

## **Supplemental Text 1.**

**Clinician insights on the technical aspects of the intervention.** Overall, clinicians found the photo intervention to be beneficial to their clinical practice and expressed surprise at how the quantity of information from photos surpassed their expectations. Representative quotes are in Supplemental Table 1.

*Duration of visit.* Clinicians perceived that photo sharing generally added time to the clinic visit but found that photos made eliciting dietary information more efficient in visits addressing diet-sensitive conditions. Even in patients with acute complaints, clinicians recognized that photos contributed information about the patients' overall clinical picture that could impact their care. While most agreed the extra time was a worthwhile tradeoff, clinicians who experienced more benefits from this intervention had incorporated photos into the agenda of the visit and mentally budgeted time beforehand.

*Intended agenda or purpose of visit.* Clinicians found that the photos created an opening for conversation about dietary behaviors and created opportunities for them to offer dietary recommendations. However, when caring for medically complex patients with acute concerns, the pictures potentially took time away from discussion of more pressing topics. Clinicians perceived limited utility of the intervention when both clinicians and patients did not have a clear agenda or established goals for photo discussion.

*Preferred placement of intervention during visit.* Clinicians expressed a preference for photo discussion during the beginning of the visit that may allowed clinicians and patients to budget time for photo discussion while also allotting time for other topics. Clinicians who saved photos for the end were more likely to run overtime or encounter the introduction of new, unexpected information later in the visit.

*Preferred method of sharing photos.* Most clinicians agreed that sharing photos on a digital device was preferred over printed photos given ease and superior quality of visual information. Other clinicians noted that printed photos had the added benefits of providing uniformity, ease of scanning into patient charts, and increased access for those without smartphones. While many preferred to receive photos in advance, clinicians were divided over whether they should request patients send in their photos via patient portal or email due to privacy and confidentiality concerns and difficulty navigating photos from this modality during the visit.

*Areas to innovate.* Clinicians thought that having structured prompts for clinicians and patients could optimize discussions. One clinician suggested that patient caregivers could take photos to possibly reduce bias. Clinicians suggested photographing patients' living situations for safety assessment, medications for addressing polypharmacy, or comprehensive oral intake over a few days' time rather than discrete meals. Some clinicians expressed interest in seeing the same principle applied to video visits.

**Supplemental Table 1. Representative quotes focused on clinician insights on the technical aspects of the intervention**

Insights	Representative clinician participant quotes
General comments	<p>“When a patient has as many medical problems as she does, it's oftentimes really hard to touch base on subjects you'd like to talk about, such as nutrition. Sometimes it's time gets in the way. I found the pictures really helpful, because they were an efficient way to kind of look at what she was eating.”</p> <p>“It's one of these relatively low tech things that changes the conversation a lot. I definitely found myself thinking this is a powerful intervention for the connection it's making and for the information I'm getting.”</p>
Duration of visit	<p>“I think the upfront cost of the little bit of extra time may be counterbalanced by the benefits that you get in terms of insights and what's going on with the patient so that hopefully down the road you either gain insights into how they live their life or how they eat their food or what they're eating.”</p> <p>“If you know you can sort of forward plan and say, ‘Okay, I need a longer visit time with this patient.’ The difficulty is that you can't flex the time of the visit. Then you flex the frequency of the visit. You could sort of propose to them that they take photos and then you come back on a specific visit, look at them and come up with a plan.”</p>
Intended agenda or purpose of visit	<p>“If it's a routine follow up visit, I think this could be incorporated nicely. If it's a visit about a condition that requires counseling on diet and exercise, then I think it would go very well...but I think that the problem is that a lot of patients, the patients that would benefit the most, are the ones that I might not have time to talk about. If they were to bring pictures, then we wouldn't have been able to talk about the other diagnosis that are very important and more time sensitive.”</p> <p>“To be honest, it shifted where I was going to go with my discussion. I was going to talk more about his chronic pain. I feel like in some ways, it did not help, and maybe hurt the quality of care, from my perspective. Because that was on my agenda, I didn't talk about it at all because the time went to talking about nutrition instead.”</p>
Preferred placement of intervention during visit	<p>“I would probably prefer it at the beginning of the visit, so that I would have a better way to plan the minutes of our visit...I would prefer to do it after we first set the agenda of the visit. Set the plan for what we were discussing that day, then to see the photos and then to wrap up by going through the problem by problem.”</p> <p>“I think she opened up a little bit more where she was like, "I think I could just show you photos," and I was like, "Yeah." I was already like 40 minutes behind. I was like, "Please don't be the photos." I think if maybe it had been the beginning of an appointment, I would set the stage a little bit more, so we knew exactly what we needed to talk about first.”</p>
Preferred method of	<p>“I prefer for it to be shown in the visit, because if it was sent to me by [patient portal] it wouldn't really help us as much. I might forget it's there, or I might not</p>

sharing photos	<p>have referred to it unless she reminds me. It's just logistically easier for us to swipe and see the multiple pictures, than for me to pull up the scan picture one at a time. I don't think I would actually use it if it wasn't during the visit.”</p> <p>“I think...as long the screen for the phone is pretty big. I think if it was one where the screen is very small and you can't see? Then maybe that would be a problem? I think probably print photos would be easier if there was ever a situation where I wanted to include them in the chart, you could scan them a little bit easier.”</p>
Areas to innovate	<p>“I think that we can use technology and I think go well beyond pictures and having video visits, and having the patient walk around with their camera, their phone, and let me see what's going on. Go show me where you keep your medicines, let's take a look at your medicine cabinet. Take out your medicines, let's take a look at them. Let's go look at your refrigerator, let's look at your pantry, let's look at whatever. Let's check your bathroom for safety bars, I mean there's so much that you could do, virtually.”</p> <p>“Part of me is like I would love to see photos of his home or things that are important to him, but I would also feel really uncomfortable asking him to do that, because it feels intrusive, and he doesn't have a choice around it, you know, so that part seems tricky.”</p>