

## Report from the Field

# ELAA Med+: Using a Mock Patient Portal to Address Digital and Health Literacy in a Community-Based Adult ESOL Program

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## Abstract

In response to high demand from program participants for both health literacy and digital skills support, the Literacy Connects English Language Acquisition for Adults program in Tucson, Arizona, created a mock patient portal (ELAA Med+) for use in their free, community-based, volunteer-taught English language and computer basics classes. Built with readily available web tools, ELAA Med+ is a rich health and digital literacy tool that includes opportunities for adult learners to practice contacting their health care providers, requesting prescription refills, and scheduling appointments in a mock patient portal designed to imitate patient portals used by local Tucson health care providers. This article grounds the mock patient portal project in current health and digital health literacy research, describes best practices for creating and implementing a mock patient portal in a volunteer-taught adult English language and literacy program, and shares lessons learned.

**Keywords:** health literacy, digital health literacy, patient portal, English language learners

Health literacy and digital health literacy have been shown to profoundly impact health outcomes. The U. S. Department of Health and Human Services' Healthy People 2030 initiative is a set of "data-driven national objectives to improve health and well-being over the next decade" (Office of Disease Prevention and Health Promotion [ODPHP], n.d., n.p.). It defines personal health literacy as "the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others" (ODPHP, n.d., n.p.). Individuals with low health literacy are likely to have difficulty accessing, comprehending, and implementing health information, resulting in worse health outcomes when compared with individuals with higher levels of health literacy (Coughlin et al., 2020).

Higher levels of health literacy are associated with higher levels of digital health literacy and access to technology and internet connection. Seidel et al. (2023) define digital health literacy as "the ability to seek, find, understand, and appraise

health information from electronic sources and apply the knowledge gained to addressing or solving a health problem" (para. 2). Individuals with higher levels of digital health literacy demonstrate greater confidence and efficacy in managing chronic health conditions and are more likely to access digital health records via patient portals (Seidel et al., 2023). Patient portal use is associated with "better patient-reported outcomes, including increased knowledge and reduced disease-related stress" (Johnson et al., 2023, para. 5). However, patients with lower digital health literacy are less likely to be aware of or use patient portals (Deshpande et al., 2023), which "further exacerbates health care disparities" (Johnson et al., 2023, para. 5).

English language learners (Soto Mas et al., 2013) and people with emerging digital skills (Arias Lopez, et al., 2023) are both likely to have lower levels of health and digital health literacy than the general population. The shift to electronic medical records, online patient portals, and telehealth, accelerated by the COVID-19 pandemic (Shaver, 2022), has largely left English language learners

and people with emerging digital skills behind, resulting in increasing health care inequity (Chang et al., 2021).

## Responding to Student Requests

The COVID-19 pandemic laid bare the many challenges facing Literacy Connects' (LC) adult learners navigating both the U.S. medical system and the digital landscape. As LC pivoted to providing online classes in the early days of the pandemic, it became clear that many students would be left behind if no support was provided for those with emerging digital literacy skills. Simultaneously, students reached out to us – an institution they trusted – with questions about health resources that staff and volunteers felt ill-prepared to answer. One way LC responded was to identify existing resources that could leverage class time to address some of these needs without creating new programming.

Health has always been the most student-requested unit in the English Language Acquisition for Adults (ELAA) curriculum, as the ability to speak to doctors, pharmacists, and first responders in English is a priority for the majority of our adult students. Our program uses the English Unlocked curriculum from Literacy Minnesota. While English Unlocked includes high-quality health literacy units, it does not include support for the digital health literacy skills that surged in importance during the pandemic. In 2021, Literacy Connects received funding from a federal grant in partnership with the Pima County Health Department to improve health literacy in the local Hispanic community. One way this funding was utilized was to send members of the LC staff to the Wisconsin Health Literacy Summit in April of 2022 where we attended a panel titled *Patient Portal Practice: Develop Digital Fluency, Build Health Literacy, and Enhance English Language Acquisition* (Butteris & Finesilver, 2022). Finesilver shared examples of a model patient portal they had developed for use in their adult English language classes, and LC staff left the panel inspired to do the same.

