and elsewhere, and that really had particularly profound meaning for me as a poet because, again, I feel that silence really does equal death. If we don’t have a voice in our society, if we aren’t heard, we risk dying.

**CAMERON**: Take us back to when you first fell in love with poetry.

**CAMPO**: Oh, my gosh. Well, in my case, it goes way, way back to when I was a kid. And I remember my parents reading poems to me. You know, for them I think it was a way to tether me, in a sense, to my heritage. In many Latin cultures, particularly in Cuban culture, poetry is a very important mode of expression and some of our perhaps most famous poets in Cuban literature were also actually politicians, and José Martí who was considered the father of the Cuban nation is an important Cuban poet, as well.

**CAMERON**: Oh, interesting, I didn’t know that.

**CAMPO**: Yeah, so that was really, I think, a way for them to bridge the kind of fracture I think all of us experienced from the experience of being exiled, in a sense, here in the U.S. And so from a very early age, also, I associated poetry with kind of a broad sense of
healing -- that poetry could heal this wound of the loss of Cuba, the loss of our homeland. And so I from a very early age [felt] that connection about the power of poetry, what poetry could do to heal, to connect people, even across a pretty traumatic experience as my family had leaving Cuba.

And then I knew, also, because of being different and also perceiving my difference from most of my peers at that early age. I knew I was Latino, you know, Cuban, I knew I was gay, and I knew that I was different in some ways. And whenever I read poems, I felt connected to other people. I felt that even though I might be perceived as different in these ways, that poetry could really still connect me across those differences to other people, and really give me, again, that wonderful sense of shared humanity, of community, of connectedness. And I think that’s one of the reasons we go to poetry, actually, is even now when we have all these other media to entertain us, I think we still always come to poetry for that really visceral sense of connection to other people.

CAMERON: I recently heard a comment, an old quote from David Foster Wallace where he was talking about literature existing to help us with our loneliness.

CAMPO: Yes, absolutely. And I think you could say literature broadly, and works of creative self-expression broadly, I think, can help us in that sense. But I think poetry in particular, because of its musicality and because of the intimacy of the experience of that other voice, really very, very powerfully connects us to one another.

CAMERON: Does the tradition of Cuban poetry and what you were just saying when you were very young, has that influenced your style of poetry, do you think?

CAMPO: In some ways I think it has. Spanish, first of all, is so musical, and so I’ve always been drawn to metrical, so-called formal poetry, poetry that rhymes, received forms, which, as it turns out, probably not surprisingly, have their roots in the Romance languages. So when I write poetry in English, I think some of what I’m trying to do is actually to make English sound like Spanish. I love that, you know, musical quality of the
language. And so yeah, I think those early experiences of reading and hearing read Cuban poets is part of what draws me to the kind of poetry that I write now and that I like to read.

**CAMERON:** How do your colleagues react to your work? And then the follow-up to that is how do your patients react to your work? Because they show up in it.

**CAMPO:** They certainly do. And I guess I would say my colleagues generally, I think, are intrigued by it. I think that they are sometimes a little skeptical of it.

**CAMERON:** In what sense?

**CAMPO:** I guess in the sense that there’s such an imperative in medicine to know, and, in particular, to know all the facts. We are always obsessed with the data. What is the potassium level and how many lymph nodes were positive on the CT scan? All very important ways of knowing and understanding about illness.

When I start thinking about poetry in relation to illness, I think it raises often a lot of uncertainty and a lot of, if you will, kind of gray areas. Or when we get into issues relating to the voice and the subjectivity of stories and of narratives, that can be, I think, really threatening to people who are so used to dealing all the time with objective data.

**CAMERON:** Right, OK.

**CAMPO:** And poems, I think, more often are asking questions than answering them, although they certainly can answer questions, as well. You know, it’s more important to understand the pain on a one-to-ten scale than it is to really understand the metaphor that the patient is using to describe the pain that “feels like a cold wind blowing through my liver” or something that we might as doctors sort of say, well, what does that mean?
Well, as doctors we ought to really think about what does that mean? And not necessarily boil everything down and reduce everything to a one-to-ten scale or some kind of Likert assessment or what-have-you. Those are useful tools, but I worry that in medicine we are more and more focused on simple competencies and scripts and algorithmic approaches to the suffering of our patients, and checklists, and all these things we hear popularized in commentary about medical practice these days, and less and less engaged in a meaningful way with the actual experience of suffering. There’s so much more depth and richness to the experience of illness that we miss by simply focusing on competencies, and certainly by distancing ourselves, which is also very much part of medical education.

And for years we actually actively taught what was conceived of as detached concern, because there was some anxiety around, well, if you feel anything for the patient or attempt to feel what the patient is feeling, that your judgment might be clouded. You’re going to not treat the arrhythmia with the proper drug, or you’re going to, because your eyes are filling with tears, not see the shadow on the chest X-ray that diagnoses the lung cancer. These are, unfortunately, myths, I think, that have never been borne out by any data. For a profession that’s obsessed with data, there’s really no data to support any of this.