In alignment with adult learning theory's emphasis on contextualized learning, this new project sought to connect the health literacy skills from English Unlocked to a digital mock patient portal that would provide relevant, timely, and practical opportunities for students to engage with real-world materials. The resulting mock patient portal, ELAA Med+, is designed to be as realistic as

possible and to provide a platform for our adult learners to practice navigating a clinic's patient portal website. The ELAA Med+ project sought to help Literacy Connects learners acquire the English language, health literacy, and digital health literacy skills necessary to engage with patient portal platforms, in alignment with three specific Healthy People 2030 objectives:

- Increase the proportion of adults who use IT to track health care data or communicate with providers
- Decrease the proportion of adults who report poor communication with their health care provider
- Increase the proportion of people who say their online medical record is easy to understand (ODPHP, n.d.).

ELAA Med+ was created to teach Adult English language learners how to navigate the actual patient portals used by health care providers. Portal creation took approximately 30 hours and was led by a University of Arizona student intern with no prior experience in web design. He created ELAA Med+ in Google Sites, using real patient portals as models (Figure 1). ELAA Med+ contains many elements that render it so realistic that we received recommendations from pilot users to add multiple disclaimers that the clinic does not actually exist. One key element of that realism is that the English used on ELAA Med+ is not simplified for English learners. The portal also includes all expected features of common portal platforms such as a Meet Our Staff page and a COVID-19 FAQ page (Figure 2). Teachers and students can practice tasks such as scheduling appointments online, requesting a prescription refill, and checking for past-due bills (Figure 3). Ultimately, the mock patient portal centers relevance and respect for our adult learners by recognizing that while students may not understand every word, they have the English language and motivation to make meaning of the portal and take more agency over their health care, even at beginning English proficiency levels.

ELAA Med+ supplements the health units in the English Unlocked curriculum by providing authentic digital health literacy practice. The mock patient portal is intended to expand on the English vocabulary, grammar, and functions that students are introduced to through those lessons. Teachers are provided with a guide of recommended activities (Figures 4-5) that incorporate the mock portal into the English Unlocked health literacy lessons.

Different class levels engage with different portal content. In beginning-level ELAA classes, students look for key vocabulary together, emphasizing the digital literacy skill of scanning for information (Figure 4). Students then use this vocabulary to fill out interactive Google Forms such as the Make an Appointment form, which provides contextualized practice with stating basic personal information. Intermediate and advanced-level classes engage with a wider range of portal content. Intermediate teachers have shared that navigating the mock portal together as a class sparks conversations that did not emerge when teaching the same health unit previously. The portal's Our Services tab prompts exploration of differences between preventative, urgent, and emergency care. The Meet Our Staff page leads to a discussion of the U.S. cultural practice of requesting specific doctors (Figure 5).

Use of ELAA Med+ has now expanded beyond the ELAA program into other Literacy Connects programming, including our Computer Basics classes. In the fall of 2022, these classes were contextualized in the area of digital health literacy and used the ELAA Med+ portal to model and practice accessing health care information and services. Students learned about their patient rights, how to choose a doctor, and how to communicate with their doctors via a patient portal. ELAA Med+ was key to one student's success in finding a new health care provider. The class practiced searching for clinics near their homes and used ELAA Med+ to learn how to use an online account. The student went home that day and found a clinic closer to her home. She was able to access her new account, make appointments online, and message her doctor. Practicing with ELAA Med+ in computer class helped her apply her new digital health literacy skills in real life.

## Lessons Learned

Literacy Connects volunteer teachers continue to use the ELAA Med+ mock patient portal in their ELAA and Computer Basics classes. Piloting the portal with select classes before rolling out the resource for general use provided important feedback that allowed us to make the portal as realistic as possible. The feedback from pilot users led us to create a teacher's guide, which includes recommended activities differentiated by English proficiency level (Figures 4-5). Because ELAA Med+ is intended to be integrated into the existing English

Unlocked health units, we did not create portal-specific lesson plans. A favorite component of the portal has been the embedded interactive forms that allow students to practice messaging a doctor, requesting a refill, or scheduling an appointment. Student responses to the forms go to ELAA program staff who then share them with the teacher. These form responses function as formative assessments, which teachers have greatly appreciated.

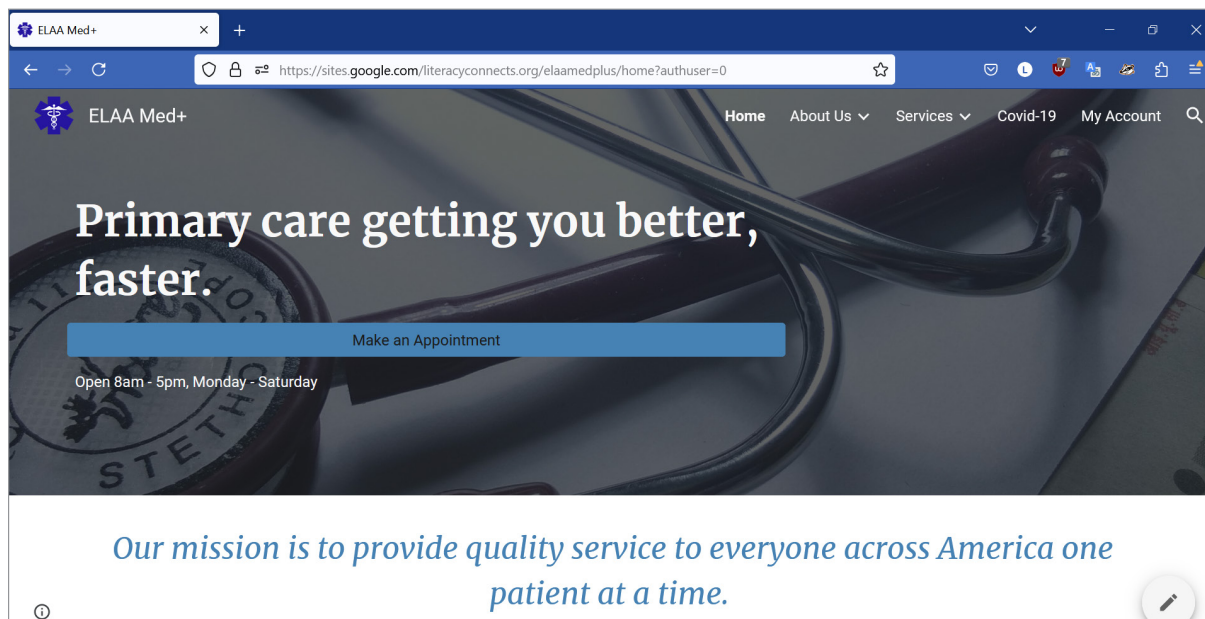
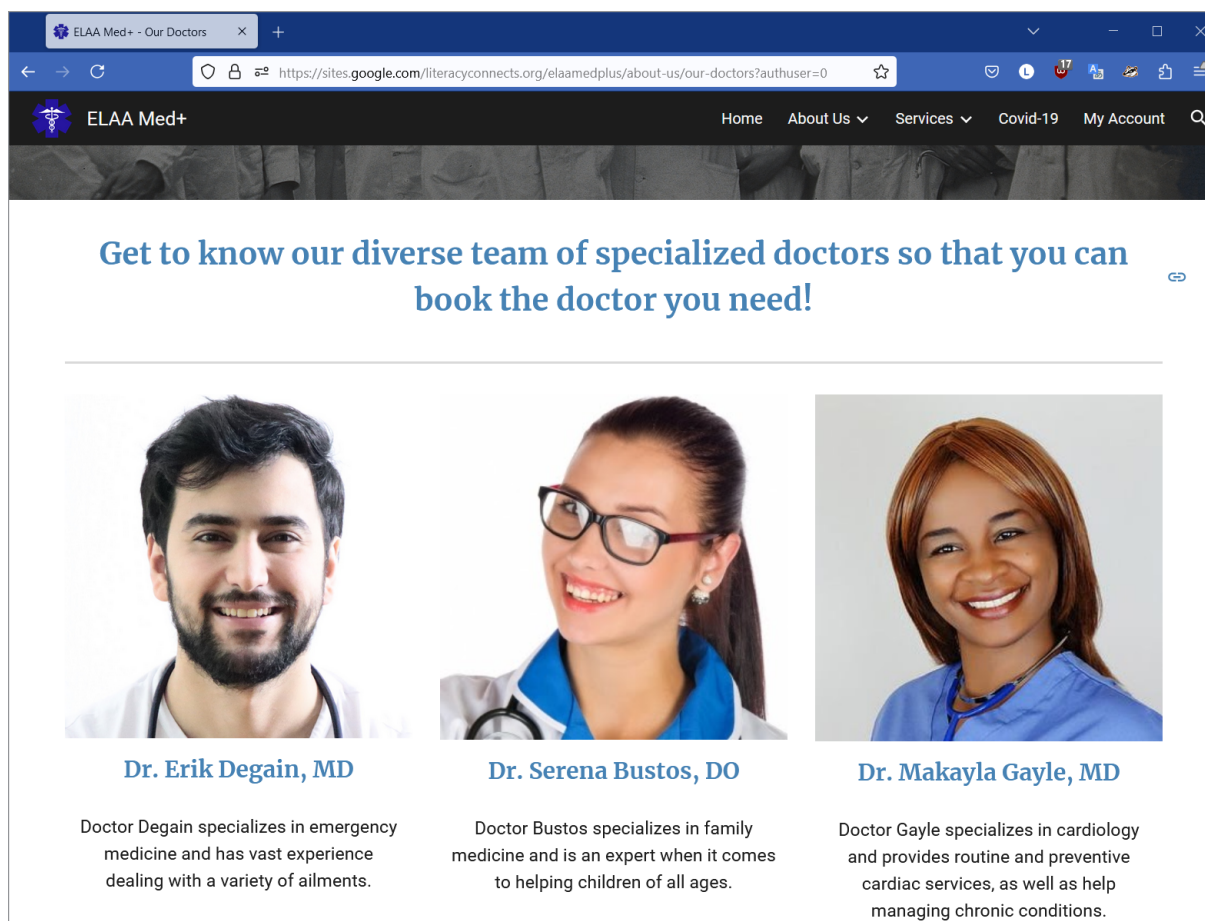
Teacher feedback has also highlighted areas for improvement of the portal. In designing the portal, we were unable to replicate the experience of creating an account and logging in. Instead, the website is viewed as if the user is already logged in as "Alex R. Gomez," a fictional account. Teachers have identified the account creation process as one students would like to practice. Similarly, students have requested help with navigating telehealth options. As ELAA Med+ evolves, we hope to integrate account creation and telehealth practice into the portal.