**CAMERON:** So how do your patients respond to either your work or you as a poet or even if they’ve--

**CAMPO:** Well, I’m really lucky. I have, I guess, sort of a self-selected group of patients because many of them have encountered my work in one place or another and have come to me because they are--

**CAMERON:** You only treat poets.

**CAMPO:** --are looking for a doctor. Right, exactly. Not only poets, although I have a few poets I take care of. But I think they have encountered my work in one place or another, and they’re looking for a doctor who they hope listens and will work together
with them as an ally rather than as a stereotype of the doctor who just tells you what to do and gives you the prescription. And you know, I think my patients -- I hope my patients -- really feel a different kind of engagement, that we’re working together to help them with their illnesses.

And again, part of that is really empathetic listening and really understanding narrative and really connecting with them through language. And we have studies these days that show that doctors interrupt patients within the first three minutes of the encounter, and the poor patient never gets a word in edgewise. I mean, I hope the experience my patients have is very different -- that, you know, what I want to do when I’m with them is actually to hear their stories and to really listen to them.

I think we like to forget in medicine that we are all, at some point in our illness narratives, going to get to that place where there isn’t another round of chemotherapy, there isn’t going to be another pill to prescribe, there isn’t, unfortunately, another procedure to be done. And what we’re going to need at that moment is the doctor who can listen and who can be present in the ICU and talk to our family members in a meaningful way, and to warm our hands when we are alone in that setting. You know, those kinds of ways of healing, I think, are terribly undervalued in our moment.

CAMERON: So that actually kind of brings us very clearly into another issue I wanted to bring up with you. Atul Gawande has written his recent book, “Being Mortal,” and it’s just talking about how the medical profession has not traditionally been very good at talking about these very things. And when I’m reading your poetry and even in an almost random flipping around, especially the second part of your most recent book, “Alternative Medicine,” I came across a few lines: “Someone is dying alone in the night.” Another poem: “The dead moved quietly around the room unseen.” And another one, which begins with the line, “The doctors had to let the patients die.” Now, this clearly hardly sets you apart from poets--

CAMPO: Yes, we are a little obsessed with death.
CAMERON: --but it’s not, as we were just saying, something that physicians traditionally talk about. And I guess the question there is, is poetry helping give voice to that which the profession itself is not comfortable with?

CAMPO: Yes, I think that’s a great question, too, David. I think that indeed we turn to poetry to help us at those moments when we don’t have technologies that are going to help keep us alive any longer, when we need that comfort, that sense of healing, when perhaps unfortunately, again, there isn’t going to be a cure. And so what do we have when we are confronting death? What do we have when we’re confronting intractable, untreatable pain? What do we have that heals when we are dealing with profound depression that doesn’t respond to the medication that’s being prescribed?

Well, what we have is the mirror of literature, of art, of the humanities more broadly, I think, to reflect our experience back to us and to remind us that we’re not alone in these experiences. That indeed, doctors do have a role at the end of life. We shouldn’t all run in the opposite direction and call the chaplain, “I can’t deal with this situation,” or the social worker, or that’s the nurse’s job to get the hospice worker in here.

You know, it’s actually our job; it’s our duty. It’s part of our role, I think, as care providers, as healers in a broad sense, to be present at those moments. And it’s extraordinary, I think, what we often think when we don’t have an intervention to prescribe, as you were suggesting, well, our job is done. You know, what else is there to do? We can’t take anything else out, there’s not another pill, I can’t prescribe anything else.

But we have so much, I think, to offer in those moments, especially if we’ve accompanied the patient through the experience of illness to that point. When we need narratives and poetry and the humanities the most in medicine, what we’ve done -- ironically, I think -- is removed ourselves even more from the human experience of
illness and placed more barriers between ourselves and our patients to sort of insulate ourselves.

And again, to my mind, these shouldn’t be either/or propositions. I don’t see why we can’t integrate them more effectively, and yes, be very concerned about correcting someone’s abnormal electrolyte level, but also care about how we convey our treatment plan to the patient and his family. How do we communicate that clearly and effectively so we all understand why we’re doing what we’re doing and what our goals are for doing these kinds of things.

CAMERON: So you talked about finding poetry in the stories that patients tell, in the metaphors that they use. Where else do you find that in your practice?

CAMPO: It’s unbelievably overt in so many ways. I think. I think of really every encounter with a patient really is a form of poetry because it really does -- if I’m doing my job right, it really does entail attentive, deeply immersed listening, which is certainly like reading a poem or hearing a poem. I think also even in the body language of patients I see poetry manifest. The gestures they make and the way they carry themselves and hold themselves when they’re describing what they’re feeling.

CAMERON: Deep noticing.