Adult learning theory espouses contextualized learning: the idea that learning is more effective when it is relevant, timely, and practical (Perin, 2011). Authentic tools like ELAA Med+ are needed to provide adult learners opportunities to practice real-world situations that incorporate all of their digital, language, and literacy skills. We encourage institutions serving adult English language and digital skills learners to incorporate patient portals into their curricula. Through the opportunity for realistic, interactive, and contextualized practice, adult students will be more prepared to seek the health care they and their families need with confidence and agency.

Finally, The ELAA Med+ project elucidates the importance of cross-pollination between community-based non-profit organizations in adult education. Wisconsin Health Literacy organized the 2022 Health Literacy Summit where LC staff were introduced to the vital importance of digital health literacy for our adult English Language Learners and the idea of creating a mock portal for student use. Literacy Minnesota's English Unlocked health literacy units provided the instructional context for integrating digital health literacy. Literacy Connects volunteer teachers and students provided feedback that has led to ELAA Med+'s evolution as a teaching tool. As peer organizations build upon each other's work, we become more effective in serving our learners.

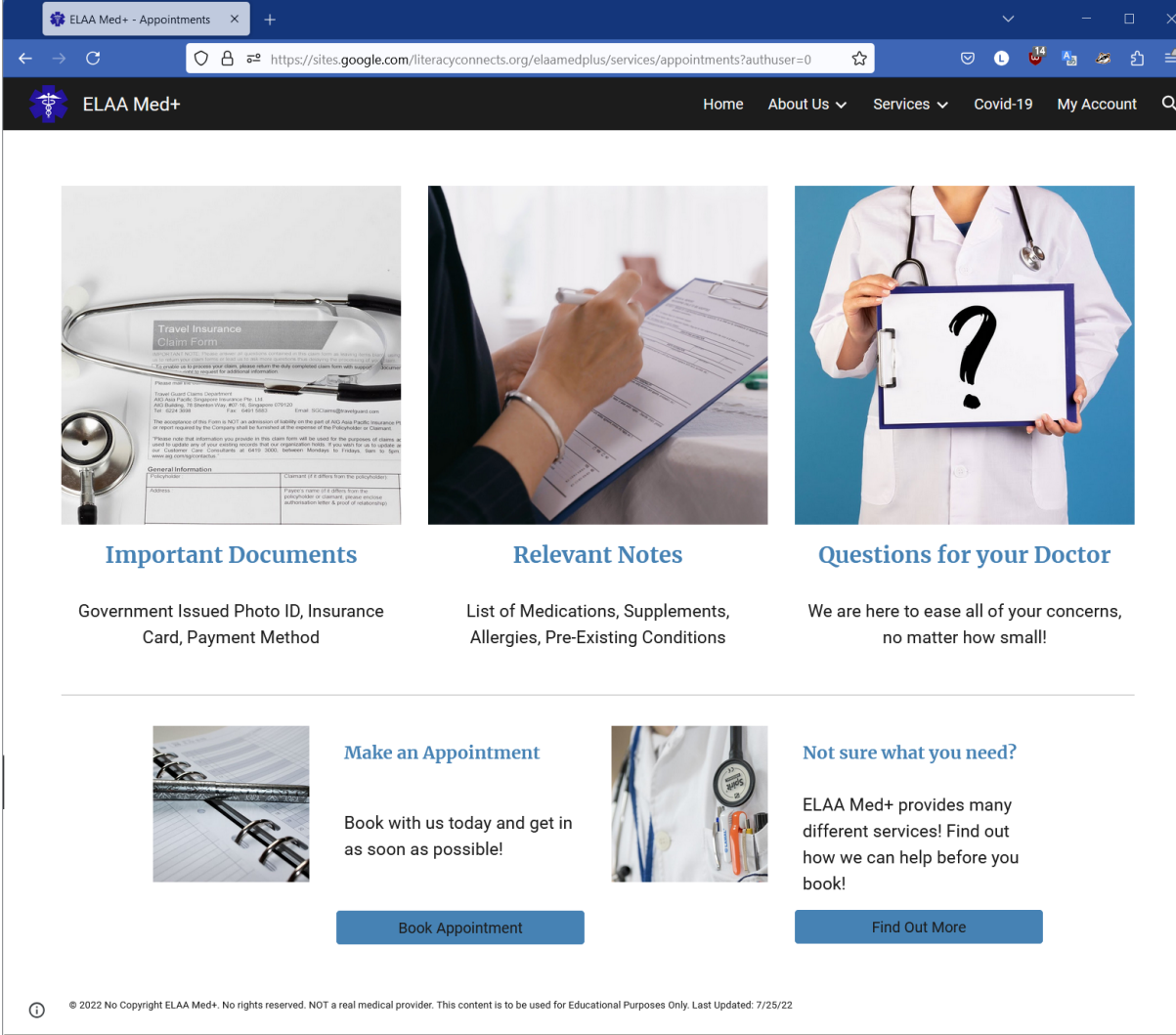
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**FIGURE 1: ELAA Med+ Home Page Screenshot****FIGURE 2: ELAA Med+ Meet Our Doctors**



## FIGURE 3: ELAA Med+ Book Your Appointment



The screenshot shows a web browser window with the address bar displaying 'https://sites.google.com/literacyconnects.org/elaamedplus/services/appointments?authuser=0'. The website header includes the ELAA Med+ logo and navigation links: Home, About Us, Services, Covid-19, and My Account. The main content area is titled 'Book Your Appointment' and features three columns of information. The first column, 'Important Documents', lists 'Government Issued Photo ID, Insurance Card, Payment Method'. The second column, 'Relevant Notes', lists 'List of Medications, Supplements, Allergies, Pre-Existing Conditions'. The third column, 'Questions for your Doctor', states 'We are here to ease all of your concerns, no matter how small!'. Below these columns are two more sections: 'Make an Appointment' with a 'Book Appointment' button, and 'Not sure what you need?' with a 'Find Out More' button. The footer contains a copyright notice: '© 2022 No Copyright ELAA Med+. No rights reserved. NOT a real medical provider. This content is to be used for Educational Purposes Only. Last Updated: 7/25/22'.

### Important Documents

Government Issued Photo ID, Insurance Card, Payment Method

### Relevant Notes

List of Medications, Supplements, Allergies, Pre-Existing Conditions

### Questions for your Doctor

We are here to ease all of your concerns, no matter how small!

### Make an Appointment

Book with us today and get in as soon as possible!

[Book Appointment](#)

### Not sure what you need?

ELAA Med+ provides many different services! Find out how we can help before you book!

[Find Out More](#)

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**FIGURE 4: Scanning for Key Vocabulary**

Topic (+ Notes)	Activities
<p><b>Patient Portal Vocabulary:</b></p> <ul style="list-style-type: none"> <li>• Patient Portal</li> <li>• Urgent Care</li> <li>• Wellness</li> <li>• Make an appointment</li> <li>• Fill a prescription</li> <li>• Pay a bill</li> </ul> <p>Digital Literacy Vocab that <i>might</i> come up while looking at the website together:</p> <ul style="list-style-type: none"> <li>• Menu</li> <li>• Click</li> <li>• Search</li> <li>• Form (and “submit” a form)</li> <li>• Account</li> <li>• Home</li> </ul>	<p>Introducing new vocabulary</p> <ul style="list-style-type: none"> <li>• On slides (separate from the website), show each vocabulary word and talk about what it means with students.</li> <li>• Ask for examples (ie: When do you need <u>urgent care</u>? - I’m sick. I have symptoms. I have a fever and a cough. Etc.)</li> </ul> <p>Practice using the vocabulary, talk about using the Patient Portal</p> <ul style="list-style-type: none"> <li>• Q&amp;A: What do you need on the Patient Portal? - I need to <u>make an appointment</u>. or I need to <u>pay a bill</u>.</li> </ul> <p>Practice using the website</p> <ul style="list-style-type: none"> <li>• Screenshare the website. With students, look for the vocabulary words. (Some things, like urgent care, can only be found if you look in the menus at the top.)</li> <li>• Demonstrate moving your mouse around to show the menus.</li> <li>• Ask questions like “I need to pay a bill. What do I click on?”</li> <li>• We can help lower student stress by reminding them that <b>they don’t need to understand every word or all of the grammar on the website!</b> They just need to look for the <u>key word</u> for what they want. Scanning for information like this is an important digital literacy skill (and literacy in general). We very rarely read every word on a website.</li> </ul> <p>Potential homework*: Have students practice navigating an</p>

**FIGURE 5: Choose a Doctor**

<p><b>Choose A Doctor</b></p> <p>Sometimes students (especially those new to formal healthcare systems) don’t realize they can ask for a specific doctor in advance. It might be as simple as a female patient preferring to see a female doctor, or a patient might want to see someone with a specific specialty (like an Ear, Nose and Throat doctor).</p>	<p>This is mainly a <u>discussion activity</u>, and is best suited to intermediate or advanced classes.</p> <p>Which doctor can help me?:</p> <ul style="list-style-type: none"> <li>• Take a look at the “Our Doctors” page together. There are descriptions for each doctor’s specialty. <ul style="list-style-type: none"> <li>◦ Remind students that they don’t need to understand every word. Look for words they know and decide what words are important.</li> </ul> </li> <li>• <u>Digital Literacy Skill</u>: Model using a search engine like Google or Bing to look up one of the acronyms in the doctor’s titles. <ul style="list-style-type: none"> <li>◦ You can then challenge students to look up the rest of them with a group in Breakout Rooms, or for homework.</li> </ul> </li> </ul> <p>Additional practice:</p> <ul style="list-style-type: none"> <li>• Describe a situation. For example: “Imagine you need to make an appointment. You are having really bad allergies this year. Which doctor should you see?” Help students look at the descriptions and choose. <ul style="list-style-type: none"> <li>◦ Repeat with other symptoms and/or health problems.</li> </ul> </li> <li>• You could also put students in groups and have each group talk together to choose a doctor and also decide the <u>reason</u> why they want to see that doctor. When they return to the main room, each group needs to share what the health problem is and which doctor they want to see.</li> </ul>
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