CAMPO: Yes, it’s about looking closely. I mean, that’s another thing that poems do brilliantly and can teach doctors about, is how to really look closely at a patient, to hear closely, listen closely to what they’re saying, but also how to see them, I think, more clearly and how to describe what we hear and what we see. When we look at an X-ray, it’s not that different from looking at a painting or studying a poem. I mean, how is that image composed? What are the elements? How would we describe it to a colleague? You know, these are really important skills for physicians to have and to develop--
**CAMERON:** It reminds me of what James Wood, the critic, talks all about. I’ve heard him say many times, great writers are great noticers.

**CAMPO:** Yes. And especially great poets, I think, are great noticers. And so yes, it’s about what we observe, what details we can see in the interaction, I think, that really are at the level of poetry in a real sense. You know, I think also about -- I talked a little about this before, but also the music of the body and the rhythms that the heart makes, that are present in breathing -- that’s poetry also. That’s probably the most fundamental form of poetry we can know, is the poetry of the sounds our bodies make.

And we’re exposed to that music from before we have conscious memory. In the womb we hear our mother’s heartbeat. And that probably is partly what informs our, even unconscious, I would say, attraction to musical language. I mean, a lot of just conversational language is iambic in nature, iambic pentameter. “A cup of coffee and a slice of toast” -- that’s iambic pentameter.

**CAMERON:** Poetry at Dunkin’ Donuts.

**CAMPO:** Yes, exactly. Right. You hear it all the time. If you’re listening for it, you hear it even more clearly, I think. So yeah, so even through the stethoscope, it’s present in those interactions.

**CAMERON:** Could you read us a poem?

**CAMPO:** Of course. Gosh, give me a minute and I’ll read for an hour. I was saying before how colleagues always say, “Oh, you can’t teach empathy,” or, “Empathy is this intangible” -- we don’t even know how to define empathy. But my response to that often is that even if we can’t define it or if it’s hard for us to teach it, I think at the very least we can model it more effectively, and we can certainly, perhaps, enact it. And one way to do that is through poems and narratives, bringing those into the rounds, bringing those into
the clinic setting and sharing them not just with our patients, but actually with each other, with our colleagues.

And so this is a poem I like to read that’s sort of an example of maybe a kind of definition of empathy or an enactment of empathy. And so when people say, “Oh, you can’t define it,” well, I say, “Here’s a poem that describes it, anyway.” And I don’t know, maybe it’s worth reading that one. It’s a short one.

CAMERON: Go for it.

CAMPO: So this is “Iatrogenic.”

You say, I do this to myself. Outside, my other patients wait. Maybe snow falls; we’re all just waiting for our deaths to come, we’re all just hoping it won’t hurt too much. You say, “It makes it seem less lonely here.”

I study them, as if the deep red cuts were only wounds, as if they didn’t hurt so much. The way you hold your upturned arms, the cuts seem aimed at your unshaven face. Outside, my other patients wait their turns. I run gloved fingertips along their course, as if I could touch pain itself, as if by touching pain I might alleviate my own despair. You say, “It’s snowing, Doc.”

The snow, instead of howling, soundlessly comes down. I think you think it’s beautiful; I say, “This isn’t all about the snow, is it?” The way you hold your upturned arms, I think about embracing you, but don’t.
I think, “We do this to ourselves.” I think
the falling snow explains itself to us,
blinding, faceless, and so deeply wounding.

CAMPO: So that’s a poem about empathy.

CAMERON: Well, thank you.

CAMPO: Maybe about empathy, I guess. I think it’s about empathy.

CAMERON: Rafael, thank you so much for joining us.

CAMPO: Thank you.

CAMERON: This was great.

CAMPO: My pleasure. Thank you for the great questions and thank you for your time.

[DINGING]

CAMERON: And now for this month’s abstract.

[TICKING]

DUTCHEN: Biological clocks: master controllers of the sleep-wake cycle, body
temperature, appetite, hormone release and other daily oscillations known as circadian
rhythms. Most of the Earth’s plants and animals, even microbes, have these circadian
clocks, but some don’t, like the bacterium E. coli.

A team led by systems biologist Pamela Silver of Harvard Medical School and the Wyss
Institute has, for the very first time, transplanted a circadian clock into a non-circadian
organism. Silver and colleagues extracted the circadian protein circuit from individual microbes called cyanobacteria and implanted the clocks into the non-circadian E. coli.

Silver’s team connected the clocks to other E. coli genes related to metabolism and behavior. They also tagged the clocks with fluorescent proteins designed to light up when circadian oscillations were triggered. When the E. coli began to glow rhythmically, they knew the transplant was a success.

Silver’s team imagines one day delivering their engineered circadian E. Coli in pill form to deliver drugs at precise times in our bodies or to sense and influence our circadian rhythms. That can possibly treat conditions such as glucose intolerance and cancer, and even jet lag.

[MUSIC PLAYING]

CAMERON: This podcast is a production of Harvard Medical School’s Office of Communications. Thanks to our amazing producer, Rick Groleau, and thanks to everyone who listened. To learn more about the research discussed in this episode, or to let us know what you think, visit hms.harvard.com/podcasts. You can also follow us on Twitter, where our handle is @HarvardMed, or like us on Facebook.

END OF INTERVIEW